

Friday, January 22, 2010

Page 1 of 4  
REQUEST NUMBER: 10-1386

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

ATTN: Valerie Davis

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

These Samples are on:  
LANL Request Number: 10-1386  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 1/22/2010

TURNAROUND/REPORT DUE: 2/21/2010

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	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	

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PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
EPA:300.0		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
EPA:353.2		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7679	R	1/15/2010	
SW-846:6010B		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
SW-846:6850		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
SW-846:6020		1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	

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REQUEST NUMBER: 10-1386

PRIORITY	METHOD CODE	CNTNR	SAMPLEID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:6850		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
SW-846:7470A		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
SW-846:7471A		1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
SW-846:9012A		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	

Friday, January 22, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:9012A						
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
SW-846:9045C						
		1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	

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Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1386C

## LOS ALAMOS

REQUEST NUMBER: 10-1386

## NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

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
RE14-10-7689	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7689	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7679	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7679	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7680	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7680	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7686	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7686	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7688	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7688	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7684	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7684	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7687	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7687	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7681	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7681	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7682	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7682	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7685	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7685	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7683	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7683	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7693	1	POLY	METALS+U-GEL	Nitric Acid	W
RE14-10-7693	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
RE14-10-7693	1	POLY	SW-846:6850	Ice	W
RE14-10-7693	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:

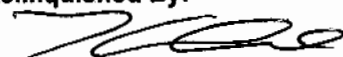
Date

Time

Received By:

Date

Time



1/22/10

3:00

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7681

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/15/2010	MEDIA:		OBT3
TIME COLLECTED (HH:MM)		1328	SUB-MEDIA:		TUFF 1
PRS ID:	C-14-006	OK	SAMPLE TECH CODE:		HA
LOCATION ID:	14-610662	↓	FIELD QC TYPE:		NA
LOCATION TYPE:	GENERIC	↓	FIELD PREP:		NA
TOP DEPTH:	0	0.0	SAMPLE USAGE:		INV
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	5	EXCAVATED: YES/NO/NA		NO
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA	WATER FLOWING: YES/NO/NA		NO
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	Y	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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 moist sandy silt

SAMPLE COMMENTS:

NA

LOCATION DESC:

G-4 Westside of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 16$  dpm  
 $\text{Pb} \leq 2080$  dpm  
 HE negative  
 PID reading  $\frac{0.0}{0.0}$  ppm

COLLECTED BY (PRINT)

TLMCFarland

REVIEWED BY (PRINT)

R5011510  
R Saunders

RELINQUISHED BY (Printed Name) TLMCFarland (Signature) TLMCFarland	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. M. R. O. R. A. (Signature) [Signature]	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7680

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	QBT3		Allh
TIME COLLECTED (HH:MM)		1316		SUB-MEDIA:	TUFF1		NA
PRS ID:	C-14-006	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	14-610661	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	2.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	3.1		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	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		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 sandy silt, few rocks

SAMPLE COMMENTS:

NA

LOCATION DESC:

G-3, South West side of AOC  
LA 1/15/10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm  
β ≤ 1845 dpmPID ambient reading 6.0  
0.0 ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) TLMcFarland (Signature) Tracy	Date/Time 01/15/10 1550	RECEIVED BY (Printed Name) S. MARCZAK (Signature) [Signature]	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7685

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/15/2010	MEDIA:		OBT3
TIME COLLECTED (HH:MM)		1406	SUB-MEDIA:		TUFF 1
PRS ID:	C-14-006	OK	SAMPLE TECH CODE:		HA
LOCATION ID:	14-610664	↓	FIELD QC TYPE:		NA
LOCATION TYPE:	GENERIC	↓	FIELD PREP:		NA
TOP DEPTH:	0	0.0	SAMPLE USAGE:		INV
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	5	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	Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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 silty clay, moist, roots and rocks, grass, bank

SAMPLE COMMENTS:

NA

LOCATION DESC:

6-2 east side of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

α ± 33 dpm  
 138 ± 1935 dpm

PID reading 1.8  
 ambient 0.0 ppm

HE negative

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Nicholas Gallegas

RELINQUISHED BY (Printed Name) TL McFarland (Signature) <i>TL McFarland</i>	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. MARZAY (Signature) <i>S. Marzay</i>	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7684

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	QBT3		A11h
TIME COLLECTED (HH:MM)		1403		SUB-MEDIA:	TUFF 1		NA
PRS ID:	C-14-006	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	14-610663			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		
TOP DEPTH:	0	2.0		SAMPLE USAGE:	INV		
BOTTOM DEPTH:	0	3.3		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	Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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:

Light brown silty sand, some white pumice

SAMPLE COMMENTS:

NA

LOCATION DESC:

G-1, north side of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 27$  dpm    PID    ambient 0.0  
 B8  $\leq 2120$  dpm    reading 0.0 ppm

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Nicholas Gallegas

RELINQUISHED BY (Printed Name) TL McFarland (Signature) <i>TL McFarland</i>	Date/Time 1/15/10 1550	RECEIVED BY S. MARRAZZ (Printed Name) (Signature) <i>SM</i>	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7679

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	QBT3		All h
TIME COLLECTED(HH:MM)		1305		SUB-MEDIA:	TUFF1		NA
PRS ID:	C-14-006	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	14-610661	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	0.5		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	S		EXCAVATED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA
BOREHOLE: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA		BOREHOLE DECLINATION:	NA	BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Regular	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		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 wet silty clay

FTB RE14-10-7691

SAMPLE COMMENTS:

NA

LOCATION DESC:

G-3, South West side of AOC  
1/15/10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 16 dpm  
BX ≤ 1852 dpmPID ambient reading 0.0 ppm  
HE negative

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

LARRY A. Lopez

RELINQUISHED BY (Printed Name) TLMcFarland (Signature) Tracy McFarland	Date/Time 1/15/10 1550	RECEIVED BY G. MAROZAK (Printed Name) (Signature) [Signature]	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7691

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/15/2010	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1302	SUB-MEDIA:	OTHER	
PRS ID:	C-14-006	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	Regular	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of RE14-10-7679

SAMPLE COMMENTS:

FTB

LOCATION DESC:

None

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) TLMcFarland	1/15/10	S. MARTIN	1/15/10
(Signature) TLMcFarland	1550		1550
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

**SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY**

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7687

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	OBT3		Allh
TIME COLLECTED(HH:MM)		1439		SUB-MEDIA:	TUFF 1		NA
PRS ID:	C-14-006	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	14-610665	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	0.8		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	Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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:

Dark brown clay

SAMPLE COMMENTS:

NA

LOCATION DESC:

6-5, center of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 16 dpm  
 BX ≤ 1769 dpm

PID  $\frac{\text{ambient}}{\text{reading}} \frac{0.0}{0.0}$  ppm  
 HE negative

COLLECTED BY (PRINT)

Th McFarland

REVIEWED BY (PRINT)

Nikolas Gallegos

RELINQUISHED BY (Printed Name) TH McFarland (Signature) Tracy Ruff	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. MARATHU (Signature) [Signature]	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time



## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7686

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	QBT3		Allh
TIME COLLECTED (HH:MM)		1421		SUB-MEDIA:	TUFF 1		NA
PRS ID:	C-14-006	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	14-610664	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	2.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	4.0		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	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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 sandy clay, moist, few white pumice fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

G-2 east side of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

α ± 22 dpm  
 BY ± 2100 dpm

PID ambient 0.0  
 reading 0.0 ppm

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY (Printed Name) TLMcFarland (Signature) Tray 267	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. MAR 27 11 (Signature) [Signature]	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7689

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	QBT3		Allh
TIME COLLECTED (HH:MM)		1340		SUB-MEDIA:	TUFF1		NA
PRS ID:	C-14-006	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	UNK	14-610662		FIELD QC TYPE:	ED		
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA		
TOP DEPTH:	0	2.0		SAMPLE USAGE:	QC		
BOTTOM DEPTH:	0	4.5		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	1341/15/10 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		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: QC Sample of RE 14-10-7682

Orangy brown sand and white pumice fragments

SAMPLE COMMENTS:

Pumice at 3'7"

LOCATION DESC:

G-4, West side of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

d ± 38 dpm

BX ± 2090 dpm

PID reading 0.0  
ambient 0.0 ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

Larry A. Lopez

RELINQUISHED BY (Printed Name) TLMcFarland (Signature) Tracy Z...	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. MARIT AU (Signature) [Signature]	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7688

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	QBT3		A11h
TIME COLLECTED (HH:MM)		1447		SUB-MEDIA:	TUFF 1		NA
PRS ID:	C-14-006	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	14-610665	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	2.4		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	3.5		SCREEN/PORT DESC:			NA
FIELD MATRIX:	B	5		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	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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 moist clayey silt, few rocks and roots

FD RE14-10-7693

SAMPLE COMMENTS:

NA

LOCATION DESC:

6-5, center of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

 $\alpha \leq 16$  dpm  
 $\text{BY} \leq 2000$  dpm

PID ambient reading 0.0 / 0.0 ppm

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

Nicholas Gallegos

RELINQUISHED BY (Printed Name) TLMcFarland (Signature) <i>Tracy Z...</i>	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. MAROAN (Signature) <i>W</i>	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7682

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:	QBT3		Allh
TIME COLLECTED (HH:MM)		1340		SUB-MEDIA:	TUFF1		NA
PRS ID:	C-14-006	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	14-610662	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	2.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	4.5		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	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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:

Orangy brown sand and white pumice fragments  
 FD RE14-10-7689

SAMPLE COMMENTS:

Pumice at 3' 7"

LOCATION DESC:

G-4 Westside of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 38 dpm

β ≤ 2090 dpm

PID  $\frac{\text{reading}}{\text{ambient}} = \frac{0.0}{0.0} \text{ ppm}$ 

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

LARRY A. COPELAND

RELINQUISHED BY (Printed Name) TLMcFarland (Signature) Tracy 32	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. M4R17A4 (Signature) [Signature]	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr. FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7683

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010	MEDIA:	OBT3		A11h	
TIME COLLECTED (HH:MM)		1349	SUB-MEDIA:	TUFF 1		NA	
PRS ID:	C-14-006	OK	SAMPLE TECH CODE:	HA		OK	
LOCATION ID:	14-610663	↓	FIELD QC TYPE:	NA			
LOCATION TYPE:	GENERIC		FIELD PREP:	NA			
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV			
BOTTOM DEPTH:	0	0.3	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	Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	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 sandy clay, slightly root moisture moist, roots and rocks

SAMPLE COMMENTS:

NA

LOCATION DESC:

G-1, north side of AOC

FIELD SCREENING/MEASUREMENT RESULTS:

 $\alpha \pm 16$  dpm  
 $\beta \pm 2050$  dpm

 PID  $\frac{\text{ambient}}{\text{reading}} \frac{0.0}{0.0}$  ppm  
 HE negative

COLLECTED BY (PRINT)

TLMcfarland

REVIEWED BY (PRINT)

Nickolas Gallegos

RELINQUISHED BY (Printed Name) TLMcfarland (Signature) Tray 227	Date/Time 1/15/10 1550	RECEIVED BY (Printed Name) S. MARY (Signature) M	Date/Time 1/15/10 1550
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2492

EVENT NAME: 4th Qtr, FY09 - AOC C-14-006 - Threemile Canyon

SAMPLE ID: RE14-10-7693

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/15/2010		MEDIA:		NA	
TIME COLLECTED(HH:MM)		1456		SUB-MEDIA:		OTHER	
PRS ID: C-14-006		OK		SAMPLE TECH CODE:		DC	
LOCATION ID: UNK		14-610665		FIELD QC TYPE:		ER	
LOCATION TYPE: GENERIC		OK		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 - Ice (Hydrogen Sulfate) Tag	Y	
1		SW-846:6850	250 ML POLY	Ice	Y	
1		TCN	500 ML POLY	Sodium Hydroxide	Y	

SAMPLE DESC: QC Sample of RE14-10-7688

## SAMPLE COMMENTS:

Rinsate

## LOCATION DESC:

NA

## FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

Nikolas Gallegos

RELINQUISHED BY (Printed Name) <b>MARIN</b> (Signature) <i>Jan A. Marin</i>	Date/Time 1/20/10 09:42	RECEIVED BY (Printed Name) <b>Sherri Sheppard</b> (Signature) <i>Sherri Sheppard</i>	Date/Time 1/20/10 942
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## DATA VALIDATION COVER SHEET

5121-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1386 VALIDATION DATE: 03/02/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: John A. Bailey 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 | <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 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 parent sample for the water QC analyses was a LANL sample from another RN. No sample data were qualified as a result. The MS/MSD parent sample raw data were not included in the data package.

Reviewed by: Monica Dymerski Level I Date: 03/03/10

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


A handwritten signature in cursive script that reads "John A. Bailey".

DATE: 03/02/10


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 checked="" type="checkbox"/>	<input 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	
<b>5121-2</b> <b>LC/MS/MS Perchlorate 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"/>	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	
<b>5121-2</b> <b>LC/MS/MS Perchlorate Analytical Data Validation Checklist</b>	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"/>	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

## Perchlorate Analysis Data Sheet

## Client Sample No.

RE14-10-7689

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 947096Extraction Type: Solid PrepDate Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 245389001Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 87Sample 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	.575	2.3	1.06	ug/kg	J	1	06-FEB-10 15:25	per0206015a
	Perchlorate Isotope Ratio			3.18			1	06-FEB-10 15:25	per0206015a
14797-73-0	Perchlorate-101	.575	2.3	1.05	ug/kg	J	1	06-FEB-10 15:25	per0206015a
	Perchlorate-O(18)			5.69	ug/kg		1	06-FEB-10 15:25	per0206015a

<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: 247096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE14-10-7679  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389002  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	0.636	ug/kg	U	1	06-FEB-10 15:31	per0206016a
	Perchlorate Isotope Ratio						1	06-FEB-10 15:31	per0206016a
14797-73-0	Perchlorate-101	.636	2.54	0.636	ug/kg	U	1	06-FEB-10 15:31	per0206016a
	Perchlorate-O(18)			6.39	ug/kg		1	06-FEB-10 15:31	per0206016a

<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

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE14-10-7680  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389002  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 88

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.568	2.27	1.88	ug/kg	J	1	06-FEB-10 15:51	per0206019a
	Perchlorate Isotope Ratio			3.22			1	06-FEB-10 15:51	per0206019a
14797-73-0	Perchlorate-101	.568	2.27	1.85	ug/kg	J	1	06-FEB-10 15:51	per0206019a
	Perchlorate-O(18)			5.64	ug/kg		1	06-FEB-10 15:51	per0206019a

<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 LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 947096Extraction Type: Solid Prep

Client Sample No.

RE14-10-7686Date Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 245389004Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 71Sample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.648	2.59	1.35	ug/kg	J	1	06-FEB-10 15:58	per0206020a
	Perchlorate Isotope Ratio			3.02			1	06-FEB-10 15:58	per0206020a
14797-73-0	Perchlorate-101	.648	2.59	1.42	ug/kg	J	1	06-FEB-10 15:58	per0206020a
	Perchlorate-O(18)			6.37	ug/kg		1	06-FEB-10 15:58	per0206020a

<sup>a</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 =

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

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0

Client Sample No.  
RE14-10-7688

Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389005  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.634	2.53	0.634	ug/kg	U	1	06-FEB-10 16:04	per0206021a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:04	per0206021a
14797-73-0	Perchlorate-101	.634	2.53	0.634	ug/kg	U	1	06-FEB-10 16:04	per0206021a
	Perchlorate-O(18)			6.51	ug/kg		1	06-FEB-10 16:04	per0206021a

<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

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE14-10-7684  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389006  
 Date Filtered: 05-FEB-10  
 Injection Volume (mL): 20  
 %Solids: 87

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.574	2.29	0.574	ug/kg	U	1	06-FEB-10 16:30	per0206025a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:30	per0206025a
14797-73-0	Perchlorate-101	.574	2.29	0.583	ug/kg	J	1	06-FEB-10 16:30	per0206025a
	Perchlorate-O(18)			6.22	ug/kg		1	06-FEB-10 16:30	per0206025a

<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: 947096

Extraction Type: Solid Prep

Client Sample No.

RE14-10-7687

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1386

GEL Sample ID: 245389007

Date Filtered: 05-FEB-10

Injection Volume (uL): 20

%Solids: 73

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.682	2.73	0.682	ug/kg	U	1	06-FEB-10 16:37	per0206026a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:37	per0206026a
14797-73-0	Perchlorate-101	.682	2.73	0.682	ug/kg	U	1	06-FEB-10 16:37	per0206026a
	Perchlorate-O(18)			6.69	ug/kg		1	06-FEB-10 16:37	per0206026a

<sup>a</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

Client Sample No.

RE14-10-7681Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 947096Extraction Type: Solid PrepDate Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 245389008Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 78Sample 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	.645	2.58	0.645	ug/kg	U	1	06-FEB-10 16:43	per0206027a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:43	per0206027a
14797-73-0	Perchlorate-101	.645	2.58	0.645	ug/kg	U	1	06-FEB-10 16:43	per0206027a
	Perchlorate-O(18)			7.05	ug/kg		1	06-FEB-10 16:43	per0206027a

<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**

**Lab Name:** GEL Laboratories LLC

**Lab Code:** GEL

**Instrument:** LCMSMS

**Method:** SW846 6850 Modified

**Matrix:** SOIL

**Extraction Batch ID:** 947096

**Extraction Type:** Solid Prep

**Client Sample No.**

RE14-10-7682

**Date Received:** 23-JAN-10

**GEL Job No (SDG):** 10-1386

**GEL Sample ID:** 245389009

**Date Filtered:** 05-FEB-10

**Injection Volume (uL):** 20

**Sample Volume/Weight:** 2.00 g

**%Solids:** 87

**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	.574	2.29	1.25	ug/kg	J	1	06-FEB-10 16:50	per0206028a
	Perchlorate Isotope Ratio			3.21			1	06-FEB-10 16:50	per0206028a
14797-73-0	Perchlorate-101	.574	2.29	1.23	ug/kg	J	1	06-FEB-10 16:50	per0206028a
	Perchlorate-O(18)			5.86	ug/kg		1	06-FEB-10 16:50	per0206028a

<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

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 247096Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7685Date Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 245389010Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 85

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc <sup>*</sup>	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.59	2.36	0.590	ug/kg	U	1	06-FEB-10 16:56	per0206029a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:56	per0206029a
14797-73-0	Perchlorate-101	.59	2.36	0.590	ug/kg	U	1	06-FEB-10 16:56	per0206029a
	Perchlorate-O(18)			6.53	ug/kg		1	06-FEB-10 16:56	per0206029a

<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: 247026

Extraction Type: Solid Prep

Client Sample No.

RE14-10-7683

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1386

GEL Sample ID: 245389011

Date Filtered: 05-FEB-10

Injection Volume (uL): 20

Sample Volume/Weight: 2.00 g

%Solids: 75

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	.67	2.68	1.35	ug/kg	J	1	06-FEB-10 17:03	per0206030a
	Perchlorate Isotope Ratio			3.11			1	06-FEB-10 17:03	per0206030a
14797-73-0	Perchlorate-101	.67	2.68	1.38	ug/kg	J	1	06-FEB-10 17:03	per0206030a
	Perchlorate-O(18)			7.13	ug/kg		1	06-FEB-10 17:03	per0206030a

<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  $\frac{\% \text{Solids}}{\% \text{Solids}}$

Form I

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846.6850 Modified

Matrix: WATER

Extraction Batch ID: 945225

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

RE14-10-7693

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1386-1

GEL Sample ID: 245390001

Date Filtered: 30-JAN-10

Injection Volume (mL): 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	01-FEB-10 22:55	per0201066a
	Perchlorate Isotope Ratio						1	01-FEB-10 22:55	per0201066a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	01-FEB-10 22:55	per0201066a
	Perchlorate-O(18)			0.453	ug/L		1	01-FEB-10 22:55	per0201066a

<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  $\frac{1}{\% \text{Solids}}$

JAB  
03/02/10

## DATA VALIDATION COVER SHEET

5118-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1386 VALIDATION DATE: 03/02/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: John A. Bailey 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 | 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. RAWBSS 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):

- Ca was detected in the soil MB. All associated sample results for Ca were detects >50X the blank concentration and, thus, were not qualified based on professional judgment.
- Tl was detected in the soil bracketing CCBs. The Tl results for samples RE14-10-7680 and -7685 were detects ≤5X the blank concentration and, thus, were qualified U,I4b. All other associated sample results for Tl were detects >5X the blank concentration and, thus, were not qualified.
- Al, Ba, Ca, Cr, Fe, Mn, K, and Na were detected in the FR blank, sample -7693, which was associated with all field samples. The Na sample results for -7679, -7688, -7687, -7681, -7685, and -7683 were detects ≤5X the blank concentration and, thus, were qualified U,I4d. The remaining associated sample results were detects >5X the FR blank concentrations and, thus, were not qualified.
- The soil MS %Rs for Sb, Ba, and Se were < the laboratory's LAL but ≥ 10%. All associated sample results for Se (with the exception of sample -7679), and the Sb results for samples -7679 and -7685 were NDs and, thus, were qualified UJ,I6a. The remaining associated sample results were detects and, thus, were qualified J-,I6a.
- It should be noted that the parent samples for the water QC analyses were LANL samples from other RNs. No sample data were qualified as a result.


Reviewed by: Monica Dymerski

Level I


Date: 03/03/10

DATA VALIDATION COVER SHEET	
5118-1  Data Validation Cover Sheet	Records Use only   Los Alamos NATIONAL LABORATORY EST. 1943
VALIDATOR'S SIGNATURE: <u>John Bailey</u> DATE: <u>03/02/10</u>	
Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project




METALS ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5118-2</b>  <b>Metals Analytical Data Validation Checklist</b>	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	Records Use only	
Metals 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. 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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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 $< \text{the LAL}$ 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"/>	24. The associated matrix spike recovery was $> \text{the UAL}$ . 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 (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				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

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## Metals Analytical Data Validation Checklist

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**  
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**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389001

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7689

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16600000	ug/Kg		7610	22400	22400	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-36-0	Antimony J-,I6a	879	ug/Kg	JN	369	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-38-2	Arsenic	2.2	mg/kg		0.224	1.12	1.12	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-39-3	Barium J-,I6a	210000	ug/Kg	N	112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-41-7	Beryllium	1.01	mg/kg		0.0224	0.112	0.112	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-43-9	Cadmium	559	ug/Kg	U	112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-70-2	Calcium	3140000	ug/Kg		8950	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-47-3	Chromium	11700	ug/Kg		168	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-48-4	Cobalt	3990	ug/Kg		168	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-50-8	Copper	5710	ug/Kg		336	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-89-6	Iron	12100000	ug/Kg		8950	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-92-1	Lead	11500	ug/Kg		280	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-95-4	Magnesium	1960000	ug/Kg	N	9510	33600	33600	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-96-5	Manganese	187000	ug/Kg	N	224	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-97-6	Mercury	23.9	ug/kg		4.43	13	13	1	AV	JXL1	02/04/10 12:52	020410S1-8	945622
7440-02-0	Nickel	7.89	mg/kg		0.112	0.448	0.448	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-09-7	Potassium	1410000	ug/Kg	N	7160	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7782-49-2	Selenium UJ,I6a	1.12	mg/kg	UN	0.56	1.12	1.12	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-22-4	Silver	559	ug/Kg	U	112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-23-5	Sodium	168000	ug/Kg		7830	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-28-0	Thallium	0.283	mg/kg		0.0672	0.224	0.224	2	MS	BAJ	02/15/10 23:15	100215-2	945407
7440-61-1	Uranium	0.786	mg/kg		0.0148	0.0448	0.0448	2	MS	BAJ	02/16/10 08:23	100215-7	945407
7440-62-2	Vanadium	23600	ug/Kg		112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-66-6	Zinc	21500	ug/Kg		369	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.514	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.513	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.53	g	30	mL	02/04/10	TXB3

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03/02/10

## METALS

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## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389002

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7679

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9380000	ug/Kg		8650	25400	25400	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-36-0	Antimony UJ,16a	1270	ug/Kg	UN	420	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-38-2	Arsenic	2.5	mg/kg		0.249	1.25	1.25	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-39-3	Barium J-,16a	164000	ug/Kg	N	127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-41-7	Beryllium	0.821	mg/kg		0.0249	0.125	0.125	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-43-9	Cadmium	636	ug/Kg	U	127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-70-2	Calcium	2350000	ug/Kg		10200	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-47-3	Chromium	10300	ug/Kg		191	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-48-4	Cobalt	5640	ug/Kg		191	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-50-8	Copper	6170	ug/Kg		382	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-89-6	Iron	12000000	ug/Kg		10200	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-92-1	Lead	14600	ug/Kg		318	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-95-4	Magnesium	1710000	ug/Kg	N	10800	38200	38200	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-96-5	Manganese	339000	ug/Kg	N	254	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-97-6	Mercury	16.3	ug/kg		5.15	15.1	15.1	1	AV	JXL1	02/04/10 13:05	020410S1-8	945622
7440-02-0	Nickel	7.31	mg/kg		0.125	0.498	0.498	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-09-7	Potassium	1310000	ug/Kg	N	8140	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7782-49-2	Selenium J-,16a	0.902	mg/kg	JN	0.623	1.25	1.25	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-22-4	Silver	636	ug/Kg	U	127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-23-5	Sodium U,14d	54400	ug/Kg		8910	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-28-0	Thallium	0.287	mg/kg		0.0747	0.249	0.249	2	MS	BAJ	02/15/10 23:58	100215-2	945407
7440-61-1	Uranium	1.28	mg/kg		0.0164	0.0498	0.0498	2	MS	BAJ	02/16/10 08:32	100215-7	945407
7440-62-2	Vanadium	24800	ug/Kg		127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-66-6	Zinc	24100	ug/Kg		420	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403

## Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.511	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.504	g	30	mL	02/04/10	TXB3

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**METALS**  
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**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389003

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7680

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	18500000	ug/Kg		7390	21700	21700	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-36-0	Antimony J-,16a	922	ug/Kg	JN	359	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-38-2	Arsenic	1.27	mg/kg		0.221	1.11	1.11	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-39-3	Barium J-,16a	243000	ug/Kg	N	109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-41-7	Beryllium	0.537	mg/kg		0.0221	0.111	0.111	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-43-9	Cadmium	543	ug/Kg	U	109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-70-2	Calcium	2400000	ug/Kg		8690	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-47-3	Chromium	13800	ug/Kg		163	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-48-4	Cobalt	5810	ug/Kg		163	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-50-8	Copper	6950	ug/Kg		326	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-89-6	Iron	15400000	ug/Kg		8690	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-92-1	Lead	16000	ug/Kg		272	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-95-4	Magnesium	2200000	ug/Kg	N	9230	32600	32600	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-96-5	Manganese	327000	ug/Kg	N	217	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-97-6	Mercury	25.8	ug/kg		4.37	12.9	12.9	1	AV	JXL1	02/04/10 13:07	020410S1-8	945622
7440-02-0	Nickel	3.95	mg/kg		0.111	0.442	0.442	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-09-7	Potassium	1420000	ug/Kg	N	6950	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.11	mg/kg	UN	0.553	1.11	1.11	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-22-4	Silver	543	ug/Kg	U	109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-23-5	Sodium	156000	ug/Kg		7610	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-28-0	Thallium U,14b	0.143	mg/kg	J	0.0663	0.221	0.221	2	MS	BAJ	02/16/10 00:05	100215-2	945407
7440-61-1	Uranium	0.525	mg/kg		0.0146	0.0442	0.0442	2	MS	BAJ	02/16/10 08:34	100215-7	945407
7440-62-2	Vanadium	31000	ug/Kg		109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-66-6	Zinc	25000	ug/Kg		359	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.523	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.514	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.53	g	30	mL	02/04/10	TXB3

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**METALS**  
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**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389004

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7686

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 77

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	17400000	ug/Kg		8560	25200	25200	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-36-0	Antimony J-,16a	601	ug/Kg	JN	415	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-38-2	Arsenic	2.53	mg/kg		0.25	1.25	1.25	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-39-3	Barium J-,16a	254000	ug/Kg	N	126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-41-7	Beryllium	1.09	mg/kg		0.025	0.125	0.125	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-43-9	Cadmium	629	ug/Kg	U	126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-70-2	Calcium	2480000	ug/Kg		10100	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-47-3	Chromium	12600	ug/Kg		189	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-48-4	Cobalt	3500	ug/Kg		189	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-50-8	Copper	7970	ug/Kg		378	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-89-6	Iron	14600000	ug/Kg		10100	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-92-1	Lead	14300	ug/Kg		315	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-95-4	Magnesium	2310000	ug/Kg	N	10700	37800	37800	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-96-5	Manganese	394000	ug/Kg	N	252	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-97-6	Mercury	23.6	ug/kg		5.09	15	15	1	AV	JXL1	02/04/10 13:09	020410S1-8	945622
7440-02-0	Nickel	8.32	mg/kg		0.125	0.501	0.501	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-09-7	Potassium	1650000	ug/Kg	N	8060	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.25	mg/kg	UN	0.626	1.25	1.25	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-22-4	Silver	629	ug/Kg	U	126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-23-5	Sodium	124000	ug/Kg		8810	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-28-0	Thallium	0.276	mg/kg		0.0751	0.25	0.25	2	MS	BAJ	02/16/10 00:11	100215-2	945407
7440-61-1	Uranium	1.06	mg/kg		0.0165	0.0501	0.0501	2	MS	BAJ	02/16/10 08:39	100215-7	945407
7440-62-2	Vanadium	27800	ug/Kg		126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-66-6	Zinc	25000	ug/Kg		415	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.515	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.518	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.52	g	30	mL	02/04/10	TXB3

JAB  
03/02/10



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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389005

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7688

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	14700000	ug/Kg		8520	25000	25000	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-36-0	Antimony J-,I6a	517	ug/Kg	JN	413	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-38-2	Arsenic	2.62	mg/kg		0.245	1.22	1.22	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-39-3	Barium J-,I6a	236000	ug/Kg	N	125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-41-7	Beryllium	0.898	mg/kg		0.0245	0.122	0.122	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-43-9	Cadmium	626	ug/Kg	U	125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-70-2	Calcium	2510000	ug/Kg		10000	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-47-3	Chromium	9840	ug/Kg		188	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-48-4	Cobalt	4350	ug/Kg		188	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-50-8	Copper	6230	ug/Kg		376	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-89-6	Iron	12300000	ug/Kg		10000	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-92-1	Lead	13100	ug/Kg		313	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-95-4	Magnesium	1760000	ug/Kg	N	10600	37600	37600	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-96-5	Manganese	285000	ug/Kg	N	250	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-97-6	Mercury	24.1	ug/kg		4.81	14.1	14.1	1	AV	JXL1	02/04/10 13:11	020410S1-8	945622
7440-02-0	Nickel	7.19	mg/kg		0.122	0.489	0.489	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-09-7	Potassium	1420000	ug/Kg	N	8020	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7782-49-2	Selenium UJ,I6a	1.22	mg/kg	UN	0.612	1.22	1.22	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-22-4	Silver	626	ug/Kg	U	125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-23-5	Sodium U,I4d	75300	ug/Kg		8770	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-28-0	Thallium	0.242	mg/kg	J	0.0734	0.245	0.245	2	MS	BAJ	02/16/10 00:17	100215-2	945407
7440-61-1	Uranium	1.28	mg/kg		0.0161	0.0489	0.0489	2	MS	BAJ	02/16/10 08:40	100215-7	945407
7440-62-2	Vanadium	24700	ug/Kg		125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-66-6	Zinc	21300	ug/Kg		413	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.506	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.518	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.538	g	30	mL	02/04/10	TXB3

JAB  
03/02/10

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389006

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7684

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	15500000	ug/Kg		7720	22700	22700	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-36-0	Antimony J-,16a	399	ug/Kg	JN	375	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-38-2	Arsenic	2.12	mg/kg		0.227	1.13	1.13	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-39-3	Barium J-,16a	223000	ug/Kg	N	114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-41-7	Beryllium	0.969	mg/kg		0.0227	0.113	0.113	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-43-9	Cadmium	568	ug/Kg	U	114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-70-2	Calcium	3930000	ug/Kg		9090	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-47-3	Chromium	10200	ug/Kg		170	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-48-4	Cobalt	4250	ug/Kg		170	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-50-8	Copper	6090	ug/Kg		341	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-89-6	Iron	12600000	ug/Kg		9090	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-92-1	Lead	13300	ug/Kg		284	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-95-4	Magnesium	1800000	ug/Kg	N	9650	34100	34100	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-96-5	Manganese	268000	ug/Kg	N	227	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-97-6	Mercury	20.8	ug/kg		4.46	13.1	13.1	1	AV	JXL1	02/04/10 13:13	020410S1-8	945622
7440-02-0	Nickel	7.21	mg/kg		0.113	0.453	0.453	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-09-7	Potassium	1470000	ug/Kg	N	7270	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.13	mg/kg	UN	0.567	1.13	1.13	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-22-4	Silver	568	ug/Kg	U	114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-23-5	Sodium	98600	ug/Kg		7950	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-28-0	Thallium	0.238	mg/kg		0.068	0.227	0.227	2	MS	BAJ	02/16/10 00:23	100215-2	945407
7440-61-1	Uranium	0.722	mg/kg		0.015	0.0453	0.0453	2	MS	BAJ	02/16/10 08:42	100215-7	945407
7440-62-2	Vanadium	25300	ug/Kg		114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-66-6	Zinc	21800	ug/Kg		375	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.505	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.506	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.525	g	30	mL	02/04/10	TXB3

JAB  
03/02/10

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389007

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7687

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 73

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8740000	ug/Kg		9010	26500	26500	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-36-0	Antimony J-,16a	548	ug/Kg	JN	437	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-38-2	Arsenic	2.19	mg/kg		0.273	1.36	1.36	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-39-3	Barium J-,16a	147000	ug/Kg	N	132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-41-7	Beryllium	0.769	mg/kg		0.0273	0.136	0.136	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-43-9	Cadmium	662	ug/Kg	U	132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-70-2	Calcium	3190000	ug/Kg		10600	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-47-3	Chromium	9330	ug/Kg		199	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-48-4	Cobalt	5230	ug/Kg		199	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-50-8	Copper	5740	ug/Kg		397	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-89-6	Iron	11400000	ug/Kg		10600	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-92-1	Lead	13600	ug/Kg		331	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-95-4	Magnesium	1520000	ug/Kg	N	11300	39700	39700	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-96-5	Manganese	376000	ug/Kg	N	265	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-97-6	Mercury	11.6	ug/kg	J	5.01	14.7	14.7	1	AV	JXL1	02/04/10 13:15	020410S1-8	945622
7440-02-0	Nickel	6.69	mg/kg		0.136	0.546	0.546	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-09-7	Potassium	1480000	ug/Kg	N	8480	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.36	mg/kg	UN	0.682	1.36	1.36	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-22-4	Silver	662	ug/Kg	U	132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-23-5	Sodium U,14d	52300	ug/Kg		9270	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-28-0	Thallium	0.275	mg/kg		0.0819	0.273	0.273	2	MS	BAJ	02/16/10 00:42	100215-2	945407
7440-61-1	Uranium	1.18	mg/kg		0.018	0.0546	0.0546	2	MS	BAJ	02/16/10 08:44	100215-7	945407
7440-62-2	Vanadium	23800	ug/Kg		132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-66-6	Zinc	24600	ug/Kg		437	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.515	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.556	g	30	mL	02/04/10	TXB3

JAB  
03/02/10

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389008

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7681

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 78

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7520000	ug/Kg		8770	25800	25800	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-36-0	Antimony J-,16a	1090	ug/Kg	JN	426	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-38-2	Arsenic	1.86	mg/kg		0.247	1.24	1.24	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-39-3	Barium J-,16a	152000	ug/Kg	N	129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-41-7	Beryllium	0.643	mg/kg		0.0247	0.124	0.124	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-43-9	Cadmium	645	ug/Kg	U	129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-70-2	Calcium	1960000	ug/Kg		10300	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-47-3	Chromium	11700	ug/Kg		193	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-48-4	Cobalt	5230	ug/Kg		193	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-50-8	Copper	4710	ug/Kg		387	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-89-6	Iron	11100000	ug/Kg		10300	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-92-1	Lead	11300	ug/Kg		322	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-95-4	Magnesium	1440000	ug/Kg	N	11000	38700	38700	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-96-5	Manganese	370000	ug/Kg	N	258	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-97-6	Mercury	13	ug/kg	J	4.62	13.6	13.6	1	AV	JXL	02/04/10 13:17	020410S1-8	945622
7440-02-0	Nickel	6.79	mg/kg		0.124	0.494	0.494	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-09-7	Potassium	1430000	ug/Kg	N	8250	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.24	mg/kg	UN	0.618	1.24	1.24	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-22-4	Silver	645	ug/Kg	U	129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-23-5	Sodium U,14d	49200	ug/Kg		9030	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-28-0	Thallium	0.239	mg/kg	J	0.0741	0.247	0.247	2	MS	BAJ	02/16/10 00:48	100215-2	945407
7440-61-1	Uranium	0.956	mg/kg		0.0163	0.0494	0.0494	2	MS	BAJ	02/16/10 08:45	100215-7	945407
7440-62-2	Vanadium	24900	ug/Kg		129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-66-6	Zinc	21500	ug/Kg		426	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.522	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.57	g	30	mL	02/04/10	TXB3

JAB  
03/02/10

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389009

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7682

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	17300000	ug/Kg		7590	22300	22300	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-36-0	Antimony J-,16a	873	ug/Kg	JN	368	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-38-2	Arsenic	2.58	mg/kg		0.227	1.13	1.13	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-39-3	Barium J-,16a	206000	ug/Kg	N	112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-41-7	Beryllium	1.33	mg/kg		0.0227	0.113	0.113	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-43-9	Cadmium	558	ug/Kg	U	112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-70-2	Calcium	2830000	ug/Kg		8930	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-47-3	Chromium	11500	ug/Kg		167	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-48-4	Cobalt	4070	ug/Kg		167	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-50-8	Copper	5840	ug/Kg		335	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-89-6	Iron	12700000	ug/Kg		8930	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-92-1	Lead	12300	ug/Kg		279	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-95-4	Magnesium	2070000	ug/Kg	N	9490	33500	33500	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-96-5	Manganese	213000	ug/Kg	N	223	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-97-6	Mercury	22.3	ug/kg		4.52	13.3	13.3	1	AV	JXL1	02/04/10 13:23	020410S1-8	945622
7440-02-0	Nickel	10.7	mg/kg		0.113	0.453	0.453	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-09-7	Potassium	1460000	ug/Kg	N	7140	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.13	mg/kg	UN	0.567	1.13	1.13	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-22-4	Silver	558	ug/Kg	U	112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-23-5	Sodium	147000	ug/Kg		7810	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-28-0	Thallium	0.301	mg/kg		0.068	0.227	0.227	2	MS	BAJ	02/16/10 00:54	100215-2	945407
7440-61-1	Uranium	1.01	mg/kg		0.015	0.0453	0.0453	2	MS	BAJ	02/16/10 08:47	100215-7	945407
7440-62-2	Vanadium	24900	ug/Kg		112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-66-6	Zinc	21600	ug/Kg		368	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.514	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.506	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.518	g	30	mL	02/04/10	TXB3

JAB  
03/02/10

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389010

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7685

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5260000	ug/Kg		7950	23400	23400	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-36-0	Antimony UJ,16a	1170	ug/Kg	UN	386	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-38-2	Arsenic	1.54	mg/kg		0.227	1.13	1.13	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-39-3	Barium J-,16a	92400	ug/Kg	N	117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-41-7	Beryllium	0.480	mg/kg		0.0227	0.113	0.113	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-43-9	Cadmium	584	ug/Kg	U	117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-70-2	Calcium	2340000	ug/Kg		9350	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-47-3	Chromium	20700	ug/Kg		175	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-48-4	Cobalt	3290	ug/Kg		175	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-50-8	Copper	7680	ug/Kg		351	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-89-6	Iron	8120000	ug/Kg		9350	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-92-1	Lead	8850	ug/Kg		292	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-95-4	Magnesium	1130000	ug/Kg	N	9930	35100	35100	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-96-5	Manganese	217000	ug/Kg	N	234	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-97-6	Mercury	10.1	ug/kg	J	4.55	13.4	13.4	1	AV	JXL1	02/04/10 13:25	020410S1-8	945622
7440-02-0	Nickel	4.48	mg/kg		0.113	0.453	0.453	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-09-7	Potassium	998000	ug/Kg	N	7480	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.13	mg/kg	UN	0.566	1.13	1.13	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-22-4	Silver	584	ug/Kg	U	117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-23-5	Sodium U,14d	70200	ug/Kg		8180	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-28-0	Thallium U,14b	0.142	mg/kg	J	0.068	0.227	0.227	2	MS	BAJ	02/16/10 01:00	100215-2	945407
7440-61-1	Uranium	1.21	mg/kg		0.015	0.0453	0.0453	2	MS	BAJ	02/16/10 08:49	100215-7	945407
7440-62-2	Vanadium	17600	ug/Kg		117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-66-6	Zinc	22500	ug/Kg		386	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.505	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.521	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.529	g	30	mL	02/04/10	TXB3

JAB  
03/02/10

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389011

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7683

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 75

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7570000	ug/Kg		8880	26100	26100	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-36-0	Antimony J-,16a	1100	ug/Kg	JN	431	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-38-2	Arsenic	2.3	mg/kg		0.264	1.32	1.32	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-39-3	Barium J-,16a	154000	ug/Kg	N	131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-41-7	Beryllium	0.851	mg/kg		0.0264	0.132	0.132	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-43-9	Cadmium	653	ug/Kg	U	131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-70-2	Calcium	3220000	ug/Kg		10400	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-47-3	Chromium	9750	ug/Kg		196	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-48-4	Cobalt	4310	ug/Kg		196	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-50-8	Copper	7800	ug/Kg		392	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-89-6	Iron	10100000	ug/Kg		10400	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-92-1	Lead	13400	ug/Kg		327	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-95-4	Magnesium	1650000	ug/Kg	N	11100	39200	39200	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-96-5	Manganese	283000	ug/Kg	N	261	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-97-6	Mercury	12.5	ug/kg	J	5.02	14.8	14.8	1	AV	JXL1	02/04/10 13:27	020410S1-8	945622
7440-02-0	Nickel	7.35	mg/kg		0.132	0.529	0.529	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-09-7	Potassium	1660000	ug/Kg	N	8360	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7782-49-2	Selenium UJ,16a	1.32	mg/kg	UN	0.661	1.32	1.32	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-22-4	Silver	653	ug/Kg	U	131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-23-5	Sodium UJ,14d	43100	ug/Kg		9140	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-28-0	Thallium	0.270	mg/kg		0.0793	0.264	0.264	2	MS	BAJ	02/16/10 01:06	100215-2	945407
7440-61-1	Uranium	1.94	mg/kg		0.0174	0.0529	0.0529	2	MS	BAJ	02/16/10 08:51	100215-7	945407
7440-62-2	Vanadium	21600	ug/Kg		131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-66-6	Zinc	27900	ug/Kg		431	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403

## Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.513	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.507	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.545	g	30	mL	02/04/10	TXB3

JAB  
03/02/10

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

SDG No: 10-1386-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245390001

BASIS: As Received

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7693

LEVEL: Low

DATE RECEIVED 23-JAN-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	70.2	ug/L	J	68	200	200	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	BAJ	02/13/10 03:44	100212-3	945381
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-39-3	Barium	1.27	ug/L	J	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	02/13/10 03:44	100212-3	945381
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	02/13/10 03:44	100212-3	945381
7440-70-2	Calcium	67.3	ug/L	J	30	200	200	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-47-3	Chromium	2.2	ug/L	J	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	02/11/10 17:56	021110B-1	945379
7439-89-6	Iron	82.4	ug/L	J	30	100	100	1	P	HSC	02/11/10 17:56	021110B-1	945379
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	BAJ	02/13/10 20:43	100213-5	945381
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	02/11/10 17:56	021110B-1	945379
7439-96-5	Manganese	1.33	ug/L	J	1	5	5	1	MS	BAJ	02/13/10 20:43	100213-5	945381
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	02/04/10 10:13	020410W1-6	945416
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-09-7	Potassium	105	ug/L	J	50	150	150	1	P	HSC	02/11/10 17:56	021110B-1	945379
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-23-5	Sodium	164	ug/L	J	100	300	300	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	BAJ	02/13/10 17:32	100213-4	945381
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	SKJ	02/13/10 19:43	100213-2	945381
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	02/11/10 17:56	021110B-1	945379

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945379	945378	SW846 3005A	50	mL	50	mL	02/03/10	FGA
945381	945380	SW846 3005A	50	mL	50	mL	02/03/10	FGA
945416	945413	SW846 7470A Prep	20	mL	20	mL	02/03/10	TXB3

JAB  
03/02/10



## DATA VALIDATION COVER SHEET

5120-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1386 VALIDATION DATE: 03/02/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: John A. Bailey 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 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 | 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. RAWBSS 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 water MS %R for Nitrate/Nitrite was < the laboratory's LAL but  $\geq 10\%$ . The associated sample result was ND and, thus, was qualified UJ, I6a.
2. It should be noted that the parent samples for soil Total Cyanide and water Total Cyanide and Nitrate/Nitrite were LANL samples from other RNs. No sample data were qualified as a result.

Reviewed by: Monica Dymerski Level I Date: 03/03/10


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

A handwritten signature in cursive script that reads 'John A. Bailey'.


DATE: 03/02/10

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2  General Chemistry 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 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	
<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"/>	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)

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Los Alamos, New Mexico 87545  
Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7683  
Sample ID: 245389011  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 25.4%

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 19.4C	H	6.63	0.010	0.100	SU	1	EXF1	01/25/10	1550	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	86.0	316	ug/kg	1	AXC2	01/29/10	1544	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.82	0.402	1.34	mg/kg	1	MAR102	01/10/10	0622	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

**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: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7689  
Sample ID: 245389001  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 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 20.4C	H	8.11	0.010	0.100	SU	1	EXF1	01/25/10	1524	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	78.2	287	ug/kg	1	AXC2	01/29/10	1532	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.35	0.345	1.15	mg/kg	1	MAR102	09/10	2308	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

**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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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7679  
Sample ID: 245389002  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 21.4%

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 20.1C	H	7.27	0.010	0.100	SU	1	EXF1	01/25/10	1526	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	93.6	83.2	306	ug/kg	1	AXC2	01/29/10	1533	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.49	0.375	1.25	mg/kg	1	MAR1	02/10/10	0104	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7680  
Sample ID: 245389003  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 12%

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 20.2C	H	7.87	0.010	0.100	SU	1	EXF1	01/25/10	1530	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	77.3	284	ug/kg	1	AXC2	01/29/10	1534	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.30	0.341	1.14	mg/kg	1	MAR102	01/10/10	0133	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7686  
Sample ID: 245389004  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 22.9%

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	7.89	0.010	0.100	SU	1	EXF1	01/25/10	1531	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	81.6	300	ug/kg	1	AXC2	01/29/10	1538	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.56	0.389	1.30	mg/kg	1	MAR1	02/10/10	0202	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7688  
Sample ID: 245389005  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 21.1%

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	7.89	0.010	0.100	SU	1	EXF1	01/25/10	1534	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	86.2	317	ug/kg	1	AXC2	01/29/10	1539	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.49	0.380	1.27	mg/kg	1	MAR1	02/10/10	0231	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

**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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7684  
Sample ID: 245389006  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 12.8%

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	8.04	0.010	0.100	SU	1	EXF1	01/25/10	1537	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	75.0	276	ug/kg	1	AXC2	01/29/10	1540	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.56	0.344	1.15	mg/kg	1	MAR1	02/10/10	0357	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7687  
Sample ID: 245389007  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 26.7%

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	7.51	0.010	0.100	SU	1	EXF1	01/25/10	1538	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	156	87.5	322	ug/kg	1	AXC2	01/29/10	1541	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.399	1.33	mg/kg	1	MAR102	10/10	0426	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7681  
Sample ID: 245389008  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 22.5%

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 19.8C	H	7.35	0.010	0.100	SU	1	EXF1	01/25/10	1542	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	82.7	304	ug/kg	1	AXC2	01/29/10	1542	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.387	1.29	mg/kg	1	MAR102	10/10	0455	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7682  
Sample ID: 245389009  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 12.8%

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	8.08	0.010	0.100	SU	1	EXF1	01/25/10	1544	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	78.0	287	ug/kg	1	AXC2	01/29/10	1543	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.41	0.344	1.15	mg/kg	1	MAR1	02/10/10	0524	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### The following Analytical Methods were performed

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

# 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: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7685  
Sample ID: 245389010  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 15.3%

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	7.05	0.010	0.100	SU	1	EXF1	01/25/10	1546	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	131	73.0	268	ug/kg	1	AXC2	01/29/10	1544	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.354	1.18	mg/kg	1	MAR1	02/10/10	0553	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### The following Analytical Methods were performed

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

# 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: February 4, 2010

Client SDG: 10-1386-1

Client Sample ID: RE14-10-7693  
Sample ID: 245390001  
Matrix: W  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-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	01/26/10	1124	943824	1
<b>Nutrient Analysis</b>											
<i>EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"</i>											
Nitrogen, Nitrate/Nitrite	U	ND	UJ,16a	0.050	0.250	mg/L	5	AXH3	01/26/10	1454	944815 2

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1448	943821

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	



Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1386C

LOS ALAMOS

REQUEST NUMBER: 10-1386

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245389, 245390

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE14-10-7689	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7689	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7679	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7679	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7680	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7680	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7686	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7686	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7686	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7686	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7684	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7684	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7687	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7687	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7681	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7681	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7682	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7682	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7686	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7686	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7683	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7683	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7693	1	POLY	METALS+U-GEL	Nitric Acid	W
RE14-10-7693	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
RE14-10-7683	1	POLY	SW-846:8850	Ice	W
RE14-10-7693	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Friday, January 22, 2010

**LOS ALAMOS  
NATIONAL LABORATORY**

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number: 10-1386

Per Agreement Number: 126310011

Project Cost Code: MR3A05528E00

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 1/22/2010

TURNAROUND/REPORT DUE: 2/21/2010

TURNAROUND REQD: 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
	EPA300.0	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	

Friday, January 22, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-300.0	1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
	EPA-353.2	1	RE14-10-7693	W	1/15/2010	
	SW-846-6010B	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
	SW-846-6020	1	RE14-10-7678	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
	SW-846-6850	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8850	1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7690	W	1/15/2010	
	SW-846:7470A	1	RE14-10-7693	W	1/15/2010	
	SW-846:7471A	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7694	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
	SW-846:9012A	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	

Friday, January 22, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846-9012A	1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
	SW-846-9045C	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	

Final Page of REQUEST NUMBER 10-1386



January 26, 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: 245389 245390  
SDG: 10-1386

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 23, 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: 10-1386  
Enclosures

**Los Alamos National Laboratory (72733-001-09)**  
**LANL ER Project**  
**Work Order #: 245389 and 245390**  
**SDG: 10-1386**

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# Case Narrative

**Case Narrative for  
Los Alamos National Laboratory (72733-001-09)  
LANL ER Project  
Workorder #: 245389 and 245390  
SDG # : 10-1386**

**January 26, 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 January 23, 2010 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. The NO3NO2 container for sample RE14-10-7693 was preserved prior to analysis. There are no additional comments concerning sample receipt. Shipping container temperature was within specification (0 - 6C).

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

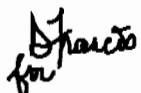
<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
245389001	RE14-10-7689
245389002	RE14-10-7679
245389003	RE14-10-7680
245389004	RE14-10-7686
245389005	RE14-10-7688
245389006	RE14-10-7684
245389007	RE14-10-7687
245389008	RE14-10-7681
245389009	RE14-10-7682
245389010	RE14-10-7685
245389011	RE14-10-7683
245390001	RE14-10-7693

**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.

A handwritten signature in black ink, appearing to read "Valerie Davis" with a stylized flourish at the end.

Valerie Davis

Project Manager

**List of current GEL Certifications as of 26 January 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**

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1386C

LOS ALAMOS

REQUEST NUMBER: 10-1386

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245389, 245390

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE14-10-7689	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7689	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7679	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7679	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7680	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7680	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7686	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7686	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7688	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7688	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7684	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7684	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7687	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7687	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7681	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7681	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7682	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7682	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7685	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7685	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7683	1	POLY	METALS+U-GEL	Ice	R
RE14-10-7683	1	POLY	Perchlorate+CN+N03+pH	Ice	R
RE14-10-7693	1	POLY	METALS+U-GEL	Nitric Acid	W
RE14-10-7693	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
RE14-10-7693	1	POLY	SW-846:6850	Ice	W
RE14-10-7693	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Friday, January 22, 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: 1/22/2010

TURNAROUND/REPORT DUE: 2/21/2010

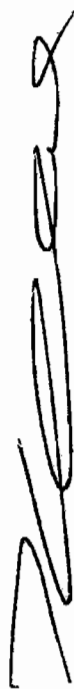
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



These Samples are on:  
LANL Request Number: 10-1386  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA-300.0	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	



Friday, January 22, 2010

REQUEST NUMBER: 10-1386

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
	EPA:353.2	1	RE14-10-7693	W	1/15/2010	
	SW-846:6010B	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
	SW-846:6020	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
	SW-846:6850	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	

Friday, January 22, 2010

Page 3 of 4

REQUEST NUMBER: 10-1386

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
	SW-846:7470A	1	RE14-10-7693	W	1/15/2010	
	SW-846:7471A	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
	SW-846:9012A	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
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		1	RE14-10-7684	R	1/15/2010	

Friday, January 22, 2010

REQUEST NUMBER: 10-1386

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	
		1	RE14-10-7693	W	1/15/2010	
	SW-846:9045C	1	RE14-10-7679	R	1/15/2010	
		1	RE14-10-7680	R	1/15/2010	
		1	RE14-10-7681	R	1/15/2010	
		1	RE14-10-7682	R	1/15/2010	
		1	RE14-10-7683	R	1/15/2010	
		1	RE14-10-7684	R	1/15/2010	
		1	RE14-10-7685	R	1/15/2010	
		1	RE14-10-7686	R	1/15/2010	
		1	RE14-10-7687	R	1/15/2010	
		1	RE14-10-7688	R	1/15/2010	
		1	RE14-10-7689	R	1/15/2010	

Final Page of REQUEST NUMBER 10-1386



Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: LANL		SDG/ARCOC/Work Order: 10-1386	
Received By: Patricia Dover-Dent		Date Received: January 23, 2009	
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*: 60 CPM
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 (describe) 1-4    12,13,15C
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: RE14-10-7693 for NO3NO2 Sulfuric Acid If Preservation added, Lot#: G45010
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: time written on containers, not on COC
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

## Comments: FEDEX#S

7209 7849 6695 1C	7209 7849 6560 4C
7209 7849 6776 1C	7209 7849 6559 4C
7209 7849 6526 2C	7209 7849 6684 4C
7209 7849 6700 2C	7209 7849 6732 12C
7209 7849 6710 2C	7209 7849 6504 13C
7209 7849 6548 2C	7209 7849 6743 13C
7209 7849 6537 3C	7209 7849 6765 13C
7209 7849 6570 3C	7209 7849 6754 15C
7209 7849 6515 4C	

PM (or PMA) review: Initials

Date

1/25/10

**Subject:** Sample Receipt for 1/23/10

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

**Date:** Mon, 25 Jan 2010 11:55:59 -0500

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

Keith,

RN 10-1372: the lab rec'd (1) 40ml vial 8260B container for sample RE46-10-11844 instead of (2) as indicated on the COC.

RN 10-1375: the lab rec'd (1) 40ml vial 8260B container for sample RE16-10-1127 instead of (2) as indicated on the COC.

RN 10-1386: the NO3NO2 containers for samples RE14-10-7693 and RE15-10-8444 were rec'd unpreserved. The lab will preserve prior to analysis.

RN 10-1382: the lab rec'd (1) 40ml vial 8260B container for sample RE15-10-7331 instead of (2) as indicated on the COC.

RN 10-1384: the lab rec'd (1) 40ml vial 8260B container for sample RE14-10-7691 instead of (2) as indicated on the COC.

RN 10-1380: the lab rec'd (1) 40ml vial 8260B container for sample RE15-10-8445 instead of (2) as indicated on the COC.

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) 665-8968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
T800 BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 22JAN10  
ACTMST: 55.0 LB MM  
CAD: 0014176/CAFE2449

BILL SENDER

ORIGIN ID: SAFA (505) 665-8968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
T800 BLDG 1237 DPU 03

SHIP DATE: 22JAN10  
ACTMST: 55.0 LB MM  
CAD: 0014176/CAFE2449

LOS ALAMOS, NM 87545  
UNITED STATES US

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-8171  
REF: 68010AMR2A0515BYD0

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-8171  
REF: 68010AMR2A0515BYD0



2 of 2  
PSN 7209 7849 6695  
Matr-N 7209 7849 6684 (8201)

### SATURDAY ###

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PRIORITY OVERNIGHT

X0 CHSA

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SC-US  
CHS



7209 7849 6776

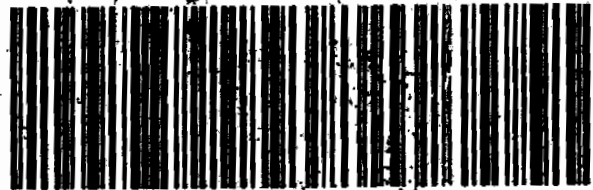
### SATURDAY ###

A1

PRIORITY OVERNIGHT

X0 CHSA

29407  
SC-US  
CHS



ORIGIN ID: SAFA (505) 665-8968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
T800 BLDG 1237 DPU 03

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UNITED STATES US

VALERIE DAVIS  
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4 of 4  
PSN 7209 7849 6526

### SATURDAY ###

A1

PRIORITY OVERNIGHT

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CHS



7209 7849 6720

### SATURDAY ###

A1

PRIORITY OVERNIGHT

X0 CHSA

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SC-US  
CHS



ORIGIN ID: SAFA (505) 655-8968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 83  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 22JAN18  
ACTMGT: 60 0:15 PM  
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VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 555-8171  
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2040

2 of 2

TRK# 7209 7849 6710

Matr# 7209 7849 6700 [0201]

### SATURDAY ###  
PRIORITY OVERNIGHT

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LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 83

LOS ALAMOS, NM 87545  
UNITED STATES US

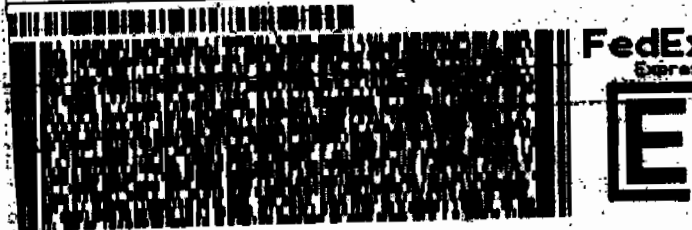
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GENERAL ENGINEERING LAB  
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CHARLESTON SC 29407

(843) 555-8171  
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1 of 3

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### SATURDAY ###  
PRIORITY OVERNIGHT

2940

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RT V3 04-09

JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 83

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 22JAN18  
ACTMGT: 60 0:15 PM  
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BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
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CHARLESTON SC 29407

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REF: 68010AMR2A0515BYDO



2 of 3

TRK# 7209 7849 6548

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### SATURDAY ###  
PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 655-8968

JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 83

LOS ALAMOS, NM 87545  
UNITED STATES US

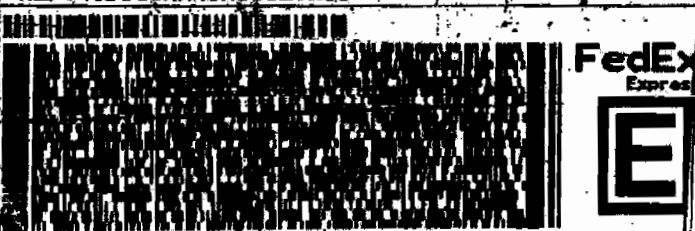
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GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 555-8171  
REF: 68010AMR3A0552V800



2 of 2

TRK# 7209 7849 6570

Matr# 7209 7849 6560 [0201]

### SATURDAY ###  
PRIORITY OVERNIGHT

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LOS ALAMOS MAIL LAB  
TRAM BLDG 1237 DPU 83

UNIT: 0014176/CAFE2449

LOS ALAMOS, NM 87545  
UNITED STATES US

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UNITED STATES US

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VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

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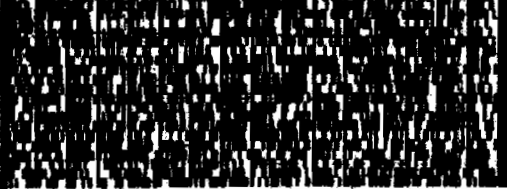
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3 of 4

\*\*\* SATURDAY \*\*\* A1  
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NPSN: 7209 7849 6515

NPSN: 7209 7849 6560

MatrN 7209 7849 6490 0201

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CHS



ORIGIN ID: SAFA (505) 605-0008  
JOYLENE VALDEZ  
LOS ALAMOS MAIL LAB  
TRAM BLDG 1237 DPU 83

SHIP DATE: 22JAN10  
ACTVAT: 0014176/CAFE2449  
CPO: 0014176/CAFE2449

LOS ALAMOS, NM 87545  
UNITED STATES US

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ORIGIN ID: SAFA (505) 605-0008  
JOYLENE VALDEZ  
LOS ALAMOS MAIL LAB  
TRAM BLDG 1237 DPU 83

SHIP DATE: 22JAN10  
ACTVAT: 0014176/CAFE2449  
CPO: 0014176/CAFE2449

LOS ALAMOS, NM 87545  
UNITED STATES US

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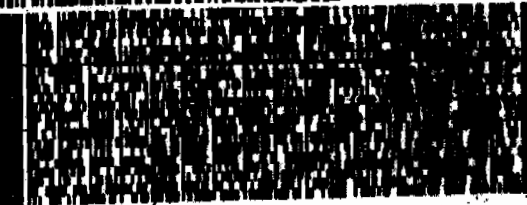
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3 of 3

\*\*\* SATURDAY \*\*\* A1  
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1 of 2

\*\*\* SATURDAY \*\*\* A1  
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NPSN: 7209 7849 6559

NPSN: 7209 7849 6684

MatrN 7209 7849 6537 0201

MASTER NPSN

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CHS





JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
7A00 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 22JAN10  
ACTIVITY: 00 0 10 10N  
CRD: 0014176/CFE2440

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LOS ALAMOS NATL LAB  
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### SATURDAY ### A1  
PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 685-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
7A00 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 22JAN10  
ACTIVITY: 00 0 10 10N  
CRD: 0014176/CFE2440

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GENERAL ENGINEERING LAB  
2040 SAVAGE RD

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### SATURDAY ### A1  
PRIORITY OVERNIGHT

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7209 7849 6732

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X0 CHSA

ORIGIN ID: SAFA (505) 685-9968

JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
7A00 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 22JAN10

ACTIVITY: 00 0 10 10N

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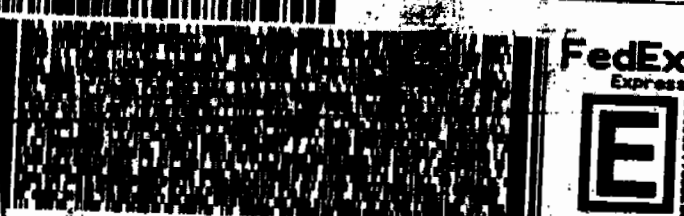
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GENERAL ENGINEERING LAB  
2040 SAVAGE RD

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### SATURDAY ### A1  
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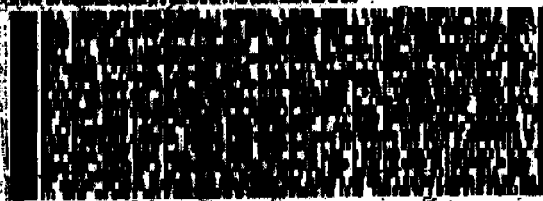
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JOYLENE VALDEZ  
LOS ALAMOS NM 87545  
TASO BLDG 1207 CPU 93  
LOS ALAMOS NM 87545  
UNITED STATES OF AMERICA

SHIP DATE: 22JAN10  
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VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 886-8171  
REF: 680100NR200515BYD0

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1 of 2  
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NM MASTER NM

\*\*\* SATURDAY \*\*\* A1 20  
PRIORITY OVERNIGHT

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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 10-1386**

**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:** 947101

**Prep Batch Number:** 947096

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245389001	RE14-10-7689
245389002	RE14-10-7679
245389003	RE14-10-7680
245389004	RE14-10-7686
245389005	RE14-10-7688
245389006	RE14-10-7684
245389007	RE14-10-7687
245389008	RE14-10-7681
245389009	RE14-10-7682
245389010	RE14-10-7685
245389011	RE14-10-7683
1202028722	Interference Check Sample (ICS)
1202028708	Method Blank (MB)
1202028709	Laboratory Control Sample (LCS)
1202028710	245389002(RE14-10-7679) Matrix Spike (MS)
1202028711	245389002(RE14-10-7679) Matrix Spike Duplicate (MSD)

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

10-1386-PERLCMS

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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**

Sample 245389002 (RE14-10-7679) was chosen for matrix spike and matrix spike duplicate analysis.

#### **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.

10-1386-PERLCMS

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**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 M. Mauer

Date: 02/10/10

# SAMPLE DATA SUMMARY

**Perchlorate Analysis Data Sheet**

**Client Sample No.**

RE14-10-7689

**Lab Name:** GEL Laboratories LLC

**Lab Code:** GEL

**Date Received:** 23-JAN-10

**Instrument:** LCMSMS

**GEL Job No (SDG):** 10-1386

**Method:** SW846 6850 Modified

**GEL Sample ID:** 245389001

**Matrix:** SOIL

**Extraction Batch ID:** 247096

**Date Filtered:** 05-FEB-10

**Injection Volume (uL):** 20

**Extraction Type:** Solid Prep

**%Solids:** 87

**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	.575	2.3	1.06	ug/kg	J	1	06-FEB-10 15:25	per0206015a
	Perchlorate Isotope Ratio			3.18			1	06-FEB-10 15:25	per0206015a
14797-73-0	Perchlorate-101	.575	2.3	1.05	ug/kg	J	1	06-FEB-10 15:25	per0206015a
	Perchlorate-O(18)			5.69	ug/kg		1	06-FEB-10 15:25	per0206015a

<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

54

**Concentrated Extract Volume: 20.0**

CAS No.	Analyte <sup>A</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	0.636	ug/kg	U	1	06-FEB-10 15:31	per0206016a
	Perchlorate Isotope Ratio						1	06-FEB-10 15:31	per0206016a
14797-73-0	Perchlorate-101	.636	2.54	0.636	ug/kg	U	1	06-FEB-10 15:31	per0206016a
	Perchlorate-O(18)			6.39	ug/kg		1	06-FEB-10 15:31	per0206016a

^ ^ 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.

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

## Perchlorate Analysis Data Sheet

**Lab Name:** GEL Laboratories LLC  
**Lab Code:** GEL  
**Instrument:** LCMSMS  
**Method:** SW846.6850 Modified  
**Matrix:** SOIL  
**Extraction Batch ID:** 247096  
**Extraction Type:** Solid Prep  
**Sample Volume/Weight:** 2.00 g  
**Concentrated Extract Volume:** 20.0  
**Client Sample No.**  
RE14-10-7680  
**Date Received:** 23-JAN-10  
**GEL Job No (SDG):** 10-1386  
**GEL Sample ID:** 245389003  
**Date Filtered:** 05-FEB-10  
**Injection Volume (uL):** 20  
**%Solids:** 88

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.568	2.27	1.88	ug/kg	J	1	06-FEB-10 15:51	per0206019a
	Perchlorate Isotope Ratio			3.22			1	06-FEB-10 15:51	per0206019a
14797-73-0	Perchlorate-101	.568	2.27	1.85	ug/kg	J	1	06-FEB-10 15:51	per0206019a
	Perchlorate-O(18)			5.64	ug/kg		1	06-FEB-10 15:51	per0206019a

<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 =

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

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947096  
 Extraction Type: Solid Prep  
 Client Sample No. RE14-10-7686  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389004  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20

Sample Volume/Weight: 2.00 g

% Solids: 77

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.648	2.59	1.35	ug/kg	J	1	06-FEB-10 15:58	per0206020a
	Perchlorate Isotope Ratio			3.02			1	06-FEB-10 15:58	per0206020a
14797-73-0	Perchlorate-101	.648	2.59	1.42	ug/kg	J	1	06-FEB-10 15:58	per0206020a
	Perchlorate-O(18)			6.37	ug/kg		1	06-FEB-10 15:58	per0206020a

<sup>a</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 %Solids

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846.6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247096  
 Extraction Type: Solid Prep  
 Client Sample No. RE14-10-7688  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389005  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 % Solids: 79  
 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	.634	2.53	0.634	ug/kg	U	1	06-FEB-10 16:04	per0206021a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:04	per0206021a
14797-73-0	Perchlorate-101	.634	2.53	0.634	ug/kg	U	1	06-FEB-10 16:04	per0206021a
	Perchlorate-O(18)			6.51	ug/kg		1	06-FEB-10 16:04	per0206021a

<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: 247096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE14-10-7684  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389006  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 87

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.574	2.29	0.574	ug/kg	U	1	06-FEB-10 16:30	per0206025a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:30	per0206025a
14797-73-0	Perchlorate-101	.574	2.29	0.583	ug/kg	J	1	06-FEB-10 16:30	per0206025a
	Perchlorate-O(18)			6.22	ug/kg		1	06-FEB-10 16:30	per0206025a

<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



# P perchlorate Analysis Data Sheet

Client Sample No.

RE14-10-7687

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Date Received: 23-JAN-10

Instrument: LCMSMS

GEL Job No (SDG): 10-1386

Method: SW846.6850 Modified

GEL Sample ID: 245389007

Matrix: SOIL

Date Filtered: 05-FEB-10

Extraction Batch ID: 947096

Injection Volume (uL): 20

Extraction Type: Solid Prep

%Solids: 73

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	.682	2.73	0.682	ug/kg	U	1	06-FEB-10 16:37	per0206026a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:37	per0206026a
14797-73-0	Perchlorate-101	.682	2.73	0.682	ug/kg	U	1	06-FEB-10 16:37	per0206026a
	Perchlorate-O(18)			6.69	ug/kg		1	06-FEB-10 16:37	per0206026a

<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**

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947096

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7681

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1386

GEL Sample ID: 245389008

Date Filtered: 05-FEB-10

Injection Volume (mL): 20

% Solids: 78

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.645	2.58	0.645	ug/kg	U	1	06-FEB-10 16:43	per0206027a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:43	per0206027a
14797-73-0	Perchlorate-101	.645	2.58	0.645	ug/kg	U	1	06-FEB-10 16:43	per0206027a
	Perchlorate-O(18)			7.05	ug/kg		1	06-FEB-10 16:43	per0206027a

<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

Client Sample No.

RE14-10-7682

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Date Received: 23-JAN-10

Method: SW846 6850 Modified

GEL Job No (SDG): 10-1386

Matrix: SOIL

GEL Sample ID: 245389002

Extraction Batch ID: 247096

Date Filtered: 05-FEB-10

Extraction Type: Solid Prep

Injection Volume (uL): 20

Sample Volume/Weight: 2.00 g

%Solids: 87

Concentrated Extract Volume: 20.0

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.574	2.29	1.25	ug/kg	J	1	06-FEB-10 16:50	per0206028a
	Perchlorate Isotope Ratio			3.21			1	06-FEB-10 16:50	per0206028a
14797-73-0	Perchlorate-101	.574	2.29	1.23	ug/kg	J	1	06-FEB-10 16:50	per0206028a
	Perchlorate-O(18)			5.86	ug/kg		1	06-FEB-10 16:50	per0206028a

^ 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: 247096

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7685

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1386

GEL Sample ID: 245389010

Date Filtered: 05-FEB-10

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.59	2.36	0.590	ug/kg	U	1	06-FEB-10 16:56	per0206029a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:56	per0206029a
14797-73-0	Perchlorate-101	.59	2.36	0.590	ug/kg	U	1	06-FEB-10 16:56	per0206029a
	Perchlorate-O(18)			6.53	ug/kg		1	06-FEB-10 16:56	per0206029a

<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

## Client Sample No.

RE14-10-7683

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSDate Received: 23-JAN-10Method: SW846 6850 ModifiedGEL Job No (SDG): 10-1386Matrix: SOILGEL Sample ID: 245389011Extraction Batch ID: 947096Date Filtered: 05-FEB-10Extraction Type: Solid PrepInjection Volume (uL): 20Sample Volume/Weight: 2.00 g%Solids: 75Concentrated 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	.67	2.68	1.35	ug/kg	J	1	06-FEB-10 17:03	per0206030a
	Perchlorate Isotope Ratio			3.11			1	06-FEB-10 17:03	per0206030a
14797-73-0	Perchlorate-101	.67	2.68	1.38	ug/kg	J	1	06-FEB-10 17:03	per0206030a
	Perchlorate-O(18)			7.13	ug/kg		1	06-FEB-10 17:03	per0206030a

<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  $\frac{1}{\% \text{Solids}}$

# QUALITY CONTROL SUMMARY

## Perchlorate Laboratory Control Sample

Lab Name: General Engineering LaboratoriesLab Code: GELGEL Job No. (SDG): 10-1386Extract Batch Code: 947096Date Filtered: 05-FEB-10Matrix: SOILSample ID: 1202028709

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.31	ug/kg	115		70 - 130
Perchlorate Isotope Ratio		3.18				-
Perchlorate-101	2.00	2.29	ug/kg	114		70 - 130
Perchlorate-O(18)		5.1	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):** 10-1386

**Extract Batch Code:** 247096 **Date Filtered:** 05-FEB-10

**Matrix:** SOIL **Sample ID:** 1202028722

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.21	ug/kg	111		70 - 130
Perchlorate Isotope Ratio		3.14				
Perchlorate-101	2.00	2.23	ug/kg	111		70 - 130
Perchlorate-O(18)		4.98	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: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206014a

Date: 06-Feb-2010

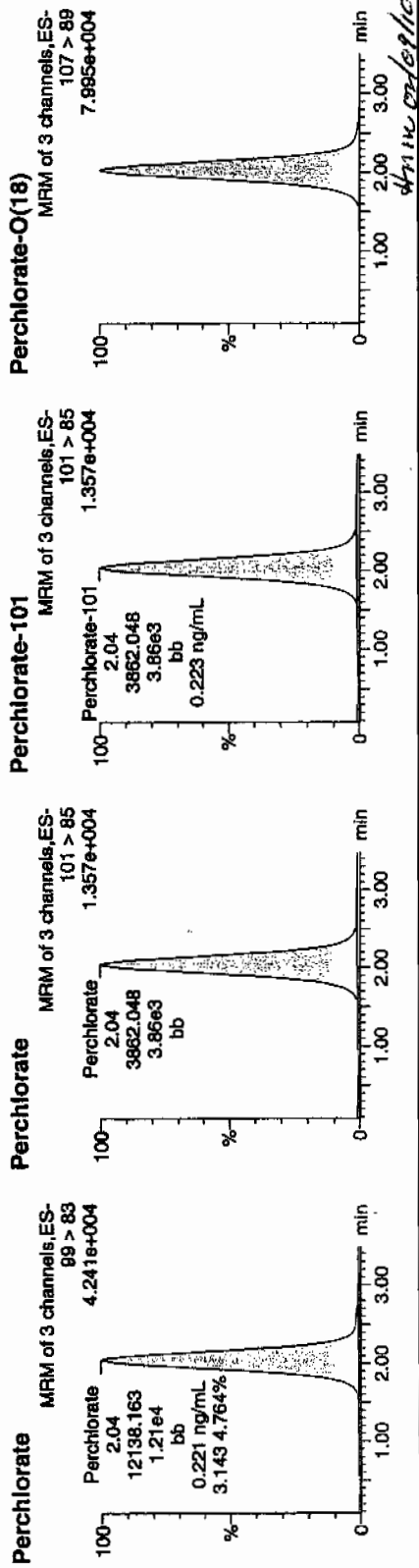
Time: 15:18:51

ID: 1202028722

Vial: 1:3,C

02-03-10

1202028722 | 947101 | 5000 | TUS | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202028722	Perchlorate	99 > 83	2.04	12138.163	12138.163	bb			-0.2214	110.71	10.71	1320.7...	3.14
1202028722	Perchlorate-101	101 > 85	2.04	3862.048	3862.048	bb			0.2228	111.40	11.40	1060.5...	
1202028722	Perchlorate-O(18)	107 > 89	2.03	22776.244	22776.244	bb			0.4984	99.67	-0.33	3528.3...	

## Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering LaboratoriesLab Code: GELGEL Job No (SDG): 10-1386Extract Batch Code: 947096Date Extracted: 05-FEB-10GEL MS/PS ID: 1202028710Client ID: RE14-10-7672GEL MSD/PSD ID: 1202028711QC Type: MS

Compound <sup>^</sup>	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.54	0.429	ug/kg	3.21	109	3.3	113	2.69	30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.2		3.02		0		-
Perchlorate-101	2.54	0.417	ug/kg	3.17	108	3.45	119	8.44	30	75 - 125
Perchlorate-O(18)	0	6.39	ug/kg	6.73		7.11		5.43		-

<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.

Comments:

## Perchlorate Initial Calibration Blank

Lab Name: General Engineering LaboratoriesGEL Job No.(SDG): 10-1386Lab Code: GELReporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	06-FEB-10	per0206001a	IPB001
Perchlorate-101	0.00	0	NA	06-FEB-10	per0206001a	IPB001
Perchlorate	0.00	0	NA	06-FEB-10	per0206002a	IPB001
Perchlorate-101	0.00	0	NA	06-FEB-10	per0206002a	IPB001

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

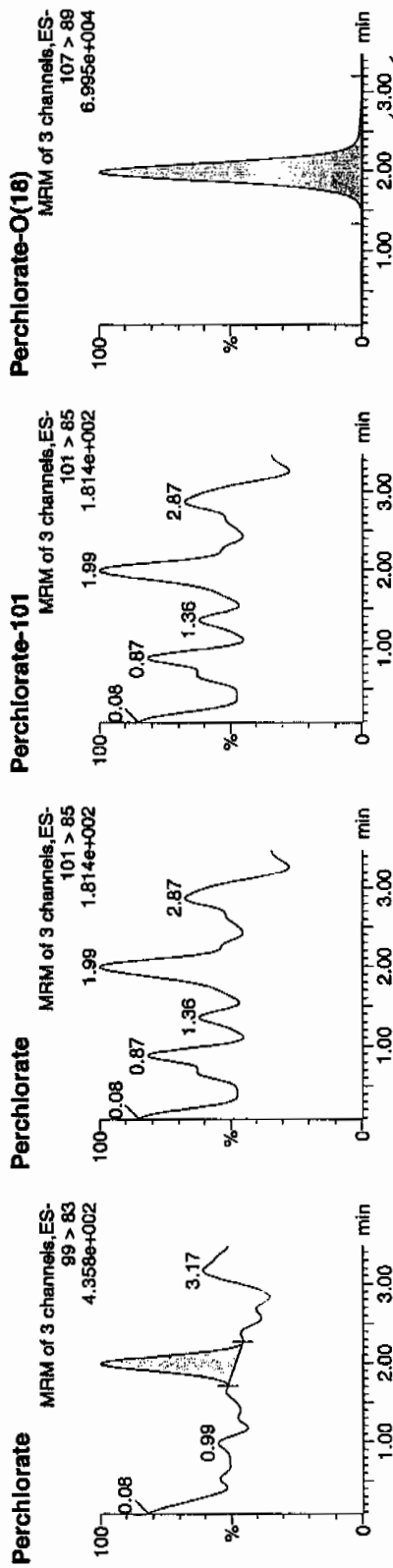
Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020610a.mdb 08 Feb 2010 10:36:58  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020610a.cdb 08 Feb 2010 18:04:41

Name: per0206001a  
Date: 06-Feb-2010  
Time: 13:53:53  
ID: IPB001  
Vial: 1:1,A

07-28-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB001	Perchlorate	99 > 83	1.99	51.989	51.989	bb			0.0009			9.188	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	1.98	20430.598	20430.598	bb			0.4470	89.41	-10.59	6896.2...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206002a

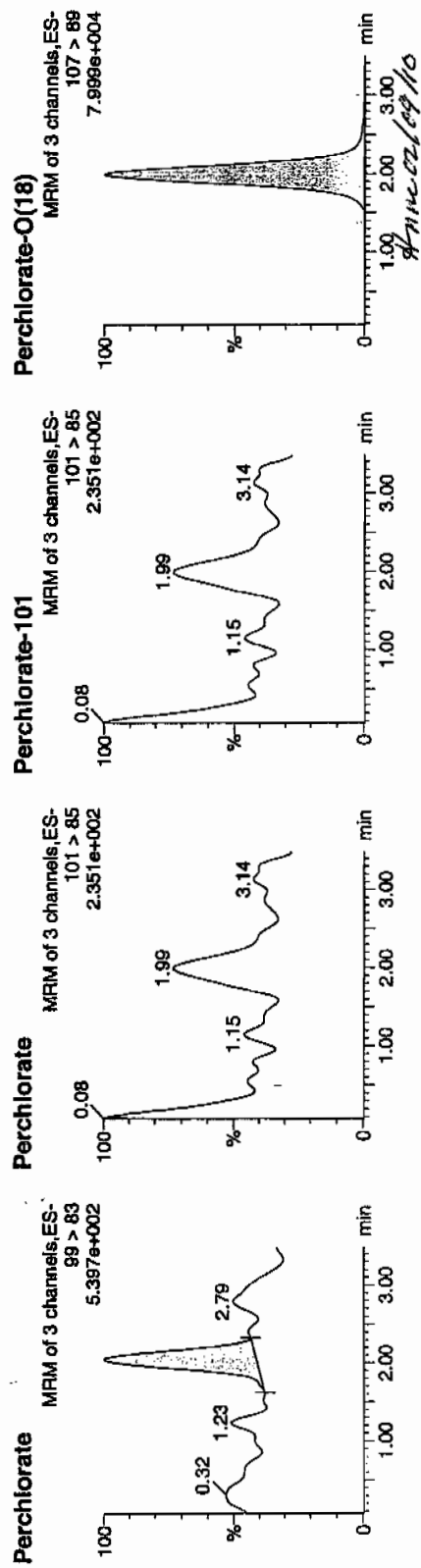
Date: 06-Feb-2010

Time: 14:00:26

ID: IPB001

Vial: 1:1,A

01-28-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.04	84.254	84.254	bb			0.0015			9.767	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	1.99	23336.811	23336.811	bb			0.5106	102.13	2.13	1156.5...	

## Perchlorate Continuing Calibration Blank

Lab Name: General Engineering LaboratoriesGEL Job No.(SDG): 10-1386Lab Code: GELReporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	06-FEB-10	per0206008a	IPB002
Perchlorate-101	0.00	0	NA	06-FEB-10	per0206008a	IPB002
Perchlorate	0.00	0	NA	06-FEB-10	per0206010a	IPB003
Perchlorate-101	0.00	0	NA	06-FEB-10	per0206010a	IPB003
Perchlorate	0.00	0	NA	06-FEB-10	per0206023a	IPB004
Perchlorate-101	0.00	0	NA	06-FEB-10	per0206023a	IPB004
Perchlorate	0.00	0	NA	06-FEB-10	per0206036a	IPB005
Perchlorate-101	0.00	0	NA	06-FEB-10	per0206036a	IPB005

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

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 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206008a

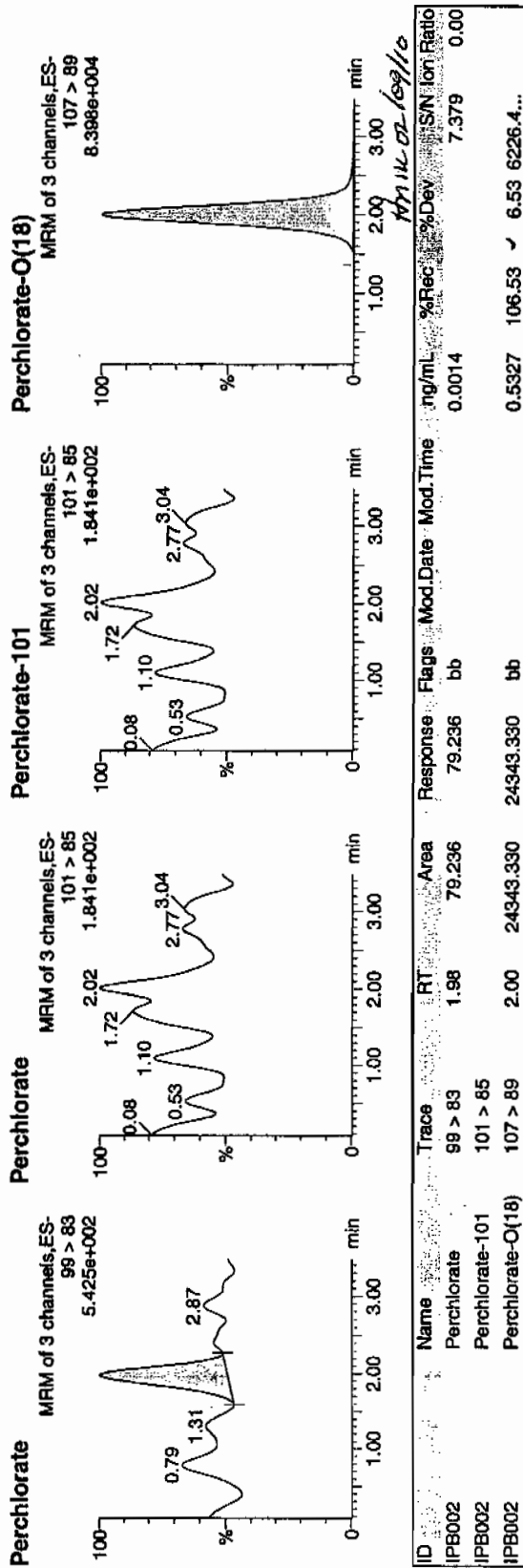
Date: 06-Feb-2010

Time: 14:39:35

ID: IPB002

Vial: 1:1,A

02-08-10



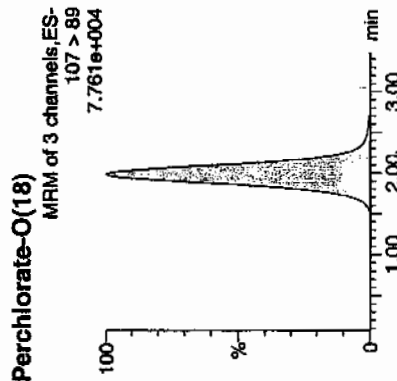
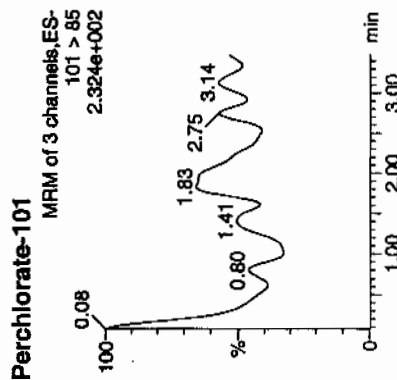
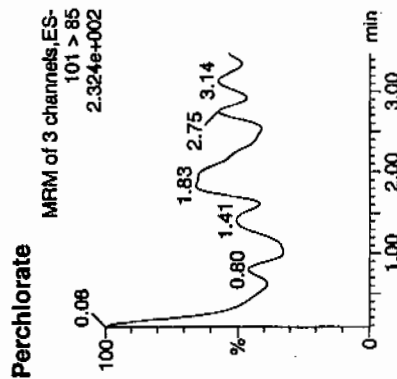
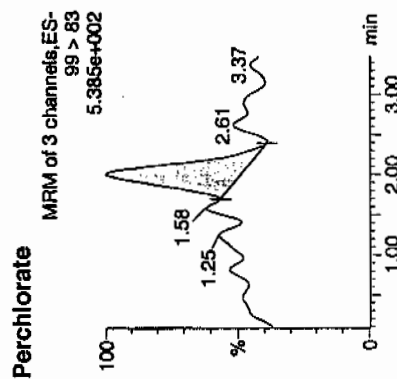
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206010a  
Date: 06-Feb-2010  
Time: 14:52:39  
ID: IPB003  
Vial: 1:1,A

02-08-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB003	Perchlorate	99 > 83	2.00	84.010	84.010	bb			0.0015			12.585	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	1.99	22684.488	22684.488	bb			0.4964	99.27	-0.73	1276.8...	



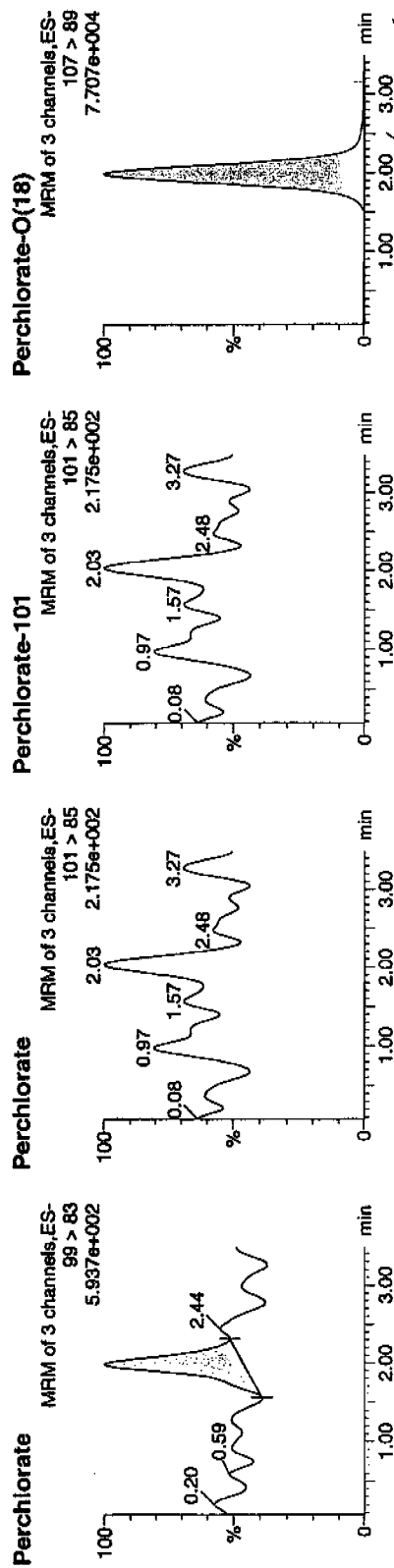
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206023a  
Date: 06-Feb-2010  
Time: 16:17:42  
ID: IPB004  
Vial: 1:1,A

*02-08-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	1.98	90.178	90.178	bb			0.0016			12.490	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	1.98	23098.127	23098.127	bb			0.5054	101.08	1.08	2061.0...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206036a

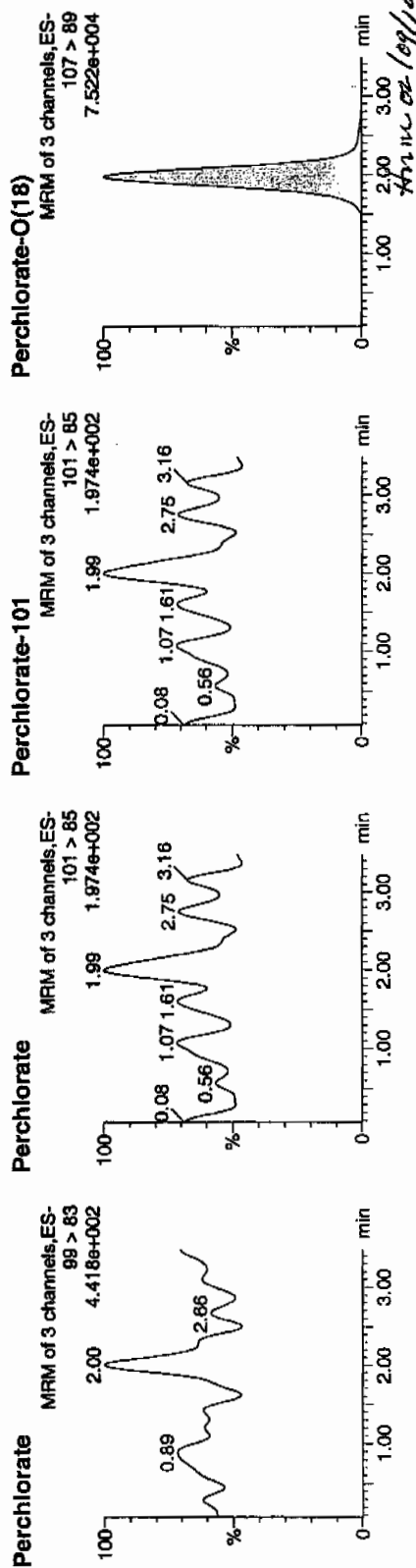
Date: 06-Feb-2010

Time: 17:42:48

ID: IPB005

Vial: 1:1,A

02-28-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85	1.98	22131.846	22131.846	bb			0.4643	96.85	-3.15	5124.3...	
IPB005	Perchlorate-O(18)	107 > 89											

# Nairb.ref

;Positive ion monoisotopic and average masses from solution  
 ;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.  
 ;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.cal

Calibration Report - MS1 Static

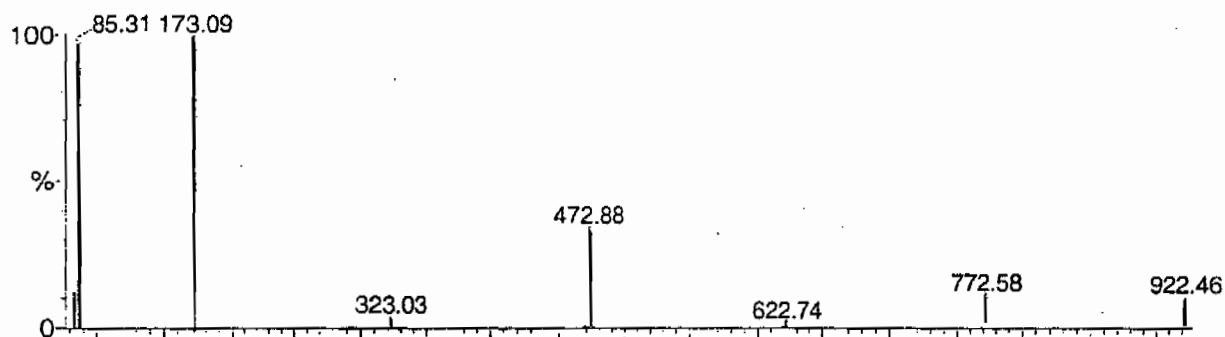
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

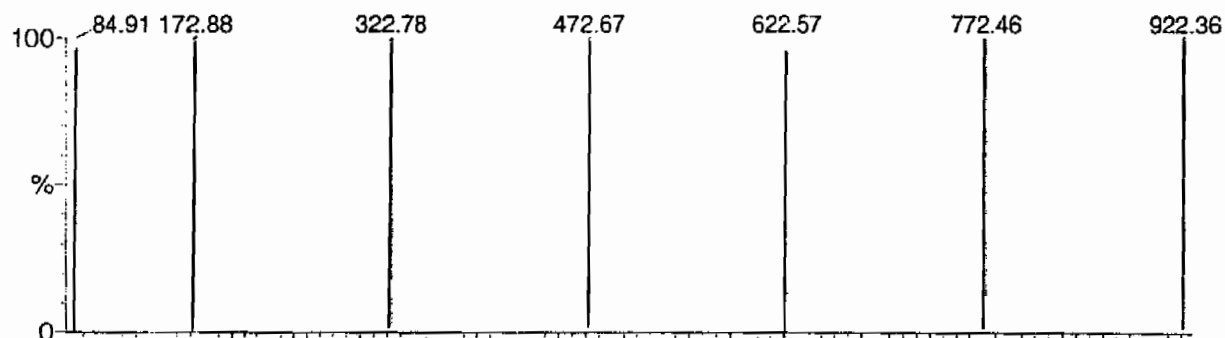
POINTS HIGHLIGHTED BY CURVED 01-07-08

Data file: STATMS1 - Uncalibrated

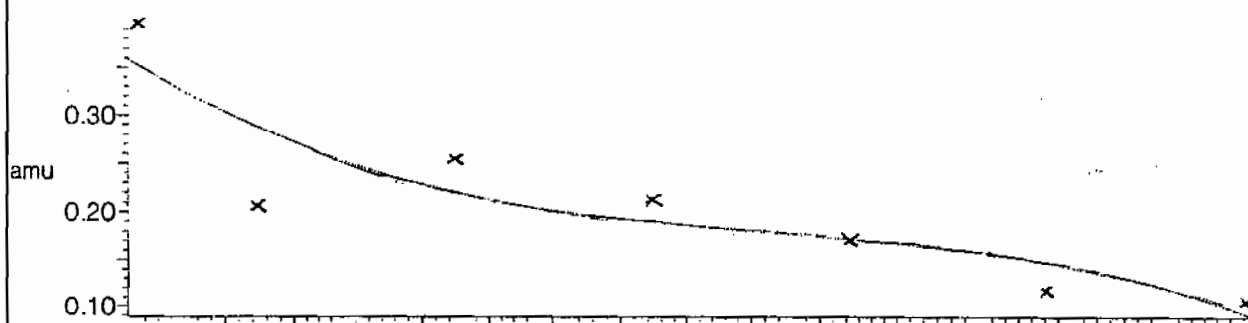
7 matches of 7 tested references



Reference file: Nairb

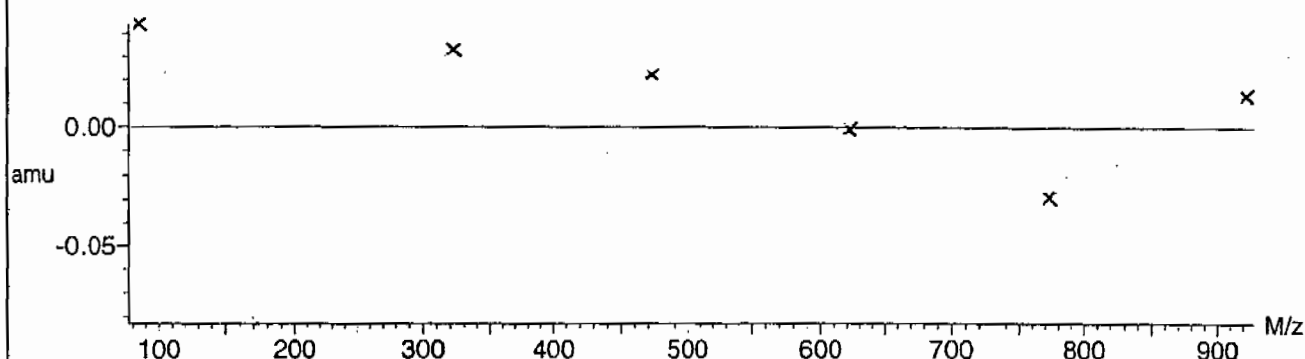


Mass difference (Raw - Ref mass)

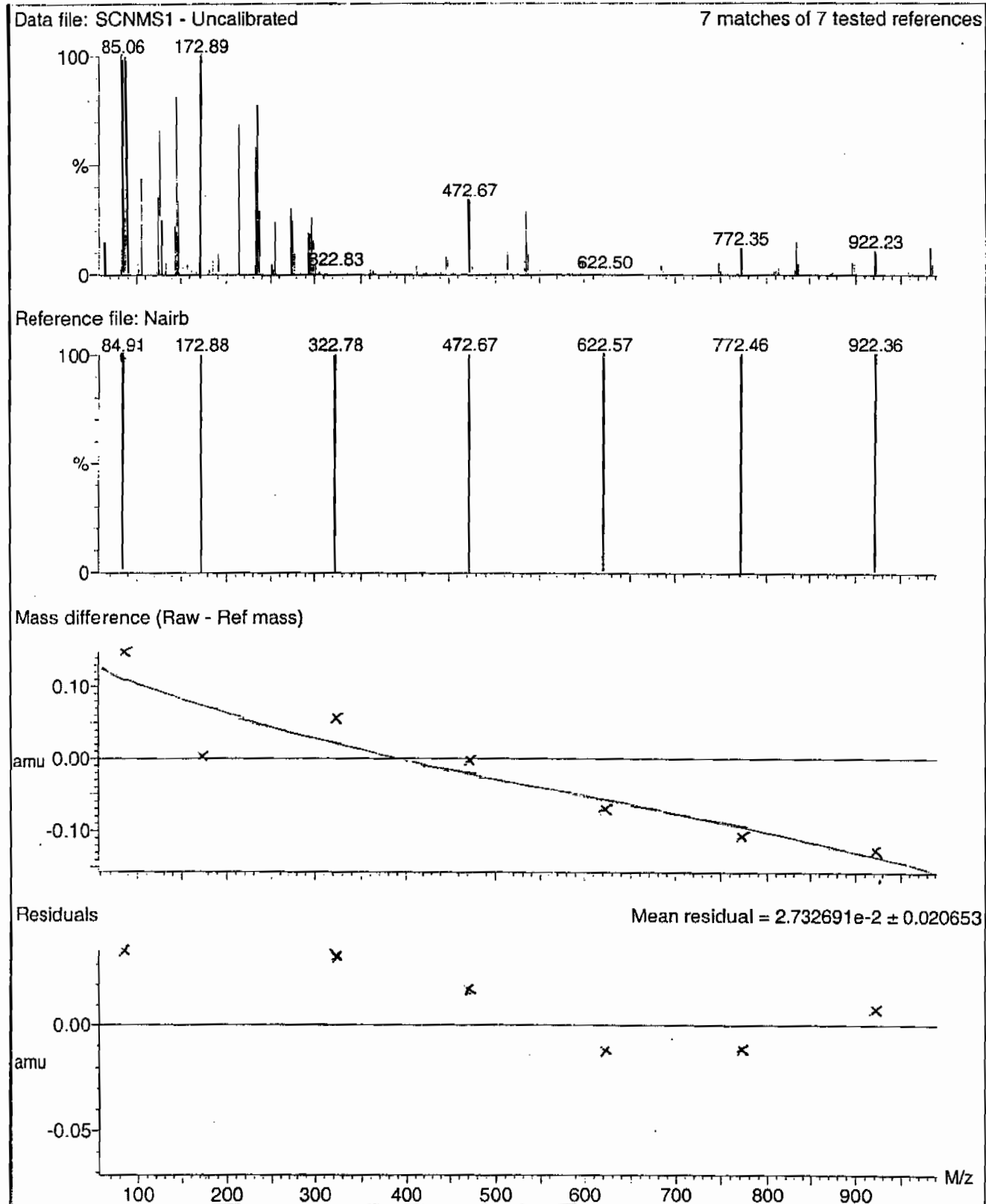


Residuals

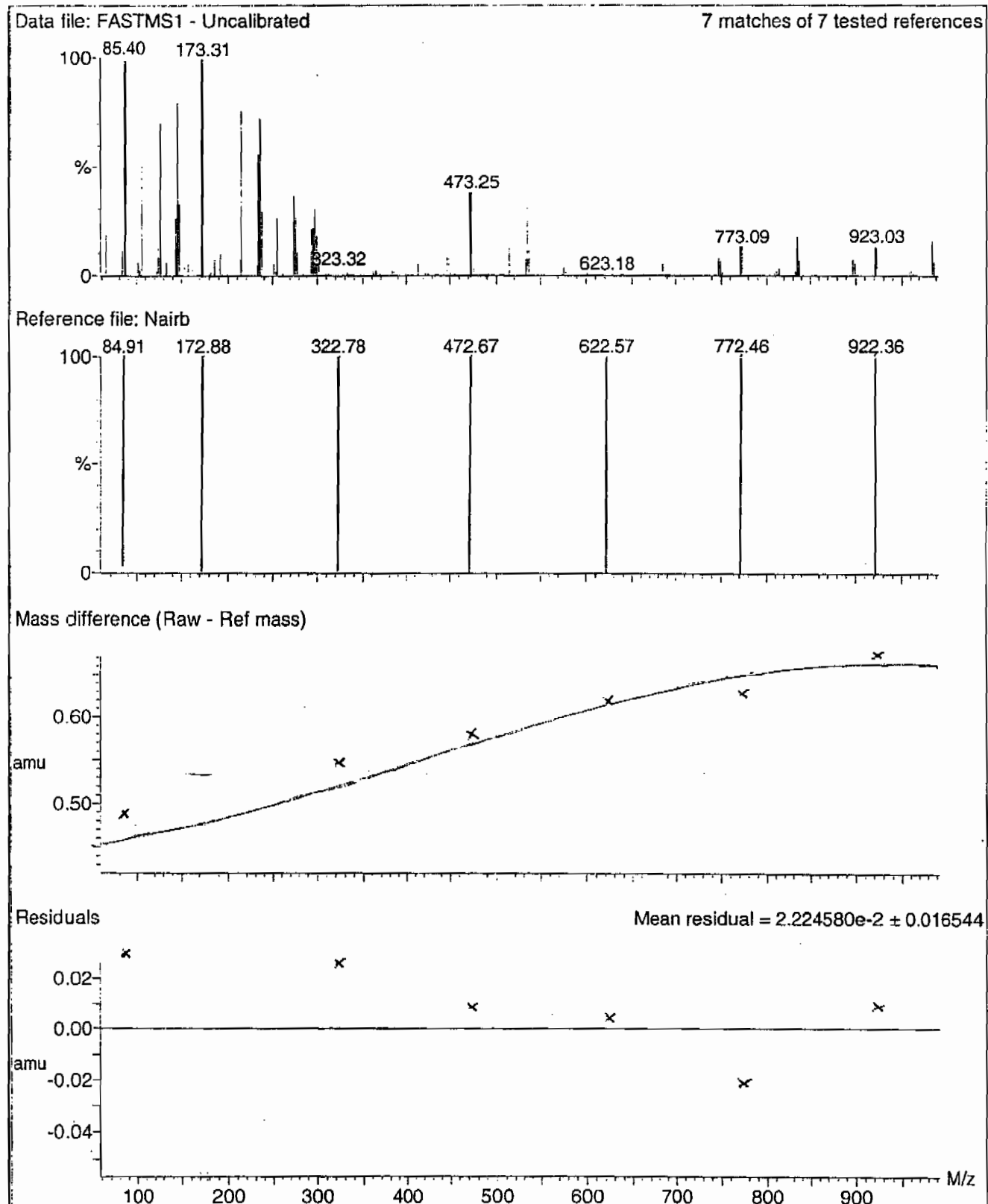
Mean residual =  $3.212012 \times 10^{-2} \pm 0.024108$



Printed: Tue Jan 08 12:20:09 2008



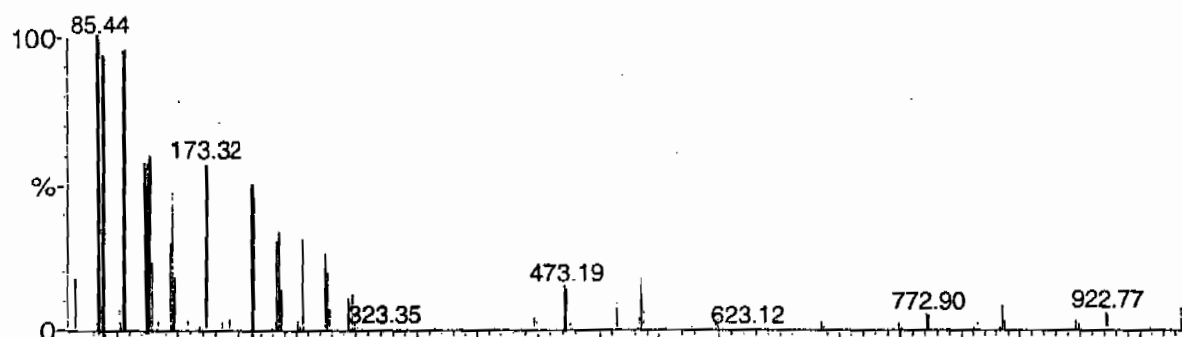
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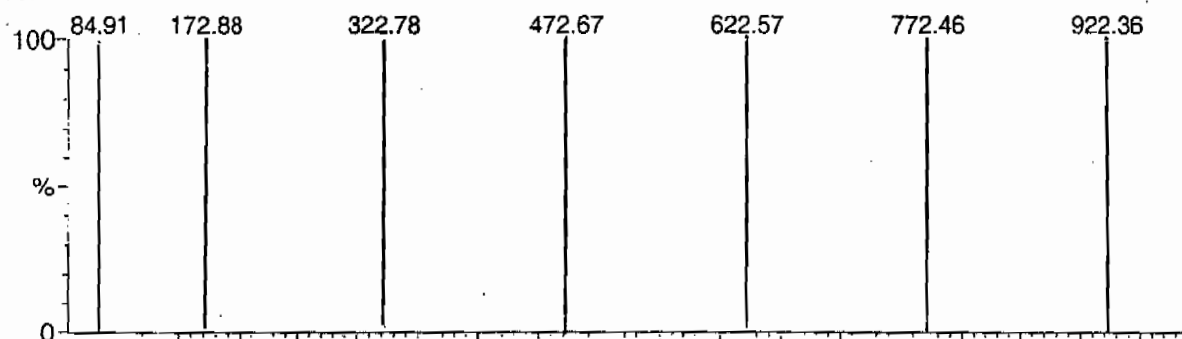
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Data file: FASTMS2 - Uncalibrated

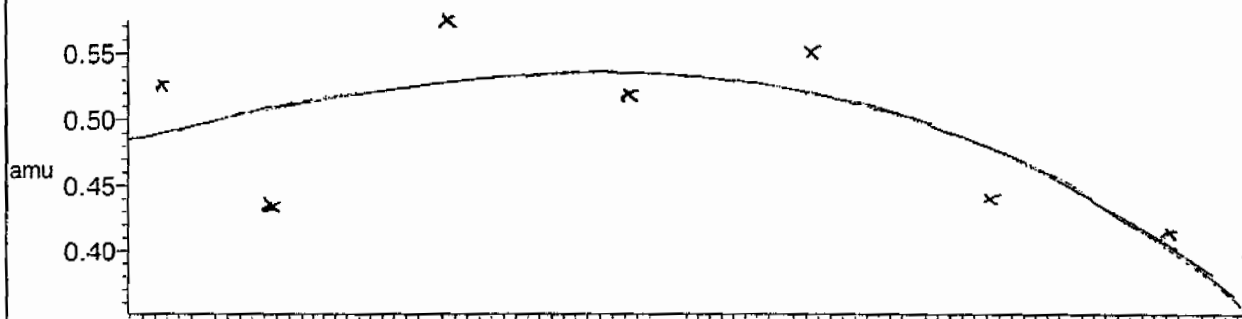
7 matches of 7 tested references



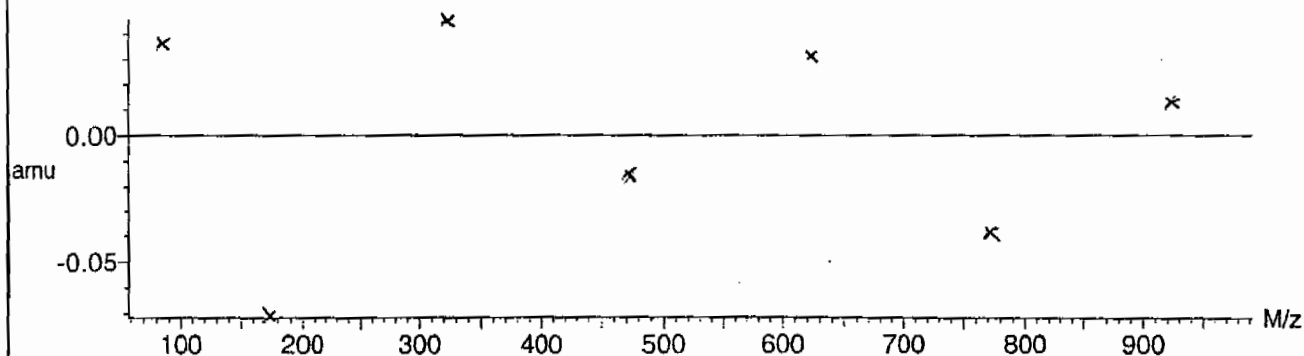
Reference file: Nairb



Mass difference (Raw - Ref mass)



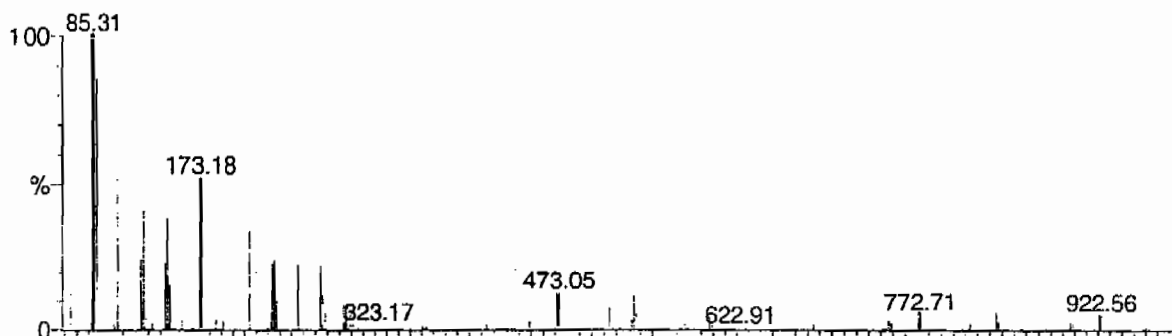
Residuals

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

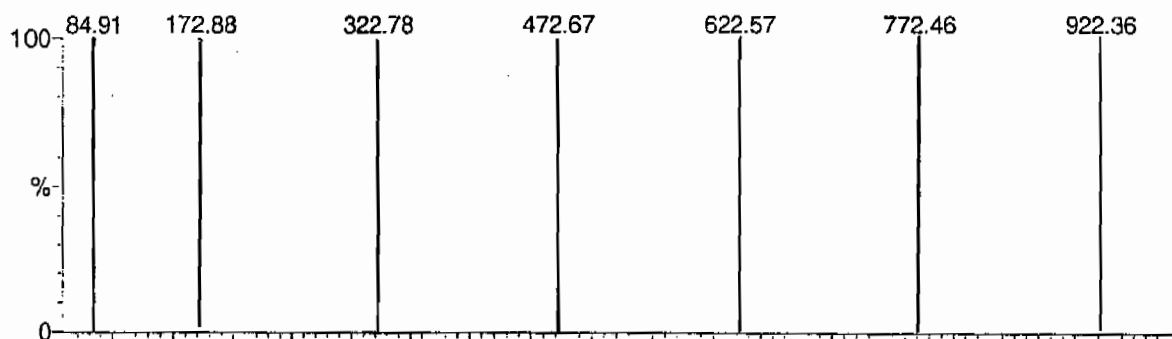
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Data file: SCNMS2 - Uncalibrated

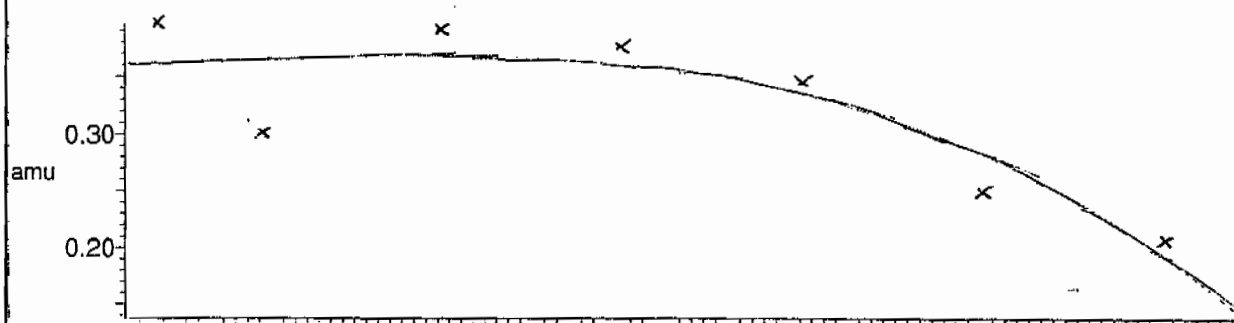
7 matches of 7 tested references



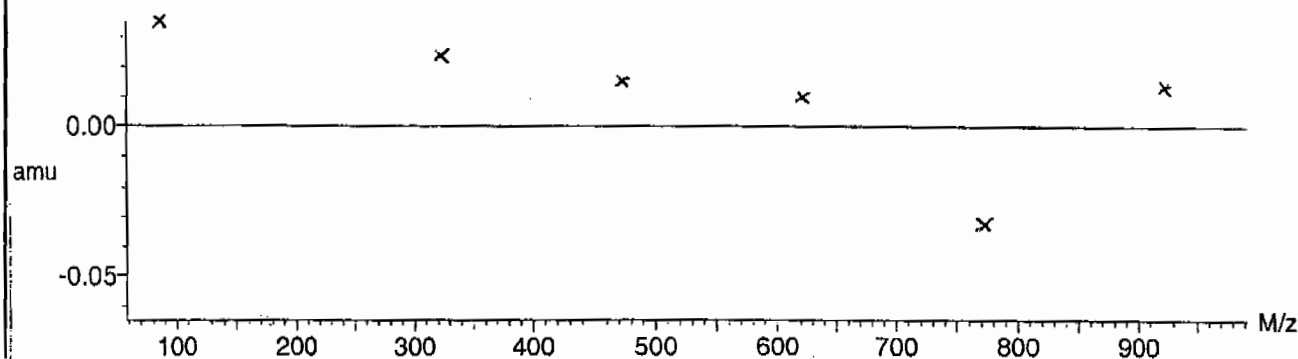
Reference file: Nairb



Mass difference (Raw - Ref mass)



Residuals

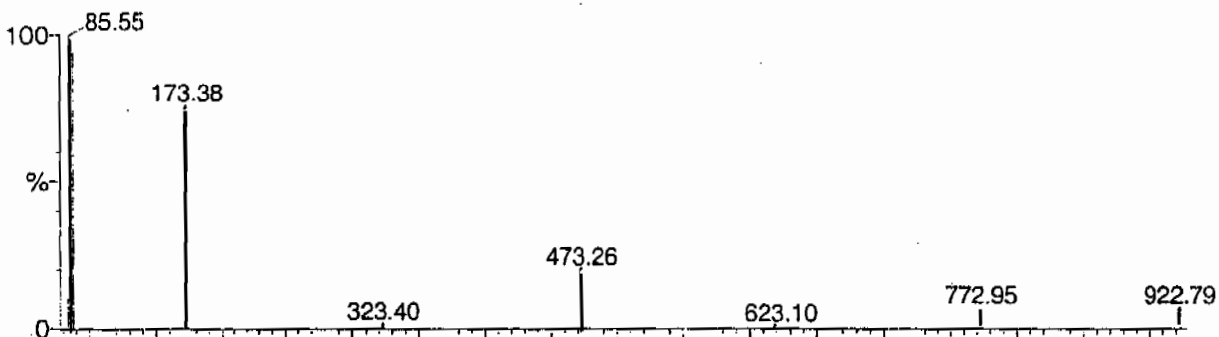
Mean residual =  $2.782494 \times 10^{-2} \pm 0.017442$ 



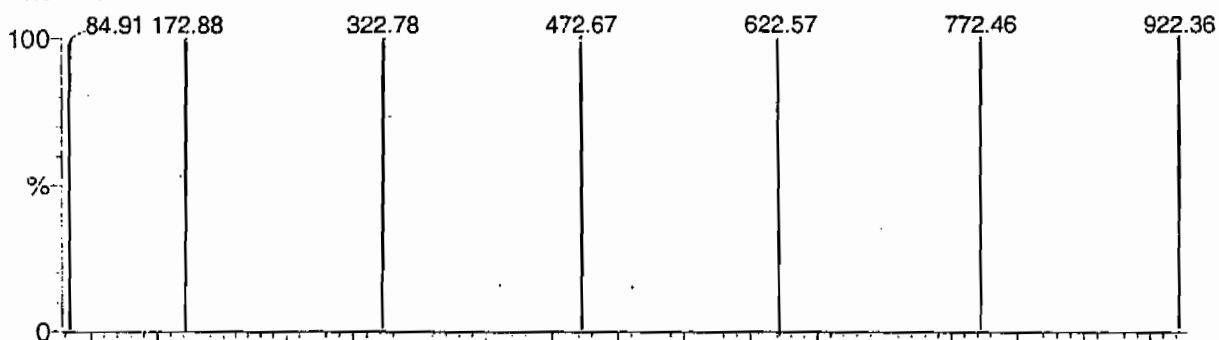
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Data file: STATMS2 - Uncalibrated

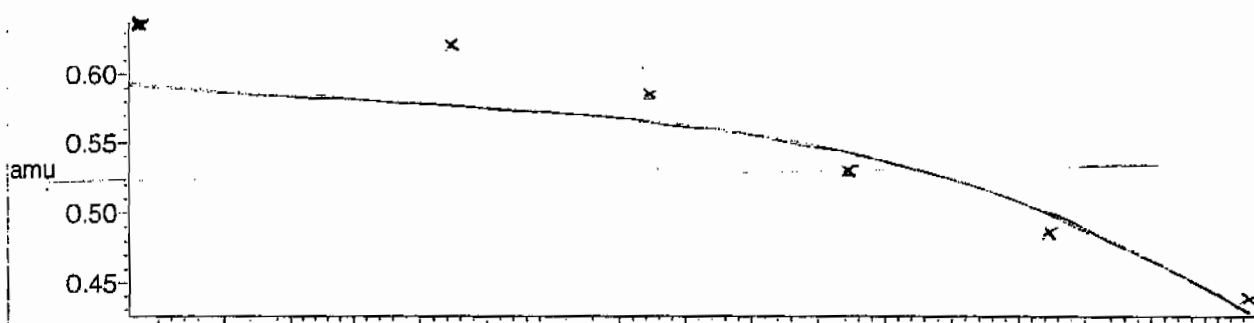
7 matches of 7 tested references



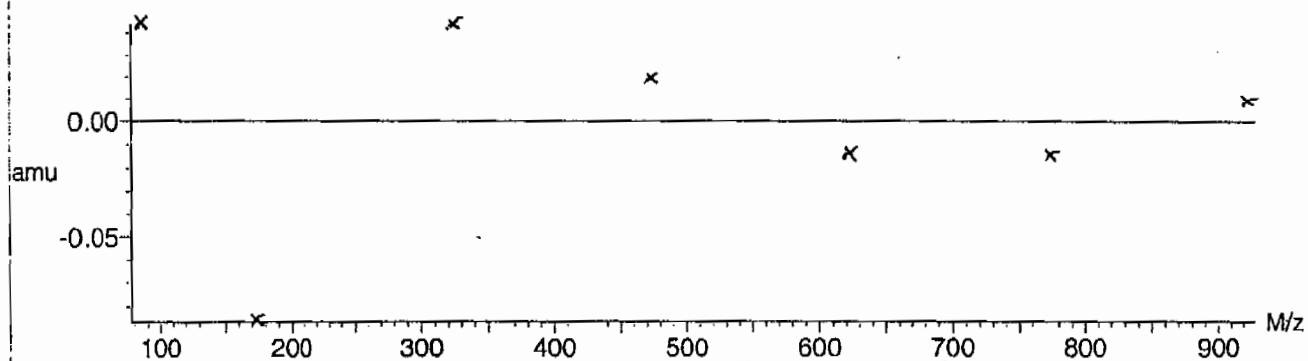
Reference file: Nairb



Mass difference (Raw - Ref mass)

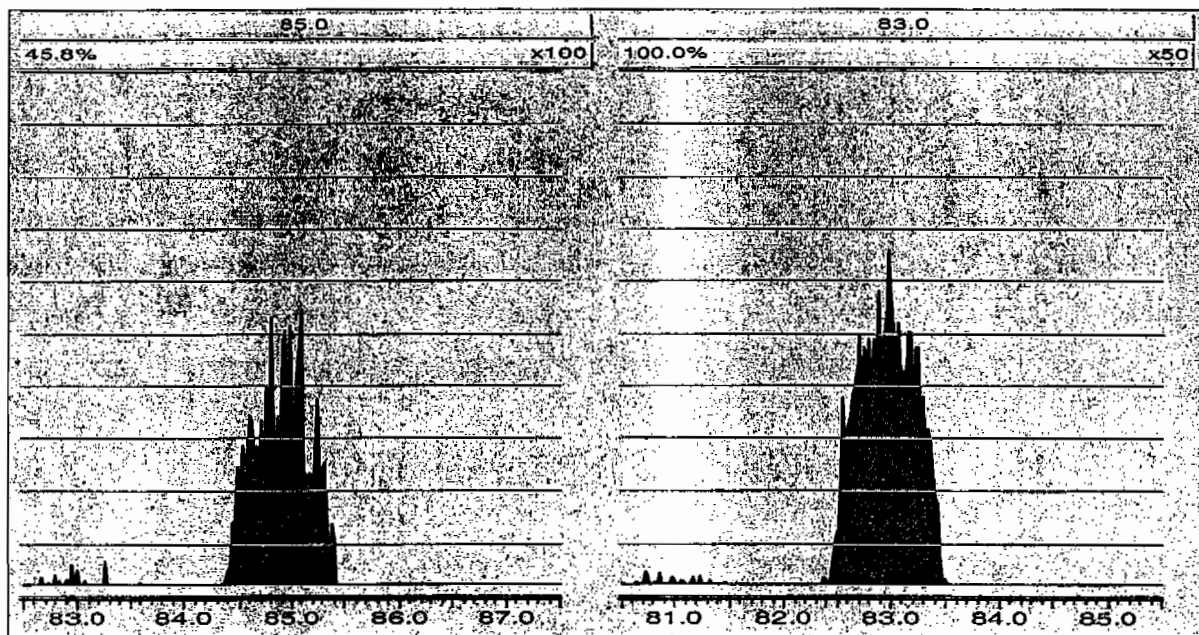


Residuals

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

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

Printed: Saturday, February 06, 2010 11:15:53 Eastern Standard Time



## Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386

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	per0206006a	06-FEB-10	22768.4				
Lower Area Limit			11384.2				
Upper Area Limit			45536.8				
1202028708	per0206012a	06-FEB-10 15:05	23205.7	1.99	1.99213	1.001	
1202028709	per0206013a	06-FEB-10 15:12	23309.4	1.99	2.00458	1.007	
1202028722	per0206014a	06-FEB-10 15:18	22776.2	2.03	2.04185	1.006	
245389001	per0206015a	06-FEB-10 15:25	22598.2	1.99	2.00457	1.007	
245389002	per0206016a	06-FEB-10 15:31	22936.2	1.99	2.00457	1.007	
1202028710	per0206017a	06-FEB-10 15:38	24174.2	1.99	2.00458	1.007	
1202028711	per0206018a	06-FEB-10 15:44	25524.4	1.99	2.00458	1.007	
245389003	per0206019a	06-FEB-10 15:51	22700	1.98	1.99215	1.006	

# Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386

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	per0206006a	06-FEB-10	22768.4				
Lower Area Limit			11384.2				
Upper Area Limit			45536.8				
245389004	per0206020a	06-FEB-10 15:58	22444.6	1.98	1.99212	1.006	
245389005	per0206021a	06-FEB-10 16:04	23461.6	1.98	1.99208	1.006	
245389006	per0206025a	06-FEB-10 16:30	24781.7	1.99	2.0046	1.007	
245389007	per0206026a	06-FEB-10 16:37	22399.8	1.98	2.00457	1.012	
245389008	per0206027a	06-FEB-10 16:43	24972.3	1.99	2.00458	1.007	
245389009	per0206028a	06-FEB-10 16:50	23350	1.98	1.9921	1.006	
245389010	per0206029a	06-FEB-10 16:56	25273.9	1.98	1.99212	1.006	
245389011	per0206030a	06-FEB-10 17:03	24322.6	1.98	1.9921	1.006	

# SAMPLE DATA

# Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE14-10-7689  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389001  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 87

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.575	2.3	1.06	ug/kg	J	1	06-FEB-10 15:25	per0206015a
	Perchlorate Isotope Ratio			3.18			1	06-FEB-10 15:25	per0206015a
14797-73-0	Perchlorate-101	.575	2.3	1.05	ug/kg	J	1	06-FEB-10 15:25	per0206015a
	Perchlorate-O(18)			5.69	ug/kg		1	06-FEB-10 15:25	per0206015a

<sup>a</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 =

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

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

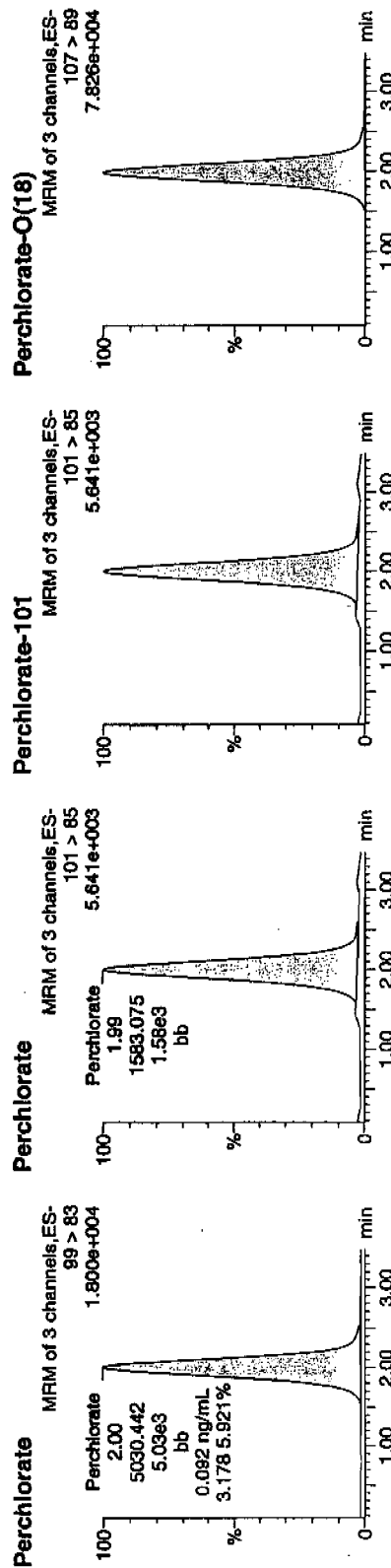
Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206015a  
Date: 06-Feb-2010  
Time: 15:25:24  
ID: 245389001  
Vial: 1:3,D

02-08-10

1222 | 947101 | 5030.442 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
245389001	Perchlorate	99 > 83	2.00	5030.442	5030.442	bb			0.0918			477.120	3.18
245389001	Perchlorate-101	101 > 85	1.99	1583.075	1583.075	bb			0.0913			774.785	
245389001	Perchlorate-O(18)	107 > 89	1.99	22598.197	22598.197	bb			0.4945	98.89	-1.11	3478.0...	

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 947096Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7679Date Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 245389002Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	0.636	ug/kg	U	1	06-FEB-10 15:31	per0206016a
	Perchlorate Isotope Ratio						1	06-FEB-10 15:31	per0206016a
14797-73-0	Perchlorate-101	.636	2.54	0.636	ug/kg	U	1	06-FEB-10 15:31	per0206016a
	Perchlorate-O(18)			6.39	ug/kg		1	06-FEB-10 15:31	per0206016a

<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 =

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



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

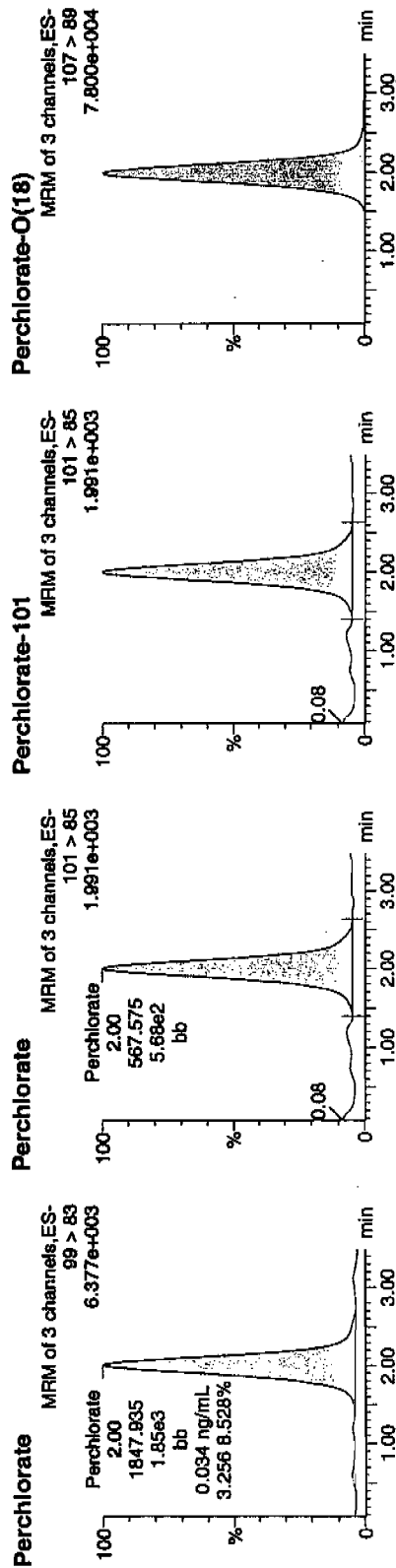
Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206016a  
Date: 06-Feb-2010  
Time: 15:31:55  
ID: 245389002  
Vial: 1:3,E

02-08-10

1.991e+003



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245389002	Perchlorate	99 > 83	2.00	1847.935	1847.935	bb			0.0337			206.640	3.26
245389002	Perchlorate-101	101 > 85	2.00	567.575	567.575	bb			0.0327			100.908	
245389002	Perchlorate-O(18)	107 > 89	1.99	22936.242	22936.242	bb			0.5019	100.37	0.37	4302.4...	

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 247096Extraction Type: Solid Prep

Client Sample No.

RE14-10-7680Date Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 245389003Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 88Sample 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	.568	2.27	1.88	ug/kg	J	1	06-FEB-10 15:51	per0206019a
	Perchlorate Isotope Ratio			3.22			1	06-FEB-10 15:51	per0206019a
14797-73-0	Perchlorate-101	.568	2.27	1.85	ug/kg	J	1	06-FEB-10 15:51	per0206019a
	Perchlorate-O(18)			5.64	ug/kg		1	06-FEB-10 15:51	per0206019a

<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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206019a

Date: 06-Feb-2010

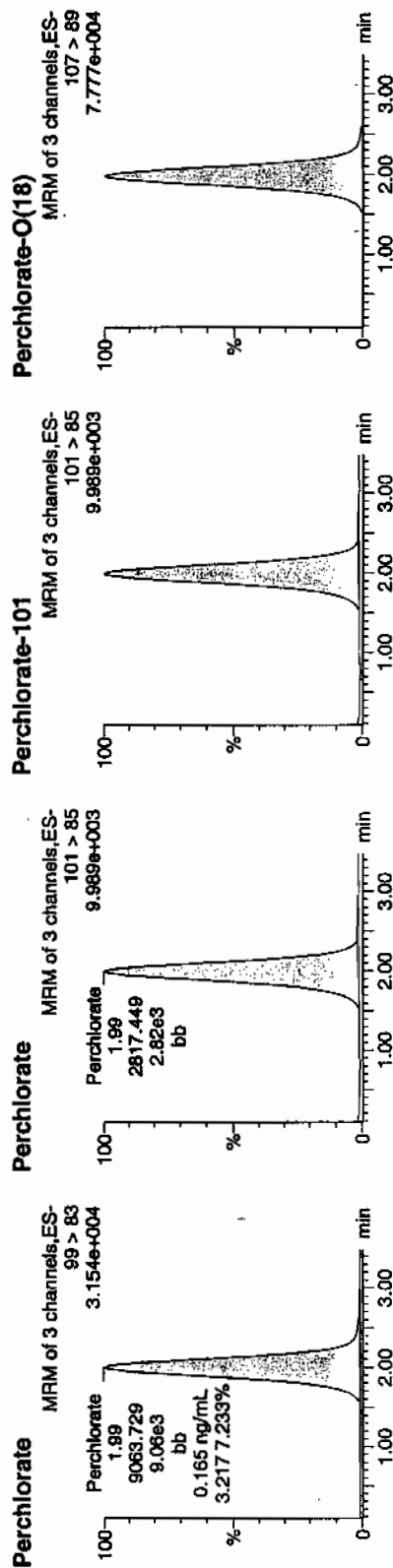
Time: 15:51:32

ID: 245389003

Vial: 1:4,B

02-08-10

1947101 102011



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245389003	Perchlorate	99 > 83	1.99	9063.729	9063.729	bb			0.1653		2473.1...	3.22	
245389003	Perchlorate-101	101 > 85	1.99	2817.449	2817.449	bb			0.1625		424.746		
245389003	Perchlorate-O(18)	107 > 89	1.98	22700.016	22700.016	bb			0.4967	99.34	-0.66	10571...	

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

**Perchlorate Analysis Data Sheet**

**Lab Name:** GEL Laboratories LLC

**Lab Code:** GEL

**Instrument:** LCMSMS

**Method:** SW846 6850 Modified

**Matrix:** SOIL

**Extraction Batch ID:** 247096

**Extraction Type:** Solid Prep

**Sample Volume/Weight:** 2.00 g

**Concentrated Extract Volume:** 20.0

**Client Sample No.**

RE14-10-7686

**Date Received:** 23-JAN-10

**GEL Job No (SDG):** 10-1386

**GEL Sample ID:** 245389004

**Date Filtered:** 05-FEB-10

**Injection Volume (uL):** 20

**% Solids:** 77

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.648	2.59	1.35	ug/kg	J	1	06-FEB-10 15:58	per0206020a
	Perchlorate Isotope Ratio			3.02			1	06-FEB-10 15:58	per0206020a
14797-73-0	Perchlorate-101	.648	2.59	1.42	ug/kg	J	1	06-FEB-10 15:58	per0206020a
	Perchlorate-O(18)			6.37	ug/kg		1	06-FEB-10 15:58	per0206020a

<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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206020a

Date: 06-Feb-2010

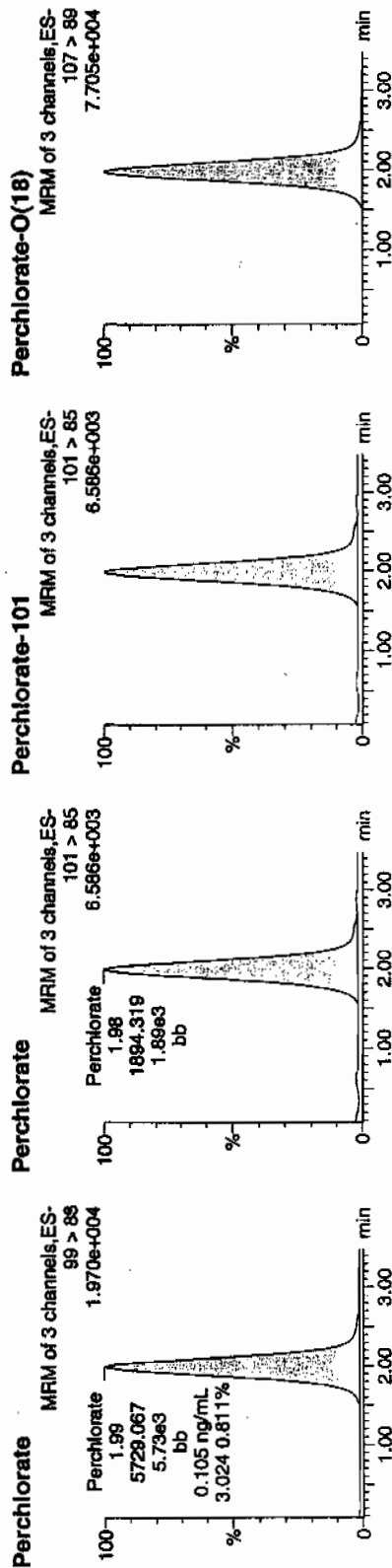
Time: 15:58:04

ID: 245389004

Vial: 1:4,C

1.99 | 947101 | 5020 | 11

02-08-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245389004	Perchlorate	99 > 83	1.99	5729.067	5729.067	bb			0.1045			599.036	3.02
245389004	Perchlorate-101	101 > 85	1.98	1894.319	1894.319	bb			0.1093			273.140	
245389004	Perchlorate-O(18)	107 > 89	1.98	22444.619	22444.619	bb			0.4911	98.22	-1.78	13650.000	

**Perchlorate Analysis Data Sheet**

**Lab Name:** GEL Laboratories LLC  
**Lab Code:** GEL  
**Instrument:** LCMSMS  
**Method:** SW846 6850 Modified  
**Matrix:** SOIL  
**Extraction Batch ID:** 247096  
**Extraction Type:** Solid Prep  
**Sample Volume/Weight:** 2.00 g  
**Concentrated Extract Volume:** 20.0

**Client Sample No.**

RE14-10-7688

**Date Received:** 23-JAN-10

**GEL Job No (SDG):** 10-1386

**GEL Sample ID:** 245389005

**Date Filtered:** 05-FEB-10

**Injection Volume (uL):** 20

**%Solids:** 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.634	2.53	0.634	ug/kg	U	1	06-FEB-10 16:04	per0206021a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:04	per0206021a
14797-73-0	Perchlorate-101	.634	2.53	0.634	ug/kg	U	1	06-FEB-10 16:04	per0206021a
	Perchlorate-O(18)			6.51	ug/kg		1	06-FEB-10 16:04	per0206021a

<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  $\frac{1}{\% \text{Solids}}$

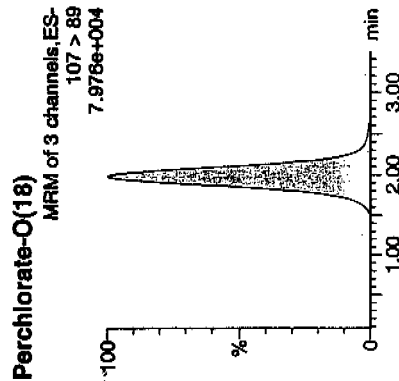
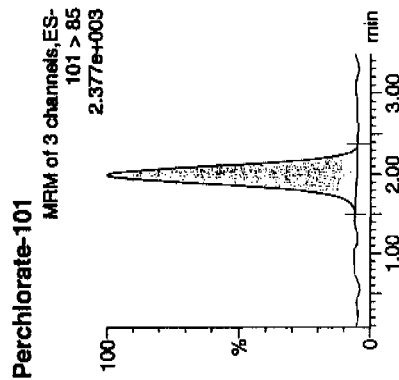
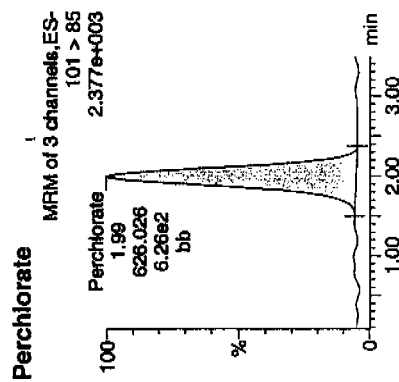
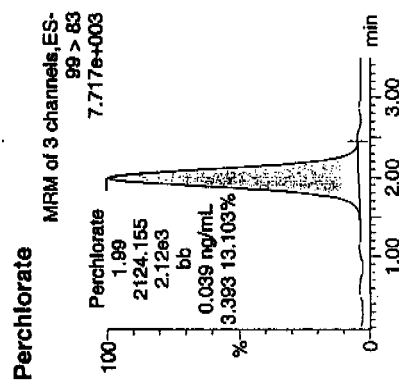
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206021a  
Date: 06-Feb-2010  
Time: 16:04:37  
ID: 245389005  
Vial: 1:4,D

620  
02-03-10  
LANC | 947101 | 5020 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245389005	Perchlorate	99 > 83	1.99	2124.155	2124.155	bb			0.0387			167.507	3.39
245389005	Perchlorate-101	101 > 85	1.99	626.026	626.026	bb			0.0361			154.134	
245389005	Perchlorate-O(18)	107 > 89	1.98	23461.561	23461.561	bb			0.5134	102.67	2.67	647.041	

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 247096Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7684Date Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 245389006Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 87

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.574	2.29	0.574	ug/kg	U	1	06-FEB-10 16:30	per0206025a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:30	per0206025a
14797-73-0	Perchlorate-101	.574	2.29	0.583	ug/kg	J	1	06-FEB-10 16:30	per0206025a
	Perchlorate-O(18)			6.22	ug/kg		1	06-FEB-10 16:30	per0206025a

<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 =

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



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

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

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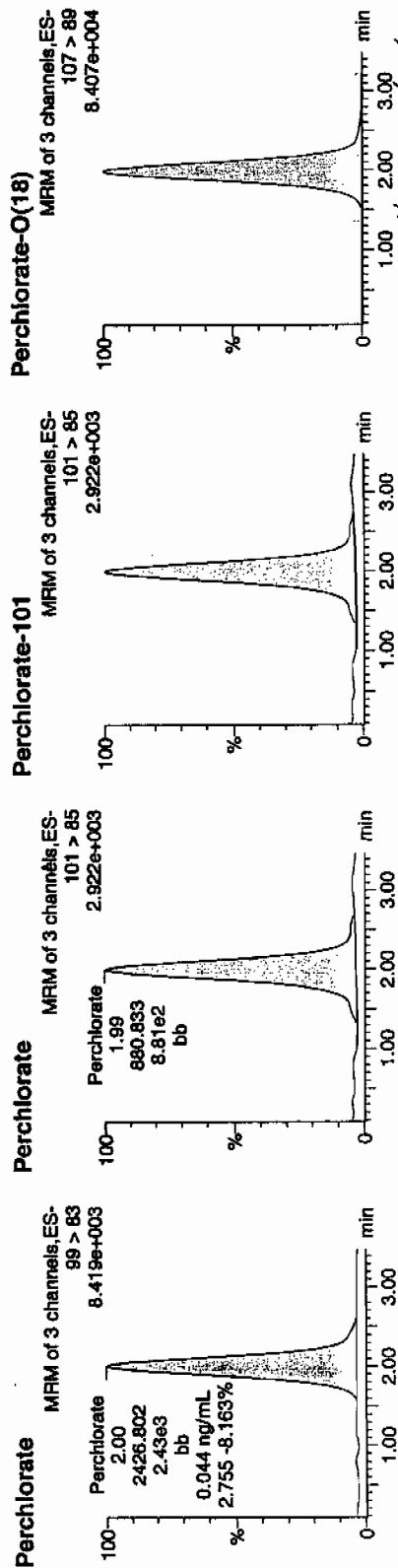
Date: 06-Feb-2010

Time: 16:30:46

ID: 245389006

Vial: 1:4,E

LOW 947101 | 20720 | 11  
02-08-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
245389006	Perchlorate	99 > 83	2.00	2426.802	2426.802	bb			0.0443			383.947	2.76
245389006	Perchlorate-101	101 > 85	1.99	880.833	880.833	bb			0.0508			224.678	
245389006	Perchlorate-O(18)	107 > 89	1.99	24781.732	24781.732	bb			0.5423	108.45		8.45	8631.3...

# Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947096

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7687

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1386

GEL Sample ID: 245389007

Date Filtered: 05-FEB-10

Injection Volume (uL): 20

%Solids: 73

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.682	2.73	0.682	ug/kg	U	1	06-FEB-10 16:37	per0206026a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:37	per0206026a
14797-73-0	Perchlorate-101	.682	2.73	0.682	ug/kg	U	1	06-FEB-10 16:37	per0206026a
	Perchlorate-O(18)			6.69	ug/kg		1	06-FEB-10 16:37	per0206026a

<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: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206026a

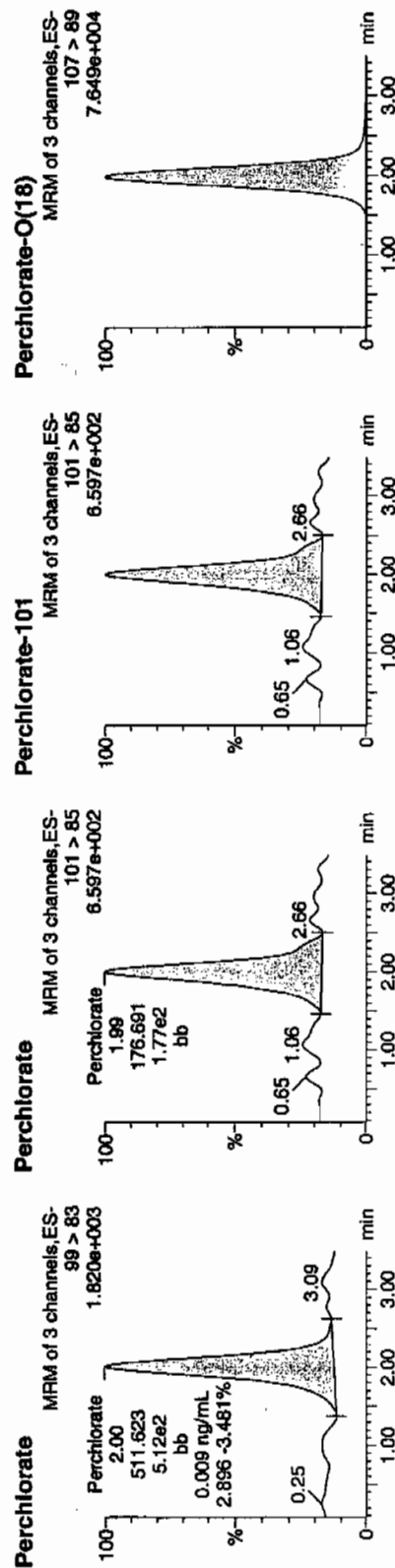
Date: 06-Feb-2010

Time: 16:37:18

ID: 245389007

Vial: 1:4,F

14200 | 947101 | 5000 | 11 |  
 2-08-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245389007	Perchlorate	99 > 83	2.00	511.623	511.623	bb			0.0093			19.505	2.90
245389007	Perchlorate-101	101 > 85	1.99	176.691	176.691	bb			0.0102			44.478	
245389007	Perchlorate-O(18)	107 > 89	1.98	22399.779	22399.779	bb			0.4901	98.03	-1.97	1895.3...	

## Perchlorate Analysis Data Sheet

**Lab Name:** GEL Laboratories LLC  
**Lab Code:** GEL  
**Instrument:** LCMSMS  
**Method:** SW846 6850 Modified  
**Matrix:** SOIL  
**Extraction Batch ID:** 947096  
**Extraction Type:** Solid Prep  
**Sample Volume/Weight:** 2.00 g  
**Concentrated Extract Volume:** 20.0  
**Client Sample No.**  
RE14-10-7681  
**Date Received:** 23-JAN-10  
**GEL Job No (SDG):** 10-1386  
**GEL Sample ID:** 245389008  
**Date Filtered:** 05-FEB-10  
**Injection Volume (uL):** 20  
**%Solids:** 78

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.645	2.58	0.645	ug/kg	U	1	06-FEB-10 16:43	per0206027a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:43	per0206027a
14797-73-0	Perchlorate-101	.645	2.58	0.645	ug/kg	U	1	06-FEB-10 16:43	per0206027a
	Perchlorate-O(18)			7.05	ug/kg		1	06-FEB-10 16:43	per0206027a

<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 =

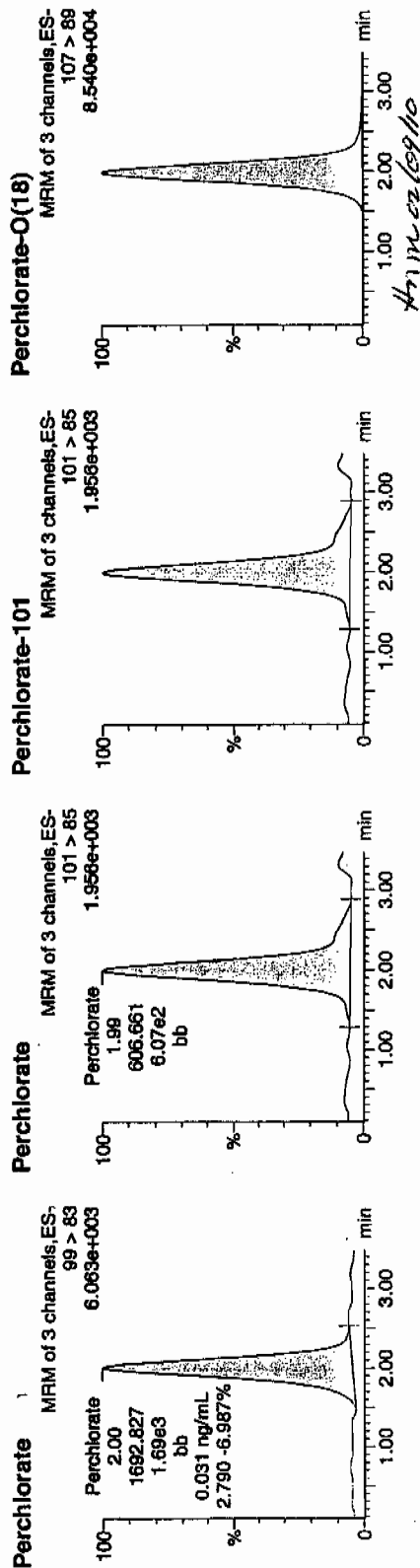
Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

**Quantify Sample Report** MassLynx 4.0 SP4  
 The GEL Group, LLC Analyst: Charfers W. Wilson  
 Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld  
 Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206027a  
 Date: 06-Feb-2010  
 Time: 16:43:50  
 ID: 245389008  
 Vial: 1:5,A

02-08-10

1522 947101 5020 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245389008	Perchlorate	99 > 83	2.00	1692.827	1692.827	bb			0.0309	-		199.450	2.79
245389008	Perchlorate-101	101 > 85	1.99	606.661	606.661	bb			0.0350			141.823	
245389008	Perchlorate-O(18)	107 > 89	1.99	24972.326	24972.326	bb			0.5464	109.28	9.28	3445.7...	

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE14-10-7682  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389009  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 87

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.574	2.29	1.25	ug/kg	J	1	06-FEB-10 16:50	per0206028a
	Perchlorate Isotope Ratio			3.21			1	06-FEB-10 16:50	per0206028a
14797-73-0	Perchlorate-101	.574	2.29	1.23	ug/kg	J	1	06-FEB-10 16:50	per0206028a
	Perchlorate-O(18)			5.86	ug/kg		1	06-FEB-10 16:50	per0206028a

<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\per020610a.qld

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Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206028a

Date: 06-Feb-2010

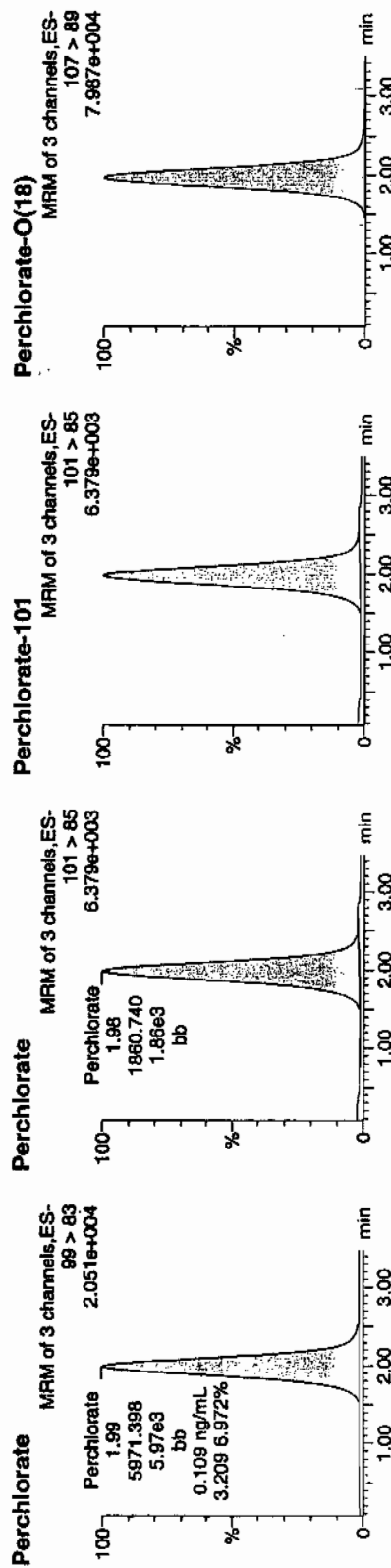
Time: 16:50:24

ID: 245389009

Vial: 1:5,B

6666  
02-08-10

1234567891011  
5020 111



ID	Name	Trace	RT	Area	Response	Flags	Mod. Date	Mod. Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245389009	Perchlorate	99 > 83	1.99	5971.398	5971.398	bb			0.1089			817.608	3.21
245389009	Perchlorate-101	101 > 85	1.98	1860.740	1860.740	bb			0.1073			421.775	
245389009	Perchlorate-O(18)	107 > 89	1.98	23350.035	23350.035	bb			0.5109	102.19	2.19	2953.1...	

# Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC Client Sample No. RE14-10-7685

Lab Code: GEL

Instrument: LCMSMS

Date Received: 23-JAN-10

Method: SW846 6850 Modified

GEL Job No (SDG): 10-1386

Matrix: SOIL

GEL Sample ID: 245389010

Extraction Batch ID: 947096

Date Filtered: 05-FEB-10

Extraction Type: Solid Prep

Injection Volume (uL): 20

Sample Volume/Weight: 2.00 g

% Solids: 85

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	.59	2.36	0.590	ug/kg	U	1	06-FEB-10 16:56	per0206029a
	Perchlorate Isotope Ratio						1	06-FEB-10 16:56	per0206029a
14797-73-0	Perchlorate-101	.59	2.36	0.590	ug/kg	U	1	06-FEB-10 16:56	per0206029a
	Perchlorate-O(18)			6.53	ug/kg		1	06-FEB-10 16:56	per0206029a

<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: Charliers W. Wilson

Page 29 of 95

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time

Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206029a

Date: 06-Feb-2010

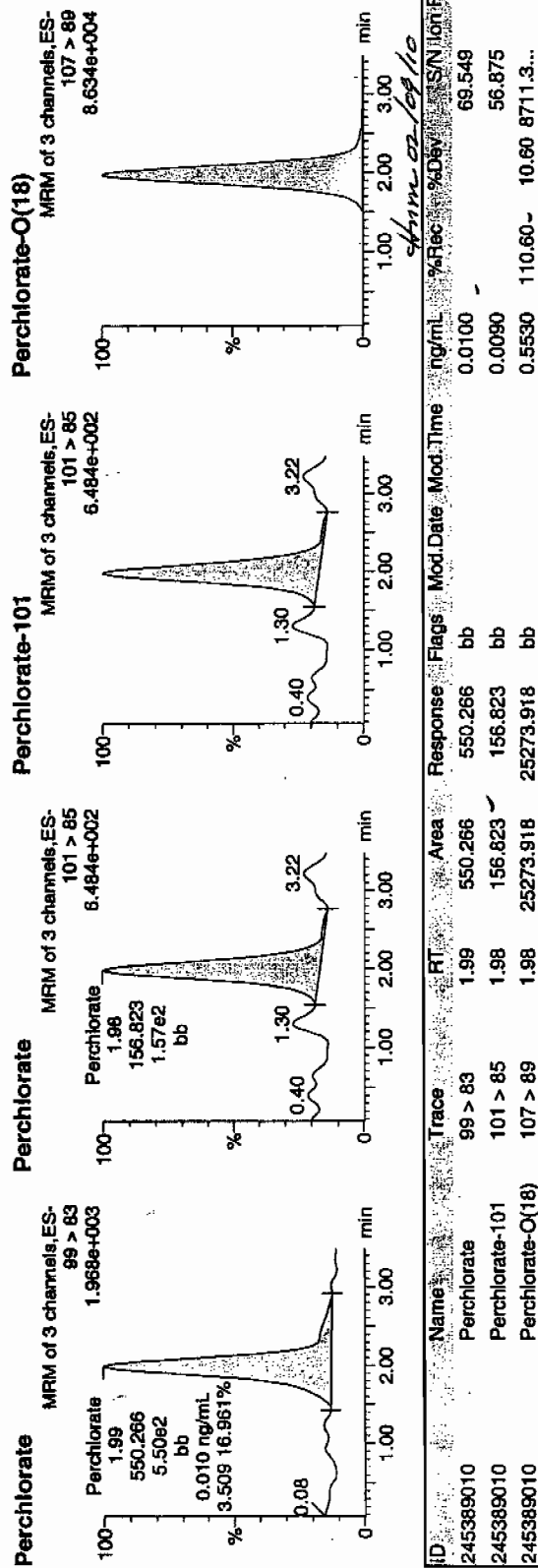
Time: 16:56:57

ID: 245389010

Vial: 1:5,C

and  
02-08-10

1942-1947101 | 520/11



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

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846.6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE14-10-7683  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 245389011  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 75

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.67	2.68	1.35	ug/kg	J	1	06-FEB-10 17:03	per0206030a
	Perchlorate Isotope Ratio			3.11			1	06-FEB-10 17:03	per0206030a
14797-73-0	Perchlorate-101	.67	2.68	1.38	ug/kg	J	1	06-FEB-10 17:03	per0206030a
	Perchlorate-O(18)			7.13	ug/kg		1	06-FEB-10 17:03	per0206030a

<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

## Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charfers W. Wilson

Page 30 of 95

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time

Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206030a

Date: 06-Feb-2010

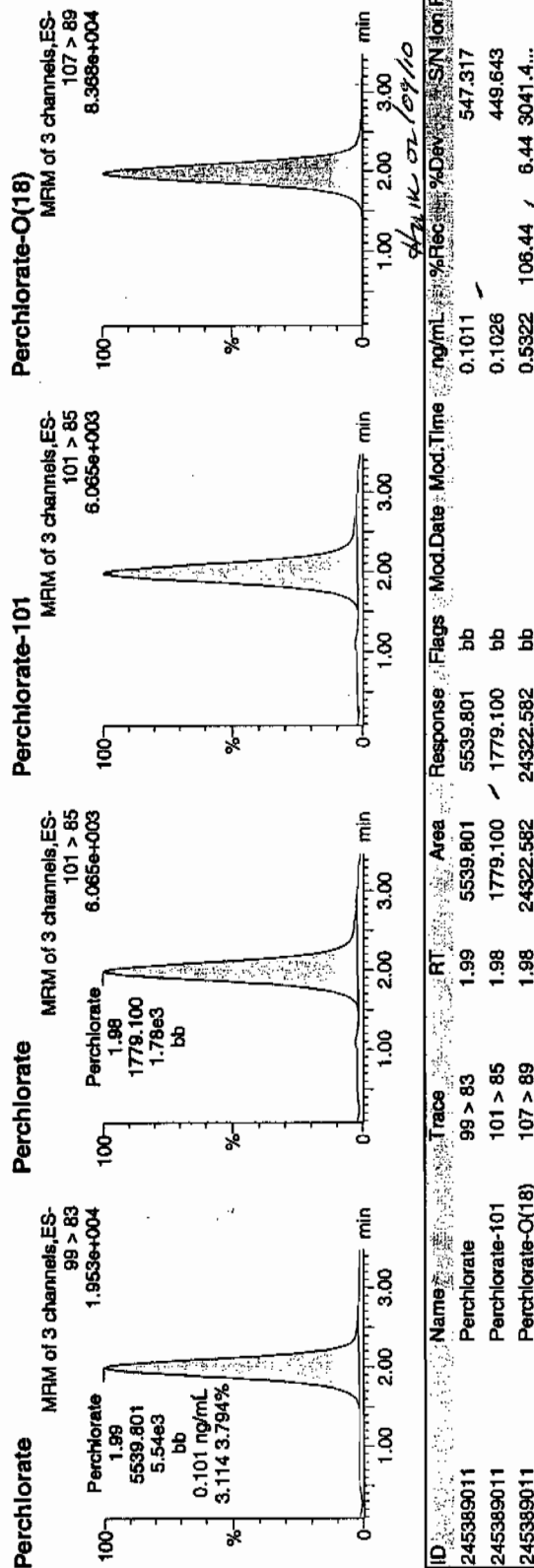
Time: 17:03:30

ID: 245389011

Vial: 1:5,D

CWD  
02-08-10

LAWL | 947101 | 5020 | 11



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

# STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1386

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 06-FEB-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: 54820.92

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories      GEL Job No.(SDG): 10-1386

Lab Code: GEL

Instrument ID: LCMSMS      Date Analyzed: 06-FEB-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-101

Coefficient of Determination:

Calibration Curve: 17334

Response Type: External Standard

Curve Type: RF

# Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Page 1 of 2

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time

Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020610a.mdb 08 Feb 2010 10:36:58

Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020610a.cdb 08 Feb 2010 18:04:41

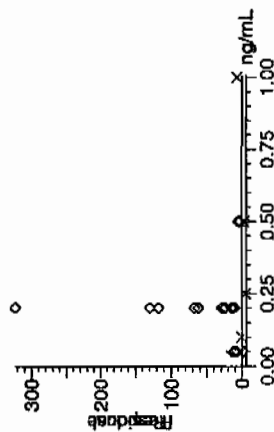
Compound name: Perchlorate

Response Factor: 54820.9

RRF SD: 2535.16, % Relative SD: 4.62444

Response type: External Std, Area

Curve type: RF



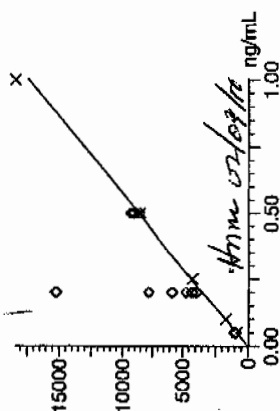
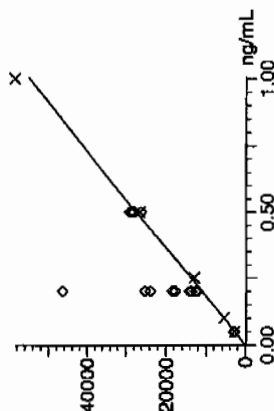
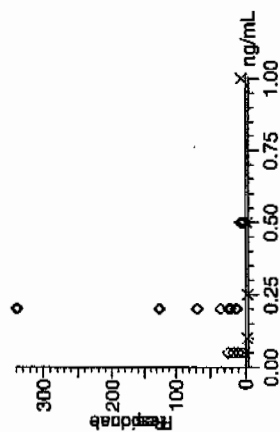
Compound name: Perchlorate-101

Response Factor: 17334

RRF SD: 687.131, % Relative SD: 3.96406

Response type: External Std, Area

Curve type: RF



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

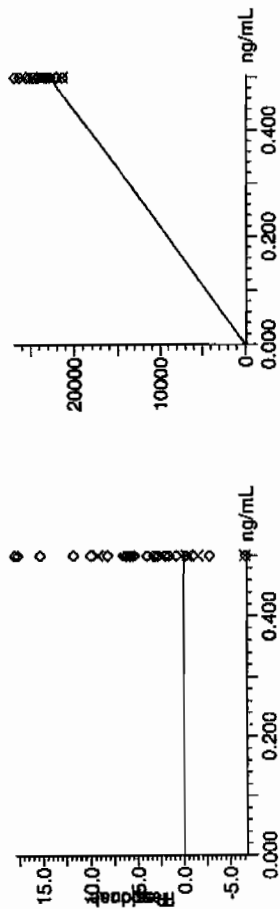
Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Compound name: Perchlorate-O(18)  
Response Factor: 45701.4  
RRF SD: 2620.47, % Relative SD: 5.7339  
Response type: External Std, Area  
Curve type: RF





Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.52	103.65	06-FEB-10 14:46	per0206009a
Perchlorate Isotope Ratio		3.21		06-FEB-10 14:46	per0206009a
Perchlorate-101	.5	.51	102.13	06-FEB-10 14:46	per0206009a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206009a

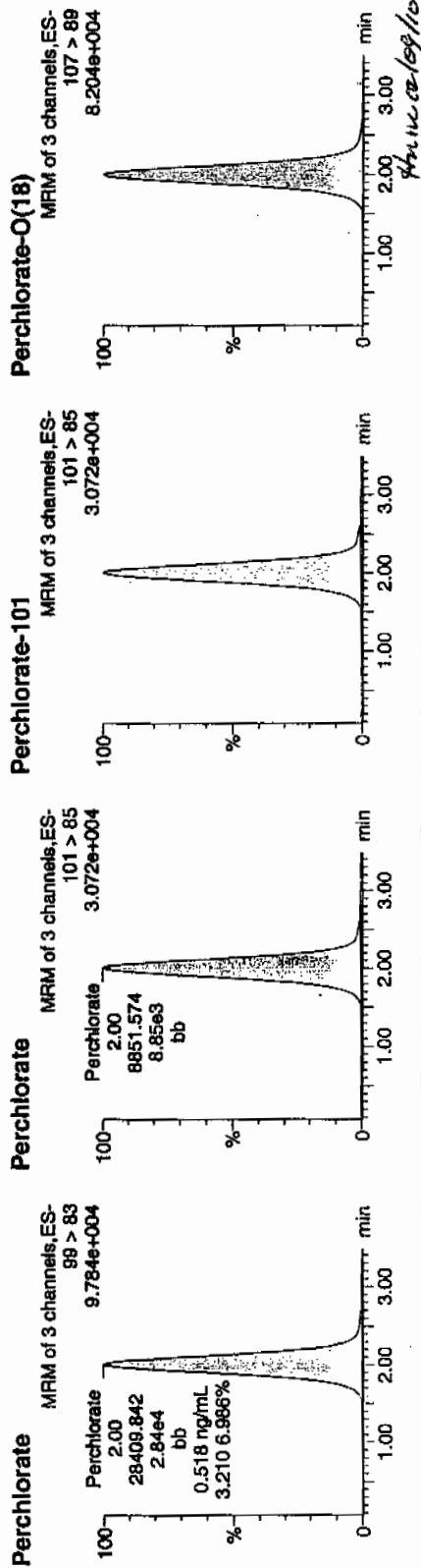
Date: 06-Feb-2010

Time: 14:46:06

ID: WCL100128-06ICV

Vial: 1:2,A

*Per  
and  
02-08-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100128-06ICV	Perchlorate	99 > 83	2.00	28409.842	28409.842	bb			0.5182	103.65	3.65	2148.8...	3.21
WCL100128-06ICV	Perchlorate-101	101 > 85	2.00	8851.574	8851.574	bb			0.5106	102.13	2.13	1046.4...	
WCL100128-06ICV	Perchlorate-O(18)	107 > 89	2.00	23753.176	23753.176	bb			0.5197	103.95	3.95	9133.9...	

## Perchlorate Continuing Calibration Verification

Lab Name: General Engineering LaboratoriesGEL Job No.(SDG): 10-1386Lab Code: GELReporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.48	95.43	06-FEB-10 16:11	per0206022a
Perchlorate Isotope Ratio		3.04		06-FEB-10 16:11	per0206022a
Perchlorate-101	.5	.5	99.28	06-FEB-10 16:11	per0206022a
Perchlorate	.5	.51	101.98	06-FEB-10 17:36	per0206035a
Perchlorate Isotope Ratio		2.98		06-FEB-10 17:36	per0206035a
Perchlorate-101	.5	.54	108.29	06-FEB-10 17:36	per0206035a

**Quantify Sample Report** MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206022a

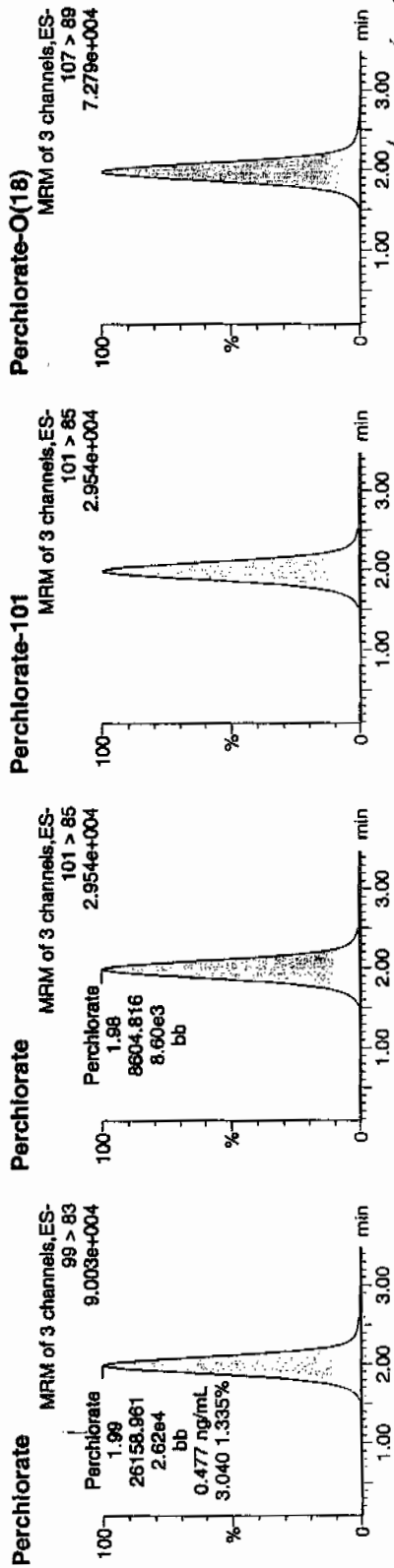
Date: 06-Feb-2010

Time: 16:11:10

ID: WCL100128-06CCV

Vial: 1:2,A

*Qus*  
*aw*  
*02-03-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	1.99	26158.961	26158.961	bb			0.4772	95.43	-4.57	3184.7...	3.04
WCL100128-06CCV	Perchlorate-101	101 > 85	1.98	8604.816	8604.816	bb			0.4964	99.28	-0.72	1627.3...	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	1.97	21335.939	21335.939	bb			0.4669	93.37	-6.63	13443....	

# Quantify Sample Report MassLynx 4.0 SP4

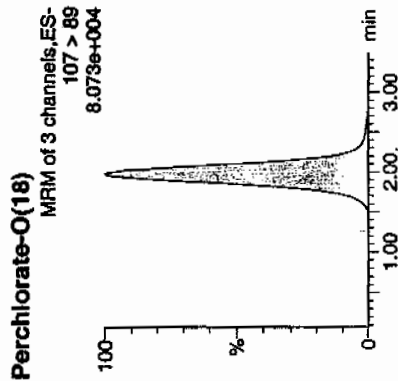
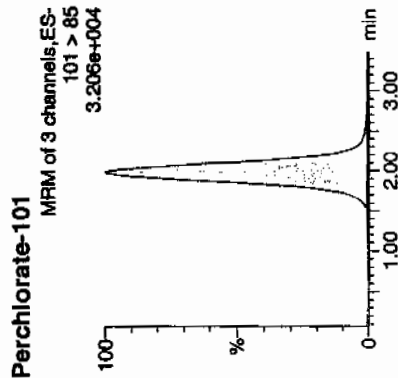
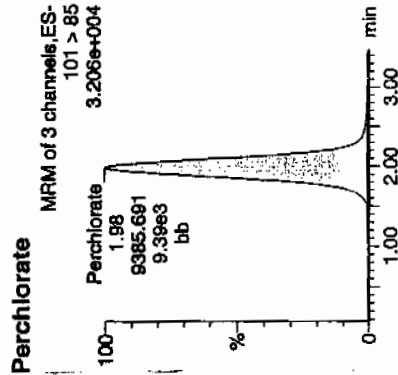
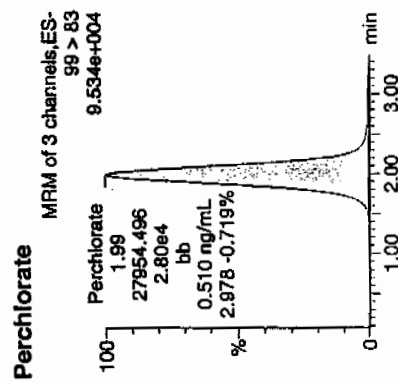
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
 Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206035a  
 Date: 06-Feb-2010  
 Time: 17:36:15  
 ID: WCL100128-06CCV  
 Vial: 1:2,A

*Run*  
*2-8-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	1.99	27954.496	27954.496	bb			0.5099	101.98	1.98	1558.0...	2.98
WCL100128-06CCV	Perchlorate-101	101 > 85	1.98	9385.691	9385.691	bb			0.5415	108.29	8.29	6007.6...	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	1.98	23471.287	23471.287	bb			0.5136	102.72	2.72	7628.4...	

## Perchlorate MDL Verification

Lab Name: General Engineering LaboratoriesGEL Job No.(SDG): 10-1386Lab Code: GELReporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.06	110.95	06-FEB-10 14:59	per0206011a
Perchlorate Isotope Ratio		3.2		06-FEB-10 14:59	per0206011a
Perchlorate-101	.05	.05	109.71	06-FEB-10 14:59	per0206011a
Perchlorate	.05	.05	97.6	06-FEB-10 16:24	per0206024a
Perchlorate Isotope Ratio		2.99		06-FEB-10 16:24	per0206024a
Perchlorate-101	.05	.05	103.39	06-FEB-10 16:24	per0206024a
Perchlorate	.05	.06	112.34	06-FEB-10 17:49	per0206037a
Perchlorate Isotope Ratio		3.03		06-FEB-10 17:49	per0206037a
Perchlorate-101	.05	.06	117.44	06-FEB-10 17:49	per0206037a

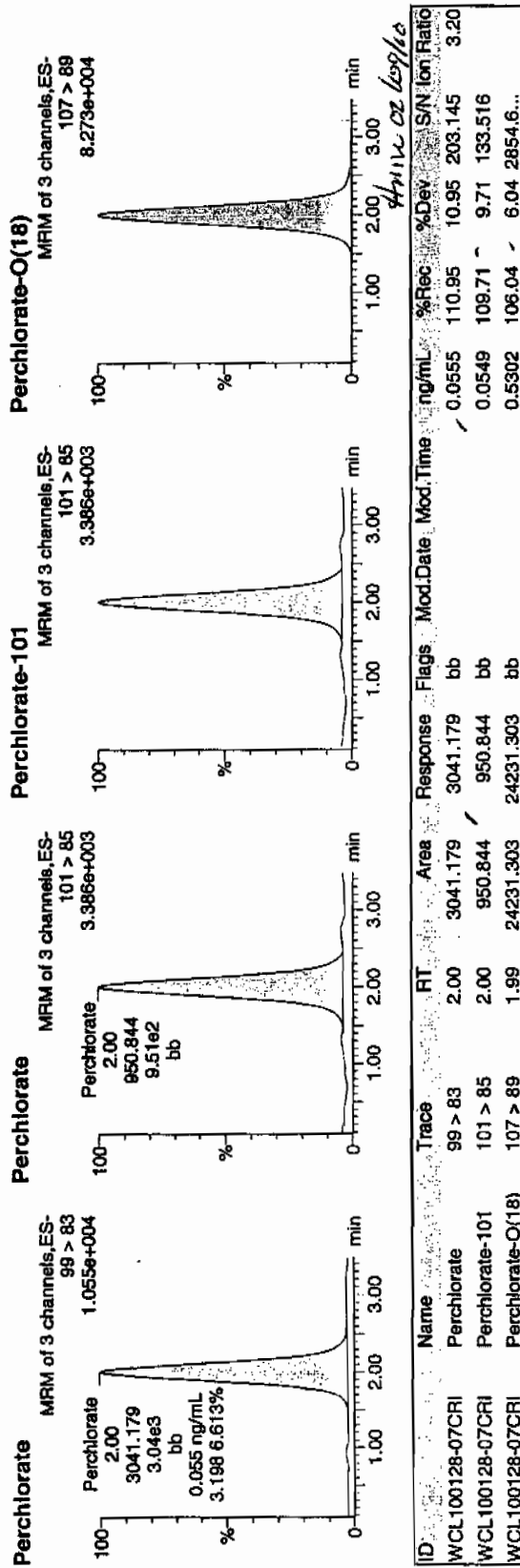
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206011a  
Date: 06-Feb-2010  
Time: 14:59:11  
ID: WCL100128-07CRI  
Vial: 1:2,B

*Run*  
*603*  
*02-08-10*



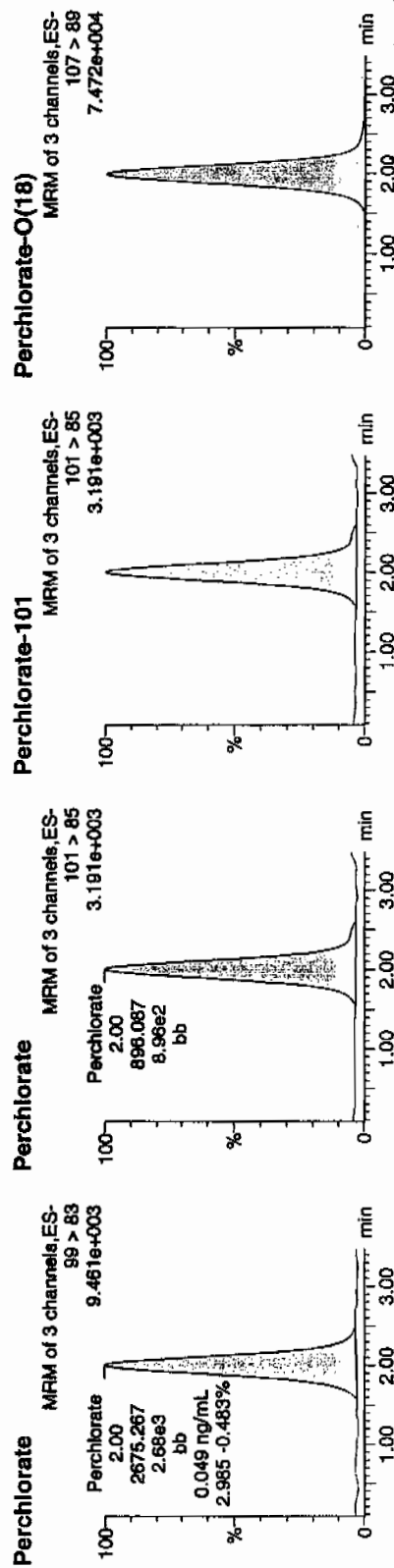
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206024a  
Date: 06-Feb-2010  
Time: 16:24:15  
ID: WCL100128-07CRI  
Vial: 1:2,B

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and  
02-08-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.00	2675.267	2675.267	bb			0.0488	97.60	-2.40	323.958	2.99
WCL100128-07CRI	Perchlorate-101	101 > 85	2.00	896.087	896.087	bb			0.0517	103.39	3.39	371.463	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	1.99	22200.217	22200.217	bb			0.4858	97.15	-2.85	6138.8...	

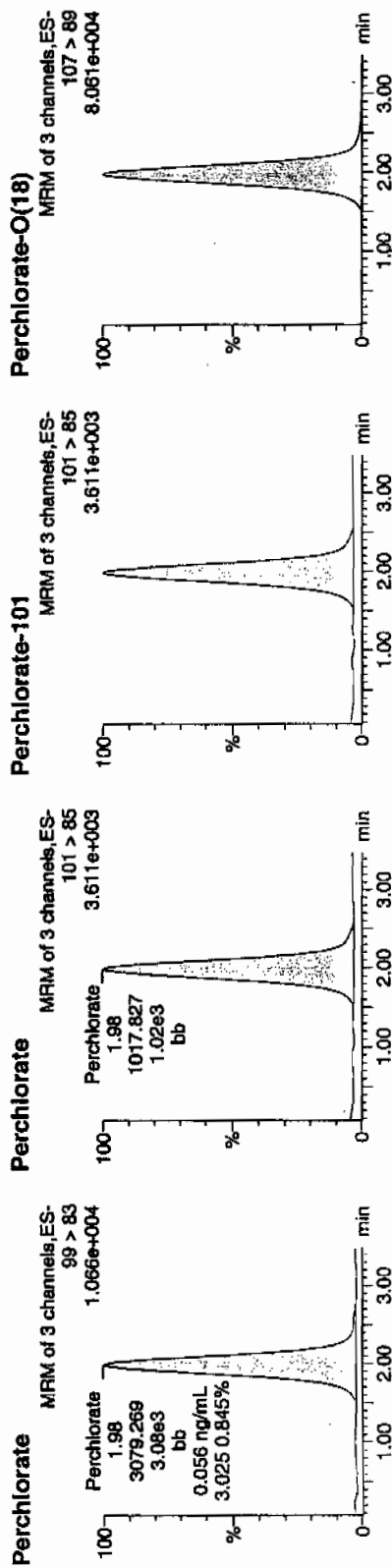


Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206037a  
Date: 06-Feb-2010  
Time: 17:49:20  
ID: WCL100128-07CRI  
Vial: 1:2,B

21-40-70  
33  
P33



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07C1	Perchlorate	99 > 83	1.98	3079.269	3079.269	bb			0.0562	112.34	12.34	405.467	3.03
WCL100128-07C1	Perchlorate-101	101 > 85	1.98	1017.827	1017.827	bb			0.0587	117.44	17.44	259.607	
WCL100128-07C1	Perchlorate-O(18)	107 > 89	1.98	23594.932	23594.932	bb			0.5163	103.26	3.26	434.485	

# 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: 947096  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. MB  
 Date Received: 05-FEB-10  
 GEL Job No (SDG): 10-1386  
 GEL Sample ID: 1202028708  
 Date Filtered: 05-FEB-10  
 Injection Volume (uL): 20  
 % Solids: 100

CAS No.	Analyte <sup>a</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	06-FEB-10 15:05	per0206012a
	Perchlorate Isotope Ratio						1	06-FEB-10 15:05	per0206012a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	06-FEB-10 15:05	per0206012a
	Perchlorate-O(18)			5.08	ug/kg		1	06-FEB-10 15:05	per0206012a

<sup>a</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: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time

Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206012a

Date: 06-Feb-2010

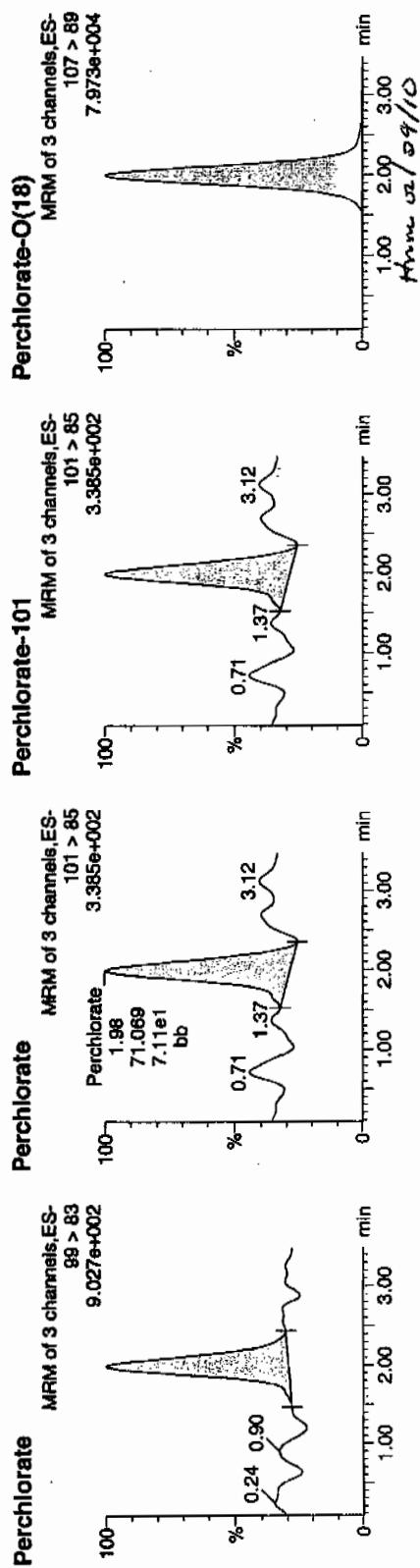
Time: 15:05:45

ID: 1202028708

Vial: 1:3,A

WJ  
02-08-10

1202028708 | 3020 | 100 | 1.1



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202028708	Perchlorate	99 > 83	1.99	185.173	185.173	bb			0.0034			10.142	2.61
1202028708	Perchlorate-101	101 > 85	1.98	71.069	71.069	bb			0.0041			19.948	
1202028708	Perchlorate-O(18)	107 > 89	1.99	23205.686	23205.686	bb			0.5078	101.55	1.55	6641.0...	

# Perchlorate Analysis Data Sheet

Client Sample No.

LCS

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Date Received: 05-FEB-10

Instrument: LCMSMS

GEL Job No (SDG): 10-1386

Method: EPA 6850 Modified

GEL Sample ID: 1202028702

Matrix: SOIL

Date Filtered: 05-FEB-10

Extraction Batch ID: 247096

Injection Volume (uL): 20

Extraction Type: Solid Prep

%Solids: 100

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	.5	2	2.31	ug/kg		1	06-FEB-10 15:12	per0206013a
	Perchlorate Isotope Ratio			3.18			1	06-FEB-10 15:12	per0206013a
14797-73-0	Perchlorate-101	.5	2	2.29	ug/kg		1	06-FEB-10 15:12	per0206013a
	Perchlorate-O(18)			5.10	ug/kg		1	06-FEB-10 15:12	per0206013a

<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: Charles W. Wilson

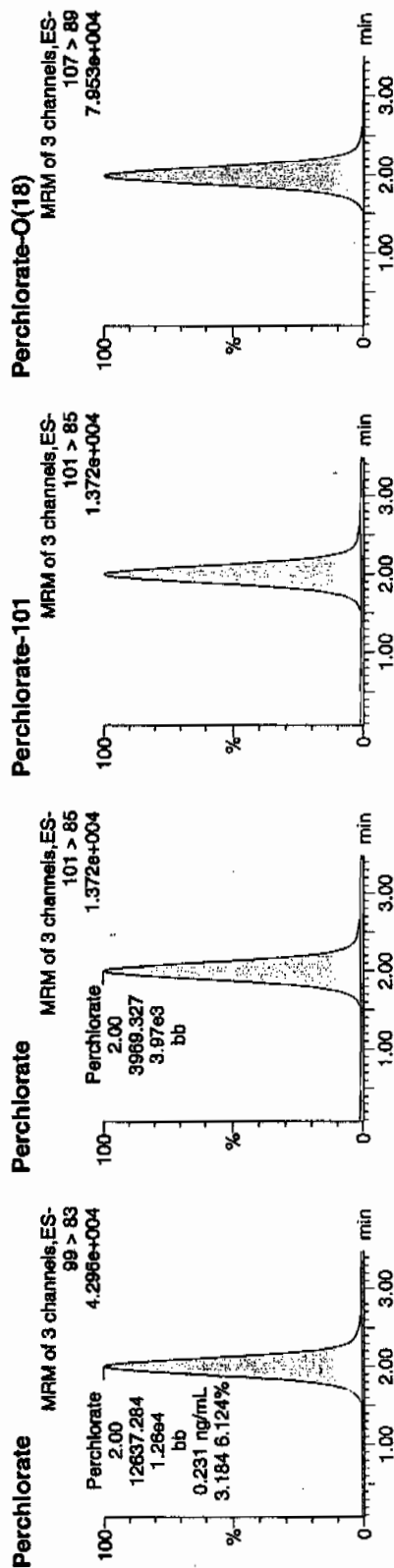
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Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206013a  
Date: 06-Feb-2010  
Time: 15:12:18  
ID: 1202028709  
Vial: 1:3,B

02-08-10

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ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202028709	Perchlorate	99 > 83	2.00	12637.284	12637.284	bb			0.2305	115.26	15.26	545.510	3.18
1202028709	Perchlorate-101	101 > 85	2.00	3969.327	3969.327	bb			0.2290	114.50	14.50	473.613	
1202028709	Perchlorate-O(18)	107 > 89	1.99	23309.373	23309.373	bb			0.5100	102.01	2.01	16822....	

12637.284  
54620.9  
= 0.2305  
Hmw 02/09/10

# Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247096

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7679MS

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1386

GEL Sample ID: 1202028710

Date Filtered: 05-FEB-10

Injection Volume (uL): 20

% Solids: 72

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	3.21	ug/kg		1	06-FEB-10 15:38	per0206017a
	Perchlorate Isotope Ratio			3.2			1	06-FEB-10 15:38	per0206017a
14797-73-0	Perchlorate-101	.636	2.54	3.17	ug/kg		1	06-FEB-10 15:38	per0206017a
	Perchlorate-O(18)			6.73	ug/kg		1	06-FEB-10 15:38	per0206017a

<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\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206017a

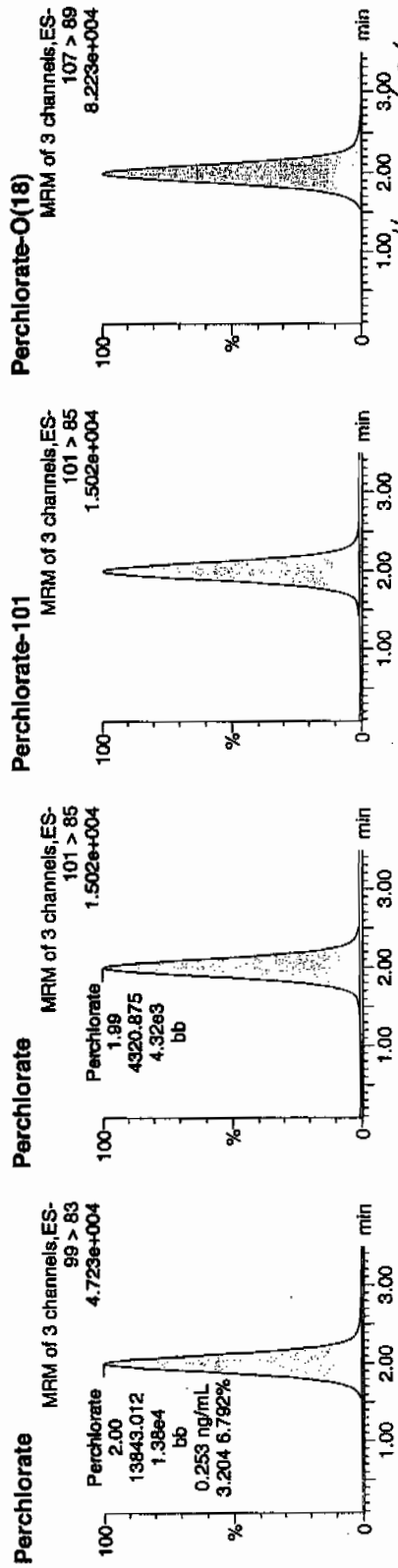
Date: 06-Feb-2010

Time: 15:38:27

ID: 1202028710

Vial: 1:3,F

662  
02-08-10  
1202028710 | 5020 | 75 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202028710	Perchlorate	99 > 83	2.00	13843.012	13843.012	bb			0.2525	126.26	26.26	1334.2...	3.20
1202028710	Perchlorate-101	101 > 85	1.99	4320.875	4320.875	bb			0.2493	124.64	24.64	959.758	
1202028710	Perchlorate-O(18)	107 > 89	1.99	24174.246	24174.246	bb			0.5290	105.79	5.79	12479...	



## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 947096Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

RE14-10-7679MSDDate Received: 23-JAN-10GEL Job No (SDG): 10-1386GEL Sample ID: 1202028711Date Filtered: 05-FEB-10Injection Volume (uL): 20%Solids: 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	3.30	ug/kg		1	06-FEB-10 15:44	per0206018a
	Perchlorate Isotope Ratio			3.02			1	06-FEB-10 15:44	per0206018a
14797-73-0	Perchlorate-101	.636	2.54	3.45	ug/kg		1	06-FEB-10 15:44	per0206018a
	Perchlorate-O(18)			7.11	ug/kg		1	06-FEB-10 15:44	per0206018a

<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\per020610a.qld

Last Altered: Monday, February 08, 2010 6:04:42 PM Eastern Standard Time  
Printed: Monday, February 08, 2010 6:06:48 PM Eastern Standard Time

Name: per0206018a

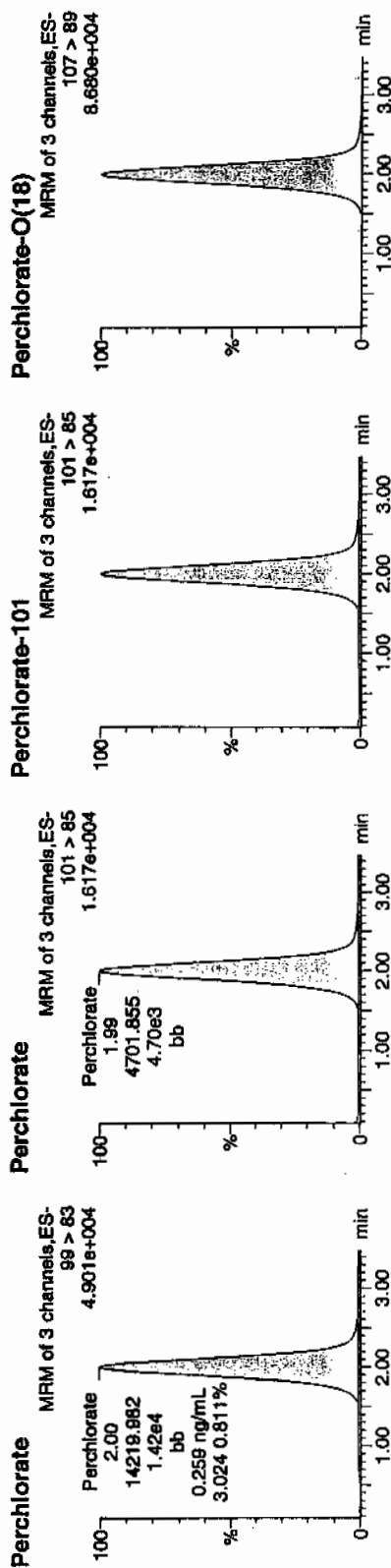
Date: 06-Feb-2010

Time: 15:44:59

ID: 1202028711

Vial: 1:4,A

663  
02-08-10  
1202028711 | 5020 | 1750 | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
1202028711	Perchlorate	99 > 83	2.00	14219.982	14219.982	bb			0.2594	129.69	29.69	867.310	3.02
1202028711	Perchlorate-101	101 > 85	1.99	4701.855	4701.855	bb			0.2713	135.63	35.63	655.975	
1202028711	Perchlorate-O(18)	107 > 89	1.99	25524.430	25524.430	bb			0.5585	111.70	11.70	17383....	

# 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: 947096 Verified by: \_\_\_\_\_  
 Analyst: Jareth Shirley  
 Method: SW846 6850 Modified  
 Lab SOP: GL-OA-E-067 REV# 6  
 Instrument: MicroMass Quattro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202028708 MB	05-FEB-2010 11:49:02	2	20	10
1202028709 LCS	05-FEB-2010 11:49:02	2	20	10
245389001	05-FEB-2010 11:49:02	2	20	10
245389002	05-FEB-2010 11:49:02	2	20	10
1202028710 MS (245389002)	05-FEB-2010 11:49:02	2	20	10
1202028711 MSD (245389002)	05-FEB-2010 11:49:02	2	20	10
245389003	05-FEB-2010 11:49:02	2	20	10
245389004	05-FEB-2010 11:49:02	2	20	10
245389005	05-FEB-2010 11:49:02	2	20	10
245389006	05-FEB-2010 11:49:02	2	20	10
245389007	05-FEB-2010 11:49:02	2	20	10
245389008	05-FEB-2010 11:49:02	2	20	10
245389009	05-FEB-2010 11:49:02	2	20	10
245389010	05-FEB-2010 11:49:02	2	20	10
245389011	05-FEB-2010 11:49:02	2	20	10
245664001	05-FEB-2010 11:49:02	2	20	10
245664002	05-FEB-2010 11:49:02	2	20	10
245664003	05-FEB-2010 11:49:02	2	20	10
245664004	05-FEB-2010 11:49:02	2	20	10
245664005	05-FEB-2010 11:49:02	2	20	10
245664006	05-FEB-2010 11:49:02	2	20	10
1202028722 ICS	05-FEB-2010 11:49:02	2	20	10

### Comments:

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
ICS	1202028722	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL	Desalting cartridges used: 090812-1-Ba & 091230-1-H
LCS	1202028709	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL	
MS	1202028710	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL	
MSD	1202028711	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL	

## GEL ORGANIC RUN LOG

INSTRUMENT ID: LOMSMS#2

Date: 02/06/10

Extr. Injection Volume: 20uL

Sequence Number: per020610a

Initial Calibration Date: 02/06/10

Method: EPA 6850-Modified

Int. Std.: UCL100122-01

Mobile Phase Lot#: 1254342, 1246195

Standard-Samp Reagent Lot#: 1233976

Reviewed BY: *hnm*Date: *02/09/10*

SOP: GL-OA-E-067 Rev.6

Alt Check Std. ID: WCL100128-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0206001a	IPB001	CWW	2/6/2010 13:53			1		USE	B
per0206002a	IPB001	CWW	2/6/2010 14:00			1		USE	B
per0206003a	WCLICAL-01	CWW	2/6/2010 14:06			1		USE	I
per0206004a	WCLICAL-02	CWW	2/6/2010 14:13			1		USE	I
per0206005a	WCLICAL-03	CWW	2/6/2010 14:20			1		USE	I
per0206006a	WCLICAL-04	CWW	2/6/2010 14:26			1		USE	I
per0206007a	WCLICAL-05	CWW	2/6/2010 14:33			1		USE	I
per0206008a	IPB002	CWW	2/6/2010 14:39			1		USE	B
per0206009a	WCLICV	CWW	2/6/2010 14:46			1		USE	C
per0206010a	IPB003	CWW	2/6/2010 14:52			1		USE	B
per0206011a	WCLCRI	CWW	2/6/2010 14:59			1		USE	C
per0206012a	1202028708	CWW	2/6/2010 15:05	947101	VARIOUS	1	LANL	USE	S
per0206013a	1202028709	CWW	2/6/2010 15:12	947101	VARIOUS	1	LANL	USE	S
per0206014a	1202028722	CWW	2/6/2010 15:18	947101	VARIOUS	1	LANL	USE	S
per0206015a	245389001	CWW	2/6/2010 15:25	947101	10-1386	1	LANL	USE	S
per0206016a	245389002	CWW	2/6/2010 15:31	947101	10-1386	1	LANL	USE	S
per0206017a	1202028710	CWW	2/6/2010 15:38	947101	10-1386	1	LANL	USE	S
per0206018a	1202028711	CWW	2/6/2010 15:44	947101	10-1386	1	LANL	USE	S
per0206019a	245389003	CWW	2/6/2010 15:51	947101	10-1386	1	LANL	USE	S
per0206020a	245389004	CWW	2/6/2010 15:58	947101	10-1386	1	LANL	USE	S
per0206021a	245389005	CWW	2/6/2010 16:04	947101	10-1386	1	LANL	USE	S
per0206022a	WCLCCV	CWW	2/6/2010 16:11			1		USE	C
per0206023a	IPB004	CWW	2/6/2010 16:17			1		USE	B
per0206024a	WCLCRI	CWW	2/6/2010 16:24			1		USE	C
per0206025a	245389006	CWW	2/6/2010 16:30	947101	10-1386	1	LANL	USE	S
per0206026a	245389007	CWW	2/6/2010 16:37	947101	10-1386	1	LANL	USE	S
per0206027a	245389008	CWW	2/6/2010 16:43	947101	10-1386	1	LANL	USE	S
per0206028a	245389009	CWW	2/6/2010 16:50	947101	10-1386	1	LANL	USE	S
per0206029a	245389010	CWW	2/6/2010 16:56	947101	10-1386	1	LANL	USE	S

per0206030a	245389011	CWW	2/6/2010 17:03	947101	10-1386	1	LANL	USE	S
per0206031a	245664001	CWW	2/6/2010 17:10	947101	10-1437	1	LANL	USE	S
per0206032a	245664002	CWW	2/6/2010 17:16	947101	10-1437	1	LANL	USE	S
per0206033a	245664003	CWW	2/6/2010 17:23	947101	10-1437	1	LANL	USE	S
per0206034a	245664004	CWW	2/6/2010 17:29	947101	10-1437	1	LANL	USE	S
per0206035a	WCLCCV	CWW	2/6/2010 17:36			1		USE	C
per0206036a	IPB005	CWW	2/6/2010 17:42			1		USE	B
per0206037a	WCLCRI	CWW	2/6/2010 17:49			1		USE	C
per0206038a	245664005	CWW	2/6/2010 17:55	947101	10-1437	1	LANL	USE	S
per0206039a	245664006	CWW	2/6/2010 18:02	947101	10-1437	1	LANL	USE	S
per0206040a	IPB006	CWW	2/6/2010 18:09			1		USE	B
per0206041a	1202029082	CWW	2/6/2010 18:16	947249	VARIOUS	1	LANL	DUSE-RA	S
per0206042a	1202029083	CWW	2/6/2010 18:23	947249	VARIOUS	1	LANL	DUSE-RA	S
per0206043a	1202029088	CWW	2/6/2010 18:29	947249	VARIOUS	1	LANL	DUSE-RA	S
per0206044a	245605003	CWW	2/6/2010 18:36	947249	10-1413	1	LANL	DUSE-DL	S
per0206045a	245608002	CWW	2/6/2010 18:42	947249	10-1415	1	LANL	DUSE-RA	S
per0206046a	245673001	CWW	2/6/2010 18:49	947249	10-1442	1	LANL	DUSE-DL	S
per0206047a	245673003	CWW	2/6/2010 18:55	947249	10-1442	1	LANL	DUSE-DL	S
per0206048a	WCLCCV	CWW	2/6/2010 19:02			1		USE	C
per0206049a	IPB007	CWW	2/6/2010 19:09			1		USE	B
per0206050a	WCLCRI	CWW	2/6/2010 19:15			1		USE	C
per0206051a	245673006	CWW	2/6/2010 19:22	947249	10-1442	1	LANL	DUSE-DL	S
per0206052a	245676001	CWW	2/6/2010 19:29	947249	10-1446	1	LANL	DUSE-RA	S
per0206053a	1202029086	CWW	2/6/2010 19:35	947249	10-1446	1	LANL	DUSE-RA	S
per0206054a	1202029087	CWW	2/6/2010 19:42	947249	10-1446	1	LANL	DUSE-RA	S
per0206055a	245791001	CWW	2/6/2010 19:49	947249	10-1467	1	LANL	DUSE-RA	S
per0206056a	1202029084	CWW	2/6/2010 19:55	947249	10-1467	1	LANL	DUSE-RA	S
per0206057a	1202029085	CWW	2/6/2010 20:02	947249	10-1467	1	LANL	DUSE-RA	S
per0206058a	245791003	CWW	2/6/2010 20:08	947249	10-1467	1	LANL	DUSE-RA	S
per0206059a	245791006	CWW	2/6/2010 20:15	947249	10-1467	1	LANL	DUSE-RA	S
per0206060a	245791007	CWW	2/6/2010 20:21	947249	10-1467	1	LANL	DUSE-RA	S
per0206061a	WCLCCV	CWW	2/6/2010 20:28			1		USE	C
per0206062a	IPB008	CWW	2/6/2010 20:35			1		USE	B
per0206063a	WCLCRI	CWW	2/6/2010 20:41			1		USE	C
per0206064a	1202035372	CWW	2/6/2010 20:48	949948	VARIOUS	1	LANL	USE	S
per0206065a	1202035373	CWW	2/6/2010 20:55	949948	VARIOUS	1	LANL	USE	S
per0206066a	1202035376	CWW	2/6/2010 21:01	949948	VARIOUS	1	LANL	USE	S

per0206067a	245910001	CWW	2/6/2010 21:08	949948	10-1487	1	LANL	USE	S
per0206068a	245910002	CWW	2/6/2010 21:14	949948	10-1487	1	LANL	USE	S
per0206069a	1202035374	CWW	2/6/2010 21:21	949948	10-1487	1	LANL	USE	S
per0206070a	1202035375	CWW	2/6/2010 21:27	949948	10-1487	1	LANL	USE	S
per0206071a	245910003	CWW	2/6/2010 21:34	949948	10-1487	1	LANL	USE	S
per0206072a	WCLCCV	CWW	2/6/2010 21:40			1		USE	C
per0206073a	IPB009	CWW	2/6/2010 21:48			1		USE	B
per0206074a	WCLCRI	CWW	2/6/2010 21:55			1		USE	C
per0206075a	245910004	CWW	2/6/2010 22:01	949948	10-1487	1	LANL	USE	S
per0206076a	245910005	CWW	2/6/2010 22:08	949948	10-1487	1	LANL	USE	S
per0206077a	245910006	CWW	2/6/2010 22:15	949948	10-1487	1	LANL	USE	S
per0206078a	245913001	CWW	2/6/2010 22:21	949948	10-1489	1	LANL	USE	S
per0206079a	245913002	CWW	2/6/2010 22:28	949948	10-1489	1	LANL	USE	S
per0206080a	245913003	CWW	2/6/2010 22:34	949948	10-1489	1	LANL	USE	S
per0206081a	245913004	CWW	2/6/2010 22:41	949948	10-1489	1	LANL	USE	S
per0206082a	245913005	CWW	2/6/2010 22:48	949948	10-1489	1	LANL	USE	S
per0206083a	WCLCCV	CWW	2/6/2010 22:54			1		USE	C
per0206084a	IPB010	CWW	2/6/2010 23:02			1		USE	B
per0206085a	WCLCRI	CWW	2/6/2010 23:09			1		USE	C
per0206086a	245955001	CWW	2/6/2010 23:16	949948	10-1509	1	LANL	USE	S
per0206087a	245955002	CWW	2/6/2010 23:22	949948	10-1509	1	LANL	USE	S
per0206088a	246058001	CWW	2/6/2010 23:29	949948	10-1530	1	LANL	USE	S
per0206089a	246058002	CWW	2/6/2010 23:36	949948	10-1530	1	LANL	USE	S
per0206090a	246058003	CWW	2/6/2010 23:42	949948	10-1530	1	LANL	USE	S
per0206091a	246060001	CWW	2/6/2010 23:49	949948	10-1531	1	LANL	USE	S
per0206092a	246060002	CWW	2/6/2010 23:55	949948	10-1531	1	LANL	USE	S
per0206093a	WCLCCV	CWW	2/7/2010 0:02			1		USE	C
per0206094a	IPB011	CWW	2/7/2010 0:09			1		USE	B
per0206095a	WCLCRI	CWW	2/7/2010 0:15			1		USE	C

## 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 10-1386-1**

**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:** 945227

**Prep Batch Number:** 945225

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245390001	RE14-10-7693
1202024399	Interference Check Sample (ICS)
1202024390	Method Blank (MB)
1202024391	Laboratory Control Sample (LCS)
1202024392	245375001(RE46-10-11834) Matrix Spike (MS)
1202024393	245375001(RE46-10-11834) 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.

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**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 245375001 (RE46-10-11834) from SDG 10-1373-1 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.

10-1386-1-PERLCMS

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### **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 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 M. Mauer Date: 02/08/10

# SAMPLE DATA SUMMARY

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC Client Sample No. RE14-10-7693

Lab Code: GEL Date Received: 23-JAN-10

Instrument: LCMSMS GEL Job No (SDG): 10-1386-1

Method: SW846 6850 Modified GEL Sample ID: 245390001

Matrix: WATER Date Filtered: 30-JAN-10

Extraction Batch ID: 245225 Injection Volume (uL): 20

Extraction Type: Filter/DAI

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	01-FEB-10 22:55	per0201066a
	Perchlorate Isotope Ratio						1	01-FEB-10 22:55	per0201066a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	01-FEB-10 22:55	per0201066a
	Perchlorate-O(18)			0.453	ug/L		1	01-FEB-10 22:55	per0201066a

<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): 10-1386-1

Extract Batch Code: 945225

Date Filtered: 30-JAN-10

Matrix: WATER

Sample ID: 1202024391

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.192	ug/L	96.0		85 - 115
Perchlorate Isotope Ratio		3.05				-
Perchlorate-101	0.200	.191	ug/L	95.6		85 - 115
Perchlorate-O(18)		.453	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.

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1386-1

Extract Batch Code: 945225

Date Filtered: 30-JAN-10

Matrix: WATER

Sample ID: 1202024392

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.187	ug/L	93.5		70 - 130
Perchlorate Isotope Ratio		2.94				
Perchlorate-101	0.200	.193	ug/L	96.7		70 - 130
Perchlorate-O(18)		.442	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.

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

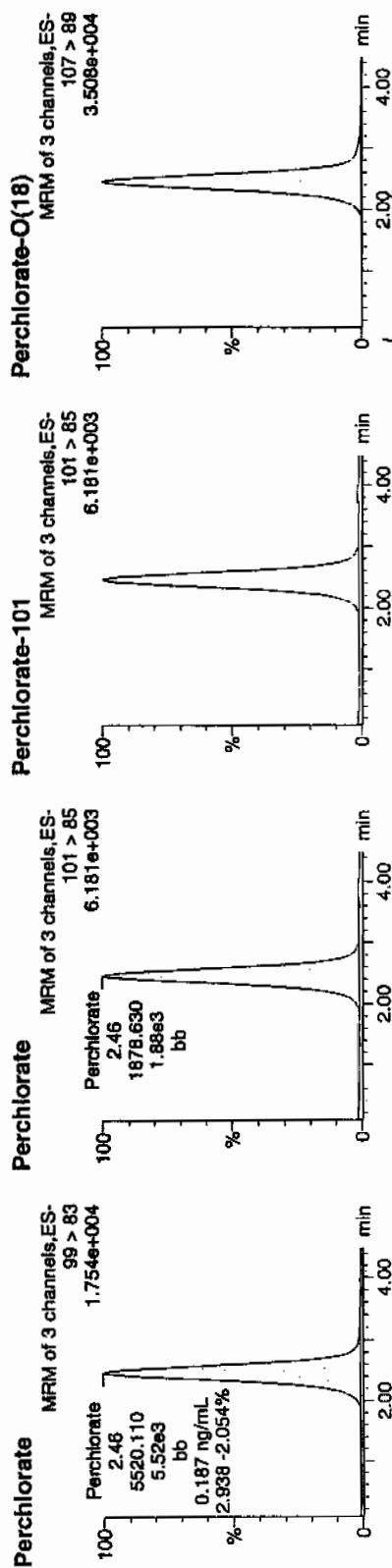
Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201051a  
Date: 01-Feb-2010  
Time: 21:02:22  
ID: 1202024399  
Vial: 2:1,C

02-02-10

1202024399 | 1202024399 | 1202024399



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202024399	Perchlorate	99 > 83	2.46	5520.110	5520.110	bb			0.1871	93.53	-6.47	193.382	2.94
1202024399	Perchlorate-101	101 > 85	2.46	1878.630	1878.630	bb			0.1934	96.69	-3.31	928.112	
1202024399	Perchlorate-O(18)	107 > 89	2.45	11020.399	11020.399	bb			0.4416	88.32	-11.68	2633.5...	

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): 10-1386-1

Extract Batch Code: 945225

Date Extracted: 30-JAN-10

GEL MS/PS ID: 1202024392

Client ID: RE46-10-11834

GEL MSD/PSD ID: 1202024393

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	0.00236	ug/L	0.186	91.6		.195	96.2		4.83		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.04			2.92			0			-
Perchlorate-101	0.200	0.00	ug/L	0.186	92.8		.202	101		8.63		30	75 - 125
Perchlorate-O(18)	0	0.442	ug/L	0.443			.455			2.78			-

^ 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

GEL Job No.(SDG): 10-1386-1

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	01-FEB-10	per0201001a	IPB001
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201001a	IPB001
Perchlorate	0.00	0	NA	01-FEB-10	per0201002a	IPB001
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201002a	IPB001

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

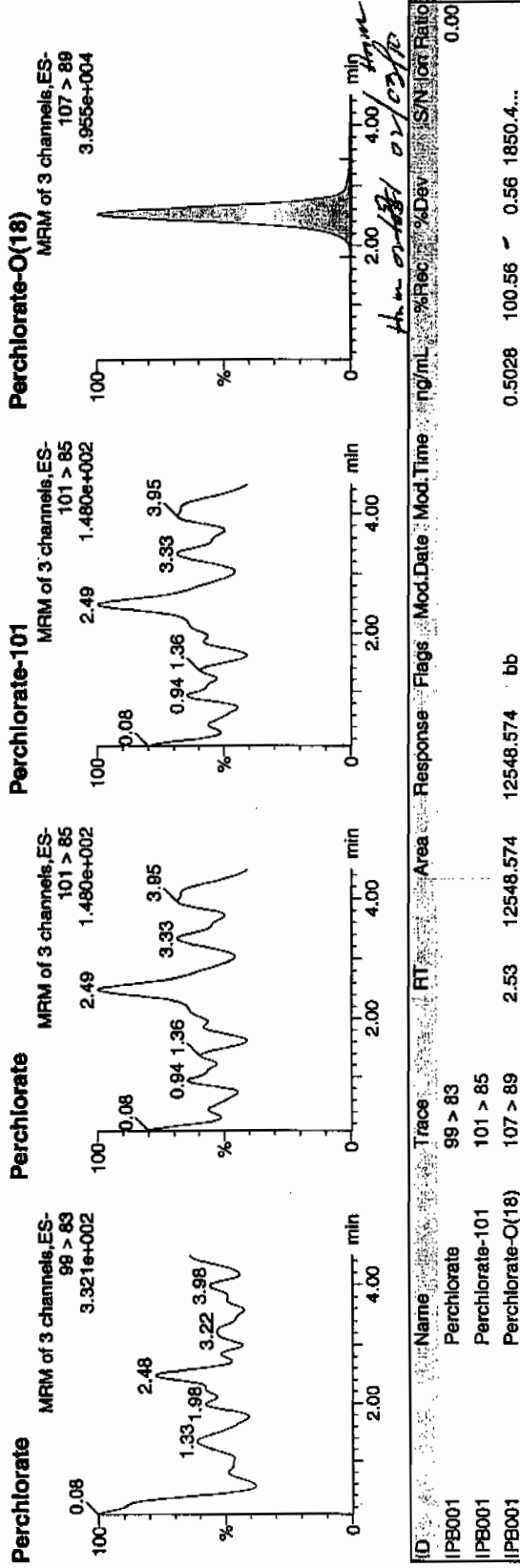
Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020110a.mdb 02 Feb 2010 07:54:05  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020110a.cdb 02 Feb 2010 14:28:23

Name: per0201001a  
Date: 01-Feb-2010  
Time: 14:44:45  
ID: IPB001  
Vial: 1:1,A

02-01-10



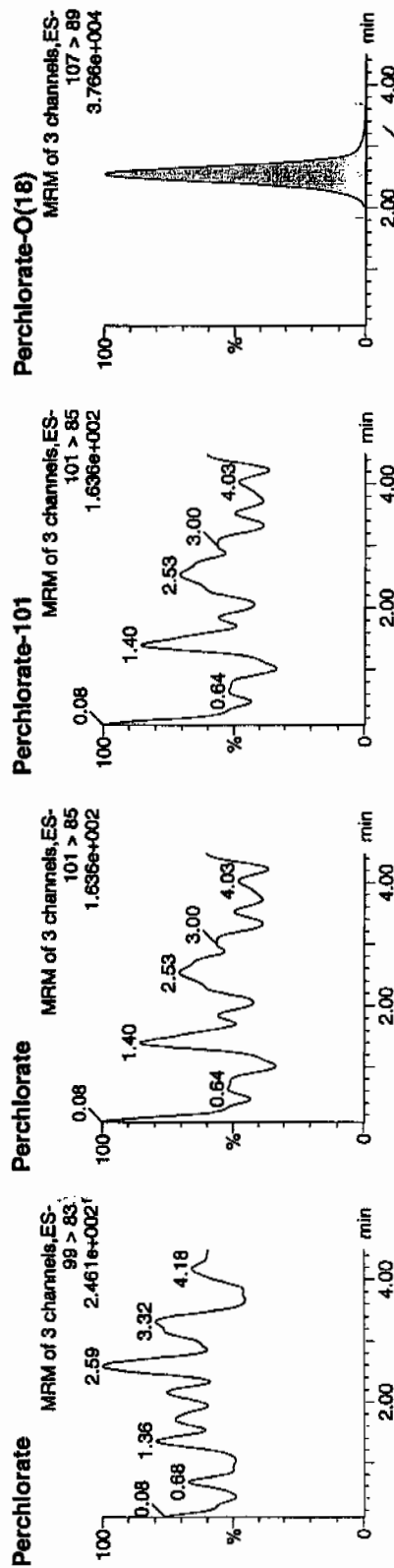
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201002a  
Date: 01-Feb-2010  
Time: 14:52:28  
ID: IPB001  
Vial: 1:1,A

und  
02-02-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.54	12279.958	12279.958	bb			0.4920	98.41	-1.59	1440.2	..

Perchlorate Continuing Calibration Blank

GEL Job No.(SDG): 10-1386-1

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	01-FEB-10	per0201008a	IPB002
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201008a	IPB002
Perchlorate	0.00	0	NA	01-FEB-10	per0201010a	IPB003
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201010a	IPB003
Perchlorate	0.00	0	NA	01-FEB-10	per0201015a	IPB004
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201015a	IPB004
Perchlorate	0.00	0	NA	01-FEB-10	per0201021a	IPB005
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201021a	IPB005
Perchlorate	0.00	0	NA	01-FEB-10	per0201034a	IPB006
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201034a	IPB006
Perchlorate	0.00	0	NA	01-FEB-10	per0201047a	IPB007
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201047a	IPB007
Perchlorate	0.00	0	NA	01-FEB-10	per0201059a	IPB008



Form 4

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386-1

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	01-FEB-10	per0201059a	IPB008
Perchlorate	0.00	0	NA	01-FEB-10	per0201070a	IPB009
Perchlorate-101	0.00	0	NA	01-FEB-10	per0201070a	IPB009

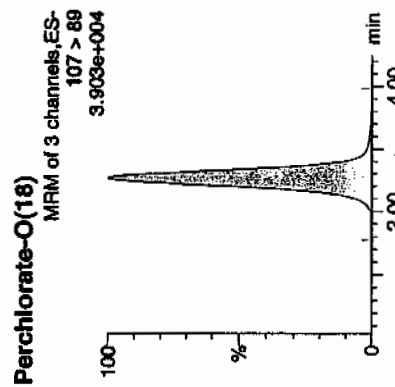
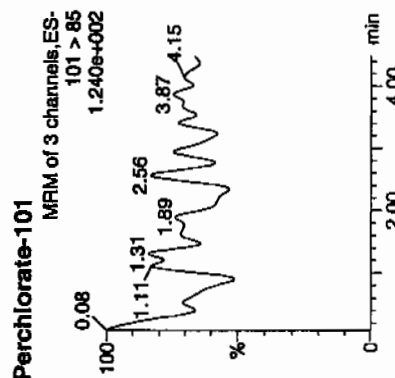
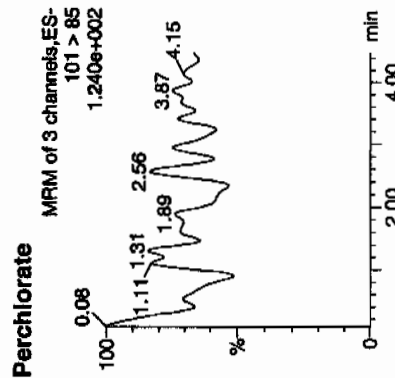
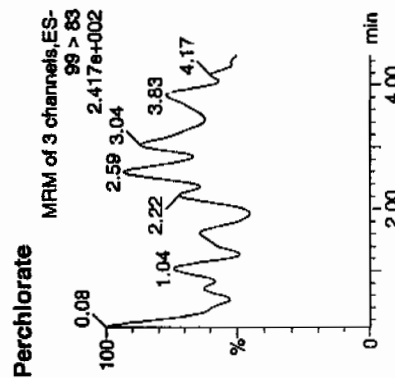
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

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Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201008a  
Date: 01-Feb-2010  
Time: 15:37:36  
ID: IPB002  
Vial: 1:1,A

02-02-10



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	2.54	12466.273	12466.273	bb			0.4995	99.90	-0.10	3302.1...	0.00

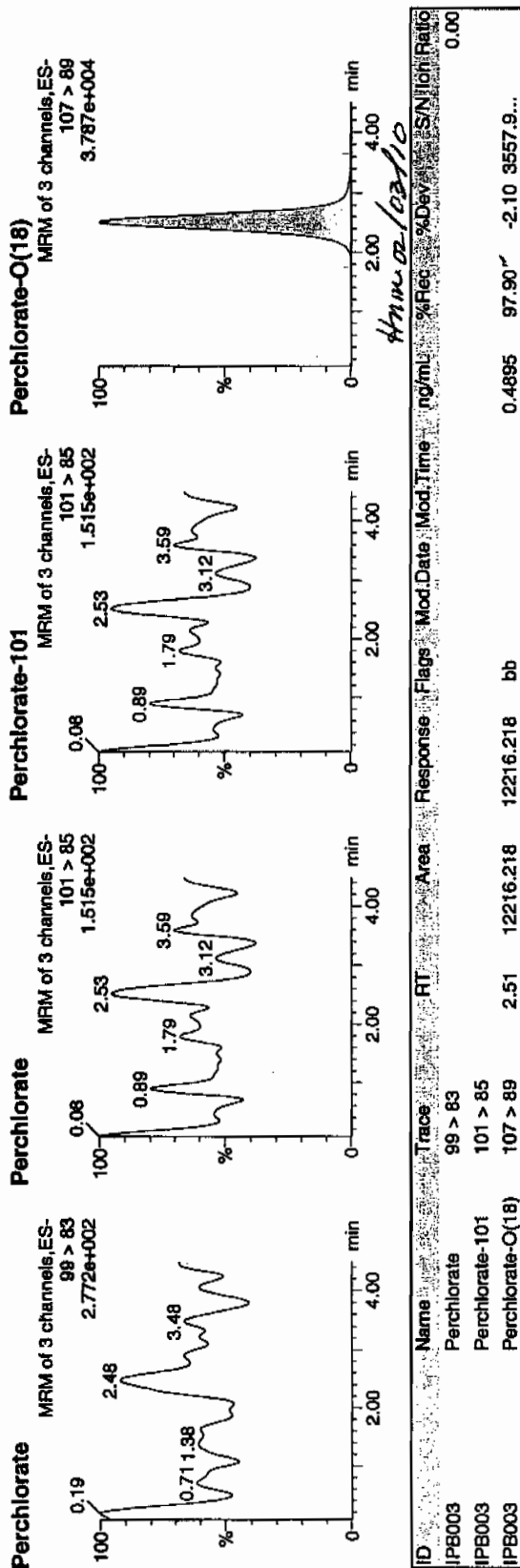
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201010a  
Date: 01-Feb-2010  
Time: 15:52:41  
ID: IPB003  
Vial: 1:1,A

02-02-10



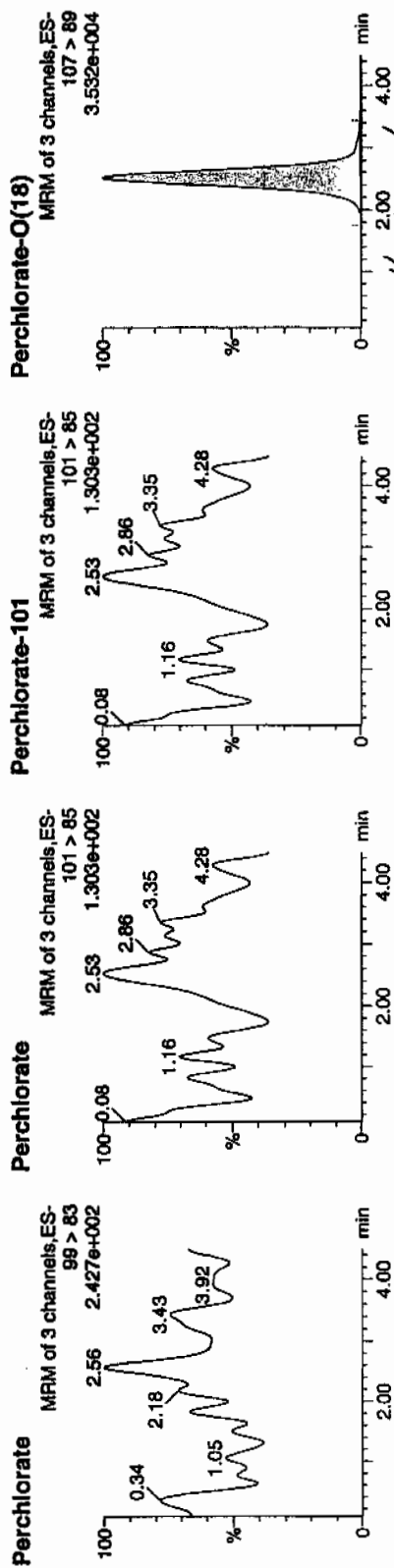
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201015a  
Date: 01-Feb-2010  
Time: 16:30:26  
ID: IPB004  
Vial: 1:1,A

02-07-10



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	2.53	11317.529	11317.529	bb			0.4535	90.70	-8.30	873.039	

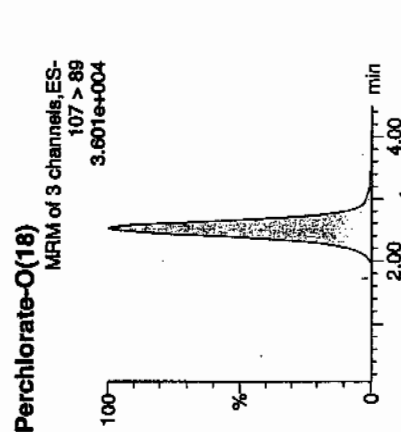
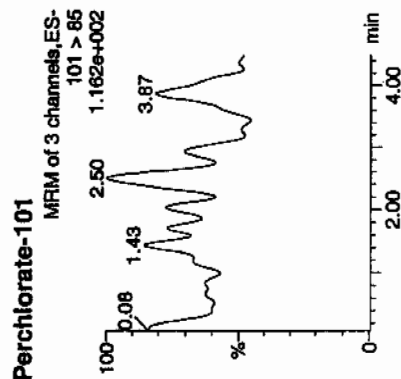
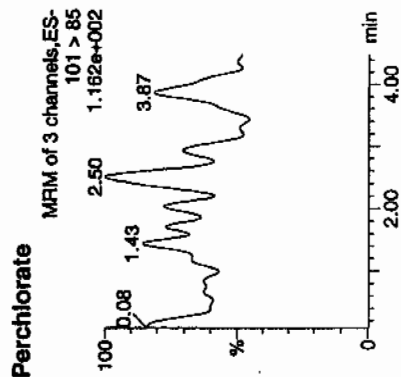
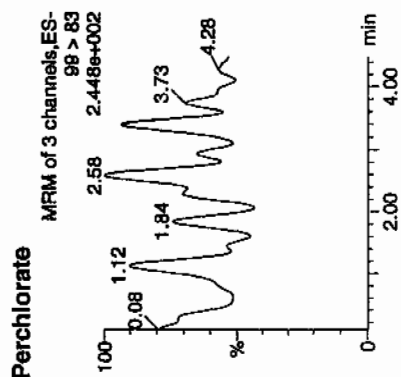
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201021a  
Date: 01-Feb-2010  
Time: 17:15:41  
ID: IPB005  
Vial: 1:1,A

02-02-10



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	2.51	11657.459	11657.459	bb			0.4671	93.42	-6.58	6561.5...	0.00

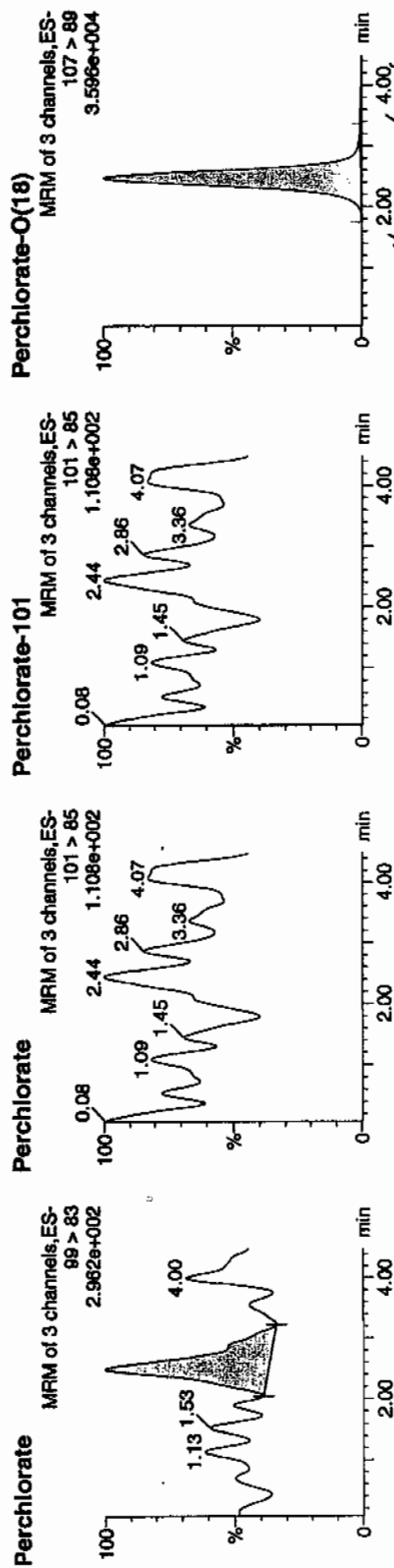
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201034a  
Date: 01-Feb-2010  
Time: 18:53:47  
ID: IPB006  
Vial: 1:1,A

02-02-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ratio
IPB006	Perchlorate	99 > 83	2.49	82.470	82.470	bb			0.0028			11.134	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.48	11318.907	11318.907	bb			0.4535	90.71	-9.29	3557.0...	

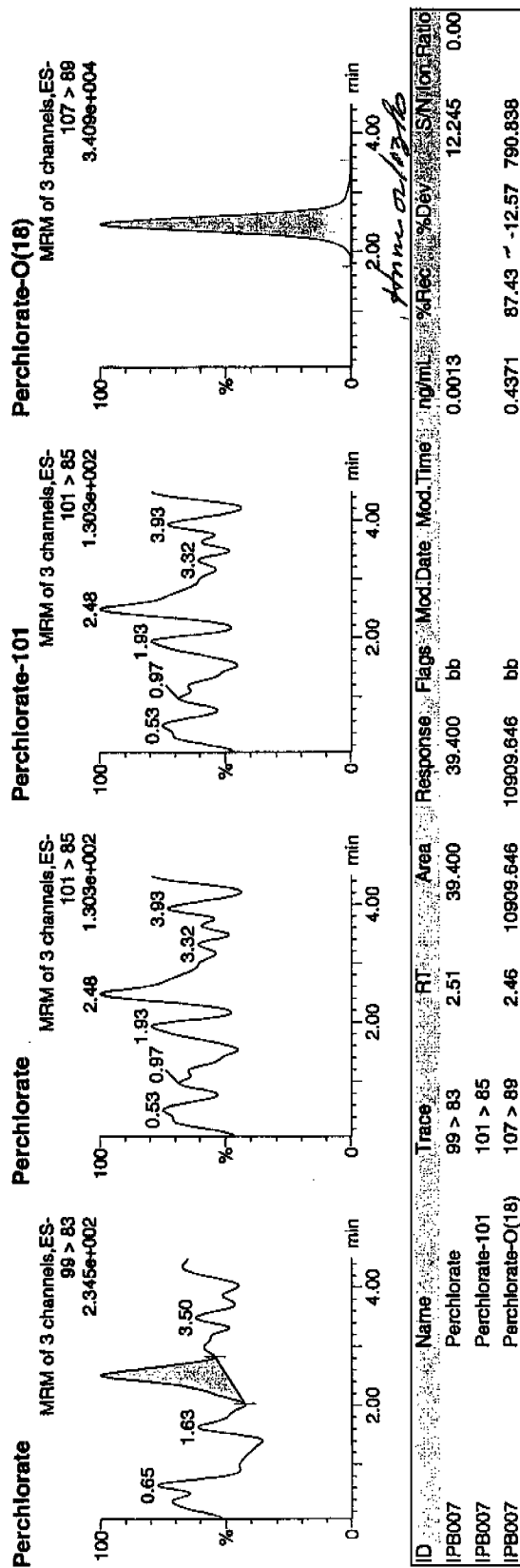
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

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Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201047a  
Date: 01-Feb-2010  
Time: 20:32:02  
ID: IPB007  
Vial: 1:1,A

02-01-10



Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charters W. Wilson

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Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

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Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201059a

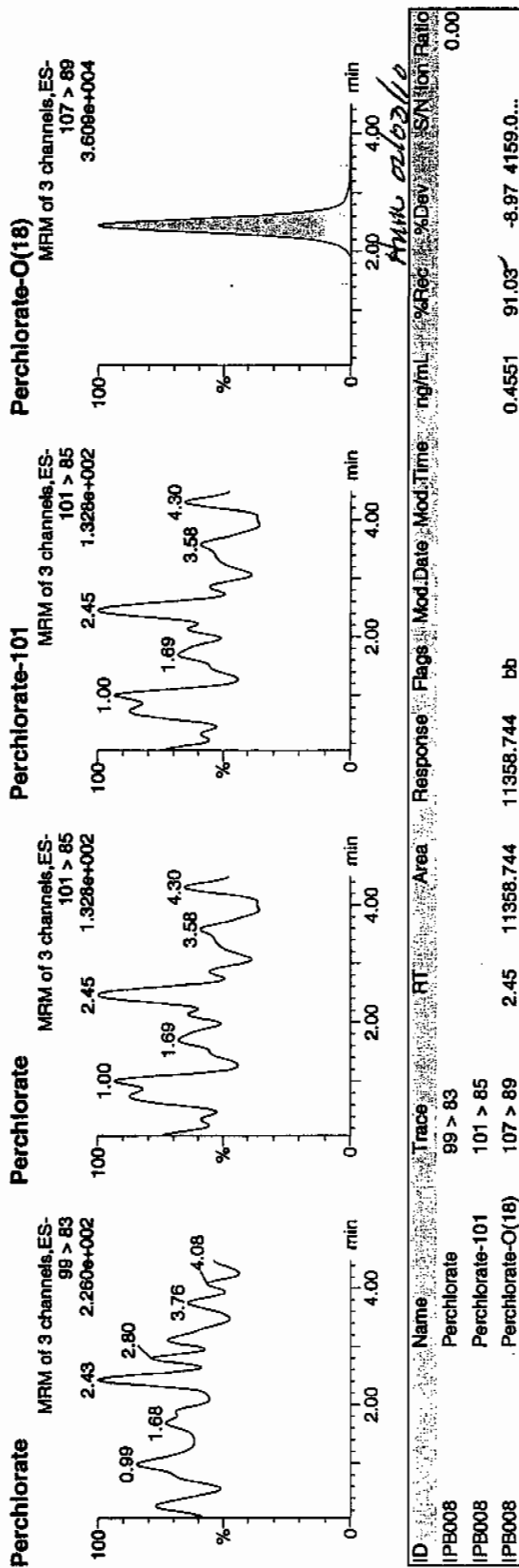
Date: 01-Feb-2010

Time: 22:02:51

ID: IPB008

Vial: 1:1,A

02-02-10





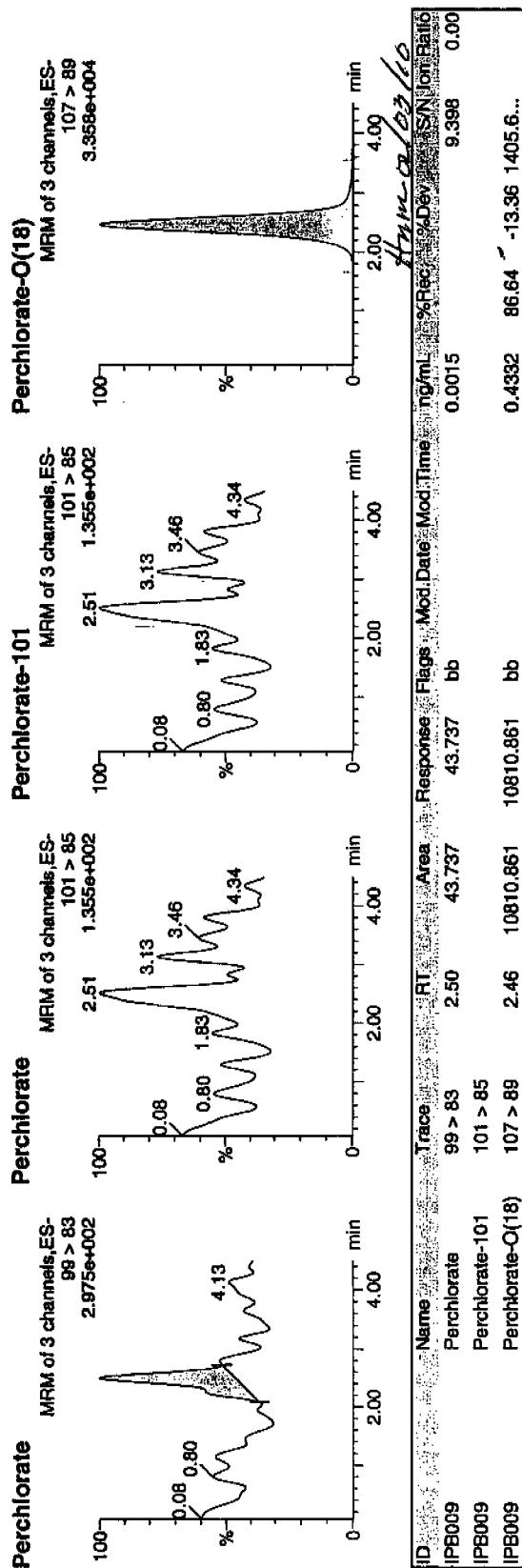
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

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Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201070a  
Date: 01-Feb-2010  
Time: 23:26:09  
ID: IPB009  
Vial: 1:1,A

02-02-10



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

QUANTO ULTIMA: nairb 01-08-08.ca

Calibration Report - MS1 Static

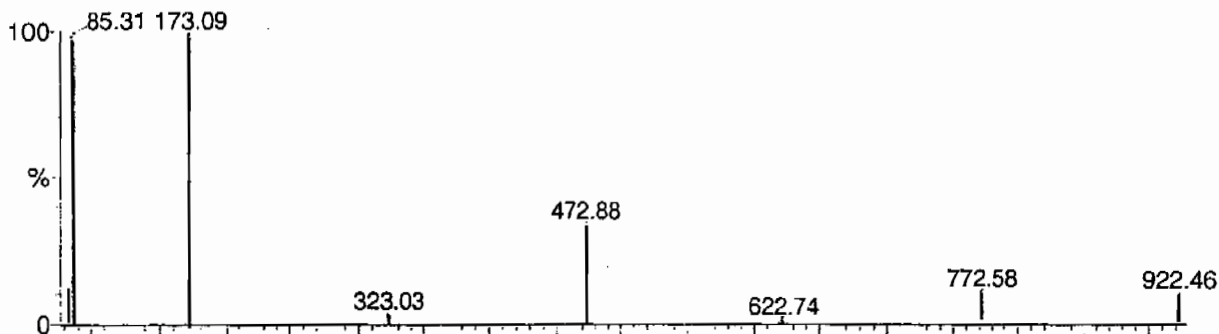
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

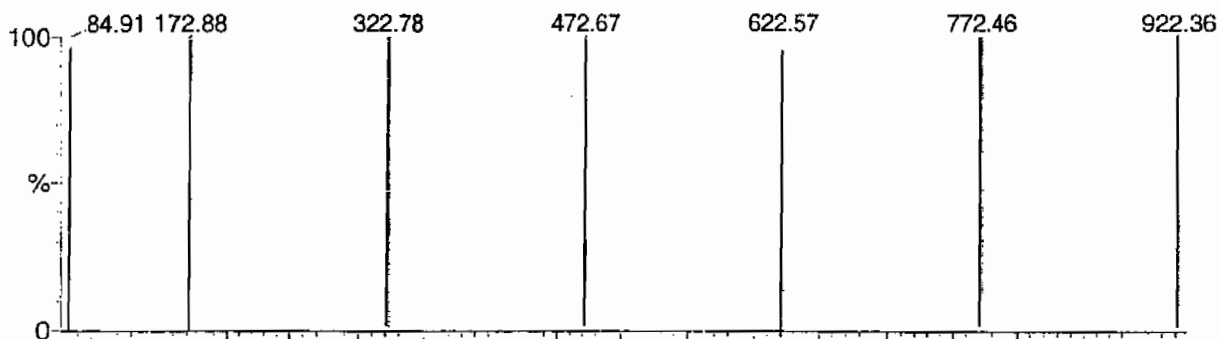
POINTS HIGHLIGHTED BY CURV 01-07-03

Data file: STATMS1 - Uncalibrated

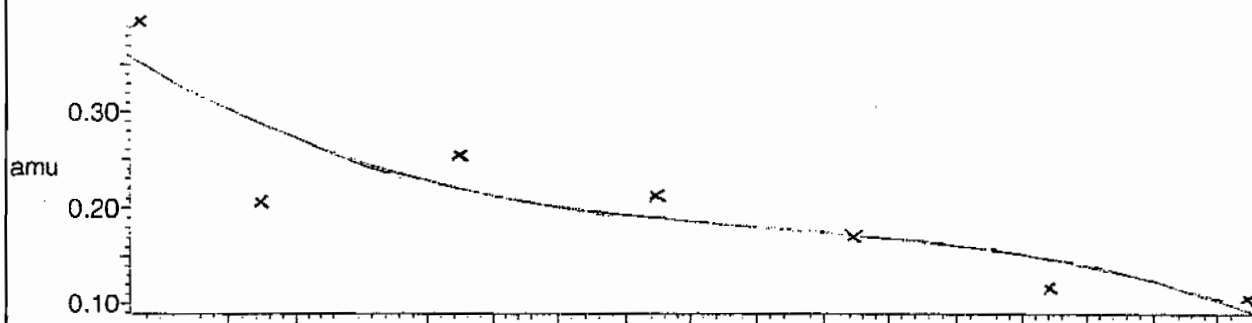
7 matches of 7 tested references



Reference file: Nairb

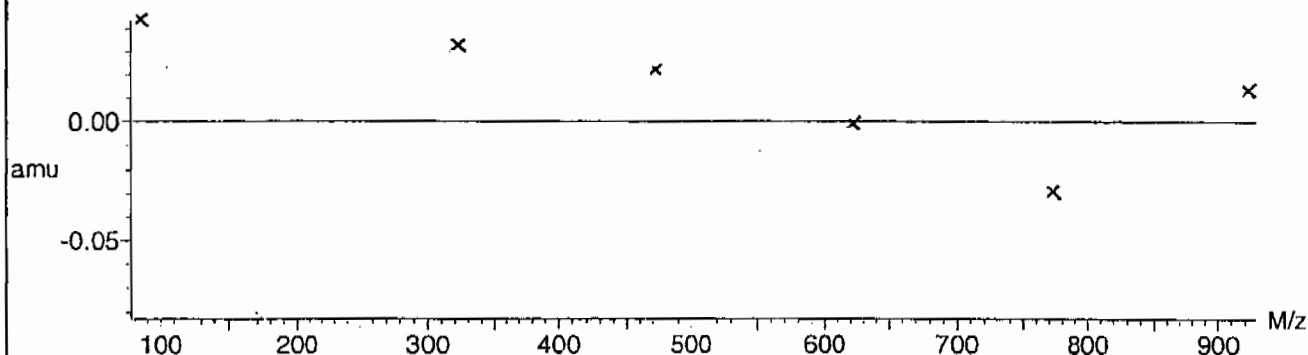


Mass difference (Raw - Ref mass)



Residuals

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



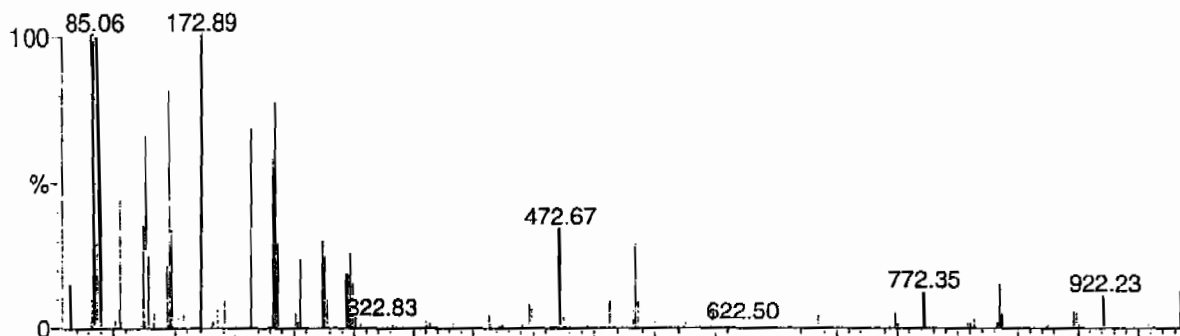
Calibration Report - MS1 Scanning

Page 1 of 1

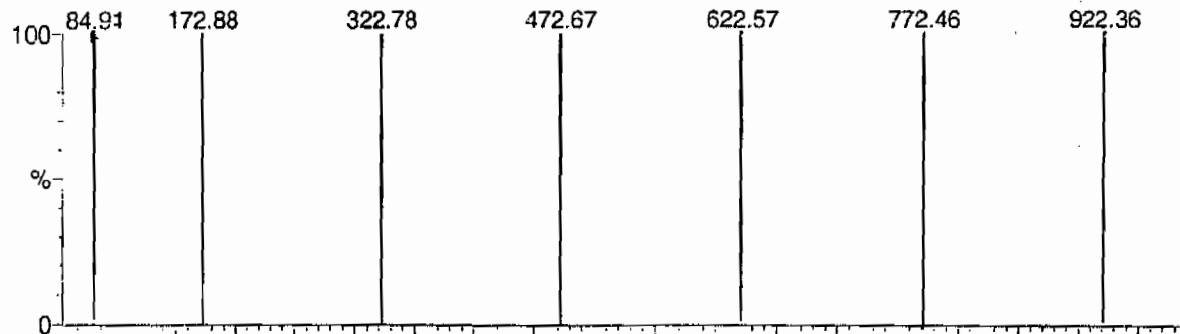
Printed: Tue Jan 08 12:20:09 2008

Data file: SCNMS1 - Uncalibrated

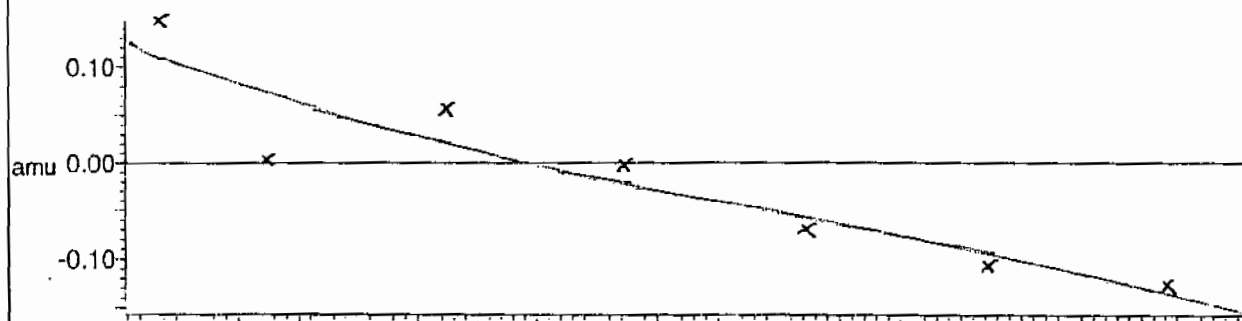
7 matches of 7 tested references



Reference file: Nairb

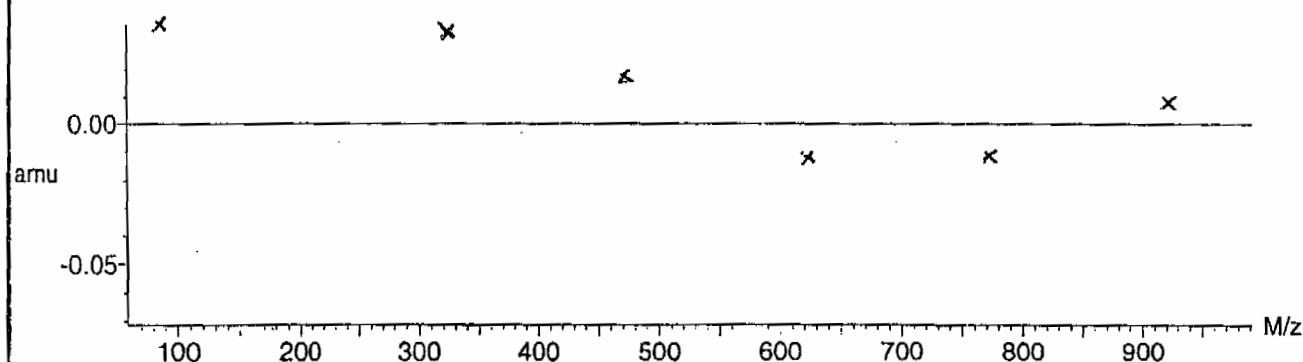


Mass difference (Raw - Ref mass)



Residuals

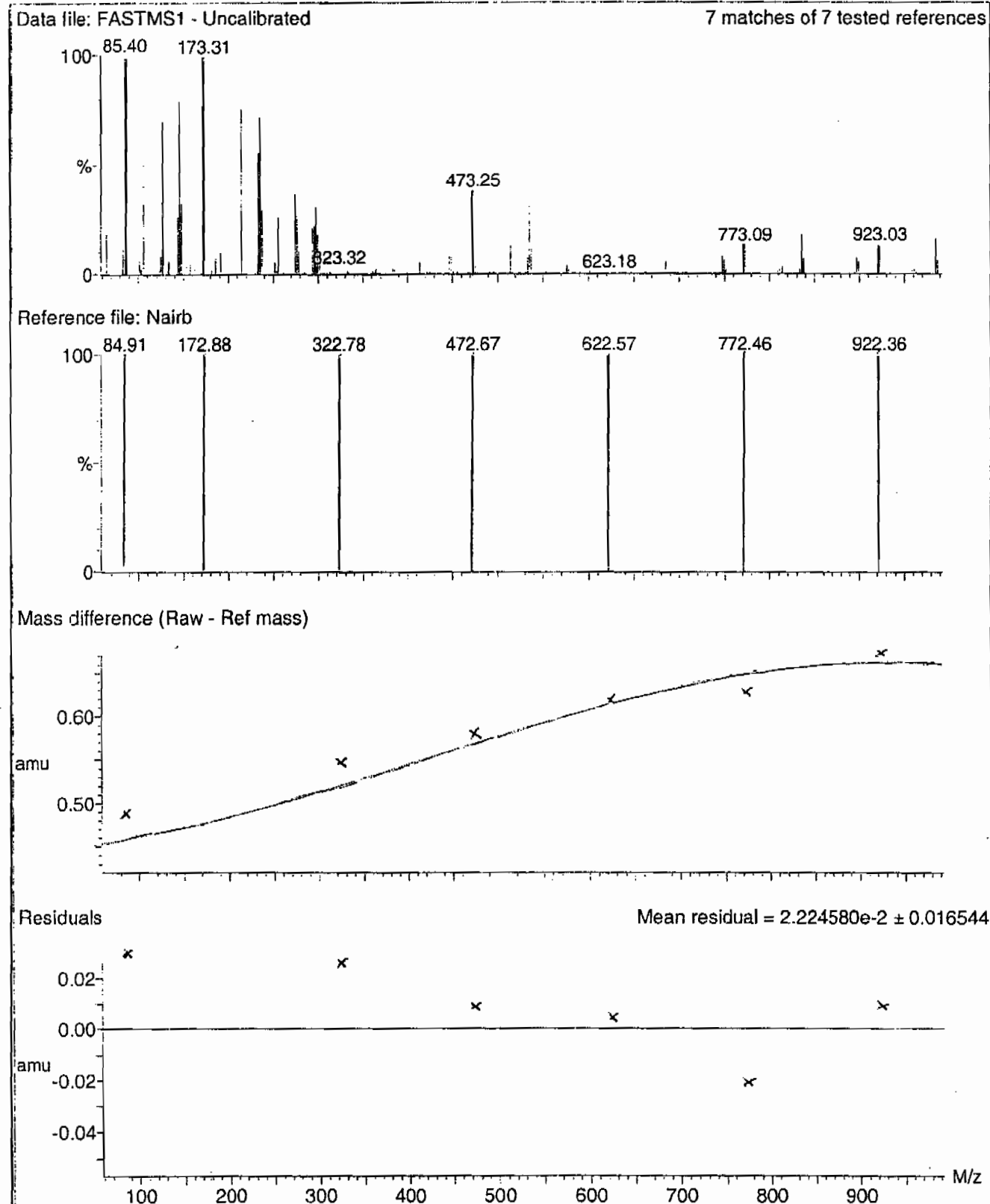
Mean residual =  $2.732691 \times 10^{-2} \pm 0.020653$



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

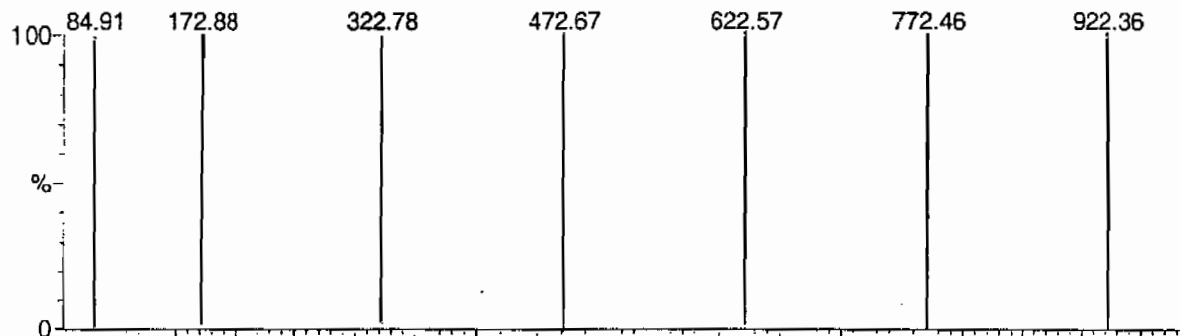
Printed: Tue Jan 08 12:23:51 2008

Data file: FASTMS2 - Uncalibrated

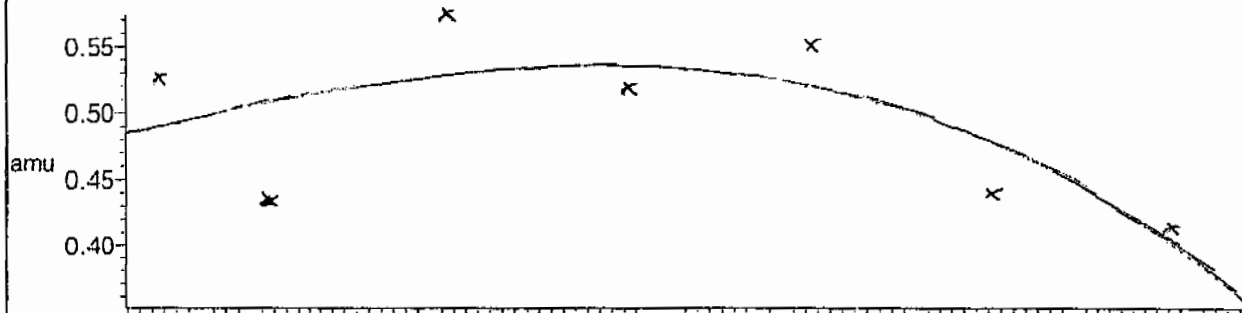
7 matches of 7 tested references



Reference file: Nairb

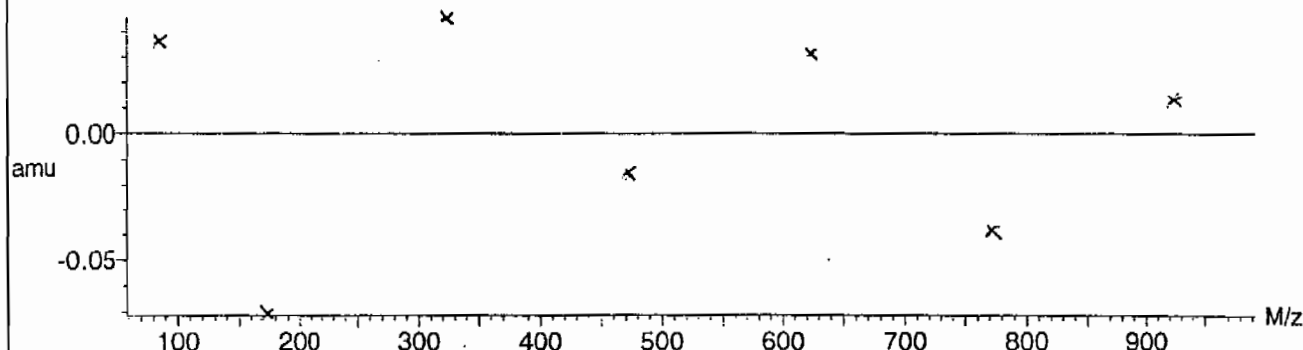


Mass difference (Raw - Ref mass)



Residuals

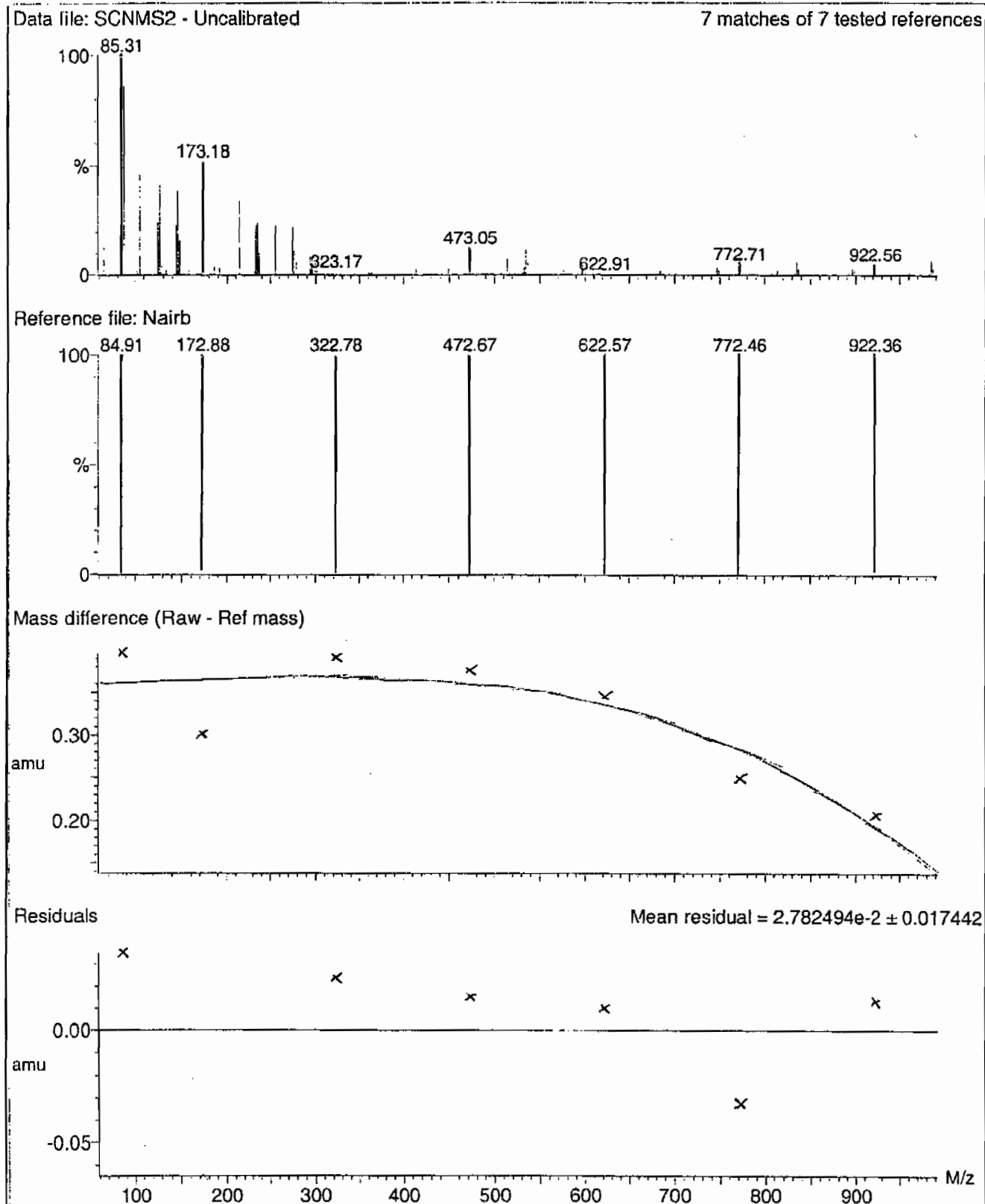
Mean residual =  $3.598289 \times 10^{-2} \pm 0.017899$



Calibration Report - MS2 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:22:56 2008



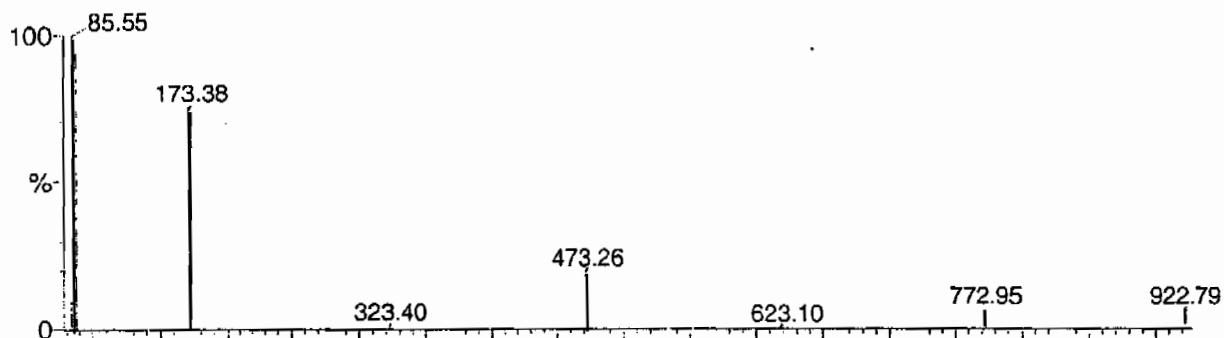
Calibration Report - MS2 Static

Page 1 of 1

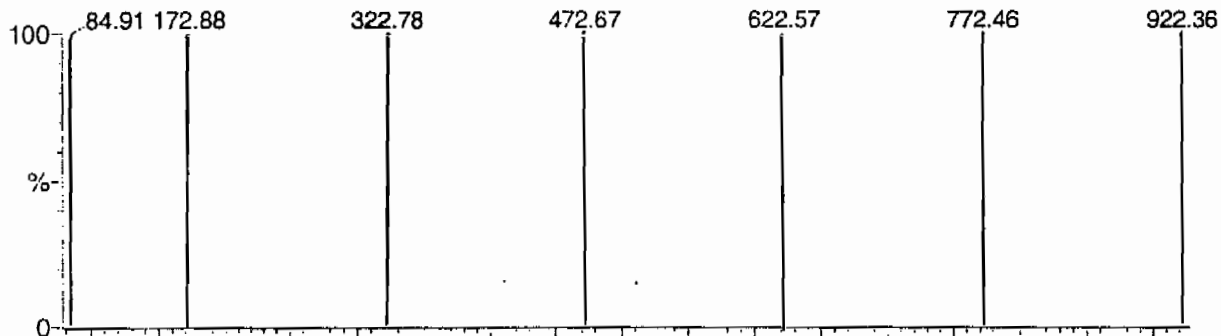
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

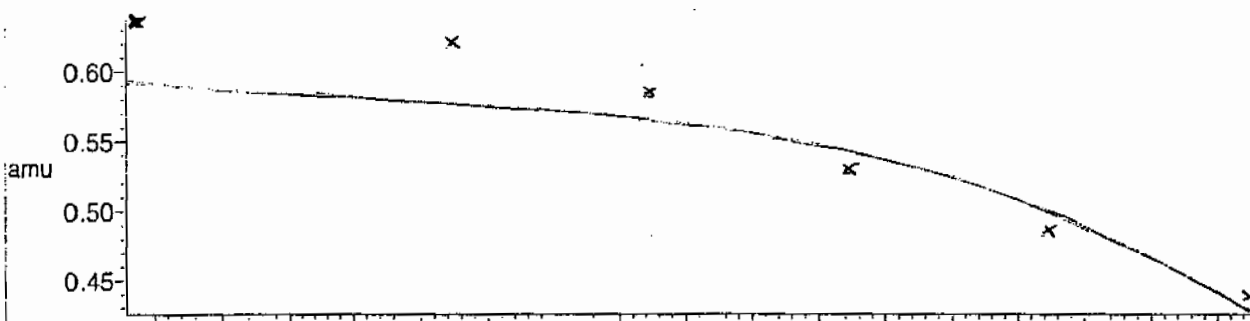
7 matches of 7 tested references



Reference file: Nairb

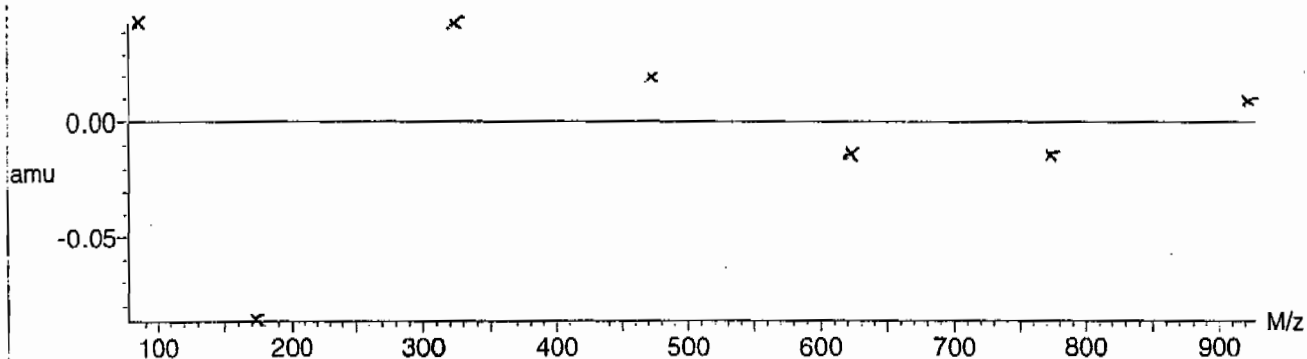


Mass difference (Raw - Ref mass)



Residuals

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





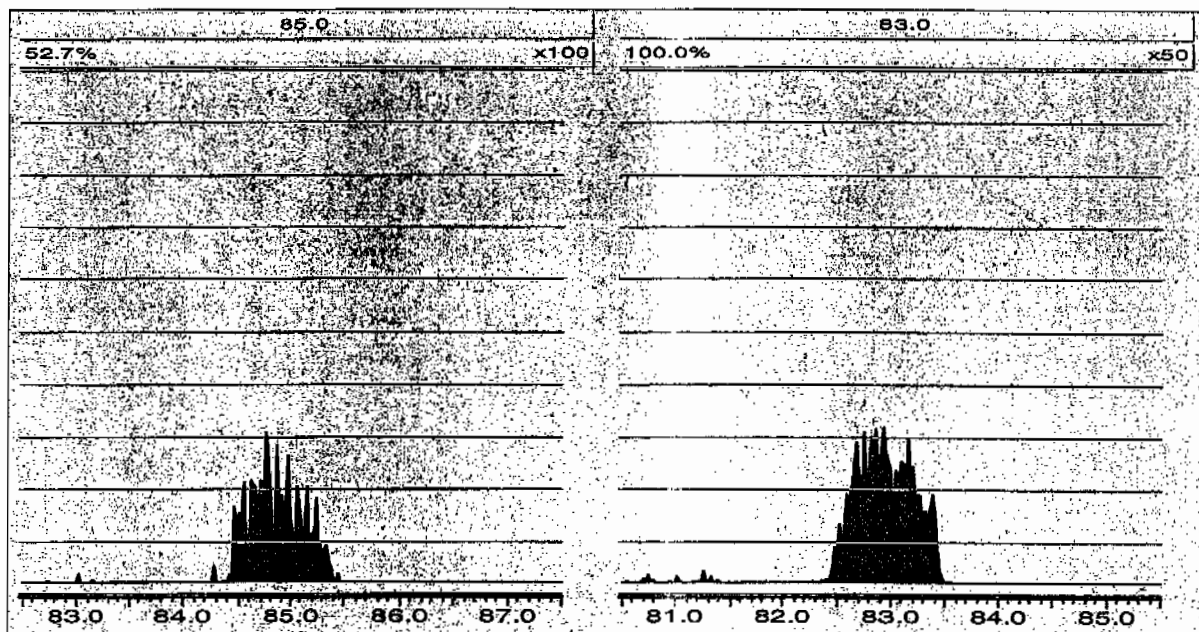
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

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

Printed: Monday, February 01, 2010 12:58:34 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386-1

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	per0201006a	01-FEB-10	12552.6				
Lower Area Limit			6276.3				
Upper Area Limit			25105.2				
1202024390	per0201049a	01-FEB-10 20:47	11140.6	2.46	2.48902	1.012	
1202024391	per0201050a	01-FEB-10 20:54	11307.9	2.46	2.47657	1.007	
1202024399	per0201051a	01-FEB-10 21:02	11020.4	2.45	2.46422	1.006	
245390001	per0201066a	01-FEB-10 22:55	11309.4	2.48	2.5015	1.009	

# SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: WATER  
 Extraction Batch ID: 245225  
 Extraction Type: Filter/DAI  
 Sample Volume/Weight: 10.0 mL  
 Concentrated Extract Volume: 10.0  
 Client Sample No. RE14-10-7693  
 Date Received: 23-JAN-10  
 GEL Job No (SDG): 10-1386-1  
 GEL Sample ID: 245390001  
 Date Filtered: 30-JAN-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	01-FEB-10 22:55	per0201066a
	Perchlorate Isotope Ratio						1	01-FEB-10 22:55	per0201066a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	01-FEB-10 22:55	per0201066a
	Perchlorate-O(18)			0.453	ug/L		1	01-FEB-10 22:55	per0201066a

<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

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time

Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201066a

Date: 01-Feb-2010

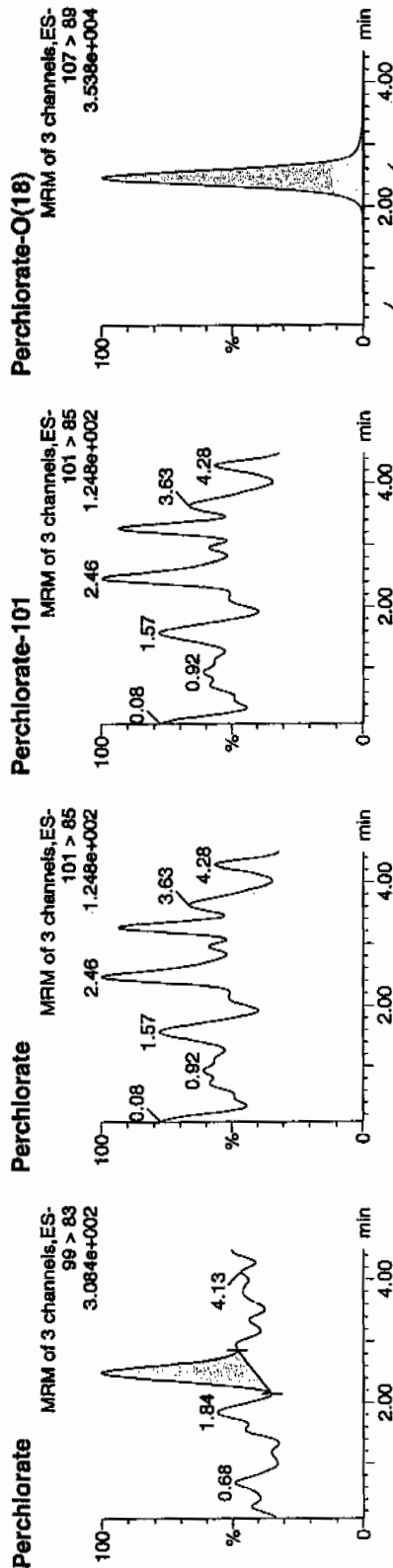
Time: 22:55:46

ID: 245390001

Vial: 2:3,C

WJ  
02-02-10

11902 | 945227 | 1202 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	SN: Ion Ratio
245390001	Perchlorate	99 > 83	2.50	56.663	56.663	bb			0.0019			13.676
245390001	Perchlorate-101	101 > 85										0.00
245390001	Perchlorate-O(18)	107 > 89	2.48	11309.403	11309.403	bb			0.4532	90.83	-9.37	7053.5...

# STANDARDS DATA

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-1386-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 01-FEB-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

Perchlorate

Coefficient of Determination:

Calibration Curve: 29509.02

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1386-1

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 01-FEB-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: 9714.282

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\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time

Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020110a.mdb 02 Feb 2010 07:54:05  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020110a.cdb 02 Feb 2010 14:28:23

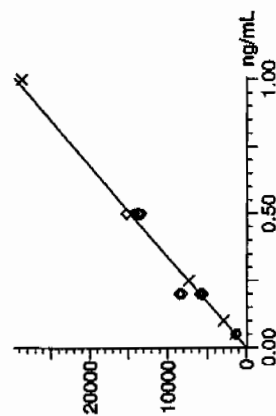
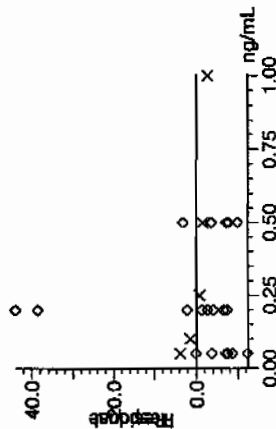
Compound name: Perchlorate

Response Factor: 29509

RRF SD: 760.836, % Relative SD: 2.57832 ✓

Response type: External Std, Area

Curve type: RF ✓



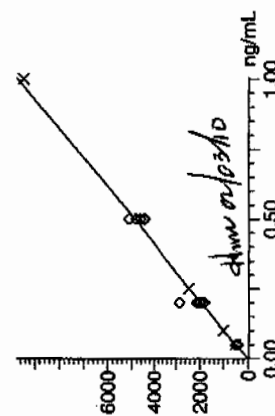
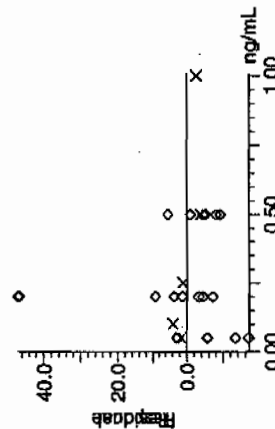
Compound name: Perchlorate-101

Response Factor: 9714.29

RRF SD: 312.663, % Relative SD: 3.21858 ✓

Response type: External Std, Area

Curve type: RF ✓

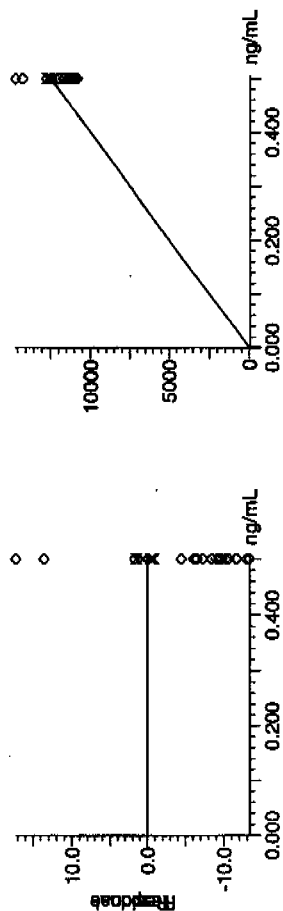


**Quantify Calibration Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Compound name: Perchlorate-O(18)  
Response Factor: 24957  
RRF SD: 251.821, % Relative SD: 1.00902  
Response type: External Std, Area  
Curve type: RF



Form 3

Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.52	103.11	01-FEB-10 15:45	per0201009a
Perchlorate Isotope Ratio		2.98		01-FEB-10 15:45	per0201009a
Perchlorate-101	.5	.53	105.27	01-FEB-10 15:45	per0201009a

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

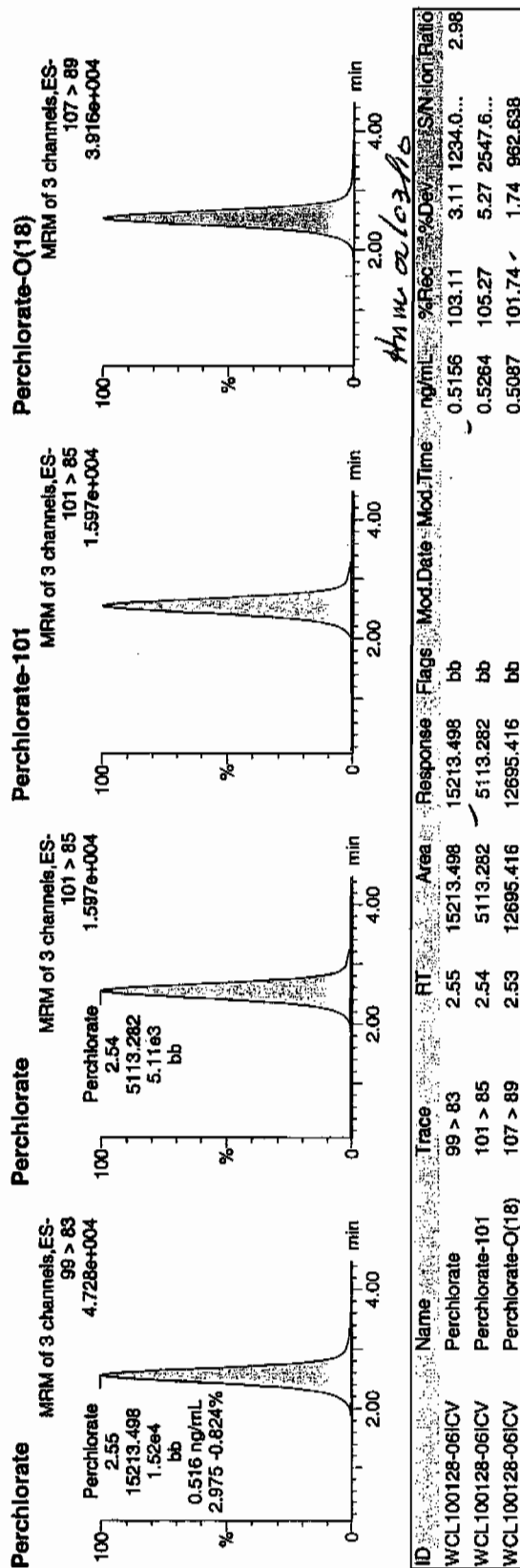
Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qid

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201009a  
Date: 01-Feb-2010  
Time: 15:45:09  
ID: WCL100128-06ICV  
Vial: 1:2,A

Pure

0.02-10



Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.48	96.42	01-FEB-10 17:08	per0201020a
Perchlorate Isotope Ratio		2.96		01-FEB-10 17:08	per0201020a
Perchlorate-101	.5	.49	98.95	01-FEB-10 17:08	per0201020a
Perchlorate	.5	.48	96.31	01-FEB-10 18:46	per0201033a
Perchlorate Isotope Ratio		3.06		01-FEB-10 18:46	per0201033a
Perchlorate-101	.5	.48	95.52	01-FEB-10 18:46	per0201033a
Perchlorate	.5	.46	92.9	01-FEB-10 20:24	per0201046a
Perchlorate Isotope Ratio		2.98		01-FEB-10 20:24	per0201046a
Perchlorate-101	.5	.47	94.76	01-FEB-10 20:24	per0201046a
Perchlorate	.5	.46	92.24	01-FEB-10 21:55	per0201058a
Perchlorate Isotope Ratio		3.05		01-FEB-10 21:55	per0201058a
Perchlorate-101	.5	.46	91.91	01-FEB-10 21:55	per0201058a
Perchlorate	.5	.45	90.12	01-FEB-10 23:18	per0201069a

Form 3

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386-1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		3.02		01-FEB-10 23:18	per0201069a
Perchlorate-101	.5	.45	90.69	01-FEB-10 23:18	per0201069a

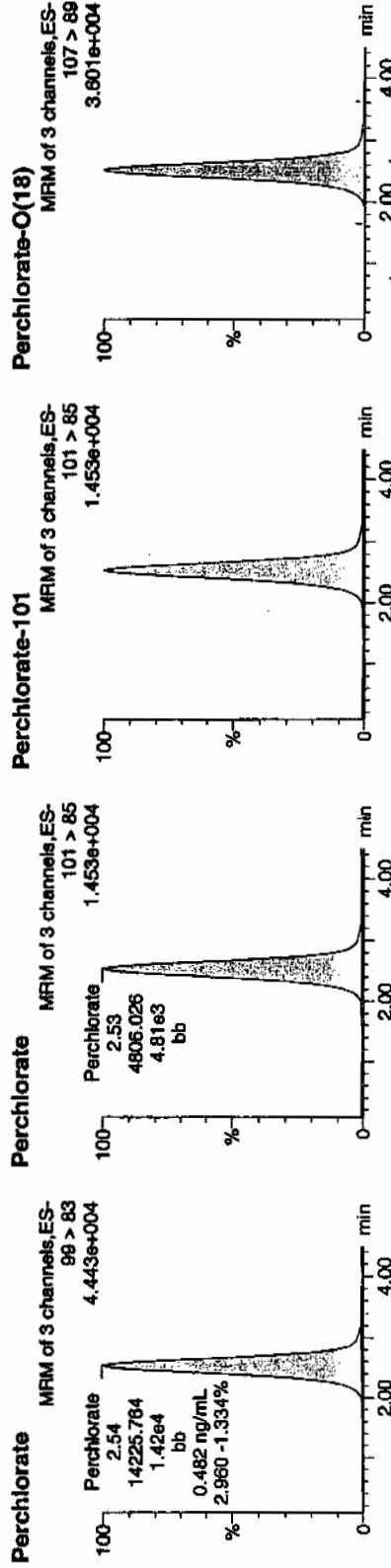
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201020a  
Date: 01-Feb-2010  
Time: 17:08:09  
ID: WCL100128-06CCV  
Vial: 1:2,A

*Pass  
and  
02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	TS/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	2.54	14225.784	14225.784	bb			0.4821	96.42	-3.58	786.613	2.96
WCL100128-06CCV	Perchlorate-101	101 > 85	2.53	4806.026	4806.026	bb			0.4947	98.95	-1.05	491.086	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	2.51	11571.769	11571.769	bb			0.4637	92.73	-7.27	6320.0...	

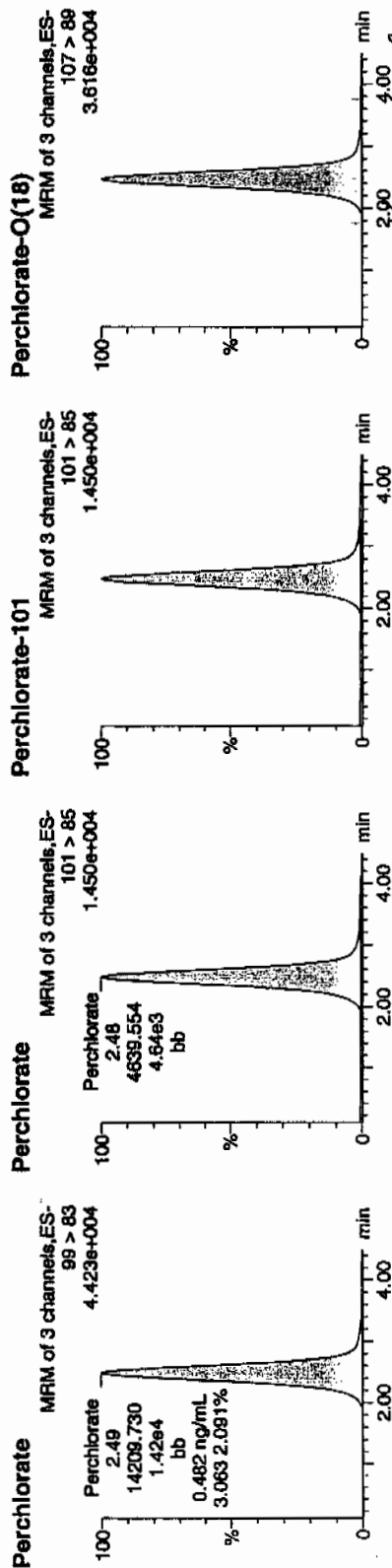
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201033a  
Date: 01-Feb-2010  
Time: 18:46:14  
ID: WCL100128-06CCV  
Vial: 1:2,A

*Pure and  
02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	2.48	14209.730	14209.730	bb			0.4815	96.31	-3.69	2292.7...	3.06
WCL100128-06CCV	Perchlorate-101	101 > 85	2.48	4639.554	4639.554	bb			0.4776	95.52	-4.48	923.216	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	2.48	11667.697	11667.697	bb			0.4675	93.50	-6.50	1169.8...	



# Quantify Sample Report - MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
 Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201046a

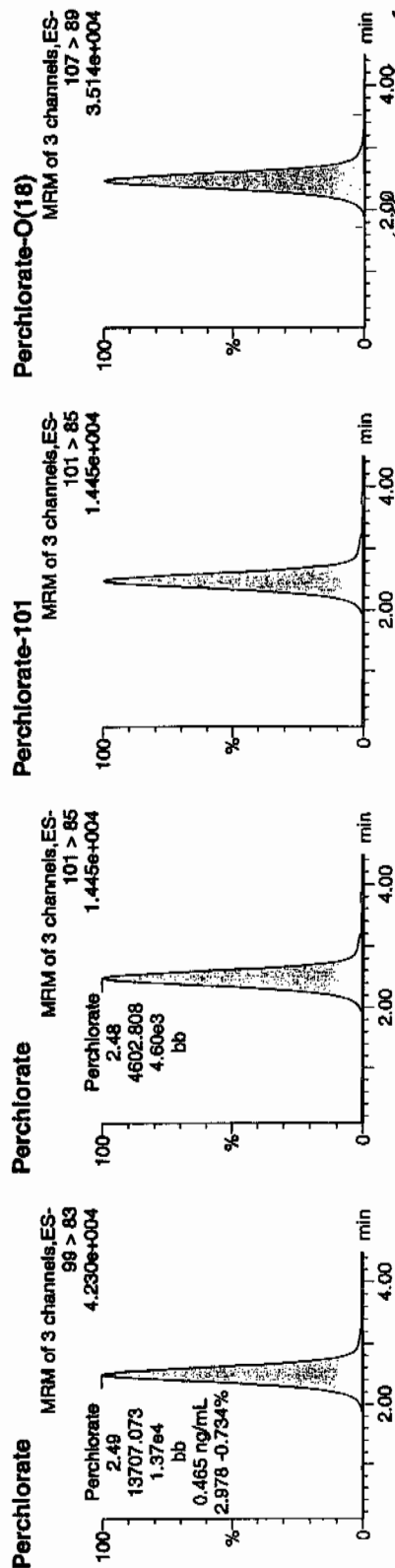
Date: 01-Feb-2010

Time: 20:24:29

ID: WCL100128-06CCV

Vial: 1:2,A

*Perchlorate*  
*02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	2.49	13707.073	13707.073	bb			0.4645	92.90	-7.10	6224.1...	2.98
WCL100128-06CCV	Perchlorate-101	101 > 85	2.48	4602.808	4602.808	bb			0.4738	94.76	-5.24	263.218	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	2.46	11264.321	11264.321	bb			0.4513	90.27	-8.73	8833.5...	

# Quantify Sample Report MassLynx 4.0 SP4

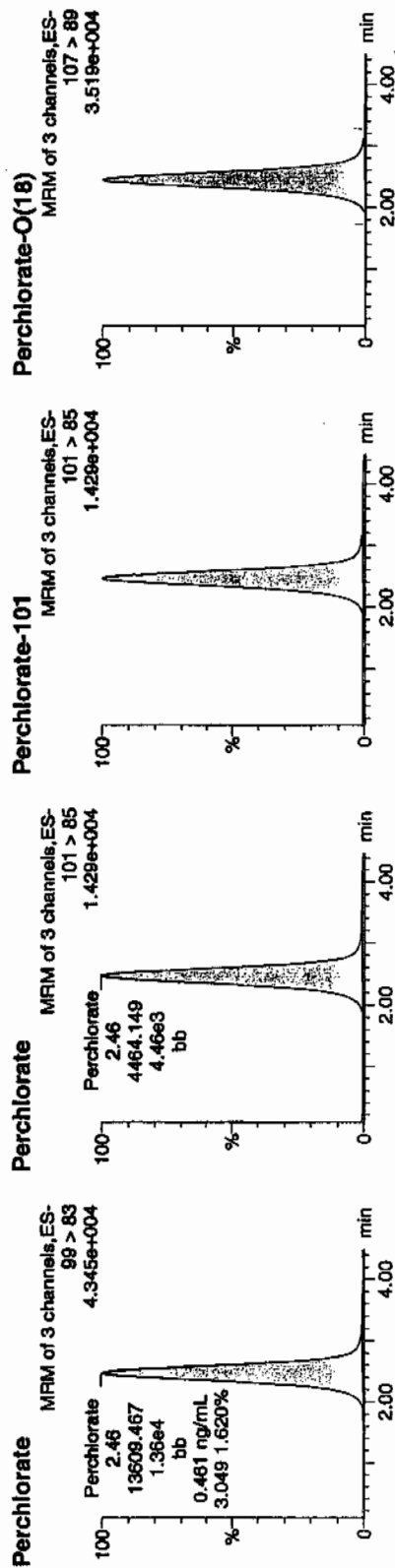
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
 Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201058a  
 Date: 01-Feb-2010  
 Time: 21:55:04  
 ID: WCL100128-06CCV  
 Vial: 1:2,A

02-02-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	2.46	13609.467	13609.467	bb			0.4612	92.24	-7.76	2053.2...	3.05
WCL100128-06CCV	Perchlorate-101	101 > 85	2.46	4464.149	4464.149	bb			0.4595	91.91	-8.09	799.870	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	2.45	11157.476	11157.476	bb			0.4471	89.41	-10.59	1020.7...	

4.345e+004

1.429e+004

1.429e+004

3.519e+004

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
 Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201069a

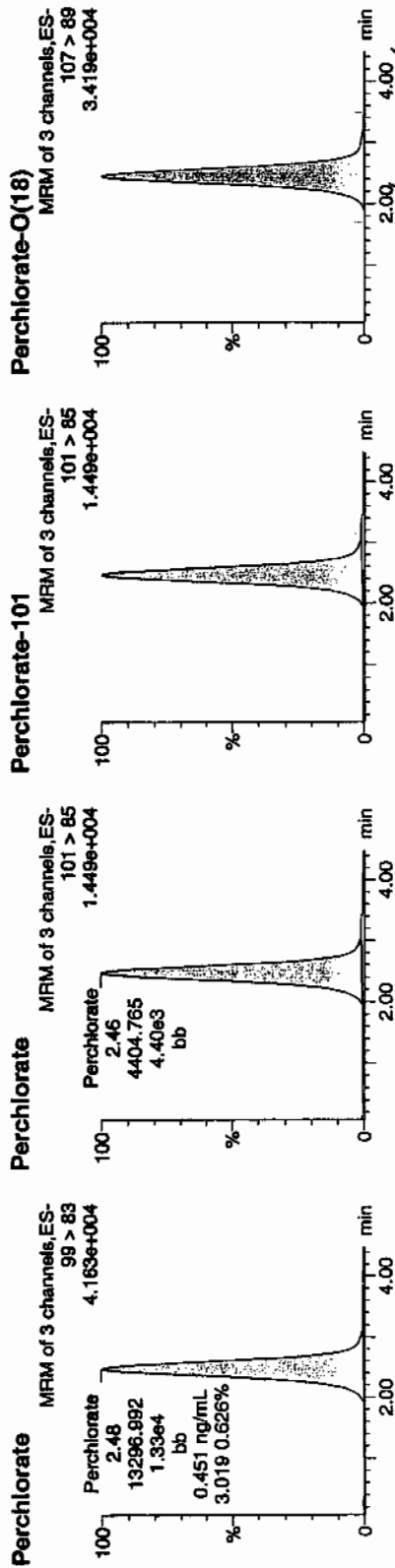
Date: 01-Feb-2010

Time: 23:18:22

ID: WCL100128-06CCV

Vial: 1:2,A

*Pass*  
*WCL*  
*02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	2.48	13296.992	13296.992	bb			0.4506	90.12	-9.88	1185.3...	3.02
WCL100128-06CCV	Perchlorate-101	101 > 85	2.46	4404.765	4404.765	bb			0.4534	90.69	-9.31	307.571	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	2.45	10816.826	10816.826	bb			0.4334	86.68	-13.32	3489.5...	

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	100.09	01-FEB-10 16:00	per0201011a
Perchlorate Isotope Ratio		2.95		01-FEB-10 16:00	per0201011a
Perchlorate-101	.05	.05	102.95	01-FEB-10 16:00	per0201011a
Perchlorate	.05	.05	93.07	01-FEB-10 17:23	per0201022a
Perchlorate Isotope Ratio		3		01-FEB-10 17:23	per0201022a
Perchlorate-101	.05	.05	94.25	01-FEB-10 17:23	per0201022a
Perchlorate	.05	.05	92.48	01-FEB-10 19:01	per0201035a
Perchlorate Isotope Ratio		2.74		01-FEB-10 19:01	per0201035a
Perchlorate-101	.05	.05	102.43	01-FEB-10 19:01	per0201035a
Perchlorate	.05	.05	91.45	01-FEB-10 20:39	per0201048a
Perchlorate Isotope Ratio		3.34		01-FEB-10 20:39	per0201048a

Form 3

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1386-1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate-101	.05	.04	83.22	01-FEB-10 20:39	per0201048a
Perchlorate	.05	.05	96.23	01-FEB-10 22:10	per0201060a
Perchlorate Isotope Ratio		3.09		01-FEB-10 22:10	per0201060a
Perchlorate-101	.05	.05	94.5	01-FEB-10 22:10	per0201060a
Perchlorate	.05	.04	87.63	01-FEB-10 23:33	per0201071a
Perchlorate Isotope Ratio		3.07		01-FEB-10 23:33	per0201071a
Perchlorate-101	.05	.04	86.66	01-FEB-10 23:33	per0201071a

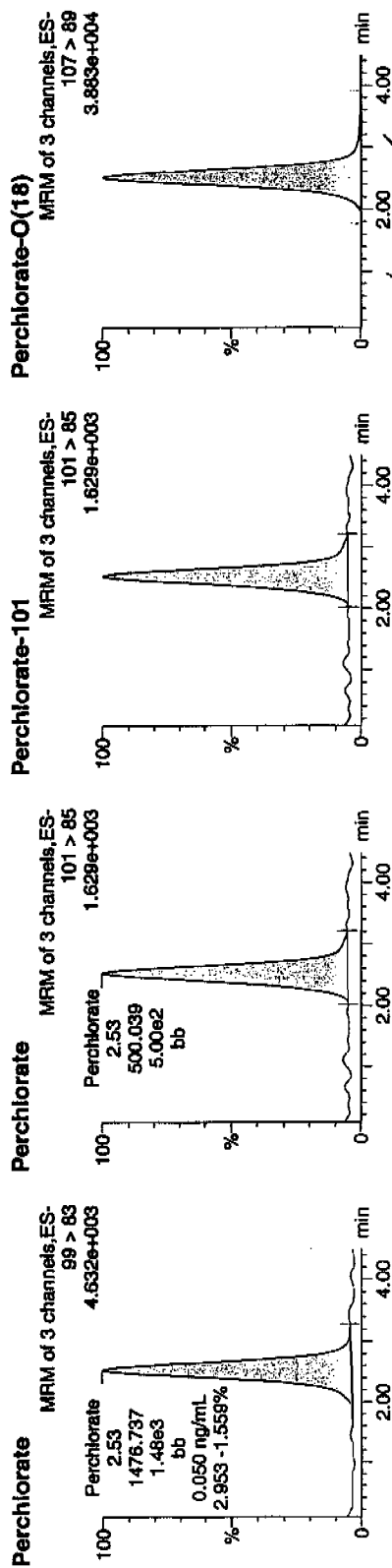
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201011a  
Date: 01-Feb-2010  
Time: 16:00:14  
ID: WCL100128-07CRI  
Vial: 1:2,B

*Pass and 02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.53	1476.737	1476.737	bb			0.0500	100.09	0.09	417.546	2.95
WCL100128-07CRI	Perchlorate-101	101 > 85	2.53	500.039	500.039	bb			0.0515	102.95	2.95	65.424	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.51	12467.722	12467.722	bb			0.4996	99.91	-0.09	1252.1...	

*4176.737/0*

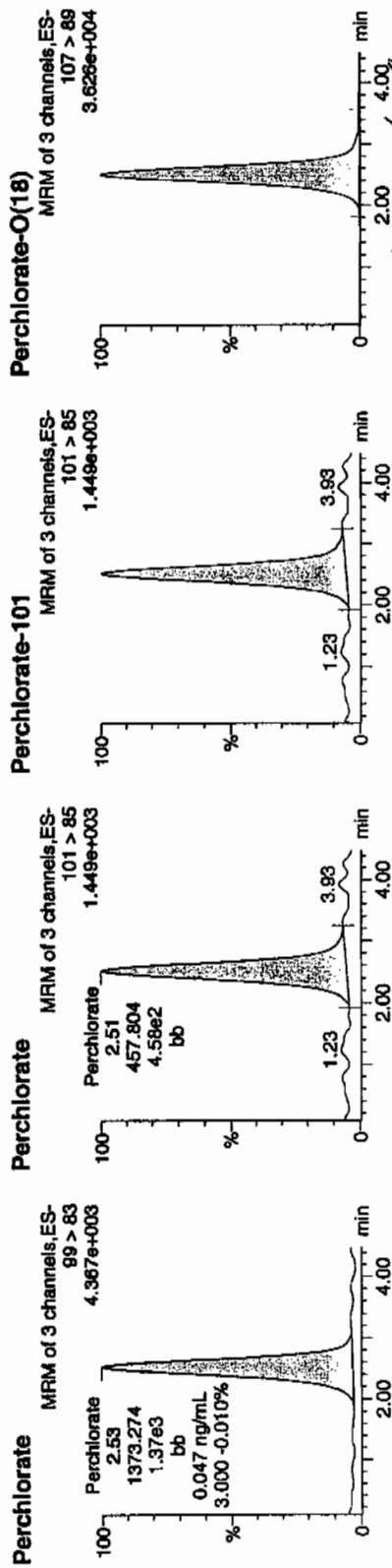
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201022a  
Date: 01-Feb-2010  
Time: 17:23:13  
ID: WCL100128-07CRI  
Vial: 1:2,B

Pure  
CWS  
02-02-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.53	1373.274	1373.274	bb			0.0465	93.07	-6.93	234.582	3.00
WCL100128-07CRI	Perchlorate-101	101 > 85	2.51	457.804	457.804	bb			0.0471	94.25	-5.75	66.529	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.50	11662.440	11662.440	bb			0.4673	93.46	-6.54	3818.4...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201035a

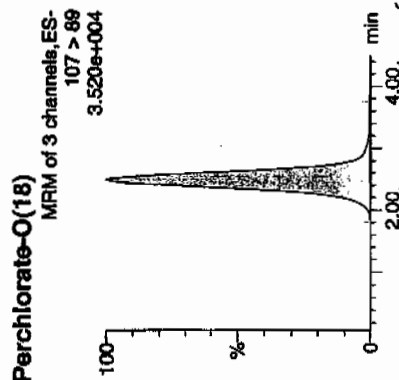
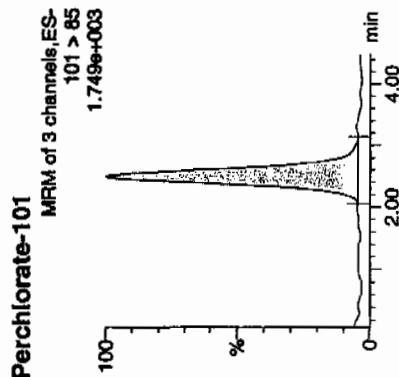
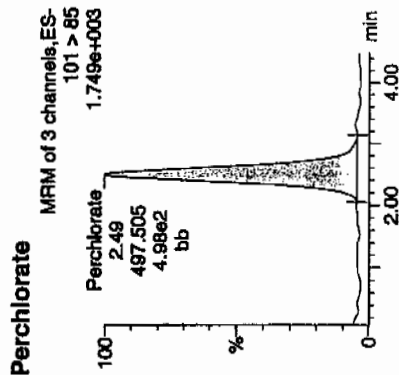
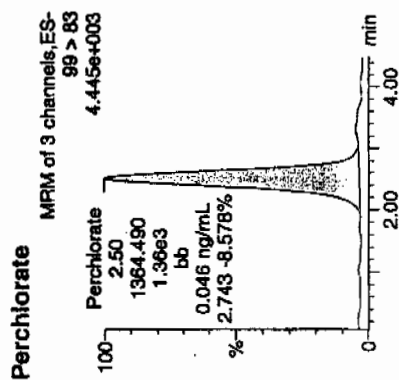
Date: 01-Feb-2010

Time: 19:01:19

ID: WCL100128-07CRI

Vial: 1:2,B

*Pass*  
*02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.50	1364.490	1364.490	bb			0.0462	92.48	-7.52	124.313	2.74
WCL100128-07CRI	Perchlorate-101	101 > 85	2.49	497.505	497.505	bb			0.0512	102.43	2.43	233.335	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.49	11314.174	11314.174	bb			0.4533	90.67	-9.33	3148.7...	



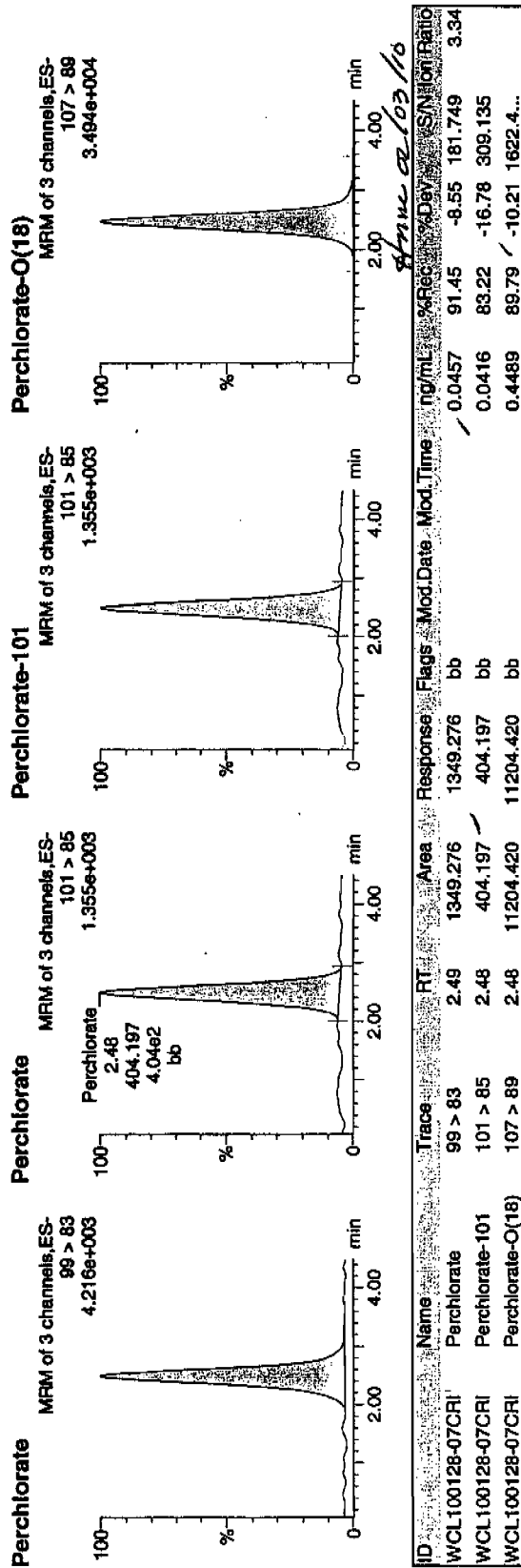
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201048a  
Date: 01-Feb-2010  
Time: 20:39:34  
ID: WCL100128-07CRI  
Vial: 1:2,B

Pass  
02-02-10



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

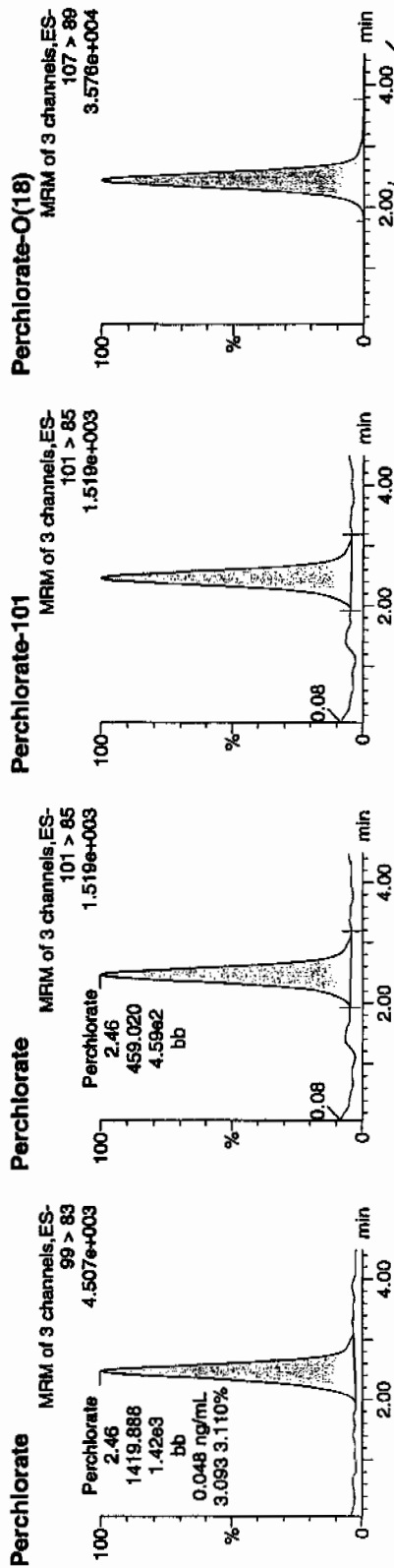
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201060a  
Date: 01-Feb-2010  
Time: 22:10:24  
ID: WCL100128-07CRI  
Vial: 1:2,B

*Pass*  
*02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.46	1419.888	1419.888	bb			0.0481	96.23	-3.77	351.804	3.09
WCL100128-07CRI	Perchlorate-101	101 > 85	2.46	459.020	459.020	bb			0.0473	94.50	-5.50	164.351	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.45	11428.174	11428.174	bb			0.4579	91.58	-8.42	4052.4...	

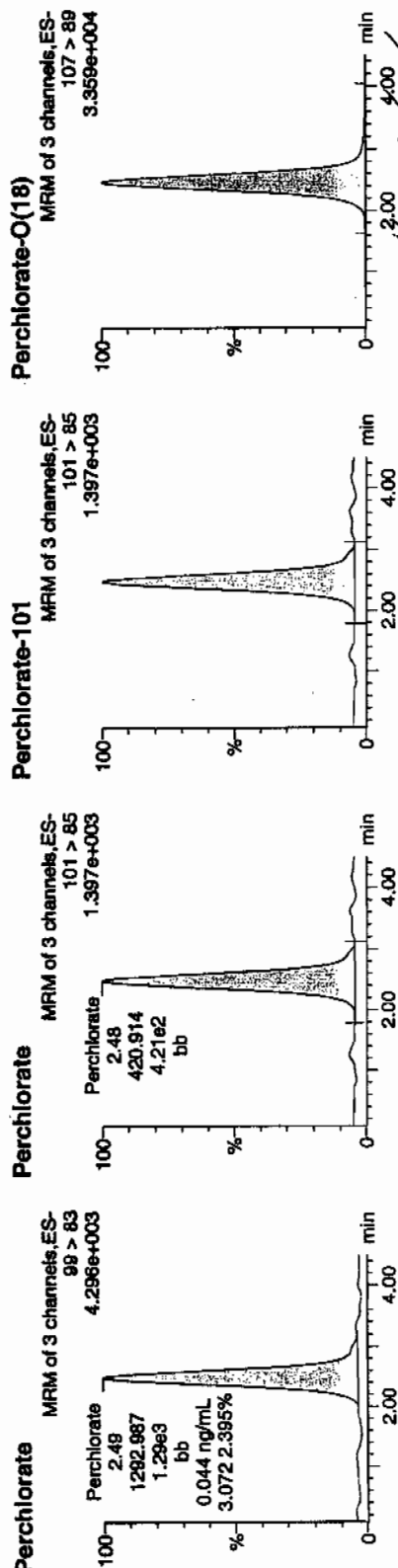
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201071a  
Date: 01-Feb-2010  
Time: 23:33:41  
ID: WCL100128-07CRI  
Vial: 1:2,B

*Perp*  
*WCL*  
*02-02-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.49	1292.987	1292.987	bb		-0.0438	87.63	-12.37	180.715	3.07
WCL100128-07CRI	Perchlorate-101	101 > 85	2.48	420.914	420.914	bb		0.0433	86.66	-13.34	137.376	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.46	10863.334	10863.334	bb		0.4353	87.06	-12.94	4010.0...	

# QUALITY CONTROL

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: 245225  
 Extraction Type: Filter/DAI  
 Client Sample No. MB  
 Date Received: 30-JAN-10  
 GEL Job No (SDG): 10-1386-1  
 GEL Sample ID: 1202024390  
 Date Filtered: 30-JAN-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 10.0 mL  
 %Solids:

Concentrated Extract Volume: 10.0

CAS No.	Analyte <sup>a</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	01-FEB-10 20:47	per0201049a
	Perchlorate Isotope Ratio						1	01-FEB-10 20:47	per0201049a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	01-FEB-10 20:47	per0201049a
	Perchlorate-O(18)			0.446	ug/L		1	01-FEB-10 20:47	per0201049a

<sup>a</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

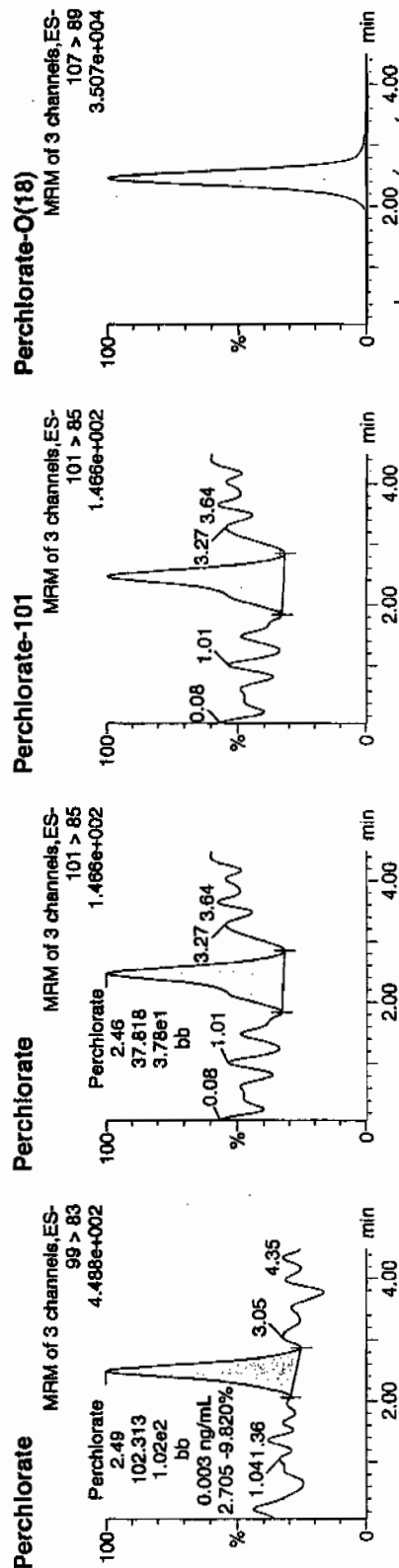
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Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201049a  
Date: 01-Feb-2010  
Time: 20:47:06  
ID: 1202024390  
Vial: 2:1.A

0000  
02-02-10

1202024390 | 945327 | LZA | MB | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202024390	Perchlorate	99 > 83	2.49	102.313	102.313	bb			0.0035			15.491	2.71
1202024390	Perchlorate-101	101 > 85	2.46	37.818	37.818	bb			0.0039			2.888	
1202024390	Perchlorate-O(18)	107 > 89	2.46	11140.639	11140.639	bb			0.4464	89.28	-10.72	3432.5...	

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: EPA 6850 Modified  
 Matrix: WATER  
 Extraction Batch ID: 945225  
 Extraction Type: Filter/DAI  
 Sample Volume/Weight: 10.0 mL  
 Concentrated Extract Volume: 10.0  
 Client Sample No. LCS  
 Date Received: 30-JAN-10  
 GEL Job No (SDG): 10-1386-1  
 GEL Sample ID: 1202024391  
 Date Filtered: 30-JAN-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	0.192	ug/L	J	1	01-FEB-10 20:54	per0201050a
	Perchlorate Isotope Ratio			3.05			1	01-FEB-10 20:54	per0201050a
14797-73-0	Perchlorate-101	.05	.2	0.191	ug/L	J	1	01-FEB-10 20:54	per0201050a
	Perchlorate-O(18)			0.453	ug/L		1	01-FEB-10 20:54	per0201050a

<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: Charles W. Wilson

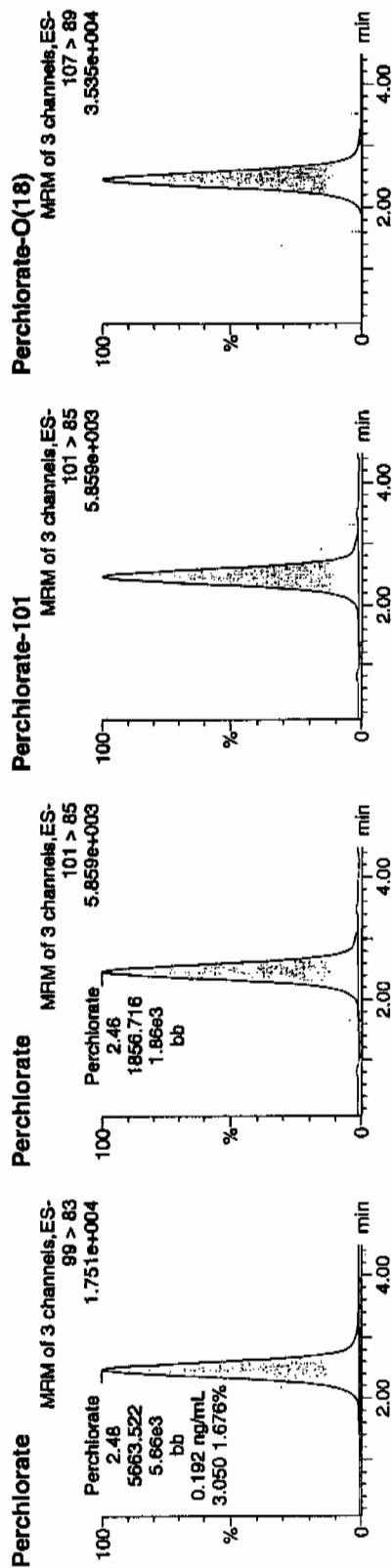
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Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201050a  
Date: 01-Feb-2010  
Time: 20:54:50  
ID: 1202024391  
Vial: 2:1,B

02-02-10

1202024391 | 1202024391 | 1202024391



$$\frac{5663.522}{29509} = 0.1919$$

Handwritten: Hmw 02/02/10



# 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: 945225 Verified by: Lab SOP: GL-OA-E-067 REV# 6  
 Analyst: Jareth Shirley Instrument: MicroMass Quatro Ultima  
 Method: SW846 6850 Modified

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1202024390 MB	30-JAN-2010 11:51:28	10	10	1
1202024391 LCS	30-JAN-2010 11:51:28	10	10	1
245250001	30-JAN-2010 11:51:28	10	10	1
245250002	30-JAN-2010 11:51:28	10	10	1
245373001	30-JAN-2010 11:51:28	10	10	1
245375001	30-JAN-2010 11:51:28	10	10	1
1202024392 MS (245375001)	30-JAN-2010 11:51:28	10	10	1
1202024393 MSD (245375001)	30-JAN-2010 11:51:28	10	10	1
245375002	30-JAN-2010 11:51:28	10	10	1
245378001	30-JAN-2010 11:51:28	10	10	1
245378002	30-JAN-2010 11:51:28	10	10	1
245382001	30-JAN-2010 11:51:28	10	10	1
245386001	30-JAN-2010 11:51:28	10	10	1
245390001	30-JAN-2010 11:51:28	10	10	1
245392001	30-JAN-2010 11:51:28	10	10	1
245392002	30-JAN-2010 11:51:28	10	10	1
1202024399 LCS	30-JAN-2010 11:51:28	10	10	1

### Comments:

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202024399	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.2	mL
LCS	1202024391	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.2	mL
MS	1202024392	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.2	mL
MSD	1202024393	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.2	mL
RGNT	All	900 ppm Bicarbonate, Chloride, Sulfate	1236492	10	mL
RGNT	All	Q251 HPLC Grade Water	1246195	10	mL

Desalting cartridges used: 090414-1-Ba & 091130-1-H

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 02/01/10

Extr. Injection Volume: 20uL

Sequence Number: per020110a

Initial Calibration Date: 02/01/10

Method: EPA 6850-Modified

Int. Std.: UCL100122-01

Mobile Phase Lot#: 1254342, 1246195

Standard-Samp Reagent Lot#: 1233976

Reviewed BY: *Amu*

Date: 02/03/10

SOP: GL-OA-E-067 Rev.6

Alt Check Std. ID: WCL100128-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0201001a	IPB001	CWW	2/1/2010 14:44			1		USE	B
per0201002a	IPB001	CWW	2/1/2010 14:52			1		USE	B
per0201003a	WCLICAL-01	CWW	2/1/2010 15:00			1		USE	I
per0201004a	WCLICAL-02	CWW	2/1/2010 15:07			1		USE	I
per0201005a	WCLICAL-03	CWW	2/1/2010 15:15			1		USE	I
per0201006a	WCLICAL-04	CWW	2/1/2010 15:22			1		USE	I
per0201007a	WCLICAL-05	CWW	2/1/2010 15:30			1		USE	I
per0201008a	IPB002	CWW	2/1/2010 15:37			1		USE	B
per0201009a	WCLICV	CWW	2/1/2010 15:45			1		USE	C
per0201010a	IPB003	CWW	2/1/2010 15:52			1		USE	B
per0201011a	WCLCRI	CWW	2/1/2010 16:00			1		USE	C
per0201012a	245777001	CWW	2/1/2010 16:07	947199	10-1458	10	LANL	USE	S
per0201013a	245777005	CWW	2/1/2010 16:15	947199	10-1458	10	LANL	USE	S
per0201014a	245807001	CWW	2/1/2010 16:22	947199	10-1474-1	1	LANL	USE	S
per0201015a	IPB004	CWW	2/1/2010 16:30			1		USE	B
per0201016a	1202024354	CWW	2/1/2010 16:37	945206	VARIOUS	1	LANL	USE	S
per0201017a	1202024355	CWW	2/1/2010 16:45	945206	VARIOUS	1	LANL	USE	S
per0201018a	1202024358	CWW	2/1/2010 16:53	945206	VARIOUS	1	LANL	USE	S
per0201019a	245113001	CWW	2/1/2010 17:00	945206	10-1325-1	1	LANL	USE	S
per0201020a	WCLCCV	CWW	2/1/2010 17:08			1		USE	C
per0201021a	IPB005	CWW	2/1/2010 17:15			1		USE	B
per0201022a	WCLCRI	CWW	2/1/2010 17:23			1		USE	C
per0201023a	245113002	CWW	2/1/2010 17:30	945206	10-1325-1	1	LANL	USE	S
per0201024a	1202024356	CWW	2/1/2010 17:38	945206	10-1325-1	1	LANL	USE	S
per0201025a	1202024357	CWW	2/1/2010 17:45	945206	10-1325-1	1	LANL	USE	S
per0201026a	245113003	CWW	2/1/2010 17:53	945206	10-1325-1	1	LANL	USE	S
per0201027a	245113004	CWW	2/1/2010 18:00	945206	10-1325-1	1	LANL	USE	S
per0201028a	245113005	CWW	2/1/2010 18:08	945206	10-1325-1	1	LANL	USE	S
per0201029a	245113006	CWW	2/1/2010 18:16	945206	10-1325-1	1	LANL	USE	S

per0201030a	245113007	CWW	2/1/2010 18:23	945206	10-1325-1	1	LANL	USE	S
per0201031a	245113008	CWW	2/1/2010 18:31	945206	10-1325-1	1	LANL	USE	S
per0201032a	245113009	CWW	2/1/2010 18:38	945206	10-1325-1	1	LANL	USE	S
per0201033a	WCLCCV	CWW	2/1/2010 18:46			1		USE	C
per0201034a	IPB006	CWW	2/1/2010 18:53			1		USE	B
per0201035a	WCLCRI	CWW	2/1/2010 19:01			1		USE	C
per0201036a	245113010	CWW	2/1/2010 19:08	945206	10-1325-1	1	LANL	USE	S
per0201037a	245113011	CWW	2/1/2010 19:16	945206	10-1325-1	1	LANL	USE	S
per0201038a	245113012	CWW	2/1/2010 19:24	945206	10-1325-1	1	LANL	USE	S
per0201039a	245113013	CWW	2/1/2010 19:31	945206	10-1325-1	1	LANL	USE	S
per0201040a	245113014	CWW	2/1/2010 19:39	945206	10-1325-1	1	LANL	USE	S
per0201041a	245371001	CWW	2/1/2010 19:46	945206	10-1374	1	LANL	USE	S
per0201042a	245371002	CWW	2/1/2010 19:54	945206	10-1374	1	LANL	USE	S
per0201043a	245372002	CWW	2/1/2010 20:01	945206	10-1375	1	LANL	USE	S
per0201044a	245372003	CWW	2/1/2010 20:09	945206	10-1375	1	LANL	USE	S
per0201045a	245372004	CWW	2/1/2010 20:16	945206	10-1375	1	LANL	USE	S
per0201046a	WCLCCV	CWW	2/1/2010 20:24			1		USE	C
per0201047a	IPB007	CWW	2/1/2010 20:32			1		USE	B
per0201048a	WCLCRI	CWW	2/1/2010 20:39			1		USE	C
per0201049a	1202024390	CWW	2/1/2010 20:47	945227	VARIOUS	1	LANL	USE	S
per0201050a	1202024391	CWW	2/1/2010 20:54	945227	VARIOUS	1	LANL	USE	S
per0201051a	1202024399	CWW	2/1/2010 21:02	945227	VARIOUS	1	LANL	USE	S
per0201052a	245250001	CWW	2/1/2010 21:09	945227	10-1351-1	1	LANL	USE	S
per0201053a	245250002	CWW	2/1/2010 21:17	945227	10-1351-1	1	LANL	USE	S
per0201054a	245373001	CWW	2/1/2010 21:24	945227	10-1375-1	1	LANL	USE	S
per0201055a	245375001	CWW	2/1/2010 21:32	945227	10-1373-1	1	LANL	USE	S
per0201056a	1202024392	CWW	2/1/2010 21:40	945227	10-1373-1	1	LANL	USE	S
per0201057a	1202024393	CWW	2/1/2010 21:47	945227	10-1373-1	1	LANL	USE	S
per0201058a	WCLCCV	CWW	2/1/2010 21:55			1		USE	C
per0201059a	IPB008	CWW	2/1/2010 22:02			1		USE	B
per0201060a	WCLCRI	CWW	2/1/2010 22:10			1		USE	C
per0201061a	245375002	CWW	2/1/2010 22:17	945227	10-1373-1	1	LANL	USE	S
per0201062a	245378001	CWW	2/1/2010 22:25	945227	10-1378-1	1	LANL	USE	S
per0201063a	245378002	CWW	2/1/2010 22:33	945227	10-1378-1	1	LANL	USE	S
per0201064a	245382001	CWW	2/1/2010 22:40	945227	10-1381	1	LANL	USE	S
per0201065a	245386001	CWW	2/1/2010 22:48	945227	10-1383-1	1	LANL	USE	S
per0201066a	245390001	CWW	2/1/2010 22:55	945227	10-1386-1	1	LANL	USE	S

per0201067a	245392001	CWW	2/1/2010 23:03	945227	10-1390-1	1	LANL	USE	S
per0201068a	245392002	CWW	2/1/2010 23:10	945227	10-1390-1	1	LANL	USE	S
per0201069a	WCLCCV	CWW	2/1/2010 23:18			1		USE	C
per0201070a	IPB009	CWW	2/1/2010 23:26			1		USE	B
per0201071a	WCLCRI	CWW	2/1/2010 23:33			1		USE	C

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

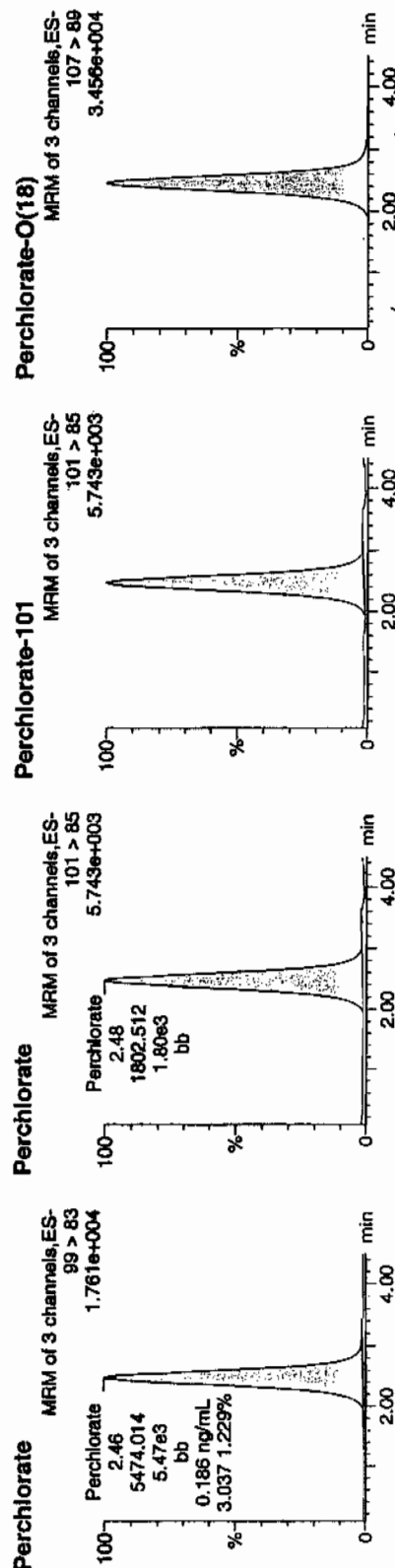
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Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201056a  
Date: 01-Feb-2010  
Time: 21:40:00  
ID: 1202024392  
Vial: 2:2,B

02-02-10

1292024392 | 1202024392 | 1202024392



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202024392	Perchlorate	99 > 83	2.46	5474.014	5474.014	bb			0.1855	92.75	-7.25	1900.0...	3.04
1202024392	Perchlorate-101	101 > 85	2.48	1802.512	1802.512	bb			0.1856	92.78	-7.22	570.796	
1202024392	Perchlorate-O(18)	107 > 89	2.45	11045.520	11045.520	bb			0.4426	88.52	-11.48	974.085	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020110a.qld

Last Altered: Tuesday, February 02, 2010 2:28:24 PM Eastern Standard Time  
Printed: Tuesday, February 02, 2010 2:30:40 PM Eastern Standard Time

Name: per0201057a

Date: 01-Feb-2010

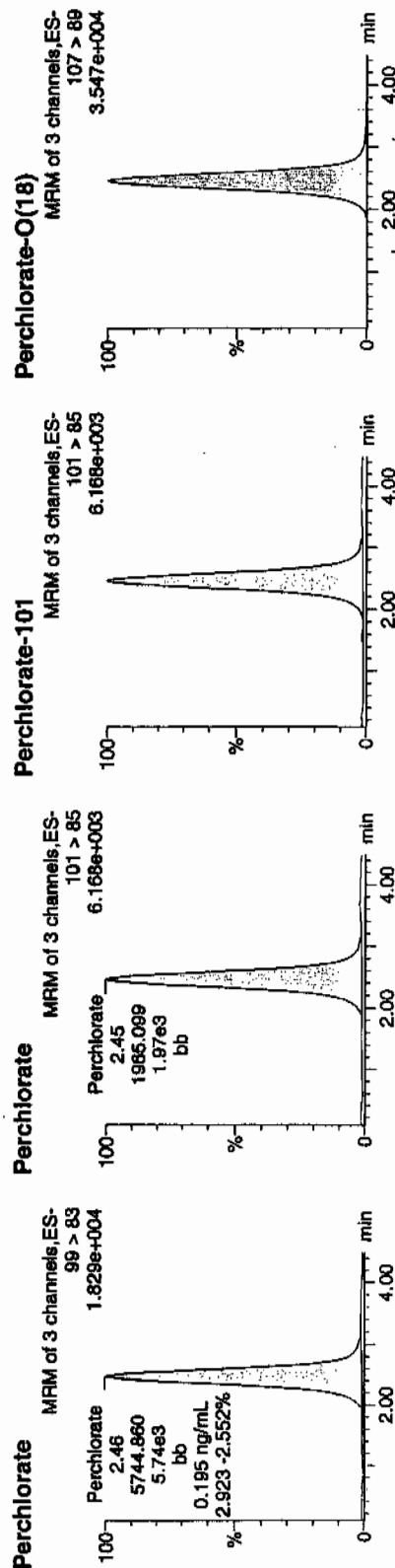
Time: 21:47:32

ID: 1202024393

Vial: 2;2;C

02-02-10

LANC | 945227 | U22 | MSD | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202024393	Perchlorate	99 > 83	2.46	5744.860	5744.860	bb			0.1947	97.34	-2.66	635.440	2.82
1202024393	Perchlorate-101	101 > 85	2.45	1965.099	1965.099	bb			0.2023	101.14	1.14	223.698	
1202024393	Perchlorate-O(18)	107 > 89	2.45	11357.204	11357.204	bb			0.4551	91.01	-8.99	564.726	

4mm 02/03/10

## 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 10-1386**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245389001	RE14-10-7689
245389002	RE14-10-7679
245389003	RE14-10-7680
245389004	RE14-10-7686
245389005	RE14-10-7688
245389006	RE14-10-7684
245389007	RE14-10-7687
245389008	RE14-10-7681
245389009	RE14-10-7682
245389010	RE14-10-7685
245389011	RE14-10-7683
1202024779	Method Blank (MB) ICP
1202024780	Laboratory Control Sample (LCS)
1202024783	245389001(RE14-10-7689L) Serial Dilution (SD)
1202024781	245389001(RE14-10-7689D) Sample Duplicate (DUP)
1202024782	245389001(RE14-10-7689S) Matrix Spike (MS)
1202024784	245389001(RE14-10-7689SD) Matrix Spike Duplicate (MSD)
1202024785	Method Blank (MB) ICP-MS
1202024786	Laboratory Control Sample (LCS)
1202024789	245389001(RE14-10-7689L) Serial Dilution (SD)

1202024787	245389001(RE14-10-7689D) Sample Duplicate (DUP)
1202024788	245389001(RE14-10-7689S) Matrix Spike (MS)
1202024790	245389001(RE14-10-7689SD) Matrix Spike Duplicate (MSD)
1202025289	Method Blank (MB) CVAA
1202025290	Laboratory Control Sample (LCS)
1202025293	245389001(RE14-10-7689L) Serial Dilution (SD)
1202025291	245389001(RE14-10-7689D) Sample Duplicate (DUP)
1202025292	245389001(RE14-10-7689S) Matrix Spike (MS)
1202025294	245389001(RE14-10-7689SD) Matrix Spike Duplicate (MSD)

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

#### **Method/Analysis Information**

<b>Analytical Batch:</b>	945403, 945407 and 945622
<b>Prep Batch :</b>	945402, 945405 and 945621
<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.

#### **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 sample was selected as the quality control (QC) sample for this SDG: 245389001.

**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 antimony, barium 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 met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of antimony, magnesium, manganese, potassium and selenium, as indicated by the "N" qualifiers.

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

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

**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 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: 789916 and 792702. 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 Brown Date: 2/19/10

# Sample Data Summary



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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389001

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7689

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16600000	ug/Kg		7610	22400	22400	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-36-0	Antimony	879	ug/Kg	JN	369	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-38-2	Arsenic	2.2	mg/kg		0.224	1.12	1.12	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-39-3	Barium	210000	ug/Kg	N	112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-41-7	Beryllium	1.01	mg/kg		0.0224	0.112	0.112	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-43-9	Cadmium	559	ug/Kg	U	112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-70-2	Calcium	3140000	ug/Kg		8950	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-47-3	Chromium	11700	ug/Kg		168	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-48-4	Cobalt	3990	ug/Kg		168	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-50-8	Copper	5710	ug/Kg		336	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-89-6	Iron	12100000	ug/Kg		8950	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-92-1	Lead	11500	ug/Kg		280	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-95-4	Magnesium	1960000	ug/Kg	N	9510	33600	33600	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-96-5	Manganese	187000	ug/Kg	N	224	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403
7439-97-6	Mercury	23.9	ug/kg		4.43	13	13	1	AV	JXL1	02/04/10 12:52	020410S1-8	945622
7440-02-0	Nickel	7.89	mg/kg		0.112	0.448	0.448	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-09-7	Potassium	1410000	ug/Kg	N	7160	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7782-49-2	Selenium	1.12	mg/kg	UN	0.56	1.12	1.12	2	MS	BAJ	02/16/10 07:01	100215-5	945407
7440-22-4	Silver	559	ug/Kg	U	112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-23-5	Sodium	168000	ug/Kg		7830	28000	28000	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-28-0	Thallium	0.283	mg/kg		0.0672	0.224	0.224	2	MS	BAJ	02/15/10 23:15	100215-2	945407
7440-61-1	Uranium	0.786	mg/kg		0.0148	0.0448	0.0448	2	MS	BAJ	02/16/10 08:23	100215-7	945407
7440-62-2	Vanadium	23600	ug/Kg		112	559	559	1	P	HSC	02/11/10 11:16	021110A-1	945403
7440-66-6	Zinc	21500	ug/Kg		369	1120	1120	1	P	HSC	02/11/10 11:16	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.514	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.513	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.53	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389002

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7679

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9380000	ug/Kg		8650	25400	25400	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-36-0	Antimony	1270	ug/Kg	UN	420	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-38-2	Arsenic	2.5	mg/kg		0.249	1.25	1.25	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-39-3	Barium	164000	ug/Kg	N	127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-41-7	Beryllium	0.821	mg/kg		0.0249	0.125	0.125	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-43-9	Cadmium	636	ug/Kg	U	127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-70-2	Calcium	2350000	ug/Kg		10200	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-47-3	Chromium	10300	ug/Kg		191	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-48-4	Cobalt	5640	ug/Kg		191	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-50-8	Copper	6170	ug/Kg		382	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-89-6	Iron	12000000	ug/Kg		10200	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-92-1	Lead	14600	ug/Kg		318	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-95-4	Magnesium	1710000	ug/Kg	N	10800	38200	38200	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-96-5	Manganese	339000	ug/Kg	N	254	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403
7439-97-6	Mercury	16.3	ug/kg		5.15	15.1	15.1	1	AV	JXL1	02/04/10 13:05	020410S1-8	945622
7440-02-0	Nickel	7.31	mg/kg		0.125	0.498	0.498	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-09-7	Potassium	1310000	ug/Kg	N	8140	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7782-49-2	Selenium	0.902	mg/kg	JN	0.623	1.25	1.25	2	MS	BAJ	02/16/10 07:13	100215-5	945407
7440-22-4	Silver	636	ug/Kg	U	127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-23-5	Sodium	54400	ug/Kg		8910	31800	31800	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-28-0	Thallium	0.287	mg/kg		0.0747	0.249	0.249	2	MS	BAJ	02/15/10 23:58	100215-2	945407
7440-61-1	Uranium	1.28	mg/kg		0.0164	0.0498	0.0498	2	MS	BAJ	02/16/10 08:32	100215-7	945407
7440-62-2	Vanadium	24800	ug/Kg		127	636	636	1	P	HSC	02/11/10 11:42	021110A-1	945403
7440-66-6	Zinc	24100	ug/Kg		420	1270	1270	1	P	HSC	02/11/10 11:42	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.511	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.504	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389003

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7680

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	18500000	ug/Kg		7390	21700	21700	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-36-0	Antimony	922	ug/Kg	JN	359	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-38-2	Arsenic	1.27	mg/kg		0.221	1.11	1.11	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-39-3	Barium	243000	ug/Kg	N	109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-41-7	Beryllium	0.557	mg/kg		0.0221	0.111	0.111	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-43-9	Cadmium	543	ug/Kg	U	109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-70-2	Calcium	2400000	ug/Kg		8690	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-47-3	Chromium	13800	ug/Kg		163	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-48-4	Cobalt	5810	ug/Kg		163	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-50-8	Copper	6950	ug/Kg		326	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-89-6	Iron	15400000	ug/Kg		8690	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-92-1	Lead	16000	ug/Kg		272	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-95-4	Magnesium	2200000	ug/Kg	N	9230	32600	32600	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-96-5	Manganese	327000	ug/Kg	N	217	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403
7439-97-6	Mercury	25.8	ug/kg		4.37	12.9	12.9	1	AV	JXL1	02/04/10 13:07	020410S1-8	945622
7440-02-0	Nickel	3.95	mg/kg		0.111	0.442	0.442	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-09-7	Potassium	1420000	ug/Kg	N	6950	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7782-49-2	Selenium	1.11	mg/kg	UN	0.553	1.11	1.11	2	MS	BAJ	02/16/10 07:16	100215-5	945407
7440-22-4	Silver	543	ug/Kg	U	109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-23-5	Sodium	156000	ug/Kg		7610	27200	27200	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-28-0	Thallium	0.143	mg/kg	J	0.0663	0.221	0.221	2	MS	BAJ	02/16/10 00:05	100215-2	945407
7440-61-1	Uranium	0.525	mg/kg		0.0146	0.0442	0.0442	2	MS	BAJ	02/16/10 08:34	100215-7	945407
7440-62-2	Vanadium	31000	ug/Kg		109	543	543	1	P	HSC	02/11/10 11:46	021110A-1	945403
7440-66-6	Zinc	25000	ug/Kg		359	1090	1090	1	P	HSC	02/11/10 11:46	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.523	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.514	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.53	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389004

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7686

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 77

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	17400000	ug/Kg		8560	25200	25200	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-36-0	Antimony	601	ug/Kg	JN	415	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-38-2	Arsenic	2.53	mg/kg		0.25	1.25	1.25	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-39-3	Barium	254000	ug/Kg	N	126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-41-7	Beryllium	1.09	mg/kg		0.025	0.125	0.125	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-43-9	Cadmium	629	ug/Kg	U	126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-70-2	Calcium	2480000	ug/Kg		10100	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-47-3	Chromium	12600	ug/Kg		189	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-48-4	Cobalt	5500	ug/Kg		189	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-50-8	Copper	7970	ug/Kg		378	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-89-6	Iron	14600000	ug/Kg		10100	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-92-1	Lead	14300	ug/Kg		315	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-95-4	Magnesium	2310000	ug/Kg	N	10700	37800	37800	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-96-5	Manganese	394000	ug/Kg	N	252	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403
7439-97-6	Mercury	23.6	ug/kg		5.09	15	15	1	AV	JXL1	02/04/10 13:09	020410S1-8	945622
7440-02-0	Nickel	8.32	mg/kg		0.125	0.501	0.501	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-09-7	Potassium	1650000	ug/Kg	N	8060	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7782-49-2	Selenium	1.25	mg/kg	UN	0.626	1.25	1.25	2	MS	BAJ	02/16/10 07:24	100215-5	945407
7440-22-4	Silver	629	ug/Kg	U	126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-23-5	Sodium	124000	ug/Kg		8810	31500	31500	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-28-0	Thallium	0.276	mg/kg		0.0751	0.25	0.25	2	MS	BAJ	02/16/10 00:11	100215-2	945407
7440-61-1	Uranium	1.06	mg/kg		0.0165	0.0501	0.0501	2	MS	BAJ	02/16/10 08:39	100215-7	945407
7440-62-2	Vanadium	27800	ug/Kg		126	629	629	1	P	HSC	02/11/10 11:50	021110A-1	945403
7440-66-6	Zinc	25000	ug/Kg		415	1260	1260	1	P	HSC	02/11/10 11:50	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.515	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.518	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.52	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389005

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7688

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	14700000	ug/Kg		8520	25000	25000	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-36-0	Antimony	517	ug/Kg	JN	413	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-38-2	Arsenic	2.62	mg/kg		0.245	1.22	1.22	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-39-3	Barium	236000	ug/Kg	N	125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-41-7	Beryllium	0.898	mg/kg		0.0245	0.122	0.122	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-43-9	Cadmium	626	ug/Kg	U	125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-70-2	Calcium	2510000	ug/Kg		10000	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-47-3	Chromium	9840	ug/Kg		188	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-48-4	Cobalt	4550	ug/Kg		188	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-50-8	Copper	6230	ug/Kg		376	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-89-6	Iron	12300000	ug/Kg		10000	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-92-1	Lead	13100	ug/Kg		313	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-95-4	Magnesium	1760000	ug/Kg	N	10600	37600	37600	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-96-5	Manganese	285000	ug/Kg	N	250	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403
7439-97-6	Mercury	24.1	ug/kg		4.81	14.1	14.1	1	AV	JXL1	02/04/10 13:11	020410S1-8	945622
7440-02-0	Nickel	7.19	mg/kg		0.122	0.489	0.489	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-09-7	Potassium	1420000	ug/Kg	N	8020	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7782-49-2	Selenium	1.22	mg/kg	UN	0.612	1.22	1.22	2	MS	BAJ	02/16/10 07:26	100215-5	945407
7440-22-4	Silver	626	ug/Kg	U	125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-23-5	Sodium	75300	ug/Kg		8770	31300	31300	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-28-0	Thallium	0.242	mg/kg	J	0.0734	0.245	0.245	2	MS	BAJ	02/16/10 00:17	100215-2	945407
7440-61-1	Uranium	1.28	mg/kg		0.0161	0.0489	0.0489	2	MS	BAJ	02/16/10 08:40	100215-7	945407
7440-62-2	Vanadium	24700	ug/Kg		125	626	626	1	P	HSC	02/11/10 11:53	021110A-1	945403
7440-66-6	Zinc	21300	ug/Kg		413	1250	1250	1	P	HSC	02/11/10 11:53	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.506	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.518	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.538	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389006

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7684

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	15500000	ug/Kg		7720	22700	22700	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-36-0	Antimony	399	ug/Kg	JN	375	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-38-2	Arsenic	2.12	mg/kg		0.227	1.13	1.13	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-39-3	Barium	223000	ug/Kg	N	114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-41-7	Beryllium	0.969	mg/kg		0.0227	0.113	0.113	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-43-9	Cadmium	568	ug/Kg	U	114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-70-2	Calcium	3930000	ug/Kg		9090	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-47-3	Chromium	10200	ug/Kg		170	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-48-4	Cobalt	4250	ug/Kg		170	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-50-8	Copper	6090	ug/Kg		341	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-89-6	Iron	12600000	ug/Kg		9090	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-92-1	Lead	13300	ug/Kg		284	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-95-4	Magnesium	1800000	ug/Kg	N	9650	34100	34100	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-96-5	Manganese	268000	ug/Kg	N	227	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403
7439-97-6	Mercury	20.8	ug/kg		4.46	13.1	13.1	1	AV	JXL1	02/04/10 13:13	020410S1-8	945622
7440-02-0	Nickel	7.21	mg/kg		0.113	0.453	0.453	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-09-7	Potassium	1470000	ug/Kg	N	7270	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7782-49-2	Selenium	1.13	mg/kg	UN	0.567	1.13	1.13	2	MS	BAJ	02/16/10 07:29	100215-5	945407
7440-22-4	Silver	568	ug/Kg	U	114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-23-5	Sodium	98600	ug/Kg		7950	28400	28400	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-28-0	Thallium	0.238	mg/kg		0.068	0.227	0.227	2	MS	BAJ	02/16/10 00:23	100215-2	945407
7440-61-1	Uranium	0.722	mg/kg		0.015	0.0453	0.0453	2	MS	BAJ	02/16/10 08:42	100215-7	945407
7440-62-2	Vanadium	25300	ug/Kg		114	568	568	1	P	HSC	02/11/10 11:57	021110A-1	945403
7440-66-6	Zinc	21800	ug/Kg		375	1140	1140	1	P	HSC	02/11/10 11:57	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.505	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.506	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.525	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389007

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7687

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 73

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8740000	ug/Kg		9010	26500	26500	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-36-0	Antimony	548	ug/Kg	JN	437	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-38-2	Arsenic	2.19	mg/kg		0.273	1.36	1.36	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-39-3	Barium	147000	ug/Kg	N	132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-41-7	Beryllium	0.769	mg/kg		0.0273	0.136	0.136	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-43-9	Cadmium	662	ug/Kg	U	132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-70-2	Calcium	3190000	ug/Kg		10600	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-47-3	Chromium	9330	ug/Kg		199	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-48-4	Cobalt	5230	ug/Kg		199	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-50-8	Copper	5740	ug/Kg		397	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-89-6	Iron	11400000	ug/Kg		10600	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-92-1	Lead	13600	ug/Kg		331	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-95-4	Magnesium	1520000	ug/Kg	N	11300	39700	39700	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-96-5	Manganese	376000	ug/Kg	N	265	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403
7439-97-6	Mercury	11.6	ug/kg	J	5.01	14.7	14.7	1	AV	JXL1	02/04/10 13:15	020410S1-8	945622
7440-02-0	Nickel	6.69	mg/kg		0.136	0.546	0.546	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-09-7	Potassium	1480000	ug/Kg	N	8480	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7782-49-2	Selenium	1.36	mg/kg	UN	0.682	1.36	1.36	2	MS	BAJ	02/16/10 07:31	100215-5	945407
7440-22-4	Silver	662	ug/Kg	U	132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-23-5	Sodium	52300	ug/Kg		9270	33100	33100	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-28-0	Thallium	0.275	mg/kg		0.0819	0.273	0.273	2	MS	BAJ	02/16/10 00:42	100215-2	945407
7440-61-1	Uranium	1.18	mg/kg		0.018	0.0546	0.0546	2	MS	BAJ	02/16/10 08:44	100215-7	945407
7440-62-2	Vanadium	23800	ug/Kg		132	662	662	1	P	HSC	02/11/10 12:01	021110A-1	945403
7440-66-6	Zinc	24600	ug/Kg		437	1320	1320	1	P	HSC	02/11/10 12:01	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.515	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.556	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389008

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7681

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 78

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7520000	ug/Kg		8770	25800	25800	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-36-0	Antimony	1090	ug/Kg	JN	426	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-38-2	Arsenic	1.86	mg/kg		0.247	1.24	1.24	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-39-3	Barium	152000	ug/Kg	N	129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-41-7	Beryllium	0.643	mg/kg		0.0247	0.124	0.124	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-43-9	Cadmium	645	ug/Kg	U	129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-70-2	Calcium	1960000	ug/Kg		10300	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-47-3	Chromium	11700	ug/Kg		193	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-48-4	Cobalt	5230	ug/Kg		193	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-50-8	Copper	4710	ug/Kg		387	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-89-6	Iron	11100000	ug/Kg		10300	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-92-1	Lead	11300	ug/Kg		322	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-95-4	Magnesium	1440000	ug/Kg	N	11000	38700	38700	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-96-5	Manganese	370000	ug/Kg	N	258	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403
7439-97-6	Mercury	13	ug/kg	J	4.62	13.6	13.6	1	AV	JXL1	02/04/10 13:17	020410S1-8	945622
7440-02-0	Nickel	6.79	mg/kg		0.124	0.494	0.494	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-09-7	Potassium	1430000	ug/Kg	N	8250	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7782-49-2	Selenium	1.24	mg/kg	UN	0.618	1.24	1.24	2	MS	BAJ	02/16/10 07:34	100215-5	945407
7440-22-4	Silver	645	ug/Kg	U	129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-23-5	Sodium	49200	ug/Kg		9030	32200	32200	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-28-0	Thallium	0.239	mg/kg	J	0.0741	0.247	0.247	2	MS	BAJ	02/16/10 00:48	100215-2	945407
7440-61-1	Uranium	0.956	mg/kg		0.0163	0.0494	0.0494	2	MS	BAJ	02/16/10 08:45	100215-7	945407
7440-62-2	Vanadium	24900	ug/Kg		129	645	645	1	P	HSC	02/11/10 12:04	021110A-1	945403
7440-66-6	Zinc	21500	ug/Kg		426	1290	1290	1	P	HSC	02/11/10 12:04	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.522	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.57	g	30	mL	02/04/10	TXB3



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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389009

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7682

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	17300000	ug/Kg		7590	22300	22300	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-36-0	Antimony	873	ug/Kg	JN	368	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-38-2	Arsenic	2.58	mg/kg		0.227	1.13	1.13	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-39-3	Barium	206000	ug/Kg	N	112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-41-7	Beryllium	1.33	mg/kg		0.0227	0.113	0.113	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-43-9	Cadmium	558	ug/Kg	U	112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-70-2	Calcium	2850000	ug/Kg		8930	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-47-3	Chromium	11500	ug/Kg		167	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-48-4	Cobalt	4070	ug/Kg		167	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-50-8	Copper	5840	ug/Kg		335	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-89-6	Iron	12700000	ug/Kg		8930	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-92-1	Lead	12300	ug/Kg		279	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-95-4	Magnesium	2070000	ug/Kg	N	9490	33500	33500	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-96-5	Manganese	213000	ug/Kg	N	223	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403
7439-97-6	Mercury	22.3	ug/kg		4.52	13.3	13.3	1	AV	JXL1	02/04/10 13:23	020410S1-8	945622
7440-02-0	Nickel	10.7	mg/kg		0.113	0.453	0.453	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-09-7	Potassium	1460000	ug/Kg	N	7140	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7782-49-2	Selenium	1.13	mg/kg	UN	0.567	1.13	1.13	2	MS	BAJ	02/16/10 07:37	100215-5	945407
7440-22-4	Silver	558	ug/Kg	U	112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-23-5	Sodium	147000	ug/Kg		7810	27900	27900	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-28-0	Thallium	0.301	mg/kg		0.068	0.227	0.227	2	MS	BAJ	02/16/10 00:54	100215-2	945407
7440-61-1	Uranium	1.01	mg/kg		0.015	0.0453	0.0453	2	MS	BAJ	02/16/10 08:47	100215-7	945407
7440-62-2	Vanadium	24900	ug/Kg		112	558	558	1	P	HSC	02/11/10 12:08	021110A-1	945403
7440-66-6	Zinc	21600	ug/Kg		368	1120	1120	1	P	HSC	02/11/10 12:08	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.514	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.506	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.518	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389010

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7685

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5260000	ug/Kg		7950	23400	23400	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-36-0	Antimony	1170	ug/Kg	UN	386	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-38-2	Arsenic	1.54	mg/kg		0.227	1.13	1.13	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-39-3	Barium	92400	ug/Kg	N	117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-41-7	Beryllium	0.480	mg/kg		0.0227	0.113	0.113	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-43-9	Cadmium	584	ug/Kg	U	117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-70-2	Calcium	2340000	ug/Kg		9350	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-47-3	Chromium	20700	ug/Kg		175	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-48-4	Cobalt	3290	ug/Kg		175	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-50-8	Copper	7680	ug/Kg		351	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-89-6	Iron	8120000	ug/Kg		9350	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-92-1	Lead	8850	ug/Kg		292	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-95-4	Magnesium	1130000	ug/Kg	N	9930	35100	35100	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-96-5	Manganese	217000	ug/Kg	N	234	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403
7439-97-6	Mercury	10.1	ug/kg	J	4.55	13.4	13.4	1	AV	JXL1	02/04/10 13:25	020410S1-8	945622
7440-02-0	Nickel	4.48	mg/kg		0.113	0.453	0.453	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-09-7	Potassium	998000	ug/Kg	N	7480	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7782-49-2	Selenium	1.13	mg/kg	UN	0.566	1.13	1.13	2	MS	BAJ	02/16/10 07:39	100215-5	945407
7440-22-4	Silver	584	ug/Kg	U	117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-23-5	Sodium	70200	ug/Kg		8180	29200	29200	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-28-0	Thallium	0.142	mg/kg	J	0.068	0.227	0.227	2	MS	BAJ	02/16/10 01:00	100215-2	945407
7440-61-1	Uranium	1.21	mg/kg		0.015	0.0453	0.0453	2	MS	BAJ	02/16/10 08:49	100215-7	945407
7440-62-2	Vanadium	17600	ug/Kg		117	584	584	1	P	HSC	02/11/10 12:12	021110A-1	945403
7440-66-6	Zinc	22500	ug/Kg		386	1170	1170	1	P	HSC	02/11/10 12:12	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.505	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.521	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.529	g	30	mL	02/04/10	TXB3

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

SDG No: 10-1386

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245389011

BASIS: Dry Weight

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7683

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 75

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7570000	ug/Kg		8880	26100	26100	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-36-0	Antimony	1100	ug/Kg	JN	431	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-38-2	Arsenic	2.3	mg/kg		0.264	1.32	1.32	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-39-3	Barium	154000	ug/Kg	N	131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-41-7	Beryllium	0.851	mg/kg		0.0264	0.132	0.132	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-43-9	Cadmium	653	ug/Kg	U	131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-70-2	Calcium	3220000	ug/Kg		10400	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-47-3	Chromium	9750	ug/Kg		196	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-48-4	Cobalt	4310	ug/Kg		196	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-50-8	Copper	7800	ug/Kg		392	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-89-6	Iron	10100000	ug/Kg		10400	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-92-1	Lead	13400	ug/Kg		327	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-95-4	Magnesium	1650000	ug/Kg	N	11100	39200	39200	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-96-5	Manganese	283000	ug/Kg	N	261	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403
7439-97-6	Mercury	12.5	ug/kg	J	5.02	14.8	14.8	1	AV	JXL1	02/04/10 13:27	020410S1-8	945622
7440-02-0	Nickel	7.35	mg/kg		0.132	0.529	0.529	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-09-7	Potassium	1660000	ug/Kg	N	8360	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7782-49-2	Selenium	1.32	mg/kg	UN	0.661	1.32	1.32	2	MS	BAJ	02/16/10 07:42	100215-5	945407
7440-22-4	Silver	653	ug/Kg	U	131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-23-5	Sodium	45100	ug/Kg		9140	32700	32700	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-28-0	Thallium	0.270	mg/kg		0.0793	0.264	0.264	2	MS	BAJ	02/16/10 01:06	100215-2	945407
7440-61-1	Uranium	1.94	mg/kg		0.0174	0.0529	0.0529	2	MS	BAJ	02/16/10 08:51	100215-7	945407
7440-62-2	Vanadium	21600	ug/Kg		131	653	653	1	P	HSC	02/11/10 12:15	021110A-1	945403
7440-66-6	Zinc	27900	ug/Kg		431	1310	1310	1	P	HSC	02/11/10 12:15	021110A-1	945403

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945403	945402	SW846 3050B	0.513	g	50	mL	02/04/10	FGA
945407	945405	SW846 3050B	0.507	g	50	mL	02/04/10	FGA
945622	945621	SW846 7471A Prep	0.545	g	30	mL	02/04/10	TXB3

# **Quality Control Summary**

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,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	5.13	ug/L	5	ug/L	102.6	90.0 – 110.0	AV	04-FEB-10 08:58	020410S1-8
	Aluminum	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Antimony	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Cadmium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Calcium	4960	ug/L	5000	ug/L	99.2	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Cobalt	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Copper	515	ug/L	500	ug/L	103	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Iron	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Lead	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Magnesium	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Manganese	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Potassium	2510	ug/L	2500	ug/L	100.2	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Silver	256	ug/L	250	ug/L	102.6	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Sodium	2510	ug/L	2500	ug/L	100.3	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Vanadium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Zinc	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	11-FEB-10 07:11	021110A-1
	Thallium	52	ug/L	50	ug/L	103.9	90.0 – 110.0	MS	15-FEB-10 22:02	100215-2
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 – 110.0	MS	16-FEB-10 06:38	100215-5
	Beryllium	51.4	ug/L	50	ug/L	102.7	90.0 – 110.0	MS	16-FEB-10 06:38	100215-5
	Nickel	51.6	ug/L	50	ug/L	103.3	90.0 – 110.0	MS	16-FEB-10 06:38	100215-5
	Selenium	49.6	ug/L	50	ug/L	99.2	90.0 – 110.0	MS	16-FEB-10 06:38	100215-5
	Uranium	52.3	ug/L	50	ug/L	104.5	90.0 – 110.0	MS	16-FEB-10 08:08	100215-7
CCV01										
	Mercury	4.97	ug/L	5	ug/L	99.3	80.0 – 120.0	AV	04-FEB-10 09:03	020410S1-8
	Aluminum	4690	ug/L	5000	ug/L	93.8	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Antimony	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Barium	478	ug/L	500	ug/L	95.7	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Cadmium	479	ug/L	500	ug/L	95.9	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,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	4690	ug/L	5000	ug/L	93.9	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Chromium	479	ug/L	500	ug/L	95.8	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Cobalt	479	ug/L	500	ug/L	95.8	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Copper	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Iron	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Lead	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Magnesium	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Manganese	487	ug/L	500	ug/L	97.5	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Potassium	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Silver	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Sodium	9520	ug/L	10000	ug/L	95.2	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Vanadium	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Zinc	477	ug/L	500	ug/L	95.4	90.0 – 110.0	P	11-FEB-10 07:34	021110A-1
	Thallium	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	15-FEB-10 22:32	100215-2
	Arsenic	47.6	ug/L	50	ug/L	95.2	90.0 – 110.0	MS	16-FEB-10 06:50	100215-5
	Beryllium	49.9	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	16-FEB-10 06:50	100215-5
	Nickel	49.7	ug/L	50	ug/L	99.5	90.0 – 110.0	MS	16-FEB-10 06:50	100215-5
	Selenium	48.6	ug/L	50	ug/L	97.3	90.0 – 110.0	MS	16-FEB-10 06:50	100215-5
	Uranium	50	ug/L	50	ug/L	100	90.0 – 110.0	MS	16-FEB-10 08:17	100215-7
CCV02	Mercury	4.92	ug/L	5	ug/L	98.5	80.0 – 120.0	AV	04-FEB-10 09:26	020410S1-8
	Aluminum	4680	ug/L	5000	ug/L	93.6	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Antimony	485	ug/L	500	ug/L	97	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Barium	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Cadmium	492	ug/L	500	ug/L	98.3	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Calcium	4680	ug/L	5000	ug/L	93.6	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Copper	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1
	Iron	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 08:04	021110A-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,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>
	Lead	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Magnesium	4850	ug/L	5000	ug/L	97.1	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Manganese	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Silver	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Vanadium	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Zinc	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	11-FEB-10 08:04	021110A-1
	Thallium	51.9	ug/L	50	ug/L	103.9	90.0 - 110.0	MS	15-FEB-10 22:51	100215-2
	Arsenic	50.3	ug/L	50	ug/L	100.6	90.0 - 110.0	MS	16-FEB-10 07:19	100215-5
	Beryllium	52.8	ug/L	50	ug/L	105.5	90.0 - 110.0	MS	16-FEB-10 07:19	100215-5
	Nickel	52.6	ug/L	50	ug/L	105.1	90.0 - 110.0	MS	16-FEB-10 07:19	100215-5
	Selenium	50	ug/L	50	ug/L	100	90.0 - 110.0	MS	16-FEB-10 07:19	100215-5
	Uranium	51.5	ug/L	50	ug/L	103	90.0 - 110.0	MS	16-FEB-10 08:35	100215-7
CCV03										
	Mercury	4.99	ug/L	5	ug/L	99.8	80.0 - 120.0	AV	04-FEB-10 09:50	020410S1-8
	Aluminum	4700	ug/L	5000	ug/L	93.9	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Antimony	474	ug/L	500	ug/L	94.8	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Barium	476	ug/L	500	ug/L	95.3	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Cadmium	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Calcium	4640	ug/L	5000	ug/L	92.9	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Chromium	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Cobalt	475	ug/L	500	ug/L	95.1	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Copper	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Iron	4760	ug/L	5000	ug/L	95.2	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Lead	473	ug/L	500	ug/L	94.5	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Magnesium	4830	ug/L	5000	ug/L	96.7	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Manganese	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Potassium	4780	ug/L	5000	ug/L	95.7	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Silver	484	ug/L	500	ug/L	96.8	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,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	9440	ug/L	10000	ug/L	94.4	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Vanadium	481	ug/L	500	ug/L	96.2	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Zinc	474	ug/L	500	ug/L	94.8	90.0 - 110.0	P	11-FEB-10 08:56	021110A-1
	Thallium	51.5	ug/L	50	ug/L	103.1	90.0 - 110.0	MS	15-FEB-10 23:46	100215-2
	Arsenic	52.3	ug/L	50	ug/L	104.7	90.0 - 110.0	MS	16-FEB-10 07:44	100215-5
	Beryllium	55	ug/L	50	ug/L	110	90.0 - 110.0	MS	16-FEB-10 07:44	100215-5
	Nickel	53.5	ug/L	50	ug/L	107	90.0 - 110.0	MS	16-FEB-10 07:44	100215-5
	Selenium	51.6	ug/L	50	ug/L	103.1	90.0 - 110.0	MS	16-FEB-10 07:44	100215-5
	Uranium	52.2	ug/L	50	ug/L	104.4	90.0 - 110.0	MS	16-FEB-10 08:52	100215-7
CCV04										
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 - 120.0	AV	04-FEB-10 10:13	020410S1-8
	Aluminum	4760	ug/L	5000	ug/L	95.3	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Antimony	482	ug/L	500	ug/L	96.5	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Barium	479	ug/L	500	ug/L	95.8	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Cadmium	479	ug/L	500	ug/L	95.9	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Calcium	4650	ug/L	5000	ug/L	93.1	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Chromium	480	ug/L	500	ug/L	95.9	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Cobalt	481	ug/L	500	ug/L	96.2	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Copper	480	ug/L	500	ug/L	96	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Iron	4830	ug/L	5000	ug/L	96.5	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Lead	479	ug/L	500	ug/L	95.7	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Magnesium	4920	ug/L	5000	ug/L	98.4	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Manganese	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Potassium	4870	ug/L	5000	ug/L	97.3	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Silver	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Sodium	9610	ug/L	10000	ug/L	96.1	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Vanadium	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Zinc	478	ug/L	500	ug/L	95.7	90.0 - 110.0	P	11-FEB-10 09:44	021110A-1
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 - 110.0	MS	16-FEB-10 00:29	100215-2



**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,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										
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	04-FEB-10 10:36	020410S1-8
	Aluminum	4750	ug/L	5000	ug/L	94.9	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Antimony	473	ug/L	500	ug/L	94.6	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Barium	476	ug/L	500	ug/L	95.1	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Cadmium	476	ug/L	500	ug/L	95.3	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Calcium	4610	ug/L	5000	ug/L	92.2	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Chromium	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Cobalt	477	ug/L	500	ug/L	95.4	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Copper	475	ug/L	500	ug/L	95.1	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Iron	4770	ug/L	5000	ug/L	95.3	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Lead	476	ug/L	500	ug/L	95.1	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Magnesium	4880	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Manganese	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Potassium	4840	ug/L	5000	ug/L	96.7	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Silver	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Sodium	9560	ug/L	10000	ug/L	95.7	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Vanadium	481	ug/L	500	ug/L	96.1	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Zinc	474	ug/L	500	ug/L	94.8	90.0 – 110.0	P	11-FEB-10 10:20	021110A-1
	Thallium	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	16-FEB-10 01:12	100215-2
CCV06										
	Mercury	5.04	ug/L	5	ug/L	100.9	80.0 – 120.0	AV	04-FEB-10 10:59	020410S1-8
	Aluminum	5240	ug/L	5000	ug/L	104.8	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Antimony	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Barium	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Cadmium	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Calcium	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Chromium	528	ug/L	500	ug/L	105.7	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Cobalt	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Copper	530	ug/L	500	ug/L	106	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1
	Iron	5280	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	11-FEB-10 10:57	021110A-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,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>
	Lead	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
	Magnesium	5420	ug/L	5000	ug/L	108.3	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
	Manganese	532	ug/L	500	ug/L	106.5	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
	Potassium	5310	ug/L	5000	ug/L	106.3	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
	Silver	535	ug/L	500	ug/L	107	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
	Vanadium	533	ug/L	500	ug/L	106.7	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
	Zinc	524	ug/L	500	ug/L	104.8	90.0 - 110.0	P	11-FEB-10 10:57	021110A-1
CCV07	Mercury	4.91	ug/L	5	ug/L	98.3	80.0 - 120.0	AV	04-FEB-10 11:22	020410S1-8
	Aluminum	4740	ug/L	5000	ug/L	94.8	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Antimony	474	ug/L	500	ug/L	94.8	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Barium	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Cadmium	475	ug/L	500	ug/L	95	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Calcium	4600	ug/L	5000	ug/L	92	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Chromium	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Cobalt	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Copper	476	ug/L	500	ug/L	95.3	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Iron	4730	ug/L	5000	ug/L	94.7	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Lead	473	ug/L	500	ug/L	94.5	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Magnesium	4820	ug/L	5000	ug/L	96.5	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Manganese	486	ug/L	500	ug/L	97.3	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Potassium	4810	ug/L	5000	ug/L	96.1	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Silver	484	ug/L	500	ug/L	96.8	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Sodium	9510	ug/L	10000	ug/L	95.1	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Vanadium	482	ug/L	500	ug/L	96.4	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
	Zinc	473	ug/L	500	ug/L	94.6	90.0 - 110.0	P	11-FEB-10 11:35	021110A-1
CCV08	Mercury	4.85	ug/L	5	ug/L	96.9	80.0 - 120.0	AV	04-FEB-10 11:45	020410S1-8
	Aluminum	4700	ug/L	5000	ug/L	93.9	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS5,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Antimony	473	ug/L	500	ug/L	94.6	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Barium	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Cadmium	473	ug/L	500	ug/L	94.6	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Calcium	4600	ug/L	5000	ug/L	92	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Chromium	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Cobalt	478	ug/L	500	ug/L	95.5	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Copper	477	ug/L	500	ug/L	95.3	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Iron	4670	ug/L	5000	ug/L	93.3	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Lead	473	ug/L	500	ug/L	94.6	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Magnesium	4820	ug/L	5000	ug/L	96.3	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Manganese	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Potassium	4800	ug/L	5000	ug/L	96	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Silver	485	ug/L	500	ug/L	97	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Sodium	9530	ug/L	10000	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Vanadium	482	ug/L	500	ug/L	96.4	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
	Zinc	473	ug/L	500	ug/L	94.5	90.0 - 110.0	P	11-FEB-10 12:19	021110A-1
CCV09										
	Mercury	4.96	ug/L	5	ug/L	99.1	80.0 - 120.0	AV	04-FEB-10 12:09	020410S1-8
CCV10										
	Mercury	4.86	ug/L	5	ug/L	97.1	80.0 - 120.0	AV	04-FEB-10 12:32	020410S1-8
CCV11										
	Mercury	4.79	ug/L	5	ug/L	95.7	80.0 - 120.0	AV	04-FEB-10 12:55	020410S1-8
CCV12										
	Mercury	4.78	ug/L	5	ug/L	95.5	80.0 - 120.0	AV	04-FEB-10 13:19	020410S1-8
CCV13										
	Mercury	4.79	ug/L	5	ug/L	95.7	80.0 - 120.0	AV	04-FEB-10 13:42	020410S1-8

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS5,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	.194	ug/L	.2	ug/L	97	70.0 – 130.0	AV	04-FEB-10 09:01	020410S1-8
	Thallium	1.29	ug/L	1	ug/L	128.9	70.0 – 130.0	MS	15-FEB-10 22:14	100215-2
	Arsenic	5.81	ug/L	5	ug/L	116.2	70.0 – 130.0	MS	16-FEB-10 06:43	100215-5
	Selenium	5.51	ug/L	5	ug/L	110.1	70.0 – 130.0	MS	16-FEB-10 06:43	100215-5
	Nickel	2.27	ug/L	2	ug/L	113.6	70.0 – 130.0	MS	16-FEB-10 06:43	100215-5
	Beryllium	.539	ug/L	.5	ug/L	107.8	70.0 – 130.0	MS	16-FEB-10 06:43	100215-5
	Uranium	.21	ug/L	.2	ug/L	105	70.0 – 130.0	MS	16-FEB-10 08:12	100215-7
PQL01										
	Aluminum	200	ug/L	200	ug/L	100	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Iron	108	ug/L	100	ug/L	108.1	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Lead	10.1	ug/L	10	ug/L	101	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Magnesium	305	ug/L	300	ug/L	101.7	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Manganese	9.65	ug/L	10	ug/L	96.5	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Potassium	123	ug/L	150	ug/L	82.3	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Silver	4.94	ug/L	5	ug/L	98.8	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Sodium	296	ug/L	300	ug/L	98.6	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Antimony	8.3	ug/L	10	ug/L	83	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Barium	4.62	ug/L	5	ug/L	92.4	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Cadmium	4.5	ug/L	5	ug/L	90	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Chromium	5.01	ug/L	5	ug/L	100.1	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Cobalt	4.22	ug/L	5	ug/L	84.4	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Copper	9.54	ug/L	10	ug/L	95.4	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Vanadium	4.89	ug/L	5	ug/L	97.8	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Zinc	9.04	ug/L	10	ug/L	90.4	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1
	Calcium	187	ug/L	200	ug/L	93.5	70.0 – 130.0	P	11-FEB-10 07:18	021110A-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ug/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>
<b>ICB01</b>										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 09:00	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 07:15	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 07:15	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:15	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:15	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 07:15	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 07:15	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 07:15	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 07:15	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 07:15	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 07:15	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 07:15	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 07:15	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 07:15	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:15	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 07:15	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:15	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 07:15	021110A-1
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	15-FEB-10 22:08	100215-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	16-FEB-10 06:40	100215-5
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 06:40	100215-5
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 06:40	100215-5
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	16-FEB-10 06:40	100215-5
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	16-FEB-10 08:10	100215-7
<b>CCB01</b>										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 09:05	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 07:38	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 07:38	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:38	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:38	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 07:38	021110A-1

**Metals**  
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**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386

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	11-FEB-10 07:38	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 07:38	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 07:38	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 07:38	021110A-1
	Lead	4.02	+/-10	J	2.5	10.0	SOL	P	11-FEB-10 07:38	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 07:38	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 07:38	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 07:38	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:38	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 07:38	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 07:38	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 07:38	021110A-1
	Thallium	0.323	+/-1	J	0.3	1.0	SOL	MS	15-FEB-10 22:39	100215-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	16-FEB-10 06:53	100215-5
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 06:53	100215-5
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 06:53	100215-5
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	16-FEB-10 06:53	100215-5
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	16-FEB-10 08:18	100215-7
<b>CCB02</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 09:28	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 08:08	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 08:08	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:08	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:08	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 08:08	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 08:08	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 08:08	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 08:08	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 08:08	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 08:08	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 08:08	021110A-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386

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>
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 08:08	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 08:08	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:08	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 08:08	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:08	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 08:08	021110A-1
	Thallium	0.385	+/-1	J	0.3	1.0	SOL	MS	15-FEB-10 22:57	100215-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	16-FEB-10 07:21	100215-5
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 07:21	100215-5
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 07:21	100215-5
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	16-FEB-10 07:21	100215-5
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	16-FEB-10 08:37	100215-7
<b>CCB03</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 09:51	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 08:59	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 08:59	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:59	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:59	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 08:59	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 08:59	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 08:59	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 08:59	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 08:59	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 08:59	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 08:59	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 08:59	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 08:59	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:59	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 08:59	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 08:59	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 08:59	021110A-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386

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>
	Thallium	0.339	+/-1	J	0.3	1.0	SOL	MS	15-FEB-10 23:52	100215-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	16-FEB-10 07:47	100215-5
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 07:47	100215-5
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 07:47	100215-5
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	16-FEB-10 07:47	100215-5
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	16-FEB-10 08:54	100215-7
<b>CCB04</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 10:15	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 09:47	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 09:47	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:47	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:47	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 09:47	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 09:47	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 09:47	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 09:47	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 09:47	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 09:47	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 09:47	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 09:47	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 09:47	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:47	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 09:47	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:47	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 09:47	021110A-1
	Thallium	0.328	+/-1	J	0.3	1.0	SOL	MS	16-FEB-10 00:35	100215-2
<b>CCB05</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 10:38	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 10:24	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 10:24	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:24	021110A-1



Metals  
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ug/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>
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:24	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 10:24	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 10:24	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 10:24	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 10:24	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 10:24	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 10:24	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 10:24	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 10:24	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 10:24	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:24	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 10:24	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:24	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 10:24	021110A-1
	Thallium	0.332	+/-1	J	0.3	1.0	SOL	MS	16-FEB-10 01:18	100215-2
CCB06	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 11:01	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 11:01	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 11:01	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:01	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:01	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 11:01	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 11:01	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 11:01	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 11:01	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 11:01	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 11:01	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 11:01	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 11:01	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 11:01	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:01	021110A-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386

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>
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 11:01	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:01	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 11:01	021110A-1
<b>CCB07</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 11:24	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 11:39	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 11:39	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:39	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:39	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 11:39	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 11:39	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 11:39	021110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 11:39	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 11:39	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 11:39	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 11:39	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 11:39	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 11:39	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:39	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 11:39	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:39	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 11:39	021110A-1
<b>CCB08</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 11:47	020410S1-8
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 12:23	021110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 12:23	021110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:23	021110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:23	021110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 12:23	021110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 12:23	021110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 12:23	021110A-1

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ug/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>
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 12:23	021110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 12:23	021110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 12:23	021110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 12:23	021110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 12:23	021110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 12:23	021110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:23	021110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 12:23	021110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:23	021110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 12:23	021110A-1
<b>CCB09</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 12:11	020410S1-8
<b>CCB10</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 12:34	020410S1-8
<b>CCB11</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 12:57	020410S1-8
<b>CCB12</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 13:21	020410S1-8
<b>CCB13</b>	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	04-FEB-10 13:44	020410S1-8

**METALS**  
**-3b-**  
**PREPARATION BLANK SUMMARY**

SDG NO. 10-1386  
 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>
1202024779	Aluminum	6680	ug/Kg	+/-19600	U	P	6680	19600
	Antimony	324	ug/Kg	+/-982	U	P	324	982
	Barium	98.2	ug/Kg	+/-491	U	P	98.2	491
	Cadmium	98.2	ug/Kg	+/-491	U	P	98.2	491
	Calcium	10100	ug/Kg	+/-24600	J	P	7860	24600
	Chromium	147	ug/Kg	+/-491	U	P	147	491
	Cobalt	147	ug/Kg	+/-491	U	P	147	491
	Copper	295	ug/Kg	+/-982	U	P	295	982
	Iron	7860	ug/Kg	+/-24600	U	P	7860	24600
	Lead	246	ug/Kg	+/-982	U	P	246	982
	Magnesium	8350	ug/Kg	+/-29500	U	P	8350	29500
	Manganese	196	ug/Kg	+/-982	U	P	196	982
	Potassium	-6520	ug/Kg	+/-24600	J	P	6290	24600
	Silver	98.2	ug/Kg	+/-491	U	P	98.2	491
	Sodium	6880	ug/Kg	+/-24600	U	P	6880	24600
	Vanadium	98.2	ug/Kg	+/-491	U	P	98.2	491
	Zinc	324	ug/Kg	+/-982	U	P	324	982
1202024785	Arsenic	0.2	mg/kg	+/-0.998	U	MS	0.2	0.998
	Beryllium	0.02	mg/kg	+/-0.0998	U	MS	0.02	0.0998
	Nickel	0.0998	mg/kg	+/-0.399	U	MS	0.0998	0.399
	Selenium	0.499	mg/kg	+/-0.998	U	MS	0.499	0.998
	Thallium	0.0599	mg/kg	+/-0.2	U	MS	0.0599	0.2
	Uranium	0.0132	mg/kg	+/-0.0399	U	MS	0.0132	0.0399
1202025289	Mercury	4.01	ug/kg	+/-11.8	U	AV	4.01	11.8

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386

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	497000	ug/L	500000	ug/L	99.3	80.0 – 120.0	11-FEB-10 07:22	021110A-1
	Antimony	-7.39	ug/L					11-FEB-10 07:22	021110A-1
	Barium	7.62	ug/L					11-FEB-10 07:22	021110A-1
	Cadmium	-5.83	ug/L					11-FEB-10 07:22	021110A-1
	Calcium	473000	ug/L	500000	ug/L	94.6	80.0 – 120.0	11-FEB-10 07:22	021110A-1
	Chromium	-0.322	ug/L					11-FEB-10 07:22	021110A-1
	Cobalt	2.48	ug/L					11-FEB-10 07:22	021110A-1
	Copper	-2.04	ug/L					11-FEB-10 07:22	021110A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 – 120.0	11-FEB-10 07:22	021110A-1
	Lead	11.1	ug/L					11-FEB-10 07:22	021110A-1
	Magnesium	475000	ug/L	500000	ug/L	95	80.0 – 120.0	11-FEB-10 07:22	021110A-1
	Manganese	7.57	ug/L					11-FEB-10 07:22	021110A-1
	Potassium	-54.2	ug/L					11-FEB-10 07:22	021110A-1
	Silver	-7.12	ug/L					11-FEB-10 07:22	021110A-1
	Sodium	44.5	ug/L					11-FEB-10 07:22	021110A-1
	Vanadium	-1.22	ug/L					11-FEB-10 07:22	021110A-1
	Zinc	-8.54	ug/L					11-FEB-10 07:22	021110A-1
<b>ICSAB01</b>									
	Aluminum	482000	ug/L	500000	ug/L	96.4	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Antimony	488	ug/L	500	ug/L	97.5	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Barium	487	ug/L	500	ug/L	97.3	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Cadmium	446	ug/L	500	ug/L	89.2	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Calcium	459000	ug/L	500000	ug/L	91.8	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Chromium	475	ug/L	500	ug/L	95.1	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Cobalt	422	ug/L	500	ug/L	84.5	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Copper	523	ug/L	500	ug/L	105	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Iron	179000	ug/L	200000	ug/L	89.6	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Lead	471	ug/L	500	ug/L	94.2	80.0 – 120.0	11-FEB-10 07:25	021110A-1
	Magnesium	464000	ug/L	500000	ug/L	92.8	80.0 – 120.0	11-FEB-10 07:25	021110A-1

## METALS

-4-

## Interference Check Sample

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

ICS:

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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>
	Manganese	471	ug/L	500	ug/L	94.1	80.0 - 120.0	11-FEB-10 07:25	021110A-1
	Potassium	4890	ug/L	5000	ug/L	97.8	80.0 - 120.0	11-FEB-10 07:25	021110A-1
	Silver	248	ug/L	250	ug/L	99.3	80.0 - 120.0	11-FEB-10 07:25	021110A-1
	Sodium	4850	ug/L	5000	ug/L	97	80.0 - 120.0	11-FEB-10 07:25	021110A-1
	Vanadium	501	ug/L	500	ug/L	100	80.0 - 120.0	11-FEB-10 07:25	021110A-1
	Zinc	450	ug/L	500	ug/L	90.1	80.0 - 120.0	11-FEB-10 07:25	021110A-1

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

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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	0.03	ug/L					15-FEB-10 22:20	100215-2
ICSAB01	Thallium	21.3	ug/L	20	ug/L	107	80.0 ~ 120.0	15-FEB-10 22:26	100215-2

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386

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>
<b>ICSA01</b>									
	Arsenic	0.448	ug/L					16-FEB-10 06:45	100215-5
	Beryllium	0.08	ug/L					16-FEB-10 06:45	100215-5
	Nickel	3.19	ug/L					16-FEB-10 06:45	100215-5
	Selenium	-1.47	ug/L					16-FEB-10 06:45	100215-5
<b>ICSAB01</b>									
	Arsenic	20.6	ug/L	20	ug/L	103	80.0 - 120.0	16-FEB-10 06:48	100215-5
	Beryllium	17.9	ug/L	20	ug/L	89.6	80.0 - 120.0	16-FEB-10 06:48	100215-5
	Nickel	21.9	ug/L	23.31	ug/L	94	80.0 - 120.0	16-FEB-10 06:48	100215-5
	Selenium	18.2	ug/L	20	ug/L	91	80.0 - 120.0	16-FEB-10 06:48	100215-5



**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

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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	Uranium	-0.031	ug/L					16-FEB-10 08:13	100215-7
ICSAB01	Uranium	22.1	ug/L	20	ug/L	111	80.0 - 120.0	16-FEB-10 08:15	100215-7

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1386 Client ID RE14-10-7689S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 87

Sample ID: 245389001 Spike ID: 1202024782

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Copper	ug/Kg	75-125	61100		5710		56500	98		P
Iron	ug/Kg		13000000		12100000		565000	161	N/A	P
Lead	ug/Kg	75-125	62600		11500		56500	90.5		P
Magnesium	ug/Kg	75-125	2500000		1960000		565000	96.9		P
Manganese	ug/Kg	75-125	254000		187000		56500	119		P
Potassium	ug/Kg	75-125	1950000		1410000		565000	96.6		P
Silver	ug/Kg	75-125	53600		112	U	56500	94.8		P
Sodium	ug/Kg	75-125	674000		168000		565000	89.6		P
Vanadium	ug/Kg	75-125	76100		23600		56500	93		P
Zinc	ug/Kg	75-125	74300		21500		56500	93.5		P
Aluminum	ug/Kg		21900000		16600000		565000	931	N/A	P
Antimony	ug/Kg	75-125	36600		879	J	56500	63.2	N	P
Barium	ug/Kg	75-125	237000		210000		56500	46.7	N	P
Cadmium	ug/Kg	75-125	50600		112	U	56500	89.5		P
Calcium	ug/Kg		3070000		3140000		565000	-13.9	N/A	P
Chromium	ug/Kg	75-125	63400		11700		56500	91.5		P
Cobalt	ug/Kg	75-125	52100		3990		56500	85.1		P

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1386 Client ID: RE14-10-7689SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 87

Sample ID: 245389001 Spike ID: 1202024784

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		23400000		16600000		566000	1200	N/A	P
Antimony	ug/Kg	75-125	37500		879	J	56600	64.8	N	P
Barium	ug/Kg	75-125	262000		210000		56600	91.8		P
Cadmium	ug/Kg	75-125	50500		112	U	56600	89.2		P
Calcium	ug/Kg		3360000		3140000		566000	38.7	N/A	P
Chromium	ug/Kg	75-125	63900		11700		56600	92.3		P
Cobalt	ug/Kg	75-125	52900		3990		56600	86.4		P
Copper	ug/Kg	75-125	61100		5710		56600	98		P
Iron	ug/Kg		13700000		12100000		566000	284	N/A	P
Lead	ug/Kg	75-125	63100		11500		56600	91.2		P
Magnesium	ug/Kg	75-125	3060000		1960000		566000	195	N	P
Manganese	ug/Kg	75-125	266000		187000		56600	140	N	P
Potassium	ug/Kg	75-125	2340000		1410000		566000	165	N	P
Silver	ug/Kg	75-125	53500		112	U	56600	94.6		P
Sodium	ug/Kg	75-125	675000		168000		566000	89.7		P
Vanadium	ug/Kg	75-125	77000		23600		56600	94.4		P
Zinc	ug/Kg	75-125	75200		21500		56600	94.9		P

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1386 Client ID: RE14-10-7689S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 87

Sample ID: 245389001 Spike ID: 1202024788

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	10.4		2.2		9.11	90.2		MS
Beryllium	mg/kg	75-125	5.71		1.01		5.69	82.5		MS
Nickel	mg/kg	75-125	13.7		7.89		5.69	102		MS
Selenium	mg/kg	75-125	1.9		0.56	U	2.28	68.6	N	MS
Thallium	mg/kg	75-125	11.8		0.283		11.4	101		MS
Uranium	mg/kg	75-125	6.83		0.786		5.69	106		MS

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1386 Client ID: RE14-10-7689SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 87

Sample ID: 245389001 Spike ID: 1202024790

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	10		2.2		9.05	86.6		MS
Beryllium	mg/kg	75-125	5.53		1.01		5.66	79.8		MS
Nickel	mg/kg	75-125	13		7.89		5.66	90.3		MS
Selenium	mg/kg	75-125	1.65		0.56	U	2.26	58.1	N	MS
Thallium	mg/kg	75-125	11.2		0.283		11.3	96.8		MS
Uranium	mg/kg	75-125	6.52		0.786		5.66	101		MS

## METALS

-5a-

## Matrix Spike Summary

**SDG NO.** 10-1386 **Client ID:** RE14-10-7689S**Contract:** LANL01004 **Level:** Low**Matrix:** SOIL **% Solids:** 87**Sample ID:** 245389001 **Spike ID:** 1202025292

<b>Analyte</b>	<b>Units</b>	<b>Acceptance Limit</b>	<b>Spiked Result</b>	<b>C</b>	<b>Sample Result</b>	<b>C</b>	<b>Spike Added</b>	<b>% Recovery</b>	<b>Qual</b>	<b>M</b>
Mercury	ug/kg	75-125	156		23.9		134	98.6		AV

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1386 Client ID: RE14-10-7689SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 87

Sample ID: 245389001 Spike ID: 1202025294

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	152		23.9		131	98		AV

**Metals**  
**-6-**  
**Duplicate Sample Summary**

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE14-10-7689D

Sample ID: 245389001

Duplicate ID: 1202024781

Percent Solids for Dup: 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	16600000		16600000		.0126		P
Antimony	ug/Kg	+/-1120	879 J		624 J		33.9		P
Barium	ug/Kg	+/-20%	210000		210000		.0669		P
Cadmium	ug/Kg		112 U		112 U				P
Calcium	ug/Kg	+/-20%	3140000		3060000		2.83		P
Chromium	ug/Kg	+/-20%	11700		10600		10.2		P
Cobalt	ug/Kg	+/-20%	3990		3670		8.35		P
Copper	ug/Kg	+/-1120	5710		5500		3.69		P
Iron	ug/Kg	+/-20%	12100000		11700000		2.89		P
Lead	ug/Kg	+/-20%	11500		11800		2.55		P
Magnesium	ug/Kg	+/-20%	1960000		1980000		1.05		P
Manganese	ug/Kg	+/-20%	187000		203000		8.4		P
Potassium	ug/Kg	+/-20%	1410000		1400000		.553		P
Silver	ug/Kg		112 U		112 U				P
Sodium	ug/Kg	+/-20%	168000		155000		7.88		P
Vanadium	ug/Kg	+/-20%	23600		22500		4.87		P
Zinc	ug/Kg	+/-20%	21500		20700		4.01		P



**Metals**  
**-6-**  
**Duplicate Sample Summary**

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE14-10-7689SD

Sample ID: 1202024782

Duplicate ID: 1202024784

Percent Solids for Dup: 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	21900000		23400000		6.76		P
Antimony	ug/Kg	+/-20	36600		37500		2.6		P
Barium	ug/Kg	+/-20	237000		262000		10.3		P
Cadmium	ug/Kg	+/-20	50600		50500		.146		P
Calcium	ug/Kg	+/-20	3070000		3360000		9.26		P
Chromium	ug/Kg	+/-20	63400		63900		.84		P
Cobalt	ug/Kg	+/-20	52100		52900		1.53		P
Copper	ug/Kg	+/-20	61100		61100		.0967		P
Iron	ug/Kg	+/-20	13000000		13700000		5.24		P
Lead	ug/Kg	+/-20	62600		63100		.815		P
Magnesium	ug/Kg	+/-20	2500000		3060000		20		P
Manganese	ug/Kg	+/-20	254000		266000		4.63		P
Potassium	ug/Kg	+/-20	1950000		2340000		18.1		P
Silver	ug/Kg	+/-20	53600		53500		.0588		P
Sodium	ug/Kg	+/-20	674000		675000		.23		P
Vanadium	ug/Kg	+/-20	76100		77000		1.17		P
Zinc	ug/Kg	+/-20	74300		75200		1.14		P

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE14-10-7689D

Sample ID: 245389001

Duplicate ID: 1202024787

Percent Solids for Dup: 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-1.14	2.2		2.42		9.8		MS
Beryllium	mg/kg	+/-20%	1.01		1.15		13.2		MS
Nickel	mg/kg	+/-20%	7.89		8.61		8.71		MS
Selenium	mg/kg		0.56 U		0.571 U				MS
Thallium	mg/kg	+/- .229	0.283		0.259		8.81		MS
Uranium	mg/kg	+/-20%	0.786		0.805		2.4		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE14-10-7689SD

Sample ID: 1202024788

Duplicate ID: 1202024790

Percent Solids for Dup: 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	10.4		10		3.64		MS
Beryllium	mg/kg	+/-20	5.71		5.53		3.23		MS
Nickel	mg/kg	+/-20	13.7		13		5.24		MS
Selenium	mg/kg	+/-20	1.9		1.65		13.9		MS
Thallium	mg/kg	+/-20	11.8		11.2		4.47		MS
Uranium	mg/kg	+/-20	6.83		6.52		4.64		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE14-10-7689D

Sample ID: 245389001

Duplicate ID: 1202025291

Percent Solids for Dup: 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-13.1	23.9		24		.378		AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1386

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE14-10-7689SD

Sample ID: 1202025292

Duplicate ID: 1202025294

Percent Solids for Dup: 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	156		152		2.13		AV

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1386

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>
1202024780								
	Aluminum	ug/Kg	10500000	8510000		81	56-144	P
	Antimony	ug/Kg	173000	135000		77.8	71-130	P
	Barium	ug/Kg	198000	203000		103	80-120	P
	Cadmium	ug/Kg	60700	59200		97.5	81-120	P
	Calcium	ug/Kg	9870000	9470000		96	83-117	P
	Chromium	ug/Kg	236000	243000		103	80-120	P
	Cobalt	ug/Kg	91200	93600		103	81-120	P
	Copper	ug/Kg	174000	190000		109	81-118	P
	Iron	ug/Kg	18000000	18600000		103	51-149	P
	Lead	ug/Kg	86000	96000		112	79-121	P
	Magnesium	ug/Kg	4000000	3800000		95.1	79-122	P
	Manganese	ug/Kg	558000	553000		99.2	81-119	P
	Potassium	ug/Kg	4300000	4060000		94.4	74-127	P
	Silver	ug/Kg	30100	32000		106	66-134	P
	Sodium	ug/Kg	1020000	1060000		104	74-127	P
	Vanadium	ug/Kg	115000	127000		110	79-121	P
	Zinc	ug/Kg	594000	585000		98.4	80-121	P

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1386

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>
1202024786								
	Arsenic	mg/kg	104	98.2		94.5	78-123	MS
	Beryllium	mg/kg	77.6	71.1		91.7	84-116	MS
	Nickel	mg/kg	134	134		99.8	78-123	MS
	Selenium	mg/kg	286	258		90.2	77-123	MS
	Thallium	mg/kg	121	125		103	78-122	MS
	Uranium	mg/kg	2.13	1.98		92.8	73-127	MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1386

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>
1202025290	Mercury	ug/kg	5170	4480		86.5	71.6-128.3	AV

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## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1386

Client ID: RE14-10-7689L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 245389001

Serial Dilution ID: 1202024783

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	148000		154000		3.72		10	P
Antimony	7.86	J	16.5	U	100			P
Barium	1880		1940		3.19		10	P
Cadmium	1	U	5	U				P
Calcium	28100		29400		4.45		10	P
Chromium	105		108		2.86		10	P
Cobalt	35.7		37.1		3.92			P
Copper	51.1		46.6	J	8.81			P
Iron	108000		113000		4.17		10	P
Lead	103		102		1.46			P
Magnesium	17500		18400		4.86		10	P
Manganese	1670		1700		1.5		10	P
Potassium	12600		12900		1.98		10	P
Silver	1	U	5	U				P
Sodium	1500		1460		3			P
Vanadium	211		214		1.18		10	P
Zinc	192		183		4.69		10	P

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1386 Client ID: RE14-10-7689L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 245389001 Serial Dilution ID: 1202024789

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	9.8		14.9	J	51.5			MS
Beryllium	4.5		5.4		20			MS
Nickel	35.2		38.2		8.38			MS
Selenium	2.5	U	12.5	U				MS
Thallium	1.26		2.67	J	112			MS
Uranium	3.51		3.49		.712			MS

## METALS

-9-

## Serial Dilution Sample Summary

**SDG NO.** 10-1386 **Client ID:** RE14-10-7689L**Contract:** LANL01004**Matrix:** SOLID **Level:** Low**Sample ID:** 245389001 **Serial Dilution ID:** 1202025293

<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>
Mercury	.367		.34	U	100			AV

**METALS**  
**-13-**  
**SAMPLE PREPARATION SUMMARY**

SDG No: 10-1386

Method Type: P

Contract: LANL01004

Lab Code: GEL

<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	945402						
1202024779	MB for batch 945402	MB	S	04-FEB-10	.509g	50mL	
1202024780	LCS for batch 945402	LCS	S	04-FEB-10	.501g	50mL	
1202024782	RE14-10-7689S	MS	S	04-FEB-10	.509g	50mL	
1202024784	RE14-10-7689SD	MSD	S	04-FEB-10	.508g	50mL	
1202024781	RE14-10-7689D	DUP	S	04-FEB-10	.515g	50mL	
245389001	RE14-10-7689	SAMPLE	S	04-FEB-10	.514g	50mL	
245389002	RE14-10-7679	SAMPLE	S	04-FEB-10	.5g	50mL	
245389003	RE14-10-7680	SAMPLE	S	04-FEB-10	.523g	50mL	
245389004	RE14-10-7686	SAMPLE	S	04-FEB-10	.515g	50mL	
245389005	RE14-10-7688	SAMPLE	S	04-FEB-10	.506g	50mL	
245389006	RE14-10-7684	SAMPLE	S	04-FEB-10	.505g	50mL	
245389007	RE14-10-7687	SAMPLE	S	04-FEB-10	.515g	50mL	
245389008	RE14-10-7681	SAMPLE	S	04-FEB-10	.5g	50mL	
245389009	RE14-10-7682	SAMPLE	S	04-FEB-10	.514g	50mL	
245389010	RE14-10-7685	SAMPLE	S	04-FEB-10	.505g	50mL	
245389011	RE14-10-7683	SAMPLE	S	04-FEB-10	.513g	50mL	

SW846

**METALS**  
**-13-**  
**SAMPLE PREPARATION SUMMARY**

SDG No: 10-1386

Method Type: MS

Contract: LANL01004

Lab Code: GEL

<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 945405							
1202024785	MB for batch 945405	MB	S	04-FEB-10	.501g	50mL	
1202024786	LCS for batch 945405	LCS	S	04-FEB-10	.502g	50mL	
1202024788	RE14-10-7689S	MS	S	04-FEB-10	.505g	50mL	
1202024790	RE14-10-7689SD	MSD	S	04-FEB-10	.508g	50mL	
1202024787	RE14-10-7689D	DUP	S	04-FEB-10	.503g	50mL	
245389001	RE14-10-7689	SAMPLE	S	04-FEB-10	.513g	50mL	
245389002	RE14-10-7679	SAMPLE	S	04-FEB-10	.511g	50mL	
245389003	RE14-10-7680	SAMPLE	S	04-FEB-10	.514g	50mL	
245389004	RE14-10-7686	SAMPLE	S	04-FEB-10	.518g	50mL	
245389005	RE14-10-7688	SAMPLE	S	04-FEB-10	.518g	50mL	
245389006	RE14-10-7684	SAMPLE	S	04-FEB-10	.506g	50mL	
245389007	RE14-10-7687	SAMPLE	S	04-FEB-10	.5g	50mL	
245389008	RE14-10-7681	SAMPLE	S	04-FEB-10	.522g	50mL	
245389009	RE14-10-7682	SAMPLE	S	04-FEB-10	.506g	50mL	
245389010	RE14-10-7685	SAMPLE	S	04-FEB-10	.521g	50mL	
245389011	RE14-10-7683	SAMPLE	S	04-FEB-10	.507g	50mL	

SW846

**METALS**  
**-13-**  
**SAMPLE PREPARATION SUMMARY**

SDG No: 10-1386

Method Type: AV

Contract: LANL01004

Lab Code: GEL

<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 945621							
1202025289	MB for batch 945621	MB	S	04-FEB-10	.509g	30mL	
1202025290	LCS for batch 945621	LCS	S	04-FEB-10	.208g	30mL	
1202025292	RE14-10-7689S	MS	S	04-FEB-10	.516g	30mL	
1202025294	RE14-10-7689SD	MSD	S	04-FEB-10	.526g	30mL	
1202025291	RE14-10-7689D	DUP	S	04-FEB-10	.528g	30mL	
245389001	RE14-10-7689	SAMPLE	S	04-FEB-10	.53g	30mL	
245389002	RE14-10-7679	SAMPLE	S	04-FEB-10	.504g	30mL	
245389003	RE14-10-7680	SAMPLE	S	04-FEB-10	.53g	30mL	
245389004	RE14-10-7686	SAMPLE	S	04-FEB-10	.52g	30mL	
245389005	RE14-10-7688	SAMPLE	S	04-FEB-10	.538g	30mL	
245389006	RE14-10-7684	SAMPLE	S	04-FEB-10	.525g	30mL	
245389007	RE14-10-7687	SAMPLE	S	04-FEB-10	.556g	30mL	
245389008	RE14-10-7681	SAMPLE	S	04-FEB-10	.57g	30mL	
245389009	RE14-10-7682	SAMPLE	S	04-FEB-10	.518g	30mL	
245389010	RE14-10-7685	SAMPLE	S	04-FEB-10	.529g	30mL	
245389011	RE14-10-7683	SAMPLE	S	04-FEB-10	.545g	30mL	

SW846

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 15-FEB-10

End Date: 16-FEB-10

Client Sdg: 10-1386

Method MS

Data File: 100215-2

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	21:44																					X			
S10	1	21:50																					X			
S100	1	21:56																					X			
ICV01	1	22:02																					X			
ICB01	1	22:08																					X			
CRDL01	1	22:14																					X			
ICSA01	1	22:20																					X			
ICSAB01	1	22:26																					X			
CCV01	1	22:32																					X			
CCB01	1	22:39																					X			
LR01	1	22:45																					X			
CCV02	1	22:51																					X			
CCB02	1	22:57																					X			
1202024785	2	23:03																					X			
1202024786	40	23:09																					X			
245389001	2	23:15																					X			
1202024787	2	23:22																					X			
1202024788	2	23:28																					X			
1202024790	2	23:34																					X			
1202024789	10	23:40																					X			
CCV03	1	23:46																					X			
CCB03	1	23:52																					X			
245389002	2	23:58																					X			
245389003	2	00:05																					X			
245389004	2	00:11																					X			
245389005	2	00:17																					X			
245389006	2	00:23																					X			
CCV04	1	00:29																					X			
CCB04	1	00:35																					X			
245389007	2	00:42																					X			
245389008	2	00:48																					X			
245389009	2	00:54																					X			
245389010	2	01:00																					X			
245389011	2	01:06																					X			
CCV05	1	01:12																					X			
CCB05	1	01:18																					X			

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 15-FEB-10

End Date: 16-FEB-10

Client Sdg: 10-1386

Method MS

Data File: 100215-5

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	06:30			X		X											X		X						
S10	1	06:33			X		X											X		X						
S100	1	06:35			X		X											X		X						
ICV01	1	06:38			X		X											X		X						
ICB01	1	06:40			X		X											X		X						
CRDL01	1	06:43			X		X											X		X						
ICSA01	1	06:45			X		X											X		X						
ICSAB01	1	06:48			X		X											X		X						
CCV01	1	06:50			X		X											X		X						
CCB01	1	06:53			X		X											X		X						
1202024785	2	06:56			X		X											X		X						
1202024786	40	06:58			X		X											X		X						
245389001	2	07:01			X		X											X		X						
1202024787	2	07:03			X		X											X		X						
1202024788	2	07:06			X		X											X		X						
1202024790	2	07:08			X		X											X		X						
1202024789	10	07:11			X		X											X		X						
245389002	2	07:13			X		X											X		X						
245389003	2	07:16			X		X											X		X						
CCV02	1	07:19			X		X											X		X						
CCB02	1	07:21			X		X											X		X						
245389004	2	07:24			X		X											X		X						
245389005	2	07:26			X		X											X		X						
245389006	2	07:29			X		X											X		X						
245389007	2	07:31			X		X											X		X						
245389008	2	07:34			X		X											X		X						
245389009	2	07:37			X		X											X		X						
245389010	2	07:39			X		X											X		X						
245389011	2	07:42			X		X											X		X						
CCV03	1	07:44			X		X											X		X						
CCB03	1	07:47			X		X											X		X						



**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 15-FEB-10

End Date: 16-FEB-10

Client Sdg: 10-1386

Method MS

Data File: 100215-7

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	08:03																						X		
S10	1	08:05																						X		
S100	1	08:07																						X		
ICV01	1	08:08																						X		
ICB01	1	08:10																						X		
CRDL01	1	08:12																						X		
ICSA01	1	08:13																						X		
ICSAB01	1	08:15																						X		
CCV01	1	08:17																						X		
CCB01	1	08:18																						X		
1202024785	2	08:20																						X		
1202024786	40	08:22																						X		
245389001	2	08:23																						X		
1202024787	2	08:25																						X		
1202024788	2	08:27																						X		
1202024790	2	08:28																						X		
1202024789	10	08:30																						X		
245389002	2	08:32																						X		
245389003	2	08:34																						X		
CCV02	1	08:35																						X		
CCB02	1	08:37																						X		
245389004	2	08:39																						X		
245389005	2	08:40																						X		
245389006	2	08:42																						X		
245389007	2	08:44																						X		
245389008	2	08:45																						X		
245389009	2	08:47																						X		
245389010	2	08:49																						X		
245389011	2	08:51																						X		
CCV03	1	08:52																						X		
CCB03	1	08:54																						X		

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: HG3

Start Date: 04-FEB-10

End Date: 04-FEB-10

Client Sdg: 10-1386

Method AV

Data File: 020410S1-8

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	08:46															X									
S0.2	1	08:48															X									
S0.5	1	08:50															X									
S2.0	1	08:52															X									
S5.0	1	08:54															X									
S10.0	1	08:56															X									
ICV01	1	08:58															X									
ICB01	1	09:00															X									
CRDL01	1	09:01															X									
CCV01	1	09:03															X									
CCB01	1	09:05															X									
ZZZZZZ	1	09:07																								
ZZZZZZ	10	09:09																								
ZZZZZZ	1	09:11																								
ZZZZZZ	1	09:13																								
ZZZZZZ	1	09:15																								
ZZZZZZ	1	09:17																								
ZZZZZZ	5	09:19																								
ZZZZZZ	1	09:21																								
ZZZZZZ	1	09:23																								
ZZZZZZ	1	09:25																								
CCV02	1	09:26															X									
CCB02	1	09:28															X									
ZZZZZZ	1	09:30																								
ZZZZZZ	1	09:32																								
ZZZZZZ	1	09:34																								
ZZZZZZ	1	09:36																								
ZZZZZZ	1	09:38																								
ZZZZZZ	1	09:40																								
ZZZZZZ	1	09:42																								
ZZZZZZ	1	09:44																								
ZZZZZZ	1	09:46																								
ZZZZZZ	1	09:48																								
CCV03	1	09:50															X									
CCB03	1	09:51															X									
ZZZZZZ	1	09:53																								
ZZZZZZ	1	09:55																								
ZZZZZZ	1	09:57																								
ZZZZZZ	10	09:59																								
ZZZZZZ	1	10:01																								

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time
ZZZZZZ	1	10:03
ZZZZZZ	1	10:05
ZZZZZZ	1	10:07
ZZZZZZ	5	10:09
ZZZZZZ	1	10:11
CCV04	1	10:13
CCB04	1	10:15
ZZZZZZ	1	10:17
ZZZZZZ	1	10:18
ZZZZZZ	1	10:20
ZZZZZZ	1	10:22
ZZZZZZ	1	10:24
ZZZZZZ	1	10:26
ZZZZZZ	1	10:28
ZZZZZZ	1	10:30
ZZZZZZ	1	10:32
ZZZZZZ	10	10:34
CCV05	1	10:36
CCB05	1	10:38
ZZZZZZ	1	10:40
ZZZZZZ	1	10:42
ZZZZZZ	1	10:44
ZZZZZZ	1	10:45
ZZZZZZ	5	10:47
ZZZZZZ	1	10:49
ZZZZZZ	1	10:51
ZZZZZZ	1	10:53
ZZZZZZ	1	10:55
ZZZZZZ	1	10:57
CCV06	1	10:59
CCB06	1	11:01
ZZZZZZ	1	11:03
ZZZZZZ	1	11:05
ZZZZZZ	1	11:07
ZZZZZZ	1	11:09
ZZZZZZ	1	11:11
ZZZZZZ	1	11:13
ZZZZZZ	1	11:14
ZZZZZZ	1	11:16
ZZZZZZ	10	11:18

**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	11:20																								
CCV07	1	11:22															X									
CCB07	1	11:24															X									
ZZZZZZ	1	11:26																								
ZZZZZZ	1	11:28																								
ZZZZZZ	1	11:30																								
ZZZZZZ	5	11:32																								
ZZZZZZ	1	11:34																								
ZZZZZZ	1	11:36																								
ZZZZZZ	1	11:38																								
ZZZZZZ	1	11:40																								
ZZZZZZ	1	11:42																								
ZZZZZZ	1	11:44																								
CCV08	1	11:45															X									
CCB08	1	11:47															X									
ZZZZZZ	1	11:49																								
ZZZZZZ	1	11:51																								
ZZZZZZ	1	11:53																								
ZZZZZZ	1	11:55																								
ZZZZZZ	1	11:57																								
ZZZZZZ	10	11:59																								
ZZZZZZ	1	12:01																								
ZZZZZZ	1	12:03																								
ZZZZZZ	1	12:05																								
ZZZZZZ	1	12:07																								
CCV09	1	12:09															X									
CCB09	1	12:11															X									
ZZZZZZ	1	12:13																								
ZZZZZZ	1	12:15																								
ZZZZZZ	1	12:16																								
ZZZZZZ	1	12:18																								
ZZZZZZ	1	12:20																								
ZZZZZZ	5	12:22																								
ZZZZZZ	1	12:24																								
ZZZZZZ	1	12:26																								
ZZZZZZ	1	12:28																								
ZZZZZZ	1	12:30																								
CCV10	1	12:32															X									
CCB10	1	12:34															X									
ZZZZZZ	1	12:36																								

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time
ZZZZZ	1	12:38
ZZZZZ	1	12:40
ZZZZZ	1	12:42
ZZZZZ	1	12:44
ZZZZZ	1	12:46
1202025289	1	12:48
1202025290	10	12:50
245389001	1	12:52
1202025291	1	12:53
CCV11	1	12:55
CCB11	1	12:57
1202025292	1	12:59
1202025294	1	13:01
1202025293	5	13:03
245389002	1	13:05
245389003	1	13:07
245389004	1	13:09
245389005	1	13:11
245389006	1	13:13
245389007	1	13:15
245389008	1	13:17
CCV12	1	13:19
CCB12	1	13:21
245389009	1	13:23
245389010	1	13:25
245389011	1	13:27
ZZZZZ	1	13:29
ZZZZZ	10	13:31
ZZZZZ	1	13:33
ZZZZZ	1	13:34
ZZZZZ	1	13:36
ZZZZZ	1	13:38
ZZZZZ	5	13:40
CCV13	1	13:42
CCB13	1	13:44

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 11-FEB-10

End Date: 11-FEB-10

Client Sdg: 10-1386

Method P

Data File: 021110A-1

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	06:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	06:59		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	07:02	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	07:05	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	07:09	X						X				X		X							X				
ICV01	1	07:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	07:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	07:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	07:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	07:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	07:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	07:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV01	1	07:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	07:38	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	07:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR04	1	08:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	08:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	08:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	08:28																								
ZZZZZZ	1	08:32																								
ZZZZZZ	1	08:35																								
ZZZZZZ	1	08:39																								
ZZZZZZ	1	08:43																								
ZZZZZZ	1	08:46																								
ZZZZZZ	5	08:49																								
ZZZZZZ	1	08:53																								
CCV03	1	08:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	08:59	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	09:19																								
ZZZZZZ	1	09:22																								
ZZZZZZ	1	09:25																								
ZZZZZZ	1	09:29																								
ZZZZZZ	1	09:33																								
ZZZZZZ	1	09:36																								
ZZZZZZ	5	09:40																								
CCV04	1	09:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	09:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	09:51																								
ZZZZZZ	1	09:55																								
ZZZZZZ	1	09:58																								

**Metals**  
**-14-**  
**Analysis Run Log**

[illegible]

# Standards



**METALS**  
**-10-**  
**Instrument Detection Limits**

SDG NO. 10-1386

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.** 10-1386

**Contract:** LANL01004

**Lab Code:** GEL

**MDL Effective Date:** 15-JUN-09

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	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY				
SOLID	Mercury		0.068	.2

**METALS**  
**-10-**  
**Instrument Detection Limits**

SDG NO. 10-1386

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	Analyte	<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: 10-1386

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: 10-1386

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: **10-1386**

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: GEL

GEL Job No: 10-1386

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Nickel	Phosphorous	Selenium	Silicon	Silver
Parmname	Wavelength					
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: **10-1386**

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



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**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1386

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. 10-1386

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>
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
Silver	1000	250	ug/L	01-FEB-10

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1386

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

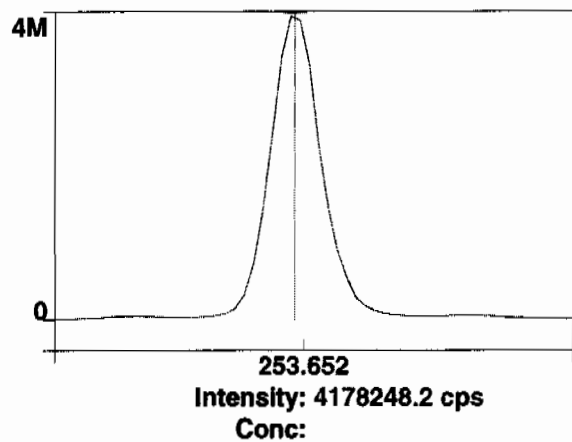
# Raw Data

Method: Hg\_ReAlign  
Result: 021810A

Sample ID: Hg\_ReAlign

Hg 253.652

Rep: 1



1

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Analysis Begun

Start Time: 2/11/2010 06:55:46

Plasma On Time: 2/8/2010 03:37:33

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\021110.sif

Batch ID:

Results Data Set: 021110A

Results Library: c:\pe\optimal\Results\Results.mdb  
=====

## Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 2/11/2010 06:22:42

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: 2/11/2010 06:55:49

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

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Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	55706.2	55706.2	0.000 %		06:56:23
1	Al 396.153Radial†	-7.0	-7.0	[0.00] µg/L		06:56:23
1	Ca 317.933Radial†	188.8	189.2	[0.00] µg/L		06:56:43
1	Fe 238.204 Radial†	16.6	16.6	[0.00] µg/L		06:56:43

1	K 766.490 Radial†	242.5	243.0	[0.00]	µg/L	06:56:23
1	Mg 279.077 IEC†	13.0	13.0	[0.00]	µg/L	06:56:43
1	Na 589.592 Radial†	574.0	575.4	[0.00]	µg/L	06:56:23
1	Sr 421.552†	20.3	20.4	[0.00]	µg/L	06:56:23
1	Sc 361.383	1950970.7	1950970.7	0.0000	%	06:57:45
1	Y 371.029	1340044.2	1340044.2	0.0000	%	06:57:45
1	Ag 328.068†	-522.9	-523.0	[0.00]	µg/L	06:57:50
1	As 188.979†	-3.6	-3.6	[0.00]	µg/L	06:58:11
1	B 249.677†	350.9	350.9	[0.00]	µg/L	06:58:11
1	Ba 233.527†	-16.7	-16.7	[0.00]	µg/L	06:58:11
1	Be 313.107†	-3347.7	-3348.4	[0.00]	µg/L	06:57:50
1	Cd 226.502†	-138.0	-138.0	[0.00]	µg/L	06:58:11
1	Co 228.616†	-3.3	-3.3	[0.00]	µg/L	06:58:11
1	Cr 267.716†	-64.9	-64.9	[0.00]	µg/L	06:57:50
1	Cu 324.752†	2572.7	2573.1	[0.00]	µg/L	06:57:50
1	Mn 257.610†	-228.5	-228.6	[0.00]	µg/L	06:58:11
1	Mo 202.031†	-4.7	-4.7	[0.00]	µg/L	06:58:11
1	Ni 231.604†	308.6	308.6	[0.00]	µg/L	06:58:11
1	P 214.914†	21.2	21.2	[0.00]	µg/L	06:58:11
1	Pb 220.353†	100.6	100.6	[0.00]	µg/L	06:58:11
1	S 181.975 Axial†	18.2	18.2	[0.00]	µg/L	06:58:11
1	Sb 206.836†	24.0	24.0	[0.00]	µg/L	06:58:11
1	Se 196.026†	10.7	10.7	[0.00]	µg/L	06:58:11
1	SiO2†	1260.7	1260.9	[0.00]	µg/L	06:57:50
1	Si 251.611†	310.1	310.2	[0.00]	µg/L	06:58:11
1	Sn 189.927†	5.0	5.0	[0.00]	µg/L	06:58:11
1	Ti 334.940†	180.6	180.6	[0.00]	µg/L	06:57:50
1	Tl 190.801†	-27.2	-27.2	[0.00]	µg/L	06:58:11
1	U 409.014†	-103.4	-103.4	[0.00]	µg/L	06:57:50
1	V 292.402†	-81.9	-81.9	[0.00]	µg/L	06:57:50
1	Zn 213.857†	502.4	502.5	[0.00]	µg/L	06:58:11
2	Sc RADIAL	55813.4	55813.4	0.000	%	06:56:48
2	Al 396.153Radial†	1.1	1.1	[0.00]	µg/L	06:56:48
2	Ca 317.933Radial†	183.3	183.4	[0.00]	µg/L	06:57:09
2	Fe 238.204 Radial†	15.9	15.9	[0.00]	µg/L	06:57:09
2	K 766.490 Radial†	225.1	225.2	[0.00]	µg/L	06:56:48
2	Mg 279.077 IEC†	8.5	8.5	[0.00]	µg/L	06:57:09
2	Na 589.592 Radial†	590.0	590.3	[0.00]	µg/L	06:56:48
2	Sr 421.552†	57.4	57.4	[0.00]	µg/L	06:56:48
2	Sc 361.383	1934264.5	1934264.5	0.0000	%	06:58:17
2	Y 371.029	1327601.5	1327601.5	0.0000	%	06:58:17
2	Ag 328.068†	-517.0	-521.6	[0.00]	µg/L	06:58:22
2	As 188.979†	5.4	5.4	[0.00]	µg/L	06:58:43
2	B 249.677†	349.8	352.9	[0.00]	µg/L	06:58:43
2	Ba 233.527†	-25.8	-26.0	[0.00]	µg/L	06:58:43
2	Be 313.107†	-3386.5	-3416.4	[0.00]	µg/L	06:58:22
2	Cd 226.502†	-145.3	-146.6	[0.00]	µg/L	06:58:43
2	Co 228.616†	-7.0	-7.1	[0.00]	µg/L	06:58:43
2	Cr 267.716†	-48.5	-48.9	[0.00]	µg/L	06:58:22
2	Cu 324.752†	2529.7	2552.0	[0.00]	µg/L	06:58:22
2	Mn 257.610†	-244.9	-247.1	[0.00]	µg/L	06:58:43
2	Mo 202.031†	-2.4	-2.4	[0.00]	µg/L	06:58:43
2	Ni 231.604†	307.7	310.4	[0.00]	µg/L	06:58:43
2	P 214.914†	25.4	25.6	[0.00]	µg/L	06:58:43
2	Pb 220.353†	96.2	97.1	[0.00]	µg/L	06:58:43
2	S 181.975 Axial†	19.5	19.7	[0.00]	µg/L	06:58:43
2	Sb 206.836†	26.2	26.4	[0.00]	µg/L	06:58:43
2	Se 196.026†	17.2	17.4	[0.00]	µg/L	06:58:43
2	SiO2†	1234.4	1245.3	[0.00]	µg/L	06:58:22
2	Si 251.611†	318.2	321.0	[0.00]	µg/L	06:58:43
2	Sn 189.927†	-0.0	-0.0	[0.00]	µg/L	06:58:43
2	Ti 334.940†	176.2	177.8	[0.00]	µg/L	06:58:22
2	Tl 190.801†	-23.8	-24.0	[0.00]	µg/L	06:58:43
2	U 409.014†	-72.8	-73.4	[0.00]	µg/L	06:58:22
2	V 292.402†	-38.8	-39.2	[0.00]	µg/L	06:58:22
2	Zn 213.857†	490.9	495.3	[0.00]	µg/L	06:58:43
3	Sc RADIAL	55997.7	55997.7	0.000	%	06:57:14
3	Al 396.153Radial†	-47.0	-46.9	[0.00]	µg/L	06:57:14
3	Ca 317.933Radial†	186.6	186.0	[0.00]	µg/L	06:57:34
3	Fe 238.204 Radial†	12.6	12.6	[0.00]	µg/L	06:57:34
3	K 766.490 Radial†	189.4	188.9	[0.00]	µg/L	06:57:14

3	Mg 279.077 IEC†	9.2	9.2	[0.00] µg/L	06:57:34
3	Na 589.592 Radial†	603.8	602.1	[0.00] µg/L	06:57:14
3	Sr 421.552†	19.8	19.8	[0.00] µg/L	06:57:14
3	Sc 361.383	1968766.5	1968766.5	0.0000 %	06:58:49
3	Y 371.029	1354221.0	1354221.0	0.0000 %	06:58:49
3	Ag 328.068†	-562.3	-557.3	[0.00] µg/L	06:58:55
3	As 188.979†	0.6	0.6	[0.00] µg/L	06:59:15
3	B 249.677†	340.4	337.4	[0.00] µg/L	06:59:15
3	Ba 233.527†	-27.3	-27.0	[0.00] µg/L	06:59:15
3	Be 313.107†	-3308.7	-3279.4	[0.00] µg/L	06:58:55
3	Cd 226.502†	-144.9	-143.6	[0.00] µg/L	06:59:15
3	Co 228.616†	-10.8	-10.7	[0.00] µg/L	06:59:15
3	Cr 267.716†	-37.5	-37.2	[0.00] µg/L	06:58:55
3	Cu 324.752†	2555.3	2532.6	[0.00] µg/L	06:58:55
3	Mn 257.610†	-245.4	-243.2	[0.00] µg/L	06:59:15
3	Mo 202.031†	-10.7	-10.6	[0.00] µg/L	06:59:15
3	Ni 231.604†	311.7	309.0	[0.00] µg/L	06:59:15
3	P 214.914†	25.0	24.8	[0.00] µg/L	06:59:15
3	Pb 220.353†	95.3	94.5	[0.00] µg/L	06:59:15
3	S 181.975 Axial†	17.9	17.8	[0.00] µg/L	06:59:15
3	Sb 206.836†	26.7	26.4	[0.00] µg/L	06:59:15
3	Se 196.026†	4.3	4.3	[0.00] µg/L	06:59:15
3	SiO2†	1269.3	1258.1	[0.00] µg/L	06:58:55
3	Si 251.611†	307.2	304.5	[0.00] µg/L	06:59:15
3	Sn 189.927†	0.8	0.8	[0.00] µg/L	06:59:15
3	Ti 334.940†	111.0	110.0	[0.00] µg/L	06:58:55
3	Tl 190.801†	-26.2	-26.0	[0.00] µg/L	06:59:15
3	U 409.014†	-44.8	-44.4	[0.00] µg/L	06:58:55
3	V 292.402†	-102.0	-101.1	[0.00] µg/L	06:58:55
3	Zn 213.857†	492.3	488.0	[0.00] µg/L	06:59:15

## Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	1951333.9	17253.85	0.88%	0.0000 %	
Sc RADIAL	55839.1	147.40	0.26%	0.000 %	
Y 371.029	1340622.2	13319.15	0.99%	0.0000 %	
Ag 328.068†	-533.9	20.22	3.79%	[0.00] µg/L	
Al 396.153Radial†	-17.6	25.67	145.65%	[0.00] µg/L	
As 188.979†	0.8	4.53	585.86%	[0.00] µg/L	
B 249.677†	347.1	8.44	2.43%	[0.00] µg/L	
Ba 233.527†	-23.2	5.70	24.52%	[0.00] µg/L	
Be 313.107†	-3348.0	68.49	2.05%	[0.00] µg/L	
Ca 317.933Radial†	186.2	2.93	1.57%	[0.00] µg/L	
Cd 226.502†	-142.7	4.34	3.04%	[0.00] µg/L	
Co 228.616†	-7.0	3.71	52.87%	[0.00] µg/L	
Cr 267.716†	-50.3	13.92	27.64%	[0.00] µg/L	
Cu 324.752†	2552.6	20.27	0.79%	[0.00] µg/L	
Fe 238.204 Radial†	15.0	2.14	14.24%	[0.00] µg/L	
K 766.490 Radial†	219.1	27.60	12.60%	[0.00] µg/L	
Mg 279.077 IEC†	10.3	2.42	23.58%	[0.00] µg/L	
Mn 257.610†	-239.6	9.76	4.07%	[0.00] µg/L	
Mo 202.031†	-5.9	4.21	71.56%	[0.00] µg/L	
Na 589.592 Radial†	589.2	13.38	2.27%	[0.00] µg/L	
Ni 231.604†	309.3	0.95	0.31%	[0.00] µg/L	
P 214.914†	23.9	2.35	9.83%	[0.00] µg/L	
Pb 220.353†	97.4	3.05	3.13%	[0.00] µg/L	
S 181.975 Axial†	18.5	0.98	5.29%	[0.00] µg/L	
Sb 206.836†	25.6	1.43	5.58%	[0.00] µg/L	
Se 196.026†	10.8	6.55	60.75%	[0.00] µg/L	
SiO2†	1254.8	8.33	0.66%	[0.00] µg/L	
Si 251.611†	311.9	8.39	2.69%	[0.00] µg/L	
Sn 189.927†	1.9	2.70	139.46%	[0.00] µg/L	
Sr 421.552†	32.5	21.57	66.34%	[0.00] µg/L	
Ti 334.940†	156.1	39.96	25.60%	[0.00] µg/L	
Tl 190.801†	-25.8	1.63	6.32%	[0.00] µg/L	
U 409.014†	-73.7	29.47	39.97%	[0.00] µg/L	
V 292.402†	-74.1	31.70	42.80%	[0.00] µg/L	
Zn 213.857†	495.2	7.29	1.47%	[0.00] µg/L	



Sequence No.: 2  
 Sample ID: S0.1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 2  
 Date Collected: 2/11/2010 06:59:24  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Analysis Time
1	Sc RADIAL	56614.5	56614.5	101 %	06:59:59
1	K 766.490 Radial†	1716.2	1473.6	[1000] µg/L	06:59:59
1	Sr 421.552†	10410.0	10234.9	[100] µg/L	06:59:59
1	Sc 361.383	1930187.5	1930187.5	98.916 %	07:00:21
1	Y 371.029	1325603.3	1325603.3	98.880 %	07:00:21
1	Ag 328.068†	13043.3	13720.2	[100] µg/L	07:00:26
1	As 188.979†	60.2	60.1	[100] µg/L	07:00:47
1	B 249.677†	2790.4	2473.9	[100] µg/L	07:00:26
1	Ba 233.527†	4235.3	4304.9	[100] µg/L	07:00:26
1	Be 313.107†	162699.4	167829.9	[100] µg/L	07:00:21
1	Cd 226.502†	3863.6	4048.6	[100] µg/L	07:00:26
1	Co 228.616†	2227.0	2258.4	[100] µg/L	07:00:47
1	Cr 267.716†	4992.3	5097.3	[100] µg/L	07:00:26
1	Cu 324.752†	18448.2	16097.7	[100] µg/L	07:00:26
1	Mn 257.610†	32116.9	32708.4	[100] µg/L	07:00:26
1	Mo 202.031†	1060.0	1077.5	[100] µg/L	07:00:47
1	Ni 231.604†	2374.1	2090.8	[100] µg/L	07:00:26
1	P 214.914†	282.9	262.2	[500] µg/L	07:00:47
1	Pb 220.353†	512.6	420.8	[100] µg/L	07:00:47
1	S 181.975 Axial†	66.2	48.4	[200] µg/L	07:00:47
1	Sb 206.836†	142.7	118.7	[100] µg/L	07:00:47
1	Se 196.026†	83.7	73.8	[100] µg/L	07:00:47
1	SiO2†	6590.9	5408.4	[1069.5] µg/L	07:00:26
1	Si 251.611†	6904.8	6668.6	[500] µg/L	07:00:26
1	Sn 189.927†	249.6	250.4	[100] µg/L	07:00:47
1	Ti 334.940†	44179.9	44507.8	[100] µg/L	07:00:26
1	Tl 190.801†	57.2	83.6	[100] µg/L	07:00:47
1	U 409.014†	1107.7	1193.6	[100] µg/L	07:00:26
1	V 292.402†	10152.9	10338.2	[100] µg/L	07:00:26
1	Zn 213.857†	4947.1	4506.0	[100] µg/L	07:00:26
2	Sc RADIAL	56222.4	56222.4	101 %	07:00:05
2	K 766.490 Radial†	1653.4	1423.1	[1000] µg/L	07:00:05
2	Sr 421.552†	10367.0	10263.8	[100] µg/L	07:00:05
2	Sc 361.383	1938289.2	1938289.2	99.332 %	07:00:53
2	Y 371.029	1329866.6	1329866.6	99.198 %	07:00:53
2	Ag 328.068†	13216.4	13839.3	[100] µg/L	07:00:59
2	As 188.979†	60.6	60.3	[100] µg/L	07:01:19
2	B 249.677†	2824.7	2496.6	[100] µg/L	07:00:59
2	Ba 233.527†	4286.1	4338.2	[100] µg/L	07:00:59
2	Be 313.107†	162852.6	167296.6	[100] µg/L	07:00:53
2	Cd 226.502†	3930.5	4099.7	[100] µg/L	07:00:59
2	Co 228.616†	2196.5	2218.3	[100] µg/L	07:01:19
2	Cr 267.716†	5010.4	5094.5	[100] µg/L	07:00:59
2	Cu 324.752†	18697.8	16271.0	[100] µg/L	07:00:59
2	Mn 257.610†	32542.8	33001.4	[100] µg/L	07:00:59
2	Mo 202.031†	1053.6	1066.5	[100] µg/L	07:01:19
2	Ni 231.604†	2408.6	2115.4	[100] µg/L	07:00:59
2	P 214.914†	279.7	257.7	[500] µg/L	07:01:19
2	Pb 220.353†	511.7	417.8	[100] µg/L	07:01:19
2	S 181.975 Axial†	72.2	54.1	[200] µg/L	07:01:19
2	Sb 206.836†	137.7	113.0	[100] µg/L	07:01:19
2	Se 196.026†	91.6	81.5	[100] µg/L	07:01:19
2	SiO2†	6705.1	5495.5	[1069.5] µg/L	07:00:59
2	Si 251.611†	6989.5	6724.7	[500] µg/L	07:00:59
2	Sn 189.927†	244.4	244.1	[100] µg/L	07:01:19
2	Ti 334.940†	44888.3	45034.2	[100] µg/L	07:00:59
2	Tl 190.801†	55.5	81.7	[100] µg/L	07:01:19
2	U 409.014†	1209.6	1291.5	[100] µg/L	07:00:59
2	V 292.402†	10334.3	10477.9	[100] µg/L	07:00:59

2	Zn 213.857†	4958.1	4496.2	[100]	µg/L	07:00:59
3	Sc RADIAL	55889.5	55889.5	100	%	07:00:10
3	K 766.490 Radial†	1699.6	1479.0	[1000]	µg/L	07:00:10
3	Sr 421.552†	10333.2	10291.4	[100]	µg/L	07:00:10
3	Sc 361.383	1936892.5	1936892.5	99.260	%	07:01:25
3	Y 371.029	1329799.0	1329799.0	99.193	%	07:01:25
3	Ag 328.068†	13059.4	13690.7	[100]	µg/L	07:01:31
3	As 188.979†	61.4	61.0	[100]	µg/L	07:01:51
3	B 249.677†	2818.5	2492.4	[100]	µg/L	07:01:31
3	Ba 233.527†	4224.5	4279.2	[100]	µg/L	07:01:31
3	Be 313.107†	161035.8	165584.5	[100]	µg/L	07:01:25
3	Cd 226.502†	3879.7	4051.3	[100]	µg/L	07:01:31
3	Co 228.616†	2183.7	2207.0	[100]	µg/L	07:01:51
3	Cr 267.716†	5033.7	5121.6	[100]	µg/L	07:01:31
3	Cu 324.752†	18501.8	16087.2	[100]	µg/L	07:01:31
3	Mn 257.610†	32085.0	32563.8	[100]	µg/L	07:01:31
3	Mo 202.031†	1045.2	1058.8	[100]	µg/L	07:01:51
3	Ni 231.604†	2331.6	2039.6	[100]	µg/L	07:01:31
3	P 214.914†	272.4	250.5	[500]	µg/L	07:01:51
3	Pb 220.353†	508.6	415.0	[100]	µg/L	07:01:51
3	S 181.975 Axial†	63.6	45.6	[200]	µg/L	07:01:51
3	Sb 206.836†	138.9	114.3	[100]	µg/L	07:01:51
3	Se 196.026†	90.3	80.2	[100]	µg/L	07:01:51
3	SiO2†	6638.6	5433.4	[1069.5]	µg/L	07:01:31
3	Si 251.611†	6910.6	6650.3	[500]	µg/L	07:01:31
3	Sn 189.927†	244.6	244.4	[100]	µg/L	07:01:51
3	Ti 334.940†	44414.6	44589.6	[100]	µg/L	07:01:31
3	Tl 190.801†	55.3	81.4	[100]	µg/L	07:01:51
3	U 409.014†	1211.0	1293.8	[100]	µg/L	07:01:31
3	V 292.402†	10169.9	10319.8	[100]	µg/L	07:01:31
3	Zn 213.857†	4933.1	4474.7	[100]	µg/L	07:01:31

## Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1935123.1	4331.00	0.22%	99.169 %
Sc RADIAL	56242.1	362.90	0.65%	101 %
Y 371.029	1328423.0	2442.13	0.18%	99.090 %
Ag 328.068†	13750.1	78.70	0.57%	[100] µg/L
As 188.979†	60.5	0.49	0.82%	[100] µg/L
B 249.677†	2487.6	12.09	0.49%	[100] µg/L
Ba 233.527†	4307.4	29.56	0.69%	[100] µg/L
Be 313.107†	166903.7	1173.15	0.70%	[100] µg/L
Cd 226.502†	4066.6	28.75	0.71%	[100] µg/L
Co 228.616†	2227.9	27.02	1.21%	[100] µg/L
Cr 267.716†	5104.5	14.89	0.29%	[100] µg/L
Cu 324.752†	16152.0	103.26	0.64%	[100] µg/L
K 766.490 Radial†	1458.6	30.83	2.11%	[1000] µg/L
Mn 257.610†	32757.9	222.95	0.68%	[100] µg/L
Mo 202.031†	1067.6	9.38	0.88%	[100] µg/L
Ni 231.604†	2081.9	38.67	1.86%	[100] µg/L
P 214.914†	256.8	5.88	2.29%	[500] µg/L
Pb 220.353†	417.9	2.89	0.69%	[100] µg/L
S 181.975 Axial†	49.3	4.35	8.81%	[200] µg/L
Sb 206.836†	115.3	2.97	2.57%	[100] µg/L
Se 196.026†	78.5	4.09	5.22%	[100] µg/L
SiO2†	5445.7	44.85	0.82%	[1069.5] µg/L
Si 251.611†	6681.2	38.80	0.58%	[500] µg/L
Sn 189.927†	246.3	3.53	1.43%	[100] µg/L
Sr 421.552†	10263.4	28.28	0.28%	[100] µg/L
Ti 334.940†	44710.6	283.27	0.63%	[100] µg/L
Tl 190.801†	82.2	1.17	1.42%	[100] µg/L
U 409.014†	1259.6	57.21	4.54%	[100] µg/L
V 292.402†	10378.6	86.46	0.83%	[100] µg/L
Zn 213.857†	4492.3	16.05	0.36%	[100] µg/L

Sequence No.: 3

Sample ID: S0.5

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 3

Date Collected: 2/11/2010 07:02:02

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	56160.5	56160.5	101 %	07:02:34
1	Al 396.153Radial†	6771.3	6750.2	[5000] µg/L	07:02:34
1	Ca 317.933Radial†	5535.9	5318.1	[5000] µg/L	07:02:55
1	K 766.490 Radial†	7104.7	6845.0	[5000] µg/L	07:02:34
1	Mg 279.077 IEC†	563.9	550.5	[5000] µg/L	07:02:55
1	Sr 421.552†	47677.8	47372.4	[500] µg/L	07:02:34
1	Sc 361.383	1991056.7	1991056.7	102.04 %	07:03:55
1	Y 371.029	1363107.9	1363107.9	101.68 %	07:03:55
1	Ag 328.068†	63453.7	62721.7	[500] µg/L	07:04:00
1	As 188.979†	267.0	260.9	[500] µg/L	07:04:20
1	B 249.677†	11905.0	11320.4	[500] µg/L	07:04:00
1	Ba 233.527†	19505.5	19139.6	[500] µg/L	07:04:00
1	Be 313.107†	775234.4	763116.1	[500] µg/L	07:03:55
1	Cd 226.502†	18532.7	18305.7	[500] µg/L	07:04:00
1	Co 228.616†	10450.9	10249.5	[500] µg/L	07:04:00
1	Cr 267.716†	23337.0	22921.7	[500] µg/L	07:04:00
1	Cu 324.752†	75642.0	71580.3	[500] µg/L	07:04:00
1	Mn 257.610†	150385.0	147624.3	[500] µg/L	07:03:55
1	Mo 202.031†	4972.0	4878.7	[500] µg/L	07:04:20
1	Ni 231.604†	9713.1	9210.0	[500] µg/L	07:04:00
1	P 214.914†	1252.5	1203.6	[2500] µg/L	07:04:20
1	Pb 220.353†	2055.0	1916.6	[500] µg/L	07:04:20
1	S 181.975 Axial†	252.8	229.2	[1000] µg/L	07:04:20
1	Sb 206.836†	568.1	531.2	[500] µg/L	07:04:20
1	Se 196.026†	361.1	343.1	[500] µg/L	07:04:20
1	SiO2†	26593.0	24807.7	[5347.5] µg/L	07:04:00
1	Si 251.611†	31233.0	30298.0	[2500] µg/L	07:04:00
1	Sn 189.927†	1161.8	1136.7	[500] µg/L	07:04:20
1	Ti 334.940†	212027.9	207641.7	[500] µg/L	07:03:55
1	Tl 190.801†	340.9	359.9	[500] µg/L	07:04:20
1	U 409.014†	5680.2	5640.6	[500] µg/L	07:04:00
1	V 292.402†	47634.9	46758.6	[500] µg/L	07:04:00
1	Zn 213.857†	21145.4	20228.3	[500] µg/L	07:04:00
2	Sc RADIAL	57061.1	57061.1	102 %	07:03:00
2	Al 396.153Radial†	6836.3	6707.5	[5000] µg/L	07:03:00
2	Ca 317.933Radial†	5563.8	5258.4	[5000] µg/L	07:03:20
2	K 766.490 Radial†	7233.6	6859.6	[5000] µg/L	07:03:00
2	Mg 279.077 IEC†	567.6	545.2	[5000] µg/L	07:03:20
2	Sr 421.552†	48471.8	47401.2	[500] µg/L	07:03:00
2	Sc 361.383	1977933.7	1977933.7	101.36 %	07:04:27
2	Y 371.029	1354352.4	1354352.4	101.02 %	07:04:27
2	Ag 328.068†	63706.5	63383.6	[500] µg/L	07:04:32
2	As 188.979†	272.3	267.9	[500] µg/L	07:04:53
2	B 249.677†	11944.2	11436.5	[500] µg/L	07:04:32
2	Ba 233.527†	19622.0	19381.3	[500] µg/L	07:04:32
2	Be 313.107†	769125.4	762130.1	[500] µg/L	07:04:27
2	Cd 226.502†	18616.7	18509.1	[500] µg/L	07:04:32
2	Co 228.616†	10483.2	10349.3	[500] µg/L	07:04:32
2	Cr 267.716†	23462.0	23196.8	[500] µg/L	07:04:32
2	Cu 324.752†	75923.0	72349.4	[500] µg/L	07:04:32
2	Mn 257.610†	149112.1	147346.4	[500] µg/L	07:04:27
2	Mo 202.031†	4995.0	4933.7	[500] µg/L	07:04:53
2	Ni 231.604†	9772.0	9331.2	[500] µg/L	07:04:32
2	P 214.914†	1248.2	1207.5	[2500] µg/L	07:04:53
2	Pb 220.353†	2056.5	1931.4	[500] µg/L	07:04:53
2	S 181.975 Axial†	254.8	232.8	[1000] µg/L	07:04:53
2	Sb 206.836†	566.0	532.8	[500] µg/L	07:04:53
2	Se 196.026†	357.2	341.7	[500] µg/L	07:04:53
2	SiO2†	26698.4	25084.6	[5347.5] µg/L	07:04:32

2	Si 251.611†	31386.7	30652.7	[2500] µg/L	07:04:32
2	Sn 189.927†	1165.4	1147.8	[500] µg/L	07:04:53
2	Ti 334.940†	210368.3	207383.0	[500] µg/L	07:04:27
2	Tl 190.801†	345.9	367.0	[500] µg/L	07:04:53
2	U 409.014†	5658.5	5656.2	[500] µg/L	07:04:32
2	V 292.402†	47856.3	47286.8	[500] µg/L	07:04:32
2	Zn 213.857†	21255.4	20474.3	[500] µg/L	07:04:32
3	Sc RADIAL	57192.8	57192.8	102 %	07:03:26
3	Al 396.153Radial†	6813.9	6670.3	[5000] µg/L	07:03:26
3	Ca 317.933Radial†	5551.5	5234.0	[5000] µg/L	07:03:46
3	K 766.490 Radial†	7246.1	6855.5	[5000] µg/L	07:03:26
3	Mg 279.077 IEC†	567.7	544.0	[5000] µg/L	07:03:46
3	Sr 421.552†	48354.0	47177.0	[500] µg/L	07:03:26
3	Sc 361.383	1982338.6	1982338.6	101.59 %	07:05:00
3	Y 371.029	1356625.9	1356625.9	101.19 %	07:05:00
3	Ag 328.068†	61050.4	60629.5	[500] µg/L	07:05:05
3	As 188.979†	241.3	236.7	[500] µg/L	07:05:26
3	B 249.677†	11411.7	10886.1	[500] µg/L	07:05:05
3	Ba 233.527†	18448.1	18182.8	[500] µg/L	07:05:05
3	Be 313.107†	750297.2	741910.2	[500] µg/L	07:05:00
3	Cd 226.502†	17389.8	17260.5	[500] µg/L	07:05:05
3	Co 228.616†	9769.6	9623.8	[500] µg/L	07:05:05
3	Cr 267.716†	21318.1	21035.0	[500] µg/L	07:05:05
3	Cu 324.752†	70945.3	67283.0	[500] µg/L	07:05:05
3	Mn 257.610†	145816.2	143775.2	[500] µg/L	07:05:00
3	Mo 202.031†	4276.6	4215.6	[500] µg/L	07:05:26
3	Ni 231.604†	9116.2	8664.3	[500] µg/L	07:05:05
3	P 214.914†	1087.2	1046.3	[2500] µg/L	07:05:26
3	Pb 220.353†	1836.2	1710.1	[500] µg/L	07:05:26
3	S 181.975 Axial†	233.0	210.8	[1000] µg/L	07:05:26
3	Sb 206.836†	496.7	463.4	[500] µg/L	07:05:26
3	Se 196.026†	323.2	307.4	[500] µg/L	07:05:26
3	SiO2†	25320.8	23670.0	[5347.5] µg/L	07:05:05
3	Si 251.611†	29738.4	28961.4	[2500] µg/L	07:05:05
3	Sn 189.927†	979.1	961.8	[500] µg/L	07:05:26
3	Ti 334.940†	204176.8	200827.2	[500] µg/L	07:05:00
3	Tl 190.801†	320.3	341.0	[500] µg/L	07:05:26
3	U 409.014†	5153.6	5146.7	[500] µg/L	07:05:05
3	V 292.402†	44273.4	43655.0	[500] µg/L	07:05:05
3	Zn 213.857†	19856.1	19050.3	[500] µg/L	07:05:05

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1983776.3	6678.59	0.34%	101.66 %
Sc RADIAL	56804.8	561.84	0.99%	102 %
Y 371.029	1358028.7	4543.24	0.33%	101.30 %
Ag 328.068†	62244.9	1437.66	2.31%	[500] µg/L
Al 396.153Radial†	6709.3	40.00	0.60%	[5000] µg/L
As 188.979†	255.2	16.34	6.40%	[500] µg/L
B 249.677†	11214.3	290.11	2.59%	[500] µg/L
Ba 233.527†	18901.2	633.82	3.35%	[500] µg/L
Be 313.107†	755718.8	11968.73	1.58%	[500] µg/L
Ca 317.933Radial†	5270.2	43.26	0.82%	[5000] µg/L
Cd 226.502†	18025.1	669.91	3.72%	[500] µg/L
Co 228.616†	10074.2	393.20	3.90%	[500] µg/L
Cr 267.716†	22384.5	1176.78	5.26%	[500] µg/L
Cu 324.752†	70404.2	2730.26	3.88%	[500] µg/L
K 766.490 Radial†	6853.4	7.56	0.11%	[5000] µg/L
Mg 279.077 IEC†	546.6	3.44	0.63%	[5000] µg/L
Mn 257.610†	146248.7	2146.58	1.47%	[500] µg/L
Mo 202.031†	4676.0	399.64	8.55%	[500] µg/L
Ni 231.604†	9068.5	355.29	3.92%	[500] µg/L
P 214.914†	1152.5	91.98	7.98%	[2500] µg/L
Pb 220.353†	1852.7	123.74	6.68%	[500] µg/L
S 181.975 Axial†	224.3	11.82	5.27%	[1000] µg/L
Sb 206.836†	509.1	39.62	7.78%	[500] µg/L
Se 196.026†	330.7	20.21	6.11%	[500] µg/L
SiO2†	24520.8	749.70	3.06%	[5347.5] µg/L
Si 251.611†	29970.7	891.91	2.98%	[2500] µg/L

Sn 189.927†	1082.1	104.32	9.64%	[500] µg/L
Sr 421.552†	47316.8	121.97	0.26%	[500] µg/L
Ti 334.940†	205284.0	3861.84	1.88%	[500] µg/L
Tl 190.801†	356.0	13.44	3.78%	[500] µg/L
U 409.014†	5481.2	289.74	5.29%	[500] µg/L
V 292.402†	45900.1	1962.19	4.27%	[500] µg/L
Zn 213.857†	19917.6	761.14	3.82%	[500] µg/L

Sequence No.: 4  
 Sample ID: SCAL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 4  
 Date Collected: 2/11/2010 07:05:35  
 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	56275.2	56275.2	101 %		07:06:08
1	Al 396.153Radial†	14981.6	14883.1	[10000] µg/L		07:06:08
1	Ca 317.933Radial†	11777.6	11500.1	[10000] µg/L		07:06:28
1	Fe 238.204 Radial†	1331.5	1306.1	[10000] µg/L		07:06:28
1	K 766.490 Radial†	15247.2	14910.0	[10000] µg/L		07:06:08
1	Mg 279.077 IEC†	1208.7	1189.1	[10000] µg/L		07:06:28
1	Na 589.592 Radial†	33625.1	32775.4	[10000] µg/L		07:06:08
1	Sr 421.552†	104618.0	103774.8	[1000] µg/L		07:06:08
1	Sc 361.383	1977336.2	1977336.2	101.33 %		07:07:32
1	Y 371.029	1353271.9	1353271.9	100.94 %		07:07:32
1	Ag 328.068†	134809.7	133570.9	[1000] µg/L		07:07:38
1	As 188.979†	586.2	577.7	[1000] µg/L		07:07:58
1	B 249.677†	25151.5	24473.7	[1000] µg/L		07:07:38
1	Ba 233.527†	41863.5	41336.2	[1000] µg/L		07:07:38
1	Be 313.107†	1674571.0	1655898.1	[1000] µg/L		07:07:32
1	Cd 226.502†	39642.4	39263.8	[1000] µg/L		07:07:38
1	Co 228.616†	22187.3	21902.5	[1000] µg/L		07:07:38
1	Cr 267.716†	49948.0	49341.5	[1000] µg/L		07:07:38
1	Cu 324.752†	158489.1	153852.3	[1000] µg/L		07:07:38
1	Mn 257.610†	316136.5	312218.8	[1000] µg/L		07:07:38
1	Mo 202.031†	10655.1	10520.9	[1000] µg/L		07:07:58
1	Ni 231.604†	20287.2	19711.1	[1000] µg/L		07:07:38
1	P 214.914†	2670.9	2611.9	[5000] µg/L		07:07:58
1	Pb 220.353†	4333.1	4178.8	[1000] µg/L		07:07:58
1	S 181.975 Axial†	528.1	502.6	[2000] µg/L		07:07:58
1	Sb 206.836†	1181.1	1140.0	[1000] µg/L		07:07:58
1	Se 196.026†	764.2	743.4	[1000] µg/L		07:07:58
1	SiO2†	55046.8	53068.2	[10695] µg/L		07:07:38
1	Si 251.611†	65964.6	64785.3	[5000] µg/L		07:07:38
1	Sn 189.927†	2491.6	2456.9	[1000] µg/L		07:07:58
1	Ti 334.940†	453311.6	447194.3	[1000] µg/L		07:07:32
1	Tl 190.801†	768.9	784.6	[1000] µg/L		07:07:58
1	U 409.014†	12055.5	11970.7	[1000] µg/L		07:07:38
1	V 292.402†	102503.0	101229.2	[1000] µg/L		07:07:38
1	Zn 213.857†	44284.7	43207.1	[1000] µg/L		07:07:38
2	Sc RADIAL	57265.1	57265.1	103 %		07:06:34
2	Al 396.153Radial†	14897.5	14544.1	[10000] µg/L		07:06:34
2	Ca 317.933Radial†	11794.9	11315.0	[10000] µg/L		07:06:54
2	Fe 238.204 Radial†	1331.5	1283.3	[10000] µg/L		07:06:54
2	K 766.490 Radial†	15263.7	14664.6	[10000] µg/L		07:06:34
2	Mg 279.077 IEC†	1209.6	1169.3	[10000] µg/L		07:06:54
2	Na 589.592 Radial†	33512.8	32089.1	[10000] µg/L		07:06:34
2	Sr 421.552†	104422.9	101790.1	[1000] µg/L		07:06:34
2	Sc 361.383	1956745.7	1956745.7	100.28 %		07:08:05
2	Y 371.029	1338814.1	1338814.1	99.865 %		07:08:05
2	Ag 328.068†	135532.6	135691.7	[1000] µg/L		07:08:11
2	As 188.979†	575.4	573.0	[1000] µg/L		07:08:31
2	B 249.677†	25295.1	24878.1	[1000] µg/L		07:08:11
2	Ba 233.527†	41935.3	41842.6	[1000] µg/L		07:08:11
2	Be 313.107†	1646600.7	1645394.7	[1000] µg/L		07:08:05
2	Cd 226.502†	39794.7	39827.4	[1000] µg/L		07:08:11
2	Co 228.616†	22304.9	22250.3	[1000] µg/L		07:08:11
2	Cr 267.716†	50275.1	50186.4	[1000] µg/L		07:08:11
2	Cu 324.752†	159604.8	156610.8	[1000] µg/L		07:08:11
2	Mn 257.610†	317388.1	316749.9	[1000] µg/L		07:08:11
2	Mo 202.031†	10467.7	10444.6	[1000] µg/L		07:08:31
2	Ni 231.604†	20374.9	20009.2	[1000] µg/L		07:08:11
2	P 214.914†	2641.0	2609.8	[5000] µg/L		07:08:31
2	Pb 220.353†	4248.6	4139.5	[1000] µg/L		07:08:31

2	S 181.975 Axial†	521.2	501.2	[2000]	µg/L	07:08:31
2	Sb 206.836†	1176.1	1147.3	[1000]	µg/L	07:08:31
2	Se 196.026†	747.3	734.4	[1000]	µg/L	07:08:31
2	SiO2†	55336.8	53929.0	[10695]	µg/L	07:08:11
2	Si 251.611†	66399.5	65904.0	[5000]	µg/L	07:08:11
2	Sn 189.927†	2440.4	2431.7	[1000]	µg/L	07:08:31
2	Ti 334.940†	446492.9	445101.9	[1000]	µg/L	07:08:05
2	Tl 190.801†	757.6	781.3	[1000]	µg/L	07:08:31
2	U 409.014†	12115.5	12155.7	[1000]	µg/L	07:08:11
2	V 292.402†	103038.1	102827.2	[1000]	µg/L	07:08:11
2	Zn 213.857†	44534.5	43916.1	[1000]	µg/L	07:08:11
3	Sc RADIAL	56797.4	56797.4	102	%	07:07:00
3	Al 396.153Radial†	14802.2	14570.0	[10000]	µg/L	07:07:00
3	Ca 317.933Radial†	11759.8	11375.1	[10000]	µg/L	07:07:20
3	Fe 238.204 Radial†	1324.6	1287.2	[10000]	µg/L	07:07:20
3	K 766.490 Radial†	15206.2	14730.6	[10000]	µg/L	07:07:00
3	Mg 279.077 IEC†	1196.0	1165.6	[10000]	µg/L	07:07:20
3	Na 589.592 Radial†	33327.3	32175.8	[10000]	µg/L	07:07:00
3	Sr 421.552†	103827.2	102042.9	[1000]	µg/L	07:07:00
3	Sc 361.383	1956904.3	1956904.3	100.29	%	07:08:38
3	Y 371.029	1338287.1	1338287.1	99.826	%	07:08:38
3	Ag 328.068†	127280.1	127451.7	[1000]	µg/L	07:08:44
3	As 188.979†	491.3	489.2	[1000]	µg/L	07:09:05
3	B 249.677†	23597.1	23182.8	[1000]	µg/L	07:08:44
3	Ba 233.527†	38307.7	38221.9	[1000]	µg/L	07:08:44
3	Be 313.107†	1532891.2	1531875.8	[1000]	µg/L	07:08:38
3	Cd 226.502†	36133.3	36173.2	[1000]	µg/L	07:08:44
3	Co 228.616†	20078.4	20028.3	[1000]	µg/L	07:08:44
3	Cr 267.716†	43813.4	43739.1	[1000]	µg/L	07:08:44
3	Cu 324.752†	144531.0	141567.0	[1000]	µg/L	07:08:44
3	Mn 257.610†	285359.0	284786.3	[1000]	µg/L	07:08:44
3	Mo 202.031†	8695.7	8676.9	[1000]	µg/L	07:09:05
3	Ni 231.604†	18365.1	18003.5	[1000]	µg/L	07:08:44
3	P 214.914†	2242.1	2211.8	[5000]	µg/L	07:09:05
3	Pb 220.353†	3695.5	3587.6	[1000]	µg/L	07:09:05
3	S 181.975 Axial†	456.6	436.7	[2000]	µg/L	07:09:05
3	Sb 206.836†	998.2	969.7	[1000]	µg/L	07:09:05
3	Se 196.026†	653.9	641.3	[1000]	µg/L	07:09:05
3	SiO2†	51170.0	49769.6	[10695]	µg/L	07:08:44
3	Si 251.611†	61254.8	60768.5	[5000]	µg/L	07:08:44
3	Sn 189.927†	2006.0	1998.4	[1000]	µg/L	07:09:05
3	Ti 334.940†	413030.0	411698.2	[1000]	µg/L	07:08:38
3	Tl 190.801†	670.1	693.9	[1000]	µg/L	07:09:05
3	U 409.014†	10772.2	10815.3	[1000]	µg/L	07:08:44
3	V 292.402†	91535.5	91349.0	[1000]	µg/L	07:08:44
3	Zn 213.857†	40178.0	39568.4	[1000]	µg/L	07:08:44

## Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
Sc 361.383	1963662.1	11842.43	0.60%	100.63	%
Sc RADIAL	56779.2	495.22	0.87%	102	%
Y 371.029	1343457.7	8503.44	0.63%	100.21	%
Ag 328.068†	132238.1	4278.64	3.24%	[1000]	µg/L
Al 396.153Radial†	14665.8	188.66	1.29%	[10000]	µg/L
As 188.979†	546.6	49.81	9.11%	[1000]	µg/L
B 249.677†	24178.2	885.42	3.66%	[1000]	µg/L
Ba 233.527†	40466.9	1960.62	4.84%	[1000]	µg/L
Be 313.107†	1611056.2	68773.06	4.27%	[1000]	µg/L
Ca 317.933Radial†	11396.7	94.43	0.83%	[10000]	µg/L
Cd 226.502†	38421.5	1967.32	5.12%	[1000]	µg/L
Co 228.616†	21393.7	1195.19	5.59%	[1000]	µg/L
Cr 267.716†	47755.7	3504.05	7.34%	[1000]	µg/L
Cu 324.752†	150676.7	8008.87	5.32%	[1000]	µg/L
Fe 238.204 Radial†	1292.2	12.21	0.95%	[10000]	µg/L
K 766.490 Radial†	14768.4	127.00	0.86%	[10000]	µg/L
Mg 279.077 IEC†	1174.7	12.65	1.08%	[10000]	µg/L
Mn 257.610†	304585.0	17295.23	5.68%	[1000]	µg/L
Mo 202.031†	9880.8	1043.32	10.56%	[1000]	µg/L
Na 589.592 Radial†	32346.7	373.71	1.16%	[10000]	µg/L

Ni 231.604†	19241.3	1082.24	5.62%	[1000]	µg/L
P 214.914†	2477.9	230.40	9.30%	[5000]	µg/L
Pb 220.353†	3968.6	330.57	8.33%	[1000]	µg/L
S 181.975 Axial†	480.2	37.65	7.84%	[2000]	µg/L
Sb 206.836†	1085.7	100.46	9.25%	[1000]	µg/L
Se 196.026†	706.4	56.53	8.00%	[1000]	µg/L
SiO2†	52255.6	2195.55	4.20%	[10695]	µg/L
Si 251.611†	63819.3	2700.58	4.23%	[5000]	µg/L
Sn 189.927†	2295.6	257.76	11.23%	[1000]	µg/L
Sr 421.552†	102535.9	1080.30	1.05%	[1000]	µg/L
Ti 334.940†	434664.8	19917.16	4.58%	[1000]	µg/L
Tl 190.801†	753.3	51.41	6.82%	[1000]	µg/L
U 409.014†	11647.2	726.40	6.24%	[1000]	µg/L
V 292.402†	98468.4	6217.20	6.31%	[1000]	µg/L
Zn 213.857†	42230.5	2332.57	5.52%	[1000]	µg/L



Sequence No.: 5  
 Sample ID: S10  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 5  
 Date Collected: 2/11/2010 07:09:14  
 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	56640.7	56640.7	101 %	07:09:47
1	Al 396.153Radial†	73507.4	72484.7	[50000] µg/L	07:09:47
1	Ca 317.933Radial†	58785.8	57767.6	[50000] µg/L	07:09:47
1	Fe 238.204 Radial†	2612.5	2560.5	[20000] µg/L	07:10:07
1	Mg 279.077 IEC†	5854.2	5761.1	[50000] µg/L	07:10:07
1	Na 589.592 Radial†	65838.8	64317.8	[20000] µg/L	07:09:47
1	Sc 361.383	1957265.7	1957265.7	100.30 %	07:11:11
1	Y 371.029	1332874.1	1332874.1	99.422 %	07:11:11
2	Sc RADIAL	56543.2	56543.2	101 %	07:10:13
2	Al 396.153Radial†	73597.4	72698.6	[50000] µg/L	07:10:13
2	Ca 317.933Radial†	58846.1	57927.1	[50000] µg/L	07:10:13
2	Fe 238.204 Radial†	2606.7	2559.2	[20000] µg/L	07:10:33
2	Mg 279.077 IEC†	5829.2	5746.4	[50000] µg/L	07:10:33
2	Na 589.592 Radial†	65964.3	64553.7	[20000] µg/L	07:10:13
2	Sc 361.383	1960760.8	1960760.8	100.48 %	07:11:19
2	Y 371.029	1335065.7	1335065.7	99.586 %	07:11:19
3	Sc RADIAL	56859.9	56859.9	102 %	07:10:39
3	Al 396.153Radial†	73208.4	71911.8	[50000] µg/L	07:10:39
3	Ca 317.933Radial†	58544.7	57307.5	[50000] µg/L	07:10:39
3	Fe 238.204 Radial†	2606.2	2544.3	[20000] µg/L	07:10:59
3	Mg 279.077 IEC†	5819.3	5704.5	[50000] µg/L	07:10:59
3	Na 589.592 Radial†	65660.0	63892.0	[20000] µg/L	07:10:39
3	Sc 361.383	1935499.7	1935499.7	99.189 %	07:11:26
3	Y 371.029	1318694.5	1318694.5	98.364 %	07:11:26

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1951175.4	13687.56	0.70%	99.992 %
Sc RADIAL	56681.3	162.20	0.29%	102 %
Y 371.029	1328878.1	8887.06	0.67%	99.124 %
Al 396.153Radial†	72365.0	406.83	0.56%	[50000] µg/L
Ca 317.933Radial†	57667.4	321.74	0.56%	[50000] µg/L
Fe 238.204 Radial†	2554.7	8.98	0.35%	[20000] µg/L
Mg 279.077 IEC†	5737.3	29.35	0.51%	[50000] µg/L
Na 589.592 Radial†	64254.5	335.32	0.52%	[20000] µg/L

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	130.7	0.00000	0.999711	
Al 396.153Radial	3	Lin Thru 0	0.0	1.447	0.00000	0.999971	
As 188.979	3	Lin Thru 0	0.0	0.5399	0.00000	0.999584	
B 249.677	3	Lin Thru 0	0.0	23.84	0.00000	0.999565	
Ba 233.527	3	Lin Thru 0	0.0	39.96	0.00000	0.999623	
Be 313.107	3	Lin Thru 0	0.0	1592	0.00000	0.999680	
Ca 317.933Radial	3	Lin Thru 0	0.0	1.152	0.00000	0.999963	
Cd 226.502	3	Lin Thru 0	0.0	37.97	0.00000	0.999670	
Co 228.616	3	Lin Thru 0	0.0	21.15	0.00000	0.999714	
Cr 267.716	3	Lin Thru 0	0.0	47.19	0.00000	0.999656	
Cu 324.752	3	Lin Thru 0	0.0	148.8	0.00000	0.999622	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1280	0.00000	0.999989	
K 766.490 Radial	3	Lin Thru 0	0.0	1.456	0.00000	0.999578	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.1148	0.00000	0.999979	
Mn 257.610	3	Lin Thru 0	0.0	302.4	0.00000	0.999845	
Mo 202.031	3	Lin Thru 0	0.0	9.782	0.00000	0.999735	
Na 589.592 Radia	2	Lin Thru 0	0.0	3.217	0.00000	0.999996	

Ni 231.604	3	Lin Thru 0	0.0	19.03	0.00000	0.999698
P 214.914	3	Lin Thru 0	0.0	0.4889	0.00000	0.999593
Pb 220.353	3	Lin Thru 0	0.0	3.918	0.00000	0.999624
S 181.975 Axial	3	Lin Thru 0	0.0	0.2370	0.00000	0.999640
Sb 206.836	3	Lin Thru 0	0.0	1.073	0.00000	0.999664
Se 196.026	3	Lin Thru 0	0.0	0.6981	0.00000	0.999609
SiO2	3	Lin Thru 0	0.0	4.828	0.00000	0.999681
Si 251.611	3	Lin Thru 0	0.0	12.61	0.00000	0.999686
Sn 189.927	3	Lin Thru 0	0.0	2.271	0.00000	0.999706
Sr 421.552	3	Lin Thru 0	0.0	101.0	0.00000	0.999513
Ti 334.940	3	Lin Thru 0	0.0	430.0	0.00000	0.999744
Tl 190.801	3	Lin Thru 0	0.0	0.7456	0.00000	0.999714
U 409.014	3	Lin Thru 0	0.0	11.52	0.00000	0.999685
V 292.402	3	Lin Thru 0	0.0	97.19	0.00000	0.999608
Zn 213.857	3	Lin Thru 0	0.0	41.78	0.00000	0.999717

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 2/11/2010 07:11:35

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56799.9	56799.9	102 %			07:12:09
1	Al 396.153Radial†	7502.9	7393.6	5097.9 µg/L		5097.9 ppb	07:12:09
1	Ca 317.933Radial†	5949.3	5662.4	4915.8 µg/L		4915.8 ppb	07:12:29
1	Fe 238.204 Radial†	679.9	653.4	5114.9 µg/L		5114.9 ppb	07:12:29
1	K 766.490 Radial†	3884.2	3599.4	2472.8 µg/L		2472.8 ppb	07:12:09
1	Mg 279.077 IEC†	604.7	584.2	5092.8 µg/L		5092.8 ppb	07:12:29
1	Na 589.592 Radial†	8753.0	8015.7	2491.6 µg/L		2491.6 ppb	07:12:09
1	Sr 421.552†	54365.3	53413.2	529.01 µg/L		529.01 ppb	07:12:09
1	Sc 361.383	1953341.8	1953341.8	100.10 %			07:13:32
1	Y 371.029	1338910.6	1338910.6	99.872 %			07:13:32
1	Ag 328.068†	33616.2	34115.5	264.70 µg/L		264.70 ppb	07:13:38
1	As 188.979†	274.8	273.7	505.87 µg/L		505.87 ppb	07:13:59
1	B 249.677†	13273.1	12912.4	539.88 µg/L		539.88 ppb	07:13:38
1	Ba 233.527†	21397.4	21398.6	536.46 µg/L		536.46 ppb	07:13:38
1	Be 313.107†	414608.1	417529.9	262.12 µg/L		262.12 ppb	07:13:32
1	Cd 226.502†	19929.2	20051.5	528.04 µg/L		528.04 ppb	07:13:38
1	Co 228.616†	11424.1	11419.4	539.30 µg/L		539.30 ppb	07:13:38
1	Cr 267.716†	24680.8	24705.8	523.88 µg/L		523.88 ppb	07:13:38
1	Cu 324.752†	82527.9	79890.5	537.59 µg/L		537.59 ppb	07:13:38
1	Mn 257.610†	157230.4	157308.3	520.73 µg/L		520.73 ppb	07:13:32
1	Mo 202.031†	5536.6	5536.8	566.20 µg/L		566.20 ppb	07:13:59
1	Ni 231.604†	10159.2	9839.4	516.34 µg/L		516.34 ppb	07:13:38
1	P 214.914†	1352.2	1326.9	2663.4 µg/L		2663.4 ppb	07:13:59
1	Pb 220.353†	2194.8	2095.2	535.03 µg/L		535.03 ppb	07:13:59
1	S 181.975 Axial†	637.1	617.8	2607.0 µg/L		2607.0 ppb	07:13:59
1	Sb 206.836†	591.1	564.9	529.43 µg/L		529.43 ppb	07:13:59
1	Se 196.026†	1884.9	1872.1	2689.9 µg/L		2689.9 ppb	07:13:59
1	SiO2†	54345.8	53035.1	10985 µg/L		10985 ppb	07:13:38
1	Si 251.611†	64821.6	64443.1	5108.6 µg/L		5108.6 ppb	07:13:38
1	Sn 189.927†	1293.2	1289.9	568.05 µg/L		568.05 ppb	07:13:59
1	Ti 334.940†	216074.3	215696.0	501.32 µg/L		501.32 ppb	07:13:32
1	Tl 190.801†	378.1	403.5	547.11 µg/L		547.11 ppb	07:13:59
1	U 409.014†	5819.5	5887.2	510.09 µg/L		510.09 ppb	07:13:38
1	V 292.402†	50657.5	50679.5	528.16 µg/L		528.16 ppb	07:13:38
1	Zn 213.857†	22486.0	21967.7	522.16 µg/L		522.16 ppb	07:13:38
2	Sc RADIAL	56216.0	56216.0	101 %			07:12:34
2	Al 396.153Radial†	7450.2	7417.9	5114.8 µg/L		5114.8 ppb	07:12:34
2	Ca 317.933Radial†	5964.0	5737.8	4981.3 µg/L		4981.3 ppb	07:12:55
2	Fe 238.204 Radial†	672.6	653.0	5111.8 µg/L		5111.8 ppb	07:12:55
2	K 766.490 Radial†	3923.0	3677.6	2526.5 µg/L		2526.5 ppb	07:12:34
2	Mg 279.077 IEC†	598.8	584.5	5095.9 µg/L		5095.9 ppb	07:12:55
2	Na 589.592 Radial†	8766.0	8117.9	2523.4 µg/L		2523.4 ppb	07:12:34
2	Sr 421.552†	53964.7	53570.3	530.56 µg/L		530.56 ppb	07:12:34
2	Sc 361.383	1953554.7	1953554.7	100.11 %			07:14:06
2	Y 371.029	1338068.4	1338068.4	99.810 %			07:14:06
2	Ag 328.068†	33287.7	33783.8	262.12 µg/L		262.12 ppb	07:14:12
2	As 188.979†	277.8	276.7	511.41 µg/L		511.41 ppb	07:14:32
2	B 249.677†	13101.4	12739.4	532.61 µg/L		532.61 ppb	07:14:12
2	Ba 233.527†	21069.7	21069.0	528.20 µg/L		528.20 ppb	07:14:12
2	Be 313.107†	415222.2	418098.2	262.47 µg/L		262.47 ppb	07:14:06
2	Cd 226.502†	19710.9	19831.2	522.23 µg/L		522.23 ppb	07:14:12
2	Co 228.616†	11246.2	11240.5	530.83 µg/L		530.83 ppb	07:14:12
2	Cr 267.716†	24295.9	24318.7	515.67 µg/L		515.67 ppb	07:14:12
2	Cu 324.752†	81648.4	79003.0	531.63 µg/L		531.63 ppb	07:14:12
2	Mn 257.610†	157937.6	157997.7	523.01 µg/L		523.01 ppb	07:14:06
2	Mo 202.031†	5455.1	5454.8	557.82 µg/L		557.82 ppb	07:14:32
2	Ni 231.604†	10001.3	9680.6	508.01 µg/L		508.01 ppb	07:14:12
2	P 214.914†	1331.0	1305.6	2620.4 µg/L		2620.4 ppb	07:14:32
2	Pb 220.353†	2171.5	2071.6	529.01 µg/L		529.01 ppb	07:14:32

2	S 181.975 Axial†	627.3	608.0	2565.4 µg/L	2565.4 ppb	07:14:32
2	Sb 206.836†	577.6	551.3	516.73 µg/L	516.73 ppb	07:14:32
2	Se 196.026†	1876.4	1863.5	2677.5 µg/L	2677.5 ppb	07:14:32
2	SiO2†	53602.5	52286.8	10830 µg/L	10830 ppb	07:14:12
2	Si 251.611†	63912.6	63528.1	5036.0 µg/L	5036.0 ppb	07:14:12
2	Sn 189.927†	1278.0	1274.7	561.33 µg/L	561.33 ppb	07:14:32
2	Ti 334.940†	216297.3	215895.3	501.78 µg/L	501.78 ppb	07:14:06
2	Tl 190.801†	379.1	404.4	548.35 µg/L	548.35 ppb	07:14:32
2	U 409.014†	5738.7	5805.9	503.02 µg/L	503.02 ppb	07:14:12
2	V 292.402†	50032.9	50050.1	521.60 µg/L	521.60 ppb	07:14:12
2	Zn 213.857†	22172.1	21651.7	514.64 µg/L	514.64 ppb	07:14:12
3	Sc RADIAL	55710.1	55710.1	99.8 %		07:13:00
3	Al 396.153Radial†	7397.0	7431.7	5126.4 µg/L	5126.4 ppb	07:13:00
3	Ca 317.933Radial†	5912.7	5740.2	4983.3 µg/L	4983.3 ppb	07:13:21
3	Fe 238.204 Radial†	668.7	655.2	5127.4 µg/L	5127.4 ppb	07:13:21
3	K 766.490 Radial†	3876.1	3666.1	2518.5 µg/L	2518.5 ppb	07:13:00
3	Mg 279.077 IEC†	599.3	590.5	5145.7 µg/L	5145.7 ppb	07:13:21
3	Na 589.592 Radial†	8626.4	8057.2	2504.5 µg/L	2504.5 ppb	07:13:00
3	Sr 421.552†	53511.2	53602.6	530.88 µg/L	530.88 ppb	07:13:00
3	Sc 361.383	1964493.8	1964493.8	100.67 %		07:14:39
3	Y 371.029	1346334.8	1346334.8	100.43 %		07:14:39
3	Ag 328.068†	30939.9	31266.6	242.46 µg/L	242.46 ppb	07:14:45
3	As 188.979†	234.7	232.3	429.48 µg/L	429.48 ppb	07:15:05
3	B 249.677†	12187.1	11758.4	491.34 µg/L	491.34 ppb	07:14:45
3	Ba 233.527†	19158.8	19053.7	477.65 µg/L	477.65 ppb	07:14:45
3	Be 313.107†	391432.6	392158.5	246.19 µg/L	246.19 ppb	07:14:39
3	Cd 226.502†	17679.0	17703.3	466.13 µg/L	466.13 ppb	07:14:45
3	Co 228.616†	10083.4	10022.9	473.25 µg/L	473.25 ppb	07:14:45
3	Cr 267.716†	21210.0	21118.3	447.81 µg/L	447.81 ppb	07:14:45
3	Cu 324.752†	73761.4	70714.7	475.93 µg/L	475.93 ppb	07:14:45
3	Mn 257.610†	149423.5	148662.2	492.13 µg/L	492.13 ppb	07:14:39
3	Mo 202.031†	4505.1	4480.8	458.25 µg/L	458.25 ppb	07:15:05
3	Ni 231.604†	8976.0	8606.5	451.65 µg/L	451.65 ppb	07:14:45
3	P 214.914†	1123.3	1091.9	2187.4 µg/L	2187.4 ppb	07:15:05
3	Pb 220.353†	1869.2	1759.3	449.18 µg/L	449.18 ppb	07:15:05
3	S 181.975 Axial†	543.4	521.2	2199.1 µg/L	2199.1 ppb	07:15:05
3	Sb 206.836†	490.9	462.0	432.59 µg/L	432.59 ppb	07:15:05
3	Se 196.026†	1631.6	1609.9	2314.2 µg/L	2314.2 ppb	07:15:05
3	SiO2†	49136.9	47553.0	9849.4 µg/L	9849.4 ppb	07:14:45
3	Si 251.611†	58556.4	57852.3	4586.1 µg/L	4586.1 ppb	07:14:45
3	Sn 189.927†	1041.3	1032.4	454.67 µg/L	454.67 ppb	07:15:05
3	Ti 334.940†	202606.5	201093.1	467.35 µg/L	467.35 ppb	07:14:39
3	Tl 190.801†	329.6	353.2	479.36 µg/L	479.36 ppb	07:15:05
3	U 409.014†	4925.5	4966.3	430.13 µg/L	430.13 ppb	07:14:45
3	V 292.402†	44256.9	44034.5	458.70 µg/L	458.70 ppb	07:14:45
3	Zn 213.857†	20000.3	19371.1	460.39 µg/L	460.39 ppb	07:14:45

## Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1957130.1	100.30 %	0.327			0.33%
Sc RADIAL	56242.0	101 %	1.0			0.97%
Y 371.029	1341104.6	100.04 %	0.339			0.34%
Ag 328.068†	33055.3	256.43 µg/L	12.165	256.43 ppb	12.165	4.74%
QC value within limits for Ag 328.068 Recovery = 102.57%						
Al 396.153Radial†	7414.4	5113.1 µg/L	14.36	5113.1 ppb	14.36	0.28%
QC value within limits for Al 396.153Radial Recovery = 102.26%						
As 188.979†	260.9	482.25 µg/L	45.790	482.25 ppb	45.790	9.50%
QC value within limits for As 188.979 Recovery = 96.45%						
B 249.677†	12470.1	521.28 µg/L	26.181	521.28 ppb	26.181	5.02%
QC value within limits for B 249.677 Recovery = 104.26%						
Ba 233.527†	20507.1	514.10 µg/L	31.837	514.10 ppb	31.837	6.19%
QC value within limits for Ba 233.527 Recovery = 102.82%						
Be 313.107†	409262.2	256.93 µg/L	9.300	256.93 ppb	9.300	3.62%
QC value within limits for Be 313.107 Recovery = 102.77%						
Ca 317.933Radial†	5713.5	4960.1 µg/L	38.40	4960.1 ppb	38.40	0.77%
QC value within limits for Ca 317.933Radial Recovery = 99.20%						
Cd 226.502†	19195.3	505.47 µg/L	34.190	505.47 ppb	34.190	6.76%
QC value within limits for Cd 226.502 Recovery = 101.09%						
Co 228.616†	10894.3	514.46 µg/L	35.937	514.46 ppb	35.937	6.99%

QC value within limits for Co 228.616 Recovery = 102.89%						
Cr 267.716†	23380.9	495.78 µg/L	41.750	495.78 ppb	41.750	8.42%
QC value within limits for Cr 267.716 Recovery = 99.16%						
Cu 324.752†	76536.0	515.05 µg/L	34.009	515.05 ppb	34.009	6.60%
QC value within limits for Cu 324.752 Recovery = 103.01%						
Fe 238.204 Radial†	653.9	5118.1 µg/L	8.26	5118.1 ppb	8.26	0.16%
QC value within limits for Fe 238.204 Radial Recovery = 102.36%						
K 766.490 Radial†	3647.7	2505.9 µg/L	29.00	2505.9 ppb	29.00	1.16%
QC value within limits for K 766.490 Radial Recovery = 100.24%						
Mg 279.077 IEC†	586.4	5111.4 µg/L	29.70	5111.4 ppb	29.70	0.58%
QC value within limits for Mg 279.077 IEC Recovery = 102.23%						
Mn 257.610†	154656.1	511.96 µg/L	17.205	511.96 ppb	17.205	3.36%
QC value within limits for Mn 257.610 Recovery = 102.39%						
Mo 202.031†	5157.4	527.42 µg/L	60.053	527.42 ppb	60.053	11.39%
QC value within limits for Mo 202.031 Recovery = 105.48%						
Na 589.592 Radial†	8063.6	2506.5 µg/L	15.98	2506.5 ppb	15.98	0.64%
QC value within limits for Na 589.592 Radial Recovery = 100.26%						
Ni 231.604†	9375.5	492.00 µg/L	35.191	492.00 ppb	35.191	7.15%
QC value within limits for Ni 231.604 Recovery = 98.40%						
P 214.914†	1241.5	2490.4 µg/L	263.26	2490.4 ppb	263.26	10.57%
QC value within limits for P 214.914 Recovery = 99.62%						
Pb 220.353†	1975.4	504.41 µg/L	47.922	504.41 ppb	47.922	9.50%
QC value within limits for Pb 220.353 Recovery = 100.88%						
S 181.975 Axial†	582.3	2457.2 µg/L	224.42	2457.2 ppb	224.42	9.13%
QC value within limits for S 181.975 Axial Recovery = 98.29%						
Sb 206.836†	526.1	492.92 µg/L	52.627	492.92 ppb	52.627	10.68%
QC value within limits for Sb 206.836 Recovery = 98.58%						
Se 196.026†	1781.8	2560.5 µg/L	213.39	2560.5 ppb	213.39	8.33%
QC value within limits for Se 196.026 Recovery = 102.42%						
SiO2†	50958.3	10555 µg/L	615.7	10555 ppb	615.7	5.83%
QC value within limits for SiO2 Recovery = 98.69%						
Si 251.611†	61941.2	4910.2 µg/L	283.04	4910.2 ppb	283.04	5.76%
QC value within limits for Si 251.611 Recovery = 98.20%						
Sn 189.927†	1199.0	528.02 µg/L	63.609	528.02 ppb	63.609	12.05%
QC value within limits for Sn 189.927 Recovery = 105.60%						
Sr 421.552†	53528.7	530.15 µg/L	1.003	530.15 ppb	1.003	0.19%
QC value within limits for Sr 421.552 Recovery = 106.03%						
Ti 334.940†	210894.8	490.15 µg/L	19.745	490.15 ppb	19.745	4.03%
QC value within limits for Ti 334.940 Recovery = 98.03%						
Tl 190.801†	387.0	524.94 µg/L	39.478	524.94 ppb	39.478	7.52%
QC value within limits for Tl 190.801 Recovery = 104.99%						
U 409.014†	5553.2	481.08 µg/L	44.267	481.08 ppb	44.267	9.20%
QC value within limits for U 409.014 Recovery = 96.22%						
V 292.402†	48254.7	502.82 µg/L	38.349	502.82 ppb	38.349	7.63%
QC value within limits for V 292.402 Recovery = 100.56%						
Zn 213.857†	20996.8	499.06 µg/L	33.704	499.06 ppb	33.704	6.75%
QC value within limits for Zn 213.857 Recovery = 99.81%						
All analyte(s) passed QC.						

Sequence No.: 7  
 Sample ID: ICB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 10  
 Date Collected: 2/11/2010 07:15:14  
 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	53931.3	53931.3	96.6 %		07:15:47
1	Al 396.153Radial†	-4.5	13.0	8.9607 µg/L	8.9607 ppb	07:15:47
1	Ca 317.933Radial†	176.3	-3.7	-3.2013 µg/L	-3.2013 ppb	07:16:07
1	Fe 238.204 Radial†	16.7	2.3	17.817 µg/L	17.817 ppb	07:16:07
1	K 766.490 Radial†	189.5	-22.8	-15.689 µg/L	-15.689 ppb	07:15:47
1	Mg 279.077 IEC†	12.1	2.3	20.269 µg/L	20.269 ppb	07:16:07
1	Na 589.592 Radial†	630.3	63.4	19.692 µg/L	19.692 ppb	07:15:47
1	Sr 421.552†	42.4	11.3	0.1123 µg/L	0.1123 ppb	07:15:47
1	Sc 361.383	1937975.3	1937975.3	99.315 %		07:17:09
1	Y 371.029	1333878.9	1333878.9	99.497 %		07:17:09
1	Ag 328.068†	-451.2	79.6	0.6138 µg/L	0.6138 ppb	07:17:14
1	As 188.979†	-0.7	-1.5	-2.7438 µg/L	-2.7438 ppb	07:17:35
1	B 249.677†	379.5	35.0	1.4613 µg/L	1.4613 ppb	07:17:35
1	Ba 233.527†	-26.3	-3.3	-0.0806 µg/L	-0.0806 ppb	07:17:35
1	Be 313.107†	-3334.0	-9.0	-0.0056 µg/L	-0.0056 ppb	07:17:14
1	Cd 226.502†	-145.3	-3.6	-0.0969 µg/L	-0.0969 ppb	07:17:35
1	Co 228.616†	-7.0	0.0	0.0003 µg/L	0.0003 ppb	07:17:35
1	Cr 267.716†	-42.8	7.3	0.1545 µg/L	0.1545 ppb	07:17:14
1	Cu 324.752†	2575.7	40.8	0.2768 µg/L	0.2768 ppb	07:17:14
1	Mn 257.610†	-228.9	9.2	0.0319 µg/L	0.0319 ppb	07:17:35
1	Mo 202.031†	-4.2	1.6	0.1669 µg/L	0.1669 ppb	07:17:35
1	Ni 231.604†	304.9	-2.4	-0.1247 µg/L	-0.1247 ppb	07:17:35
1	P 214.914†	22.7	-1.0	-2.1708 µg/L	-2.1708 ppb	07:17:35
1	Pb 220.353†	93.9	-2.8	-0.7273 µg/L	-0.7273 ppb	07:17:35
1	S 181.975 Axial†	16.1	-2.4	-9.9320 µg/L	-9.9320 ppb	07:17:35
1	Sb 206.836†	27.8	2.4	2.2125 µg/L	2.2125 ppb	07:17:35
1	Se 196.026†	22.6	12.0	17.158 µg/L	17.158 ppb	07:17:35
1	SiO2†	1251.4	5.2	1.0849 µg/L	1.0849 ppb	07:17:14
1	Si 251.611†	327.0	17.3	1.3753 µg/L	1.3753 ppb	07:17:35
1	Sn 189.927†	4.4	2.4	1.0780 µg/L	1.0780 ppb	07:17:35
1	Ti 334.940†	175.3	20.3	0.0456 µg/L	0.0456 ppb	07:17:14
1	Tl 190.801†	-26.4	-0.9	-1.1539 µg/L	-1.1539 ppb	07:17:35
1	U 409.014†	-7.1	66.6	5.7833 µg/L	5.7833 ppb	07:17:14
1	V 292.402†	-19.9	54.1	0.5660 µg/L	0.5660 ppb	07:17:14
1	Zn 213.857†	489.7	-2.2	-0.0539 µg/L	-0.0539 ppb	07:17:35
2	Sc RADIAL	54179.5	54179.5	97.0 %		07:16:13
2	Al 396.153Radial†	-27.7	-10.9	-7.5510 µg/L	-7.5510 ppb	07:16:13
2	Ca 317.933Radial†	180.5	-0.2	-0.1838 µg/L	-0.1838 ppb	07:16:33
2	Fe 238.204 Radial†	17.2	2.6	20.693 µg/L	20.693 ppb	07:16:33
2	K 766.490 Radial†	172.4	-41.3	-28.402 µg/L	-28.402 ppb	07:16:13
2	Mg 279.077 IEC†	7.6	-2.4	-20.944 µg/L	-20.944 ppb	07:16:33
2	Na 589.592 Radial†	607.4	36.8	11.433 µg/L	11.433 ppb	07:16:13
2	Sr 421.552†	32.8	1.3	0.0132 µg/L	0.0132 ppb	07:16:13
2	Sc 361.383	1931332.3	1931332.3	98.975 %		07:17:41
2	Y 371.029	1328546.0	1328546.0	99.099 %		07:17:41
2	Ag 328.068†	-512.6	16.1	0.1250 µg/L	0.1250 ppb	07:17:46
2	As 188.979†	-3.4	-4.2	-7.7809 µg/L	-7.7809 ppb	07:18:07
2	B 249.677†	379.3	36.2	1.5062 µg/L	1.5062 ppb	07:18:07
2	Ba 233.527†	-21.7	1.3	0.0335 µg/L	0.0335 ppb	07:18:07
2	Be 313.107†	-3269.3	44.9	0.0282 µg/L	0.0282 ppb	07:17:46
2	Cd 226.502†	-145.2	-3.9	-0.1058 µg/L	-0.1058 ppb	07:18:07
2	Co 228.616†	4.3	11.3	0.5352 µg/L	0.5352 ppb	07:18:07
2	Cr 267.716†	-49.7	0.1	0.0029 µg/L	0.0029 ppb	07:17:46
2	Cu 324.752†	2592.6	66.9	0.4522 µg/L	0.4522 ppb	07:17:46
2	Mn 257.610†	-220.1	17.2	0.0605 µg/L	0.0605 ppb	07:18:07
2	Mo 202.031†	-2.6	3.2	0.3312 µg/L	0.3312 ppb	07:18:07
2	Ni 231.604†	312.9	6.8	0.3574 µg/L	0.3574 ppb	07:18:07
2	P 214.914†	13.7	-10.0	-20.588 µg/L	-20.588 ppb	07:18:07
2	Pb 220.353†	97.9	1.5	0.3830 µg/L	0.3830 ppb	07:18:07

2	S 181.975 Axial†	24.5	6.3	26.386 µg/L	26.386 ppb	07:18:07
2	Sb 206.836†	22.1	-3.2	-3.0077 µg/L	-3.0077 ppb	07:18:07
2	Se 196.026†	17.5	6.9	10.018 µg/L	10.018 ppb	07:18:07
2	SiO2†	1283.2	41.7	8.6470 µg/L	8.6470 ppb	07:17:46
2	Si 251.611†	334.9	26.5	2.0999 µg/L	2.0999 ppb	07:18:07
2	Sn 189.927†	-4.0	-6.0	-2.6263 µg/L	-2.6263 ppb	07:18:07
2	Ti 334.940†	158.6	4.1	0.0113 µg/L	0.0113 ppb	07:17:46
2	Tl 190.801†	-22.9	2.6	3.4428 µg/L	3.4428 ppb	07:18:07
2	U 409.014†	-113.4	-40.8	-3.5475 µg/L	-3.5475 ppb	07:17:46
2	V 292.402†	-62.3	11.1	0.1155 µg/L	0.1155 ppb	07:17:46
2	Zn 213.857†	493.0	2.9	0.0672 µg/L	0.0672 ppb	07:18:07
3	Sc RADIAL	54159.7	54159.7	97.0 %		07:16:38
3	Al 396.153Radial†	-17.9	-0.8	-0.5639 µg/L	-0.5639 ppb	07:16:38
3	Ca 317.933Radial†	185.7	5.2	4.5471 µg/L	4.5471 ppb	07:16:59
3	Fe 238.204 Radial†	15.4	0.8	6.6349 µg/L	6.6349 ppb	07:16:59
3	K 766.490 Radial†	141.4	-73.2	-50.316 µg/L	-50.316 ppb	07:16:38
3	Mg 279.077 IEC†	14.5	4.7	40.952 µg/L	40.952 ppb	07:16:59
3	Na 589.592 Radial†	612.7	42.5	13.197 µg/L	13.197 ppb	07:16:38
3	Sr 421.552†	66.0	35.6	0.3521 µg/L	0.3521 ppb	07:16:38
3	Sc 361.383	1953531.4	1953531.4	100.11 %		07:18:13
3	Y 371.029	1343366.0	1343366.0	100.20 %		07:18:13
3	Ag 328.068†	-515.0	19.5	0.1499 µg/L	0.1499 ppb	07:18:18
3	As 188.979†	0.7	-0.1	-0.1310 µg/L	-0.1310 ppb	07:18:39
3	B 249.677†	383.5	36.0	1.5088 µg/L	1.5088 ppb	07:18:39
3	Ba 233.527†	-20.5	2.8	0.0690 µg/L	0.0690 ppb	07:18:39
3	Be 313.107†	-3190.4	161.3	0.1013 µg/L	0.1013 ppb	07:18:18
3	Cd 226.502†	-152.8	-9.9	-0.2609 µg/L	-0.2609 ppb	07:18:39
3	Co 228.616†	-7.5	-0.4	-0.0204 µg/L	-0.0204 ppb	07:18:39
3	Cr 267.716†	-17.6	32.7	0.6940 µg/L	0.6940 ppb	07:18:18
3	Cu 324.752†	2561.8	6.3	0.0434 µg/L	0.0434 ppb	07:18:18
3	Mn 257.610†	-230.0	9.9	0.0319 µg/L	0.0319 ppb	07:18:39
3	Mo 202.031†	-3.1	2.8	0.2895 µg/L	0.2895 ppb	07:18:39
3	Ni 231.604†	309.9	0.2	0.0094 µg/L	0.0094 ppb	07:18:39
3	P 214.914†	28.2	4.3	8.7003 µg/L	8.7003 ppb	07:18:39
3	Pb 220.353†	102.7	5.2	1.3160 µg/L	1.3160 ppb	07:18:39
3	S 181.975 Axial†	17.5	-1.1	-4.6715 µg/L	-4.6715 ppb	07:18:39
3	Sb 206.836†	28.4	2.8	2.5843 µg/L	2.5843 ppb	07:18:39
3	Se 196.026†	18.9	8.1	11.618 µg/L	11.618 ppb	07:18:39
3	SiO2†	1282.3	26.1	5.4041 µg/L	5.4041 ppb	07:18:18
3	Si 251.611†	334.7	22.5	1.7820 µg/L	1.7820 ppb	07:18:39
3	Sn 189.927†	3.6	1.7	0.7494 µg/L	0.7494 ppb	07:18:39
3	Ti 334.940†	143.4	-12.9	-0.0332 µg/L	-0.0332 ppb	07:18:18
3	Tl 190.801†	-22.1	3.7	4.9908 µg/L	4.9908 ppb	07:18:39
3	U 409.014†	-42.9	30.9	2.6825 µg/L	2.6825 ppb	07:18:18
3	V 292.402†	-73.3	0.9	0.0163 µg/L	0.0163 ppb	07:18:18
3	Zn 213.857†	503.8	7.9	0.1873 µg/L	0.1873 ppb	07:18:39

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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	1940946.3	99.468 %	0.5839			0.59%
Sc RADIAL	54090.2	96.9 %	0.25			0.26%
Y 371.029	1335263.7	99.600 %	0.5599			0.56%
Ag 328.068†	38.4	0.2962 µg/L	0.27527	0.2962 ppb	0.27527	92.92%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	0.4	0.2819 µg/L	8.28831	0.2819 ppb	8.28831	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.9	-3.5519 µg/L	3.88845	-3.5519 ppb	3.88845	109.47%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	35.7	1.4921 µg/L	0.02672	1.4921 ppb	0.02672	1.79%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	0.3	0.0073 µg/L	0.07815	0.0073 ppb	0.07815	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	65.7	0.0413 µg/L	0.05468	0.0413 ppb	0.05468	132.41%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	0.4	0.3873 µg/L	3.90566	0.3873 ppb	3.90566	>999.9%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-5.8	-0.1545 µg/L	0.09222	-0.1545 ppb	0.09222	59.69%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	3.6	0.1717 µg/L	0.31497	0.1717 ppb	0.31497	183.40%

Cr	267.716†	13.4	0.2838 µg/L	0.36321	0.2838 ppb	0.36321	127.98%
	QC value within limits for Cr 267.716	Recovery = Not calculated					
Cu	324.752†	38.0	0.2575 µg/L	0.20509	0.2575 ppb	0.20509	79.66%
	QC value within limits for Cu 324.752	Recovery = Not calculated					
Fe	238.204 Radial†	1.9	15.048 µg/L	7.4266	15.048 ppb	7.4266	49.35%
	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated					
K	766.490 Radial†	-45.8	-31.469 µg/L	17.5159	-31.469 ppb	17.5159	55.66%
	QC value within limits for K 766.490 Radial	Recovery = Not calculated					
Mg	279.077 IEC†	1.5	13.426 µg/L	31.5107	13.426 ppb	31.5107	234.70%
	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated					
Mn	257.610†	12.1	0.0414 µg/L	0.01654	0.0414 ppb	0.01654	39.91%
	QC value within limits for Mn 257.610	Recovery = Not calculated					
Mo	202.031†	2.6	0.2625 µg/L	0.08542	0.2625 ppb	0.08542	32.54%
	QC value within limits for Mo 202.031	Recovery = Not calculated					
Na	589.592 Radial†	47.5	14.774 µg/L	4.3497	14.774 ppb	4.3497	29.44%
	QC value within limits for Na 589.592 Radial	Recovery = Not calculated					
Ni	231.604†	1.5	0.0807 µg/L	0.24880	0.0807 ppb	0.24880	308.29%
	QC value within limits for Ni 231.604	Recovery = Not calculated					
P	214.914†	-2.3	-4.6861 µg/L	14.80526	-4.6861 ppb	14.80526	315.94%
	QC value within limits for P 214.914	Recovery = Not calculated					
Pb	220.353†	1.3	0.3239 µg/L	1.02297	0.3239 ppb	1.02297	315.81%
	QC value within limits for Pb 220.353	Recovery = Not calculated					
S	181.975 Axial†	0.9	3.9277 µg/L	19.62696	3.9277 ppb	19.62696	499.71%
	QC value within limits for S 181.975 Axial	Recovery = Not calculated					
Sb	206.836†	0.6	0.5964 µg/L	3.12676	0.5964 ppb	3.12676	524.31%
	QC value within limits for Sb 206.836	Recovery = Not calculated					
Se	196.026†	9.0	12.931 µg/L	3.7467	12.931 ppb	3.7467	28.97%
	QC value within limits for Se 196.026	Recovery = Not calculated					
SiO2†		24.4	5.0453 µg/L	3.79382	5.0453 ppb	3.79382	75.19%
	QC value within limits for SiO2	Recovery = Not calculated					
Si	251.611†	22.1	1.7524 µg/L	0.36323	1.7524 ppb	0.36323	20.73%
	QC value within limits for Si 251.611	Recovery = Not calculated					
Sn	189.927†	-0.6	-0.2663 µg/L	2.05044	-0.2663 ppb	2.05044	770.02%
	QC value within limits for Sn 189.927	Recovery = Not calculated					
Sr	421.552†	16.1	0.1592 µg/L	0.17427	0.1592 ppb	0.17427	109.49%
	QC value within limits for Sr 421.552	Recovery = Not calculated					
Ti	334.940†	3.8	0.0079 µg/L	0.03954	0.0079 ppb	0.03954	500.90%
	QC value within limits for Ti 334.940	Recovery = Not calculated					
Tl	190.801†	1.8	2.4266 µg/L	3.19593	2.4266 ppb	3.19593	131.71%
	QC value within limits for Tl 190.801	Recovery = Not calculated					
U	409.014†	18.9	1.6394 µg/L	4.75202	1.6394 ppb	4.75202	289.86%
	QC value within limits for U 409.014	Recovery = Not calculated					
V	292.402†	22.0	0.2326 µg/L	0.29298	0.2326 ppb	0.29298	125.96%
	QC value within limits for V 292.402	Recovery = Not calculated					
Zn	213.857†	2.9	0.0668 µg/L	0.12061	0.0668 ppb	0.12061	180.47%
	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: 2/11/2010 07:18:48  
 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	55756.7	55756.7	99.9 %		07:19:21
1	Al 396.153Radial†	283.0	301.0	207.84 µg/L	207.84 ppb	07:19:21
1	Ca 317.933Radial†	397.8	212.2	184.24 µg/L	184.24 ppb	07:19:41
1	Fe 238.204 Radial†	28.7	13.7	106.88 µg/L	106.88 ppb	07:19:41
1	K 766.490 Radial†	412.6	194.2	133.41 µg/L	133.41 ppb	07:19:21
1	Mg 279.077 IEC†	42.7	32.5	283.10 µg/L	283.10 ppb	07:19:41
1	Na 589.592 Radial†	1553.7	966.8	300.51 µg/L	300.51 ppb	07:19:21
1	Sr 421.552†	535.0	503.3	4.9843 µg/L	4.9843 ppb	07:19:21
1	Sc 361.383	1976079.7	1976079.7	101.27 %		07:20:43
1	Y 371.029	1359904.4	1359904.4	101.44 %		07:20:43
1	Ag 328.068†	122.5	654.9	5.0492 µg/L	5.0492 ppb	07:20:49
1	As 188.979†	14.2	13.3	24.578 µg/L	24.578 ppb	07:21:10
1	B 249.677†	1508.2	1142.3	47.874 µg/L	47.874 ppb	07:20:49
1	Ba 233.527†	181.6	202.5	5.0772 µg/L	5.0772 ppb	07:21:10
1	Be 313.107†	4313.9	7607.9	4.7778 µg/L	4.7778 ppb	07:20:49
1	Cd 226.502†	44.7	186.8	4.9134 µg/L	4.9134 ppb	07:21:10
1	Co 228.616†	83.6	89.6	4.2343 µg/L	4.2343 ppb	07:21:10
1	Cr 267.716†	180.6	228.6	4.8486 µg/L	4.8486 ppb	07:20:49
1	Cu 324.752†	4057.1	1453.7	9.7842 µg/L	9.7842 ppb	07:20:49
1	Mn 257.610†	2796.5	3001.1	9.9283 µg/L	9.9283 ppb	07:20:49
1	Mo 202.031†	91.9	96.6	9.8785 µg/L	9.8785 ppb	07:21:10
1	Ni 231.604†	403.4	89.0	4.6723 µg/L	4.6723 ppb	07:21:10
1	P 214.914†	96.4	71.3	144.96 µg/L	144.96 ppb	07:21:10
1	Pb 220.353†	134.9	35.9	9.1213 µg/L	9.1213 ppb	07:21:10
1	S 181.975 Axial†	42.1	23.0	97.184 µg/L	97.184 ppb	07:21:10
1	Sb 206.836†	34.5	8.5	7.9825 µg/L	7.9825 ppb	07:21:10
1	Se 196.026†	34.4	23.2	33.221 µg/L	33.221 ppb	07:21:10
1	SiO2†	2267.3	984.2	203.84 µg/L	203.84 ppb	07:20:49
1	Si 251.611†	1526.1	1195.2	94.744 µg/L	94.744 ppb	07:21:10
1	Sn 189.927†	25.2	23.0	10.136 µg/L	10.136 ppb	07:21:10
1	Ti 334.940†	2249.5	2065.2	4.7836 µg/L	4.7836 ppb	07:20:49
1	Tl 190.801†	-11.9	14.0	18.879 µg/L	18.879 ppb	07:21:10
1	U 409.014†	540.3	607.3	52.692 µg/L	52.692 ppb	07:20:49
1	V 292.402†	422.9	491.6	5.2133 µg/L	5.2133 ppb	07:20:49
1	Zn 213.857†	907.5	400.9	9.5392 µg/L	9.5392 ppb	07:21:10
2	Sc RADIAL	55357.6	55357.6	99.1 %		07:19:47
2	Al 396.153Radial†	280.1	300.1	207.20 µg/L	207.20 ppb	07:19:47
2	Ca 317.933Radial†	404.9	222.3	192.96 µg/L	192.96 ppb	07:20:07
2	Fe 238.204 Radial†	30.3	15.6	121.61 µg/L	121.61 ppb	07:20:07
2	K 766.490 Radial†	377.4	161.6	111.03 µg/L	111.03 ppb	07:19:47
2	Mg 279.077 IEC†	47.3	37.4	326.22 µg/L	326.22 ppb	07:20:07
2	Na 589.592 Radial†	1506.3	930.1	289.12 µg/L	289.12 ppb	07:19:47
2	Sr 421.552†	509.5	481.4	4.7680 µg/L	4.7680 ppb	07:19:47
2	Sc 361.383	1981271.8	1981271.8	101.53 %		07:21:16
2	Y 371.029	1364398.5	1364398.5	101.77 %		07:21:16
2	Ag 328.068†	127.3	659.3	5.0815 µg/L	5.0815 ppb	07:21:21
2	As 188.979†	18.0	17.0	31.390 µg/L	31.390 ppb	07:21:42
2	B 249.677†	1479.9	1110.5	46.532 µg/L	46.532 ppb	07:21:21
2	Ba 233.527†	167.9	188.6	4.7288 µg/L	4.7288 ppb	07:21:42
2	Be 313.107†	4218.6	7502.9	4.7119 µg/L	4.7119 ppb	07:21:21
2	Cd 226.502†	31.1	173.3	4.5566 µg/L	4.5566 ppb	07:21:42
2	Co 228.616†	88.2	93.9	4.4369 µg/L	4.4369 ppb	07:21:42
2	Cr 267.716†	219.5	266.5	5.6507 µg/L	5.6507 ppb	07:21:21
2	Cu 324.752†	4035.7	1422.1	9.5735 µg/L	9.5735 ppb	07:21:21
2	Mn 257.610†	2773.5	2971.2	9.8295 µg/L	9.8295 ppb	07:21:21
2	Mo 202.031†	93.0	97.5	9.9688 µg/L	9.9688 ppb	07:21:42
2	Ni 231.604†	412.9	97.3	5.1067 µg/L	5.1067 ppb	07:21:42
2	P 214.914†	82.8	57.7	117.16 µg/L	117.16 ppb	07:21:42
2	Pb 220.353†	140.2	40.7	10.344 µg/L	10.344 ppb	07:21:42

2	S 181.975 Axial†	40.0	20.8	87.783 µg/L	87.783 ppb	07:21:42
2	Sb 206.836†	35.0	8.8	8.3053 µg/L	8.3053 ppb	07:21:42
2	Se 196.026†	34.2	22.9	32.787 µg/L	32.787 ppb	07:21:42
2	SiO2†	2339.7	1049.6	217.40 µg/L	217.40 ppb	07:21:21
2	Si 251.611†	1539.7	1204.5	95.485 µg/L	95.485 ppb	07:21:42
2	Sn 189.927†	25.3	22.9	10.126 µg/L	10.126 ppb	07:21:42
2	Ti 334.940†	2184.3	1995.2	4.6174 µg/L	4.6174 ppb	07:21:21
2	Tl 190.801†	-11.0	14.9	20.103 µg/L	20.103 ppb	07:21:42
2	U 409.014†	506.6	572.7	49.686 µg/L	49.686 ppb	07:21:21
2	V 292.402†	390.1	458.3	4.8713 µg/L	4.8713 ppb	07:21:21
2	Zn 213.857†	904.9	396.0	9.4162 µg/L	9.4162 ppb	07:21:42
3	Sc RADIAL	55454.5	55454.5	99.3 %		07:20:13
3	Al 396.153Radial†	248.8	268.1	185.13 µg/L	185.13 ppb	07:20:13
3	Ca 317.933Radial†	395.0	211.5	183.61 µg/L	183.61 ppb	07:20:33
3	Fe 238.204 Radial†	27.1	12.3	95.841 µg/L	95.841 ppb	07:20:33
3	K 766.490 Radial†	399.4	183.1	125.77 µg/L	125.77 ppb	07:20:13
3	Mg 279.077 IEC†	45.1	35.1	306.14 µg/L	306.14 ppb	07:20:33
3	Na 589.592 Radial†	1536.2	957.7	297.68 µg/L	297.68 ppb	07:20:13
3	Sr 421.552†	516.3	487.4	4.8269 µg/L	4.8269 ppb	07:20:13
3	Sc 361.383	1964990.5	1964990.5	100.70 %		07:21:48
3	Y 371.029	1353521.5	1353521.5	100.96 %		07:21:48
3	Ag 328.068†	74.5	607.9	4.6848 µg/L	4.6848 ppb	07:21:53
3	As 188.979†	15.4	14.5	26.829 µg/L	26.829 ppb	07:22:14
3	B 249.677†	1440.1	1083.1	45.394 µg/L	45.394 ppb	07:21:53
3	Ba 233.527†	139.2	161.5	4.0496 µg/L	4.0496 ppb	07:22:14
3	Be 313.107†	3652.3	6974.9	4.3803 µg/L	4.3803 ppb	07:21:53
3	Cd 226.502†	10.8	153.5	4.0351 µg/L	4.0351 ppb	07:22:14
3	Co 228.616†	78.0	84.5	3.9940 µg/L	3.9940 ppb	07:22:14
3	Cr 267.716†	164.0	213.2	4.5201 µg/L	4.5201 ppb	07:21:53
3	Cu 324.752†	3955.6	1375.5	9.2567 µg/L	9.2567 ppb	07:21:53
3	Mn 257.610†	2558.4	2780.2	9.1953 µg/L	9.1953 ppb	07:21:53
3	Mo 202.031†	73.6	79.0	8.0811 µg/L	8.0811 ppb	07:22:14
3	Ni 231.604†	394.9	82.8	4.3466 µg/L	4.3466 ppb	07:22:14
3	P 214.914†	83.4	59.0	119.73 µg/L	119.73 ppb	07:22:14
3	Pb 220.353†	140.9	42.6	10.825 µg/L	10.825 ppb	07:22:14
3	S 181.975 Axial†	38.1	19.2	81.176 µg/L	81.176 ppb	07:22:14
3	Sb 206.836†	35.0	9.2	8.6178 µg/L	8.6178 ppb	07:22:14
3	Se 196.026†	37.2	26.1	37.394 µg/L	37.394 ppb	07:22:14
3	SiO2†	2216.1	945.9	195.93 µg/L	195.93 ppb	07:21:53
3	Si 251.611†	1364.6	1043.2	82.699 µg/L	82.699 ppb	07:22:14
3	Sn 189.927†	15.1	13.1	5.7949 µg/L	5.7949 ppb	07:22:14
3	Ti 334.940†	2010.7	1840.6	4.2595 µg/L	4.2595 ppb	07:21:53
3	Tl 190.801†	-12.3	13.6	18.346 µg/L	18.346 ppb	07:22:14
3	U 409.014†	499.1	569.4	49.406 µg/L	49.406 ppb	07:21:53
3	V 292.402†	360.7	432.3	4.5832 µg/L	4.5832 ppb	07:21:53
3	Zn 213.857†	844.6	343.5	8.1654 µg/L	8.1654 ppb	07:22:14

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1974114.0	101.17 %	0.426			0.42%
Sc RADIAL	55522.9	99.4 %	0.37			0.37%
Y 371.029	1359274.8	101.39 %	0.408			0.40%
Ag 328.068†	640.7	4.9385 µg/L	0.22032	4.9385 ppb	0.22032	4.46%
QC value within limits for Ag 328.068 Recovery = 98.77%						
Al 396.153Radial†	289.8	200.06 µg/L	12.932	200.06 ppb	12.932	6.46%
QC value within limits for Al 396.153Radial Recovery = 100.03%						
As 188.979†	14.9	27.599 µg/L	3.4705	27.599 ppb	3.4705	12.57%
QC value within limits for As 188.979 Recovery = 92.00%						
B 249.677†	1111.9	46.600 µg/L	1.2411	46.600 ppb	1.2411	2.66%
QC value within limits for B 249.677 Recovery = 93.20%						
Ba 233.527†	184.2	4.6186 µg/L	0.52260	4.6186 ppb	0.52260	11.32%
QC value within limits for Ba 233.527 Recovery = 92.37%						
Be 313.107†	7361.9	4.6233 µg/L	0.21303	4.6233 ppb	0.21303	4.61%
QC value within limits for Be 313.107 Recovery = 92.47%						
Ca 317.933Radial†	215.3	186.93 µg/L	5.225	186.93 ppb	5.225	2.80%
QC value within limits for Ca 317.933Radial Recovery = 93.47%						
Cd 226.502†	171.2	4.5017 µg/L	0.44171	4.5017 ppb	0.44171	9.81%
QC value within limits for Cd 226.502 Recovery = 90.03%						
Co 228.616†	89.3	4.2217 µg/L	0.22171	4.2217 ppb	0.22171	5.25%

QC value within limits for Co 228.616 Recovery = 84.43%							
Cr 267.716†	236.1	5.0065 µg/L	0.58160	5.0065 ppb	0.58160	11.62%	
QC value within limits for Cr 267.716 Recovery = 100.13%							
Cu 324.752†	1417.1	9.5381 µg/L	0.26554	9.5381 ppb	0.26554	2.78%	
QC value within limits for Cu 324.752 Recovery = 95.38%							
Fe 238.204 Radial†	13.8	108.11 µg/L	12.929	108.11 ppb	12.929	11.96%	
QC value within limits for Fe 238.204 Radial Recovery = 108.11%							
K 766.490 Radial†	179.6	123.41 µg/L	11.376	123.41 ppb	11.376	9.22%	
QC value within limits for K 766.490 Radial Recovery = 82.27%							
Mg 279.077 IEC†	35.0	305.15 µg/L	21.577	305.15 ppb	21.577	7.07%	
QC value within limits for Mg 279.077 IEC Recovery = 101.72%							
Mn 257.610†	2917.5	9.6510 µg/L	0.39773	9.6510 ppb	0.39773	4.12%	
QC value within limits for Mn 257.610 Recovery = 96.51%							
Mo 202.031†	91.0	9.3094 µg/L	1.06475	9.3094 ppb	1.06475	11.44%	
QC value within limits for Mo 202.031 Recovery = 93.09%							
Na 589.592 Radial†	951.5	295.77 µg/L	5.930	295.77 ppb	5.930	2.01%	
QC value within limits for Na 589.592 Radial Recovery = 98.59%							
Ni 231.604†	89.7	4.7085 µg/L	0.38134	4.7085 ppb	0.38134	8.10%	
QC value within limits for Ni 231.604 Recovery = 94.17%							
P 214.914†	62.7	127.29 µg/L	15.364	127.29 ppb	15.364	12.07%	
QC value within limits for P 214.914 Recovery = 84.86%							
Pb 220.353†	39.7	10.097 µg/L	0.8782	10.097 ppb	0.8782	8.70%	
QC value within limits for Pb 220.353 Recovery = 100.97%							
S 181.975 Axial†	21.0	88.714 µg/L	8.0447	88.714 ppb	8.0447	9.07%	
QC value within limits for S 181.975 Axial Recovery = 88.71%							
Sb 206.836†	8.8	8.3019 µg/L	0.31767	8.3019 ppb	0.31767	3.83%	
QC value within limits for Sb 206.836 Recovery = 83.02%							
Se 196.026†	24.1	34.467 µg/L	2.5436	34.467 ppb	2.5436	7.38%	
QC value within limits for Se 196.026 Recovery = 114.89%							
SiO2†	993.2	205.73 µg/L	10.860	205.73 ppb	10.860	5.28%	
QC value within limits for SiO2 Recovery = 96.58%							
Si 251.611†	1147.6	90.976 µg/L	7.1776	90.976 ppb	7.1776	7.89%	
QC value within limits for Si 251.611 Recovery = 90.98%							
Sn 189.927†	19.7	8.6856 µg/L	2.50348	8.6856 ppb	2.50348	28.82%	
QC value within limits for Sn 189.927 Recovery = 86.86%							
Sr 421.552†	490.7	4.8598 µg/L	0.11182	4.8598 ppb	0.11182	2.30%	
QC value within limits for Sr 421.552 Recovery = 97.20%							
Ti 334.940†	1967.0	4.5535 µg/L	0.26786	4.5535 ppb	0.26786	5.88%	
QC value within limits for Ti 334.940 Recovery = 91.07%							
Tl 190.801†	14.1	19.110 µg/L	0.9009	19.110 ppb	0.9009	4.71%	
QC value within limits for Tl 190.801 Recovery = 95.55%							
U 409.014†	583.1	50.595 µg/L	1.8217	50.595 ppb	1.8217	3.60%	
QC value within limits for U 409.014 Recovery = 101.19%							
V 292.402†	460.7	4.8893 µg/L	0.31539	4.8893 ppb	0.31539	6.45%	
QC value within limits for V 292.402 Recovery = 97.79%							
Zn 213.857†	380.1	9.0403 µg/L	0.76016	9.0403 ppb	0.76016	8.41%	
QC value within limits for Zn 213.857 Recovery = 90.40%							
All analyte(s) passed QC.							

Sequence No.: 9

Sample ID: ICSA

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 103

Date Collected: 2/11/2010 07:22:23

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	53830.2	53830.2	96.4 %		07:23:04
1	Al 396.153Radial†	694254.9	720182.0	497700 µg/L	497700 ppb	07:22:59
1	Ca 317.933Radial†	526001.5	545445.6	473530 µg/L	473530 ppb	07:22:59
1	Fe 238.204 Radial†	22931.6	23772.4	185680 µg/L	185680 ppb	07:23:04
1	K 766.490 Radial†	121.9	-92.6	-63.606 µg/L	-63.606 ppb	07:23:04
1	Mg 279.077 IEC†	53016.1	54984.4	478760 µg/L	478760 ppb	07:23:04
1	Na 589.592 Radial†	699.6	136.5	42.433 µg/L	42.433 ppb	07:23:04
1	Sr 421.552†	372.1	353.4	3.5005 µg/L	3.5005 ppb	07:23:04
1	Sc 361.383	1827460.2	1827460.2	93.652 %		07:23:37
1	Y 371.029	1251162.4	1251162.4	93.327 %		07:23:37
1	Ag 328.068†	-2792.6	-2448.0	-7.1696 µg/L	-7.1696 ppb	07:23:42
1	As 188.979†	-13.7	-15.4	-42.417 µg/L	-42.417 ppb	07:24:03
1	B 249.677†	794.4	501.2	-75.861 µg/L	-75.861 ppb	07:23:42
1	Ba 233.527†	276.3	318.2	7.9248 µg/L	7.9248 ppb	07:24:03
1	Be 313.107†	-4082.1	-1010.7	-0.6452 µg/L	-0.6452 ppb	07:23:42
1	Cd 226.502†	392.2	561.6	-6.1993 µg/L	-6.1993 ppb	07:24:03
1	Co 228.616†	50.2	60.6	2.7981 µg/L	2.7981 ppb	07:24:03
1	Cr 267.716†	-62.6	-16.5	-0.3633 µg/L	-0.3633 ppb	07:24:03
1	Cu 324.752†	-1483.2	-4136.3	-1.9880 µg/L	-1.9880 ppb	07:23:42
1	Mn 257.610†	341.3	604.0	7.5340 µg/L	7.5340 ppb	07:23:42
1	Mo 202.031†	-103.9	-105.0	-3.6828 µg/L	-3.6828 ppb	07:24:03
1	Ni 231.604†	148.8	-150.4	-5.4923 µg/L	-5.4923 ppb	07:24:03
1	P 214.914†	96.3	79.0	156.61 µg/L	156.61 ppb	07:24:03
1	Pb 220.353†	58.5	-35.0	11.405 µg/L	11.405 ppb	07:24:03
1	S 181.975 Axial†	34.3	18.1	76.258 µg/L	76.258 ppb	07:24:03
1	Sb 206.836†	55.8	34.0	-9.7171 µg/L	-9.7171 ppb	07:24:03
1	Se 196.026†	18.5	9.0	-37.843 µg/L	-37.843 ppb	07:24:03
1	SiO2†	1049.7	-133.9	-27.735 µg/L	-27.735 ppb	07:24:03
1	Si 251.611†	415.9	132.2	10.479 µg/L	10.479 ppb	07:24:03
1	Sn 189.927†	-54.6	-60.3	7.8004 µg/L	7.8004 ppb	07:24:03
1	Ti 334.940†	10956.2	11542.8	-3.4170 µg/L	-3.4170 ppb	07:23:42
1	Tl 190.801†	-36.9	-13.6	1.8809 µg/L	1.8809 ppb	07:24:03
1	U 409.014†	-30.3	41.4	-51.098 µg/L	-51.098 ppb	07:23:42
1	V 292.402†	-2050.2	-2115.1	0.0108 µg/L	0.0108 ppb	07:23:42
1	Zn 213.857†	1522.8	1130.7	-8.8310 µg/L	-8.8310 ppb	07:24:03
2	Sc RADIAL	53682.0	53682.0	96.1 %		07:23:16
2	Al 396.153Radial†	692543.9	720390.1	497840 µg/L	497840 ppb	07:23:10
2	Ca 317.933Radial†	524991.1	545900.7	473920 µg/L	473920 ppb	07:23:10
2	Fe 238.204 Radial†	22656.6	23552.0	183950 µg/L	183950 ppb	07:23:16
2	K 766.490 Radial†	99.6	-115.5	-79.315 µg/L	-79.315 ppb	07:23:16
2	Mg 279.077 IEC†	52442.1	54539.1	474890 µg/L	474890 ppb	07:23:16
2	Na 589.592 Radial†	708.6	147.8	45.943 µg/L	45.943 ppb	07:23:16
2	Sr 421.552†	352.4	334.0	3.3083 µg/L	3.3083 ppb	07:23:16
2	Sc 361.383	1830775.9	1830775.9	93.822 %		07:24:09
2	Y 371.029	1252557.9	1252557.9	93.431 %		07:24:09
2	Ag 328.068†	-2771.5	-2420.0	-7.0725 µg/L	-7.0725 ppb	07:24:15
2	As 188.979†	-11.1	-12.6	-37.355 µg/L	-37.355 ppb	07:24:35
2	B 249.677†	788.0	492.8	-75.315 µg/L	-75.315 ppb	07:24:15
2	Ba 233.527†	260.6	300.9	7.4898 µg/L	7.4898 ppb	07:24:35
2	Be 313.107†	-3971.8	-885.3	-0.5664 µg/L	-0.5664 ppb	07:24:15
2	Cd 226.502†	397.5	566.4	-5.8768 µg/L	-5.8768 ppb	07:24:35
2	Co 228.616†	30.4	39.4	1.7968 µg/L	1.7968 ppb	07:24:35
2	Cr 267.716†	-72.3	-26.7	-0.5809 µg/L	-0.5809 ppb	07:24:35
2	Cu 324.752†	-1455.0	-4103.4	-2.0061 µg/L	-2.0061 ppb	07:24:15
2	Mn 257.610†	340.7	602.7	7.4559 µg/L	7.4559 ppb	07:24:15
2	Mo 202.031†	-114.2	-115.9	-4.8530 µg/L	-4.8530 ppb	07:24:35
2	Ni 231.604†	150.9	-148.5	-5.4120 µg/L	-5.4120 ppb	07:24:35
2	P 214.914†	97.1	79.6	159.41 µg/L	159.41 ppb	07:24:35
2	Pb 220.353†	49.9	-44.1	9.1261 µg/L	9.1261 ppb	07:24:35

2	S 181.975 Axial†	35.6	19.4	81.906 µg/L	81.906 ppb	07:24:35
2	Sb 206.836†	50.6	28.4	-14.972 µg/L	-14.972 ppb	07:24:35
2	Se 196.026†	6.4	-4.0	-57.713 µg/L	-57.713 ppb	07:24:35
2	SiO2†	1063.6	-121.1	-25.085 µg/L	-25.085 ppb	07:24:35
2	Si 251.611†	436.6	153.4	12.163 µg/L	12.163 ppb	07:24:35
2	Sn 189.927†	-56.5	-62.2	6.6871 µg/L	6.6871 ppb	07:24:35
2	Ti 334.940†	10979.6	11546.5	-3.0955 µg/L	-3.0955 ppb	07:24:15
2	Tl 190.801†	-24.0	0.1	20.080 µg/L	20.080 ppb	07:24:35
2	U 409.014†	39.9	116.3	-44.381 µg/L	-44.381 ppb	07:24:15
2	V 292.402†	-2167.3	-2236.0	-1.4374 µg/L	-1.4374 ppb	07:24:15
2	Zn 213.857†	1520.6	1125.5	-8.6557 µg/L	-8.6557 ppb	07:24:35
3	Sc RADIAL	54179.0	54179.0	97.0 %		07:23:27
3	Al 396.153Radial†	694227.6	715516.6	494470 µg/L	494470 ppb	07:23:21
3	Ca 317.933Radial†	527386.6	543359.7	471710 µg/L	471710 ppb	07:23:21
3	Fe 238.204 Radial†	22622.0	23300.2	181990 µg/L	181990 ppb	07:23:27
3	K 766.490 Radial†	184.9	-28.5	-19.574 µg/L	-19.574 ppb	07:23:27
3	Mg 279.077 IEC†	52494.3	54092.5	471000 µg/L	471000 ppb	07:23:27
3	Na 589.592 Radial†	712.2	144.8	45.018 µg/L	45.018 ppb	07:23:27
3	Sr 421.552†	378.3	357.3	3.5390 µg/L	3.5390 ppb	07:23:27
3	Sc 361.383	1835683.8	1835683.8	94.073 %		07:24:41
3	Y 371.029	1257190.4	1257190.4	93.777 %		07:24:41
3	Ag 328.068†	-2769.3	-2409.8	-7.1224 µg/L	-7.1224 ppb	07:24:47
3	As 188.979†	-14.1	-15.7	-43.096 µg/L	-43.096 ppb	07:25:08
3	B 249.677†	790.1	492.8	-74.288 µg/L	-74.288 ppb	07:24:47
3	Ba 233.527†	259.2	298.8	7.4341 µg/L	7.4341 ppb	07:25:08
3	Be 313.107†	-3979.7	-882.3	-0.5651 µg/L	-0.5651 ppb	07:24:47
3	Cd 226.502†	407.5	576.0	-5.4026 µg/L	-5.4026 ppb	07:25:08
3	Co 228.616†	51.4	61.6	2.8457 µg/L	2.8457 ppb	07:25:08
3	Cr 267.716†	-47.7	-0.4	-0.0224 µg/L	-0.0224 ppb	07:25:08
3	Cu 324.752†	-1438.0	-4081.2	-2.1305 µg/L	-2.1305 ppb	07:24:47
3	Mn 257.610†	443.0	710.5	7.7064 µg/L	7.7064 ppb	07:24:47
3	Mo 202.031†	-99.3	-99.7	-3.2769 µg/L	-3.2769 ppb	07:25:08
3	Ni 231.604†	162.1	-137.0	-4.8359 µg/L	-4.8359 ppb	07:25:08
3	P 214.914†	119.2	102.8	207.38 µg/L	207.38 ppb	07:25:08
3	Pb 220.353†	64.3	-29.0	12.882 µg/L	12.882 ppb	07:25:08
3	S 181.975 Axial†	38.2	22.1	93.125 µg/L	93.125 ppb	07:25:08
3	Sb 206.836†	68.2	46.9	2.5320 µg/L	2.5320 ppb	07:25:08
3	Se 196.026†	14.2	4.3	-47.169 µg/L	-47.169 ppb	07:25:08
3	SiO2†	1063.9	-123.8	-25.648 µg/L	-25.648 ppb	07:25:08
3	Si 251.611†	432.2	147.6	11.697 µg/L	11.697 ppb	07:25:08
3	Sn 189.927†	-63.2	-69.1	3.3969 µg/L	3.3969 ppb	07:25:08
3	Ti 334.940†	11553.6	12125.4	-1.4772 µg/L	-1.4772 ppb	07:24:47
3	Tl 190.801†	-32.7	-9.0	7.4924 µg/L	7.4924 ppb	07:25:08
3	U 409.014†	-55.1	15.1	-52.757 µg/L	-52.757 ppb	07:24:47
3	V 292.402†	-2225.4	-2291.6	-2.2363 µg/L	-2.2363 ppb	07:24:47
3	Zn 213.857†	1533.1	1134.5	-8.1291 µg/L	-8.1291 ppb	07:25:08

## Mean Data: ICSEA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1831306.6	93.849 %	0.2120			0.23%
Sc RADIAL	53897.1	96.5 %	0.46			0.47%
Y 371.029	1253636.9	93.512 %	0.2354			0.25%
Ag 328.068†	-2425.9	-7.1215 µg/L	0.04855	-7.1215 ppb	0.04855	0.68%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	718696.2	496670 µg/L	1904.3	496670 ppb	1904.3	0.38%
QC value within limits for Al 396.153Radial Recovery = 99.33%						
As 188.979†	-14.6	-40.956 µg/L	3.1368	-40.956 ppb	3.1368	7.66%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	495.6	-75.155 µg/L	0.7991	-75.155 ppb	0.7991	1.06%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	306.0	7.6163 µg/L	0.26865	7.6163 ppb	0.26865	3.53%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-926.1	-0.5922 µg/L	0.04590	-0.5922 ppb	0.04590	7.75%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	544902.0	473050 µg/L	1176.3	473050 ppb	1176.3	0.25%
QC value within limits for Ca 317.933Radial Recovery = 94.61%						
Cd 226.502†	568.0	-5.8262 µg/L	0.40078	-5.8262 ppb	0.40078	6.88%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	53.9	2.4802 µg/L	0.59233	2.4802 ppb	0.59233	23.88%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	-14.5 -0.3222 µg/L	0.28151 -0.3222 ppb	0.28151 87.38%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	-4107.0 -2.0415 µg/L	0.07761 -2.0415 ppb	0.07761 3.80%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	23541.5 183870 µg/L	1845.7 183870 ppb	1845.7 1.00%
QC value within limits for Fe 238.204 Radial	Recovery = 91.94%		
K 766.490 Radial†	-78.8 -54.165 µg/L	30.9693 -54.165 ppb	30.9693 57.18%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	54538.7 474880 µg/L	3882.8 474880 ppb	3882.8 0.82%
QC value within limits for Mg 279.077 IEC	Recovery = 94.98%		
Mn 257.610†	639.1 7.5654 µg/L	0.12818 7.5654 ppb	0.12818 1.69%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	-106.9 -3.9376 µg/L	0.81835 -3.9376 ppb	0.81835 20.78%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	143.0 44.465 µg/L	1.8188 44.465 ppb	1.8188 4.09%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-145.3 -5.2467 µg/L	0.35806 -5.2467 ppb	0.35806 6.82%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	87.1 174.47 µg/L	28.539 174.47 ppb	28.539 16.36%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	-36.1 11.138 µg/L	1.8921 11.138 ppb	1.8921 16.99%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	19.9 83.763 µg/L	8.5854 83.763 ppb	8.5854 10.25%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	36.4 -7.3856 µg/L	8.98178 -7.3856 ppb	8.98178 121.61%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	3.1 -47.575 µg/L	9.9414 -47.575 ppb	9.9414 20.90%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	-126.3 -26.156 µg/L	1.3962 -26.156 ppb	1.3962 5.34%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	144.4 11.446 µg/L	0.8694 11.446 ppb	0.8694 7.60%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	-63.8 5.9615 µg/L	2.28967 5.9615 ppb	2.28967 38.41%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	348.3 3.4493 µg/L	0.12357 3.4493 ppb	0.12357 3.58%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	11738.2 -2.6633 µg/L	1.03965 -2.6633 ppb	1.03965 39.04%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	-7.5 9.8178 µg/L	9.31982 9.8178 ppb	9.31982 94.93%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	57.6 -49.412 µg/L	4.4351 -49.412 ppb	4.4351 8.98%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	-2214.2 -1.2210 µg/L	1.13904 -1.2210 ppb	1.13904 93.29%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	1130.2 -8.5386 µg/L	0.36528 -8.5386 ppb	0.36528 4.28%
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: 2/11/2010 07:25:18

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	54774.4	54774.4	98.1 %		07:25:57
1	Al 396.153Radial†	682119.7	695395.9	480560 µg/L	480560 ppb	07:25:51
1	Ca 317.933Radial†	516470.8	526323.4	456920 µg/L	456920 ppb	07:25:51
1	Fe 238.204 Radial†	22585.4	23009.4	179730 µg/L	179730 ppb	07:25:57
1	K 766.490 Radial†	7210.7	7131.8	4899.5 µg/L	4899.5 ppb	07:25:57
1	Mg 279.077 IEC†	52472.4	53482.1	465690 µg/L	465690 ppb	07:25:57
1	Na 589.592 Radial†	15923.0	15643.3	4862.5 µg/L	4862.5 ppb	07:25:57
1	Sr 421.552†	48214.4	49119.0	486.48 µg/L	486.48 ppb	07:25:57
1	Sc 361.383	1837766.0	1837766.0	94.180 %		07:26:30
1	Y 371.029	1258337.9	1258337.9	93.862 %		07:26:30
1	Ag 328.068†	28233.8	30512.5	247.83 µg/L	247.83 ppb	07:26:36
1	As 188.979†	252.5	267.4	480.91 µg/L	480.91 ppb	07:26:57
1	B 249.677†	12173.6	12578.8	434.70 µg/L	434.70 ppb	07:26:36
1	Ba 233.527†	18245.8	19396.5	486.27 µg/L	486.27 ppb	07:26:36
1	Be 313.107†	350346.2	375344.5	235.61 µg/L	235.61 ppb	07:26:30
1	Cd 226.502†	16540.1	17705.0	446.41 µg/L	446.41 ppb	07:26:36
1	Co 228.616†	8429.2	8957.2	422.80 µg/L	422.80 ppb	07:26:57
1	Cr 267.716†	21113.2	22468.2	476.43 µg/L	476.43 ppb	07:26:36
1	Cu 324.752†	72207.5	74117.1	523.06 µg/L	523.06 ppb	07:26:36
1	Mn 257.610†	132572.1	141004.2	471.60 µg/L	471.60 ppb	07:26:36
1	Mo 202.031†	4432.1	4711.9	488.51 µg/L	488.51 ppb	07:26:57
1	Ni 231.604†	7783.1	7954.7	419.74 µg/L	419.74 ppb	07:26:57
1	P 214.914†	1250.6	1304.0	2614.3 µg/L	2614.3 ppb	07:26:57
1	Pb 220.353†	1773.5	1785.7	475.42 µg/L	475.42 ppb	07:26:57
1	S 181.975 Axial†	614.7	634.2	2675.9 µg/L	2675.9 ppb	07:26:57
1	Sb 206.836†	557.5	566.3	490.59 µg/L	490.59 ppb	07:26:57
1	Se 196.026†	1537.2	1621.4	2271.9 µg/L	2271.9 ppb	07:26:57
1	SiO2†	49540.5	51347.2	10635 µg/L	10635 ppb	07:26:36
1	Si 251.611†	59664.3	63039.5	4997.3 µg/L	4997.3 ppb	07:26:36
1	Sn 189.927†	998.8	1058.6	499.68 µg/L	499.68 ppb	07:26:57
1	Ti 334.940†	206780.0	219402.2	480.77 µg/L	480.77 ppb	07:26:36
1	Tl 190.801†	273.3	315.9	448.51 µg/L	448.51 ppb	07:26:57
1	U 409.014†	5106.3	5495.6	424.24 µg/L	424.24 ppb	07:26:36
1	V 292.402†	43378.1	46132.7	501.14 µg/L	501.14 ppb	07:26:36
1	Zn 213.857†	19654.6	20374.0	450.09 µg/L	450.09 ppb	07:26:36
2	Sc RADIAL	55184.3	55184.3	98.8 %		07:26:08
2	Al 396.153Radial†	687112.6	695283.0	480480 µg/L	480480 ppb	07:26:03
2	Ca 317.933Radial†	521017.3	527013.1	457520 µg/L	457520 ppb	07:26:03
2	Fe 238.204 Radial†	22550.1	22802.6	178110 µg/L	178110 ppb	07:26:08
2	K 766.490 Radial†	7189.0	7055.3	4846.9 µg/L	4846.9 ppb	07:26:08
2	Mg 279.077 IEC†	52299.8	52910.1	460710 µg/L	460710 ppb	07:26:08
2	Na 589.592 Radial†	15922.3	15522.0	4824.8 µg/L	4824.8 ppb	07:26:08
2	Sr 421.552†	48222.8	48762.4	482.95 µg/L	482.95 ppb	07:26:08
2	Sc 361.383	1829559.1	1829559.1	93.759 %		07:27:03
2	Y 371.029	1254243.9	1254243.9	93.557 %		07:27:03
2	Ag 328.068†	28309.2	30727.4	249.38 µg/L	249.38 ppb	07:27:09
2	As 188.979†	247.1	262.8	472.26 µg/L	472.26 ppb	07:27:29
2	B 249.677†	12100.5	12558.8	434.70 µg/L	434.70 ppb	07:27:09
2	Ba 233.527†	18258.4	19496.9	488.78 µg/L	488.78 ppb	07:27:09
2	Be 313.107†	348300.4	374831.2	235.29 µg/L	235.29 ppb	07:27:03
2	Cd 226.502†	16507.5	17749.0	447.76 µg/L	447.76 ppb	07:27:09
2	Co 228.616†	8472.0	9042.9	426.86 µg/L	426.86 ppb	07:27:29
2	Cr 267.716†	21034.9	22485.3	476.79 µg/L	476.79 ppb	07:27:09
2	Cu 324.752†	72203.3	74456.5	525.12 µg/L	525.12 ppb	07:27:09
2	Mn 257.610†	132328.2	141375.6	472.81 µg/L	472.81 ppb	07:27:09
2	Mo 202.031†	4470.0	4773.4	494.73 µg/L	494.73 ppb	07:27:29
2	Ni 231.604†	7818.5	8029.6	423.65 µg/L	423.65 ppb	07:27:29
2	P 214.914†	1256.8	1316.6	2641.2 µg/L	2641.2 ppb	07:27:29
2	Pb 220.353†	1755.2	1774.7	472.66 µg/L	472.66 ppb	07:27:29

2	S 181.975 Axial†	613.3	635.5	2681.6 µg/L	2681.6 ppb	07:27:29
2	Sb 206.836†	566.7	578.8	502.28 µg/L	502.28 ppb	07:27:29
2	Se 196.026†	1541.1	1632.9	2288.2 µg/L	2288.2 ppb	07:27:29
2	SiO2†	49445.4	51481.7	10663 µg/L	10663 ppb	07:27:09
2	Si 251.611†	59660.1	63319.2	5019.5 µg/L	5019.5 ppb	07:27:09
2	Sn 189.927†	1001.5	1066.3	502.63 µg/L	502.63 ppb	07:27:29
2	Ti 334.940†	206590.6	220185.1	482.99 µg/L	482.99 ppb	07:27:09
2	Tl 190.801†	275.6	319.7	453.36 µg/L	453.36 ppb	07:27:29
2	U 409.014†	5169.9	5587.7	432.43 µg/L	432.43 ppb	07:27:09
2	V 292.402†	43320.2	46277.6	502.50 µg/L	502.50 ppb	07:27:09
2	Zn 213.857†	19670.6	20484.6	453.08 µg/L	453.08 ppb	07:27:09
3	Sc RADIAL	54829.9	54829.9	98.2 %		07:26:20
3	Al 396.153Radial†	688562.0	701252.7	484610 µg/L	484610 ppb	07:26:14
3	Ca 317.933Radial†	522583.7	532015.8	461870 µg/L	461870 ppb	07:26:14
3	Fe 238.204 Radial†	22630.6	23032.1	179900 µg/L	179900 ppb	07:26:20
3	K 766.490 Radial†	7248.3	7162.6	4920.6 µg/L	4920.6 ppb	07:26:20
3	Mg 279.077 IEC†	52452.3	53407.5	465040 µg/L	465040 ppb	07:26:20
3	Na 589.592 Radial†	15935.2	15639.2	4861.3 µg/L	4861.3 ppb	07:26:20
3	Sr 421.552†	48309.2	49165.9	486.94 µg/L	486.94 ppb	07:26:20
3	Sc 361.383	1842758.8	1842758.8	94.436 %		07:27:36
3	Y 371.029	1264073.9	1264073.9	94.290 %		07:27:36
3	Ag 328.068†	28243.1	30441.1	247.29 µg/L	247.29 ppb	07:27:42
3	As 188.979†	234.1	247.2	443.26 µg/L	443.26 ppb	07:28:02
3	B 249.677†	12082.7	12447.6	429.09 µg/L	429.09 ppb	07:27:42
3	Ba 233.527†	18239.0	19336.8	484.77 µg/L	484.77 ppb	07:27:42
3	Be 313.107†	350914.1	374937.9	235.36 µg/L	235.36 ppb	07:27:36
3	Cd 226.502†	16480.0	17593.8	443.46 µg/L	443.46 ppb	07:27:42
3	Co 228.616†	8340.0	8838.4	417.19 µg/L	417.19 ppb	07:28:02
3	Cr 267.716†	21013.5	22301.9	472.90 µg/L	472.90 ppb	07:27:42
3	Cu 324.752†	71963.7	73651.2	519.96 µg/L	519.96 ppb	07:27:42
3	Mn 257.610†	131815.5	139821.7	467.74 µg/L	467.74 ppb	07:27:42
3	Mo 202.031†	4396.1	4661.0	483.31 µg/L	483.31 ppb	07:28:02
3	Ni 231.604†	7721.7	7867.3	415.15 µg/L	415.15 ppb	07:28:02
3	P 214.914†	1249.8	1299.6	2606.5 µg/L	2606.5 ppb	07:28:02
3	Pb 220.353†	1739.2	1744.3	465.06 µg/L	465.06 ppb	07:28:02
3	S 181.975 Axial†	607.4	624.6	2635.6 µg/L	2635.6 ppb	07:28:02
3	Sb 206.836†	538.6	544.7	470.02 µg/L	470.02 ppb	07:28:02
3	Se 196.026†	1521.7	1600.6	2241.8 µg/L	2241.8 ppb	07:28:02
3	SiO2†	49361.1	51014.7	10566 µg/L	10566 ppb	07:27:42
3	Si 251.611†	59557.5	62754.8	4974.7 µg/L	4974.7 ppb	07:27:42
3	Sn 189.927†	998.6	1055.5	498.20 µg/L	498.20 ppb	07:28:02
3	Ti 334.940†	206332.2	218333.1	478.41 µg/L	478.41 ppb	07:27:42
3	Tl 190.801†	269.5	311.2	442.04 µg/L	442.04 ppb	07:28:02
3	U 409.014†	5115.3	5490.4	423.47 µg/L	423.47 ppb	07:27:42
3	V 292.402†	43353.9	45982.4	499.56 µg/L	499.56 ppb	07:27:42
3	Zn 213.857†	19634.8	20296.4	448.29 µg/L	448.29 ppb	07:27:42

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1836694.6	94.125 %	0.3415			0.36%
Sc RADIAL	54929.6	98.4 %	0.40			0.40%
Y 371.029	1258885.2	93.903 %	0.3683			0.39%
Ag 328.068†	30560.4	248.17 µg/L	1.088	248.17 ppb	1.088	0.44%
QC value within limits for Ag 328.068 Recovery = 99.27%						
Al 396.153Radial†	697310.5	481880 µg/L	2359.8	481880 ppb	2359.8	0.49%
QC value within limits for Al 396.153Radial Recovery = 96.38%						
As 188.979†	259.1	465.48 µg/L	19.721	465.48 ppb	19.721	4.24%
QC value within limits for As 188.979 Recovery = 93.10%						
B 249.677†	12528.4	432.83 µg/L	3.237	432.83 ppb	3.237	0.75%
QC value within limits for B 249.677 Recovery = 86.57%						
Ba 233.527†	19410.1	486.61 µg/L	2.027	486.61 ppb	2.027	0.42%
QC value within limits for Ba 233.527 Recovery = 97.32%						
Be 313.107†	375037.9	235.42 µg/L	0.170	235.42 ppb	0.170	0.07%
QC value within limits for Be 313.107 Recovery = 94.17%						
Ca 317.933Radial†	528450.7	458770 µg/L	2697.0	458770 ppb	2697.0	0.59%
QC value within limits for Ca 317.933Radial Recovery = 91.75%						
Cd 226.502†	17682.6	445.88 µg/L	2.199	445.88 ppb	2.199	0.49%
QC value within limits for Cd 226.502 Recovery = 89.18%						
Co 228.616†	8946.2	422.29 µg/L	4.856	422.29 ppb	4.856	1.15%



QC value within limits for Co 228.616	Recovery = 84.46%			
Cr 267.716†	22418.5	475.38 µg/L	2.148	475.38 ppb
QC value within limits for Cr 267.716	Recovery = 95.08%			
Cu 324.752†	74074.9	522.71 µg/L	2.599	522.71 ppb
QC value within limits for Cu 324.752	Recovery = 104.54%			
Fe 238.204 Radial†	22948.0	179250 µg/L	987.4	179250 ppb
QC value within limits for Fe 238.204 Radial	Recovery = 89.62%			
K 766.490 Radial†	7116.6	4889.0 µg/L	37.97	4889.0 ppb
QC value within limits for K 766.490 Radial	Recovery = 97.78%			
Mg 279.077 IEC†	53266.6	463820 µg/L	2707.4	463820 ppb
QC value within limits for Mg 279.077 IEC	Recovery = 92.76%			
Mn 257.610†	140733.8	470.72 µg/L	2.650	470.72 ppb
QC value within limits for Mn 257.610	Recovery = 94.14%			
Mo 202.031†	4715.4	488.85 µg/L	5.717	488.85 ppb
QC value within limits for Mo 202.031	Recovery = 97.77%			
Na 589.592 Radial†	15601.5	4849.5 µg/L	21.42	4849.5 ppb
QC value within limits for Na 589.592 Radial	Recovery = 96.99%			
Ni 231.604†	7950.5	419.51 µg/L	4.251	419.51 ppb
QC value within limits for Ni 231.604	Recovery = 83.90%			
P 214.914†	1306.7	2620.7 µg/L	18.19	2620.7 ppb
QC value within limits for P 214.914	Recovery = 104.83%			
Pb 220.353†	1768.2	471.05 µg/L	5.369	471.05 ppb
QC value within limits for Pb 220.353	Recovery = 94.21%			
S 181.975 Axial†	631.4	2664.4 µg/L	25.11	2664.4 ppb
QC value within limits for S 181.975 Axial	Recovery = 106.57%			
Sb 206.836†	563.3	487.63 µg/L	16.330	487.63 ppb
QC value within limits for Sb 206.836	Recovery = 97.53%			
Se 196.026†	1618.3	2267.3 µg/L	23.58	2267.3 ppb
QC value within limits for Se 196.026	Recovery = 90.69%			
SiO2†	51281.2	10622 µg/L	49.8	10622 ppb
QC value within limits for SiO2	Recovery = 99.31%			
Si 251.611†	63037.8	4997.2 µg/L	22.37	4997.2 ppb
QC value within limits for Si 251.611	Recovery = 99.94%			
Sn 189.927†	1060.1	500.17 µg/L	2.260	500.17 ppb
QC value within limits for Sn 189.927	Recovery = 100.03%			
Sr 421.552†	49015.8	485.45 µg/L	2.185	485.45 ppb
QC value within limits for Sr 421.552	Recovery = 97.09%			
Ti 334.940†	219306.8	480.72 µg/L	2.290	480.72 ppb
QC value within limits for Ti 334.940	Recovery = 96.14%			
Tl 190.801†	315.6	447.97 µg/L	5.683	447.97 ppb
QC value within limits for Tl 190.801	Recovery = 89.59%			
U 409.014†	5524.6	426.71 µg/L	4.964	426.71 ppb
QC value within limits for U 409.014	Recovery = 85.34%			
V 292.402†	46130.9	501.07 µg/L	1.468	501.07 ppb
QC value within limits for V 292.402	Recovery = 100.21%			
Zn 213.857†	20385.0	450.48 µg/L	2.419	450.48 ppb
QC value within limits for Zn 213.857	Recovery = 90.10%			

All analyte(s) passed QC.

Sequence No.: 11  
 Sample ID: LR1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 105  
 Date Collected: 2/11/2010 07:28:11  
 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	54798.2	54798.2	98.1 %		07:28:51
1	Al 396.153Radial†	668459.9	681174.6	470740 µg/L	470740 ppb	07:28:46
1	Ca 317.933Radial†	508829.8	518308.6	449970 µg/L	449970 ppb	07:28:46
1	Fe 238.204 Radial†	54047.1	55058.7	430040 µg/L	430040 ppb	07:28:51
1	K 766.490 Radial†	113.4	-103.5	-71.099 µg/L	-71.099 ppb	07:28:51
1	Mg 279.077 IEC†	50906.2	51862.8	451310 µg/L	451310 ppb	07:28:51
1	Na 589.592 Radial†	1442208.7	1469013.4	456620 µg/L	456620 ppb	07:28:46
1	Sr 421.552†	524.6	502.0	4.9722 µg/L	4.9722 ppb	07:28:51
1	Sc 361.383	1831162.0	1831162.0	93.842 %		07:29:26
1	Y 371.029	1249220.6	1249220.6	93.182 %		07:29:26
1	Ag 328.068†	-4877.7	-4663.9	-9.0324 µg/L	-9.0324 ppb	07:29:32
1	As 188.979†	-23.7	-26.0	-46.608 µg/L	-46.608 ppb	07:29:52
1	B 249.677†	1456.5	1205.0	-173.84 µg/L	-173.84 ppb	07:29:32
1	Ba 233.527†	559.7	619.6	15.383 µg/L	15.383 ppb	07:29:52
1	Be 313.107†	-10981.8	-8354.5	-5.2617 µg/L	-5.2617 ppb	07:29:32
1	Cd 226.502†	1127.5	1344.2	-13.204 µg/L	-13.204 ppb	07:29:32
1	Co 228.616†	176.8	195.4	9.1480 µg/L	9.1480 ppb	07:29:52
1	Cr 267.716†	75.4	130.7	2.7274 µg/L	2.7274 ppb	07:29:52
1	Cu 324.752†	-8847.4	-11980.7	-20.737 µg/L	-20.737 ppb	07:29:32
1	Mn 257.610†	-6307.1	-6481.4	17.689 µg/L	17.689 ppb	07:29:26
1	Mo 202.031†	-190.6	-197.2	-3.8191 µg/L	-3.8191 ppb	07:29:52
1	Ni 231.604†	66.4	-238.6	-6.9560 µg/L	-6.9560 ppb	07:29:52
1	P 214.914†	286.7	281.6	370.52 µg/L	370.52 ppb	07:29:52
1	Pb 220.353†	173.4	87.5	18.368 µg/L	18.368 ppb	07:29:52
1	S 181.975 Axial†	34.1	17.8	75.038 µg/L	75.038 ppb	07:29:52
1	Sb 206.836†	44.8	22.1	-18.861 µg/L	-18.861 ppb	07:29:52
1	Se 196.026†	-140.5	-160.5	418.16 µg/L	418.16 ppb	07:29:52
1	SiO2†	975.6	-215.2	-44.569 µg/L	-44.569 ppb	07:29:52
1	Si 251.611†	-298.6	-630.1	-49.947 µg/L	-49.947 ppb	07:29:52
1	Sn 189.927†	-55.5	-61.1	-21.723 µg/L	-21.723 ppb	07:29:52
1	Ti 334.940†	13954.3	14713.9	5.7293 µg/L	5.7293 ppb	07:29:32
1	Tl 190.801†	-57.2	-35.2	23.541 µg/L	23.541 ppb	07:29:52
1	U 409.014†	141068.3	150399.8	12970 µg/L	12970 ppb	07:29:32
1	V 292.402†	-6322.0	-6662.8	-4.5237 µg/L	-4.5237 ppb	07:29:32
1	Zn 213.857†	2806.2	2495.1	13.867 µg/L	13.867 ppb	07:29:52
2	Sc RADIAL	54854.0	54854.0	98.2 %		07:29:03
2	Al 396.153Radial†	672393.0	684486.2	473030 µg/L	473030 ppb	07:28:58
2	Ca 317.933Radial†	512362.3	521377.7	452630 µg/L	452630 ppb	07:28:58
2	Fe 238.204 Radial†	53924.5	54877.9	428630 µg/L	428630 ppb	07:29:03
2	K 766.490 Radial†	107.2	-109.9	-75.529 µg/L	-75.529 ppb	07:29:03
2	Mg 279.077 IEC†	50960.4	51865.4	451330 µg/L	451330 ppb	07:29:03
2	Na 589.592 Radial†	1450619.0	1476081.6	458820 µg/L	458820 ppb	07:28:58
2	Sr 421.552†	524.7	501.6	4.9677 µg/L	4.9677 ppb	07:29:03
2	Sc 361.383	1821532.4	1821532.4	93.348 %		07:29:59
2	Y 371.029	1241043.5	1241043.5	92.572 %		07:29:59
2	Ag 328.068†	-4828.4	-4638.6	-8.9339 µg/L	-8.9339 ppb	07:30:05
2	As 188.979†	-22.4	-24.8	-44.484 µg/L	-44.484 ppb	07:30:25
2	B 249.677†	1411.6	1165.2	-174.77 µg/L	-174.77 ppb	07:30:05
2	Ba 233.527†	557.7	620.7	15.408 µg/L	15.408 ppb	07:30:25
2	Be 313.107†	-10998.0	-8433.7	-5.3113 µg/L	-5.3113 ppb	07:30:05
2	Cd 226.502†	1156.3	1381.4	-12.065 µg/L	-12.065 ppb	07:30:05
2	Co 228.616†	189.7	210.3	9.8499 µg/L	9.8499 ppb	07:30:25
2	Cr 267.716†	63.7	118.6	2.4702 µg/L	2.4702 ppb	07:30:25
2	Cu 324.752†	-8819.3	-12000.3	-21.066 µg/L	-21.066 ppb	07:30:05
2	Mn 257.610†	-6183.2	-6384.1	17.822 µg/L	17.822 ppb	07:29:59
2	Mo 202.031†	-202.9	-211.4	-5.3266 µg/L	-5.3266 ppb	07:30:25
2	Ni 231.604†	71.4	-232.9	-6.6755 µg/L	-6.6755 ppb	07:30:25
2	P 214.914†	286.6	283.1	375.43 µg/L	375.43 ppb	07:30:25
2	Pb 220.353†	162.4	76.6	15.722 µg/L	15.722 ppb	07:30:25

2	S 181.975 Axial†	30.6	14.2	59.869 µg/L	59.869 ppb	07:30:25
2	Sb 206.836†	45.7	23.3	-18.015 µg/L	-18.015 ppb	07:30:25
2	Se 196.026†	-131.6	-151.7	426.09 µg/L	426.09 ppb	07:30:25
2	SiO2†	948.4	-238.8	-49.460 µg/L	-49.460 ppb	07:30:25
2	Si 251.611†	-326.1	-661.2	-52.414 µg/L	-52.414 ppb	07:30:25
2	Sn 189.927†	-51.9	-57.6	-20.043 µg/L	-20.043 ppb	07:30:25
2	Ti 334.940†	13791.2	14617.8	5.5467 µg/L	5.5467 ppb	07:30:05
2	Tl 190.801†	-58.7	-37.1	20.732 µg/L	20.732 ppb	07:30:25
2	U 409.014†	140850.2	150960.9	13018 µg/L	13018 ppb	07:30:05
2	V 292.402†	-6375.3	-6755.5	-5.6050 µg/L	-5.6050 ppb	07:30:05
2	Zn 213.857†	2795.6	2499.5	14.038 µg/L	14.038 ppb	07:30:25
3	Sc RADIAL	54976.2	54976.2	98.5 %		07:29:15
3	Al 396.153Radial†	669326.0	679849.0	469820 µg/L	469820 ppb	07:29:10
3	Ca 317.933Radial†	509483.4	517293.8	449090 µg/L	449090 ppb	07:29:10
3	Fe 238.204 Radial†	53974.1	54806.2	428070 µg/L	428070 ppb	07:29:15
3	K 766.490 Radial†	160.4	-56.1	-38.538 µg/L	-38.538 ppb	07:29:15
3	Mg 279.077 IEC†	50894.9	51683.5	449750 µg/L	449750 ppb	07:29:15
3	Na 589.592 Radial†	1446540.7	1468655.6	456510 µg/L	456510 ppb	07:29:10
3	Sr 421.552†	538.5	514.4	5.0945 µg/L	5.0945 ppb	07:29:15
3	Sc 361.383	1828693.7	1828693.7	93.715 %		07:30:31
3	Y 371.029	1246566.4	1246566.4	92.984 %		07:30:31
3	Ag 328.068†	-4972.5	-4772.0	-9.9735 µg/L	-9.9735 ppb	07:30:37
3	As 188.979†	-21.8	-24.1	-43.074 µg/L	-43.074 ppb	07:30:58
3	B 249.677†	1402.0	1149.0	-175.16 µg/L	-175.16 ppb	07:30:37
3	Ba 233.527†	555.6	616.1	15.297 µg/L	15.297 ppb	07:30:58
3	Be 313.107†	-10997.8	-8387.3	-5.2822 µg/L	-5.2822 ppb	07:30:37
3	Cd 226.502†	1117.7	1335.4	-13.212 µg/L	-13.212 ppb	07:30:37
3	Co 228.616†	194.8	214.8	10.067 µg/L	10.067 ppb	07:30:58
3	Cr 267.716†	79.8	135.5	2.8295 µg/L	2.8295 ppb	07:30:58
3	Cu 324.752†	-8800.4	-11943.2	-20.760 µg/L	-20.760 ppb	07:30:37
3	Mn 257.610†	-6474.4	-6669.0	16.869 µg/L	16.869 ppb	07:30:31
3	Mo 202.031†	-183.8	-190.2	-3.1788 µg/L	-3.1788 ppb	07:30:58
3	Ni 231.604†	90.3	-212.9	-5.6343 µg/L	-5.6343 ppb	07:30:58
3	P 214.914†	315.0	312.2	434.52 µg/L	434.52 ppb	07:30:58
3	Pb 220.353†	183.7	98.6	21.218 µg/L	21.218 ppb	07:30:58
3	S 181.975 Axial†	40.8	25.0	105.65 µg/L	105.65 ppb	07:30:58
3	Sb 206.836†	47.8	25.4	-15.779 µg/L	-15.779 ppb	07:30:58
3	Se 196.026†	-140.0	-160.1	414.90 µg/L	414.90 ppb	07:30:58
3	SiO2†	976.3	-213.0	-44.110 µg/L	-44.110 ppb	07:30:58
3	Si 251.611†	-308.9	-641.5	-50.853 µg/L	-50.853 ppb	07:30:58
3	Sn 189.927†	-46.0	-51.0	-17.272 µg/L	-17.272 ppb	07:30:58
3	Ti 334.940†	13878.8	14653.5	5.6980 µg/L	5.6980 ppb	07:30:37
3	Tl 190.801†	-46.2	-23.6	38.881 µg/L	38.881 ppb	07:30:58
3	U 409.014†	141222.9	150767.6	13002 µg/L	13002 ppb	07:30:37
3	V 292.402†	-6174.8	-6514.8	-3.1939 µg/L	-3.1939 ppb	07:30:37
3	Zn 213.857†	2818.3	2512.1	14.451 µg/L	14.451 ppb	07:30:58

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Mean Data: LRL

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1827129.3	93.635 %		0.2563			0.27%
Sc RADIAL	54876.1	98.3 %		0.16			0.17%
Y 371.029	1245610.2	92.913 %		0.3112			0.33%
Ag 328.068†	-4691.5	-9.3133 µg/L		0.57389	-9.3133 ppb	0.57389	6.16%
Al 396.153Radial†	681836.6	471200 µg/L		1650.6	471200 ppb	1650.6	0.35%
QC value within limits for Al 396.153Radial Recovery = 94.24%							
As 188.979†	-24.9	-44.722 µg/L		1.7790	-44.722 ppb	1.7790	3.98%
B 249.677†	1173.1	-174.59 µg/L		0.680	-174.59 ppb	0.680	0.39%
Ba 233.527†	618.8	15.362 µg/L		0.0582	15.362 ppb	0.0582	0.38%
Be 313.107†	-8391.8	-5.2851 µg/L		0.02495	-5.2851 ppb	0.02495	0.47%
Ca 317.933Radial†	518993.4	450560 µg/L		1846.0	450560 ppb	1846.0	0.41%
QC value within limits for Ca 317.933Radial Recovery = 90.11%							
Cd 226.502†	1353.7	-12.827 µg/L		0.6601	-12.827 ppb	0.6601	5.15%
Co 228.616†	206.8	9.6883 µg/L		0.48039	9.6883 ppb	0.48039	4.96%
Cr 267.716†	128.3	2.6757 µg/L		0.18518	2.6757 ppb	0.18518	6.92%
Cu 324.752†	-11974.7	-20.854 µg/L		0.1835	-20.854 ppb	0.1835	0.88%
Fe 238.204 Radial†	54914.2	428910 µg/L		1016.0	428910 ppb	1016.0	0.24%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 85.78%							
K 766.490 Radial†	-89.8	-61.722 µg/L		20.1999	-61.722 ppb	20.1999	32.73%
Mg 279.077 IEC†	51803.9	450800 µg/L		907.6	450800 ppb	907.6	0.20%

QC value within limits for Mg 279.077 IEC Recovery = 90.16%

Mn 257.610†	-6511.5	17.460 µg/L	0.5162	17.460 ppb	0.5162	2.96%
Mo 202.031†	-199.6	-4.1081 µg/L	1.10271	-4.1081 ppb	1.10271	26.84%
Na 589.592 Radial†	1471250.2	457320 µg/L	1301.8	457320 ppb	1301.8	0.28%

QC value within limits for Na 589.592 Radial Recovery = 91.46%

Ni 231.604†	-228.2	-6.4219 µg/L	0.69636	-6.4219 ppb	0.69636	10.84%
P 214.914†	292.3	393.49 µg/L	35.622	393.49 ppb	35.622	9.05%
Pb 220.353†	87.6	18.436 µg/L	2.7485	18.436 ppb	2.7485	14.91%
S 181.975 Axial†	19.0	80.184 µg/L	23.3183	80.184 ppb	23.3183	29.08%
Sb 206.836†	23.6	-17.552 µg/L	1.5924	-17.552 ppb	1.5924	9.07%
Se 196.026†	-157.5	419.72 µg/L	5.755	419.72 ppb	5.755	1.37%
SiO2†	-222.3	-46.047 µg/L	2.9651	-46.047 ppb	2.9651	6.44%
Si 251.611†	-644.3	-51.071 µg/L	1.2479	-51.071 ppb	1.2479	2.44%
Sn 189.927†	-56.6	-19.679 µg/L	2.2481	-19.679 ppb	2.2481	11.42%
Sr 421.552†	506.0	5.0115 µg/L	0.07191	5.0115 ppb	0.07191	1.44%
Ti 334.940†	14661.7	5.6580 µg/L	0.09766	5.6580 ppb	0.09766	1.73%
Tl 190.801†	-31.9	27.718 µg/L	9.7687	27.718 ppb	9.7687	35.24%
U 409.014†	150709.5	12997 µg/L	24.8	12997 ppb	24.8	0.19%

QC value less than the lower limit for U 409.014 Recovery = 86.64%

V 292.402†	-6644.4	-4.4409 µg/L	1.20769	-4.4409 ppb	1.20769	27.20%
Zn 213.857†	2502.2	14.119 µg/L	0.3001	14.119 ppb	0.3001	2.13%

QC Failed. Continue with analysis.

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 2/11/2010 07:31:07

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	56145.9	56145.9	101 %		07:31:50
1	Al 396.153Radial†	482.4	497.4	140.47 µg/L	140.47 ppb	07:31:50
1	Ca 317.933Radial†	456.5	267.8	232.53 µg/L	232.53 ppb	07:32:10
1	Fe 238.204 Radial†	17.8	2.6	216.76 µg/L	216.76 ppb	07:32:10
1	K 766.490 Radial†	421920.3	419395.5	288120 µg/L	288120 ppb	07:31:44
1	Mg 279.077 IEC†	19.2	8.9	243.65 µg/L	243.65 ppb	07:32:10
1	Na 589.592 Radial†	1515.4	917.9	285.32 µg/L	285.32 ppb	07:31:50
1	Sr 421.552†	960107.8	954828.5	9456.7 µg/L	9456.7 ppb	07:31:44
1	Sc 361.383	1958516.8	1958516.8	100.37 %		07:33:42
1	Y 371.029	1340056.1	1340056.1	99.958 %		07:33:42
1	Ag 328.068†	-7206.9	-6646.6	14.336 µg/L	14.336 ppb	07:33:47
1	As 188.979†	5176.6	5156.9	9532.2 µg/L	9532.2 ppb	07:33:47
1	B 249.677†	115188.9	114419.3	4838.3 µg/L	4838.3 ppb	07:33:42
1	Ba 233.527†	573207.9	571128.9	14311 µg/L	14311 ppb	07:33:42
1	Be 313.107†	4471300.4	4458249.8	2797.2 µg/L	2797.2 ppb	07:33:31
1	Cd 226.502†	358558.4	357386.1	9422.1 µg/L	9422.1 ppb	07:33:42
1	Co 228.616†	196330.9	195617.9	9236.3 µg/L	9236.3 ppb	07:33:42
1	Cr 267.716†	1130919.7	1126822.4	23885 µg/L	23885 ppb	07:33:42
1	Cu 324.752†	2967158.4	2953723.7	19850 µg/L	19850 ppb	07:33:42
1	Mn 257.610†	2848705.1	2838497.1	9387.5 µg/L	9387.5 ppb	07:33:42
1	Mo 202.031†	97139.0	96788.6	9894.4 µg/L	9894.4 ppb	07:33:42
1	Ni 231.604†	180833.3	179860.7	9438.1 µg/L	9438.1 ppb	07:33:42
1	P 214.914†	7448.1	7397.0	13189 µg/L	13189 ppb	07:33:47
1	Pb 220.353†	96915.8	96463.0	24615 µg/L	24615 ppb	07:33:42
1	S 181.975 Axial†	12513.8	12449.4	52529 µg/L	52529 ppb	07:33:47
1	Sb 206.836†	11164.8	11098.3	10236 µg/L	10236 ppb	07:33:47
1	Se 196.026†	6704.7	6669.3	9553.6 µg/L	9553.6 ppb	07:33:47
1	SiO2†	470407.5	467427.5	96816 µg/L	96816 ppb	07:33:42
1	Si 251.611†	572058.3	569648.4	45157 µg/L	45157 ppb	07:33:42
1	Sn 189.927†	23631.1	23542.5	10367 µg/L	10367 ppb	07:33:47
1	Ti 334.940†	4165977.1	4150542.2	9652.8 µg/L	9652.8 ppb	07:33:31
1	Tl 190.801†	6997.6	6997.7	9476.8 µg/L	9476.8 ppb	07:33:47
1	U 409.014†	706.4	777.6	67.490 µg/L	67.490 ppb	07:33:42
1	V 292.402†	963437.7	959978.4	10009 µg/L	10009 ppb	07:33:42
1	Zn 213.857†	594064.4	591390.4	14082 µg/L	14082 ppb	07:33:42
2	Sc RADIAL	56527.0	56527.0	101 %		07:32:22
2	Al 396.153Radial†	429.6	442.0	110.31 µg/L	110.31 ppb	07:32:22
2	Ca 317.933Radial†	358.2	167.7	145.56 µg/L	145.56 ppb	07:32:42
2	Fe 238.204 Radial†	7.2	-8.0	126.63 µg/L	126.63 ppb	07:32:42
2	K 766.490 Radial†	425783.2	420382.5	288800 µg/L	288800 ppb	07:32:16
2	Mg 279.077 IEC†	3.6	-6.7	101.33 µg/L	101.33 ppb	07:32:42
2	Na 589.592 Radial†	1369.3	763.4	237.31 µg/L	237.31 ppb	07:32:22
2	Sr 421.552†	972694.1	960824.1	9516.1 µg/L	9516.1 ppb	07:32:16
2	Sc 361.383	1952662.5	1952662.5	100.07 %		07:34:07
2	Y 371.029	1333706.3	1333706.3	99.484 %		07:34:07
2	Ag 328.068†	-6692.3	-6153.8	15.377 µg/L	15.377 ppb	07:34:12
2	As 188.979†	4880.1	4876.0	9012.7 µg/L	9012.7 ppb	07:34:12
2	B 249.677†	112203.6	111780.2	4725.7 µg/L	4725.7 ppb	07:34:07
2	Ba 233.527†	553136.6	552783.5	13851 µg/L	13851 ppb	07:34:07
2	Be 313.107†	4427189.2	4427524.9	2777.9 µg/L	2777.9 ppb	07:33:56
2	Cd 226.502†	344286.6	344195.1	9074.3 µg/L	9074.3 ppb	07:34:07
2	Co 228.616†	188392.8	188271.7	8888.8 µg/L	8888.8 ppb	07:34:07
2	Cr 267.716†	1069092.1	1068415.0	22647 µg/L	22647 ppb	07:34:07
2	Cu 324.752†	2841431.1	2836945.1	19065 µg/L	19065 ppb	07:34:07
2	Mn 257.610†	2725933.0	2724317.8	9009.9 µg/L	9009.9 ppb	07:34:07
2	Mo 202.031†	92977.0	92919.6	9498.8 µg/L	9498.8 ppb	07:34:07
2	Ni 231.604†	173234.6	172807.3	9067.9 µg/L	9067.9 ppb	07:34:07
2	P 214.914†	6831.2	6802.6	12043 µg/L	12043 ppb	07:34:12
2	Pb 220.353†	93728.6	93567.5	23876 µg/L	23876 ppb	07:34:07

2	S 181.975 Axial†	11728.1	11701.6	49374 µg/L	49374 ppb	07:34:12
2	Sb 206.836†	10411.6	10378.9	9573.2 µg/L	9573.2 ppb	07:34:12
2	Se 196.026†	6308.0	6293.0	9014.4 µg/L	9014.4 ppb	07:34:12
2	SiO2†	455813.7	454248.8	94087 µg/L	94087 ppb	07:34:07
2	Si 251.611†	554100.4	553411.5	43870 µg/L	43870 ppb	07:34:07
2	Sn 189.927†	21505.7	21489.1	9462.9 µg/L	9462.9 ppb	07:34:12
2	Ti 334.940†	4129377.1	4126411.2	9596.7 µg/L	9596.7 ppb	07:33:56
2	Tl 190.801†	6711.6	6732.8	9120.7 µg/L	9120.7 ppb	07:34:12
2	U 409.014†	640.7	714.1	61.990 µg/L	61.990 ppb	07:34:07
2	V 292.402†	920413.4	919861.2	9590.3 µg/L	9590.3 ppb	07:34:07
2	Zn 213.857†	570232.2	569349.0	13558 µg/L	13558 ppb	07:34:07
3	Sc RADIAL	57079.6	57079.6	102 %		07:32:54
3	Al 396.153Radial†	364.6	374.3	90.837 µg/L	90.837 ppb	07:32:54
3	Ca 317.933Radial†	355.8	161.9	140.55 µg/L	140.55 ppb	07:33:15
3	Fe 238.204 Radial†	7.4	-7.8	100.93 µg/L	100.93 ppb	07:33:15
3	K 766.490 Radial†	424289.2	414848.9	285000 µg/L	285000 ppb	07:32:49
3	Mg 279.077 IEC†	11.1	0.6	142.54 µg/L	142.54 ppb	07:33:15
3	Na 589.592 Radial†	1234.9	618.8	192.36 µg/L	192.36 ppb	07:32:54
3	Sr 421.552†	968196.2	947121.4	9380.3 µg/L	9380.3 ppb	07:32:49
3	Sc 361.383	1948916.9	1948916.9	99.876 %		07:34:31
3	Y 371.029	1332520.5	1332520.5	99.396 %		07:34:31
3	Ag 328.068†	-5686.2	-5159.3	14.106 µg/L	14.106 ppb	07:34:37
3	As 188.979†	4210.6	4215.1	7791.1 µg/L	7791.1 ppb	07:34:37
3	B 249.677†	100052.0	99829.0	4218.5 µg/L	4218.5 ppb	07:34:31
3	Ba 233.527†	480905.5	481525.2	12065 µg/L	12065 ppb	07:34:31
3	Be 313.107†	3938910.6	3947143.7	2476.5 µg/L	2476.5 ppb	07:34:21
3	Cd 226.502†	297978.1	298490.4	7869.3 µg/L	7869.3 ppb	07:34:31
3	Co 228.616†	161384.5	161591.7	7628.5 µg/L	7628.5 ppb	07:34:31
3	Cr 267.716†	895939.1	897100.6	19016 µg/L	19016 ppb	07:34:31
3	Cu 324.752†	2453588.6	2454078.9	16492 µg/L	16492 ppb	07:34:31
3	Mn 257.610†	2347959.8	2351111.3	7775.6 µg/L	7775.6 ppb	07:34:31
3	Mo 202.031†	79802.9	79907.8	8168.7 µg/L	8168.7 ppb	07:34:31
3	Ni 231.604†	148746.1	148621.3	7798.8 µg/L	7798.8 ppb	07:34:31
3	P 214.914†	5858.9	5842.3	10328 µg/L	10328 ppb	07:34:37
3	Pb 220.353†	82500.3	82505.2	21053 µg/L	21053 ppb	07:34:31
3	S 181.975 Axial†	10206.7	10200.8	43041 µg/L	43041 ppb	07:34:37
3	Sb 206.836†	8967.6	8953.1	8263.6 µg/L	8263.6 ppb	07:34:37
3	Se 196.026†	5499.7	5495.7	7872.3 µg/L	7872.3 ppb	07:34:37
3	SiO2†	401406.6	400649.7	82985 µg/L	82985 ppb	07:34:31
3	Si 251.611†	487963.0	488256.3	38705 µg/L	38705 ppb	07:34:31
3	Sn 189.927†	18118.9	18139.5	7987.8 µg/L	7987.8 ppb	07:34:37
3	Ti 334.940†	3674599.6	3679000.6	8556.2 µg/L	8556.2 ppb	07:34:21
3	Tl 190.801†	6004.3	6037.5	8178.3 µg/L	8178.3 ppb	07:34:37
3	U 409.014†	582.9	657.3	57.067 µg/L	57.067 ppb	07:34:31
3	V 292.402†	788045.4	789096.7	8226.2 µg/L	8226.2 ppb	07:34:31
3	Zn 213.857†	492524.8	492640.4	11731 µg/L	11731 ppb	07:34:31

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Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1953365.4	100.10 %	0.248			0.25%
Sc RADIAL	56584.2	101 %	0.8			0.83%
Y 371.029	1335427.7	99.613 %	0.3022			0.30%
Ag 328.068†	-5986.5	14.606 µg/L	0.6771	14.606 ppb	0.6771	4.64%
Al 396.153Radial†	437.9	113.87 µg/L	25.008	113.87 ppb	25.008	21.96%
As 188.979†	4749.3	8778.7 µg/L	893.81	8778.7 ppb	893.81	10.18%
QC value less than the lower limit for As 188.979 Recovery = 87.79%						
B 249.677†	108676.2	4594.2 µg/L	330.18	4594.2 ppb	330.18	7.19%
QC value within limits for B 249.677 Recovery = 91.88%						
Ba 233.527†	535145.9	13409 µg/L	1186.2	13409 ppb	1186.2	8.85%
QC value less than the lower limit for Ba 233.527 Recovery = 89.39%						
Be 313.107†	4277639.4	2683.8 µg/L	179.84	2683.8 ppb	179.84	6.70%
QC value less than the lower limit for Be 313.107 Recovery = 89.46%						
Ca 317.933Radial†	199.1	172.88 µg/L	51.718	172.88 ppb	51.718	29.92%
Cd 226.502†	333357.2	8788.5 µg/L	814.88	8788.5 ppb	814.88	9.27%
QC value less than the lower limit for Cd 226.502 Recovery = 87.89%						
Co 228.616†	181827.1	8584.5 µg/L	845.98	8584.5 ppb	845.98	9.85%
QC value less than the lower limit for Co 228.616 Recovery = 85.85%						
Cr 267.716†	1030779.3	21849 µg/L	2530.7	21849 ppb	2530.7	11.58%
QC value less than the lower limit for Cr 267.716 Recovery = 87.40%						

Cu 324.752†	2748249.2	18469 µg/L	1756.4	18469 ppb	1756.4	9.51%
QC value within limits for Cu 324.752 Recovery = 92.34%						
Fe 238.204 Radial†	-4.4	148.11 µg/L	60.831	148.11 ppb	60.831	41.07%
K 766.490 Radial†	418208.9	287300 µg/L	2027.6	287300 ppb	2027.6	0.71%
QC value within limits for K 766.490 Radial Recovery = 95.77%						
Mg 279.077 IEC†	0.9	162.50 µg/L	73.228	162.50 ppb	73.228	45.06%
Mn 257.610†	2637975.4	8724.3 µg/L	843.04	8724.3 ppb	843.04	9.66%
QC value less than the lower limit for Mn 257.610 Recovery = 87.24%						
Mo 202.031†	89872.0	9187.3 µg/L	904.04	9187.3 ppb	904.04	9.84%
QC value within limits for Mo 202.031 Recovery = 91.87%						
Na 589.592 Radial†	766.7	238.33 µg/L	46.492	238.33 ppb	46.492	19.51%
Ni 231.604†	167096.4	8768.3 µg/L	859.74	8768.3 ppb	859.74	9.81%
QC value less than the lower limit for Ni 231.604 Recovery = 87.68%						
P 214.914†	6680.6	11853 µg/L	1439.8	11853 ppb	1439.8	12.15%
QC value less than the lower limit for P 214.914 Recovery = 79.02%						
Pb 220.353†	90845.2	23182 µg/L	1879.7	23182 ppb	1879.7	8.11%
QC value within limits for Pb 220.353 Recovery = 92.73%						
S 181.975 Axial†	11450.6	48315 µg/L	4831.8	48315 ppb	4831.8	10.00%
QC value within limits for S 181.975 Axial Recovery = 96.63%						
Sb 206.836†	10143.4	9357.7 µg/L	1003.81	9357.7 ppb	1003.81	10.73%
QC value within limits for Sb 206.836 Recovery = 93.58%						
Se 196.026†	6152.7	8813.5 µg/L	858.47	8813.5 ppb	858.47	9.74%
QC value less than the lower limit for Se 196.026 Recovery = 88.13%						
SiO2†	440775.3	91296 µg/L	7325.8	91296 ppb	7325.8	8.02%
QC value less than the lower limit for SiO2 Recovery = 85.32%						
Si 251.611†	537105.4	42578 µg/L	3414.8	42578 ppb	3414.8	8.02%
QC value less than the lower limit for Si 251.611 Recovery = 85.16%						
Sn 189.927†	21057.0	9272.6 µg/L	1200.99	9272.6 ppb	1200.99	12.95%
QC value within limits for Sn 189.927 Recovery = 92.73%						
Sr 421.552†	954258.0	9451.0 µg/L	68.03	9451.0 ppb	68.03	0.72%
QC value within limits for Sr 421.552 Recovery = 94.51%						
Ti 334.940†	3985318.0	9268.6 µg/L	617.59	9268.6 ppb	617.59	6.66%
QC value within limits for Ti 334.940 Recovery = 92.69%						
Tl 190.801†	6589.3	8925.2 µg/L	670.96	8925.2 ppb	670.96	7.52%
QC value less than the lower limit for Tl 190.801 Recovery = 89.25%						
U 409.014†	716.3	62.182 µg/L	5.2140	62.182 ppb	5.2140	8.39%
V 292.402†	889645.4	9275.2 µg/L	932.25	9275.2 ppb	932.25	10.05%
QC value within limits for V 292.402 Recovery = 92.75%						
Zn 213.857†	551126.6	13124 µg/L	1234.1	13124 ppb	1234.1	9.40%
QC value less than the lower limit for Zn 213.857 Recovery = 87.49%						
QC Failed. Continue with analysis.						

Sequence No.: 13

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 07:34:46

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	57368.8	57368.8	103 %			07:35:24
1	Al 396.153Radial†	6979.8	6811.3	4696.4 µg/L		4696.4 ppb	07:35:44
1	Ca 317.933Radial†	5757.0	5417.3	4703.0 µg/L		4703.0 ppb	07:35:44
1	Fe 238.204 Radial†	640.6	608.5	4762.9 µg/L		4762.9 ppb	07:35:44
1	K 766.490 Radial†	7612.3	7190.2	4939.6 µg/L		4939.6 ppb	07:35:24
1	Mg 279.077 IEC†	578.4	552.7	4818.0 µg/L		4818.0 ppb	07:35:44
1	Na 589.592 Radial†	32067.6	30623.2	9518.9 µg/L		9518.9 ppb	07:35:24
1	Sr 421.552†	49608.0	48252.7	477.90 µg/L		477.90 ppb	07:35:24
1	Sc 361.383	1980675.2	1980675.2	101.50 %			07:36:48
1	Y 371.029	1359574.5	1359574.5	101.41 %			07:36:48
1	Ag 328.068†	64626.3	64202.9	494.63 µg/L		494.63 ppb	07:36:53
1	As 188.979†	279.8	274.9	508.23 µg/L		508.23 ppb	07:37:14
1	B 249.677†	12291.7	11762.5	491.79 µg/L		491.79 ppb	07:36:53
1	Ba 233.527†	20032.5	19759.0	495.38 µg/L		495.38 ppb	07:36:53
1	Be 313.107†	787723.0	779401.8	489.46 µg/L		489.46 ppb	07:36:48
1	Cd 226.502†	19017.5	18878.6	497.17 µg/L		497.17 ppb	07:36:53
1	Co 228.616†	10666.6	10515.6	496.55 µg/L		496.55 ppb	07:36:53
1	Cr 267.716†	24016.0	23710.6	502.77 µg/L		502.77 ppb	07:36:53
1	Cu 324.752†	77436.3	73736.6	496.19 µg/L		496.19 ppb	07:36:53
1	Mn 257.610†	152787.2	150763.5	499.05 µg/L		499.05 ppb	07:36:48
1	Mo 202.031†	5146.8	5076.4	519.13 µg/L		519.13 ppb	07:37:14
1	Ni 231.604†	9954.1	9497.3	498.42 µg/L		498.42 ppb	07:36:53
1	P 214.914†	1278.0	1235.2	2479.6 µg/L		2479.6 ppb	07:37:14
1	Pb 220.353†	2150.2	2020.9	516.01 µg/L		516.01 ppb	07:37:14
1	S 181.975 Axial†	262.4	240.0	1012.5 µg/L		1012.5 ppb	07:37:14
1	Sb 206.836†	582.4	548.2	513.37 µg/L		513.37 ppb	07:37:14
1	Se 196.026†	377.3	361.0	524.50 µg/L		524.50 ppb	07:37:14
1	SiO2†	27273.5	25614.7	5305.5 µg/L		5305.5 ppb	07:36:53
1	Si 251.611†	32130.9	31343.1	2484.6 µg/L		2484.6 ppb	07:36:53
1	Sn 189.927†	1200.1	1180.4	519.83 µg/L		519.83 ppb	07:37:14
1	Ti 334.940†	215511.6	212163.0	493.12 µg/L		493.12 ppb	07:36:48
1	Tl 190.801†	353.6	374.2	507.69 µg/L		507.69 ppb	07:37:14
1	U 409.014†	5791.7	5779.7	500.81 µg/L		500.81 ppb	07:36:53
1	V 292.402†	48761.4	48113.1	501.30 µg/L		501.30 ppb	07:36:53
1	Zn 213.857†	21677.0	20860.6	495.84 µg/L		495.84 ppb	07:36:53
2	Sc RADIAL	57521.7	57521.7	103 %			07:35:50
2	Al 396.153Radial†	6960.7	6774.8	4671.4 µg/L		4671.4 ppb	07:36:10
2	Ca 317.933Radial†	5743.4	5389.2	4678.6 µg/L		4678.6 ppb	07:36:10
2	Fe 238.204 Radial†	643.0	609.2	4768.6 µg/L		4768.6 ppb	07:36:10
2	K 766.490 Radial†	7584.3	7143.4	4907.4 µg/L		4907.4 ppb	07:35:50
2	Mg 279.077 IEC†	586.2	558.8	4871.2 µg/L		4871.2 ppb	07:36:10
2	Na 589.592 Radial†	32112.7	30584.1	9506.7 µg/L		9506.7 ppb	07:35:50
2	Sr 421.552†	49513.1	48032.2	475.71 µg/L		475.71 ppb	07:35:50
2	Sc 361.383	1985616.5	1985616.5	101.76 %			07:37:21
2	Y 371.029	1362290.9	1362290.9	101.62 %			07:37:21
2	Ag 328.068†	64549.4	63968.9	492.83 µg/L		492.83 ppb	07:37:27
2	As 188.979†	273.9	268.4	496.21 µg/L		496.21 ppb	07:37:47
2	B 249.677†	12268.4	11709.5	489.56 µg/L		489.56 ppb	07:37:27
2	Ba 233.527†	19991.7	19669.7	493.14 µg/L		493.14 ppb	07:37:27
2	Be 313.107†	787507.2	777258.5	488.12 µg/L		488.12 ppb	07:37:21
2	Cd 226.502†	19002.6	18817.2	495.56 µg/L		495.56 ppb	07:37:27
2	Co 228.616†	10704.4	10526.6	497.06 µg/L		497.06 ppb	07:37:27
2	Cr 267.716†	23969.2	23605.7	500.55 µg/L		500.55 ppb	07:37:27
2	Cu 324.752†	77424.9	73535.5	494.84 µg/L		494.84 ppb	07:37:27
2	Mn 257.610†	153066.2	150663.1	498.71 µg/L		498.71 ppb	07:37:21
2	Mo 202.031†	5037.7	4956.6	506.88 µg/L		506.88 ppb	07:37:47
2	Ni 231.604†	9918.0	9437.5	495.27 µg/L		495.27 ppb	07:37:27
2	P 214.914†	1248.5	1203.1	2413.9 µg/L		2413.9 ppb	07:37:47
2	Pb 220.353†	2120.4	1986.4	507.17 µg/L		507.17 ppb	07:37:47



2	S 181.975 Axial†	260.4	237.3	1001.4 µg/L	1001.4 ppb	07:37:47
2	Sb 206.836†	567.1	531.7	497.81 µg/L	497.81 ppb	07:37:47
2	Se 196.026†	374.7	357.4	519.35 µg/L	519.35 ppb	07:37:47
2	SiO2†	27213.9	25489.2	5279.5 µg/L	5279.5 ppb	07:37:27
2	Si 251.611†	32085.7	31219.8	2474.9 µg/L	2474.9 ppb	07:37:27
2	Sn 189.927†	1173.8	1151.6	507.17 µg/L	507.17 ppb	07:37:47
2	Ti 334.940†	215730.2	211849.3	492.38 µg/L	492.38 ppb	07:37:21
2	Tl 190.801†	353.0	372.7	505.66 µg/L	505.66 ppb	07:37:47
2	U 409.014†	5758.6	5732.9	496.75 µg/L	496.75 ppb	07:37:27
2	V 292.402†	48770.2	48002.3	500.05 µg/L	500.05 ppb	07:37:27
2	Zn 213.857†	21658.7	20789.5	494.15 µg/L	494.15 ppb	07:37:27
3	Sc RADIAL	56741.6	56741.6	102 %		07:36:16
3	Al 396.153Radial†	6907.2	6815.0	4701.1 µg/L	4701.1 ppb	07:36:36
3	Ca 317.933Radial†	5688.2	5411.5	4698.0 µg/L	4698.0 ppb	07:36:36
3	Fe 238.204 Radial†	639.4	614.2	4806.3 µg/L	4806.3 ppb	07:36:36
3	K 766.490 Radial†	7496.2	7157.9	4917.4 µg/L	4917.4 ppb	07:36:16
3	Mg 279.077 IEC†	577.9	558.5	4866.7 µg/L	4866.7 ppb	07:36:36
3	Na 589.592 Radial†	31726.4	30632.5	9521.7 µg/L	9521.7 ppb	07:36:16
3	Sr 421.552†	48995.9	48184.1	477.22 µg/L	477.22 ppb	07:36:16
3	Sc 361.383	1995572.9	1995572.9	102.27 %		07:37:54
3	Y 371.029	1370063.4	1370063.4	102.20 %		07:37:54
3	Ag 328.068†	60317.7	59514.5	458.39 µg/L	458.39 ppb	07:38:00
3	As 188.979†	231.8	225.9	417.68 µg/L	417.68 ppb	07:38:21
3	B 249.677†	11380.4	10781.1	450.48 µg/L	450.48 ppb	07:38:00
3	Ba 233.527†	18184.8	17804.9	446.37 µg/L	446.37 ppb	07:38:00
3	Be 313.107†	735982.7	723015.1	454.05 µg/L	454.05 ppb	07:37:54
3	Cd 226.502†	17137.0	16899.9	445.00 µg/L	445.00 ppb	07:38:00
3	Co 228.616†	9579.6	9374.3	442.58 µg/L	442.58 ppb	07:38:00
3	Cr 267.716†	20850.6	20438.7	433.40 µg/L	433.40 ppb	07:38:00
3	Cu 324.752†	69966.0	65862.4	443.28 µg/L	443.28 ppb	07:38:00
3	Mn 257.610†	143093.3	140160.8	463.99 µg/L	463.99 ppb	07:37:54
3	Mo 202.031†	4165.3	4078.8	417.15 µg/L	417.15 ppb	07:38:21
3	Ni 231.604†	8925.0	8417.8	441.77 µg/L	441.77 ppb	07:38:00
3	P 214.914†	1068.6	1021.0	2045.4 µg/L	2045.4 ppb	07:38:21
3	Pb 220.353†	1825.5	1687.7	430.81 µg/L	430.81 ppb	07:38:21
3	S 181.975 Axial†	225.6	202.1	852.54 µg/L	852.54 ppb	07:38:21
3	Sb 206.836†	487.9	451.5	422.32 µg/L	422.32 ppb	07:38:21
3	Se 196.026†	323.8	305.9	445.62 µg/L	445.62 ppb	07:38:21
3	SiO2†	25030.9	23221.2	4809.7 µg/L	4809.7 ppb	07:38:00
3	Si 251.611†	29381.7	28418.5	2252.8 µg/L	2252.8 ppb	07:38:00
3	Sn 189.927†	956.1	932.9	410.86 µg/L	410.86 ppb	07:38:21
3	Ti 334.940†	200097.3	195505.3	454.37 µg/L	454.37 ppb	07:37:54
3	Tl 190.801†	311.2	330.1	448.21 µg/L	448.21 ppb	07:38:21
3	U 409.014†	5075.8	5037.0	436.33 µg/L	436.33 ppb	07:38:00
3	V 292.402†	43371.8	42484.4	442.37 µg/L	442.37 ppb	07:38:00
3	Zn 213.857†	19495.1	18567.6	441.28 µg/L	441.28 ppb	07:38:00

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1987288.2	101.84 %	0.389			0.38%
Sc RADIAL	57210.7	102 %	0.7			0.72%
Y 371.029	1363976.3	101.74 %	0.406			0.40%
Ag 328.068†	62562.1	481.95 µg/L	20.424	481.95 ppb	20.424	4.24%
QC value within limits for Ag 328.068 Recovery = 96.39%						
Al 396.153Radial†	6800.4	4689.6 µg/L	15.95	4689.6 ppb	15.95	0.34%
QC value within limits for Al 396.153Radial Recovery = 93.79%						
As 188.979†	256.4	474.04 µg/L	49.175	474.04 ppb	49.175	10.37%
QC value within limits for As 188.979 Recovery = 94.81%						
B 249.677†	11417.7	477.27 µg/L	23.232	477.27 ppb	23.232	4.87%
QC value within limits for B 249.677 Recovery = 95.45%						
Ba 233.527†	19077.9	478.30 µg/L	27.671	478.30 ppb	27.671	5.79%
QC value within limits for Ba 233.527 Recovery = 95.66%						
Be 313.107†	759891.8	477.21 µg/L	20.066	477.21 ppb	20.066	4.20%
QC value within limits for Be 313.107 Recovery = 95.44%						
Ca 317.933Radial†	5406.0	4693.2 µg/L	12.87	4693.2 ppb	12.87	0.27%
QC value within limits for Ca 317.933Radial Recovery = 93.86%						
Cd 226.502†	18198.6	479.24 µg/L	29.667	479.24 ppb	29.667	6.19%
QC value within limits for Cd 226.502 Recovery = 95.85%						
Co 228.616†	10138.8	478.73 µg/L	31.305	478.73 ppb	31.305	6.54%

QC value within limits for Co 228.616 Recovery = 95.75%							
Cr 267.716†	22585.0	478.90 µg/L	39.426	478.90 ppb	39.426	8.23%	
QC value within limits for Cr 267.716 Recovery = 95.78%							
Cu 324.752†	71044.8	478.10 µg/L	30.165	478.10 ppb	30.165	6.31%	
QC value within limits for Cu 324.752 Recovery = 95.62%							
Fe 238.204 Radial†	610.6	4779.3 µg/L	23.57	4779.3 ppb	23.57	0.49%	
QC value within limits for Fe 238.204 Radial Recovery = 95.59%							
K 766.490 Radial†	7163.8	4921.5 µg/L	16.47	4921.5 ppb	16.47	0.33%	
QC value within limits for K 766.490 Radial Recovery = 98.43%							
Mg 279.077 IEC†	556.7	4852.0 µg/L	29.52	4852.0 ppb	29.52	0.61%	
QC value within limits for Mg 279.077 IEC Recovery = 97.04%							
Mn 257.610†	147195.8	487.25 µg/L	20.147	487.25 ppb	20.147	4.13%	
QC value within limits for Mn 257.610 Recovery = 97.45%							
Mo 202.031†	4704.0	481.05 µg/L	55.682	481.05 ppb	55.682	11.58%	
QC value within limits for Mo 202.031 Recovery = 96.21%							
Na 589.592 Radial†	30613.3	9515.8 µg/L	7.98	9515.8 ppb	7.98	0.08%	
QC value within limits for Na 589.592 Radial Recovery = 95.16%							
Ni 231.604†	9117.5	478.49 µg/L	31.836	478.49 ppb	31.836	6.65%	
QC value within limits for Ni 231.604 Recovery = 95.70%							
P 214.914†	1153.1	2313.0 µg/L	234.00	2313.0 ppb	234.00	10.12%	
QC value within limits for P 214.914 Recovery = 92.52%							
Pb 220.353†	1898.3	484.66 µg/L	46.845	484.66 ppb	46.845	9.67%	
QC value within limits for Pb 220.353 Recovery = 96.93%							
S 181.975 Axial†	226.4	955.48 µg/L	89.321	955.48 ppb	89.321	9.35%	
QC value within limits for S 181.975 Axial Recovery = 95.55%							
Sb 206.836†	510.5	477.83 µg/L	48.700	477.83 ppb	48.700	10.19%	
QC value within limits for Sb 206.836 Recovery = 95.57%							
Se 196.026†	341.4	496.49 µg/L	44.129	496.49 ppb	44.129	8.89%	
QC value within limits for Se 196.026 Recovery = 99.30%							
SiO2†	24775.1	5131.6 µg/L	279.02	5131.6 ppb	279.02	5.44%	
QC value within limits for SiO2 Recovery = 95.96%							
Si 251.611†	30327.1	2404.1 µg/L	131.12	2404.1 ppb	131.12	5.45%	
QC value within limits for Si 251.611 Recovery = 96.16%							
Sn 189.927†	1088.3	479.29 µg/L	59.594	479.29 ppb	59.594	12.43%	
QC value within limits for Sn 189.927 Recovery = 95.86%							
Sr 421.552†	48156.4	476.94 µg/L	1.117	476.94 ppb	1.117	0.23%	
QC value within limits for Sr 421.552 Recovery = 95.39%							
Ti 334.940†	206505.9	479.96 µg/L	22.160	479.96 ppb	22.160	4.62%	
QC value within limits for Ti 334.940 Recovery = 95.99%							
Tl 190.801†	359.0	487.19 µg/L	33.767	487.19 ppb	33.767	6.93%	
QC value within limits for Tl 190.801 Recovery = 97.44%							
U 409.014†	5516.5	477.96 µg/L	36.111	477.96 ppb	36.111	7.56%	
QC value within limits for U 409.014 Recovery = 95.59%							
V 292.402†	46199.9	481.24 µg/L	33.666	481.24 ppb	33.666	7.00%	
QC value within limits for V 292.402 Recovery = 96.25%							
Zn 213.857†	20072.6	477.09 µg/L	31.022	477.09 ppb	31.022	6.50%	
QC value within limits for Zn 213.857 Recovery = 95.42%							
All analyte(s) passed QC.							

Sequence No.: 14

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 07:38:31

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	55875.4	55875.4	100 %		07:39:03
1	Al 396.153Radial†	20.8	38.4	26.535 µg/L	26.535 ppb	07:39:03
1	Ca 317.933Radial†	210.0	23.6	20.529 µg/L	20.529 ppb	07:39:24
1	Fe 238.204 Radial†	19.6	4.6	35.892 µg/L	35.892 ppb	07:39:24
1	K 766.490 Radial†	294.6	75.3	51.760 µg/L	51.760 ppb	07:39:03
1	Mg 279.077 IEC†	16.8	6.5	56.596 µg/L	56.596 ppb	07:39:24
1	Na 589.592 Radial†	857.5	267.7	83.214 µg/L	83.214 ppb	07:39:03
1	Sr 421.552†	139.1	106.4	1.0542 µg/L	1.0542 ppb	07:39:03
1	Sc 361.383	1990275.9	1990275.9	102.00 %		07:40:26
1	Y 371.029	1373393.9	1373393.9	102.44 %		07:40:26
1	Ag 328.068†	-512.2	31.8	0.2480 µg/L	0.2480 ppb	07:40:31
1	As 188.979†	-1.1	-1.8	-3.3713 µg/L	-3.3713 ppb	07:40:52
1	B 249.677†	422.4	67.0	2.7933 µg/L	2.7933 ppb	07:40:52
1	Ba 233.527†	-2.7	20.6	0.5158 µg/L	0.5158 ppb	07:40:52
1	Be 313.107†	-3121.5	287.6	0.1806 µg/L	0.1806 ppb	07:40:31
1	Cd 226.502†	-130.5	14.8	0.3846 µg/L	0.3846 ppb	07:40:52
1	Co 228.616†	-6.6	0.5	0.0256 µg/L	0.0256 ppb	07:40:52
1	Cr 267.716†	-39.8	11.3	0.2405 µg/L	0.2405 ppb	07:40:31
1	Cu 324.752†	2824.5	216.7	1.4610 µg/L	1.4610 ppb	07:40:31
1	Mn 257.610†	-160.3	82.5	0.2752 µg/L	0.2752 ppb	07:40:52
1	Mo 202.031†	-0.4	5.5	0.5653 µg/L	0.5653 ppb	07:40:52
1	Ni 231.604†	315.9	0.4	0.0199 µg/L	0.0199 ppb	07:40:52
1	P 214.914†	27.8	3.3	6.7057 µg/L	6.7057 ppb	07:40:52
1	Pb 220.353†	121.9	22.2	5.6511 µg/L	5.6511 ppb	07:40:52
1	S 181.975 Axial†	15.7	-3.2	-13.421 µg/L	-13.421 ppb	07:40:52
1	Sb 206.836†	21.1	-4.9	-4.5576 µg/L	-4.5576 ppb	07:40:52
1	Se 196.026†	15.5	4.4	6.3244 µg/L	6.3244 ppb	07:40:52
1	SiO2†	1311.2	30.8	6.3733 µg/L	6.3733 ppb	07:40:31
1	Si 251.611†	365.4	46.4	3.6767 µg/L	3.6767 ppb	07:40:52
1	Sn 189.927†	11.6	9.4	4.1439 µg/L	4.1439 ppb	07:40:52
1	Ti 334.940†	258.9	97.7	0.2232 µg/L	0.2232 ppb	07:40:31
1	Tl 190.801†	-21.9	4.3	5.7954 µg/L	5.7954 ppb	07:40:52
1	U 409.014†	-16.9	57.2	4.9596 µg/L	4.9596 ppb	07:40:31
1	V 292.402†	-37.5	37.3	0.3977 µg/L	0.3977 ppb	07:40:31
1	Zn 213.857†	541.5	35.7	0.8468 µg/L	0.8468 ppb	07:40:52
2	Sc RADIAL	55849.6	55849.6	100 %		07:39:29
2	Al 396.153Radial†	-8.0	9.6	6.6717 µg/L	6.6717 ppb	07:39:29
2	Ca 317.933Radial†	207.6	21.3	18.519 µg/L	18.519 ppb	07:39:50
2	Fe 238.204 Radial†	17.1	2.0	15.788 µg/L	15.788 ppb	07:39:50
2	K 766.490 Radial†	258.0	38.9	26.703 µg/L	26.703 ppb	07:39:29
2	Mg 279.077 IEC†	17.5	7.2	62.909 µg/L	62.909 ppb	07:39:50
2	Na 589.592 Radial†	806.3	216.9	67.415 µg/L	67.415 ppb	07:39:29
2	Sr 421.552†	86.5	54.0	0.5348 µg/L	0.5348 ppb	07:39:29
2	Sc 361.383	1991005.2	1991005.2	102.03 %		07:40:58
2	Y 371.029	1374873.0	1374873.0	102.55 %		07:40:58
2	Ag 328.068†	-479.2	64.3	0.4977 µg/L	0.4977 ppb	07:41:04
2	As 188.979†	4.2	3.4	6.2604 µg/L	6.2604 ppb	07:41:24
2	B 249.677†	397.4	42.4	1.7742 µg/L	1.7742 ppb	07:41:24
2	Ba 233.527†	2.1	25.3	0.6338 µg/L	0.6338 ppb	07:41:24
2	Be 313.107†	-2933.5	473.0	0.2970 µg/L	0.2970 ppb	07:41:04
2	Cd 226.502†	-127.3	18.0	0.4720 µg/L	0.4720 ppb	07:41:24
2	Co 228.616†	6.9	13.8	0.6503 µg/L	0.6503 ppb	07:41:24
2	Cr 267.716†	12.0	62.1	1.3170 µg/L	1.3170 ppb	07:41:04
2	Cu 324.752†	2867.4	257.7	1.7338 µg/L	1.7338 ppb	07:41:04
2	Mn 257.610†	-117.4	124.6	0.4116 µg/L	0.4116 ppb	07:41:24
2	Mo 202.031†	-7.8	-1.8	-0.1805 µg/L	-0.1805 ppb	07:41:24
2	Ni 231.604†	319.7	4.0	0.2090 µg/L	0.2090 ppb	07:41:24
2	P 214.914†	15.6	-8.6	-17.813 µg/L	-17.813 ppb	07:41:24
2	Pb 220.353†	119.8	20.0	5.0982 µg/L	5.0982 ppb	07:41:24

2	S 181.975 Axial†	18.2	-0.8	-3.1876 µg/L	-3.1876 ppb	07:41:24
2	Sb 206.836†	27.9	1.7	1.5807 µg/L	1.5807 ppb	07:41:24
2	Se 196.026†	14.3	3.3	4.6858 µg/L	4.6858 ppb	07:41:24
2	SiO2†	1323.5	42.3	8.7658 µg/L	8.7658 ppb	07:41:04
2	Si 251.611†	356.6	37.6	2.9806 µg/L	2.9806 ppb	07:41:24
2	Sn 189.927†	1.8	-0.2	-0.0713 µg/L	-0.0713 ppb	07:41:24
2	Ti 334.940†	332.6	169.8	0.3902 µg/L	0.3902 ppb	07:41:04
2	Tl 190.801†	-25.4	0.9	1.2114 µg/L	1.2114 ppb	07:41:24
2	U 409.014†	-85.2	-9.7	-0.8489 µg/L	-0.8489 ppb	07:41:04
2	V 292.402†	-0.8	73.3	0.7567 µg/L	0.7567 ppb	07:41:04
2	Zn 213.857†	543.1	37.0	0.8773 µg/L	0.8773 ppb	07:41:24
3	Sc RADIAL	56651.7	56651.7	101 %		07:39:55
3	Al 396.153Radial†	22.3	39.6	27.328 µg/L	27.328 ppb	07:39:55
3	Ca 317.933Radial†	203.5	14.4	12.473 µg/L	12.473 ppb	07:40:16
3	Fe 238.204 Radial†	13.9	-1.4	-10.648 µg/L	-10.648 ppb	07:40:16
3	K 766.490 Radial†	327.1	103.4	71.029 µg/L	71.029 ppb	07:39:55
3	Mg 279.077 IEC†	20.1	9.5	83.083 µg/L	83.083 ppb	07:40:16
3	Na 589.592 Radial†	766.7	166.5	51.741 µg/L	51.741 ppb	07:39:55
3	Sr 421.552†	74.8	41.2	0.4085 µg/L	0.4085 ppb	07:39:55
3	Sc 361.383	1968391.8	1968391.8	100.87 %		07:41:30
3	Y 371.029	1357511.0	1357511.0	101.26 %		07:41:30
3	Ag 328.068†	-493.4	44.8	0.3456 µg/L	0.3456 ppb	07:41:36
3	As 188.979†	1.2	0.4	0.8067 µg/L	0.8067 ppb	07:41:56
3	B 249.677†	403.6	53.0	2.2315 µg/L	2.2315 ppb	07:41:56
3	Ba 233.527†	-5.6	17.7	0.4428 µg/L	0.4428 ppb	07:41:56
3	Be 313.107†	-3120.7	254.3	0.1597 µg/L	0.1597 ppb	07:41:36
3	Cd 226.502†	-124.5	19.3	0.5107 µg/L	0.5107 ppb	07:41:56
3	Co 228.616†	-8.4	-1.3	-0.0599 µg/L	-0.0599 ppb	07:41:56
3	Cr 267.716†	-21.8	28.8	0.6096 µg/L	0.6096 ppb	07:41:36
3	Cu 324.752†	2827.0	249.9	1.6780 µg/L	1.6780 ppb	07:41:36
3	Mn 257.610†	-158.6	82.3	0.2676 µg/L	0.2676 ppb	07:41:56
3	Mo 202.031†	2.7	8.5	0.8736 µg/L	0.8736 ppb	07:41:56
3	Ni 231.604†	322.3	10.2	0.5348 µg/L	0.5348 ppb	07:41:56
3	P 214.914†	25.0	0.9	1.7685 µg/L	1.7685 ppb	07:41:56
3	Pb 220.353†	103.4	5.1	1.3169 µg/L	1.3169 ppb	07:41:56
3	S 181.975 Axial†	15.3	-3.3	-14.133 µg/L	-14.133 ppb	07:41:56
3	Sb 206.836†	24.2	-1.7	-1.5405 µg/L	-1.5405 ppb	07:41:56
3	Se 196.026†	10.5	-0.4	-0.6455 µg/L	-0.6455 ppb	07:41:56
3	SiO2†	1328.3	62.0	12.844 µg/L	12.844 ppb	07:41:36
3	Si 251.611†	361.9	46.9	3.7185 µg/L	3.7185 ppb	07:41:56
3	Sn 189.927†	4.7	2.7	1.1906 µg/L	1.1906 ppb	07:41:56
3	Ti 334.940†	260.3	102.0	0.2308 µg/L	0.2308 ppb	07:41:36
3	Tl 190.801†	-27.1	-1.1	-1.4622 µg/L	-1.4622 ppb	07:41:56
3	U 409.014†	-92.4	-17.8	-1.5459 µg/L	-1.5459 ppb	07:41:36
3	V 292.402†	-23.7	50.6	0.5257 µg/L	0.5257 ppb	07:41:36
3	Zn 213.857†	543.1	43.2	1.0239 µg/L	1.0239 ppb	07:41:56

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1983224.3	101.63 %	0.659			0.65%
Sc RADIAL	56125.6	101 %	0.8			0.81%
Y 371.029	1368592.6	102.09 %	0.718			0.70%
Ag 328.068†	47.0	0.3637 µg/L	0.12584	0.3637 ppb	0.12584	34.59%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	29.2	20.178 µg/L	11.7038	20.178 ppb	11.7038	58.00%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.7	1.2319 µg/L	4.82991	1.2319 ppb	4.82991	392.05%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	54.2	2.2663 µg/L	0.51044	2.2663 ppb	0.51044	22.52%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	21.2	0.5308 µg/L	0.09636	0.5308 ppb	0.09636	18.15%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	338.3	0.2124 µg/L	0.07397	0.2124 ppb	0.07397	34.82%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	19.8	17.174 µg/L	4.1931	17.174 ppb	4.1931	24.42%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	17.4	0.4558 µg/L	0.06458	0.4558 ppb	0.06458	14.17%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	4.3	0.2053 µg/L	0.38776	0.2053 ppb	0.38776	188.85%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	34.1	0.7224 µg/L	0.54707	0.7224 ppb	0.54707	75.73%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	241.4	1.6243 µg/L	0.14410	1.6243 ppb	0.14410	8.87%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.8	13.677 µg/L	23.3418	13.677 ppb	23.3418	170.66%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	72.5	49.831 µg/L	22.2258	49.831 ppb	22.2258	44.60%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	7.8	67.530 µg/L	13.8346	67.530 ppb	13.8346	20.49%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	96.5	0.3181 µg/L	0.08104	0.3181 ppb	0.08104	25.47%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	4.1	0.4195 µg/L	0.54196	0.4195 ppb	0.54196	129.20%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	217.0	67.457 µg/L	15.7362	67.457 ppb	15.7362	23.33%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	4.8	0.2546 µg/L	0.26046	0.2546 ppb	0.26046	102.32%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-1.4	-3.1131 µg/L	12.96803	-3.1131 ppb	12.96803	416.56%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	15.8	4.0221 µg/L	2.35895	4.0221 ppb	2.35895	58.65%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-2.4	-10.247 µg/L	6.1241	-10.247 ppb	6.1241	59.76%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-1.6	-1.5058 µg/L	3.06929	-1.5058 ppb	3.06929	203.83%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	2.4	3.4549 µg/L	3.64432	3.4549 ppb	3.64432	105.48%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	45.0	9.3278 µg/L	3.27193	9.3278 ppb	3.27193	35.08%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	43.6	3.4586 µg/L	0.41447	3.4586 ppb	0.41447	11.98%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	4.0	1.7544 µg/L	2.16342	1.7544 ppb	2.16342	123.32%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	67.2	0.6659 µg/L	0.34219	0.6659 ppb	0.34219	51.39%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	123.2	0.2814 µg/L	0.09434	0.2814 ppb	0.09434	33.53%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.4	1.8482 µg/L	3.67045	1.8482 ppb	3.67045	198.59%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	9.9	0.8549 µg/L	3.57182	0.8549 ppb	3.57182	417.79%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	53.7	0.5600 µg/L	0.18195	0.5600 ppb	0.18195	32.49%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	38.6	0.9160 µg/L	0.09465	0.9160 ppb	0.09465	10.33%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

## =====

Analysis Begun

Start Time: 2/11/2010 07:57:00 Plasma On Time: 2/8/2010 03:37:33  
 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\021110.sif

Batch ID:

Results Data Set: 021110A

Results Library: c:\pe\optima1\Results\Results.mdb

## =====

Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 2/11/2010 06:59:17

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: 113

Sample ID: LR1

Date Collected: 2/11/2010 07:57:02

Analyst: HSC

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

## =====

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56284.3	56284.3	101 %			07:57:37
1	Al 396.153Radial†	-65.3	-47.1	-32.279 µg/L		-32.279 ppb	07:57:57
1	Ca 317.933Radial†	110.4	-76.7	-66.563 µg/L		-66.563 ppb	07:57:57
1	Fe 238.204 Radial†	49273.6	48868.8	381690 µg/L		381690 ppb	07:57:37

1	K 766.490 Radial†	45.0	-174.4	-119.84 µg/L	-119.84 ppb	07:57:37
1	Mg 279.077 IEC†	37.0	26.5	-179.23 µg/L	-179.23 ppb	07:57:57
1	Na 589.592 Radial†	582.7	-11.1	-3.4625 µg/L	-3.4625 ppb	07:57:37
1	Sr 421.552†	117.2	83.7	0.8291 µg/L	0.8291 ppb	07:57:37
1	Sc 361.383	1983899.1	1983899.1	101.67 %		07:59:00
1	Y 371.029	1362958.3	1362958.3	101.67 %		07:59:00
1	Ag 328.068†	-4186.9	-3584.3	-3.7371 µg/L	-3.7371 ppb	07:59:06
1	As 188.979†	-15.6	-16.1	-7.6271 µg/L	-7.6271 ppb	07:59:27
1	B 249.677†	1358.7	989.3	-157.67 µg/L	-157.67 ppb	07:59:06
1	Ba 233.527†	501.0	516.0	12.813 µg/L	12.813 ppb	07:59:27
1	Be 313.107†	-8988.9	-5493.3	-3.4530 µg/L	-3.4530 ppb	07:59:06
1	Cd 226.502†	1088.8	1213.7	-11.174 µg/L	-11.174 ppb	07:59:06
1	Co 228.616†	220.3	223.7	10.551 µg/L	10.551 ppb	07:59:27
1	Cr 267.716†	-144.4	-91.7	-1.9783 µg/L	-1.9783 ppb	07:59:06
1	Cu 324.752†	-7910.6	-10333.3	-16.387 µg/L	-16.387 ppb	07:59:06
1	Mn 257.610†	-10189.2	-9782.3	18.404 µg/L	18.404 ppb	07:59:00
1	Mo 202.031†	-148.0	-139.7	0.2271 µg/L	0.2271 ppb	07:59:06
1	Ni 231.604†	167.6	-144.5	-2.6423 µg/L	-2.6423 ppb	07:59:27
1	P 214.914†	307.7	278.8	267.73 µg/L	267.73 ppb	07:59:27
1	Pb 220.353†	242.1	140.7	10.832 µg/L	10.832 ppb	07:59:27
1	S 181.975 Axial†	8.2	-10.4	-44.053 µg/L	-44.053 ppb	07:59:27
1	Sb 206.836†	25.4	-0.6	-0.7838 µg/L	-0.7838 ppb	07:59:27
1	Se 196.026†	-230.3	-237.3	703.29 µg/L	703.29 ppb	07:59:27
1	SiO2†	1111.8	-161.2	-33.389 µg/L	-33.389 ppb	07:59:27
1	Si 251.611†	-729.3	-1029.2	-81.585 µg/L	-81.585 ppb	07:59:06
1	Sn 189.927†	13.2	11.0	-35.852 µg/L	-35.852 ppb	07:59:27
1	Ti 334.940†	2361.7	2166.8	5.0200 µg/L	5.0200 ppb	07:59:06
1	Tl 190.801†	-44.0	-17.5	42.800 µg/L	42.800 ppb	07:59:27
1	U 409.014†	119835.7	117942.3	10186 µg/L	10186 ppb	07:59:00
1	V 292.402†	-5602.9	-5436.9	-0.4931 µg/L	-0.4931 ppb	07:59:06
1	Zn 213.857†	2463.1	1927.4	28.139 µg/L	28.139 ppb	07:59:27
2	Sc RADIAL	56166.2	56166.2	101 %		07:58:03
2	Al 396.153Radial†	-67.3	-49.3	-33.762 µg/L	-33.762 ppb	07:58:23
2	Ca 317.933Radial†	123.8	-63.1	-54.812 µg/L	-54.812 ppb	07:58:23
2	Fe 238.204 Radial†	48677.3	48378.8	377870 µg/L	377870 ppb	07:58:03
2	K 766.490 Radial†	108.0	-111.7	-76.712 µg/L	-76.712 ppb	07:58:03
2	Mg 279.077 IEC†	39.5	29.0	-152.80 µg/L	-152.80 ppb	07:58:23
2	Na 589.592 Radial†	583.5	-9.2	-2.8463 µg/L	-2.8463 ppb	07:58:03
2	Sr 421.552†	132.9	99.6	0.9869 µg/L	0.9869 ppb	07:58:03
2	Sc 361.383	1982305.4	1982305.4	101.59 %		07:59:34
2	Y 371.029	1362159.2	1362159.2	101.61 %		07:59:34
2	Ag 328.068†	-4197.0	-3597.5	-4.0790 µg/L	-4.0790 ppb	07:59:39
2	As 188.979†	-12.8	-13.4	-2.8037 µg/L	-2.8037 ppb	08:00:00
2	B 249.677†	1367.3	998.9	-155.27 µg/L	-155.27 ppb	07:59:39
2	Ba 233.527†	498.9	514.4	12.771 µg/L	12.771 ppb	08:00:00
2	Be 313.107†	-8946.2	-5458.3	-3.4311 µg/L	-3.4311 ppb	07:59:39
2	Cd 226.502†	1066.2	1192.2	-11.306 µg/L	-11.306 ppb	07:59:39
2	Co 228.616†	196.4	200.4	9.4495 µg/L	9.4495 ppb	08:00:00
2	Cr 267.716†	-53.3	-2.2	-0.0809 µg/L	-0.0809 ppb	07:59:39
2	Cu 324.752†	-7859.7	-10289.5	-16.624 µg/L	-16.624 ppb	07:59:39
2	Mn 257.610†	-10269.0	-9868.9	17.607 µg/L	17.607 ppb	07:59:34
2	Mo 202.031†	-141.5	-133.4	0.7253 µg/L	0.7253 ppb	07:59:39
2	Ni 231.604†	162.7	-149.2	-2.9383 µg/L	-2.9383 ppb	08:00:00
2	P 214.914†	311.5	282.8	278.98 µg/L	278.98 ppb	08:00:00
2	Pb 220.353†	227.8	126.9	7.4899 µg/L	7.4899 ppb	08:00:00
2	S 181.975 Axial†	8.1	-10.6	-44.528 µg/L	-44.528 ppb	08:00:00
2	Sb 206.836†	20.2	-5.7	-5.5674 µg/L	-5.5674 ppb	08:00:00
2	Se 196.026†	-217.9	-225.3	710.01 µg/L	710.01 ppb	08:00:00
2	SiO2†	1100.9	-171.0	-35.425 µg/L	-35.425 ppb	08:00:00
2	Si 251.611†	-753.4	-1053.5	-83.515 µg/L	-83.515 ppb	07:59:39
2	Sn 189.927†	17.7	15.5	-33.483 µg/L	-33.483 ppb	08:00:00
2	Ti 334.940†	2362.6	2169.6	5.0249 µg/L	5.0249 ppb	07:59:39
2	Tl 190.801†	-45.9	-19.4	39.666 µg/L	39.666 ppb	08:00:00
2	U 409.014†	119251.0	117461.6	10145 µg/L	10145 ppb	07:59:34
2	V 292.402†	-5593.3	-5431.8	-0.9258 µg/L	-0.9258 ppb	07:59:39
2	Zn 213.857†	2437.8	1904.5	27.771 µg/L	27.771 ppb	08:00:00
3	Sc RADIAL	56511.6	56511.6	101 %		07:58:28
3	Al 396.153Radial†	-64.8	-46.4	-31.815 µg/L	-31.815 ppb	07:58:49
3	Ca 317.933Radial†	116.6	-71.0	-61.644 µg/L	-61.644 ppb	07:58:49
3	Fe 238.204 Radial†	49345.2	48743.0	380710 µg/L	380710 ppb	07:58:28
3	K 766.490 Radial†	67.0	-152.8	-105.00 µg/L	-105.00 ppb	07:58:28

3	Mg 279.077 IEC†	34.2	23.5	-204.01 µg/L	-204.01 ppb	07:58:49
3	Na 589.592 Radial†	573.2	-22.8	-7.1015 µg/L	-7.1015 ppb	07:58:28
3	Sr 421.552†	151.2	116.8	1.1572 µg/L	1.1572 ppb	07:58:28
3	Sc 361.383	2000213.2	2000213.2	102.50 %		08:00:07
3	Y 371.029	1375340.6	1375340.6	102.59 %		08:00:07
3	Ag 328.068†	-3761.6	-3135.7	-0.3288 µg/L	-0.3288 ppb	08:00:12
3	As 188.979†	-6.5	-7.1	8.9655 µg/L	8.9655 ppb	08:00:33
3	B 249.677†	1308.1	929.0	-159.68 µg/L	-159.68 ppb	08:00:12
3	Ba 233.527†	408.4	421.6	10.461 µg/L	10.461 ppb	08:00:33
3	Be 313.107†	-8345.5	-4793.5	-3.0132 µg/L	-3.0132 ppb	08:00:12
3	Cd 226.502†	971.7	1090.7	-14.300 µg/L	-14.300 ppb	08:00:12
3	Co 228.616†	182.7	185.3	8.7377 µg/L	8.7377 ppb	08:00:33
3	Cr 267.716†	-56.8	-5.0	-0.1385 µg/L	-0.1385 ppb	08:00:12
3	Cu 324.752†	-6818.2	-9204.2	-8.9355 µg/L	-8.9355 ppb	08:00:12
3	Mn 257.610†	-9415.3	-8945.6	21.041 µg/L	21.041 ppb	08:00:07
3	Mo 202.031†	-139.0	-129.7	1.2082 µg/L	1.2082 ppb	08:00:12
3	Ni 231.604†	195.9	-118.3	-1.2743 µg/L	-1.2743 ppb	08:00:33
3	P 214.914†	253.9	223.9	155.41 µg/L	155.41 ppb	08:00:33
3	Pb 220.353†	220.8	118.1	5.8291 µg/L	5.8291 ppb	08:00:33
3	S 181.975 Axial†	6.5	-12.2	-51.657 µg/L	-51.657 ppb	08:00:33
3	Sb 206.836†	21.7	-4.4	-4.3263 µg/L	-4.3263 ppb	08:00:33
3	Se 196.026†	-176.4	-182.9	778.59 µg/L	778.59 ppb	08:00:33
3	SiO2†	1125.8	-156.5	-32.411 µg/L	-32.411 ppb	08:00:33
3	Si 251.611†	-649.2	-945.2	-74.926 µg/L	-74.926 ppb	08:00:12
3	Sn 189.927†	18.0	15.6	-33.727 µg/L	-33.727 ppb	08:00:33
3	Ti 334.940†	2128.9	1920.7	4.4499 µg/L	4.4499 ppb	08:00:12
3	Tl 190.801†	-44.8	-17.9	41.280 µg/L	41.280 ppb	08:00:33
3	U 409.014†	112341.2	109669.7	9467.9 µg/L	9467.9 ppb	08:00:07
3	V 292.402†	-5048.7	-4851.3	4.6826 µg/L	4.6826 ppb	08:00:12
3	Zn 213.857†	2075.7	1529.7	18.648 µg/L	18.648 ppb	08:00:33

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1988805.9	101.92 %	%	0.508			0.50%
Sc RADIAL	56320.7	101 %	%	0.3			0.31%
Y 371.029	1366819.4	101.95 %	%	0.551			0.54%
Ag 328.068†	-3439.2	-2.7149 µg/L	µg/L	2.07354	-2.7149 ppb	2.07354	76.38%
Al 396.153Radial†	-47.6	-32.619 µg/L	µg/L	1.0170	-32.619 ppb	1.0170	3.12%
As 188.979†	-12.2	-0.4884 µg/L	µg/L	8.53512	-0.4884 ppb	8.53512	>999.9%
B 249.677†	972.4	-157.54 µg/L	µg/L	2.209	-157.54 ppb	2.209	1.40%
Ba 233.527†	484.0	12.015 µg/L	µg/L	1.3458	12.015 ppb	1.3458	11.20%
Be 313.107†	-5248.4	-3.2991 µg/L	µg/L	0.24784	-3.2991 ppb	0.24784	7.51%
Ca 317.933Radial†	-70.3	-61.006 µg/L	µg/L	5.9013	-61.006 ppb	5.9013	9.67%
Cd 226.502†	1165.5	-12.260 µg/L	µg/L	1.7680	-12.260 ppb	1.7680	14.42%
Co 228.616†	203.1	9.5794 µg/L	µg/L	0.91351	9.5794 ppb	0.91351	9.54%
Cr 267.716†	-33.0	-0.7326 µg/L	µg/L	1.07923	-0.7326 ppb	1.07923	147.32%
Cu 324.752†	-9942.3	-13.982 µg/L	µg/L	4.3722	-13.982 ppb	4.3722	31.27%
Fe 238.204 Radial†	48663.5	380090 µg/L	µg/L	1987.7	380090 ppb	1987.7	0.52%
K 766.490 Radial†	-146.3	-100.52 µg/L	µg/L	21.909	-100.52 ppb	21.909	21.80%
Mg 279.077 IEC†	26.3	-178.68 µg/L	µg/L	25.611	-178.68 ppb	25.611	14.33%
Mn 257.610†	-9532.3	19.017 µg/L	µg/L	1.7973	19.017 ppb	1.7973	9.45%
Mo 202.031†	-134.2	0.7202 µg/L	µg/L	0.49060	0.7202 ppb	0.49060	68.12%
Na 589.592 Radial†	-14.4	-4.4701 µg/L	µg/L	2.29959	-4.4701 ppb	2.29959	51.44%
Ni 231.604†	-137.3	-2.2850 µg/L	µg/L	0.88772	-2.2850 ppb	0.88772	38.85%
P 214.914†	261.8	234.04 µg/L	µg/L	68.328	234.04 ppb	68.328	29.19%
Pb 220.353†	128.5	8.0502 µg/L	µg/L	2.54796	8.0502 ppb	2.54796	31.65%
S 181.975 Axial†	-11.1	-46.746 µg/L	µg/L	4.2596	-46.746 ppb	4.2596	9.11%
Sb 206.836†	-3.6	-3.5591 µg/L	µg/L	2.48231	-3.5591 ppb	2.48231	69.74%
Se 196.026†	-215.1	730.63 µg/L	µg/L	41.671	730.63 ppb	41.671	5.70%
SiO2†	-162.9	-33.742 µg/L	µg/L	1.5374	-33.742 ppb	1.5374	4.56%
Si 251.611†	-1009.3	-80.009 µg/L	µg/L	4.5060	-80.009 ppb	4.5060	5.63%
Sn 189.927†	14.0	-34.354 µg/L	µg/L	1.3028	-34.354 ppb	1.3028	3.79%
Sr 421.552†	100.1	0.9911 µg/L	µg/L	0.16411	0.9911 ppb	0.16411	16.56%
Ti 334.940†	2085.7	4.8316 µg/L	µg/L	0.33060	4.8316 ppb	0.33060	6.84%
Tl 190.801†	-18.3	41.249 µg/L	µg/L	1.5675	41.249 ppb	1.5675	3.80%
U 409.014†	115024.5	9932.9 µg/L	µg/L	403.19	9932.9 ppb	403.19	4.06%
V 292.402†	-5240.0	1.0879 µg/L	µg/L	3.12064	1.0879 ppb	3.12064	286.85%
Zn 213.857†	1787.2	24.853 µg/L	µg/L	5.3765	24.853 ppb	5.3765	21.63%



Sequence No.: 2  
 Sample ID: LR2  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 114  
 Date Collected: 2/11/2010 08:00:43  
 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	54917.7	54917.7	98.3 %		08:01:15
1	Al 396.153Radial†	4.4	22.1	15.266 µg/L	15.266 ppb	08:01:15
1	Ca 317.933Radial†	218.1	35.6	30.918 µg/L	30.918 ppb	08:01:36
1	Fe 238.204 Radial†	12.1	-2.8	87.112 µg/L	87.112 ppb	08:01:36
1	K 766.490 Radial†	231.9	16.8	11.519 µg/L	11.519 ppb	08:01:15
1	Mg 279.077 IEC†	7.1	-3.0	-26.217 µg/L	-26.217 ppb	08:01:36
1	Na 589.592 Radial†	666.7	88.7	27.567 µg/L	27.567 ppb	08:01:15
1	Sr 421.552†	42.4	10.6	0.1046 µg/L	0.1046 ppb	08:01:15
1	Sc 361.383	1948400.9	1948400.9	99.850 %		08:02:40
1	Y 371.029	1340789.7	1340789.7	100.01 %		08:02:40
1	Ag 328.068†	-380.6	152.7	0.8602 µg/L	0.8602 ppb	08:02:46
1	As 188.979†	2723.7	2727.1	5051.2 µg/L	5051.2 ppb	08:03:06
1	B 249.677†	-413.3	-761.0	2.1046 µg/L	2.1046 ppb	08:02:46
1	Ba 233.527†	424340.6	425002.6	10636 µg/L	10636 ppb	08:02:40
1	Be 313.107†	-8631.2	-5296.2	-3.3293 µg/L	-3.3293 ppb	08:02:46
1	Cd 226.502†	202462.7	202910.2	5349.4 µg/L	5349.4 ppb	08:02:40
1	Co 228.616†	108295.5	108465.5	5127.5 µg/L	5127.5 ppb	08:02:46
1	Cr 267.716†	1002445.6	1004004.9	21276 µg/L	21276 ppb	08:02:40
1	Cu 324.752†	1719.4	-830.6	-5.5849 µg/L	-5.5849 ppb	08:02:46
1	Mn 257.610†	1587925.3	1590555.3	5260.3 µg/L	5260.3 ppb	08:02:40
1	Mo 202.031†	-7.8	-2.0	-0.2011 µg/L	-0.2011 ppb	08:03:06
1	Ni 231.604†	100755.4	100597.7	5278.9 µg/L	5278.9 ppb	08:02:46
1	P 214.914†	-0.7	-24.6	-49.683 µg/L	-49.683 ppb	08:03:06
1	Pb 220.353†	95.6	-1.6	-0.4479 µg/L	-0.4479 ppb	08:03:06
1	S 181.975 Axial†	13.4	-5.1	-21.720 µg/L	-21.720 ppb	08:03:06
1	Sb 206.836†	456.2	431.3	161.09 µg/L	161.09 ppb	08:03:06
1	Se 196.026†	22.2	11.4	16.318 µg/L	16.318 ppb	08:03:06
1	SiO2†	-357.1	-1612.4	-333.96 µg/L	-333.96 ppb	08:02:46
1	Si 251.611†	278.2	-33.3	-2.6391 µg/L	-2.6391 ppb	08:03:06
1	Sn 189.927†	-6.9	-8.8	-3.8959 µg/L	-3.8959 ppb	08:03:06
1	Ti 334.940†	2455.6	2303.2	5.3590 µg/L	5.3590 ppb	08:02:46
1	Tl 190.801†	0.7	26.4	39.934 µg/L	39.934 ppb	08:03:06
1	U 409.014†	359.4	433.7	37.651 µg/L	37.651 ppb	08:02:46
1	V 292.402†	-4584.8	-4517.6	2.5717 µg/L	2.5717 ppb	08:02:46
1	Zn 213.857†	1685.9	1193.2	5.2343 µg/L	5.2343 ppb	08:03:06
2	Sc RADIAL	54991.1	54991.1	98.5 %		08:01:41
2	Al 396.153Radial†	-3.2	14.4	9.9516 µg/L	9.9516 ppb	08:01:41
2	Ca 317.933Radial†	208.2	25.2	21.912 µg/L	21.912 ppb	08:02:02
2	Fe 238.204 Radial†	11.9	-3.0	86.353 µg/L	86.353 ppb	08:02:02
2	K 766.490 Radial†	199.0	-17.0	-11.660 µg/L	-11.660 ppb	08:01:41
2	Mg 279.077 IEC†	9.2	-0.9	-7.8169 µg/L	-7.8169 ppb	08:02:02
2	Na 589.592 Radial†	632.3	52.8	16.407 µg/L	16.407 ppb	08:01:41
2	Sr 421.552†	-1.4	-33.9	-0.3357 µg/L	-0.3357 ppb	08:01:41
2	Sc 361.383	1951695.6	1951695.6	100.02 %		08:03:14
2	Y 371.029	1343532.0	1343532.0	100.22 %		08:03:14
2	Ag 328.068†	-357.4	176.6	1.0403 µg/L	1.0403 ppb	08:03:19
2	As 188.979†	2683.5	2682.3	4968.2 µg/L	4968.2 ppb	08:03:40
2	B 249.677†	-410.7	-757.7	2.1552 µg/L	2.1552 ppb	08:03:19
2	Ba 233.527†	424508.6	424453.2	10622 µg/L	10622 ppb	08:03:14
2	Be 313.107†	-8711.0	-5361.3	-3.3703 µg/L	-3.3703 ppb	08:03:19
2	Cd 226.502†	202688.9	202794.1	5346.4 µg/L	5346.4 ppb	08:03:14
2	Co 228.616†	109250.4	109237.2	5164.0 µg/L	5164.0 ppb	08:03:19
2	Cr 267.716†	1001455.8	1001320.5	21219 µg/L	21219 ppb	08:03:14
2	Cu 324.752†	1627.2	-925.7	-6.2242 µg/L	-6.2242 ppb	08:03:19
2	Mn 257.610†	1586356.5	1586302.1	5246.2 µg/L	5246.2 ppb	08:03:14
2	Mo 202.031†	-7.1	-1.2	-0.1277 µg/L	-0.1277 ppb	08:03:40
2	Ni 231.604†	101636.8	101308.6	5316.2 µg/L	5316.2 ppb	08:03:19
2	P 214.914†	8.9	-15.0	-30.064 µg/L	-30.064 ppb	08:03:40
2	Pb 220.353†	99.5	2.1	0.5050 µg/L	0.5050 ppb	08:03:40

2	S 181.975 Axial†	16.4	-2.1	-8.8651 µg/L	-8.8651 ppb	08:03:40
2	Sb 206.836†	447.8	422.1	153.14 µg/L	153.14 ppb	08:03:40
2	Se 196.026†	16.0	5.2	7.4078 µg/L	7.4078 ppb	08:03:40
2	SiO2†	-353.9	-1608.6	-333.18 µg/L	-333.18 ppb	08:03:19
2	Si 251.611†	283.7	-28.2	-2.2371 µg/L	-2.2371 ppb	08:03:40
2	Sn 189.927†	-9.9	-11.8	-5.1917 µg/L	-5.1917 ppb	08:03:40
2	Ti 334.940†	2478.4	2321.8	5.4007 µg/L	5.4007 ppb	08:03:19
2	Tl 190.801†	1.5	27.2	40.832 µg/L	40.832 ppb	08:03:40
2	U 409.014†	395.8	469.5	40.762 µg/L	40.762 ppb	08:03:19
2	V 292.402†	-4625.8	-4550.9	2.1022 µg/L	2.1022 ppb	08:03:19
2	Zn 213.857†	1653.1	1157.6	4.2171 µg/L	4.2171 ppb	08:03:40
3	Sc RADIAL	55010.4	55010.4	98.5 %		08:02:07
3	Al 396.153Radial†	1.4	19.0	13.152 µg/L	13.152 ppb	08:02:07
3	Ca 317.933Radial†	209.4	26.4	22.904 µg/L	22.904 ppb	08:02:27
3	Fe 238.204 Radial†	9.8	-5.1	56.424 µg/L	56.424 ppb	08:02:27
3	K 766.490 Radial†	230.2	14.7	10.071 µg/L	10.071 ppb	08:02:07
3	Mg 279.077 IEC†	11.2	1.1	10.024 µg/L	10.024 ppb	08:02:27
3	Na 589.592 Radial†	607.7	27.6	8.5759 µg/L	8.5759 ppb	08:02:07
3	Sr 421.552†	59.4	27.8	0.2754 µg/L	0.2754 ppb	08:02:07
3	Sc 361.383	1942429.3	1942429.3	99.544 %		08:03:47
3	Y 371.029	1335509.4	1335509.4	99.619 %		08:03:47
3	Ag 328.068†	-379.4	152.8	0.9005 µg/L	0.9005 ppb	08:03:53
3	As 188.979†	2244.2	2253.7	4174.3 µg/L	4174.3 ppb	08:04:13
3	B 249.677†	-249.0	-597.2	5.5637 µg/L	5.5637 ppb	08:03:53
3	Ba 233.527†	392466.9	394289.3	9867.3 µg/L	9867.3 ppb	08:03:47
3	Be 313.107†	-7970.2	-4658.7	-2.9285 µg/L	-2.9285 ppb	08:03:53
3	Cd 226.502†	185869.6	186864.4	4926.2 µg/L	4926.2 ppb	08:03:47
3	Co 228.616†	95740.6	96186.5	4547.0 µg/L	4547.0 ppb	08:03:53
3	Cr 267.716†	898833.2	903004.0	19136 µg/L	19136 ppb	08:03:47
3	Cu 324.752†	1736.1	-808.6	-5.4395 µg/L	-5.4395 ppb	08:03:53
3	Mn 257.610†	1455635.7	1462548.3	4837.0 µg/L	4837.0 ppb	08:03:47
3	Mo 202.031†	-8.5	-2.6	-0.2691 µg/L	-0.2691 ppb	08:04:13
3	Ni 231.604†	88843.8	88941.8	4667.2 µg/L	4667.2 ppb	08:03:53
3	P 214.914†	3.0	-20.9	-42.111 µg/L	-42.111 ppb	08:04:13
3	Pb 220.353†	105.3	8.4	2.1098 µg/L	2.1098 ppb	08:04:13
3	S 181.975 Axial†	19.0	0.6	2.3213 µg/L	2.3213 ppb	08:04:13
3	Sb 206.836†	357.1	333.1	93.817 µg/L	93.817 ppb	08:04:13
3	Se 196.026†	19.5	8.8	12.490 µg/L	12.490 ppb	08:04:13
3	SiO2†	-94.8	-1350.0	-279.62 µg/L	-279.62 ppb	08:03:53
3	Si 251.611†	291.7	-18.8	-1.4921 µg/L	-1.4921 ppb	08:04:13
3	Sn 189.927†	-5.7	-7.7	-3.3789 µg/L	-3.3789 ppb	08:04:13
3	Ti 334.940†	2109.6	1963.1	4.5651 µg/L	4.5651 ppb	08:03:53
3	Tl 190.801†	0.9	26.7	40.481 µg/L	40.481 ppb	08:04:13
3	U 409.014†	361.5	436.9	37.931 µg/L	37.931 ppb	08:03:53
3	V 292.402†	-3970.8	-3915.0	3.8391 µg/L	3.8391 ppb	08:03:53
3	Zn 213.857†	1440.0	951.3	2.1476 µg/L	2.1476 ppb	08:04:13

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1947508.6	99.804 %	0.2407			0.24%
Sc RADIAL	54973.1	98.4 %	0.09			0.09%
Y 371.029	1339943.7	99.949 %	0.3042			0.30%
Ag 328.068†	160.7	0.9337 µg/L	0.09455	0.9337 ppb	0.09455	10.13%
Al 396.153Radial†	18.5	12.790 µg/L	2.6758	12.790 ppb	2.6758	20.92%
As 188.979†	2554.3	4731.2 µg/L	484.06	4731.2 ppb	484.06	10.23%
B 249.677†	-705.3	3.2745 µg/L	1.98267	3.2745 ppb	1.98267	60.55%
Ba 233.527†	414581.7	10375 µg/L	439.8	10375 ppb	439.8	4.24%
Be 313.107†	-5105.4	-3.2094 µg/L	0.24407	-3.2094 ppb	0.24407	7.60%
Ca 317.933Radial†	29.1	25.245 µg/L	4.9384	25.245 ppb	4.9384	19.56%
Cd 226.502†	197522.9	5207.3 µg/L	243.48	5207.3 ppb	243.48	4.68%
Co 228.616†	104629.7	4946.2 µg/L	346.15	4946.2 ppb	346.15	7.00%
Cr 267.716†	969443.1	20544 µg/L	1219.6	20544 ppb	1219.6	5.94%
Cu 324.752†	-855.0	-5.7495 µg/L	0.41744	-5.7495 ppb	0.41744	7.26%
Fe 238.204 Radial†	-3.6	76.630 µg/L	17.5027	76.630 ppb	17.5027	22.84%
K 766.490 Radial†	4.8	3.3100 µg/L	12.98485	3.3100 ppb	12.98485	392.30%
Mg 279.077 IEC†	-0.9	-8.0030 µg/L	18.12126	-8.0030 ppb	18.12126	226.43%
Mn 257.610†	1546468.6	5114.5 µg/L	240.46	5114.5 ppb	240.46	4.70%
Mo 202.031†	-1.9	-0.1993 µg/L	0.07072	-0.1993 ppb	0.07072	35.49%
Na 589.592 Radial†	56.4	17.517 µg/L	9.5442	17.517 ppb	9.5442	54.49%

Ni 231.604†	96949.4	5087.4 µg/L	364.39	5087.4 ppb	364.39	7.16%
P 214.914†	-20.1	-40.620 µg/L	9.8945	-40.620 ppb	9.8945	24.36%
Pb 220.353†	2.9	0.7223 µg/L	1.29257	0.7223 ppb	1.29257	178.95%
S 181.975 Axial†	-2.2	-9.4214 µg/L	12.03048	-9.4214 ppb	12.03048	127.69%
Sb 206.836†	395.5	136.02 µg/L	36.762	136.02 ppb	36.762	27.03%
Se 196.026†	8.5	12.072 µg/L	4.4696	12.072 ppb	4.4696	37.03%
SiO2†	-1523.7	-315.59 µg/L	31.152	-315.59 ppb	31.152	9.87%
Si 251.611†	-26.8	-2.1228 µg/L	0.58200	-2.1228 ppb	0.58200	27.42%
Sn 189.927†	-9.4	-4.1555 µg/L	0.93390	-4.1555 ppb	0.93390	22.47%
Sr 421.552†	1.5	0.0148 µg/L	0.31527	0.0148 ppb	0.31527	>999.9%
Ti 334.940†	2196.0	5.1083 µg/L	0.47085	5.1083 ppb	0.47085	9.22%
Tl 190.801†	26.8	40.416 µg/L	0.4524	40.416 ppb	0.4524	1.12%
U 409.014†	446.7	38.781 µg/L	1.7208	38.781 ppb	1.7208	4.44%
V 292.402†	-4327.8	2.8376 µg/L	0.89848	2.8376 ppb	0.89848	31.66%
Zn 213.857†	1100.7	3.8663 µg/L	1.57295	3.8663 ppb	1.57295	40.68%

Sequence No.: 3

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 08:04:23

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	56977.1	56977.1	102 %		08:05:00
1	Al 396.153Radial†	6957.5	6836.2	4713.4 µg/L	4713.4 ppb	08:05:20
1	Ca 317.933Radial†	5722.1	5421.7	4706.8 µg/L	4706.8 ppb	08:05:20
1	Fe 238.204 Radial†	646.2	618.3	4840.0 µg/L	4840.0 ppb	08:05:20
1	K 766.490 Radial†	7467.3	7099.1	4877.0 µg/L	4877.0 ppb	08:05:00
1	Mg 279.077 IEC†	581.3	559.5	4877.1 µg/L	4877.1 ppb	08:05:20
1	Na 589.592 Radial†	32117.9	30887.2	9600.9 µg/L	9600.9 ppb	08:05:00
1	Sr 421.552†	49926.1	48896.5	484.27 µg/L	484.27 ppb	08:05:00
1	Sc 361.383	1949359.7	1949359.7	99.899 %		08:06:24
1	Y 371.029	1342255.6	1342255.6	100.12 %		08:06:24
1	Ag 328.068†	65181.5	65781.5	506.79 µg/L	506.79 ppb	08:06:29
1	As 188.979†	276.9	276.4	510.90 µg/L	510.90 ppb	08:06:50
1	B 249.677†	12219.1	11884.4	496.88 µg/L	496.88 ppb	08:06:29
1	Ba 233.527†	20198.9	20242.6	507.50 µg/L	507.50 ppb	08:06:29
1	Be 313.107†	791693.7	795843.5	499.79 µg/L	499.79 ppb	08:06:24
1	Cd 226.502†	19203.5	19365.6	510.01 µg/L	510.01 ppb	08:06:29
1	Co 228.616†	10784.0	10801.9	510.07 µg/L	510.07 ppb	08:06:29
1	Cr 267.716†	24276.4	24351.3	516.36 µg/L	516.36 ppb	08:06:29
1	Cu 324.752†	77781.8	75307.9	506.76 µg/L	506.76 ppb	08:06:29
1	Mn 257.610†	153414.7	153809.7	509.13 µg/L	509.13 ppb	08:06:24
1	Mo 202.031†	5167.4	5178.5	529.57 µg/L	529.57 ppb	08:06:50
1	Ni 231.604†	10016.5	9717.3	509.96 µg/L	509.96 ppb	08:06:29
1	P 214.914†	1285.4	1262.8	2535.0 µg/L	2535.0 ppb	08:06:50
1	Pb 220.353†	2114.4	2019.1	515.55 µg/L	515.55 ppb	08:06:50
1	S 181.975 Axial†	263.2	244.9	1033.3 µg/L	1033.3 ppb	08:06:50
1	Sb 206.836†	577.4	552.4	517.32 µg/L	517.32 ppb	08:06:50
1	Se 196.026†	370.3	359.9	523.13 µg/L	523.13 ppb	08:06:50
1	SiO2†	27297.9	26070.8	5399.9 µg/L	5399.9 ppb	08:06:29
1	Si 251.611†	32102.2	31822.8	2522.7 µg/L	2522.7 ppb	08:06:29
1	Sn 189.927†	1206.6	1205.9	531.04 µg/L	531.04 ppb	08:06:50
1	Ti 334.940†	216118.5	216181.2	502.46 µg/L	502.46 ppb	08:06:24
1	Tl 190.801†	351.0	377.1	511.73 µg/L	511.73 ppb	08:06:50
1	U 409.014†	5801.6	5881.2	509.61 µg/L	509.61 ppb	08:06:29
1	V 292.402†	49241.1	49365.1	514.31 µg/L	514.31 ppb	08:06:29
1	Zn 213.857†	21799.6	21326.4	506.91 µg/L	506.91 ppb	08:06:29
2	Sc RADIAL	56987.6	56987.6	102 %		08:05:26
2	Al 396.153Radial†	6889.5	6768.2	4666.7 µg/L	4666.7 ppb	08:05:46
2	Ca 317.933Radial†	5681.7	5381.0	4671.5 µg/L	4671.5 ppb	08:05:46
2	Fe 238.204 Radial†	639.8	611.8	4789.6 µg/L	4789.6 ppb	08:05:46
2	K 766.490 Radial†	7454.7	7085.4	4867.6 µg/L	4867.6 ppb	08:05:26
2	Mg 279.077 IEC†	581.6	559.6	4878.2 µg/L	4878.2 ppb	08:05:46
2	Na 589.592 Radial†	31996.8	30762.8	9562.2 µg/L	9562.2 ppb	08:05:26
2	Sr 421.552†	49613.2	48580.9	481.15 µg/L	481.15 ppb	08:05:26
2	Sc 361.383	1947192.5	1947192.5	99.788 %		08:06:57
2	Y 371.029	1339355.6	1339355.6	99.906 %		08:06:57
2	Ag 328.068†	64985.3	65657.4	505.84 µg/L	505.84 ppb	08:07:03
2	As 188.979†	277.1	276.9	511.86 µg/L	511.86 ppb	08:07:23
2	B 249.677†	12204.1	11882.9	496.85 µg/L	496.85 ppb	08:07:03
2	Ba 233.527†	20125.7	20191.7	506.23 µg/L	506.23 ppb	08:07:03
2	Be 313.107†	788986.6	794012.7	498.64 µg/L	498.64 ppb	08:06:57
2	Cd 226.502†	19186.4	19370.0	510.12 µg/L	510.12 ppb	08:07:03
2	Co 228.616†	10720.6	10750.4	507.63 µg/L	507.63 ppb	08:07:03
2	Cr 267.716†	24210.1	24312.0	515.52 µg/L	515.52 ppb	08:07:03
2	Cu 324.752†	77581.3	75193.7	505.98 µg/L	505.98 ppb	08:07:03
2	Mn 257.610†	153151.1	153716.5	508.81 µg/L	508.81 ppb	08:06:57
2	Mo 202.031†	5063.1	5079.7	519.47 µg/L	519.47 ppb	08:07:23
2	Ni 231.604†	9968.8	9680.7	508.04 µg/L	508.04 ppb	08:07:03
2	P 214.914†	1251.3	1230.1	2468.2 µg/L	2468.2 ppb	08:07:23
2	Pb 220.353†	2078.4	1985.4	506.93 µg/L	506.93 ppb	08:07:23

2	S 181.975 Axial†	258.5	240.5	1014.8 µg/L	1014.8 ppb	08:07:23
2	Sb 206.836†	571.0	546.6	511.76 µg/L	511.76 ppb	08:07:23
2	Se 196.026†	361.8	351.8	511.42 µg/L	511.42 ppb	08:07:23
2	SiO2†	27200.8	26003.9	5386.1 µg/L	5386.1 ppb	08:07:03
2	Si 251.611†	31960.1	31716.2	2514.2 µg/L	2514.2 ppb	08:07:03
2	Sn 189.927†	1182.5	1183.1	521.02 µg/L	521.02 ppb	08:07:23
2	Ti 334.940†	215646.6	215949.1	501.92 µg/L	501.92 ppb	08:06:57
2	Tl 190.801†	353.5	380.0	515.66 µg/L	515.66 ppb	08:07:23
2	U 409.014†	5807.5	5893.6	510.70 µg/L	510.70 ppb	08:07:03
2	V 292.402†	49140.1	49318.7	513.75 µg/L	513.75 ppb	08:07:03
2	Zn 213.857†	21717.5	21268.5	505.54 µg/L	505.54 ppb	08:07:03
3	Sc RADIAL	56977.8	56977.8	102 %		08:05:51
3	Al 396.153Radial†	6874.5	6754.7	4659.2 µg/L	4659.2 ppb	08:06:12
3	Ca 317.933Radial†	5660.3	5361.0	4654.1 µg/L	4654.1 ppb	08:06:12
3	Fe 238.204 Radial†	630.3	602.6	4716.6 µg/L	4716.6 ppb	08:06:12
3	K 766.490 Radial†	7334.1	6968.5	4787.3 µg/L	4787.3 ppb	08:05:51
3	Mg 279.077 IEC†	573.1	551.4	4805.6 µg/L	4805.6 ppb	08:06:12
3	Na 589.592 Radial†	31846.5	30620.8	9518.1 µg/L	9518.1 ppb	08:05:51
3	Sr 421.552†	49091.0	48077.4	476.16 µg/L	476.16 ppb	08:05:51
3	Sc 361.383	1951558.3	1951558.3	100.01 %		08:07:30
3	Y 371.029	1343173.6	1343173.6	100.19 %		08:07:30
3	Ag 328.068†	60401.4	60928.4	469.27 µg/L	469.27 ppb	08:07:36
3	As 188.979†	228.1	227.3	420.26 µg/L	420.26 ppb	08:07:56
3	B 249.677†	11203.1	10854.7	453.64 µg/L	453.64 ppb	08:07:36
3	Ba 233.527†	18142.1	18163.3	455.36 µg/L	455.36 ppb	08:07:36
3	Be 313.107†	735903.5	739166.9	464.20 µg/L	464.20 ppb	08:07:30
3	Cd 226.502†	17125.0	17265.8	454.66 µg/L	454.66 ppb	08:07:36
3	Co 228.616†	9537.9	9543.8	450.59 µg/L	450.59 ppb	08:07:36
3	Cr 267.716†	20914.5	20962.5	444.50 µg/L	444.50 ppb	08:07:36
3	Cu 324.752†	69641.6	67081.0	451.45 µg/L	451.45 ppb	08:07:36
3	Mn 257.610†	143677.0	143900.1	476.34 µg/L	476.34 ppb	08:07:30
3	Mo 202.031†	4188.7	4194.1	428.93 µg/L	428.93 ppb	08:07:56
3	Ni 231.604†	8935.4	8625.1	452.65 µg/L	452.65 ppb	08:07:36
3	P 214.914†	1068.3	1044.3	2092.3 µg/L	2092.3 ppb	08:07:56
3	Pb 220.353†	1802.1	1704.5	435.13 µg/L	435.13 ppb	08:07:56
3	S 181.975 Axial†	224.6	206.0	869.11 µg/L	869.11 ppb	08:07:56
3	Sb 206.836†	481.5	455.9	426.51 µg/L	426.51 ppb	08:07:56
3	Se 196.026†	319.0	308.2	448.84 µg/L	448.84 ppb	08:07:56
3	SiO2†	24900.0	23642.3	4896.9 µg/L	4896.9 ppb	08:07:36
3	Si 251.611†	29178.7	28863.4	2288.1 µg/L	2288.1 ppb	08:07:36
3	Sn 189.927†	957.2	955.2	420.67 µg/L	420.67 ppb	08:07:56
3	Ti 334.940†	199715.2	199536.1	463.75 µg/L	463.75 ppb	08:07:30
3	Tl 190.801†	313.2	338.9	460.17 µg/L	460.17 ppb	08:07:56
3	U 409.014†	5006.5	5079.7	440.05 µg/L	440.05 ppb	08:07:36
3	V 292.402†	43408.8	43477.9	452.70 µg/L	452.70 ppb	08:07:36
3	Zn 213.857†	19415.1	18917.6	449.61 µg/L	449.61 ppb	08:07:36

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1949370.2	99.899 %	0.1119			0.11%
Sc RADIAL	56980.8	102 %	0.0			0.01%
Y 371.029	1341594.9	100.07 %	0.149			0.15%
Ag 328.068†	64122.4	493.97 µg/L	21.396	493.97 ppb	21.396	4.33%
QC value within limits for Ag 328.068 Recovery = 98.79%						
Al 396.153Radial†	6786.4	4679.7 µg/L	29.39	4679.7 ppb	29.39	0.63%
QC value within limits for Al 396.153Radial Recovery = 93.59%						
As 188.979†	260.2	481.01 µg/L	52.613	481.01 ppb	52.613	10.94%
QC value within limits for As 188.979 Recovery = 96.20%						
B 249.677†	11540.7	482.45 µg/L	24.958	482.45 ppb	24.958	5.17%
QC value within limits for B 249.677 Recovery = 96.49%						
Ba 233.527†	19532.6	489.70 µg/L	29.746	489.70 ppb	29.746	6.07%
QC value within limits for Ba 233.527 Recovery = 97.94%						
Be 313.107†	776341.0	487.54 µg/L	20.225	487.54 ppb	20.225	4.15%
QC value within limits for Be 313.107 Recovery = 97.51%						
Ca 317.933Radial†	5387.9	4677.5 µg/L	26.85	4677.5 ppb	26.85	0.57%
QC value within limits for Ca 317.933Radial Recovery = 93.55%						
Cd 226.502†	18667.1	491.60 µg/L	31.989	491.60 ppb	31.989	6.51%
QC value within limits for Cd 226.502 Recovery = 98.32%						
Co 228.616†	10365.4	489.43 µg/L	33.661	489.43 ppb	33.661	6.88%

QC value within limits for Co 228.616 Recovery = 97.89%							
Cr 267.716†	23208.6	492.13 µg/L	41.245	492.13 ppb	41.245	8.38%	
QC value within limits for Cr 267.716 Recovery = 98.43%							
Cu 324.752†	72527.5	488.06 µg/L	31.708	488.06 ppb	31.708	6.50%	
QC value within limits for Cu 324.752 Recovery = 97.61%							
Fe 238.204 Radial†	610.9	4782.1 µg/L	62.03	4782.1 ppb	62.03	1.30%	
QC value within limits for Fe 238.204 Radial Recovery = 95.64%							
K 766.490 Radial†	7051.0	4844.0 µg/L	49.33	4844.0 ppb	49.33	1.02%	
QC value within limits for K 766.490 Radial Recovery = 96.88%							
Mg 279.077 IEC†	556.8	4853.6 µg/L	41.58	4853.6 ppb	41.58	0.86%	
QC value within limits for Mg 279.077 IEC Recovery = 97.07%							
Mn 257.610†	150475.4	498.10 µg/L	18.839	498.10 ppb	18.839	3.78%	
QC value within limits for Mn 257.610 Recovery = 99.62%							
Mo 202.031†	4817.5	492.65 µg/L	55.418	492.65 ppb	55.418	11.25%	
QC value within limits for Mo 202.031 Recovery = 98.53%							
Na 589.592 Radial†	30756.9	9560.4 µg/L	41.44	9560.4 ppb	41.44	0.43%	
QC value within limits for Na 589.592 Radial Recovery = 95.60%							
Ni 231.604†	9341.0	490.21 µg/L	32.548	490.21 ppb	32.548	6.64%	
QC value within limits for Ni 231.604 Recovery = 98.04%							
P 214.914†	1179.1	2365.2 µg/L	238.67	2365.2 ppb	238.67	10.09%	
QC value within limits for P 214.914 Recovery = 94.61%							
Pb 220.353†	1903.0	485.87 µg/L	44.154	485.87 ppb	44.154	9.09%	
QC value within limits for Pb 220.353 Recovery = 97.17%							
S 181.975 Axial†	230.5	972.39 µg/L	89.920	972.39 ppb	89.920	9.25%	
QC value within limits for S 181.975 Axial Recovery = 97.24%							
Sb 206.836†	518.3	485.20 µg/L	50.897	485.20 ppb	50.897	10.49%	
QC value within limits for Sb 206.836 Recovery = 97.04%							
Se 196.026†	340.0	494.46 µg/L	39.944	494.46 ppb	39.944	8.08%	
QC value within limits for Se 196.026 Recovery = 98.89%							
SiO2†	25239.0	5227.6 µg/L	286.49	5227.6 ppb	286.49	5.48%	
QC value within limits for SiO2 Recovery = 97.76%							
Si 251.611†	30800.8	2441.7 µg/L	133.07	2441.7 ppb	133.07	5.45%	
QC value within limits for Si 251.611 Recovery = 97.67%							
Sn 189.927†	1114.7	490.91 µg/L	61.040	490.91 ppb	61.040	12.43%	
QC value within limits for Sn 189.927 Recovery = 98.18%							
Sr 421.552†	48518.3	480.53 µg/L	4.092	480.53 ppb	4.092	0.85%	
QC value within limits for Sr 421.552 Recovery = 96.11%							
Ti 334.940†	210555.5	489.38 µg/L	22.193	489.38 ppb	22.193	4.53%	
QC value within limits for Ti 334.940 Recovery = 97.88%							
Tl 190.801†	365.4	495.85 µg/L	30.962	495.85 ppb	30.962	6.24%	
QC value within limits for Tl 190.801 Recovery = 99.17%							
U 409.014†	5618.2	486.79 µg/L	40.480	486.79 ppb	40.480	8.32%	
QC value within limits for U 409.014 Recovery = 97.36%							
V 292.402†	47387.2	493.59 µg/L	35.406	493.59 ppb	35.406	7.17%	
QC value within limits for V 292.402 Recovery = 98.72%							
Zn 213.857†	20504.2	487.35 µg/L	32.696	487.35 ppb	32.696	6.71%	
QC value within limits for Zn 213.857 Recovery = 97.47%							
All analyte(s) passed QC.							

Sequence No.: 4  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/11/2010 08:08:07  
 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	55320.1	55320.1	99.1 %		08:08:39
1	Al 396.153Radial†	-15.3	2.2	1.5041 µg/L	1.5041 ppb	08:08:39
1	Ca 317.933Radial†	188.6	4.1	3.5917 µg/L	3.5917 ppb	08:09:00
1	Fe 238.204 Radial†	18.5	3.7	28.629 µg/L	28.629 ppb	08:09:00
1	K 766.490 Radial†	206.4	-10.8	-7.3978 µg/L	-7.3978 ppb	08:08:39
1	Mg 279.077 IEC†	16.3	6.2	54.079 µg/L	54.079 ppb	08:09:00
1	Na 589.592 Radial†	650.8	67.6	21.025 µg/L	21.025 ppb	08:08:39
1	Sr 421.552†	51.1	19.1	0.1888 µg/L	0.1888 ppb	08:08:39
1	Sc 361.383	1954421.6	1954421.6	100.16 %		08:10:02
1	Y 371.029	1347889.8	1347889.8	100.54 %		08:10:02
1	Ag 328.068†	-430.5	104.2	0.8016 µg/L	0.8016 ppb	08:10:07
1	As 188.979†	2.3	1.5	2.7396 µg/L	2.7396 ppb	08:10:28
1	B 249.677†	354.1	6.4	0.2582 µg/L	0.2582 ppb	08:10:28
1	Ba 233.527†	-10.6	12.6	0.3164 µg/L	0.3164 ppb	08:10:28
1	Be 313.107†	-3118.8	234.1	0.1471 µg/L	0.1471 ppb	08:10:07
1	Cd 226.502†	-146.0	-3.1	-0.0837 µg/L	-0.0837 ppb	08:10:28
1	Co 228.616†	3.4	10.4	0.4918 µg/L	0.4918 ppb	08:10:28
1	Cr 267.716†	25.9	76.2	1.6149 µg/L	1.6149 ppb	08:10:07
1	Cu 324.752†	2527.9	-28.7	-0.1887 µg/L	-0.1887 ppb	08:10:07
1	Mn 257.610†	-174.1	65.8	0.2191 µg/L	0.2191 ppb	08:10:28
1	Mo 202.031†	-4.6	1.3	0.1362 µg/L	0.1362 ppb	08:10:28
1	Ni 231.604†	314.5	4.7	0.2455 µg/L	0.2455 ppb	08:10:28
1	P 214.914†	19.2	-4.7	-9.6208 µg/L	-9.6208 ppb	08:10:28
1	Pb 220.353†	97.3	-0.2	-0.0682 µg/L	-0.0682 ppb	08:10:28
1	S 181.975 Axial†	20.3	1.7	7.2032 µg/L	7.2032 ppb	08:10:28
1	Sb 206.836†	22.7	-2.9	-2.7482 µg/L	-2.7482 ppb	08:10:28
1	Se 196.026†	12.6	1.8	2.6228 µg/L	2.6228 ppb	08:10:28
1	SiO2†	1247.2	-9.5	-1.9741 µg/L	-1.9741 ppb	08:10:07
1	Si 251.611†	304.7	-7.6	-0.6045 µg/L	-0.6045 ppb	08:10:28
1	Sn 189.927†	6.0	4.0	1.7710 µg/L	1.7710 ppb	08:10:28
1	Ti 334.940†	131.5	-24.9	-0.0620 µg/L	-0.0620 ppb	08:10:07
1	Tl 190.801†	-20.9	4.9	6.5231 µg/L	6.5231 ppb	08:10:28
1	U 409.014†	13.0	86.8	7.5279 µg/L	7.5279 ppb	08:10:07
1	V 292.402†	-27.9	46.2	0.4918 µg/L	0.4918 ppb	08:10:07
1	Zn 213.857†	491.8	-4.2	-0.1062 µg/L	-0.1062 ppb	08:10:28
2	Sc RADIAL	55574.6	55574.6	99.5 %		08:09:05
2	Al 396.153Radial†	-20.7	-3.2	-2.2222 µg/L	-2.2222 ppb	08:09:05
2	Ca 317.933Radial†	188.7	3.4	2.9923 µg/L	2.9923 ppb	08:09:26
2	Fe 238.204 Radial†	17.4	2.4	18.773 µg/L	18.773 ppb	08:09:26
2	K 766.490 Radial†	86.6	-132.0	-90.703 µg/L	-90.703 ppb	08:09:05
2	Mg 279.077 IEC†	8.1	-2.1	-18.505 µg/L	-18.505 ppb	08:09:26
2	Na 589.592 Radial†	594.8	8.4	2.6088 µg/L	2.6088 ppb	08:09:05
2	Sr 421.552†	52.3	20.0	0.1983 µg/L	0.1983 ppb	08:09:05
2	Sc 361.383	1971991.9	1971991.9	101.06 %		08:10:34
2	Y 371.029	1360519.2	1360519.2	101.48 %		08:10:34
2	Ag 328.068†	-509.7	29.6	0.2296 µg/L	0.2296 ppb	08:10:39
2	As 188.979†	-0.6	-1.4	-2.5529 µg/L	-2.5529 ppb	08:11:00
2	B 249.677†	354.8	4.0	0.1589 µg/L	0.1589 ppb	08:11:00
2	Ba 233.527†	1.9	25.1	0.6289 µg/L	0.6289 ppb	08:11:00
2	Be 313.107†	-3120.0	260.8	0.1638 µg/L	0.1638 ppb	08:10:39
2	Cd 226.502†	-120.6	23.4	0.6141 µg/L	0.6141 ppb	08:11:00
2	Co 228.616†	9.1	16.0	0.7562 µg/L	0.7562 ppb	08:11:00
2	Cr 267.716†	16.0	66.1	1.4019 µg/L	1.4019 ppb	08:10:39
2	Cu 324.752†	2576.8	-2.8	-0.0161 µg/L	-0.0161 ppb	08:10:39
2	Mn 257.610†	-193.7	47.9	0.1617 µg/L	0.1617 ppb	08:11:00
2	Mo 202.031†	-1.9	4.0	0.4056 µg/L	0.4056 ppb	08:11:00
2	Ni 231.604†	319.8	7.1	0.3714 µg/L	0.3714 ppb	08:11:00
2	P 214.914†	16.3	-7.7	-15.863 µg/L	-15.863 ppb	08:11:00
2	Pb 220.353†	93.3	-5.0	-1.2943 µg/L	-1.2943 ppb	08:11:00

2	S 181.975 Axial†	20.9	2.1	8.9870 µg/L	8.9870 ppb	08:11:00
2	Sb 206.836†	22.1	-3.7	-3.5049 µg/L	-3.5049 ppb	08:11:00
2	Se 196.026†	10.7	-0.1	-0.1369 µg/L	-0.1369 ppb	08:11:00
2	SiO2†	1260.4	-7.6	-1.5719 µg/L	-1.5719 ppb	08:10:39
2	Si 251.611†	319.1	3.9	0.3062 µg/L	0.3062 ppb	08:11:00
2	Sn 189.927†	-4.2	-6.1	-2.6716 µg/L	-2.6716 ppb	08:11:00
2	Ti 334.940†	177.9	19.9	0.0478 µg/L	0.0478 ppb	08:10:39
2	Tl 190.801†	-23.8	2.2	2.9027 µg/L	2.9027 ppb	08:11:00
2	U 409.014†	-0.1	73.7	6.3912 µg/L	6.3912 ppb	08:10:39
2	V 292.402†	-46.5	28.1	0.3042 µg/L	0.3042 ppb	08:10:39
2	Zn 213.857†	505.2	4.7	0.1107 µg/L	0.1107 ppb	08:11:00
3	Sc RADIAL	55574.9	55574.9	99.5 %		08:09:31
3	Al 396.153Radial†	-15.7	1.8	1.2445 µg/L	1.2445 ppb	08:09:31
3	Ca 317.933Radial†	192.0	6.7	5.8347 µg/L	5.8347 ppb	08:09:52
3	Fe 238.204 Radial†	16.7	1.8	13.832 µg/L	13.832 ppb	08:09:52
3	K 766.490 Radial†	232.5	14.5	9.9760 µg/L	9.9760 ppb	08:09:31
3	Mg 279.077 IEC†	11.4	1.2	10.576 µg/L	10.576 ppb	08:09:52
3	Na 589.592 Radial†	615.3	29.0	9.0136 µg/L	9.0136 ppb	08:09:31
3	Sr 421.552†	29.5	-2.9	-0.0287 µg/L	-0.0287 ppb	08:09:31
3	Sc 361.383	1955698.9	1955698.9	100.22 %		08:11:06
3	Y 371.029	1348765.8	1348765.8	100.61 %		08:11:06
3	Ag 328.068†	-505.4	29.6	0.2295 µg/L	0.2295 ppb	08:11:11
3	As 188.979†	2.3	1.6	2.8835 µg/L	2.8835 ppb	08:11:32
3	B 249.677†	354.7	6.8	0.2805 µg/L	0.2805 ppb	08:11:32
3	Ba 233.527†	-13.6	9.7	0.2423 µg/L	0.2423 ppb	08:11:32
3	Be 313.107†	-3152.1	203.0	0.1276 µg/L	0.1276 ppb	08:11:11
3	Cd 226.502†	-132.1	10.9	0.2855 µg/L	0.2855 ppb	08:11:32
3	Co 228.616†	-5.5	1.6	0.0739 µg/L	0.0739 ppb	08:11:32
3	Cr 267.716†	-25.2	25.2	0.5351 µg/L	0.5351 ppb	08:11:11
3	Cu 324.752†	2547.2	-11.1	-0.0725 µg/L	-0.0725 ppb	08:11:11
3	Mn 257.610†	-200.1	40.0	0.1336 µg/L	0.1336 ppb	08:11:32
3	Mo 202.031†	-0.6	5.3	0.5385 µg/L	0.5385 ppb	08:11:32
3	Ni 231.604†	308.1	-1.9	-0.1000 µg/L	-0.1000 ppb	08:11:32
3	P 214.914†	25.0	1.1	2.1703 µg/L	2.1703 ppb	08:11:32
3	Pb 220.353†	97.3	-0.3	-0.0898 µg/L	-0.0898 ppb	08:11:32
3	S 181.975 Axial†	15.4	-3.2	-13.411 µg/L	-13.411 ppb	08:11:32
3	Sb 206.836†	27.4	1.8	1.6402 µg/L	1.6402 ppb	08:11:32
3	Se 196.026†	14.7	3.9	5.6426 µg/L	5.6426 ppb	08:11:32
3	SiO2†	1254.3	-3.2	-0.6694 µg/L	-0.6694 ppb	08:11:11
3	Si 251.611†	316.5	3.9	0.3074 µg/L	0.3074 ppb	08:11:32
3	Sn 189.927†	3.6	1.7	0.7476 µg/L	0.7476 ppb	08:11:32
3	Ti 334.940†	129.7	-26.8	-0.0630 µg/L	-0.0630 ppb	08:11:11
3	Tl 190.801†	-21.6	4.3	5.7163 µg/L	5.7163 ppb	08:11:32
3	U 409.014†	55.4	129.0	11.197 µg/L	11.197 ppb	08:11:11
3	V 292.402†	-45.4	28.8	0.3151 µg/L	0.3151 ppb	08:11:11
3	Zn 213.857†	503.3	6.9	0.1651 µg/L	0.1651 ppb	08:11:32

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1960704.1	100.48 %	0.502			0.50%
Sc RADIAL	55489.9	99.4 %	0.26			0.26%
Y 371.029	1352391.6	100.88 %	0.526			0.52%
Ag 328.068†	54.5	0.4202 µg/L	0.33031	0.4202 ppb	0.33031	78.60%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	0.3	0.1755 µg/L	2.08051	0.1755 ppb	2.08051	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.6	1.0234 µg/L	3.09803	1.0234 ppb	3.09803	302.72%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	5.8	0.2325 µg/L	0.06476	0.2325 ppb	0.06476	27.85%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	15.8	0.3959 µg/L	0.20515	0.3959 ppb	0.20515	51.82%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	232.6	0.1462 µg/L	0.01813	0.1462 ppb	0.01813	12.41%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	4.8	4.1395 µg/L	1.49832	4.1395 ppb	1.49832	36.20%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	10.4	0.2720 µg/L	0.34910	0.2720 ppb	0.34910	128.36%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	9.3	0.4406 µg/L	0.34403	0.4406 ppb	0.34403	78.07%



QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	55.9	1.1839 µg/L	0.57196	1.1839 ppb	0.57196	48.31%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-14.2	-0.0924 µg/L	0.08802	-0.0924 ppb	0.08802	95.24%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	2.6	20.411 µg/L	7.5334	20.411 ppb	7.5334	36.91%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-42.8	-29.375 µg/L	53.8173	-29.375 ppb	53.8173	183.21%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	1.8	15.383 µg/L	36.5300	15.383 ppb	36.5300	237.47%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	51.2	0.1715 µg/L	0.04357	0.1715 ppb	0.04357	25.41%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	3.5	0.3601 µg/L	0.20502	0.3601 ppb	0.20502	56.93%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	35.0	10.883 µg/L	9.3493	10.883 ppb	9.3493	85.91%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	3.3	0.1723 µg/L	0.24410	0.1723 ppb	0.24410	141.69%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-3.8	-7.7711 µg/L	9.15767	-7.7711 ppb	9.15767	117.84%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-1.9	-0.4841 µg/L	0.70172	-0.4841 ppb	0.70172	144.96%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	0.2	0.9265 µg/L	12.44827	0.9265 ppb	12.44827	>999.9%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-1.6	-1.5376 µg/L	2.77795	-1.5376 ppb	2.77795	180.67%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	1.9	2.7095 µg/L	2.89070	2.7095 ppb	2.89070	106.69%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-6.8	-1.4051 µg/L	0.66814	-1.4051 ppb	0.66814	47.55%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	0.0	0.0030 µg/L	0.52616	0.0030 ppb	0.52616	>999.9%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-0.1	-0.0510 µg/L	2.32650	-0.0510 ppb	2.32650	>999.9%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	12.1	0.1195 µg/L	0.12841	0.1195 ppb	0.12841	107.49%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-10.6	-0.0258 µg/L	0.06367	-0.0258 ppb	0.06367	247.21%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	3.8	5.0474 µg/L	1.90064	5.0474 ppb	1.90064	37.66%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	96.5	8.3721 µg/L	2.51172	8.3721 ppb	2.51172	30.00%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	34.4	0.3704 µg/L	0.10533	0.3704 ppb	0.10533	28.44%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	2.5	0.0566 µg/L	0.14352	0.0566 ppb	0.14352	253.74%	
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: 2/11/2010 08:56:07

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	56510.7	56510.7	101 %			08:56:45
1	Al 396.153Radial†	6965.8	6900.7	4758.4 µg/L		4758.4 ppb	08:57:05
1	Ca 317.933Radial†	5651.7	5398.3	4686.5 µg/L		4686.5 ppb	08:57:05
1	Fe 238.204 Radial†	640.0	617.3	4832.1 µg/L		4832.1 ppb	08:57:05
1	K 766.490 Radial†	7370.6	7064.0	4852.9 µg/L		4852.9 ppb	08:56:45
1	Mg 279.077 IEC†	575.1	558.1	4864.6 µg/L		4864.6 ppb	08:57:05
1	Na 589.592 Radial†	31769.3	30802.5	9574.6 µg/L		9574.6 ppb	08:56:45
1	Sr 421.552†	49067.1	48451.4	479.87 µg/L		479.87 ppb	08:56:45
1	Sc 361.383	1993032.6	1993032.6	102.14 %			08:58:09
1	Y 371.029	1370874.0	1370874.0	102.26 %			08:58:09
1	Ag 328.068†	64510.2	63694.4	490.71 µg/L		490.71 ppb	08:58:14
1	As 188.979†	275.1	268.6	496.46 µg/L		496.46 ppb	08:58:35
1	B 249.677†	12002.7	11404.5	476.72 µg/L		476.72 ppb	08:58:14
1	Ba 233.527†	19786.8	19396.0	486.28 µg/L		486.28 ppb	08:58:14
1	Be 313.107†	784743.0	771672.4	484.61 µg/L		484.61 ppb	08:58:09
1	Cd 226.502†	18787.9	18537.6	488.18 µg/L		488.18 ppb	08:58:14
1	Co 228.616†	10557.3	10343.5	488.41 µg/L		488.41 ppb	08:58:14
1	Cr 267.716†	23692.0	23246.7	492.94 µg/L		492.94 ppb	08:58:14
1	Cu 324.752†	76723.0	72565.2	488.32 µg/L		488.32 ppb	08:58:14
1	Mn 257.610†	152276.7	149330.3	494.31 µg/L		494.31 ppb	08:58:09
1	Mo 202.031†	5082.6	4982.2	509.49 µg/L		509.49 ppb	08:58:35
1	Ni 231.604†	9831.5	9316.5	488.93 µg/L		488.93 ppb	08:58:14
1	P 214.914†	1255.2	1205.0	2418.5 µg/L		2418.5 ppb	08:58:35
1	Pb 220.353†	2078.7	1937.8	494.79 µg/L		494.79 ppb	08:58:35
1	S 181.975 Axial†	260.7	236.7	998.61 µg/L		998.61 ppb	08:58:35
1	Sb 206.836†	569.5	532.0	498.23 µg/L		498.23 ppb	08:58:35
1	Se 196.026†	360.4	342.1	497.56 µg/L		497.56 ppb	08:58:35
1	SiO2†	27043.9	25223.3	5224.4 µg/L		5224.4 ppb	08:58:14
1	Si 251.611†	31765.3	30788.8	2440.7 µg/L		2440.7 ppb	08:58:14
1	Sn 189.927†	1177.0	1150.4	506.64 µg/L		506.64 ppb	08:58:35
1	Ti 334.940†	214507.1	209863.0	487.76 µg/L		487.76 ppb	08:58:09
1	Tl 190.801†	349.9	368.3	499.84 µg/L		499.84 ppb	08:58:35
1	U 409.014†	5765.5	5718.6	495.50 µg/L		495.50 ppb	08:58:14
1	V 292.402†	48490.3	47549.9	495.41 µg/L		495.41 ppb	08:58:14
1	Zn 213.857†	21403.0	20460.0	486.29 µg/L		486.29 ppb	08:58:14
2	Sc RADIAL	56938.8	56938.8	102 %			08:57:11
2	Al 396.153Radial†	6904.8	6789.0	4681.4 µg/L		4681.4 ppb	08:57:31
2	Ca 317.933Radial†	5641.4	5346.3	4641.3 µg/L		4641.3 ppb	08:57:31
2	Fe 238.204 Radial†	635.8	608.5	4763.4 µg/L		4763.4 ppb	08:57:31
2	K 766.490 Radial†	7355.6	6994.4	4805.1 µg/L		4805.1 ppb	08:57:11
2	Mg 279.077 IEC†	578.7	557.3	4858.0 µg/L		4858.0 ppb	08:57:31
2	Na 589.592 Radial†	31698.9	30497.4	9479.7 µg/L		9479.7 ppb	08:57:11
2	Sr 421.552†	48901.4	47924.4	474.65 µg/L		474.65 ppb	08:57:11
2	Sc 361.383	1973319.1	1973319.1	101.13 %			08:58:42
2	Y 371.029	1359037.5	1359037.5	101.37 %			08:58:42
2	Ag 328.068†	64387.9	64204.5	494.62 µg/L		494.62 ppb	08:58:48
2	As 188.979†	263.2	259.5	479.77 µg/L		479.77 ppb	08:59:08
2	B 249.677†	11968.6	11488.2	480.27 µg/L		480.27 ppb	08:58:48
2	Ba 233.527†	19798.7	19601.4	491.43 µg/L		491.43 ppb	08:58:48
2	Be 313.107†	779141.0	773808.4	485.95 µg/L		485.95 ppb	08:58:42
2	Cd 226.502†	18775.2	18708.7	492.70 µg/L		492.70 ppb	08:58:48
2	Co 228.616†	10514.5	10404.3	491.28 µg/L		491.28 ppb	08:58:48
2	Cr 267.716†	23727.9	23513.9	498.60 µg/L		498.60 ppb	08:58:48
2	Cu 324.752†	76548.3	73142.9	492.20 µg/L		492.20 ppb	08:58:48
2	Mn 257.610†	151215.8	149770.6	495.76 µg/L		495.76 ppb	08:58:42
2	Mo 202.031†	4977.3	4927.7	503.92 µg/L		503.92 ppb	08:59:08
2	Ni 231.604†	9816.7	9398.0	493.20 µg/L		493.20 ppb	08:58:48
2	P 214.914†	1237.8	1200.2	2408.0 µg/L		2408.0 ppb	08:59:08
2	Pb 220.353†	2040.6	1920.5	490.35 µg/L		490.35 ppb	08:59:08

2	S 181.975 Axial†	256.3	234.9	991.20 µg/L	991.20 ppb	08:59:08
2	Sb 206.836†	569.1	537.1	502.85 µg/L	502.85 ppb	08:59:08
2	Se 196.026†	357.8	343.0	498.74 µg/L	498.74 ppb	08:59:08
2	SiO2†	26972.1	25416.8	5264.5 µg/L	5264.5 ppb	08:58:48
2	Si 251.611†	31735.3	31069.8	2463.0 µg/L	2463.0 ppb	08:58:48
2	Sn 189.927†	1150.9	1136.1	500.35 µg/L	500.35 ppb	08:59:08
2	Ti 334.940†	212670.7	210145.2	488.42 µg/L	488.42 ppb	08:58:42
2	Tl 190.801†	341.2	363.1	492.84 µg/L	492.84 ppb	08:59:08
2	U 409.014†	5762.1	5771.6	500.11 µg/L	500.11 ppb	08:58:48
2	V 292.402†	48328.8	47864.4	498.61 µg/L	498.61 ppb	08:58:48
2	Zn 213.857†	21344.7	20611.7	489.90 µg/L	489.90 ppb	08:58:48
3	Sc RADIAL	57434.8	57434.8	103 %		08:57:37
3	Al 396.153Radial†	6910.5	6736.2	4646.5 µg/L	4646.5 ppb	08:57:57
3	Ca 317.933Radial†	5646.3	5303.2	4604.0 µg/L	4604.0 ppb	08:57:57
3	Fe 238.204 Radial†	630.0	597.5	4676.3 µg/L	4676.3 ppb	08:57:57
3	K 766.490 Radial†	7250.2	6829.8	4692.0 µg/L	4692.0 ppb	08:57:37
3	Mg 279.077 IEC†	575.0	548.7	4782.2 µg/L	4782.2 ppb	08:57:57
3	Na 589.592 Radial†	31218.3	29761.8	9251.1 µg/L	9251.1 ppb	08:57:37
3	Sr 421.552†	48114.8	46745.5	462.97 µg/L	462.97 ppb	08:57:37
3	Sc 361.383	1972228.4	1972228.4	101.07 %		08:59:15
3	Y 371.029	1355849.2	1355849.2	101.14 %		08:59:15
3	Ag 328.068†	60729.6	60620.2	466.88 µg/L	466.88 ppb	08:59:21
3	As 188.979†	227.8	224.6	415.23 µg/L	415.23 ppb	08:59:41
3	B 249.677†	11280.5	10813.9	451.94 µg/L	451.94 ppb	08:59:21
3	Ba 233.527†	18167.9	17998.7	451.23 µg/L	451.23 ppb	08:59:21
3	Be 313.107†	732897.3	728480.7	457.49 µg/L	457.49 ppb	08:59:15
3	Cd 226.502†	17152.7	17113.7	450.65 µg/L	450.65 ppb	08:59:21
3	Co 228.616†	9556.1	9461.9	446.72 µg/L	446.72 ppb	08:59:21
3	Cr 267.716†	20867.7	20696.9	438.87 µg/L	438.87 ppb	08:59:21
3	Cu 324.752†	69674.8	66384.1	446.76 µg/L	446.76 ppb	08:59:21
3	Mn 257.610†	142810.1	141536.7	468.52 µg/L	468.52 ppb	08:59:15
3	Mo 202.031†	4161.5	4123.3	421.69 µg/L	421.69 ppb	08:59:41
3	Ni 231.604†	8900.4	8496.8	445.91 µg/L	445.91 ppb	08:59:21
3	P 214.914†	1065.4	1030.3	2064.0 µg/L	2064.0 ppb	08:59:41
3	Pb 220.353†	1811.3	1694.7	432.61 µg/L	432.61 ppb	08:59:41
3	S 181.975 Axial†	229.1	208.1	878.25 µg/L	878.25 ppb	08:59:41
3	Sb 206.836†	480.8	450.1	421.08 µg/L	421.08 ppb	08:59:41
3	Se 196.026†	325.6	311.4	453.25 µg/L	453.25 ppb	08:59:41
3	SiO2†	25087.9	23567.3	4881.4 µg/L	4881.4 ppb	08:59:21
3	Si 251.611†	29477.9	28853.7	2287.3 µg/L	2287.3 ppb	08:59:21
3	Sn 189.927†	941.3	929.4	409.30 µg/L	409.30 ppb	08:59:41
3	Ti 334.940†	198984.2	196720.0	457.20 µg/L	457.20 ppb	08:59:15
3	Tl 190.801†	307.1	329.6	447.62 µg/L	447.62 ppb	08:59:41
3	U 409.014†	5135.6	5155.0	446.59 µg/L	446.59 ppb	08:59:21
3	V 292.402†	43448.1	43061.9	448.36 µg/L	448.36 ppb	08:59:21
3	Zn 213.857†	19460.3	18758.9	445.85 µg/L	445.85 ppb	08:59:21

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1979526.7	101.44 %	0.600			0.59%
Sc RADIAL	56961.4	102 %	0.8			0.81%
Y 371.029	1361920.2	101.59 %	0.591			0.58%
Ag 328.068†	62839.7	484.07 µg/L	15.017	484.07 ppb	15.017	3.10%
QC value within limits for Ag 328.068 Recovery = 96.81%						
Al 396.153Radial†	6808.6	4695.4 µg/L	57.26	4695.4 ppb	57.26	1.22%
QC value within limits for Al 396.153Radial Recovery = 93.91%						
As 188.979†	250.9	463.82 µg/L	42.902	463.82 ppb	42.902	9.25%
QC value within limits for As 188.979 Recovery = 92.76%						
B 249.677†	11235.5	469.64 µg/L	15.436	469.64 ppb	15.436	3.29%
QC value within limits for B 249.677 Recovery = 93.93%						
Ba 233.527†	18998.7	476.31 µg/L	21.875	476.31 ppb	21.875	4.59%
QC value within limits for Ba 233.527 Recovery = 95.26%						
Be 313.107†	757987.2	476.02 µg/L	16.061	476.02 ppb	16.061	3.37%
QC value within limits for Be 313.107 Recovery = 95.20%						
Ca 317.933Radial†	5349.3	4643.9 µg/L	41.34	4643.9 ppb	41.34	0.89%
QC value within limits for Ca 317.933Radial Recovery = 92.88%						
Cd 226.502†	18120.0	477.17 µg/L	23.081	477.17 ppb	23.081	4.84%
QC value within limits for Cd 226.502 Recovery = 95.43%						
Co 228.616†	10069.9	475.47 µg/L	24.940	475.47 ppb	24.940	5.25%

QC value within limits for Co 228.616 Recovery = 95.09%							
Cr 267.716†	22485.8	476.80 µg/L	32.969	476.80 ppb	32.969	6.91%	
QC value within limits for Cr 267.716 Recovery = 95.36%							
Cu 324.752†	70697.4	475.76 µg/L	25.187	475.76 ppb	25.187	5.29%	
QC value within limits for Cu 324.752 Recovery = 95.15%							
Fe 238.204 Radial†	607.8	4757.3 µg/L	78.07	4757.3 ppb	78.07	1.64%	
QC value within limits for Fe 238.204 Radial Recovery = 95.15%							
K 766.490 Radial†	6962.7	4783.3 µg/L	82.63	4783.3 ppb	82.63	1.73%	
QC value within limits for K 766.490 Radial Recovery = 95.67%							
Mg 279.077 IEC†	554.7	4834.9 µg/L	45.80	4834.9 ppb	45.80	0.95%	
QC value within limits for Mg 279.077 IEC Recovery = 96.70%							
Mn 257.610†	146879.2	486.20 µg/L	15.326	486.20 ppb	15.326	3.15%	
QC value within limits for Mn 257.610 Recovery = 97.24%							
Mo 202.031†	4677.7	478.37 µg/L	49.163	478.37 ppb	49.163	10.28%	
QC value within limits for Mo 202.031 Recovery = 95.67%							
Na 589.592 Radial†	30353.9	9435.1 µg/L	166.30	9435.1 ppb	166.30	1.76%	
QC value within limits for Na 589.592 Radial Recovery = 94.35%							
Ni 231.604†	9070.4	476.01 µg/L	26.158	476.01 ppb	26.158	5.50%	
QC value within limits for Ni 231.604 Recovery = 95.20%							
P 214.914†	1145.2	2296.9 µg/L	201.71	2296.9 ppb	201.71	8.78%	
QC value within limits for P 214.914 Recovery = 91.87%							
Pb 220.353†	1851.0	472.58 µg/L	34.688	472.58 ppb	34.688	7.34%	
QC value within limits for Pb 220.353 Recovery = 94.52%							
S 181.975 Axial†	226.6	956.02 µg/L	67.454	956.02 ppb	67.454	7.06%	
QC value within limits for S 181.975 Axial Recovery = 95.60%							
Sb 206.836†	506.4	474.06 µg/L	45.934	474.06 ppb	45.934	9.69%	
QC value within limits for Sb 206.836 Recovery = 94.81%							
Se 196.026†	332.2	483.18 µg/L	25.929	483.18 ppb	25.929	5.37%	
QC value within limits for Se 196.026 Recovery = 96.64%							
SiO2†	24735.8	5123.4 µg/L	210.56	5123.4 ppb	210.56	4.11%	
QC value within limits for SiO2 Recovery = 95.81%							
Si 251.611†	30237.4	2397.0 µg/L	95.65	2397.0 ppb	95.65	3.99%	
QC value within limits for Si 251.611 Recovery = 95.88%							
Sn 189.927†	1072.0	472.09 µg/L	54.475	472.09 ppb	54.475	11.54%	
QC value within limits for Sn 189.927 Recovery = 94.42%							
Sr 421.552†	47707.1	472.49 µg/L	8.651	472.49 ppb	8.651	1.83%	
QC value within limits for Sr 421.552 Recovery = 94.50%							
Ti 334.940†	205576.0	477.80 µg/L	17.837	477.80 ppb	17.837	3.73%	
QC value within limits for Ti 334.940 Recovery = 95.56%							
Tl 190.801†	353.7	480.10 µg/L	28.345	480.10 ppb	28.345	5.90%	
QC value within limits for Tl 190.801 Recovery = 96.02%							
U 409.014†	5548.4	480.74 µg/L	29.660	480.74 ppb	29.660	6.17%	
QC value within limits for U 409.014 Recovery = 96.15%							
V 292.402†	46158.7	480.79 µg/L	28.134	480.79 ppb	28.134	5.85%	
QC value within limits for V 292.402 Recovery = 96.16%							
Zn 213.857†	19943.5	474.01 µg/L	24.462	474.01 ppb	24.462	5.16%	
QC value within limits for Zn 213.857 Recovery = 94.80%							
All analyte(s) passed QC.							

Sequence No.: 10

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 08:59:52

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55541.4	55541.4	99.5 %			09:00:24
1	Al 396.153Radial†	-3.4	14.2	9.8128 µg/L		9.8128 ppb	09:00:24
1	Ca 317.933Radial†	188.3	3.1	2.6880 µg/L		2.6880 ppb	09:00:45
1	Fe 238.204 Radial†	17.2	2.2	17.452 µg/L		17.452 ppb	09:00:45
1	K 766.490 Radial†	202.1	-15.8	-10.880 µg/L		-10.880 ppb	09:00:24
1	Mg 279.077 IEC†	11.5	1.3	11.750 µg/L		11.750 ppb	09:00:45
1	Na 589.592 Radial†	611.3	25.4	7.8830 µg/L		7.8830 ppb	09:00:24
1	Sr 421.552†	55.0	22.8	0.2259 µg/L		0.2259 ppb	09:00:24
1	Sc 361.383	1966524.2	1966524.2	100.78 %			09:01:47
1	Y 371.029	1356673.8	1356673.8	101.20 %			09:01:47
1	Ag 328.068†	-481.8	55.8	0.4302 µg/L		0.4302 ppb	09:01:52
1	As 188.979†	0.3	-0.5	-0.8907 µg/L		-0.8907 ppb	09:02:13
1	B 249.677†	340.8	-8.9	-0.3808 µg/L		-0.3808 ppb	09:02:13
1	Ba 233.527†	-7.2	16.1	0.4039 µg/L		0.4039 ppb	09:02:13
1	Be 313.107†	-3160.4	212.0	0.1333 µg/L		0.1333 ppb	09:01:52
1	Cd 226.502†	-141.5	2.3	0.0584 µg/L		0.0584 ppb	09:02:13
1	Co 228.616†	-3.3	3.7	0.1776 µg/L		0.1776 ppb	09:02:13
1	Cr 267.716†	-46.1	4.6	0.0979 µg/L		0.0979 ppb	09:01:52
1	Cu 324.752†	2518.0	-54.0	-0.3607 µg/L		-0.3607 ppb	09:01:52
1	Mn 257.610†	-207.6	33.6	0.1130 µg/L		0.1130 ppb	09:02:13
1	Mo 202.031†	-0.2	5.7	0.5841 µg/L		0.5841 ppb	09:02:13
1	Ni 231.604†	308.5	-3.3	-0.1708 µg/L		-0.1708 ppb	09:02:13
1	P 214.914†	22.1	-2.0	-3.9794 µg/L		-3.9794 ppb	09:02:13
1	Pb 220.353†	99.8	1.6	0.4254 µg/L		0.4254 ppb	09:02:13
1	S 181.975 Axial†	15.7	-3.0	-12.651 µg/L		-12.651 ppb	09:02:13
1	Sb 206.836†	20.1	-5.7	-5.3038 µg/L		-5.3038 ppb	09:02:13
1	Se 196.026†	11.4	0.5	0.8215 µg/L		0.8215 ppb	09:02:13
1	SiO2†	1272.3	7.7	1.5950 µg/L		1.5950 ppb	09:01:52
1	Si 251.611†	405.1	90.1	7.1392 µg/L		7.1392 ppb	09:02:13
1	Sn 189.927†	2.2	0.3	0.1133 µg/L		0.1133 ppb	09:02:13
1	Ti 334.940†	72.3	-84.4	-0.1973 µg/L		-0.1973 ppb	09:01:52
1	Tl 190.801†	-24.8	1.2	1.5652 µg/L		1.5652 ppb	09:02:13
1	U 409.014†	-118.2	-43.5	-3.7827 µg/L		-3.7827 ppb	09:01:52
1	V 292.402†	-42.8	31.6	0.3281 µg/L		0.3281 ppb	09:01:52
1	Zn 213.857†	489.8	-9.3	-0.2221 µg/L		-0.2221 ppb	09:02:13
2	Sc RADIAL	55307.7	55307.7	99.0 %			09:00:50
2	Al 396.153Radial†	12.5	30.3	20.908 µg/L		20.908 ppb	09:00:50
2	Ca 317.933Radial†	193.8	9.5	8.2087 µg/L		8.2087 ppb	09:01:11
2	Fe 238.204 Radial†	18.5	3.7	28.781 µg/L		28.781 ppb	09:01:11
2	K 766.490 Radial†	164.5	-53.0	-36.428 µg/L		-36.428 ppb	09:00:50
2	Mg 279.077 IEC†	9.4	-0.8	-6.8761 µg/L		-6.8761 ppb	09:01:11
2	Na 589.592 Radial†	653.4	70.4	21.882 µg/L		21.882 ppb	09:00:50
2	Sr 421.552†	33.8	1.6	0.0157 µg/L		0.0157 ppb	09:00:50
2	Sc 361.383	1959145.8	1959145.8	100.40 %			09:02:19
2	Y 371.029	1350531.5	1350531.5	100.74 %			09:02:19
2	Ag 328.068†	-464.1	71.7	0.5515 µg/L		0.5515 ppb	09:02:24
2	As 188.979†	0.6	-0.1	-0.2526 µg/L		-0.2526 ppb	09:02:45
2	B 249.677†	339.3	-9.1	-0.3978 µg/L		-0.3978 ppb	09:02:45
2	Ba 233.527†	-15.9	7.4	0.1851 µg/L		0.1851 ppb	09:02:45
2	Be 313.107†	-3105.5	255.0	0.1601 µg/L		0.1601 ppb	09:02:24
2	Cd 226.502†	-135.6	7.7	0.1995 µg/L		0.1995 ppb	09:02:45
2	Co 228.616†	-4.1	2.9	0.1392 µg/L		0.1392 ppb	09:02:45
2	Cr 267.716†	-84.4	-33.7	-0.7149 µg/L		-0.7149 ppb	09:02:24
2	Cu 324.752†	2505.9	-56.7	-0.3768 µg/L		-0.3768 ppb	09:02:24
2	Mn 257.610†	-228.6	12.0	0.0437 µg/L		0.0437 ppb	09:02:45
2	Mo 202.031†	-5.6	0.3	0.0365 µg/L		0.0365 ppb	09:02:45
2	Ni 231.604†	315.0	4.4	0.2304 µg/L		0.2304 ppb	09:02:45
2	P 214.914†	14.8	-9.2	-18.755 µg/L		-18.755 ppb	09:02:45
2	Pb 220.353†	93.8	-4.0	-1.0099 µg/L		-1.0099 ppb	09:02:45

2	S 181.975 Axial†	16.5	-2.2	-9.1258 µg/L	-9.1258 ppb	09:02:45
2	Sb 206.836†	26.7	1.0	0.9723 µg/L	0.9723 ppb	09:02:45
2	Se 196.026†	14.5	3.7	5.3905 µg/L	5.3905 ppb	09:02:45
2	SiO2†	1340.8	80.7	16.715 µg/L	16.715 ppb	09:02:24
2	Si 251.611†	410.8	97.2	7.7092 µg/L	7.7092 ppb	09:02:45
2	Sn 189.927†	2.6	0.7	0.2880 µg/L	0.2880 ppb	09:02:45
2	Ti 334.940†	221.5	64.5	0.1506 µg/L	0.1506 ppb	09:02:24
2	Tl 190.801†	-19.7	6.1	8.2199 µg/L	8.2199 ppb	09:02:45
2	U 409.014†	-67.0	7.0	0.6045 µg/L	0.6045 ppb	09:02:24
2	V 292.402†	-56.8	17.5	0.1828 µg/L	0.1828 ppb	09:02:24
2	Zn 213.857†	492.7	-4.5	-0.1095 µg/L	-0.1095 ppb	09:02:45
3	Sc RADIAL	55557.7	55557.7	99.5 %		09:01:16
3	Al 396.153Radial†	-1.8	15.8	10.927 µg/L	10.927 ppb	09:01:16
3	Ca 317.933Radial†	191.2	6.0	5.2149 µg/L	5.2149 ppb	09:01:37
3	Fe 238.204 Radial†	16.3	1.4	10.577 µg/L	10.577 ppb	09:01:37
3	K 766.490 Radial†	121.3	-97.1	-66.716 µg/L	-66.716 ppb	09:01:16
3	Mg 279.077 IEC†	11.0	0.8	6.6675 µg/L	6.6675 ppb	09:01:37
3	Na 589.592 Radial†	613.4	27.3	8.4907 µg/L	8.4907 ppb	09:01:16
3	Sr 421.552†	35.2	2.9	0.0284 µg/L	0.0284 ppb	09:01:16
3	Sc 361.383	1967428.5	1967428.5	100.82 %		09:02:51
3	Y 371.029	1357869.5	1357869.5	101.29 %		09:02:51
3	Ag 328.068†	-488.5	49.4	0.3814 µg/L	0.3814 ppb	09:02:56
3	As 188.979†	2.3	1.5	2.7508 µg/L	2.7508 ppb	09:03:17
3	B 249.677†	344.3	-5.6	-0.2391 µg/L	-0.2391 ppb	09:03:17
3	Ba 233.527†	-12.2	11.2	0.2798 µg/L	0.2798 ppb	09:03:17
3	Be 313.107†	-3151.7	222.1	0.1395 µg/L	0.1395 ppb	09:02:56
3	Cd 226.502†	-136.3	7.5	0.1964 µg/L	0.1964 ppb	09:03:17
3	Co 228.616†	-10.2	-3.1	-0.1480 µg/L	-0.1480 ppb	09:03:17
3	Cr 267.716†	-34.5	16.1	0.3417 µg/L	0.3417 ppb	09:02:56
3	Cu 324.752†	2526.2	-47.1	-0.3151 µg/L	-0.3151 ppb	09:02:56
3	Mn 257.610†	-225.8	15.7	0.0531 µg/L	0.0531 ppb	09:03:17
3	Mo 202.031†	-2.0	3.9	0.3975 µg/L	0.3975 ppb	09:03:17
3	Ni 231.604†	296.6	-15.2	-0.7976 µg/L	-0.7976 ppb	09:03:17
3	P 214.914†	20.6	-3.4	-6.9901 µg/L	-6.9901 ppb	09:03:17
3	Pb 220.353†	87.0	-11.1	-2.8212 µg/L	-2.8212 ppb	09:03:17
3	S 181.975 Axial†	15.4	-3.3	-13.956 µg/L	-13.956 ppb	09:03:17
3	Sb 206.836†	24.4	-1.4	-1.2667 µg/L	-1.2667 ppb	09:03:17
3	Se 196.026†	11.3	0.4	0.5966 µg/L	0.5966 ppb	09:03:17
3	SiO2†	1330.2	64.5	13.369 µg/L	13.369 ppb	09:02:56
3	Si 251.611†	411.2	95.9	7.6059 µg/L	7.6059 ppb	09:03:17
3	Sn 189.927†	5.1	3.1	1.3828 µg/L	1.3828 ppb	09:03:17
3	Ti 334.940†	125.0	-32.2	-0.0753 µg/L	-0.0753 ppb	09:02:56
3	Tl 190.801†	-22.2	3.7	5.0196 µg/L	5.0196 ppb	09:03:17
3	U 409.014†	-74.0	0.4	0.0326 µg/L	0.0326 ppb	09:02:56
3	V 292.402†	-35.3	39.1	0.4071 µg/L	0.4071 ppb	09:02:56
3	Zn 213.857†	494.5	-4.8	-0.1108 µg/L	-0.1108 ppb	09:03:17

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1964366.2	100.67 %	0.233			0.23%
Sc RADIAL	55469.0	99.3 %	0.25			0.25%
Y 371.029	1355024.9	101.07 %	0.294			0.29%
Ag 328.068†	59.0	0.4544 µg/L	0.08762	0.4544 ppb	0.08762	19.28%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	20.1	13.882 µg/L	6.1095	13.882 ppb	6.1095	44.01%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.3	0.5358 µg/L	1.94456	0.5358 ppb	1.94456	362.93%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-7.8	-0.3392 µg/L	0.08711	-0.3392 ppb	0.08711	25.68%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	11.6	0.2896 µg/L	0.10971	0.2896 ppb	0.10971	37.88%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	229.7	0.1443 µg/L	0.01404	0.1443 ppb	0.01404	9.73%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	6.2	5.3705 µg/L	2.76364	5.3705 ppb	2.76364	51.46%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	5.8	0.1514 µg/L	0.08055	0.1514 ppb	0.08055	53.19%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	1.2	0.0563 µg/L	0.17793	0.0563 ppb	0.17793	316.13%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-4.3	-0.0918 µg/L	0.55326	-0.0918 ppb	0.55326	602.92%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-52.6	-0.3509 µg/L	0.03201	-0.3509 ppb	0.03201	9.12%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	2.4	18.937 µg/L	9.1929	18.937 ppb	9.1929	48.55%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-55.3	-38.008 µg/L	27.9517	-38.008 ppb	27.9517	73.54%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.4	3.8470 µg/L	9.62787	3.8470 ppb	9.62787	250.27%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	20.4	0.0699 µg/L	0.03759	0.0699 ppb	0.03759	53.77%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	3.3	0.3394 µg/L	0.27839	0.3394 ppb	0.27839	82.03%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	41.0	12.752 µg/L	7.9125	12.752 ppb	7.9125	62.05%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-4.7	-0.2460 µg/L	0.51813	-0.2460 ppb	0.51813	210.62%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-4.9	-9.9082 µg/L	7.80814	-9.9082 ppb	7.80814	78.80%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-4.5	-1.1352 µg/L	1.62696	-1.1352 ppb	1.62696	143.31%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-2.8	-11.911 µg/L	2.4988	-11.911 ppb	2.4988	20.98%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-2.0	-1.8661 µg/L	3.18071	-1.8661 ppb	3.18071	170.45%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.6	2.2695 µg/L	2.70514	2.2695 ppb	2.70514	119.19%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	51.0	10.560 µg/L	7.9417	10.560 ppb	7.9417	75.21%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	94.4	7.4847 µg/L	0.30369	7.4847 ppb	0.30369	4.06%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	1.4	0.5947 µg/L	0.68807	0.5947 ppb	0.68807	115.70%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	9.1	0.0900 µg/L	0.11787	0.0900 ppb	0.11787	130.95%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-17.4	-0.0406 µg/L	0.17652	-0.0406 ppb	0.17652	434.33%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	3.7	4.9349 µg/L	3.32816	4.9349 ppb	3.32816	67.44%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-12.0	-1.0486 µg/L	2.38508	-1.0486 ppb	2.38508	227.46%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	29.4	0.3060 µg/L	0.11372	0.3060 ppb	0.11372	37.17%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-6.2	-0.1475 µg/L	0.06463	-0.1475 ppb	0.06463	43.82%
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: 2/11/2010 09:44:08  
 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	56182.0	56182.0	101 %		09:44:47
1	Al 396.153Radial†	6885.9	6861.5	4731.2 µg/L	4731.2 ppb	09:44:47
1	Ca 317.933Radial†	5558.8	5338.7	4634.7 µg/L	4634.7 ppb	09:45:07
1	Fe 238.204 Radial†	635.4	616.5	4825.9 µg/L	4825.9 ppb	09:45:07
1	K 766.490 Radial†	7314.1	7050.4	4843.6 µg/L	4843.6 ppb	09:44:47
1	Mg 279.077 IEC†	572.7	558.9	4872.1 µg/L	4872.1 ppb	09:45:07
1	Na 589.592 Radial†	31534.1	30752.4	9559.0 µg/L	9559.0 ppb	09:44:47
1	Sr 421.552†	48597.4	48268.2	478.05 µg/L	478.05 ppb	09:44:47
1	Sc 361.383	1958137.6	1958137.6	100.35 %		09:46:10
1	Y 371.029	1345573.7	1345573.7	100.37 %		09:46:10
1	Ag 328.068†	65103.1	65410.9	503.92 µg/L	503.92 ppb	09:46:16
1	As 188.979†	271.2	269.5	498.15 µg/L	498.15 ppb	09:46:36
1	B 249.677†	12114.6	11725.4	490.21 µg/L	490.21 ppb	09:46:16
1	Ba 233.527†	19973.9	19927.7	499.61 µg/L	499.61 ppb	09:46:16
1	Be 313.107†	786175.3	786791.7	494.10 µg/L	494.10 ppb	09:46:10
1	Cd 226.502†	18965.9	19042.8	501.50 µg/L	501.50 ppb	09:46:16
1	Co 228.616†	10723.3	10693.1	504.92 µg/L	504.92 ppb	09:46:16
1	Cr 267.716†	23960.1	23927.2	507.36 µg/L	507.36 ppb	09:46:16
1	Cu 324.752†	77282.2	74461.0	501.06 µg/L	501.06 ppb	09:46:16
1	Mn 257.610†	152551.0	152260.6	504.00 µg/L	504.00 ppb	09:46:10
1	Mo 202.031†	5065.9	5054.2	516.86 µg/L	516.86 ppb	09:46:36
1	Ni 231.604†	9959.4	9615.4	504.61 µg/L	504.61 ppb	09:46:16
1	P 214.914†	1256.9	1228.7	2465.6 µg/L	2465.6 ppb	09:46:36
1	Pb 220.353†	2081.5	1976.9	504.74 µg/L	504.74 ppb	09:46:36
1	S 181.975 Axial†	255.1	235.6	994.20 µg/L	994.20 ppb	09:46:36
1	Sb 206.836†	575.3	547.7	512.84 µg/L	512.84 ppb	09:46:36
1	Se 196.026†	365.4	353.3	513.69 µg/L	513.69 ppb	09:46:36
1	SiO2†	27260.9	25911.4	5366.9 µg/L	5366.9 ppb	09:46:16
1	Si 251.611†	32048.7	31625.5	2507.0 µg/L	2507.0 ppb	09:46:16
1	Sn 189.927†	1177.5	1171.5	515.90 µg/L	515.90 ppb	09:46:36
1	Ti 334.940†	215254.0	214349.9	498.20 µg/L	498.20 ppb	09:46:10
1	Tl 190.801†	352.6	377.1	511.72 µg/L	511.72 ppb	09:46:36
1	U 409.014†	5814.1	5867.7	508.45 µg/L	508.45 ppb	09:46:16
1	V 292.402†	48898.6	48802.8	508.40 µg/L	508.40 ppb	09:46:16
1	Zn 213.857†	21616.4	21046.1	500.23 µg/L	500.23 ppb	09:46:16
2	Sc RADIAL	56107.5	56107.5	100 %		09:45:12
2	Al 396.153Radial†	6911.8	6896.3	4755.3 µg/L	4755.3 ppb	09:45:12
2	Ca 317.933Radial†	5547.1	5334.4	4631.0 µg/L	4631.0 ppb	09:45:33
2	Fe 238.204 Radial†	631.0	613.0	4798.3 µg/L	4798.3 ppb	09:45:33
2	K 766.490 Radial†	7313.1	7059.0	4849.5 µg/L	4849.5 ppb	09:45:12
2	Mg 279.077 IEC†	580.4	567.4	4945.6 µg/L	4945.6 ppb	09:45:33
2	Na 589.592 Radial†	31656.8	30916.1	9609.9 µg/L	9609.9 ppb	09:45:12
2	Sr 421.552†	48758.2	48492.4	480.27 µg/L	480.27 ppb	09:45:12
2	Sc 361.383	1946926.7	1946926.7	99.774 %		09:46:43
2	Y 371.029	1336877.0	1336877.0	99.721 %		09:46:43
2	Ag 328.068†	63855.7	64534.2	497.15 µg/L	497.15 ppb	09:46:49
2	As 188.979†	265.3	265.1	490.02 µg/L	490.02 ppb	09:47:10
2	B 249.677†	11872.3	11552.1	482.93 µg/L	482.93 ppb	09:46:49
2	Ba 233.527†	19514.2	19581.6	490.93 µg/L	490.93 ppb	09:46:49
2	Be 313.107†	779120.2	784231.9	492.50 µg/L	492.50 ppb	09:46:43
2	Cd 226.502†	18454.1	18638.6	490.85 µg/L	490.85 ppb	09:46:49
2	Co 228.616†	10405.0	10435.5	492.75 µg/L	492.75 ppb	09:46:49
2	Cr 267.716†	23313.4	23416.6	496.54 µg/L	496.54 ppb	09:46:49
2	Cu 324.752†	75781.1	73400.0	493.93 µg/L	493.93 ppb	09:46:49
2	Mn 257.610†	151225.7	151807.6	502.50 µg/L	502.50 ppb	09:46:43
2	Mo 202.031†	4996.9	5014.1	512.76 µg/L	512.76 ppb	09:47:10
2	Ni 231.604†	9702.4	9415.0	494.10 µg/L	494.10 ppb	09:46:49
2	P 214.914†	1236.5	1215.4	2439.2 µg/L	2439.2 ppb	09:47:10
2	Pb 220.353†	2055.9	1963.2	501.26 µg/L	501.26 ppb	09:47:10



2	S 181.975 Axial†	254.4	236.4	997.40 µg/L	997.40 ppb	09:47:10
2	Sb 206.836†	570.1	545.8	511.10 µg/L	511.10 ppb	09:47:10
2	Se 196.026†	358.9	348.9	507.24 µg/L	507.24 ppb	09:47:10
2	SiO2†	26733.4	25539.1	5289.8 µg/L	5289.8 ppb	09:46:49
2	Si 251.611†	31437.3	31196.6	2473.0 µg/L	2473.0 ppb	09:46:49
2	Sn 189.927†	1155.6	1156.3	509.22 µg/L	509.22 ppb	09:47:10
2	Ti 334.940†	213352.3	213679.1	496.63 µg/L	496.63 ppb	09:46:43
2	Tl 190.801†	340.5	367.0	498.15 µg/L	498.15 ppb	09:47:10
2	U 409.014†	5641.9	5728.4	496.35 µg/L	496.35 ppb	09:46:49
2	V 292.402†	47719.8	47901.9	499.06 µg/L	499.06 ppb	09:46:49
2	Zn 213.857†	21139.5	20692.1	491.82 µg/L	491.82 ppb	09:46:49
3	Sc RADIAL	55791.9	55791.9	99.9 %		09:45:38
3	Al 396.153Radial†	6937.1	6960.6	4801.6 µg/L	4801.6 ppb	09:45:38
3	Ca 317.933Radial†	5585.7	5404.3	4691.7 µg/L	4691.7 ppb	09:45:59
3	Fe 238.204 Radial†	634.8	620.3	4854.3 µg/L	4854.3 ppb	09:45:59
3	K 766.490 Radial†	7348.8	7136.0	4902.3 µg/L	4902.3 ppb	09:45:38
3	Mg 279.077 IEC†	576.2	566.4	4936.2 µg/L	4936.2 ppb	09:45:59
3	Na 589.592 Radial†	31625.0	31062.5	9655.4 µg/L	9655.4 ppb	09:45:38
3	Sr 421.552†	48787.7	48796.5	483.28 µg/L	483.28 ppb	09:45:38
3	Sc 361.383	1950703.5	1950703.5	99.968 %		09:47:17
3	Y 371.029	1340472.7	1340472.7	99.989 %		09:47:17
3	Ag 328.068†	59860.8	60414.1	465.30 µg/L	465.30 ppb	09:47:22
3	As 188.979†	228.6	227.9	421.38 µg/L	421.38 ppb	09:47:43
3	B 249.677†	11080.4	10736.9	448.61 µg/L	448.61 ppb	09:47:22
3	Ba 233.527†	17799.7	17828.7	446.97 µg/L	446.97 ppb	09:47:22
3	Be 313.107†	725808.1	729390.7	458.06 µg/L	458.06 ppb	09:47:17
3	Cd 226.502†	16766.5	16914.7	445.39 µg/L	445.39 ppb	09:47:22
3	Co 228.616†	9408.4	9418.5	444.67 µg/L	444.67 ppb	09:47:22
3	Cr 267.716†	20465.1	20522.0	435.17 µg/L	435.17 ppb	09:47:22
3	Cu 324.752†	68737.4	66207.0	445.60 µg/L	445.60 ppb	09:47:22
3	Mn 257.610†	141346.5	141631.8	468.85 µg/L	468.85 ppb	09:47:17
3	Mo 202.031†	4131.0	4138.3	423.22 µg/L	423.22 ppb	09:47:43
3	Ni 231.604†	8801.0	8494.5	445.80 µg/L	445.80 ppb	09:47:22
3	P 214.914†	1054.5	1031.0	2065.6 µg/L	2065.6 ppb	09:47:43
3	Pb 220.353†	1780.5	1683.7	429.81 µg/L	429.81 ppb	09:47:43
3	S 181.975 Axial†	221.4	203.0	856.42 µg/L	856.42 ppb	09:47:43
3	Sb 206.836†	477.4	452.0	422.85 µg/L	422.85 ppb	09:47:43
3	Se 196.026†	323.7	313.0	455.91 µg/L	455.91 ppb	09:47:43
3	SiO2†	24752.9	23506.1	4868.7 µg/L	4868.7 ppb	09:47:22
3	Si 251.611†	29042.5	28740.0	2278.3 µg/L	2278.3 ppb	09:47:22
3	Sn 189.927†	939.9	938.2	413.20 µg/L	413.20 ppb	09:47:43
3	Ti 334.940†	197711.9	197619.6	459.28 µg/L	459.28 ppb	09:47:17
3	Tl 190.801†	305.8	331.6	450.33 µg/L	450.33 ppb	09:47:43
3	U 409.014†	5078.4	5153.8	446.46 µg/L	446.46 ppb	09:47:22
3	V 292.402†	42759.2	42847.1	446.17 µg/L	446.17 ppb	09:47:22
3	Zn 213.857†	19143.1	18654.1	443.32 µg/L	443.32 ppb	09:47:22

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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	1951922.6	100.03 %	0.292			0.29%
Sc RADIAL	56027.1	100 %	0.4			0.37%
Y 371.029	1340974.5	100.03 %	0.326			0.33%
Ag 328.068†	63453.0	488.79 µg/L	20.624	488.79 ppb	20.624	4.22%
QC value within limits for Ag 328.068 Recovery = 97.76%						
Al 396.153Radial†	6906.1	4762.7 µg/L	35.78	4762.7 ppb	35.78	0.75%
QC value within limits for Al 396.153Radial Recovery = 95.25%						
As 188.979†	254.2	469.85 µg/L	42.174	469.85 ppb	42.174	8.98%
QC value within limits for As 188.979 Recovery = 93.97%						
B 249.677†	11338.2	473.91 µg/L	22.218	473.91 ppb	22.218	4.69%
QC value within limits for B 249.677 Recovery = 94.78%						
Ba 233.527†	19112.7	479.17 µg/L	28.223	479.17 ppb	28.223	5.89%
QC value within limits for Ba 233.527 Recovery = 95.83%						
Be 313.107†	766804.8	481.55 µg/L	20.363	481.55 ppb	20.363	4.23%
QC value within limits for Be 313.107 Recovery = 96.31%						
Ca 317.933Radial†	5359.1	4652.5 µg/L	33.99	4652.5 ppb	33.99	0.73%
QC value within limits for Ca 317.933Radial Recovery = 93.05%						
Cd 226.502†	18198.7	479.24 µg/L	29.800	479.24 ppb	29.800	6.22%
QC value within limits for Cd 226.502 Recovery = 95.85%						
Co 228.616†	10182.4	480.78 µg/L	31.862	480.78 ppb	31.862	6.63%

QC value within limits for Co 228.616	Recovery = 96.16%			
Cr 267.716†	22621.9	479.69 µg/L	38.936	479.69 ppb
QC value within limits for Cr 267.716	Recovery = 95.94%			
Cu 324.752†	71356.0	480.20 µg/L	30.175	480.20 ppb
QC value within limits for Cu 324.752	Recovery = 96.04%			
Fe 238.204 Radial†	616.6	4826.2 µg/L	28.02	4826.2 ppb
QC value within limits for Fe 238.204 Radial	Recovery = 96.52%			
K 766.490 Radial†	7081.8	4865.1 µg/L	32.36	4865.1 ppb
QC value within limits for K 766.490 Radial	Recovery = 97.30%			
Mg 279.077 IEC†	564.2	4918.0 µg/L	40.00	4918.0 ppb
QC value within limits for Mg 279.077 IEC	Recovery = 98.36%			
Mn 257.610†	148566.7	491.79 µg/L	19.874	491.79 ppb
QC value within limits for Mn 257.610	Recovery = 98.36%			
Mo 202.031†	4735.5	484.28 µg/L	52.915	484.28 ppb
QC value within limits for Mo 202.031	Recovery = 96.86%			
Na 589.592 Radial†	30910.4	9608.1 µg/L	48.22	9608.1 ppb
QC value within limits for Na 589.592 Radial	Recovery = 96.08%			
Ni 231.604†	9175.0	481.50 µg/L	31.366	481.50 ppb
QC value within limits for Ni 231.604	Recovery = 96.30%			
P 214.914†	1158.4	2323.5 µg/L	223.75	2323.5 ppb
QC value within limits for P 214.914	Recovery = 92.94%			
Pb 220.353†	1874.6	478.61 µg/L	42.290	478.61 ppb
QC value within limits for Pb 220.353	Recovery = 95.72%			
S 181.975 Axial†	225.0	949.34 µg/L	80.489	949.34 ppb
QC value within limits for S 181.975 Axial	Recovery = 94.93%			
Sb 206.836†	515.2	482.26 µg/L	51.458	482.26 ppb
QC value within limits for Sb 206.836	Recovery = 96.45%			
Se 196.026†	338.4	492.28 µg/L	31.661	492.28 ppb
QC value within limits for Se 196.026	Recovery = 98.46%			
SiO2†	24985.6	5175.1 µg/L	268.17	5175.1 ppb
QC value within limits for SiO2	Recovery = 96.78%			
Si 251.611†	30520.7	2419.5 µg/L	123.42	2419.5 ppb
QC value within limits for Si 251.611	Recovery = 96.78%			
Sn 189.927†	1088.7	479.44 µg/L	57.465	479.44 ppb
QC value within limits for Sn 189.927	Recovery = 95.89%			
Sr 421.552†	48519.0	480.54 µg/L	2.626	480.54 ppb
QC value within limits for Sr 421.552	Recovery = 96.11%			
Ti 334.940†	208549.5	484.70 µg/L	22.029	484.70 ppb
QC value within limits for Ti 334.940	Recovery = 96.94%			
Tl 190.801†	358.6	486.73 µg/L	32.249	486.73 ppb
QC value within limits for Tl 190.801	Recovery = 97.35%			
U 409.014†	5583.3	483.75 µg/L	32.859	483.75 ppb
QC value within limits for U 409.014	Recovery = 96.75%			
V 292.402†	46517.3	484.54 µg/L	33.558	484.54 ppb
QC value within limits for V 292.402	Recovery = 96.91%			
Zn 213.857†	20130.8	478.46 µg/L	30.718	478.46 ppb
QC value within limits for Zn 213.857	Recovery = 95.69%			

All analyte(s) passed QC.

Sequence No.: 9  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/11/2010 09:47:52  
 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	55523.2	55523.2	99.4 %		09:48:25
1	Al 396.153Radial†	-10.4	7.2	4.9525 µg/L	4.9525 ppb	09:48:25
1	Ca 317.933Radial†	190.8	5.7	4.9333 µg/L	4.9333 ppb	09:48:45
1	Fe 238.204 Radial†	16.8	1.9	14.691 µg/L	14.691 ppb	09:48:45
1	K 766.490 Radial†	188.8	-29.2	-20.051 µg/L	-20.051 ppb	09:48:25
1	Mg 279.077 IEC†	8.5	-1.7	-14.654 µg/L	-14.654 ppb	09:48:45
1	Na 589.592 Radial†	614.9	29.2	9.0671 µg/L	9.0671 ppb	09:48:25
1	Sr 421.552†	35.2	2.9	0.0287 µg/L	0.0287 ppb	09:48:25
1	Sc 361.383	1942935.2	1942935.2	99.570 %		09:49:47
1	Y 371.029	1341207.7	1341207.7	100.04 %		09:49:47
1	Ag 328.068†	-471.9	60.0	0.4629 µg/L	0.4629 ppb	09:49:53
1	As 188.979†	2.7	1.9	3.5094 µg/L	3.5094 ppb	09:50:13
1	B 249.677†	341.4	-4.2	-0.1844 µg/L	-0.1844 ppb	09:50:13
1	Ba 233.527†	-15.8	7.3	0.1843 µg/L	0.1843 ppb	09:50:13
1	Be 313.107†	-3060.9	273.9	0.1721 µg/L	0.1721 ppb	09:49:53
1	Cd 226.502†	-143.3	-1.1	-0.0316 µg/L	-0.0316 ppb	09:50:13
1	Co 228.616†	-1.2	5.8	0.2745 µg/L	0.2745 ppb	09:50:13
1	Cr 267.716†	-33.9	16.3	0.3455 µg/L	0.3455 ppb	09:50:13
1	Cu 324.752†	2468.1	-73.9	-0.4944 µg/L	-0.4944 ppb	09:49:53
1	Mn 257.610†	-194.8	43.9	0.1479 µg/L	0.1479 ppb	09:50:13
1	Mo 202.031†	4.6	10.5	1.0720 µg/L	1.0720 ppb	09:50:13
1	Ni 231.604†	309.7	1.7	0.0907 µg/L	0.0907 ppb	09:50:13
1	P 214.914†	22.6	-1.2	-2.3515 µg/L	-2.3515 ppb	09:50:13
1	Pb 220.353†	92.8	-4.1	-1.0482 µg/L	-1.0482 ppb	09:50:13
1	S 181.975 Axial†	15.3	-3.1	-13.275 µg/L	-13.275 ppb	09:50:13
1	Sb 206.836†	22.4	-3.1	-2.8724 µg/L	-2.8724 ppb	09:50:13
1	Se 196.026†	16.5	5.8	8.3498 µg/L	8.3498 ppb	09:50:13
1	SiO2†	1321.9	72.8	15.085 µg/L	15.085 ppb	09:49:53
1	Si 251.611†	421.7	111.6	8.8486 µg/L	8.8486 ppb	09:50:13
1	Sn 189.927†	3.9	1.9	0.8504 µg/L	0.8504 ppb	09:50:13
1	Ti 334.940†	128.3	-27.3	-0.0623 µg/L	-0.0623 ppb	09:49:53
1	Tl 190.801†	-24.5	1.1	1.4955 µg/L	1.4955 ppb	09:50:13
1	U 409.014†	-115.3	-42.0	-3.6513 µg/L	-3.6513 ppb	09:49:53
1	V 292.402†	-23.6	50.4	0.5257 µg/L	0.5257 ppb	09:49:53
1	Zn 213.857†	495.0	1.9	0.0449 µg/L	0.0449 ppb	09:50:13
2	Sc RADIAL	55861.1	55861.1	100 %		09:48:51
2	Al 396.153Radial†	7.4	25.0	17.283 µg/L	17.283 ppb	09:48:51
2	Ca 317.933Radial†	188.1	1.9	1.6241 µg/L	1.6241 ppb	09:49:11
2	Fe 238.204 Radial†	16.2	1.1	8.9703 µg/L	8.9703 ppb	09:49:11
2	K 766.490 Radial†	182.7	-36.4	-24.994 µg/L	-24.994 ppb	09:48:51
2	Mg 279.077 IEC†	11.6	1.4	12.145 µg/L	12.145 ppb	09:49:11
2	Na 589.592 Radial†	578.2	-11.2	-3.4968 µg/L	-3.4968 ppb	09:48:51
2	Sr 421.552†	27.3	-5.2	-0.0520 µg/L	-0.0520 ppb	09:48:51
2	Sc 361.383	1957458.8	1957458.8	100.31 %		09:50:19
2	Y 371.029	1350140.8	1350140.8	100.71 %		09:50:19
2	Ag 328.068†	-535.5	0.1	0.0050 µg/L	0.0050 ppb	09:50:25
2	As 188.979†	0.6	-0.2	-0.3710 µg/L	-0.3710 ppb	09:50:45
2	B 249.677†	345.4	-2.8	-0.1197 µg/L	-0.1197 ppb	09:50:45
2	Ba 233.527†	-11.1	12.1	0.3045 µg/L	0.3045 ppb	09:50:45
2	Be 313.107†	-2974.3	383.0	0.2406 µg/L	0.2406 ppb	09:50:25
2	Cd 226.502†	-141.9	1.3	0.0330 µg/L	0.0330 ppb	09:50:45
2	Co 228.616†	1.8	8.8	0.4154 µg/L	0.4154 ppb	09:50:45
2	Cr 267.716†	-35.4	15.1	0.3195 µg/L	0.3195 ppb	09:50:45
2	Cu 324.752†	2472.3	-88.0	-0.5902 µg/L	-0.5902 ppb	09:50:25
2	Mn 257.610†	-184.3	55.9	0.1855 µg/L	0.1855 ppb	09:50:45
2	Mo 202.031†	-0.4	5.5	0.5623 µg/L	0.5623 ppb	09:50:45
2	Ni 231.604†	296.0	-14.2	-0.7479 µg/L	-0.7479 ppb	09:50:45
2	P 214.914†	27.1	3.1	6.4033 µg/L	6.4033 ppb	09:50:45
2	Pb 220.353†	95.1	-2.6	-0.6508 µg/L	-0.6508 ppb	09:50:45

2	S 181.975 Axial†	20.2	1.6	6.8883 µg/L	6.8883 ppb	09:50:45
2	Sb 206.836†	25.2	-0.5	-0.4802 µg/L	-0.4802 ppb	09:50:45
2	Se 196.026†	16.6	5.7	8.2254 µg/L	8.2254 ppb	09:50:45
2	SiO2†	1337.5	78.5	16.268 µg/L	16.268 ppb	09:50:25
2	Si 251.611†	435.8	122.6	9.7175 µg/L	9.7175 ppb	09:50:45
2	Sn 189.927†	0.2	-1.7	-0.7516 µg/L	-0.7516 ppb	09:50:45
2	Ti 334.940†	193.5	36.8	0.0846 µg/L	0.0846 ppb	09:50:25
2	Tl 190.801†	-22.9	2.9	3.8627 µg/L	3.8627 ppb	09:50:45
2	U 409.014†	-46.6	27.3	2.3704 µg/L	2.3704 ppb	09:50:25
2	V 292.402†	-19.2	54.9	0.5738 µg/L	0.5738 ppb	09:50:25
2	Zn 213.857†	488.4	-8.4	-0.1979 µg/L	-0.1979 ppb	09:50:45
3	Sc RADIAL	55190.0	55190.0	98.8 %		09:49:17
3	Al 396.153Radial†	-3.1	14.5	9.9959 µg/L	9.9959 ppb	09:49:17
3	Ca 317.933Radial†	196.0	12.1	10.491 µg/L	10.491 ppb	09:49:37
3	Fe 238.204 Radial†	18.2	3.4	26.348 µg/L	26.348 ppb	09:49:37
3	K 766.490 Radial†	155.8	-61.4	-42.192 µg/L	-42.192 ppb	09:49:17
3	Mg 279.077 IEC†	12.4	2.3	19.672 µg/L	19.672 ppb	09:49:37
3	Na 589.592 Radial†	571.7	-10.8	-3.3602 µg/L	-3.3602 ppb	09:49:17
3	Sr 421.552†	23.4	-8.8	-0.0872 µg/L	-0.0872 ppb	09:49:17
3	Sc 361.383	1934827.4	1934827.4	99.154 %		09:50:51
3	Y 371.029	1334984.7	1334984.7	99.579 %		09:50:51
3	Ag 328.068†	-493.8	35.9	0.2775 µg/L	0.2775 ppb	09:50:57
3	As 188.979†	-0.2	-1.0	-1.8924 µg/L	-1.8924 ppb	09:51:17
3	B 249.677†	353.5	9.5	0.3829 µg/L	0.3829 ppb	09:51:17
3	Ba 233.527†	-9.4	13.7	0.3443 µg/L	0.3443 ppb	09:51:17
3	Be 313.107†	-2832.6	491.3	0.3086 µg/L	0.3086 ppb	09:50:57
3	Cd 226.502†	-136.1	5.5	0.1425 µg/L	0.1425 ppb	09:51:17
3	Co 228.616†	-1.7	5.3	0.2514 µg/L	0.2514 ppb	09:51:17
3	Cr 267.716†	-49.7	0.2	0.0050 µg/L	0.0050 ppb	09:51:17
3	Cu 324.752†	2445.0	-86.7	-0.5793 µg/L	-0.5793 ppb	09:50:57
3	Mn 257.610†	-169.6	68.6	0.2296 µg/L	0.2296 ppb	09:51:17
3	Mo 202.031†	-6.8	-1.0	-0.1026 µg/L	-0.1026 ppb	09:51:17
3	Ni 231.604†	314.5	7.8	0.4097 µg/L	0.4097 ppb	09:51:17
3	P 214.914†	17.8	-6.0	-12.178 µg/L	-12.178 ppb	09:51:17
3	Pb 220.353†	99.5	3.0	0.7649 µg/L	0.7649 ppb	09:51:17
3	S 181.975 Axial†	16.1	-2.3	-9.7069 µg/L	-9.7069 ppb	09:51:17
3	Sb 206.836†	28.1	2.7	2.5170 µg/L	2.5170 ppb	09:51:17
3	Se 196.026†	16.9	6.3	9.0442 µg/L	9.0442 ppb	09:51:17
3	SiO2†	1313.4	69.9	14.469 µg/L	14.469 ppb	09:50:57
3	Si 251.611†	454.3	146.3	11.601 µg/L	11.601 ppb	09:51:17
3	Sn 189.927†	-4.8	-6.8	-2.9732 µg/L	-2.9732 ppb	09:51:17
3	Ti 334.940†	233.9	79.8	0.1842 µg/L	0.1842 ppb	09:50:57
3	Tl 190.801†	-24.3	1.3	1.7306 µg/L	1.7306 ppb	09:51:17
3	U 409.014†	-33.1	40.4	3.4988 µg/L	3.4988 ppb	09:50:57
3	V 292.402†	-52.5	21.2	0.2237 µg/L	0.2237 ppb	09:50:57
3	Zn 213.857†	491.1	0.0	-0.0024 µg/L	-0.0024 ppb	09:51:17

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Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1945073.8	99.679 %	0.5876			0.59%
Sc RADIAL	55524.8	99.4 %	0.60			0.60%
Y 371.029	1342111.1	100.11 %	0.568			0.57%
Ag 328.068†	32.0	0.2485 µg/L	0.23036	0.2485 ppb	0.23036	92.71%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	15.6	10.744 µg/L	6.1994	10.744 ppb	6.1994	57.70%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.2	0.4153 µg/L	2.78543	0.4153 ppb	2.78543	670.65%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	0.8	0.0262 µg/L	0.31054	0.0262 ppb	0.31054	>999.9%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	11.1	0.2777 µg/L	0.08332	0.2777 ppb	0.08332	30.00%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	382.8	0.2404 µg/L	0.06823	0.2404 ppb	0.06823	28.38%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	6.5	5.6828 µg/L	4.48077	5.6828 ppb	4.48077	78.85%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.9	0.0480 µg/L	0.08803	0.0480 ppb	0.08803	183.46%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	6.6	0.3137 µg/L	0.08877	0.3137 ppb	0.08877	28.30%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	10.5	0.2233 µg/L	0.18953	0.2233 ppb	0.18953	84.86%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-82.9	-0.5546 µg/L	0.05245	-0.5546 ppb	0.05245	9.46%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	2.1	16.670 µg/L	8.8563	16.670 ppb	8.8563	53.13%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-42.3	-29.079 µg/L	11.6220	-29.079 ppb	11.6220	39.97%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	0.7	5.7210 µg/L	18.04207	5.7210 ppb	18.04207	315.36%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	56.1	0.1877 µg/L	0.04090	0.1877 ppb	0.04090	21.80%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	5.0	0.5106 µg/L	0.58900	0.5106 ppb	0.58900	115.36%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	2.4	0.7367 µg/L	7.21464	0.7367 ppb	7.21464	979.34%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-1.6	-0.0825 µg/L	0.59787	-0.0825 ppb	0.59787	724.73%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-1.3	-2.7088 µg/L	9.29598	-2.7088 ppb	9.29598	343.18%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-1.2	-0.3114 µg/L	0.95302	-0.3114 ppb	0.95302	306.05%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-1.3	-5.3645 µg/L	10.76016	-5.3645 ppb	10.76016	200.58%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-0.3	-0.2786 µg/L	2.70037	-0.2786 ppb	2.70037	969.41%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	5.9	8.5398 µg/L	0.44122	8.5398 ppb	0.44122	5.17%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	73.7	15.274 µg/L	0.9145	15.274 ppb	0.9145	5.99%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	126.8	10.056 µg/L	1.4070	10.056 ppb	1.4070	13.99%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-2.2	-0.9581 µg/L	1.92011	-0.9581 ppb	1.92011	200.40%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-3.7	-0.0368 µg/L	0.05944	-0.0368 ppb	0.05944	161.38%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	29.8	0.0688 µg/L	0.12401	0.0688 ppb	0.12401	180.17%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.8	2.3630 µg/L	1.30414	2.3630 ppb	1.30414	55.19%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	8.5	0.7393 µg/L	3.84400	0.7393 ppb	3.84400	519.98%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	42.2	0.4411 µg/L	0.18977	0.4411 ppb	0.18977	43.03%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-2.2	-0.0518 µg/L	0.12868	-0.0518 ppb	0.12868	248.45%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 18

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 10:20:52

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	56340.8	56340.8	101 %		10:21:29
1	Al 396.153Radial†	6953.5	6909.2	4764.2 µg/L	4764.2 ppb	10:21:29
1	Ca 317.933Radial†	5596.6	5360.6	4653.8 µg/L	4653.8 ppb	10:21:50
1	Fe 238.204 Radial†	633.9	613.2	4799.8 µg/L	4799.8 ppb	10:21:50
1	K 766.490 Radial†	7389.4	7104.5	4880.7 µg/L	4880.7 ppb	10:21:29
1	Mg 279.077 IEC†	581.0	565.6	4930.3 µg/L	4930.3 ppb	10:21:50
1	Na 589.592 Radial†	31794.8	30922.4	9611.9 µg/L	9611.9 ppb	10:21:29
1	Sr 421.552†	49056.3	48586.9	481.21 µg/L	481.21 ppb	10:21:29
1	Sc 361.383	1973862.8	1973862.8	101.15 %		10:22:53
1	Y 371.029	1355157.4	1355157.4	101.08 %		10:22:53
1	Ag 328.068†	64471.1	64269.2	495.13 µg/L	495.13 ppb	10:22:59
1	As 188.979†	275.1	271.2	501.40 µg/L	501.40 ppb	10:23:19
1	B 249.677†	12008.7	11524.6	481.78 µg/L	481.78 ppb	10:22:59
1	Ba 233.527†	19807.8	19605.0	491.52 µg/L	491.52 ppb	10:22:59
1	Be 313.107†	784228.9	778626.0	488.98 µg/L	488.98 ppb	10:22:53
1	Cd 226.502†	18767.9	18696.5	492.37 µg/L	492.37 ppb	10:22:59
1	Co 228.616†	10603.5	10489.5	495.31 µg/L	495.31 ppb	10:22:59
1	Cr 267.716†	23693.0	23472.9	497.73 µg/L	497.73 ppb	10:22:59
1	Cu 324.752†	76441.5	73016.4	491.35 µg/L	491.35 ppb	10:22:59
1	Mn 257.610†	151905.1	150410.9	497.88 µg/L	497.88 ppb	10:22:53
1	Mo 202.031†	5096.0	5043.7	515.78 µg/L	515.78 ppb	10:23:19
1	Ni 231.604†	9872.2	9450.2	495.94 µg/L	495.94 ppb	10:22:59
1	P 214.914†	1256.4	1218.2	2445.2 µg/L	2445.2 ppb	10:23:19
1	Pb 220.353†	2079.4	1958.3	500.02 µg/L	500.02 ppb	10:23:19
1	S 181.975 Axial†	253.3	231.9	978.28 µg/L	978.28 ppb	10:23:19
1	Sb 206.836†	563.1	531.0	497.38 µg/L	497.38 ppb	10:23:19
1	Se 196.026†	368.1	353.1	513.26 µg/L	513.26 ppb	10:23:19
1	SiO2†	26889.7	25328.1	5246.1 µg/L	5246.1 ppb	10:22:59
1	Si 251.611†	31753.1	31078.8	2463.7 µg/L	2463.7 ppb	10:22:59
1	Sn 189.927†	1185.6	1170.1	515.32 µg/L	515.32 ppb	10:23:19
1	Ti 334.940†	214993.8	212383.8	493.62 µg/L	493.62 ppb	10:22:53
1	Tl 190.801†	352.0	373.7	507.13 µg/L	507.13 ppb	10:23:19
1	U 409.014†	5776.0	5783.8	501.16 µg/L	501.16 ppb	10:22:59
1	V 292.402†	48424.5	47945.9	499.54 µg/L	499.54 ppb	10:22:59
1	Zn 213.857†	21404.6	20665.1	491.17 µg/L	491.17 ppb	10:22:59
2	Sc RADIAL	56594.3	56594.3	101 %		10:21:55
2	Al 396.153Radial†	6950.1	6875.0	4740.7 µg/L	4740.7 ppb	10:21:55
2	Ca 317.933Radial†	5527.3	5267.4	4572.8 µg/L	4572.8 ppb	10:22:16
2	Fe 238.204 Radial†	629.3	605.9	4742.7 µg/L	4742.7 ppb	10:22:16
2	K 766.490 Radial†	7310.4	6993.8	4804.7 µg/L	4804.7 ppb	10:21:55
2	Mg 279.077 IEC†	579.8	561.8	4897.2 µg/L	4897.2 ppb	10:22:16
2	Na 589.592 Radial†	31733.5	30720.9	9549.2 µg/L	9549.2 ppb	10:21:55
2	Sr 421.552†	48822.1	48138.1	476.76 µg/L	476.76 ppb	10:21:55
2	Sc 361.383	1995629.8	1995629.8	102.27 %		10:23:27
2	Y 371.029	1370309.7	1370309.7	102.21 %		10:23:27
2	Ag 328.068†	64419.1	63523.2	489.38 µg/L	489.38 ppb	10:23:32
2	As 188.979†	266.5	259.8	480.32 µg/L	480.32 ppb	10:23:53
2	B 249.677†	12018.2	11404.4	476.76 µg/L	476.76 ppb	10:23:32
2	Ba 233.527†	19759.2	19343.8	484.97 µg/L	484.97 ppb	10:23:32
2	Be 313.107†	785985.8	771887.7	484.74 µg/L	484.74 ppb	10:23:27
2	Cd 226.502†	18779.9	18505.8	487.35 µg/L	487.35 ppb	10:23:32
2	Co 228.616†	10559.1	10331.7	487.85 µg/L	487.85 ppb	10:23:32
2	Cr 267.716†	23683.2	23207.9	492.11 µg/L	492.11 ppb	10:23:32
2	Cu 324.752†	76520.6	72269.5	486.32 µg/L	486.32 ppb	10:23:32
2	Mn 257.610†	152399.7	149256.6	494.06 µg/L	494.06 ppb	10:23:27
2	Mo 202.031†	5064.3	4957.7	506.99 µg/L	506.99 ppb	10:23:53
2	Ni 231.604†	9833.6	9306.0	488.37 µg/L	488.37 ppb	10:23:32
2	P 214.914†	1262.5	1210.6	2430.1 µg/L	2430.1 ppb	10:23:53
2	Pb 220.353†	2078.3	1934.8	494.03 µg/L	494.03 ppb	10:23:53

2	S 181.975 Axial†	257.2	233.0	983.04 µg/L	983.04 ppb	10:23:53
2	Sb 206.836†	570.0	531.7	497.95 µg/L	497.95 ppb	10:23:53
2	Se 196.026†	371.7	352.7	512.56 µg/L	512.56 ppb	10:23:53
2	SiO2†	26985.5	25131.8	5205.4 µg/L	5205.4 ppb	10:23:32
2	Si 251.611†	31852.8	30834.0	2444.3 µg/L	2444.3 ppb	10:23:32
2	Sn 189.927†	1175.5	1147.5	505.35 µg/L	505.35 ppb	10:23:53
2	Ti 334.940†	215300.1	210365.0	488.93 µg/L	488.93 ppb	10:23:27
2	Tl 190.801†	351.3	369.3	501.09 µg/L	501.09 ppb	10:23:53
2	U 409.014†	5689.5	5637.0	488.43 µg/L	488.43 ppb	10:23:32
2	V 292.402†	48346.2	47347.1	493.28 µg/L	493.28 ppb	10:23:32
2	Zn 213.857†	21359.2	20389.8	484.62 µg/L	484.62 ppb	10:23:32
3	Sc RADIAL	56472.8	56472.8	101 %		10:22:21
3	Al 396.153Radial†	6923.0	6863.0	4734.2 µg/L	4734.2 ppb	10:22:21
3	Ca 317.933Radial†	5547.9	5299.5	4600.7 µg/L	4600.7 ppb	10:22:42
3	Fe 238.204 Radial†	630.2	608.1	4759.3 µg/L	4759.3 ppb	10:22:42
3	K 766.490 Radial†	7322.9	7021.7	4823.8 µg/L	4823.8 ppb	10:22:21
3	Mg 279.077 IEC†	570.1	553.5	4823.2 µg/L	4823.2 ppb	10:22:42
3	Na 589.592 Radial†	31614.2	30670.2	9533.5 µg/L	9533.5 ppb	10:22:21
3	Sr 421.552†	48737.6	48158.2	476.96 µg/L	476.96 ppb	10:22:21
3	Sc 361.383	1963930.2	1963930.2	100.65 %		10:24:00
3	Y 371.029	1347929.0	1347929.0	100.55 %		10:24:00
3	Ag 328.068†	60527.0	60672.8	467.29 µg/L	467.29 ppb	10:24:06
3	As 188.979†	224.7	222.5	411.36 µg/L	411.36 ppb	10:24:26
3	B 249.677†	11230.7	10811.6	451.79 µg/L	451.79 ppb	10:24:06
3	Ba 233.527†	18066.7	17974.0	450.61 µg/L	450.61 ppb	10:24:06
3	Be 313.107†	736333.1	734958.4	461.55 µg/L	461.55 ppb	10:24:00
3	Cd 226.502†	17045.4	17078.8	449.72 µg/L	449.72 ppb	10:24:06
3	Co 228.616†	9530.9	9476.8	447.41 µg/L	447.41 ppb	10:24:06
3	Cr 267.716†	20753.3	20670.5	438.31 µg/L	438.31 ppb	10:24:06
3	Cu 324.752†	69658.6	66659.2	448.62 µg/L	448.62 ppb	10:24:06
3	Mn 257.610†	144003.7	143319.7	474.43 µg/L	474.43 ppb	10:24:00
3	Mo 202.031†	4138.2	4117.5	421.10 µg/L	421.10 ppb	10:24:26
3	Ni 231.604†	8916.0	8549.5	448.68 µg/L	448.68 ppb	10:24:06
3	P 214.914†	1051.6	1020.9	2044.8 µg/L	2044.8 ppb	10:24:26
3	Pb 220.353†	1805.0	1696.0	432.96 µg/L	432.96 ppb	10:24:26
3	S 181.975 Axial†	224.9	204.9	864.76 µg/L	864.76 ppb	10:24:26
3	Sb 206.836†	481.8	453.1	423.88 µg/L	423.88 ppb	10:24:26
3	Se 196.026†	318.0	305.2	444.59 µg/L	444.59 ppb	10:24:26
3	SiO2†	25121.2	23705.4	4910.0 µg/L	4910.0 ppb	10:24:06
3	Si 251.611†	29435.6	28934.9	2293.7 µg/L	2293.7 ppb	10:24:06
3	Sn 189.927†	945.5	937.5	412.88 µg/L	412.88 ppb	10:24:26
3	Ti 334.940†	201500.4	200051.9	464.95 µg/L	464.95 ppb	10:24:00
3	Tl 190.801†	312.1	335.8	456.05 µg/L	456.05 ppb	10:24:26
3	U 409.014†	5010.5	5052.1	437.65 µg/L	437.65 ppb	10:24:06
3	V 292.402†	43353.2	43149.2	449.25 µg/L	449.25 ppb	10:24:06
3	Zn 213.857†	19369.2	18749.7	445.60 µg/L	445.60 ppb	10:24:06

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1977807.6	101.36 %	0.831			0.82%
Sc RADIAL	56469.3	101 %	0.2			0.22%
Y 371.029	1357798.7	101.28 %	0.852			0.84%
Ag 328.068†	62821.7	483.93 µg/L	14.695	483.93 ppb	14.695	3.04%
QC value within limits for Ag 328.068 Recovery = 96.79%						
Al 396.153Radial†	6882.4	4746.3 µg/L	15.78	4746.3 ppb	15.78	0.33%
QC value within limits for Al 396.153Radial Recovery = 94.93%						
As 188.979†	251.2	464.36 µg/L	47.095	464.36 ppb	47.095	10.14%
QC value within limits for As 188.979 Recovery = 92.87%						
B 249.677†	11246.9	470.11 µg/L	16.060	470.11 ppb	16.060	3.42%
QC value within limits for B 249.677 Recovery = 94.02%						
Ba 233.527†	18974.3	475.70 µg/L	21.972	475.70 ppb	21.972	4.62%
QC value within limits for Ba 233.527 Recovery = 95.14%						
Be 313.107†	761824.0	478.42 µg/L	14.763	478.42 ppb	14.763	3.09%
QC value within limits for Be 313.107 Recovery = 95.68%						
Ca 317.933Radial†	5309.1	4609.1 µg/L	41.12	4609.1 ppb	41.12	0.89%
QC value within limits for Ca 317.933Radial Recovery = 92.18%						
Cd 226.502†	18093.7	476.48 µg/L	23.308	476.48 ppb	23.308	4.89%
QC value within limits for Cd 226.502 Recovery = 95.30%						
Co 228.616†	10099.4	476.86 µg/L	25.773	476.86 ppb	25.773	5.40%

QC value within limits for Co 228.616 Recovery = 95.37%							
Cr 267.716†	22450.4	476.05 µg/L	32.803	476.05 ppb	32.803	6.89%	
QC value within limits for Cr 267.716 Recovery = 95.21%							
Cu 324.752†	70648.4	475.43 µg/L	23.353	475.43 ppb	23.353	4.91%	
QC value within limits for Cu 324.752 Recovery = 95.09%							
Fe 238.204 Radial†	609.1	4767.2 µg/L	29.36	4767.2 ppb	29.36	0.62%	
QC value within limits for Fe 238.204 Radial Recovery = 95.34%							
K 766.490 Radial†	7040.0	4836.4 µg/L	39.55	4836.4 ppb	39.55	0.82%	
QC value within limits for K 766.490 Radial Recovery = 96.73%							
Mg 279.077 IEC†	560.3	4883.6 µg/L	54.86	4883.6 ppb	54.86	1.12%	
QC value within limits for Mg 279.077 IEC Recovery = 97.67%							
Mn 257.610†	147662.4	488.79 µg/L	12.583	488.79 ppb	12.583	2.57%	
QC value within limits for Mn 257.610 Recovery = 97.76%							
Mo 202.031†	4706.3	481.29 µg/L	52.310	481.29 ppb	52.310	10.87%	
QC value within limits for Mo 202.031 Recovery = 96.26%							
Na 589.592 Radial†	30771.2	9564.8 µg/L	41.48	9564.8 ppb	41.48	0.43%	
QC value within limits for Na 589.592 Radial Recovery = 95.65%							
Ni 231.604†	9101.9	477.67 µg/L	25.384	477.67 ppb	25.384	5.31%	
QC value within limits for Ni 231.604 Recovery = 95.53%							
P 214.914†	1149.9	2306.7 µg/L	226.98	2306.7 ppb	226.98	9.84%	
QC value within limits for P 214.914 Recovery = 92.27%							
Pb 220.353†	1863.0	475.67 µg/L	37.111	475.67 ppb	37.111	7.80%	
QC value within limits for Pb 220.353 Recovery = 95.13%							
S 181.975 Axial†	223.3	942.02 µg/L	66.956	942.02 ppb	66.956	7.11%	
QC value within limits for S 181.975 Axial Recovery = 94.20%							
Sb 206.836†	505.3	473.07 µg/L	42.600	473.07 ppb	42.600	9.00%	
QC value within limits for Sb 206.836 Recovery = 94.61%							
Se 196.026†	337.0	490.14 µg/L	39.445	490.14 ppb	39.445	8.05%	
QC value within limits for Se 196.026 Recovery = 98.03%							
SiO2†	24721.7	5120.5 µg/L	183.44	5120.5 ppb	183.44	3.58%	
QC value within limits for SiO2 Recovery = 95.76%							
Si 251.611†	30282.6	2400.6 µg/L	93.03	2400.6 ppb	93.03	3.88%	
QC value within limits for Si 251.611 Recovery = 96.02%							
Sn 189.927†	1085.0	477.85 µg/L	56.488	477.85 ppb	56.488	11.82%	
QC value within limits for Sn 189.927 Recovery = 95.57%							
Sr 421.552†	48294.4	478.31 µg/L	2.511	478.31 ppb	2.511	0.52%	
QC value within limits for Sr 421.552 Recovery = 95.66%							
Ti 334.940†	207600.2	482.50 µg/L	15.379	482.50 ppb	15.379	3.19%	
QC value within limits for Ti 334.940 Recovery = 96.50%							
Tl 190.801†	359.6	488.09 µg/L	27.910	488.09 ppb	27.910	5.72%	
QC value within limits for Tl 190.801 Recovery = 97.62%							
U 409.014†	5491.0	475.75 µg/L	33.602	475.75 ppb	33.602	7.06%	
QC value within limits for U 409.014 Recovery = 95.15%							
V 292.402†	46147.4	480.69 µg/L	27.408	480.69 ppb	27.408	5.70%	
QC value within limits for V 292.402 Recovery = 96.14%							
Zn 213.857†	19934.9	473.80 µg/L	24.635	473.80 ppb	24.635	5.20%	
QC value within limits for Zn 213.857 Recovery = 94.76%							
All analyte(s) passed QC.							



Sequence No.: 19  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/11/2010 10:24:36  
 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	53795.0	53795.0	96.3 %		10:25:09
1	Al 396.153Radial†	-15.5	1.5	1.0440 µg/L	1.0440 ppb	10:25:09
1	Ca 317.933Radial†	179.4	0.0	0.0006 µg/L	0.0006 ppb	10:25:30
1	Fe 238.204 Radial†	19.0	4.7	36.612 µg/L	36.612 ppb	10:25:30
1	K 766.490 Radial†	196.6	-15.0	-10.288 µg/L	-10.288 ppb	10:25:09
1	Mg 279.077 IEC†	16.8	7.2	62.376 µg/L	62.376 ppb	10:25:30
1	Na 589.592 Radial†	566.0	-1.8	-0.5473 µg/L	-0.5473 ppb	10:25:09
1	Sr 421.552†	67.3	37.3	0.3696 µg/L	0.3696 ppb	10:25:09
1	Sc 361.383	1918759.6	1918759.6	98.331 %		10:26:31
1	Y 371.029	1322161.3	1322161.3	98.623 %		10:26:31
1	Ag 328.068†	-522.1	3.0	0.0271 µg/L	0.0271 ppb	10:26:37
1	As 188.979†	-0.2	-1.0	-1.8111 µg/L	-1.8111 ppb	10:26:57
1	B 249.677†	322.8	-18.7	-0.8051 µg/L	-0.8051 ppb	10:26:57
1	Ba 233.527†	-22.4	0.4	0.0114 µg/L	0.0114 ppb	10:26:57
1	Be 313.107†	-3119.7	175.3	0.1101 µg/L	0.1101 ppb	10:26:37
1	Cd 226.502†	-146.7	-6.4	-0.1730 µg/L	-0.1730 ppb	10:26:57
1	Co 228.616†	-11.6	-4.7	-0.2242 µg/L	-0.2242 ppb	10:26:57
1	Cr 267.716†	-41.1	8.6	0.1821 µg/L	0.1821 ppb	10:26:57
1	Cu 324.752†	2452.4	-58.5	-0.3883 µg/L	-0.3883 ppb	10:26:37
1	Mn 257.610†	-124.3	113.2	0.3769 µg/L	0.3769 ppb	10:26:57
1	Mo 202.031†	-5.4	0.4	0.0407 µg/L	0.0407 ppb	10:26:57
1	Ni 231.604†	305.3	1.1	0.0589 µg/L	0.0589 ppb	10:26:57
1	P 214.914†	17.2	-6.4	-13.018 µg/L	-13.018 ppb	10:26:57
1	Pb 220.353†	96.2	0.4	0.0993 µg/L	0.0993 ppb	10:26:57
1	S 181.975 Axial†	15.9	-2.4	-10.139 µg/L	-10.139 ppb	10:26:57
1	Sb 206.836†	27.5	2.3	2.1625 µg/L	2.1625 ppb	10:26:57
1	Se 196.026†	7.9	-2.7	-3.8429 µg/L	-3.8429 ppb	10:26:57
1	SiO2†	1313.0	80.5	16.676 µg/L	16.676 ppb	10:26:37
1	Si 251.611†	360.1	54.4	4.3095 µg/L	4.3095 ppb	10:26:57
1	Sn 189.927†	-3.0	-5.0	-2.2145 µg/L	-2.2145 ppb	10:26:57
1	Ti 334.940†	236.7	84.6	0.1918 µg/L	0.1918 ppb	10:26:37
1	Tl 190.801†	-22.1	3.3	4.4743 µg/L	4.4743 ppb	10:26:57
1	U 409.014†	10.0	83.9	7.2786 µg/L	7.2786 ppb	10:26:37
1	V 292.402†	-42.7	30.6	0.3276 µg/L	0.3276 ppb	10:26:37
1	Zn 213.857†	485.7	-1.3	-0.0362 µg/L	-0.0362 ppb	10:26:57
2	Sc RADIAL	54128.9	54128.9	96.9 %		10:25:35
2	Al 396.153Radial†	-5.8	11.7	8.0664 µg/L	8.0664 ppb	10:25:35
2	Ca 317.933Radial†	181.5	1.0	0.8705 µg/L	0.8705 ppb	10:25:55
2	Fe 238.204 Radial†	17.1	2.6	20.227 µg/L	20.227 ppb	10:25:55
2	K 766.490 Radial†	147.0	-67.4	-46.311 µg/L	-46.311 ppb	10:25:35
2	Mg 279.077 IEC†	9.3	-0.6	-5.3082 µg/L	-5.3082 ppb	10:25:55
2	Na 589.592 Radial†	561.8	-9.7	-3.0050 µg/L	-3.0050 ppb	10:25:35
2	Sr 421.552†	41.4	10.2	0.1012 µg/L	0.1012 ppb	10:25:35
2	Sc 361.383	1915048.2	1915048.2	98.140 %		10:27:03
2	Y 371.029	1320845.2	1320845.2	98.525 %		10:27:03
2	Ag 328.068†	-546.6	-23.0	-0.1728 µg/L	-0.1728 ppb	10:27:09
2	As 188.979†	3.7	3.0	5.4686 µg/L	5.4686 ppb	10:27:30
2	B 249.677†	335.0	-5.7	-0.2513 µg/L	-0.2513 ppb	10:27:30
2	Ba 233.527†	-7.8	15.3	0.3827 µg/L	0.3827 ppb	10:27:30
2	Be 313.107†	-3006.2	284.9	0.1789 µg/L	0.1789 ppb	10:27:09
2	Cd 226.502†	-137.0	3.1	0.0794 µg/L	0.0794 ppb	10:27:30
2	Co 228.616†	-10.2	-3.4	-0.1602 µg/L	-0.1602 ppb	10:27:30
2	Cr 267.716†	-35.6	14.1	0.2984 µg/L	0.2984 ppb	10:27:30
2	Cu 324.752†	2489.8	-15.6	-0.1021 µg/L	-0.1021 ppb	10:27:09
2	Mn 257.610†	-114.1	123.4	0.4109 µg/L	0.4109 ppb	10:27:30
2	Mo 202.031†	-9.9	-4.2	-0.4239 µg/L	-0.4239 ppb	10:27:30
2	Ni 231.604†	302.7	-0.9	-0.0494 µg/L	-0.0494 ppb	10:27:30
2	P 214.914†	16.2	-7.3	-15.029 µg/L	-15.029 ppb	10:27:30
2	Pb 220.353†	97.9	2.4	0.6014 µg/L	0.6014 ppb	10:27:30

2	S 181.975 Axial†	14.9	-3.3	-14.121 µg/L	-14.121 ppb	10:27:30
2	Sb 206.836†	19.0	-6.3	-5.8536 µg/L	-5.8536 ppb	10:27:30
2	Se 196.026†	13.0	2.5	3.6179 µg/L	3.6179 ppb	10:27:30
2	SiO2†	1293.0	62.7	12.997 µg/L	12.997 ppb	10:27:09
2	Si 251.611†	387.9	83.4	6.6112 µg/L	6.6112 ppb	10:27:30
2	Sn 189.927†	1.1	-0.8	-0.3476 µg/L	-0.3476 ppb	10:27:30
2	Ti 334.940†	272.8	121.8	0.2837 µg/L	0.2837 ppb	10:27:09
2	Tl 190.801†	-25.8	-0.5	-0.6713 µg/L	-0.6713 ppb	10:27:30
2	U 409.014†	-30.8	42.4	3.6776 µg/L	3.6776 ppb	10:27:09
2	V 292.402†	-44.3	29.0	0.3018 µg/L	0.3018 ppb	10:27:09
2	Zn 213.857†	490.8	4.9	0.1162 µg/L	0.1162 ppb	10:27:30
3	Sc RADIAL	54460.0	54460.0	97.5 %		10:26:01
3	Al 396.153Radial†	-18.7	-1.6	-1.1179 µg/L	-1.1179 ppb	10:26:01
3	Ca 317.933Radial†	183.4	1.9	1.6417 µg/L	1.6417 ppb	10:26:21
3	Fe 238.204 Radial†	16.1	1.4	11.168 µg/L	11.168 ppb	10:26:21
3	K 766.490 Radial†	224.1	10.7	7.3467 µg/L	7.3467 ppb	10:26:01
3	Mg 279.077 IEC†	9.6	-0.4	-3.8857 µg/L	-3.8857 ppb	10:26:21
3	Na 589.592 Radial†	632.3	59.1	18.380 µg/L	18.380 ppb	10:26:01
3	Sr 421.552†	37.1	5.5	0.0547 µg/L	0.0547 ppb	10:26:01
3	Sc 361.383	1899953.9	1899953.9	97.367 %		10:27:36
3	Y 371.029	1310326.7	1310326.7	97.740 %		10:27:36
3	Ag 328.068†	-464.3	57.1	0.4406 µg/L	0.4406 ppb	10:27:41
3	As 188.979†	-3.3	-4.2	-7.7461 µg/L	-7.7461 ppb	10:28:02
3	B 249.677†	332.2	-5.9	-0.2523 µg/L	-0.2523 ppb	10:28:02
3	Ba 233.527†	-7.6	15.5	0.3877 µg/L	0.3877 ppb	10:28:02
3	Be 313.107†	-2722.2	552.2	0.3468 µg/L	0.3468 ppb	10:27:41
3	Cd 226.502†	-129.2	10.0	0.2644 µg/L	0.2644 ppb	10:28:02
3	Co 228.616†	-1.7	5.3	0.2495 µg/L	0.2495 ppb	10:28:02
3	Cr 267.716†	-40.4	8.8	0.1874 µg/L	0.1874 ppb	10:28:02
3	Cu 324.752†	2507.3	22.5	0.1526 µg/L	0.1526 ppb	10:27:41
3	Mn 257.610†	-65.3	172.6	0.5724 µg/L	0.5724 ppb	10:28:02
3	Mo 202.031†	-0.1	5.8	0.5928 µg/L	0.5928 ppb	10:28:02
3	Ni 231.604†	327.4	26.9	1.4127 µg/L	1.4127 ppb	10:28:02
3	P 214.914†	19.7	-3.6	-7.4441 µg/L	-7.4441 ppb	10:28:02
3	Pb 220.353†	95.7	0.9	0.2322 µg/L	0.2322 ppb	10:28:02
3	S 181.975 Axial†	14.7	-3.4	-14.365 µg/L	-14.365 ppb	10:28:02
3	Sb 206.836†	26.6	1.7	1.5835 µg/L	1.5835 ppb	10:28:02
3	Se 196.026†	8.5	-2.1	-2.9575 µg/L	-2.9575 ppb	10:28:02
3	SiO2†	1320.2	101.1	20.942 µg/L	20.942 ppb	10:27:41
3	Si 251.611†	389.2	87.9	6.9646 µg/L	6.9646 ppb	10:28:02
3	Sn 189.927†	1.5	-0.4	-0.1914 µg/L	-0.1914 ppb	10:28:02
3	Ti 334.940†	300.0	151.9	0.3537 µg/L	0.3537 ppb	10:27:41
3	Tl 190.801†	-28.8	-3.8	-5.1071 µg/L	-5.1071 ppb	10:28:02
3	U 409.014†	-57.2	15.0	1.3012 µg/L	1.3012 ppb	10:27:41
3	V 292.402†	-25.4	48.0	0.5019 µg/L	0.5019 ppb	10:27:41
3	Zn 213.857†	492.8	10.8	0.2526 µg/L	0.2526 ppb	10:28:02

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1911253.9	97.946 %	0.5104			0.52%
Sc RADIAL	54128.0	96.9 %	0.60			0.61%
Y 371.029	1317777.7	98.296 %	0.4838			0.49%
Ag 328.068†	12.3	0.0983 µg/L	0.31287	0.0983 ppb	0.31287	318.25%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	3.9	2.6642 µg/L	4.80169	2.6642 ppb	4.80169	180.23%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.7	-1.3629 µg/L	6.61873	-1.3629 ppb	6.61873	485.64%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-10.1	-0.4362 µg/L	0.31945	-0.4362 ppb	0.31945	73.23%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	10.4	0.2606 µg/L	0.21583	0.2606 ppb	0.21583	82.82%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	337.5	0.2119 µg/L	0.12176	0.2119 ppb	0.12176	57.46%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1.0	0.8376 µg/L	0.82108	0.8376 ppb	0.82108	98.03%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	2.2	0.0569 µg/L	0.21955	0.0569 ppb	0.21955	385.67%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.9	-0.0449 µg/L	0.25703	-0.0449 ppb	0.25703	571.87%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	10.5 0.2226 µg/L	0.06563 0.2226 ppb	0.06563 29.48%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	-17.2 -0.1126 µg/L	0.27064 -0.1126 ppb	0.27064 240.34%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	2.9 22.669 µg/L	12.8968 22.669 ppb	12.8968 56.89%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	-23.9 -16.417 µg/L	27.3486 -16.417 ppb	27.3486 166.58%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	2.0 17.727 µg/L	38.6733 17.727 ppb	38.6733 218.16%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	136.4 0.4534 µg/L	0.10446 0.4534 ppb	0.10446 23.04%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	0.7 0.0699 µg/L	0.50894 0.0699 ppb	0.50894 728.30%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	15.9 4.9425 µg/L	11.70186 4.9425 ppb	11.70186 236.76%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	9.0 0.4741 µg/L	0.81468 0.4741 ppb	0.81468 171.85%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	-5.8 -11.831 µg/L	3.9295 -11.831 ppb	3.9295 33.21%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	1.2 0.3110 µg/L	0.26013 0.3110 ppb	0.26013 83.66%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	-3.1 -12.875 µg/L	2.3728 -12.875 ppb	2.3728 18.43%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	-0.8 -0.7025 µg/L	4.47035 -0.7025 ppb	4.47035 636.33%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-0.8 -1.0609 µg/L	4.07600 -1.0609 ppb	4.07600 384.22%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	81.5 16.872 µg/L	3.9759 16.872 ppb	3.9759 23.57%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	75.2 5.9618 µg/L	1.44177 5.9618 ppb	1.44177 24.18%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	-2.1 -0.9178 µg/L	1.12563 -0.9178 ppb	1.12563 122.64%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	17.7 0.1751 µg/L	0.16995 0.1751 ppb	0.16995 97.03%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	119.4 0.2764 µg/L	0.08121 0.2764 ppb	0.08121 29.38%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	-0.3 -0.4347 µg/L	4.79508 -0.4347 ppb	4.79508 >999.9%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	47.1 4.0858 µg/L	3.00956 4.0858 ppb	3.00956 73.66%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	35.9 0.3771 µg/L	0.10885 0.3771 ppb	0.10885 28.87%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	4.8 0.1109 µg/L	0.14450 0.1109 ppb	0.14450 130.34%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

Sequence No.: 28

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 10:57:35

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	53857.3	53857.3	96.5 %		10:58:14
1	Al 396.153Radial†	7268.1	7553.1	5208.2 µg/L	5208.2 ppb	10:58:14
1	Ca 317.933Radial†	5813.0	5840.7	5070.6 µg/L	5070.6 ppb	10:58:35
1	Fe 238.204 Radial†	657.2	666.4	5216.4 µg/L	5216.4 ppb	10:58:35
1	K 766.490 Radial†	7594.7	7655.1	5258.9 µg/L	5258.9 ppb	10:58:14
1	Mg 279.077 IEC†	600.5	612.4	5338.0 µg/L	5338.0 ppb	10:58:35
1	Na 589.592 Radial†	32923.0	33545.2	10427 µg/L	10427 ppb	10:58:14
1	Sr 421.552†	50900.9	52741.4	522.35 µg/L	522.35 ppb	10:58:14
1	Sc 361.383	1885364.1	1885364.1	96.619 %		10:59:38
1	Y 371.029	1294550.1	1294550.1	96.563 %		10:59:38
1	Ag 328.068†	67741.7	70645.9	544.26 µg/L	544.26 ppb	10:59:44
1	As 188.979†	284.6	293.7	543.00 µg/L	543.00 ppb	11:00:04
1	B 249.677†	12615.6	12710.0	531.37 µg/L	531.37 ppb	10:59:44
1	Ba 233.527†	20772.8	21522.9	539.61 µg/L	539.61 ppb	10:59:44
1	Be 313.107†	806441.0	838006.8	526.27 µg/L	526.27 ppb	10:59:38
1	Cd 226.502†	19708.9	20541.3	540.96 µg/L	540.96 ppb	10:59:44
1	Co 228.616†	11105.5	11501.1	543.09 µg/L	543.09 ppb	10:59:44
1	Cr 267.716†	24977.1	25901.4	549.23 µg/L	549.23 ppb	10:59:44
1	Cu 324.752†	80746.2	81018.9	545.19 µg/L	545.19 ppb	10:59:44
1	Mn 257.610†	156305.7	162014.6	536.30 µg/L	536.30 ppb	10:59:38
1	Mo 202.031†	5316.8	5508.7	563.34 µg/L	563.34 ppb	11:00:04
1	Ni 231.604†	10322.4	10374.2	544.44 µg/L	544.44 ppb	10:59:44
1	P 214.914†	1303.5	1325.3	2659.1 µg/L	2659.1 ppb	11:00:04
1	Pb 220.353†	2178.4	2157.2	550.81 µg/L	550.81 ppb	11:00:04
1	S 181.975 Axial†	267.5	258.3	1090.0 µg/L	1090.0 ppb	11:00:04
1	Sb 206.836†	593.2	588.3	550.93 µg/L	550.93 ppb	11:00:04
1	Se 196.026†	379.5	382.0	555.26 µg/L	555.26 ppb	11:00:04
1	SiO2†	28181.1	27912.4	5781.4 µg/L	5781.4 ppb	10:59:44
1	Si 251.611†	33342.1	34196.9	2710.9 µg/L	2710.9 ppb	10:59:44
1	Sn 189.927†	1233.6	1274.8	561.41 µg/L	561.41 ppb	11:00:04
1	Ti 334.940†	221556.8	229153.1	532.60 µg/L	532.60 ppb	10:59:38
1	Tl 190.801†	369.9	408.6	554.37 µg/L	554.37 ppb	11:00:04
1	U 409.014†	6054.0	6339.6	549.33 µg/L	549.33 ppb	10:59:44
1	V 292.402†	51047.5	52907.8	551.18 µg/L	551.18 ppb	10:59:44
1	Zn 213.857†	22411.3	22700.2	539.54 µg/L	539.54 ppb	10:59:44
2	Sc RADIAL	53152.5	53152.5	95.2 %		10:58:40
2	Al 396.153Radial†	7199.7	7581.3	5227.7 µg/L	5227.7 ppb	10:58:40
2	Ca 317.933Radial†	5857.4	5967.3	5180.5 µg/L	5180.5 ppb	10:59:01
2	Fe 238.204 Radial†	659.6	677.9	5306.2 µg/L	5306.2 ppb	10:59:01
2	K 766.490 Radial†	7572.2	7735.9	5314.5 µg/L	5314.5 ppb	10:58:40
2	Mg 279.077 IEC†	603.6	623.8	5438.0 µg/L	5438.0 ppb	10:59:01
2	Na 589.592 Radial†	32898.3	33972.0	10560 µg/L	10560 ppb	10:58:40
2	Sr 421.552†	50695.6	53225.5	527.15 µg/L	527.15 ppb	10:58:40
2	Sc 361.383	1857596.5	1857596.5	95.196 %		11:00:11
2	Y 371.029	1276299.6	1276299.6	95.202 %		11:00:11
2	Ag 328.068†	66916.9	70827.5	545.67 µg/L	545.67 ppb	11:00:17
2	As 188.979†	278.7	292.0	539.71 µg/L	539.71 ppb	11:00:38
2	B 249.677†	12442.0	12722.8	531.87 µg/L	531.87 ppb	11:00:17
2	Ba 233.527†	20550.5	21610.8	541.81 µg/L	541.81 ppb	11:00:17
2	Be 313.107†	810312.1	854549.8	536.65 µg/L	536.65 ppb	11:00:11
2	Cd 226.502†	19365.1	20485.1	539.47 µg/L	539.47 ppb	11:00:17
2	Co 228.616†	10939.0	11498.0	542.92 µg/L	542.92 ppb	11:00:17
2	Cr 267.716†	24706.3	26003.3	551.39 µg/L	551.39 ppb	11:00:17
2	Cu 324.752†	79789.5	81263.2	546.84 µg/L	546.84 ppb	11:00:17
2	Mn 257.610†	157414.3	165597.3	548.15 µg/L	548.15 ppb	11:00:11
2	Mo 202.031†	5198.2	5466.4	559.01 µg/L	559.01 ppb	11:00:38
2	Ni 231.604†	10183.5	10388.0	545.16 µg/L	545.16 ppb	11:00:17
2	P 214.914†	1280.9	1321.7	2651.4 µg/L	2651.4 ppb	11:00:38
2	Pb 220.353†	2144.0	2154.8	550.16 µg/L	550.16 ppb	11:00:38

2	S 181.975 Axial†	264.9	259.7	1095.8 µg/L	1095.8 ppb	11:00:38
2	Sb 206.836†	588.1	592.1	554.39 µg/L	554.39 ppb	11:00:38
2	Se 196.026†	367.9	375.7	546.36 µg/L	546.36 ppb	11:00:38
2	SiO2†	27963.2	28119.5	5824.3 µg/L	5824.3 ppb	11:00:17
2	Si 251.611†	33012.2	34366.2	2724.3 µg/L	2724.3 ppb	11:00:17
2	Sn 189.927†	1202.5	1261.2	555.43 µg/L	555.43 ppb	11:00:38
2	Ti 334.940†	222790.0	233876.2	543.57 µg/L	543.57 ppb	11:00:11
2	Tl 190.801†	358.7	402.6	546.40 µg/L	546.40 ppb	11:00:38
2	U 409.014†	6006.0	6382.9	553.07 µg/L	553.07 ppb	11:00:17
2	V 292.402†	50453.4	53073.4	552.87 µg/L	552.87 ppb	11:00:17
2	Zn 213.857†	22159.6	22782.5	541.49 µg/L	541.49 ppb	11:00:17
3	Sc RADIAL	52730.6	52730.6	94.4 %		10:59:06
3	Al 396.153Radial†	7218.2	7661.3	5285.0 µg/L	5285.0 ppb	10:59:06
3	Ca 317.933Radial†	5836.6	5994.5	5204.1 µg/L	5204.1 ppb	10:59:26
3	Fe 238.204 Radial†	654.5	678.1	5306.5 µg/L	5306.5 ppb	10:59:26
3	K 766.490 Radial†	7583.2	7811.2	5366.2 µg/L	5366.2 ppb	10:59:06
3	Mg 279.077 IEC†	603.0	628.3	5475.0 µg/L	5475.0 ppb	10:59:26
3	Na 589.592 Radial†	32817.9	34163.3	10619 µg/L	10619 ppb	10:59:06
3	Sr 421.552†	50525.2	53471.1	529.58 µg/L	529.58 ppb	10:59:06
3	Sc 361.383	1860864.8	1860864.8	95.364 %		11:00:45
3	Y 371.029	1279786.8	1279786.8	95.462 %		11:00:45
3	Ag 328.068†	63235.3	66843.5	514.83 µg/L	514.83 ppb	11:00:50
3	As 188.979†	234.3	244.9	452.79 µg/L	452.79 ppb	11:01:11
3	B 249.677†	11700.3	11922.0	498.17 µg/L	498.17 ppb	11:00:50
3	Ba 233.527†	18903.5	19845.8	497.54 µg/L	497.54 ppb	11:00:50
3	Be 313.107†	758336.4	798552.3	501.49 µg/L	501.49 ppb	11:00:45
3	Cd 226.502†	17698.7	18701.9	492.46 µg/L	492.46 ppb	11:00:50
3	Co 228.616†	9952.6	10443.5	493.06 µg/L	493.06 ppb	11:00:50
3	Cr 267.716†	21740.4	22847.7	484.48 µg/L	484.48 ppb	11:00:50
3	Cu 324.752†	72887.8	73878.7	497.22 µg/L	497.22 ppb	11:00:50
3	Mn 257.610†	147354.8	154758.3	512.30 µg/L	512.30 ppb	11:00:45
3	Mo 202.031†	4296.8	4511.6	461.41 µg/L	461.41 ppb	11:01:11
3	Ni 231.604†	9251.8	9392.2	492.91 µg/L	492.91 ppb	11:00:50
3	P 214.914†	1086.2	1115.2	2232.6 µg/L	2232.6 ppb	11:01:11
3	Pb 220.353†	1857.7	1850.6	472.41 µg/L	472.41 ppb	11:01:11
3	S 181.975 Axial†	228.8	221.4	933.99 µg/L	933.99 ppb	11:01:11
3	Sb 206.836†	494.3	492.7	460.83 µg/L	460.83 ppb	11:01:11
3	Se 196.026†	327.6	332.7	484.80 µg/L	484.80 ppb	11:01:11
3	SiO2†	26097.8	26111.9	5408.4 µg/L	5408.4 ppb	11:00:50
3	Si 251.611†	30671.6	31850.9	2524.9 µg/L	2524.9 ppb	11:00:50
3	Sn 189.927†	977.4	1023.0	450.52 µg/L	450.52 ppb	11:01:11
3	Ti 334.940†	207737.3	217680.7	505.91 µg/L	505.91 ppb	11:00:45
3	Tl 190.801†	312.9	353.8	480.68 µg/L	480.68 ppb	11:01:11
3	U 409.014†	5308.4	5640.3	488.60 µg/L	488.60 ppb	11:00:50
3	V 292.402†	45339.6	47617.9	495.76 µg/L	495.76 ppb	11:00:50
3	Zn 213.857†	20158.7	20643.5	490.60 µg/L	490.60 ppb	11:00:50

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1867941.8	95.726 %	0.7777			0.81%
Sc RADIAL	53246.8	95.4 %	1.02			1.07%
Y 371.029	1283545.5	95.743 %	0.7227			0.75%
Ag 328.068†	69439.0	534.92 µg/L	17.415	534.92 ppb	17.415	3.26%
QC value within limits for Ag 328.068 Recovery = 106.98%						
Al 396.153Radial†	7598.6	5240.3 µg/L	39.93	5240.3 ppb	39.93	0.76%
QC value within limits for Al 396.153Radial Recovery = 104.81%						
As 188.979†	276.9	511.83 µg/L	51.158	511.83 ppb	51.158	10.00%
QC value within limits for As 188.979 Recovery = 102.37%						
B 249.677†	12451.6	520.47 µg/L	19.317	520.47 ppb	19.317	3.71%
QC value within limits for B 249.677 Recovery = 104.09%						
Ba 233.527†	20993.1	526.32 µg/L	24.949	526.32 ppb	24.949	4.74%
QC value within limits for Ba 233.527 Recovery = 105.26%						
Be 313.107†	830369.6	521.47 µg/L	18.067	521.47 ppb	18.067	3.46%
QC value within limits for Be 313.107 Recovery = 104.29%						
Ca 317.933Radial†	5934.2	5151.7 µg/L	71.26	5151.7 ppb	71.26	1.38%
QC value within limits for Ca 317.933Radial Recovery = 103.03%						
Cd 226.502†	19909.4	524.30 µg/L	27.585	524.30 ppb	27.585	5.26%
QC value within limits for Cd 226.502 Recovery = 104.86%						
Co 228.616†	11147.5	526.36 µg/L	28.836	526.36 ppb	28.836	5.48%

QC value within limits for Co 228.616 Recovery = 105.27%							
Cr 267.716†	24917.5	528.37 µg/L	38.020	528.37 ppb	38.020	7.20%	
QC value within limits for Cr 267.716 Recovery = 105.67%							
Cu 324.752†	78720.3	529.75 µg/L	28.186	529.75 ppb	28.186	5.32%	
QC value within limits for Cu 324.752 Recovery = 105.95%							
Fe 238.204 Radial†	674.1	5276.3 µg/L	51.91	5276.3 ppb	51.91	0.98%	
QC value within limits for Fe 238.204 Radial Recovery = 105.53%							
K 766.490 Radial†	7734.1	5313.2 µg/L	53.64	5313.2 ppb	53.64	1.01%	
QC value within limits for K 766.490 Radial Recovery = 106.26%							
Mg 279.077 IEC†	621.5	5417.0 µg/L	70.86	5417.0 ppb	70.86	1.31%	
QC value within limits for Mg 279.077 IEC Recovery = 108.34%							
Mn 257.610†	160790.0	532.25 µg/L	18.263	532.25 ppb	18.263	3.43%	
QC value within limits for Mn 257.610 Recovery = 106.45%							
Mo 202.031†	5162.3	527.92 µg/L	57.640	527.92 ppb	57.640	10.92%	
QC value within limits for Mo 202.031 Recovery = 105.58%							
Na 589.592 Radial†	33893.5	10535 µg/L	98.4	10535 ppb	98.4	0.93%	
QC value within limits for Na 589.592 Radial Recovery = 105.35%							
Ni 231.604†	10051.5	527.50 µg/L	29.961	527.50 ppb	29.961	5.68%	
QC value within limits for Ni 231.604 Recovery = 105.50%							
P 214.914†	1254.0	2514.4 µg/L	244.03	2514.4 ppb	244.03	9.71%	
QC value within limits for P 214.914 Recovery = 100.58%							
Pb 220.353†	2054.2	524.46 µg/L	45.081	524.46 ppb	45.081	8.60%	
QC value within limits for Pb 220.353 Recovery = 104.89%							
S 181.975 Axial†	246.5	1039.9 µg/L	91.79	1039.9 ppb	91.79	8.83%	
QC value within limits for S 181.975 Axial Recovery = 103.99%							
Sb 206.836†	557.7	522.05 µg/L	53.046	522.05 ppb	53.046	10.16%	
QC value within limits for Sb 206.836 Recovery = 104.41%							
Se 196.026†	363.5	528.81 µg/L	38.367	528.81 ppb	38.367	7.26%	
QC value within limits for Se 196.026 Recovery = 105.76%							
SiO2†	27381.3	5671.4 µg/L	228.71	5671.4 ppb	228.71	4.03%	
QC value within limits for SiO2 Recovery = 106.06%							
Si 251.611†	33471.3	2653.4 µg/L	111.45	2653.4 ppb	111.45	4.20%	
QC value within limits for Si 251.611 Recovery = 106.13%							
Sn 189.927†	1186.3	522.45 µg/L	62.367	522.45 ppb	62.367	11.94%	
QC value within limits for Sn 189.927 Recovery = 104.49%							
Sr 421.552†	53146.0	526.36 µg/L	3.677	526.36 ppb	3.677	0.70%	
QC value within limits for Sr 421.552 Recovery = 105.27%							
Ti 334.940†	226903.3	527.36 µg/L	19.373	527.36 ppb	19.373	3.67%	
QC value within limits for Ti 334.940 Recovery = 105.47%							
Tl 190.801†	388.3	527.15 µg/L	40.443	527.15 ppb	40.443	7.67%	
QC value within limits for Tl 190.801 Recovery = 105.43%							
U 409.014†	6120.9	530.33 µg/L	36.192	530.33 ppb	36.192	6.82%	
QC value within limits for U 409.014 Recovery = 106.07%							
V 292.402†	51199.7	533.27 µg/L	32.494	533.27 ppb	32.494	6.09%	
QC value within limits for V 292.402 Recovery = 106.65%							
Zn 213.857†	22042.1	523.88 µg/L	28.836	523.88 ppb	28.836	5.50%	
QC value within limits for Zn 213.857 Recovery = 104.78%							
All analyte(s) passed QC.							

Sequence No.: 29

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 11:01:21

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	53650.2	53650.2	96.1 %		11:01:53
1	Al 396.153Radial†	-22.9	-6.2	-4.3161 µg/L	-4.3161 ppb	11:01:53
1	Ca 317.933Radial†	185.7	7.1	6.1560 µg/L	6.1560 ppb	11:02:14
1	Fe 238.204 Radial†	17.9	3.6	28.364 µg/L	28.364 ppb	11:02:14
1	K 766.490 Radial†	180.7	-31.0	-21.315 µg/L	-21.315 ppb	11:01:53
1	Mg 279.077 IEC†	10.8	1.0	8.9881 µg/L	8.9881 ppb	11:02:14
1	Na 589.592 Radial†	578.8	13.2	4.0983 µg/L	4.0983 ppb	11:01:53
1	Sr 421.552†	56.7	26.5	0.2622 µg/L	0.2622 ppb	11:01:53
1	Sc 361.383	1911752.8	1911752.8	97.972 %		11:03:16
1	Y 371.029	1318255.1	1318255.1	98.332 %		11:03:16
1	Ag 328.068†	-525.4	-2.3	-0.0133 µg/L	-0.0133 ppb	11:03:21
1	As 188.979†	-2.4	-3.2	-5.9997 µg/L	-5.9997 ppb	11:03:42
1	B 249.677†	328.1	-12.2	-0.5244 µg/L	-0.5244 ppb	11:03:42
1	Ba 233.527†	-26.0	-3.3	-0.0817 µg/L	-0.0817 ppb	11:03:42
1	Be 313.107†	-3146.7	136.2	0.0855 µg/L	0.0855 ppb	11:03:21
1	Cd 226.502†	-151.0	-11.4	-0.3028 µg/L	-0.3028 ppb	11:03:42
1	Co 228.616†	-1.1	5.9	0.2774 µg/L	0.2774 ppb	11:03:42
1	Cr 267.716†	-38.9	10.6	0.2250 µg/L	0.2250 ppb	11:03:21
1	Cu 324.752†	2442.3	-59.8	-0.3977 µg/L	-0.3977 ppb	11:03:21
1	Mn 257.610†	-171.4	64.7	0.2172 µg/L	0.2172 ppb	11:03:42
1	Mo 202.031†	-4.6	1.2	0.1248 µg/L	0.1248 ppb	11:03:42
1	Ni 231.604†	313.9	11.1	0.5834 µg/L	0.5834 ppb	11:03:42
1	P 214.914†	24.8	1.5	3.0483 µg/L	3.0483 ppb	11:03:42
1	Pb 220.353†	93.1	-2.3	-0.5904 µg/L	-0.5904 ppb	11:03:42
1	S 181.975 Axial†	15.9	-2.4	-9.9434 µg/L	-9.9434 ppb	11:03:42
1	Sb 206.836†	24.5	-0.6	-0.5337 µg/L	-0.5337 ppb	11:03:42
1	Se 196.026†	10.2	-0.4	-0.4428 µg/L	-0.4428 ppb	11:03:42
1	SiO2†	1278.5	50.3	10.409 µg/L	10.409 ppb	11:03:21
1	Si 251.611†	384.1	80.2	6.3566 µg/L	6.3566 ppb	11:03:42
1	Sn 189.927†	1.2	-0.8	-0.3354 µg/L	-0.3354 ppb	11:03:42
1	Ti 334.940†	252.6	101.7	0.2358 µg/L	0.2358 ppb	11:03:21
1	Tl 190.801†	-26.7	-1.5	-2.0427 µg/L	-2.0427 ppb	11:03:42
1	U 409.014†	-145.3	-74.5	-6.4752 µg/L	-6.4752 ppb	11:03:21
1	V 292.402†	-36.2	37.1	0.3801 µg/L	0.3801 ppb	11:03:21
1	Zn 213.857†	488.9	3.7	0.0857 µg/L	0.0857 ppb	11:03:42
2	Sc RADIAL	53915.5	53915.5	96.6 %		11:02:19
2	Al 396.153Radial†	-10.6	6.7	4.6111 µg/L	4.6111 ppb	11:02:19
2	Ca 317.933Radial†	186.8	7.2	6.2871 µg/L	6.2871 ppb	11:02:40
2	Fe 238.204 Radial†	16.7	2.2	17.279 µg/L	17.279 ppb	11:02:40
2	K 766.490 Radial†	175.7	-37.1	-25.479 µg/L	-25.479 ppb	11:02:19
2	Mg 279.077 IEC†	10.0	0.1	0.9791 µg/L	0.9791 ppb	11:02:40
2	Na 589.592 Radial†	575.0	6.2	1.9385 µg/L	1.9385 ppb	11:02:19
2	Sr 421.552†	46.5	15.6	0.1549 µg/L	0.1549 ppb	11:02:19
2	Sc 361.383	1915123.4	1915123.4	98.144 %		11:03:48
2	Y 371.029	1319967.5	1319967.5	98.459 %		11:03:48
2	Ag 328.068†	-519.3	4.8	0.0401 µg/L	0.0401 ppb	11:03:53
2	As 188.979†	-0.5	-1.2	-2.3141 µg/L	-2.3141 ppb	11:04:14
2	B 249.677†	317.9	-23.2	-0.9808 µg/L	-0.9808 ppb	11:04:14
2	Ba 233.527†	-11.2	11.8	0.2964 µg/L	0.2964 ppb	11:04:14
2	Be 313.107†	-2963.8	328.2	0.2060 µg/L	0.2060 ppb	11:03:53
2	Cd 226.502†	-134.9	5.3	0.1377 µg/L	0.1377 ppb	11:04:14
2	Co 228.616†	-2.1	4.9	0.2295 µg/L	0.2295 ppb	11:04:14
2	Cr 267.716†	-37.4	12.2	0.2591 µg/L	0.2591 ppb	11:03:53
2	Cu 324.752†	2564.3	60.2	0.4068 µg/L	0.4068 ppb	11:03:53
2	Mn 257.610†	-127.2	110.0	0.3662 µg/L	0.3662 ppb	11:04:14
2	Mo 202.031†	0.2	6.1	0.6270 µg/L	0.6270 ppb	11:04:14
2	Ni 231.604†	312.6	9.2	0.4814 µg/L	0.4814 ppb	11:04:14
2	P 214.914†	21.5	-1.9	-3.9607 µg/L	-3.9607 ppb	11:04:14
2	Pb 220.353†	86.8	-9.0	-2.2945 µg/L	-2.2945 ppb	11:04:14

2	S 181.975 Axial†	16.2	-2.0	-8.6024 µg/L	-8.6024 ppb	11:04:14
2	Sb 206.836†	22.1	-3.1	-2.9099 µg/L	-2.9099 ppb	11:04:14
2	Se 196.026†	21.0	10.6	15.186 µg/L	15.186 ppb	11:04:14
2	SiO2†	1284.7	54.2	11.231 µg/L	11.231 ppb	11:03:53
2	Si 251.611†	388.1	83.6	6.6250 µg/L	6.6250 ppb	11:04:14
2	Sn 189.927†	5.9	4.1	1.7981 µg/L	1.7981 ppb	11:04:14
2	Ti 334.940†	342.9	193.2	0.4494 µg/L	0.4494 ppb	11:03:53
2	Tl 190.801†	-26.0	-0.7	-0.9813 µg/L	-0.9813 ppb	11:04:14
2	U 409.014†	37.9	112.4	9.7545 µg/L	9.7545 ppb	11:03:53
2	V 292.402†	-40.4	32.9	0.3558 µg/L	0.3558 ppb	11:03:53
2	Zn 213.857†	486.5	0.4	0.0064 µg/L	0.0064 ppb	11:04:14
3	Sc RADIAL	54355.9	54355.9	97.3 %		11:02:45
3	Al 396.153Radial†	-28.3	-11.4	-7.9025 µg/L	-7.9025 ppb	11:02:45
3	Ca 317.933Radial†	191.8	10.9	9.4518 µg/L	9.4518 ppb	11:03:06
3	Fe 238.204 Radial†	17.7	3.1	24.510 µg/L	24.510 ppb	11:03:06
3	K 766.490 Radial†	186.9	-27.1	-18.599 µg/L	-18.599 ppb	11:02:45
3	Mg 279.077 IEC†	8.4	-1.7	-14.598 µg/L	-14.598 ppb	11:03:06
3	Na 589.592 Radial†	548.2	-26.1	-8.1080 µg/L	-8.1080 ppb	11:02:45
3	Sr 421.552†	27.1	-4.7	-0.0464 µg/L	-0.0464 ppb	11:02:45
3	Sc 361.383	1913277.8	1913277.8	98.050 %		11:04:20
3	Y 371.029	1318114.0	1318114.0	98.321 %		11:04:20
3	Ag 328.068†	-515.5	8.2	0.0679 µg/L	0.0679 ppb	11:04:25
3	As 188.979†	0.1	-0.7	-1.3144 µg/L	-1.3144 ppb	11:04:46
3	B 249.677†	348.1	7.9	0.3201 µg/L	0.3201 ppb	11:04:46
3	Ba 233.527†	-8.6	14.5	0.3628 µg/L	0.3628 ppb	11:04:46
3	Be 313.107†	-2958.1	331.1	0.2079 µg/L	0.2079 ppb	11:04:25
3	Cd 226.502†	-126.2	14.0	0.3674 µg/L	0.3674 ppb	11:04:46
3	Co 228.616†	-13.1	-6.3	-0.3007 µg/L	-0.3007 ppb	11:04:46
3	Cr 267.716†	-51.5	-2.1	-0.0451 µg/L	-0.0451 ppb	11:04:25
3	Cu 324.752†	2468.6	-34.9	-0.2312 µg/L	-0.2312 ppb	11:04:25
3	Mn 257.610†	-134.5	102.5	0.3427 µg/L	0.3427 ppb	11:04:46
3	Mo 202.031†	-5.7	0.1	0.0086 µg/L	0.0086 ppb	11:04:46
3	Ni 231.604†	310.3	7.1	0.3759 µg/L	0.3759 ppb	11:04:46
3	P 214.914†	24.1	0.7	1.3665 µg/L	1.3665 ppb	11:04:46
3	Pb 220.353†	98.1	2.7	0.6800 µg/L	0.6800 ppb	11:04:46
3	S 181.975 Axial†	17.6	-0.6	-2.3639 µg/L	-2.3639 ppb	11:04:46
3	Sb 206.836†	27.8	2.8	2.6046 µg/L	2.6046 ppb	11:04:46
3	Se 196.026†	10.7	0.2	0.3339 µg/L	0.3339 ppb	11:04:46
3	SiO2†	1297.9	69.0	14.287 µg/L	14.287 ppb	11:04:25
3	Si 251.611†	375.3	70.9	5.6230 µg/L	5.6230 ppb	11:04:46
3	Sn 189.927†	2.9	1.0	0.4471 µg/L	0.4471 ppb	11:04:46
3	Ti 334.940†	301.9	151.8	0.3543 µg/L	0.3543 ppb	11:04:25
3	Tl 190.801†	-25.6	-0.4	-0.5034 µg/L	-0.5034 ppb	11:04:46
3	U 409.014†	-62.0	10.5	0.9100 µg/L	0.9100 ppb	11:04:25
3	V 292.402†	-15.3	58.4	0.6051 µg/L	0.6051 ppb	11:04:25
3	Zn 213.857†	496.2	10.8	0.2573 µg/L	0.2573 ppb	11:04:46

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1913384.7	98.055 %	0.0865			0.09%
Sc RADIAL	53973.8	96.7 %	0.64			0.66%
Y 371.029	1318778.9	98.371 %	0.0770			0.08%
Ag 328.068†	3.6	0.0316 µg/L	0.04126	0.0316 ppb	0.04126	130.73%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-3.7	-2.5358 µg/L	6.44397	-2.5358 ppb	6.44397	254.12%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.7	-3.2094 µg/L	2.46763	-3.2094 ppb	2.46763	76.89%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-9.1	-0.3950 µg/L	0.66003	-0.3950 ppb	0.66003	167.08%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.7	0.1925 µg/L	0.23975	0.1925 ppb	0.23975	124.55%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	265.2	0.1665 µg/L	0.07013	0.1665 ppb	0.07013	42.13%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	8.4	7.2983 µg/L	1.86616	7.2983 ppb	1.86616	25.57%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	2.6	0.0674 µg/L	0.34058	0.0674 ppb	0.34058	504.99%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	1.5	0.0687 µg/L	0.32086	0.0687 ppb	0.32086	466.83%



Cr 267.716†	6.9	0.1463 µg/L	0.16665	0.1463 ppb	0.16665	113.88%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-11.5	-0.0740 µg/L	0.42467	-0.0740 ppb	0.42467	573.63%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	3.0	23.384 µg/L	5.6275	23.384 ppb	5.6275	24.07%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-31.7	-21.798 µg/L	3.4655	-21.798 ppb	3.4655	15.90%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-0.2	-1.5436 µg/L	11.99371	-1.5436 ppb	11.99371	776.98%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	92.4	0.3087 µg/L	0.08007	0.3087 ppb	0.08007	25.94%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	2.5	0.2535 µg/L	0.32866	0.2535 ppb	0.32866	129.66%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-2.2	-0.6904 µg/L	6.51398	-0.6904 ppb	6.51398	943.48%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	9.1	0.4802 µg/L	0.10374	0.4802 ppb	0.10374	21.60%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	0.1	0.1514 µg/L	3.65911	0.1514 ppb	3.65911	>999.9%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-2.9	-0.7349 µg/L	1.49253	-0.7349 ppb	1.49253	203.08%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-1.7	-6.9699 µg/L	4.04488	-6.9699 ppb	4.04488	58.03%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-0.3	-0.2797 µg/L	2.76600	-0.2797 ppb	2.76600	988.98%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	3.5	5.0257 µg/L	8.80767	5.0257 ppb	8.80767	175.25%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	57.8	11.975 µg/L	2.0433	11.975 ppb	2.0433	17.06%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	78.2	6.2015 µg/L	0.51872	6.2015 ppb	0.51872	8.36%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	1.5	0.6366 µg/L	1.07929	0.6366 ppb	1.07929	169.54%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	12.5	0.1236 µg/L	0.15668	0.1236 ppb	0.15668	126.78%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	148.9	0.3465 µg/L	0.10699	0.3465 ppb	0.10699	30.88%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.9	-1.1758 µg/L	0.78785	-1.1758 ppb	0.78785	67.00%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	16.1	1.3964 µg/L	8.12578	1.3964 ppb	8.12578	581.90%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	42.8	0.4470 µg/L	0.13745	0.4470 ppb	0.13745	30.75%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	5.0	0.1165 µg/L	0.12825	0.1165 ppb	0.12825	110.11%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

=====  
Analysis Begun

Start Time: 2/11/2010 11:10:20

Plasma On Time: 2/8/2010 03:37:33

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\021110.sif

Batch ID:

Results Data Set: 021110A

Results Library: c:\pe\optima1\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 301

Sample ID: 1202024779|945403|1

Date Collected: 2/11/2010 11:10:22

Analyst: HSC

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

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Replicate Data: 1202024779|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	52428.1	52428.1	93.9 %		11:10:59
1	Al 396.153Radial†	30.1	49.7	34.353 µg/L	34.353 ppb	11:10:59
1	Ca 317.933Radial†	279.1	111.1	96.445 µg/L	96.445 ppb	11:11:20
1	Fe 238.204 Radial†	21.4	7.8	60.744 µg/L	60.744 ppb	11:11:20
1	K 766.490 Radial†	163.0	-45.4	-31.202 µg/L	-31.202 ppb	11:10:59
1	Mg 279.077 IEC†	13.5	4.1	36.074 µg/L	36.074 ppb	11:11:20
1	Na 589.592 Radial†	571.8	19.8	6.1585 µg/L	6.1585 ppb	11:10:59
1	Sr 421.552†	131.6	107.6	1.0659 µg/L	1.0659 ppb	11:10:59
1	Sc 361.383	1862940.0	1862940.0	95.470 %		11:12:21
1	Y 371.029	1281460.1	1281460.1	95.587 %		11:12:21
1	Ag 328.068†	-510.9	-1.2	-0.0023 µg/L	-0.0023 ppb	11:12:27
1	As 188.979†	-1.2	-2.0	-3.7415 µg/L	-3.7415 ppb	11:12:48
1	B 249.677†	379.7	50.6	2.0907 µg/L	2.0907 ppb	11:12:48
1	Ba 233.527†	-6.8	16.1	0.4045 µg/L	0.4045 ppb	11:12:48
1	Be 313.107†	-3211.3	-15.6	-0.0099 µg/L	-0.0099 ppb	11:12:27
1	Cd 226.502†	-142.3	-6.3	-0.1723 µg/L	-0.1723 ppb	11:12:48
1	Co 228.616†	-11.0	-4.5	-0.2113 µg/L	-0.2113 ppb	11:12:48
1	Cr 267.716†	-51.5	-3.6	-0.0762 µg/L	-0.0762 ppb	11:12:48
1	Cu 324.752†	2549.8	118.2	0.8027 µg/L	0.8027 ppb	11:12:27
1	Mn 257.610†	-35.4	202.5	0.6764 µg/L	0.6764 ppb	11:12:48
1	Mo 202.031†	-7.5	-2.0	-0.2012 µg/L	-0.2012 ppb	11:12:48
1	Ni 231.604†	314.6	20.2	1.0611 µg/L	1.0611 ppb	11:12:48
1	P 214.914†	29.3	6.8	13.718 µg/L	13.718 ppb	11:12:48
1	Pb 220.353†	99.6	6.9	1.7686 µg/L	1.7686 ppb	11:12:48
1	S 181.975 Axial†	21.2	3.7	15.481 µg/L	15.481 ppb	11:12:48
1	Sb 206.836†	28.4	4.1	3.8047 µg/L	3.8047 ppb	11:12:48
1	Se 196.026†	14.9	4.9	7.0971 µg/L	7.0971 ppb	11:12:48
1	SiO2†	1308.2	115.5	23.927 µg/L	23.927 ppb	11:12:27
1	Si 251.611†	376.7	82.7	6.5585 µg/L	6.5585 ppb	11:12:48
1	Sn 189.927†	1.3	-0.6	-0.2713 µg/L	-0.2713 ppb	11:12:48
1	Ti 334.940†	260.2	116.4	0.2694 µg/L	0.2694 ppb	11:12:27
1	Tl 190.801†	-18.7	6.2	8.2813 µg/L	8.2813 ppb	11:12:48
1	U 409.014†	-77.1	-7.0	-0.6221 µg/L	-0.6221 ppb	11:12:27
1	V 292.402†	-23.5	49.5	0.5139 µg/L	0.5139 ppb	11:12:27
1	Zn 213.857†	564.9	96.4	2.2977 µg/L	2.2977 ppb	11:12:48
2	Sc RADIAL	53100.7	53100.7	95.1 %		11:11:25
2	Al 396.153Radial†	53.2	73.5	50.825 µg/L	50.825 ppb	11:11:25
2	Ca 317.933Radial†	292.5	121.4	105.43 µg/L	105.43 ppb	11:11:45
2	Fe 238.204 Radial†	23.9	10.1	79.190 µg/L	79.190 ppb	11:11:45
2	K 766.490 Radial†	103.4	-110.3	-75.804 µg/L	-75.804 ppb	11:11:25
2	Mg 279.077 IEC†	11.9	2.2	19.206 µg/L	19.206 ppb	11:11:45
2	Na 589.592 Radial†	590.1	31.3	9.7401 µg/L	9.7401 ppb	11:11:25
2	Sr 421.552†	119.7	93.4	0.9251 µg/L	0.9251 ppb	11:11:25
2	Sc 361.383	1864325.1	1864325.1	95.541 %		11:12:54
2	Y 371.029	1282769.3	1282769.3	95.685 %		11:12:54
2	Ag 328.068†	-462.5	49.9	0.3891 µg/L	0.3891 ppb	11:12:59
2	As 188.979†	0.0	-0.7	-1.3418 µg/L	-1.3418 ppb	11:13:20

2	B 249.677†	380.7	51.4	2.1175 µg/L	2.1175 ppb	11:13:20
2	Ba 233.527†	-13.8	8.8	0.2206 µg/L	0.2206 ppb	11:13:20
2	Be 313.107†	-3238.0	-41.1	-0.0260 µg/L	-0.0260 ppb	11:12:59
2	Cd 226.502†	-129.7	7.0	0.1758 µg/L	0.1758 ppb	11:13:20
2	Co 228.616†	-14.2	-7.8	-0.3711 µg/L	-0.3711 ppb	11:13:20
2	Cr 267.716†	-31.1	17.8	0.3770 µg/L	0.3770 ppb	11:13:20
2	Cu 324.752†	2551.6	118.0	0.8043 µg/L	0.8043 ppb	11:12:59
2	Mn 257.610†	-29.4	208.9	0.7006 µg/L	0.7006 ppb	11:13:20
2	Mo 202.031†	-7.9	-2.4	-0.2451 µg/L	-0.2451 ppb	11:13:20
2	Ni 231.604†	316.2	21.6	1.1350 µg/L	1.1350 ppb	11:13:20
2	P 214.914†	23.0	0.2	0.2199 µg/L	0.2199 ppb	11:13:20
2	Pb 220.353†	100.2	7.5	1.8894 µg/L	1.8894 ppb	11:13:20
2	S 181.975 Axial†	22.9	5.4	22.889 µg/L	22.889 ppb	11:13:20
2	Sb 206.836†	22.3	-2.3	-2.1574 µg/L	-2.1574 ppb	11:13:20
2	Se 196.026†	16.1	6.1	8.9093 µg/L	8.9093 ppb	11:13:20
2	SiO2†	1397.5	208.0	43.074 µg/L	43.074 ppb	11:12:59
2	Si 251.611†	394.2	100.7	7.9812 µg/L	7.9812 ppb	11:13:20
2	Sn 189.927†	4.4	2.7	1.1874 µg/L	1.1874 ppb	11:13:20
2	Ti 334.940†	325.9	185.0	0.4304 µg/L	0.4304 ppb	11:12:59
2	Tl 190.801†	-23.3	1.3	1.8087 µg/L	1.8087 ppb	11:13:20
2	U 409.014†	42.0	117.7	10.197 µg/L	10.197 ppb	11:12:59
2	V 292.402†	-32.5	40.0	0.4308 µg/L	0.4308 ppb	11:12:59
2	Zn 213.857†	564.1	95.1	2.2660 µg/L	2.2660 ppb	11:13:20
3	Sc RADIAL	52886.6	52886.6	94.7 %		11:11:51
3	Al 396.153Radial†	50.1	70.5	48.723 µg/L	48.723 ppb	11:11:51
3	Ca 317.933Radial†	291.4	121.5	105.44 µg/L	105.44 ppb	11:12:11
3	Fe 238.204 Radial†	21.7	7.8	61.240 µg/L	61.240 ppb	11:12:11
3	K 766.490 Radial†	80.5	-134.1	-92.099 µg/L	-92.099 ppb	11:11:51
3	Mg 279.077 IEC†	12.6	3.1	26.878 µg/L	26.878 ppb	11:12:11
3	Na 589.592 Radial†	559.2	1.2	0.3624 µg/L	0.3624 ppb	11:11:51
3	Sr 421.552†	124.8	99.2	0.9826 µg/L	0.9826 ppb	11:11:51
3	Sc 361.383	1881486.4	1881486.4	96.421 %		11:13:26
3	Y 371.029	1294436.9	1294436.9	96.555 %		11:13:26
3	Ag 328.068†	-519.5	-4.9	-0.0343 µg/L	-0.0343 ppb	11:13:32
3	As 188.979†	0.1	-0.7	-1.2789 µg/L	-1.2789 ppb	11:13:52
3	B 249.677†	386.2	53.4	2.2108 µg/L	2.2108 ppb	11:13:52
3	Ba 233.527†	-18.5	4.1	0.1016 µg/L	0.1016 ppb	11:13:52
3	Be 313.107†	-3254.6	-27.4	-0.0174 µg/L	-0.0174 ppb	11:13:32
3	Cd 226.502†	-139.9	-2.4	-0.0696 µg/L	-0.0696 ppb	11:13:52
3	Co 228.616†	-13.1	-6.6	-0.3127 µg/L	-0.3127 ppb	11:13:52
3	Cr 267.716†	-34.4	14.7	0.3117 µg/L	0.3117 ppb	11:13:52
3	Cu 324.752†	2522.5	63.5	0.4355 µg/L	0.4355 ppb	11:13:32
3	Mn 257.610†	-53.3	184.4	0.6169 µg/L	0.6169 ppb	11:13:52
3	Mo 202.031†	-4.8	0.9	0.0976 µg/L	0.0976 ppb	11:13:52
3	Ni 231.604†	301.3	3.2	0.1674 µg/L	0.1674 ppb	11:13:52
3	P 214.914†	22.9	-0.2	-0.4029 µg/L	-0.4029 ppb	11:13:52
3	Pb 220.353†	100.6	7.0	1.7806 µg/L	1.7806 ppb	11:13:52
3	S 181.975 Axial†	21.0	3.2	13.550 µg/L	13.550 ppb	11:13:52
3	Sb 206.836†	21.5	-3.3	-3.0491 µg/L	-3.0491 ppb	11:13:52
3	Se 196.026†	19.0	9.0	12.940 µg/L	12.940 ppb	11:13:52
3	SiO2†	1325.2	119.6	24.780 µg/L	24.780 ppb	11:13:32
3	Si 251.611†	373.2	75.2	5.9613 µg/L	5.9613 ppb	11:13:52
3	Sn 189.927†	1.9	0.0	0.0063 µg/L	0.0063 ppb	11:13:52
3	Ti 334.940†	298.9	153.8	0.3573 µg/L	0.3573 ppb	11:13:32
3	Tl 190.801†	-27.2	-2.5	-3.3302 µg/L	-3.3302 ppb	11:13:52
3	U 409.014†	-82.0	-11.3	-0.9937 µg/L	-0.9937 ppb	11:13:32
3	V 292.402†	-81.3	-10.2	-0.0973 µg/L	-0.0973 ppb	11:13:32
3	Zn 213.857†	551.2	76.4	1.8229 µg/L	1.8229 ppb	11:13:52

Mean Data: 1202024779|945403|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1869583.8	95.811 %		0.5294			0.55%
Sc RADIAL	52805.1	94.6 %		0.62			0.65%
Y 371.029	1286222.1	95.942 %		0.5329			0.56%
Ag 328.068†	14.6	0.1175 µg/L		0.23573	0.1175 ppb	0.23573	200.62%
Al 396.153Radial†	64.6	44.634 µg/L		8.9650	44.634 ppb	8.9650	20.09%
As 188.979†	-1.1	-2.1207 µg/L		1.40396	-2.1207 ppb	1.40396	66.20%
B 249.677†	51.8	2.1397 µg/L		0.06306	2.1397 ppb	0.06306	2.95%
Ba 233.527†	9.7	0.2422 µg/L		0.15262	0.2422 ppb	0.15262	63.00%

Be 313.107†	-28.1	-0.0178 µg/L	0.00804	-0.0178 ppb	0.00804	45.26%
Ca 317.933 Radial†	118.0	102.44 µg/L	5.189	102.44 ppb	5.189	5.07%
Cd 226.502†	-0.6	-0.0221 µg/L	0.17885	-0.0221 ppb	0.17885	810.68%
Co 228.616†	-6.3	-0.2984 µg/L	0.08090	-0.2984 ppb	0.08090	27.11%
Cr 267.716†	9.6	0.2042 µg/L	0.24498	0.2042 ppb	0.24498	119.98%
Cu 324.752†	99.9	0.6808 µg/L	0.21244	0.6808 ppb	0.21244	31.20%
Fe 238.204 Radial†	8.6	67.058 µg/L	10.5095	67.058 ppb	10.5095	15.67%
K 766.490 Radial†	-96.6	-66.368 µg/L	31.5259	-66.368 ppb	31.5259	47.50%
Mg 279.077 IEC†	3.2	27.386 µg/L	8.4453	27.386 ppb	8.4453	30.84%
Mn 257.610†	198.6	0.6646 µg/L	0.04308	0.6646 ppb	0.04308	6.48%
Mo 202.031†	-1.2	-0.1162 µg/L	0.18647	-0.1162 ppb	0.18647	160.43%
Na 589.592 Radial†	17.4	5.4203 µg/L	4.73224	5.4203 ppb	4.73224	87.31%
Ni 231.604†	15.0	0.7879 µg/L	0.53859	0.7879 ppb	0.53859	68.36%
P 214.914†	2.3	4.5115 µg/L	7.97880	4.5115 ppb	7.97880	176.85%
Pb 220.353†	7.1	1.8129 µg/L	0.06656	1.8129 ppb	0.06656	3.67%
S 181.975 Axial†	4.1	17.306 µg/L	4.9298	17.306 ppb	4.9298	28.49%
Sb 206.836†	-0.5	-0.4673 µg/L	3.72637	-0.4673 ppb	3.72637	797.50%
Se 196.026†	6.6	9.6487 µg/L	2.99067	9.6487 ppb	2.99067	31.00%
SiO2†	147.7	30.594 µg/L	10.8167	30.594 ppb	10.8167	35.36%
Si 251.611†	86.2	6.8337 µg/L	1.03770	6.8337 ppb	1.03770	15.19%
Sn 189.927†	0.7	0.3075 µg/L	0.77460	0.3075 ppb	0.77460	251.94%
Sr 421.552†	100.1	0.9912 µg/L	0.07083	0.9912 ppb	0.07083	7.15%
Ti 334.940†	151.7	0.3524 µg/L	0.08062	0.3524 ppb	0.08062	22.88%
Tl 190.801†	1.7	2.2533 µg/L	5.81848	2.2533 ppb	5.81848	258.22%
U 409.014†	33.1	2.8604 µg/L	6.35638	2.8604 ppb	6.35638	222.22%
V 292.402†	26.4	0.2825 µg/L	0.33152	0.2825 ppb	0.33152	117.36%
Zn 213.857†	89.3	2.1289 µg/L	0.26546	2.1289 ppb	0.26546	12.47%

Sequence No.: 2

Sample ID: 1202024780|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 302

Date Collected: 2/11/2010 11:14:01

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024780|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56312.6	56312.6	101 %		11:14:40
1	Al 396.153Radial†	124807.4	123775.6	85527 µg/L	85527 ppb	11:14:34
1	Ca 317.933Radial†	110800.2	109682.2	95220 µg/L	95220 ppb	11:14:34
1	Fe 238.204 Radial†	24075.5	23858.0	186360 µg/L	186360 ppb	11:14:40
1	K 766.490 Radial†	60154.8	59429.9	40828 µg/L	40828 ppb	11:14:34
1	Mg 279.077 IEC†	4427.1	4379.6	37959 µg/L	37959 ppb	11:14:40
1	Na 589.592 Radial†	35182.9	34297.9	10661 µg/L	10661 ppb	11:14:34
1	Sr 421.552†	235340.5	233329.0	2310.9 µg/L	2310.9 ppb	11:14:34
1	Sc 361.383	1957648.6	1957648.6	100.32 %		11:15:15
1	Y 371.029	1372729.4	1372729.4	102.39 %		11:15:15
1	Ag 328.068†	39047.7	39455.7	321.69 µg/L	321.69 ppb	11:15:21
1	As 188.979†	586.7	584.0	1086.5 µg/L	1086.5 ppb	11:15:42
1	B 249.677†	37174.3	36707.3	1446.6 µg/L	1446.6 ppb	11:15:21
1	Ba 233.527†	81713.9	81473.6	2041.2 µg/L	2041.2 ppb	11:15:21
1	Be 313.107†	1286704.5	1285902.0	805.68 µg/L	805.68 ppb	11:15:15
1	Cd 226.502†	23248.8	23316.5	594.40 µg/L	594.40 ppb	11:15:21
1	Co 228.616†	20207.2	20149.0	941.05 µg/L	941.05 ppb	11:15:21
1	Cr 267.716†	115164.8	114843.6	2434.5 µg/L	2434.5 ppb	11:15:21
1	Cu 324.752†	282549.3	279085.2	1901.4 µg/L	1901.4 ppb	11:15:21
1	Mn 257.610†	1677363.4	1672192.4	5553.6 µg/L	5553.6 ppb	11:15:15
1	Mo 202.031†	5173.5	5162.7	534.85 µg/L	534.85 ppb	11:15:42
1	Ni 231.604†	26393.0	25998.5	1367.1 µg/L	1367.1 ppb	11:15:21
1	P 214.914†	4158.7	4121.4	8122.7 µg/L	8122.7 ppb	11:15:42
1	Pb 220.353†	3905.9	3795.9	964.91 µg/L	964.91 ppb	11:15:42
1	S 181.975 Axial†	979.8	958.1	4042.5 µg/L	4042.5 ppb	11:15:42
1	Sb 206.836†	1508.5	1478.1	1350.5 µg/L	1350.5 ppb	11:15:42
1	Se 196.026†	1977.9	1960.8	3257.7 µg/L	3257.7 ppb	11:15:42
1	SiO2†	304725.7	302488.0	62653 µg/L	62653 ppb	11:15:21
1	Si 251.611†	374611.6	373091.4	29576 µg/L	29576 ppb	11:15:15
1	Sn 189.927†	2571.3	2561.1	1111.9 µg/L	1111.9 ppb	11:15:42
1	Ti 334.940†	2466362.3	2458250.4	5715.6 µg/L	5715.6 ppb	11:15:15
1	Tl 190.801†	860.7	883.7	1278.1 µg/L	1278.1 ppb	11:15:42
1	U 409.014†	-1132.1	-1054.7	-123.27 µg/L	-123.27 ppb	11:15:21
1	V 292.402†	120655.8	120340.7	1269.7 µg/L	1269.7 ppb	11:15:21
1	Zn 213.857†	247210.3	245917.7	5866.4 µg/L	5866.4 ppb	11:15:21
2	Sc RADIAL	57129.1	57129.1	102 %		11:14:51
2	Al 396.153Radial†	125070.6	122264.0	84482 µg/L	84482 ppb	11:14:45
2	Ca 317.933Radial†	110958.4	108266.7	93991 µg/L	93991 ppb	11:14:45
2	Fe 238.204 Radial†	24333.6	23769.1	185670 µg/L	185670 ppb	11:14:51
2	K 766.490 Radial†	60224.0	58645.0	40288 µg/L	40288 ppb	11:14:45
2	Mg 279.077 IEC†	4511.2	4399.1	38130 µg/L	38130 ppb	11:14:51
2	Na 589.592 Radial†	35371.5	33983.5	10563 µg/L	10563 ppb	11:14:45
2	Sr 421.552†	235915.5	230555.8	2283.4 µg/L	2283.4 ppb	11:14:45
2	Sc 361.383	1958441.4	1958441.4	100.36 %		11:15:49
2	Y 371.029	1373307.0	1373307.0	102.44 %		11:15:49
2	Ag 328.068†	39029.2	39421.5	321.35 µg/L	321.35 ppb	11:15:55
2	As 188.979†	581.6	578.7	1076.7 µg/L	1076.7 ppb	11:16:15
2	B 249.677†	37032.9	36551.5	1440.4 µg/L	1440.4 ppb	11:15:55
2	Ba 233.527†	81436.7	81164.4	2033.4 µg/L	2033.4 ppb	11:15:55
2	Be 313.107†	1277333.4	1276045.7	799.50 µg/L	799.50 ppb	11:15:49
2	Cd 226.502†	23166.1	23224.7	592.06 µg/L	592.06 ppb	11:15:55
2	Co 228.616†	20079.2	20013.3	934.73 µg/L	934.73 ppb	11:15:55
2	Cr 267.716†	114854.0	114487.5	2426.9 µg/L	2426.9 ppb	11:15:55
2	Cu 324.752†	281743.0	278167.9	1895.2 µg/L	1895.2 ppb	11:15:55
2	Mn 257.610†	1667130.0	1661319.3	5517.5 µg/L	5517.5 ppb	11:15:49
2	Mo 202.031†	5179.1	5166.2	535.17 µg/L	535.17 ppb	11:16:15
2	Ni 231.604†	26306.2	25901.4	1362.0 µg/L	1362.0 ppb	11:15:55
2	P 214.914†	4164.1	4125.1	8131.2 µg/L	8131.2 ppb	11:16:15
2	Pb 220.353†	3885.5	3774.0	959.29 µg/L	959.29 ppb	11:16:15

2	S 181.975 Axial†	964.3	942.3	3975.8 µg/L	3975.8 ppb	11:16:15
2	Sb 206.836†	1506.7	1475.6	1348.4 µg/L	1348.4 ppb	11:16:15
2	Se 196.026†	1963.8	1945.9	3234.6 µg/L	3234.6 ppb	11:16:15
2	SiO2†	303363.2	301007.5	62346 µg/L	62346 ppb	11:15:55
2	Si 251.611†	372222.9	370560.2	29375 µg/L	29375 ppb	11:15:49
2	Sn 189.927†	2565.6	2554.3	1109.0 µg/L	1109.0 ppb	11:16:15
2	Ti 334.940†	2448019.0	2438978.6	5670.8 µg/L	5670.8 ppb	11:15:49
2	Tl 190.801†	861.6	884.2	1278.2 µg/L	1278.2 ppb	11:16:15
2	U 409.014†	-1135.6	-1057.8	-123.37 µg/L	-123.37 ppb	11:15:55
2	V 292.402†	120235.4	119873.1	1264.8 µg/L	1264.8 ppb	11:15:55
2	Zn 213.857†	246461.2	245071.5	5846.2 µg/L	5846.2 ppb	11:15:55
3	Sc RADIAL	56561.2	56561.2	101 %		11:15:02
3	Al 396.153Radial†	125557.7	123972.4	85663 µg/L	85663 ppb	11:14:57
3	Ca 317.933Radial†	111702.8	110090.5	95574 µg/L	95574 ppb	11:14:57
3	Fe 238.204 Radial†	24185.5	23861.7	186390 µg/L	186390 ppb	11:15:02
3	K 766.490 Radial†	60592.9	59600.2	40945 µg/L	40945 ppb	11:14:57
3	Mg 279.077 IEC†	4482.0	4414.5	38263 µg/L	38263 ppb	11:15:02
3	Na 589.592 Radial†	35464.3	34422.3	10700 µg/L	10700 ppb	11:14:57
3	Sr 421.552†	237384.4	234321.2	2320.7 µg/L	2320.7 ppb	11:14:57
3	Sc 361.383	1968606.2	1968606.2	100.89 %		11:16:23
3	Y 371.029	1380204.3	1380204.3	102.95 %		11:16:23
3	Ag 328.068†	39075.4	39266.5	320.24 µg/L	320.24 ppb	11:16:28
3	As 188.979†	584.2	578.3	1076.0 µg/L	1076.0 ppb	11:16:49
3	B 249.677†	37337.5	36662.8	1444.7 µg/L	1444.7 ppb	11:16:28
3	Ba 233.527†	82048.8	81352.1	2038.1 µg/L	2038.1 ppb	11:16:28
3	Be 313.107†	1298150.9	1290109.2	808.31 µg/L	808.31 ppb	11:16:23
3	Cd 226.502†	23289.3	23227.7	592.06 µg/L	592.06 ppb	11:16:28
3	Co 228.616†	20253.4	20082.7	937.89 µg/L	937.89 ppb	11:16:28
3	Cr 267.716†	115772.9	114807.5	2433.7 µg/L	2433.7 ppb	11:16:28
3	Cu 324.752†	284068.5	279023.5	1901.0 µg/L	1901.0 ppb	11:16:28
3	Mn 257.610†	1690827.7	1676232.2	5566.9 µg/L	5566.9 ppb	11:16:23
3	Mo 202.031†	5213.0	5173.1	535.91 µg/L	535.91 ppb	11:16:49
3	Ni 231.604†	26485.2	25943.5	1364.3 µg/L	1364.3 ppb	11:16:28
3	P 214.914†	4213.4	4152.6	8186.6 µg/L	8186.6 ppb	11:16:49
3	Pb 220.353†	3912.5	3780.8	961.05 µg/L	961.05 ppb	11:16:49
3	S 181.975 Axial†	981.2	954.0	4025.4 µg/L	4025.4 ppb	11:16:49
3	Sb 206.836†	1515.5	1476.6	1349.1 µg/L	1349.1 ppb	11:16:49
3	Se 196.026†	1998.8	1970.5	3271.3 µg/L	3271.3 ppb	11:16:49
3	SiO2†	305363.5	301429.5	62434 µg/L	62434 ppb	11:16:28
3	Si 251.611†	378130.8	374501.2	29688 µg/L	29688 ppb	11:16:23
3	Sn 189.927†	2586.7	2562.0	1112.4 µg/L	1112.4 ppb	11:16:49
3	Ti 334.940†	2487675.2	2465692.5	5732.9 µg/L	5732.9 ppb	11:16:23
3	Tl 190.801†	869.6	887.7	1283.7 µg/L	1283.7 ppb	11:16:49
3	U 409.014†	-1169.1	-1085.1	-125.93 µg/L	-125.93 ppb	11:16:28
3	V 292.402†	121316.8	120326.5	1269.6 µg/L	1269.6 ppb	11:16:28
3	Zn 213.857†	248235.6	245562.4	5857.9 µg/L	5857.9 ppb	11:16:28

Mean Data: 1202024780|945403|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1961565.4	100.52 %		0.313			0.31%
Sc RADIAL	56667.7	101 %		0.7			0.74%
Y 371.029	1375413.6	102.60 %		0.310			0.30%
Ag 328.068†	39381.2	321.10 µg/L		0.757	321.10 ppb	0.757	0.24%
Al 396.153Radial†	123337.3	85224 µg/L		645.9	85224 ppb	645.9	0.76%
As 188.979†	580.3	1079.7 µg/L		5.86	1079.7 ppb	5.86	0.54%
B 249.677†	36640.5	1443.9 µg/L		3.17	1443.9 ppb	3.17	0.22%
Ba 233.527†	81330.0	2037.6 µg/L		3.90	2037.6 ppb	3.90	0.19%
Be 313.107†	1284019.0	804.50 µg/L		4.523	804.50 ppb	4.523	0.56%
Ca 317.933Radial†	109346.5	94929 µg/L		830.9	94929 ppb	830.9	0.88%
Cd 226.502†	23256.3	592.84 µg/L		1.354	592.84 ppb	1.354	0.23%
Co 228.616†	20081.7	937.89 µg/L		3.160	937.89 ppb	3.160	0.34%
Cr 267.716†	114712.9	2431.7 µg/L		4.16	2431.7 ppb	4.16	0.17%
Cu 324.752†	278758.9	1899.2 µg/L		3.50	1899.2 ppb	3.50	0.18%
Fe 238.204 Radial†	23829.6	186140 µg/L		409.6	186140 ppb	409.6	0.22%
K 766.490 Radial†	59225.1	40687 µg/L		350.0	40687 ppb	350.0	0.86%
Mg 279.077 IEC†	4397.7	38117 µg/L		152.6	38117 ppb	152.6	0.40%
Mn 257.610†	1669914.6	5546.0 µg/L		25.56	5546.0 ppb	25.56	0.46%
Mo 202.031†	5167.3	535.31 µg/L		0.547	535.31 ppb	0.547	0.10%
Na 589.592 Radial†	34234.5	10641 µg/L		70.3	10641 ppb	70.3	0.66%

Ni 231.604†	25947.8	1364.5 µg/L	2.56	1364.5 ppb	2.56	0.19%
P 214.914†	4133.0	8146.8 µg/L	34.69	8146.8 ppb	34.69	0.43%
Pb 220.353†	3783.6	961.75 µg/L	2.875	961.75 ppb	2.875	0.30%
S 181.975 Axial†	951.5	4014.6 µg/L	34.64	4014.6 ppb	34.64	0.86%
Sb 206.836†	1476.7	1349.4 µg/L	1.07	1349.4 ppb	1.07	0.08%
Se 196.026†	1959.0	3254.6 µg/L	18.54	3254.6 ppb	18.54	0.57%
SiO2†	301641.7	62478 µg/L	158.0	62478 ppb	158.0	0.25%
Si 251.611†	372717.6	29546 µg/L	158.3	29546 ppb	158.3	0.54%
Sn 189.927†	2559.2	1111.1 µg/L	1.81	1111.1 ppb	1.81	0.16%
Sr 421.552†	232735.3	2305.0 µg/L	19.33	2305.0 ppb	19.33	0.84%
Ti 334.940†	2454307.2	5706.4 µg/L	32.07	5706.4 ppb	32.07	0.56%
Tl 190.801†	885.2	1280.0 µg/L	3.20	1280.0 ppb	3.20	0.25%
U 409.014†	-1065.8	-124.19 µg/L	1.509	-124.19 ppb	1.509	1.22%
V 292.402†	120180.1	1268.1 µg/L	2.79	1268.1 ppb	2.79	0.22%
Zn 213.857†	245517.2	5856.9 µg/L	10.14	5856.9 ppb	10.14	0.17%

Sequence No.: 3  
 Sample ID: 245389001|945403|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 303  
 Date Collected: 2/11/2010 11:16:58  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245389001|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57213.1	57213.1	102 %		11:17:31
1	Al 396.153Radial†	219771.0	214510.6	148240 µg/L	148240 ppb	11:17:31
1	Ca 317.933Radial†	33423.5	32434.6	28158 µg/L	28158 ppb	11:17:51
1	Fe 238.204 Radial†	14211.3	13855.0	108220 µg/L	108220 ppb	11:17:51
1	K 766.490 Radial†	19021.4	18345.5	12603 µg/L	12603 ppb	11:17:31
1	Mg 279.077 IEC†	2081.5	2021.3	17491 µg/L	17491 ppb	11:17:51
1	Na 589.592 Radial†	5567.7	4844.8	1505.9 µg/L	1505.9 ppb	11:17:51
1	Sr 421.552†	29338.4	28601.3	283.27 µg/L	283.27 ppb	11:17:31
1	Sc 361.383	1982468.5	1982468.5	101.60 %		11:18:56
1	Y 371.029	1400832.7	1400832.7	104.49 %		11:18:56
1	Ag 328.068†	-1936.6	-1372.2	-2.3459 µg/L	-2.3459 ppb	11:19:02
1	As 188.979†	7.6	6.7	17.192 µg/L	17.192 ppb	11:19:22
1	B 249.677†	1188.1	822.4	-21.796 µg/L	-21.796 ppb	11:19:02
1	Ba 233.527†	77666.7	76470.2	1914.1 µg/L	1914.1 ppb	11:19:02
1	Be 313.107†	19364.3	22408.3	12.207 µg/L	12.207 ppb	11:19:02
1	Cd 226.502†	258.4	397.1	-1.6987 µg/L	-1.6987 ppb	11:19:22
1	Co 228.616†	1002.4	993.7	36.730 µg/L	36.730 ppb	11:19:22
1	Cr 267.716†	5032.3	5003.6	106.16 µg/L	106.16 ppb	11:19:02
1	Cu 324.752†	8106.4	5426.5	51.509 µg/L	51.509 ppb	11:19:02
1	Mn 257.610†	512133.3	504329.9	1681.6 µg/L	1681.6 ppb	11:18:56
1	Mo 202.031†	-10.1	-4.0	3.7008 µg/L	3.7008 ppb	11:19:22
1	Ni 231.604†	1700.0	1364.0	73.008 µg/L	73.008 ppb	11:19:22
1	P 214.914†	506.7	474.8	922.10 µg/L	922.10 ppb	11:19:22
1	Pb 220.353†	504.2	398.9	105.90 µg/L	105.90 ppb	11:19:22
1	S 181.975 Axial†	115.0	94.6	399.27 µg/L	399.27 ppb	11:19:22
1	Sb 206.836†	37.4	11.2	6.7937 µg/L	6.7937 ppb	11:19:22
1	Se 196.026†	-35.2	-45.4	207.22 µg/L	207.22 ppb	11:19:22
1	SiO2†	307699.2	301612.0	62472 µg/L	62472 ppb	11:18:56
1	Si 251.611†	372265.0	366106.7	29022 µg/L	29022 ppb	11:18:56
1	Sn 189.927†	-25.0	-26.6	-21.309 µg/L	-21.309 ppb	11:19:22
1	Ti 334.940†	2144604.0	2110766.9	4908.0 µg/L	4908.0 ppb	11:18:56
1	Tl 190.801†	-72.5	-45.6	12.967 µg/L	12.967 ppb	11:19:22
1	U 409.014†	-1314.8	-1220.4	-122.71 µg/L	-122.71 ppb	11:18:56
1	V 292.402†	19861.8	19623.9	214.79 µg/L	214.79 ppb	11:19:02
1	Zn 213.857†	9052.0	8414.6	194.91 µg/L	194.91 ppb	11:19:02
2	Sc RADIAL	57524.0	57524.0	103 %		11:17:57
2	Al 396.153Radial†	220849.6	214398.4	148160 µg/L	148160 ppb	11:17:57
2	Ca 317.933Radial†	33352.2	32189.0	27945 µg/L	27945 ppb	11:18:17
2	Fe 238.204 Radial†	14163.1	13733.2	107270 µg/L	107270 ppb	11:18:17
2	K 766.490 Radial†	19056.5	18279.2	12558 µg/L	12558 ppb	11:17:57
2	Mg 279.077 IEC†	2080.5	2009.3	17388 µg/L	17388 ppb	11:18:17
2	Na 589.592 Radial†	5558.2	4806.2	1493.9 µg/L	1493.9 ppb	11:18:17
2	Sr 421.552†	29404.4	28510.6	282.37 µg/L	282.37 ppb	11:17:57
2	Sc 361.383	1966825.9	1966825.9	100.79 %		11:19:30
2	Y 371.029	1391803.3	1391803.3	103.82 %		11:19:30
2	Ag 328.068†	-1900.3	-1351.4	-2.2453 µg/L	-2.2453 ppb	11:19:36
2	As 188.979†	8.2	7.4	18.483 µg/L	18.483 ppb	11:19:56
2	B 249.677†	1181.2	824.8	-21.198 µg/L	-21.198 ppb	11:19:36
2	Ba 233.527†	77028.9	76445.4	1913.5 µg/L	1913.5 ppb	11:19:36
2	Be 313.107†	19513.5	22707.8	12.389 µg/L	12.389 ppb	11:19:36
2	Cd 226.502†	250.7	391.4	-1.7382 µg/L	-1.7382 ppb	11:19:56
2	Co 228.616†	1007.1	1006.2	37.287 µg/L	37.287 ppb	11:19:56
2	Cr 267.716†	5020.0	5030.8	106.74 µg/L	106.74 ppb	11:19:36
2	Cu 324.752†	8059.4	5443.3	51.490 µg/L	51.490 ppb	11:19:36
2	Mn 257.610†	509678.4	505903.5	1686.7 µg/L	1686.7 ppb	11:19:30
2	Mo 202.031†	-14.5	-8.5	3.2080 µg/L	3.2080 ppb	11:19:56
2	Ni 231.604†	1716.9	1394.0	74.573 µg/L	74.573 ppb	11:19:56
2	P 214.914†	514.3	486.3	946.39 µg/L	946.39 ppb	11:19:56
2	Pb 220.353†	497.3	396.0	105.20 µg/L	105.20 ppb	11:19:56



2	S 181.975 Axial†	112.8	93.4	393.91 µg/L	393.91 ppb	11:19:56
2	Sb 206.836†	41.7	15.7	11.025 µg/L	11.025 ppb	11:19:56
2	Se 196.026†	-33.6	-44.1	206.66 µg/L	206.66 ppb	11:19:56
2	SiO2†	305642.7	301980.5	62548 µg/L	62548 ppb	11:19:30
2	Si 251.611†	369851.0	366625.9	29063 µg/L	29063 ppb	11:19:30
2	Sn 189.927†	-22.8	-24.6	-20.359 µg/L	-20.359 ppb	11:19:56
2	Ti 334.940†	2134685.6	2117715.2	4924.2 µg/L	4924.2 ppb	11:19:30
2	Tl 190.801†	-76.7	-50.3	6.6660 µg/L	6.6660 ppb	11:19:56
2	U 409.014†	-1325.0	-1240.8	-124.34 µg/L	-124.34 ppb	11:19:30
2	V 292.402†	19723.2	19641.9	214.85 µg/L	214.85 ppb	11:19:36
2	Zn 213.857†	9002.6	8436.5	195.47 µg/L	195.47 ppb	11:19:36
3	Sc RADIAL	57392.5	57392.5	103 %		11:18:23
3	Al 396.153Radial†	221428.3	215452.7	148890 µg/L	148890 ppb	11:18:23
3	Ca 317.933Radial†	33589.3	32494.0	28209 µg/L	28209 ppb	11:18:43
3	Fe 238.204 Radial†	14266.5	13865.3	108300 µg/L	108300 ppb	11:18:43
3	K 766.490 Radial†	19074.6	18339.3	12599 µg/L	12599 ppb	11:18:23
3	Mg 279.077 IEC†	2096.4	2029.4	17562 µg/L	17562 ppb	11:18:43
3	Na 589.592 Radial†	5558.0	4818.4	1497.7 µg/L	1497.7 ppb	11:18:43
3	Sr 421.552†	29455.6	28625.9	283.51 µg/L	283.51 ppb	11:18:23
3	Sc 361.383	1977702.7	1977702.7	101.35 %		11:20:04
3	Y 371.029	1396451.2	1396451.2	104.16 %		11:20:04
3	Ag 328.068†	-1780.0	-1222.3	-1.2682 µg/L	-1.2682 ppb	11:20:09
3	As 188.979†	8.0	7.2	18.066 µg/L	18.066 ppb	11:20:30
3	B 249.677†	1132.5	770.3	-24.032 µg/L	-24.032 ppb	11:20:09
3	Ba 233.527†	73524.6	72567.6	1816.4 µg/L	1816.4 ppb	11:20:09
3	Be 313.107†	19066.8	22160.6	12.118 µg/L	12.118 ppb	11:20:09
3	Cd 226.502†	224.2	363.9	-2.5879 µg/L	-2.5879 ppb	11:20:30
3	Co 228.616†	913.5	908.4	33.057 µg/L	33.057 ppb	11:20:30
3	Cr 267.716†	4769.3	4756.1	100.91 µg/L	100.91 ppb	11:20:09
3	Cu 324.752†	7884.5	5226.8	50.178 µg/L	50.178 ppb	11:20:09
3	Mn 257.610†	496366.4	489987.9	1634.2 µg/L	1634.2 ppb	11:20:04
3	Mo 202.031†	-9.7	-3.7	3.7363 µg/L	3.7363 ppb	11:20:30
3	Ni 231.604†	1567.2	1237.0	66.342 µg/L	66.342 ppb	11:20:30
3	P 214.914†	477.5	447.3	865.99 µg/L	865.99 ppb	11:20:30
3	Pb 220.353†	470.1	366.4	97.643 µg/L	97.643 ppb	11:20:30
3	S 181.975 Axial†	106.0	86.1	363.23 µg/L	363.23 ppb	11:20:30
3	Sb 206.836†	36.1	10.0	5.7586 µg/L	5.7586 ppb	11:20:30
3	Se 196.026†	-30.8	-41.2	213.50 µg/L	213.50 ppb	11:20:30
3	SiO2†	299689.1	294438.5	60986 µg/L	60986 ppb	11:20:04
3	Si 251.611†	362602.5	357456.0	28336 µg/L	28336 ppb	11:20:04
3	Sn 189.927†	-29.6	-31.1	-23.330 µg/L	-23.330 ppb	11:20:30
3	Ti 334.940†	2063911.4	2036237.0	4734.7 µg/L	4734.7 ppb	11:20:04
3	Tl 190.801†	-67.9	-41.3	17.136 µg/L	17.136 ppb	11:20:30
3	U 409.014†	-1306.0	-1214.8	-122.24 µg/L	-122.24 ppb	11:20:04
3	V 292.402†	18712.4	18537.0	203.60 µg/L	203.60 ppb	11:20:09
3	Zn 213.857†	8669.5	8058.7	186.41 µg/L	186.41 ppb	11:20:09

Mean Data: 245389001|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1975665.7	101.25 %	0.411			0.41%
Sc RADIAL	57376.5	103 %	0.3			0.27%
Y 371.029	1396362.4	104.16 %	0.337			0.32%
Ag 328.068†	-1315.3	-1.9531 µg/L	0.59532	-1.9531 ppb	0.59532	30.48%
Al 396.153Radial†	214787.2	148430 µg/L	400.2	148430 ppb	400.2	0.27%
As 188.979†	7.1	17.913 µg/L	0.6590	17.913 ppb	0.6590	3.68%
B 249.677†	805.8	-22.342 µg/L	1.4939	-22.342 ppb	1.4939	6.69%
Ba 233.527†	75161.0	1881.3 µg/L	56.22	1881.3 ppb	56.22	2.99%
Be 313.107†	22425.6	12.238 µg/L	0.1384	12.238 ppb	0.1384	1.13%
Ca 317.933Radial†	32372.5	28104 µg/L	140.3	28104 ppb	140.3	0.50%
Cd 226.502†	384.1	-2.0083 µg/L	0.50239	-2.0083 ppb	0.50239	25.02%
Co 228.616†	969.4	35.692 µg/L	2.2983	35.692 ppb	2.2983	6.44%
Cr 267.716†	4930.1	104.60 µg/L	3.212	104.60 ppb	3.212	3.07%
Cu 324.752†	5365.5	51.059 µg/L	0.7630	51.059 ppb	0.7630	1.49%
Fe 238.204 Radial†	13817.8	107930 µg/L	573.8	107930 ppb	573.8	0.53%
K 766.490 Radial†	18321.3	12587 µg/L	25.1	12587 ppb	25.1	0.20%
Mg 279.077 IEC†	2020.0	17480 µg/L	87.7	17480 ppb	87.7	0.50%
Mn 257.610†	500073.8	1667.5 µg/L	28.96	1667.5 ppb	28.96	1.74%
Mo 202.031†	-5.4	3.5483 µg/L	0.29528	3.5483 ppb	0.29528	8.32%
Na 589.592 Radial†	4823.1	1499.2 µg/L	6.13	1499.2 ppb	6.13	0.41%

Ni 231.604†	1331.6	71.307 µg/L	4.3711	71.307 ppb	4.3711	6.13%
P 214.914†	469.5	911.49 µg/L	41.238	911.49 ppb	41.238	4.52%
Pb 220.353†	387.1	102.91 µg/L	4.577	102.91 ppb	4.577	4.45%
S 181.975 Axial†	91.4	385.47 µg/L	19.449	385.47 ppb	19.449	5.05%
Sb 206.836†	12.3	7.8591 µg/L	2.79017	7.8591 ppb	2.79017	35.50%
Se 196.026†	-43.6	209.12 µg/L	3.796	209.12 ppb	3.796	1.82%
SiO2†	299343.7	62002 µg/L	880.7	62002 ppb	880.7	1.42%
Si 251.611†	363396.2	28807 µg/L	408.3	28807 ppb	408.3	1.42%
Sn 189.927†	-27.4	-21.666 µg/L	1.5174	-21.666 ppb	1.5174	7.00%
Sr 421.552†	28579.2	283.05 µg/L	0.601	283.05 ppb	0.601	0.21%
Ti 334.940†	2088239.7	4855.6 µg/L	105.05	4855.6 ppb	105.05	2.16%
Tl 190.801†	-45.7	12.256 µg/L	5.2711	12.256 ppb	5.2711	43.01%
U 409.014†	-1225.3	-123.09 µg/L	1.103	-123.09 ppb	1.103	0.90%
V 292.402†	19267.6	211.08 µg/L	6.478	211.08 ppb	6.478	3.07%
Zn 213.857†	8303.3	192.26 µg/L	5.077	192.26 ppb	5.077	2.64%

Sequence No.: 4  
 Sample ID: 1202024781|945403|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 304  
 Date Collected: 2/11/2010 11:20:39  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202024781|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56972.9	56972.9	102 %		11:21:12
1	Al 396.153Radial†	219988.2	215628.0	149010 µg/L	149010 ppb	11:21:12
1	Ca 317.933Radial†	32580.3	31745.7	27560 µg/L	27560 ppb	11:21:32
1	Fe 238.204 Radial†	13838.8	13548.4	105820 µg/L	105820 ppb	11:21:32
1	K 766.490 Radial†	18925.2	18329.5	12592 µg/L	12592 ppb	11:21:12
1	Mg 279.077 IEC†	2107.6	2055.4	17791 µg/L	17791 ppb	11:21:32
1	Na 589.592 Radial†	5197.4	4504.7	1400.2 µg/L	1400.2 ppb	11:21:32
1	Sr 421.552†	29587.6	28966.3	286.88 µg/L	286.88 ppb	11:21:12
1	Sc 361.383	1984154.2	1984154.2	101.68 %		11:22:37
1	Y 371.029	1398027.9	1398027.9	104.28 %		11:22:37
1	Ag 328.068†	-1886.0	-1320.9	-2.1755 µg/L	-2.1755 ppb	11:22:43
1	As 188.979†	9.8	8.9	21.214 µg/L	21.214 ppb	11:23:03
1	B 249.677†	1086.0	721.0	-24.817 µg/L	-24.817 ppb	11:22:43
1	Ba 233.527†	77132.6	75879.9	1899.3 µg/L	1899.3 ppb	11:22:43
1	Be 313.107†	19390.5	22417.8	12.318 µg/L	12.318 ppb	11:22:43
1	Cd 226.502†	233.1	372.0	-2.0923 µg/L	-2.0923 ppb	11:23:03
1	Co 228.616†	933.1	924.7	34.041 µg/L	34.041 ppb	11:23:03
1	Cr 267.716†	4540.4	4515.6	95.812 µg/L	95.812 ppb	11:22:43
1	Cu 324.752†	7872.8	5190.0	49.587 µg/L	49.587 ppb	11:22:43
1	Mn 257.610†	556916.8	547944.3	1825.5 µg/L	1825.5 ppb	11:22:37
1	Mo 202.031†	-24.9	-18.6	2.1209 µg/L	2.1209 ppb	11:23:03
1	Ni 231.604†	1641.4	1304.9	69.876 µg/L	69.876 ppb	11:23:03
1	P 214.914†	425.7	394.8	760.51 µg/L	760.51 ppb	11:23:03
1	Pb 220.353†	510.8	405.0	107.59 µg/L	107.59 ppb	11:23:03
1	S 181.975 Axial†	101.6	81.4	343.29 µg/L	343.29 ppb	11:23:03
1	Sb 206.836†	31.4	5.3	1.4270 µg/L	1.4270 ppb	11:23:03
1	Se 196.026†	-39.8	-49.9	194.20 µg/L	194.20 ppb	11:23:03
1	SiO2†	335324.2	328522.8	68045 µg/L	68045 ppb	11:22:37
1	Si 251.611†	405546.0	398525.9	31592 µg/L	31592 ppb	11:22:37
1	Sn 189.927†	-48.3	-49.4	-31.092 µg/L	-31.092 ppb	11:23:03
1	Ti 334.940†	2026241.6	1992568.9	4633.1 µg/L	4633.1 ppb	11:22:37
1	Tl 190.801†	-67.1	-40.3	18.090 µg/L	18.090 ppb	11:23:03
1	U 409.014†	-1337.8	-1241.9	-124.21 µg/L	-124.21 ppb	11:22:43
1	V 292.402†	18810.5	18573.4	203.66 µg/L	203.66 ppb	11:22:43
1	Zn 213.857†	8684.4	8045.5	186.18 µg/L	186.18 ppb	11:22:43
2	Sc RADIAL	57460.1	57460.1	103 %		11:21:38
2	Al 396.153Radial†	220721.2	214512.1	148240 µg/L	148240 ppb	11:21:38
2	Ca 317.933Radial†	32591.1	31485.5	27334 µg/L	27334 ppb	11:21:58
2	Fe 238.204 Radial†	13836.9	13431.5	104910 µg/L	104910 ppb	11:21:58
2	K 766.490 Radial†	18949.0	18195.3	12500 µg/L	12500 ppb	11:21:38
2	Mg 279.077 IEC†	2110.6	2040.9	17665 µg/L	17665 ppb	11:21:58
2	Na 589.592 Radial†	5178.2	4442.9	1381.0 µg/L	1381.0 ppb	11:21:58
2	Sr 421.552†	29717.9	28847.1	285.70 µg/L	285.70 ppb	11:21:38
2	Sc 361.383	1975665.8	1975665.8	101.25 %		11:23:10
2	Y 371.029	1391151.1	1391151.1	103.77 %		11:23:10
2	Ag 328.068†	-1913.2	-1355.7	-2.4845 µg/L	-2.4845 ppb	11:23:16
2	As 188.979†	2.0	1.2	6.9328 µg/L	6.9328 ppb	11:23:36
2	B 249.677†	1107.5	746.8	-23.258 µg/L	-23.258 ppb	11:23:16
2	Ba 233.527†	77562.8	76630.7	1918.1 µg/L	1918.1 ppb	11:23:16
2	Be 313.107†	19493.3	22601.2	12.412 µg/L	12.412 ppb	11:23:16
2	Cd 226.502†	227.9	367.8	-2.0987 µg/L	-2.0987 ppb	11:23:36
2	Co 228.616†	925.7	921.3	33.766 µg/L	33.766 ppb	11:23:36
2	Cr 267.716†	4547.0	4541.3	96.359 µg/L	96.359 ppb	11:23:16
2	Cu 324.752†	7955.8	5305.2	50.234 µg/L	50.234 ppb	11:23:16
2	Mn 257.610†	561948.0	555266.8	1849.6 µg/L	1849.6 ppb	11:23:10
2	Mo 202.031†	-14.1	-8.1	3.1615 µg/L	3.1615 ppb	11:23:36
2	Ni 231.604†	1640.9	1311.4	70.205 µg/L	70.205 ppb	11:23:36
2	P 214.914†	414.0	385.0	741.14 µg/L	741.14 ppb	11:23:36
2	Pb 220.353†	511.5	407.8	108.31 µg/L	108.31 ppb	11:23:36

2	S 181.975 Axial†	101.6	81.8	345.17 µg/L	345.17 ppb	11:23:36
2	Sb 206.836†	33.8	7.7	3.7354 µg/L	3.7354 ppb	11:23:36
2	Se 196.026†	-36.2	-46.5	196.71 µg/L	196.71 ppb	11:23:36
2	SiO2†	337409.2	331999.0	68765 µg/L	68765 ppb	11:23:10
2	Si 251.611†	408169.4	402830.6	31933 µg/L	31933 ppb	11:23:10
2	Sn 189.927†	-35.2	-36.7	-25.399 µg/L	-25.399 ppb	11:23:36
2	Ti 334.940†	2041777.8	2016475.4	4688.7 µg/L	4688.7 ppb	11:23:10
2	Tl 190.801†	-75.3	-48.6	7.3612 µg/L	7.3612 ppb	11:23:36
2	U 409.014†	-1359.0	-1268.5	-126.37 µg/L	-126.37 ppb	11:23:16
2	V 292.402†	18942.8	18783.6	205.72 µg/L	205.72 ppb	11:23:16
2	Zn 213.857†	8795.1	8191.5	189.73 µg/L	189.73 ppb	11:23:16
3	Sc RADIAL	57377.7	57377.7	103 %		11:22:04
3	Al 396.153Radial†	221277.8	215361.8	148830 µg/L	148830 ppb	11:22:04
3	Ca 317.933Radial†	32413.4	31358.1	27223 µg/L	27223 ppb	11:22:24
3	Fe 238.204 Radial†	13755.3	13371.4	104440 µg/L	104440 ppb	11:22:24
3	K 766.490 Radial†	18970.4	18242.6	12532 µg/L	12532 ppb	11:22:04
3	Mg 279.077 IEC†	2104.2	2037.5	17637 µg/L	17637 ppb	11:22:24
3	Na 589.592 Radial†	5179.1	4451.0	1383.5 µg/L	1383.5 ppb	11:22:24
3	Sr 421.552†	29764.1	28933.4	286.56 µg/L	286.56 ppb	11:22:04
3	Sc 361.383	1976262.6	1976262.6	101.28 %		11:23:44
3	Y 371.029	1389380.8	1389380.8	103.64 %		11:23:44
3	Ag 328.068†	-1780.5	-1224.1	-1.5787 µg/L	-1.5787 ppb	11:23:49
3	As 188.979†	6.6	5.7	15.234 µg/L	15.234 ppb	11:24:10
3	B 249.677†	1090.5	729.6	-23.740 µg/L	-23.740 ppb	11:23:49
3	Ba 233.527†	74172.4	73260.0	1833.7 µg/L	1833.7 ppb	11:23:49
3	Be 313.107†	18257.8	21375.5	11.719 µg/L	11.719 ppb	11:23:49
3	Cd 226.502†	188.7	329.1	-3.0724 µg/L	-3.0724 ppb	11:24:10
3	Co 228.616†	855.1	851.3	30.879 µg/L	30.879 ppb	11:24:10
3	Cr 267.716†	4326.5	4322.2	91.709 µg/L	91.709 ppb	11:23:49
3	Cu 324.752†	7645.0	4996.0	48.091 µg/L	48.091 ppb	11:23:49
3	Mn 257.610†	539694.2	533126.1	1776.3 µg/L	1776.3 ppb	11:23:44
3	Mo 202.031†	-17.6	-11.5	2.7922 µg/L	2.7922 ppb	11:24:10
3	Ni 231.604†	1510.4	1182.0	63.408 µg/L	63.408 ppb	11:24:10
3	P 214.914†	392.1	363.2	697.36 µg/L	697.36 ppb	11:24:10
3	Pb 220.353†	484.1	380.6	101.41 µg/L	101.41 ppb	11:24:10
3	S 181.975 Axial†	91.5	71.8	303.06 µg/L	303.06 ppb	11:24:10
3	Sb 206.836†	42.3	16.1	11.608 µg/L	11.608 ppb	11:24:10
3	Se 196.026†	-28.9	-39.3	205.83 µg/L	205.83 ppb	11:24:10
3	SiO2†	327546.9	322160.4	66728 µg/L	66728 ppb	11:23:44
3	Si 251.611†	395986.9	390680.1	30970 µg/L	30970 ppb	11:23:44
3	Sn 189.927†	-30.8	-32.3	-23.429 µg/L	-23.429 ppb	11:24:10
3	Ti 334.940†	1954325.7	1929517.6	4486.5 µg/L	4486.5 ppb	11:23:44
3	Tl 190.801†	-64.8	-38.2	19.238 µg/L	19.238 ppb	11:24:10
3	U 409.014†	-1258.5	-1168.8	-117.65 µg/L	-117.65 ppb	11:23:49
3	V 292.402†	17894.1	17742.5	194.95 µg/L	194.95 ppb	11:23:49
3	Zn 213.857†	8353.5	7752.9	179.28 µg/L	179.28 ppb	11:23:49

Mean Data: 1202024781|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1978694.2	101.40 %	0.243			0.24%
Sc RADIAL	57270.2	103 %	0.5			0.46%
Y 371.029	1392853.3	103.90 %	0.341			0.33%
Ag 328.068†	-1300.2	-2.0796 µg/L	0.46045	-2.0796 ppb	0.46045	22.14%
Al 396.153Radial†	215167.3	148700 µg/L	402.8	148700 ppb	402.8	0.27%
As 188.979†	5.3	14.460 µg/L	7.1721	14.460 ppb	7.1721	49.60%
B 249.677†	732.5	-23.938 µg/L	0.7981	-23.938 ppb	0.7981	3.33%
Ba 233.527†	75256.9	1883.7 µg/L	44.30	1883.7 ppb	44.30	2.35%
Be 313.107†	22131.5	12.150 µg/L	0.3759	12.150 ppb	0.3759	3.09%
Ca 317.933Radial†	31529.8	27372 µg/L	171.5	27372 ppb	171.5	0.63%
Cd 226.502†	356.3	-2.4211 µg/L	0.56401	-2.4211 ppb	0.56401	23.30%
Co 228.616†	899.1	32.896 µg/L	1.7515	32.896 ppb	1.7515	5.32%
Cr 267.716†	4459.7	94.627 µg/L	2.5417	94.627 ppb	2.5417	2.69%
Cu 324.752†	5163.7	49.304 µg/L	1.0992	49.304 ppb	1.0992	2.23%
Fe 238.204 Radial†	13450.4	105060 µg/L	703.1	105060 ppb	703.1	0.67%
K 766.490 Radial†	18255.8	12542 µg/L	46.7	12542 ppb	46.7	0.37%
Mg 279.077 IEC†	2044.6	17698 µg/L	82.1	17698 ppb	82.1	0.46%
Mn 257.610†	545445.7	1817.2 µg/L	37.35	1817.2 ppb	37.35	2.06%
Mo 202.031†	-12.7	2.6915 µg/L	0.52760	2.6915 ppb	0.52760	19.60%
Na 589.592 Radial†	4466.2	1388.3 µg/L	10.45	1388.3 ppb	10.45	0.75%

Ni 231.604†	1266.1	67.829 µg/L	3.8328	67.829 ppb	3.8328	5.65%
P 214.914†	381.0	733.00 µg/L	32.351	733.00 ppb	32.351	4.41%
Pb 220.353†	397.8	105.77 µg/L	3.795	105.77 ppb	3.795	3.59%
S 181.975 Axial†	78.3	330.50 µg/L	23.788	330.50 ppb	23.788	7.20%
Sb 206.836†	9.7	5.5902 µg/L	5.33812	5.5902 ppb	5.33812	95.49%
Se 196.026†	-45.2	198.91 µg/L	6.121	198.91 ppb	6.121	3.08%
SiO2†	327560.7	67846 µg/L	1033.4	67846 ppb	1033.4	1.52%
Si 251.611†	397345.5	31499 µg/L	488.4	31499 ppb	488.4	1.55%
Sn 189.927†	-39.5	-26.640 µg/L	3.9793	-26.640 ppb	3.9793	14.94%
Sr 421.552†	28915.6	286.38 µg/L	0.610	286.38 ppb	0.610	0.21%
Ti 334.940†	1979520.6	4602.8 µg/L	104.48	4602.8 ppb	104.48	2.27%
Tl 190.801†	-42.3	14.896 µg/L	6.5509	14.896 ppb	6.5509	43.98%
U 409.014†	-1226.4	-122.74 µg/L	4.542	-122.74 ppb	4.542	3.70%
V 292.402†	18366.5	201.44 µg/L	5.718	201.44 ppb	5.718	2.84%
Zn 213.857†	7996.6	185.06 µg/L	5.310	185.06 ppb	5.310	2.87%

Sequence No.: 5

Sample ID: 1202024782|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 305

Date Collected: 2/11/2010 11:24:19

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024782|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57092.1	57092.1	102 %		11:24:53
1	Al 396.153Radial†	287365.7	281076.6	194230 µg/L	194230 ppb	11:24:53
1	Ca 317.933Radial†	32613.4	31711.4	27530 µg/L	27530 ppb	11:25:13
1	Fe 238.204 Radial†	15291.6	14940.9	116710 µg/L	116710 ppb	11:25:13
1	K 766.490 Radial†	26017.0	25227.0	17331 µg/L	17331 ppb	11:24:53
1	Mg 279.077 IEC†	2652.5	2584.0	22391 µg/L	22391 ppb	11:25:13
1	Na 589.592 Radial†	20265.8	19231.8	5978.0 µg/L	5978.0 ppb	11:24:53
1	Sr 421.552†	73471.6	71826.6	711.37 µg/L	711.37 ppb	11:24:53
1	Sc 361.383	1992908.7	1992908.7	102.13 %		11:26:18
1	Y 371.029	1400392.1	1400392.1	104.46 %		11:26:18
1	Ag 328.068†	62242.2	61477.6	482.01 µg/L	482.01 ppb	11:26:24
1	As 188.979†	272.6	266.2	497.45 µg/L	497.45 ppb	11:26:45
1	B 249.677†	12013.3	11415.6	418.94 µg/L	418.94 ppb	11:26:24
1	Ba 233.527†	87494.4	85692.4	2145.7 µg/L	2145.7 ppb	11:26:24
1	Be 313.107†	790005.0	776872.5	485.98 µg/L	485.98 ppb	11:26:18
1	Cd 226.502†	18132.6	17897.1	458.70 µg/L	458.70 ppb	11:26:24
1	Co 228.616†	10570.9	10357.4	478.63 µg/L	478.63 ppb	11:26:45
1	Cr 267.716†	27726.4	27198.3	576.79 µg/L	576.79 ppb	11:26:24
1	Cu 324.752†	84351.7	80039.4	554.10 µg/L	554.10 ppb	11:26:24
1	Mn 257.610†	699437.2	685085.6	2280.3 µg/L	2280.3 ppb	11:26:18
1	Mo 202.031†	4405.3	4319.3	445.98 µg/L	445.98 ppb	11:26:45
1	Ni 231.604†	10473.7	9945.9	523.45 µg/L	523.45 ppb	11:26:45
1	P 214.914†	740.1	700.7	1344.9 µg/L	1344.9 ppb	11:26:45
1	Pb 220.353†	2364.1	2217.4	572.16 µg/L	572.16 ppb	11:26:45
1	S 181.975 Axial†	1258.7	1213.9	5121.9 µg/L	5121.9 ppb	11:26:45
1	Sb 206.836†	383.8	350.2	324.69 µg/L	324.69 ppb	11:26:45
1	Se 196.026†	278.2	261.6	666.07 µg/L	666.07 ppb	11:26:45
1	SiO2†	291254.8	283924.0	58808 µg/L	58808 ppb	11:26:24
1	Si 251.611†	354812.5	347098.8	27515 µg/L	27515 ppb	11:26:18
1	Sn 189.927†	1113.7	1088.5	469.40 µg/L	469.40 ppb	11:26:45
1	Ti 334.940†	2397615.8	2347442.1	5458.1 µg/L	5458.1 ppb	11:26:18
1	Tl 190.801†	277.8	297.8	484.98 µg/L	484.98 ppb	11:26:45
1	U 409.014†	4472.6	4453.1	368.69 µg/L	368.69 ppb	11:26:24
1	V 292.402†	66699.7	65382.4	691.61 µg/L	691.61 ppb	11:26:24
1	Zn 213.857†	29670.5	28556.3	673.55 µg/L	673.55 ppb	11:26:24
2	Sc RADIAL	57421.9	57421.9	103 %		11:25:19
2	Al 396.153Radial†	289885.8	281912.8	194810 µg/L	194810 ppb	11:25:19
2	Ca 317.933Radial†	32412.9	31333.2	27202 µg/L	27202 ppb	11:25:39
2	Fe 238.204 Radial†	15150.6	14717.9	114970 µg/L	114970 ppb	11:25:39
2	K 766.490 Radial†	26233.0	25290.9	17375 µg/L	17375 ppb	11:25:19
2	Mg 279.077 IEC†	2637.4	2554.4	22135 µg/L	22135 ppb	11:25:39
2	Na 589.592 Radial†	20479.8	19326.0	6007.2 µg/L	6007.2 ppb	11:25:19
2	Sr 421.552†	74135.5	72059.4	713.68 µg/L	713.68 ppb	11:25:19
2	Sc 361.383	1995380.5	1995380.5	102.26 %		11:26:52
2	Y 371.029	1402142.2	1402142.2	104.59 %		11:26:52
2	Ag 328.068†	61193.8	60376.9	473.40 µg/L	473.40 ppb	11:26:58
2	As 188.979†	270.0	263.2	491.99 µg/L	491.99 ppb	11:27:18
2	B 249.677†	11786.8	11179.5	409.93 µg/L	409.93 ppb	11:26:58
2	Ba 233.527†	86029.9	84154.1	2107.2 µg/L	2107.2 ppb	11:26:58
2	Be 313.107†	785542.6	771550.3	482.65 µg/L	482.65 ppb	11:26:52
2	Cd 226.502†	17741.3	17492.4	448.23 µg/L	448.23 ppb	11:26:58
2	Co 228.616†	10462.4	10238.4	473.09 µg/L	473.09 ppb	11:27:18
2	Cr 267.716†	27287.0	26735.0	566.96 µg/L	566.96 ppb	11:26:58
2	Cu 324.752†	82998.1	78613.4	544.28 µg/L	544.28 ppb	11:26:58
2	Mn 257.610†	695805.7	680685.9	2265.6 µg/L	2265.6 ppb	11:26:52
2	Mo 202.031†	4374.5	4283.8	442.28 µg/L	442.28 ppb	11:27:18
2	Ni 231.604†	10407.3	9868.3	519.35 µg/L	519.35 ppb	11:27:18
2	P 214.914†	722.2	682.4	1310.0 µg/L	1310.0 ppb	11:27:18
2	Pb 220.353†	2333.2	2184.3	563.83 µg/L	563.83 ppb	11:27:18

2	S 181.975 Axial†	1254.1	1207.9	5096.5 µg/L	5096.5 ppb	11:27:18
2	Sb 206.836†	397.1	362.7	336.46 µg/L	336.46 ppb	11:27:18
2	Se 196.026†	294.9	277.6	684.54 µg/L	684.54 ppb	11:27:18
2	SiO2†	285817.4	278253.4	57633 µg/L	57633 ppb	11:26:58
2	Si 251.611†	352692.8	344595.5	27317 µg/L	27317 ppb	11:26:52
2	Sn 189.927†	1110.9	1084.4	467.74 µg/L	467.74 ppb	11:27:18
2	Ti 334.940†	2383634.1	2330860.9	5419.5 µg/L	5419.5 ppb	11:26:52
2	Tl 190.801†	272.6	292.3	477.06 µg/L	477.06 ppb	11:27:18
2	U 409.014†	4273.3	4252.7	351.55 µg/L	351.55 ppb	11:26:58
2	V 292.402†	65596.3	64222.4	679.41 µg/L	679.41 ppb	11:26:58
2	Zn 213.857†	29201.3	28061.5	661.84 µg/L	661.84 ppb	11:26:58
3	Sc RADIAL	58045.7	58045.7	104 %		11:25:45
3	Al 396.153Radial†	288215.8	277276.9	191610 µg/L	191610 ppb	11:25:45
3	Ca 317.933Radial†	32140.3	30732.3	26680 µg/L	26680 ppb	11:26:05
3	Fe 238.204 Radial†	15072.2	14484.2	113140 µg/L	113140 ppb	11:26:05
3	K 766.490 Radial†	26232.7	25016.4	17186 µg/L	17186 ppb	11:25:45
3	Mg 279.077 IEC†	2641.7	2531.0	21933 µg/L	21933 ppb	11:26:05
3	Na 589.592 Radial†	20382.9	19018.8	5911.8 µg/L	5911.8 ppb	11:25:45
3	Sr 421.552†	73790.0	70952.4	702.72 µg/L	702.72 ppb	11:25:45
3	Sc 361.383	1979878.6	1979878.6	101.46 %		11:27:26
3	Y 371.029	1388373.1	1388373.1	103.56 %		11:27:26
3	Ag 328.068†	59946.6	59616.2	467.29 µg/L	467.29 ppb	11:27:31
3	As 188.979†	242.7	238.5	446.08 µg/L	446.08 ppb	11:27:52
3	B 249.677†	11467.9	10955.5	401.44 µg/L	401.44 ppb	11:27:31
3	Ba 233.527†	82498.8	81332.6	2036.5 µg/L	2036.5 ppb	11:27:31
3	Be 313.107†	752773.0	745267.9	466.21 µg/L	466.21 ppb	11:27:26
3	Cd 226.502†	17125.4	17021.2	435.98 µg/L	435.98 ppb	11:27:31
3	Co 228.616†	9475.2	9345.6	431.24 µg/L	431.24 ppb	11:27:52
3	Cr 267.716†	25780.9	25459.6	539.92 µg/L	539.92 ppb	11:27:31
3	Cu 324.752†	79321.7	75625.5	523.94 µg/L	523.94 ppb	11:27:31
3	Mn 257.610†	669468.2	660055.8	2197.1 µg/L	2197.1 ppb	11:27:26
3	Mo 202.031†	3946.8	3895.8	402.55 µg/L	402.55 ppb	11:27:52
3	Ni 231.604†	9427.9	8982.6	472.85 µg/L	472.85 ppb	11:27:52
3	P 214.914†	654.9	621.6	1187.5 µg/L	1187.5 ppb	11:27:52
3	Pb 220.353†	2169.8	2041.2	527.12 µg/L	527.12 ppb	11:27:52
3	S 181.975 Axial†	1171.4	1135.9	4792.9 µg/L	4792.9 ppb	11:27:52
3	Sb 206.836†	365.9	335.0	310.37 µg/L	310.37 ppb	11:27:52
3	Se 196.026†	274.7	260.0	654.66 µg/L	654.66 ppb	11:27:52
3	SiO2†	274882.1	269664.2	55854 µg/L	55854 ppb	11:27:31
3	Si 251.611†	341086.3	335856.9	26624 µg/L	26624 ppb	11:27:26
3	Sn 189.927†	991.3	975.1	419.77 µg/L	419.77 ppb	11:27:52
3	Ti 334.940†	2282514.9	2249450.8	5230.2 µg/L	5230.2 ppb	11:27:26
3	Tl 190.801†	251.6	273.7	449.86 µg/L	449.86 ppb	11:27:52
3	U 409.014†	4123.2	4137.5	341.84 µg/L	341.84 ppb	11:27:31
3	V 292.402†	62339.5	61514.8	650.95 µg/L	650.95 ppb	11:27:31
3	Zn 213.857†	27992.1	27093.3	639.00 µg/L	639.00 ppb	11:27:31

Mean Data: 1202024782|945403|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1989389.3	101.95 %	0.427			0.42%
Sc RADIAL	57519.9	103 %	0.9			0.84%
Y 371.029	1396969.2	104.20 %	0.559			0.54%
Ag 328.068†	60490.3	474.23 µg/L	7.397	474.23 ppb	7.397	1.56%
Al 396.153Radial†	280088.8	193550 µg/L	1707.0	193550 ppb	1707.0	0.88%
As 188.979†	256.0	478.50 µg/L	28.215	478.50 ppb	28.215	5.90%
B 249.677†	11183.5	410.10 µg/L	8.751	410.10 ppb	8.751	2.13%
Ba 233.527†	83726.3	2096.5 µg/L	55.37	2096.5 ppb	55.37	2.64%
Be 313.107†	764563.6	478.28 µg/L	10.584	478.28 ppb	10.584	2.21%
Ca 317.933Radial†	31259.0	27137 µg/L	428.7	27137 ppb	428.7	1.58%
Cd 226.502†	17470.2	447.64 µg/L	11.369	447.64 ppb	11.369	2.54%
Co 228.616†	9980.5	460.99 µg/L	25.911	460.99 ppb	25.911	5.62%
Cr 267.716†	26464.3	561.23 µg/L	19.094	561.23 ppb	19.094	3.40%
Cu 324.752†	78092.7	540.77 µg/L	15.381	540.77 ppb	15.381	2.84%
Fe 238.204 Radial†	14714.3	114940 µg/L	1784.4	114940 ppb	1784.4	1.55%
K 766.490 Radial†	25178.1	17297 µg/L	98.7	17297 ppb	98.7	0.57%
Mg 279.077 IEC†	2556.5	22153 µg/L	229.9	22153 ppb	229.9	1.04%
Mn 257.610†	675275.8	2247.7 µg/L	44.41	2247.7 ppb	44.41	1.98%
Mo 202.031†	4166.3	430.27 µg/L	24.078	430.27 ppb	24.078	5.60%
Na 589.592 Radial†	19192.2	5965.7 µg/L	48.92	5965.7 ppb	48.92	0.82%

Ni 231.604†	9598.9	505.22 µg/L	28.105	505.22 ppb	28.105	5.56%
P 214.914†	668.2	1280.8 µg/L	82.66	1280.8 ppb	82.66	6.45%
Pb 220.353†	2147.6	554.37 µg/L	23.967	554.37 ppb	23.967	4.32%
S 181.975 Axial†	1185.9	5003.8 µg/L	183.01	5003.8 ppb	183.01	3.66%
Sb 206.836†	349.3	323.84 µg/L	13.066	323.84 ppb	13.066	4.03%
Se 196.026†	266.4	668.42 µg/L	15.078	668.42 ppb	15.078	2.26%
SiO2†	277280.6	57432 µg/L	1487.1	57432 ppb	1487.1	2.59%
Si 251.611†	342517.0	27152 µg/L	467.9	27152 ppb	467.9	1.72%
Sn 189.927†	1049.3	452.30 µg/L	28.189	452.30 ppb	28.189	6.23%
Sr 421.552†	71612.8	709.26 µg/L	5.781	709.26 ppb	5.781	0.82%
Ti 334.940†	2309251.3	5369.2 µg/L	121.97	5369.2 ppb	121.97	2.27%
Tl 190.801†	287.9	470.63 µg/L	18.419	470.63 ppb	18.419	3.91%
U 409.014†	4281.1	354.03 µg/L	13.596	354.03 ppb	13.596	3.84%
V 292.402†	63706.5	673.99 µg/L	20.865	673.99 ppb	20.865	3.10%
Zn 213.857†	27903.7	658.13 µg/L	17.572	658.13 ppb	17.572	2.67%



Sequence No.: 6

Sample ID: 1202024784|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 306

Date Collected: 2/11/2010 11:28:01

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024784|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58445.3	58445.3	105 %		11:28:34
1	Al 396.153Radial†	312599.8	298677.7	206400 µg/L	206400 ppb	11:28:34
1	Ca 317.933Radial†	36113.8	34317.2	29792 µg/L	29792 ppb	11:28:55
1	Fe 238.204 Radial†	16234.1	15495.1	121040 µg/L	121040 ppb	11:28:55
1	K 766.490 Radial†	31755.7	30120.5	20692 µg/L	20692 ppb	11:28:34
1	Mg 279.077 IEC†	3277.0	3120.7	27061 µg/L	27061 ppb	11:28:55
1	Na 589.592 Radial†	20646.2	19136.3	5948.3 µg/L	5948.3 ppb	11:28:34
1	Sr 421.552†	76422.8	72982.4	722.82 µg/L	722.82 ppb	11:28:34
1	Sc 361.383	1982907.9	1982907.9	101.62 %		11:30:00
1	Y 371.029	1391373.2	1391373.2	103.79 %		11:30:00
1	Ag 328.068†	60870.7	60435.4	474.29 µg/L	474.29 ppb	11:30:06
1	As 188.979†	273.1	268.0	501.00 µg/L	501.00 ppb	11:30:26
1	B 249.677†	11758.0	11223.7	408.62 µg/L	408.62 ppb	11:30:06
1	Ba 233.527†	94908.2	93420.2	2339.1 µg/L	2339.1 ppb	11:30:06
1	Be 313.107†	780038.3	770965.7	481.79 µg/L	481.79 ppb	11:30:00
1	Cd 226.502†	17685.9	17547.1	449.00 µg/L	449.00 ppb	11:30:06
1	Co 228.616†	10690.7	10527.5	484.05 µg/L	484.05 ppb	11:30:26
1	Cr 267.716†	27384.1	26998.4	572.55 µg/L	572.55 ppb	11:30:06
1	Cu 324.752†	82554.0	78686.9	545.62 µg/L	545.62 ppb	11:30:06
1	Mn 257.610†	719427.4	708211.6	2357.2 µg/L	2357.2 ppb	11:30:00
1	Mo 202.031†	4357.2	4293.7	443.52 µg/L	443.52 ppb	11:30:26
1	Ni 231.604†	10575.5	10097.8	531.47 µg/L	531.47 ppb	11:30:26
1	P 214.914†	733.3	697.7	1341.9 µg/L	1341.9 ppb	11:30:26
1	Pb 220.353†	2347.6	2212.9	571.53 µg/L	571.53 ppb	11:30:26
1	S 181.975 Axial†	1263.8	1225.1	5169.2 µg/L	5169.2 ppb	11:30:26
1	Sb 206.836†	401.8	369.8	342.80 µg/L	342.80 ppb	11:30:26
1	Se 196.026†	285.3	270.0	685.08 µg/L	685.08 ppb	11:30:26
1	SiO2†	253964.9	248666.2	51505 µg/L	51505 ppb	11:30:06
1	Si 251.611†	308765.6	303537.3	24062 µg/L	24062 ppb	11:30:06
1	Sn 189.927†	1457.7	1432.6	620.99 µg/L	620.99 ppb	11:30:26
1	Ti 334.940†	2935364.4	2888468.2	6716.0 µg/L	6716.0 ppb	11:30:00
1	Tl 190.801†	261.8	283.4	478.29 µg/L	478.29 ppb	11:30:26
1	U 409.014†	4216.1	4222.7	347.95 µg/L	347.95 ppb	11:30:06
1	V 292.402†	66127.6	65148.7	689.67 µg/L	689.67 ppb	11:30:06
1	Zn 213.857†	29399.3	28435.9	670.18 µg/L	670.18 ppb	11:30:06
2	Sc RADIAL	58240.4	58240.4	104 %		11:29:00
2	Al 396.153Radial†	311136.7	298325.8	206160 µg/L	206160 ppb	11:29:00
2	Ca 317.933Radial†	35891.2	34225.1	29712 µg/L	29712 ppb	11:29:21
2	Fe 238.204 Radial†	16164.1	15482.6	120940 µg/L	120940 ppb	11:29:21
2	K 766.490 Radial†	31561.2	30040.8	20638 µg/L	20638 ppb	11:29:00
2	Mg 279.077 IEC†	3265.2	3120.4	27059 µg/L	27059 ppb	11:29:21
2	Na 589.592 Radial†	20641.7	19201.4	5968.5 µg/L	5968.5 ppb	11:29:00
2	Sr 421.552†	75984.4	72818.9	721.20 µg/L	721.20 ppb	11:29:00
2	Sc 361.383	1977008.7	1977008.7	101.32 %		11:30:33
2	Y 371.029	1388314.0	1388314.0	103.56 %		11:30:33
2	Ag 328.068†	61265.9	61004.2	478.67 µg/L	478.67 ppb	11:30:39
2	As 188.979†	270.4	266.1	497.55 µg/L	497.55 ppb	11:30:59
2	B 249.677†	11839.6	11338.7	413.51 µg/L	413.51 ppb	11:30:39
2	Ba 233.527†	95617.4	94398.9	2363.6 µg/L	2363.6 ppb	11:30:39
2	Be 313.107†	787569.3	780689.4	487.87 µg/L	487.87 ppb	11:30:33
2	Cd 226.502†	17839.1	17750.1	454.36 µg/L	454.36 ppb	11:30:39
2	Co 228.616†	10613.7	10482.9	481.77 µg/L	481.77 ppb	11:30:59
2	Cr 267.716†	27588.4	27280.4	578.53 µg/L	578.53 ppb	11:30:39
2	Cu 324.752†	83065.5	79434.1	550.62 µg/L	550.62 ppb	11:30:39
2	Mn 257.610†	726463.1	717268.3	2387.2 µg/L	2387.2 ppb	11:30:33
2	Mo 202.031†	4344.9	4294.4	443.60 µg/L	443.60 ppb	11:30:59
2	Ni 231.604†	10494.3	10048.7	528.90 µg/L	528.90 ppb	11:30:59
2	P 214.914†	736.2	702.8	1351.7 µg/L	1351.7 ppb	11:30:59
2	Pb 220.353†	2337.6	2209.8	570.74 µg/L	570.74 ppb	11:30:59

2	S 181.975 Axial†	1262.6	1227.7	5180.0 µg/L	5180.0 ppb	11:30:59
2	Sb 206.836†	401.5	370.7	343.53 µg/L	343.53 ppb	11:30:59
2	Se 196.026†	270.5	256.2	665.15 µg/L	665.15 ppb	11:30:59
2	SiO2†	255229.9	250660.6	51918 µg/L	51918 ppb	11:30:39
2	Si 251.611†	310098.4	305759.3	24238 µg/L	24238 ppb	11:30:39
2	Sn 189.927†	1438.2	1417.6	614.38 µg/L	614.38 ppb	11:30:59
2	Ti 334.940†	2960501.7	2921898.4	6793.7 µg/L	6793.7 ppb	11:30:33
2	Tl 190.801†	274.9	297.1	497.45 µg/L	497.45 ppb	11:30:59
2	U 409.014†	4231.4	4250.2	350.35 µg/L	350.35 ppb	11:30:39
2	V 292.402†	66439.5	65650.8	694.84 µg/L	694.84 ppb	11:30:39
2	Zn 213.857†	29630.6	28750.5	677.72 µg/L	677.72 ppb	11:30:39
3	Sc RADIAL	58601.4	58601.4	105 %		11:29:27
3	Al 396.153Radial†	315134.5	300297.6	207520 µg/L	207520 ppb	11:29:27
3	Ca 317.933Radial†	36014.6	34130.8	29630 µg/L	29630 ppb	11:29:47
3	Fe 238.204 Radial†	16231.9	15451.8	120700 µg/L	120700 ppb	11:29:47
3	K 766.490 Radial†	31955.1	30229.8	20767 µg/L	20767 ppb	11:29:27
3	Mg 279.077 IEC†	3276.9	3112.2	26987 µg/L	26987 ppb	11:29:47
3	Na 589.592 Radial†	20829.6	19258.5	5986.3 µg/L	5986.3 ppb	11:29:27
3	Sr 421.552†	76987.2	73325.7	726.22 µg/L	726.22 ppb	11:29:27
3	Sc 361.383	1976025.6	1976025.6	101.27 %		11:31:07
3	Y 371.029	1384692.5	1384692.5	103.29 %		11:31:07
3	Ag 328.068†	59605.4	59394.5	466.10 µg/L	466.10 ppb	11:31:12
3	As 188.979†	242.6	238.8	446.96 µg/L	446.96 ppb	11:31:33
3	B 249.677†	11432.1	10942.2	396.95 µg/L	396.95 ppb	11:31:12
3	Ba 233.527†	91086.9	89972.0	2252.8 µg/L	2252.8 ppb	11:31:12
3	Be 313.107†	757185.5	751072.0	469.36 µg/L	469.36 ppb	11:31:07
3	Cd 226.502†	17086.0	17015.2	434.98 µg/L	434.98 ppb	11:31:12
3	Co 228.616†	9611.8	9498.8	435.77 µg/L	435.77 ppb	11:31:33
3	Cr 267.716†	25900.1	25626.8	543.47 µg/L	543.47 ppb	11:31:12
3	Cu 324.752†	79087.0	75546.2	524.46 µg/L	524.46 ppb	11:31:12
3	Mn 257.610†	700834.2	692316.5	2304.6 µg/L	2304.6 ppb	11:31:07
3	Mo 202.031†	3933.4	3890.2	402.27 µg/L	402.27 ppb	11:31:33
3	Ni 231.604†	9531.5	9103.1	479.27 µg/L	479.27 ppb	11:31:33
3	P 214.914†	677.8	645.4	1236.8 µg/L	1236.8 ppb	11:31:33
3	Pb 220.353†	2179.3	2054.7	531.16 µg/L	531.16 ppb	11:31:33
3	S 181.975 Axial†	1179.8	1146.5	4837.5 µg/L	4837.5 ppb	11:31:33
3	Sb 206.836†	363.9	333.7	308.82 µg/L	308.82 ppb	11:31:33
3	Se 196.026†	260.3	246.2	650.24 µg/L	650.24 ppb	11:31:33
3	SiO2†	244220.6	239914.1	49692 µg/L	49692 ppb	11:31:12
3	Si 251.611†	296458.9	292442.6	23183 µg/L	23183 ppb	11:31:12
3	Sn 189.927†	1298.9	1280.7	554.16 µg/L	554.16 ppb	11:31:33
3	Ti 334.940†	2843555.6	2807867.4	6528.5 µg/L	6528.5 ppb	11:31:07
3	Tl 190.801†	246.2	268.9	457.12 µg/L	457.12 ppb	11:31:33
3	U 409.014†	4010.3	4033.9	331.62 µg/L	331.62 ppb	11:31:12
3	V 292.402†	62756.6	62046.5	657.31 µg/L	657.31 ppb	11:31:12
3	Zn 213.857†	28224.7	27376.8	645.11 µg/L	645.11 ppb	11:31:12

Mean Data: 1202024784|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1978647.4	101.40 %	0.191			0.19%
Sc RADIAL	58429.1	105 %	0.3			0.31%
Y 371.029	1388126.6	103.54 %	0.249			0.24%
Ag 328.068†	60278.0	473.02 µg/L	6.382	473.02 ppb	6.382	1.35%
Al 396.153Radial†	299100.4	206690 µg/L	727.3	206690 ppb	727.3	0.35%
As 188.979†	257.6	481.84 µg/L	30.253	481.84 ppb	30.253	6.28%
B 249.677†	11168.2	406.36 µg/L	8.511	406.36 ppb	8.511	2.09%
Ba 233.527†	92597.0	2318.5 µg/L	58.23	2318.5 ppb	58.23	2.51%
Be 313.107†	767575.7	479.68 µg/L	9.433	479.68 ppb	9.433	1.97%
Ca 317.933Radial†	34224.4	29712 µg/L	80.9	29712 ppb	80.9	0.27%
Cd 226.502†	17437.5	446.11 µg/L	10.007	446.11 ppb	10.007	2.24%
Co 228.616†	10169.7	467.20 µg/L	27.241	467.20 ppb	27.241	5.83%
Cr 267.716†	26635.2	564.85 µg/L	18.759	564.85 ppb	18.759	3.32%
Cu 324.752†	77889.1	540.23 µg/L	13.886	540.23 ppb	13.886	2.57%
Fe 238.204 Radial†	15476.5	120890 µg/L	174.9	120890 ppb	174.9	0.14%
K 766.490 Radial†	30130.4	20699 µg/L	65.2	20699 ppb	65.2	0.31%
Mg 279.077 IEC†	3117.7	27036 µg/L	42.1	27036 ppb	42.1	0.16%
Mn 257.610†	705932.1	2349.7 µg/L	41.79	2349.7 ppb	41.79	1.78%
Mo 202.031†	4159.4	429.80 µg/L	23.842	429.80 ppb	23.842	5.55%
Na 589.592 Radial†	19198.7	5967.7 µg/L	19.01	5967.7 ppb	19.01	0.32%

Ni 231.604†	9749.9	513.21 µg/L	29.423	513.21 ppb	29.423	5.73%
P 214.914†	682.0	1310.2 µg/L	63.68	1310.2 ppb	63.68	4.86%
Pb 220.353†	2159.1	557.81 µg/L	23.078	557.81 ppb	23.078	4.14%
S 181.975 Axial†	1199.7	5062.2 µg/L	194.69	5062.2 ppb	194.69	3.85%
Sb 206.836†	358.1	331.72 µg/L	19.833	331.72 ppb	19.833	5.98%
Se 196.026†	257.5	666.82 µg/L	17.479	666.82 ppb	17.479	2.62%
SiO2†	246413.6	51039 µg/L	1184.0	51039 ppb	1184.0	2.32%
Si 251.611†	300579.7	23828 µg/L	565.5	23828 ppb	565.5	2.37%
Sn 189.927†	1377.0	596.51 µg/L	36.828	596.51 ppb	36.828	6.17%
Sr 421.552†	73042.3	723.42 µg/L	2.562	723.42 ppb	2.562	0.35%
Ti 334.940†	2872744.7	6679.4 µg/L	136.33	6679.4 ppb	136.33	2.04%
Tl 190.801†	283.1	477.62 µg/L	20.177	477.62 ppb	20.177	4.22%
U 409.014†	4168.9	343.31 µg/L	10.194	343.31 ppb	10.194	2.97%
V 292.402†	64282.0	680.61 µg/L	20.342	680.61 ppb	20.342	2.99%
Zn 213.857†	28187.8	664.34 µg/L	17.071	664.34 ppb	17.071	2.57%

Sequence No.: 7

Sample ID: 1202024783|945403|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 307

Date Collected: 2/11/2010 11:31:42

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024783|945403|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56474.5	56474.5	101 %		11:32:15
1	Al 396.153Radial†	45112.0	44622.0	30837 µg/L	30837 ppb	11:32:15
1	Ca 317.933Radial†	7030.4	6765.1	5873.0 µg/L	5873.0 ppb	11:32:15
1	Fe 238.204 Radial†	2941.5	2893.4	22599 µg/L	22599 ppb	11:32:35
1	K 766.490 Radial†	4008.3	3744.1	2572.2 µg/L	2572.2 ppb	11:32:15
1	Mg 279.077 IEC†	441.5	426.3	3689.0 µg/L	3689.0 ppb	11:32:35
1	Na 589.592 Radial†	1537.9	931.4	289.51 µg/L	289.51 ppb	11:32:15
1	Sr 421.552†	6039.3	5938.9	58.819 µg/L	58.819 ppb	11:32:15
1	Sc 361.383	1990419.8	1990419.8	102.00 %		11:33:38
1	Y 371.029	1372187.3	1372187.3	102.35 %		11:33:38
1	Ag 328.068†	-888.0	-336.7	-0.8767 µg/L	-0.8767 ppb	11:33:44
1	As 188.979†	1.2	0.4	1.6736 µg/L	1.6736 ppb	11:34:04
1	B 249.677†	486.6	130.0	-6.3017 µg/L	-6.3017 ppb	11:33:44
1	Ba 233.527†	16115.1	15821.9	396.03 µg/L	396.03 ppb	11:33:44
1	Be 313.107†	1419.8	4739.9	2.5906 µg/L	2.5906 ppb	11:33:44
1	Cd 226.502†	-49.5	94.2	-0.0586 µg/L	-0.0586 ppb	11:34:04
1	Co 228.616†	211.1	214.0	7.9956 µg/L	7.9956 ppb	11:34:04
1	Cr 267.716†	1027.7	1057.9	22.444 µg/L	22.444 ppb	11:33:44
1	Cu 324.752†	3547.2	925.0	9.3573 µg/L	9.3573 ppb	11:33:44
1	Mn 257.610†	105647.7	103812.7	346.19 µg/L	346.19 ppb	11:33:44
1	Mo 202.031†	-11.1	-5.0	0.3454 µg/L	0.3454 ppb	11:34:04
1	Ni 231.604†	603.2	282.0	15.096 µg/L	15.096 ppb	11:34:04
1	P 214.914†	129.4	103.0	200.58 µg/L	200.58 ppb	11:34:04
1	Pb 220.353†	179.7	78.8	20.966 µg/L	20.966 ppb	11:34:04
1	S 181.975 Axial†	33.7	14.5	61.220 µg/L	61.220 ppb	11:34:04
1	Sb 206.836†	21.3	-4.8	-5.2049 µg/L	-5.2049 ppb	11:34:04
1	Se 196.026†	8.6	-2.4	53.428 µg/L	53.428 ppb	11:34:04
1	SiO2†	63593.1	61089.5	12653 µg/L	12653 ppb	11:33:44
1	Si 251.611†	76091.9	74285.8	5888.8 µg/L	5888.8 ppb	11:33:44
1	Sn 189.927†	-3.1	-4.9	-4.1779 µg/L	-4.1779 ppb	11:34:04
1	Ti 334.940†	445949.8	437036.6	1016.2 µg/L	1016.2 ppb	11:33:38
1	Tl 190.801†	-28.1	-1.8	12.974 µg/L	12.974 ppb	11:34:04
1	U 409.014†	-355.5	-274.7	-27.350 µg/L	-27.350 ppb	11:33:44
1	V 292.402†	4048.1	4042.7	44.279 µg/L	44.279 ppb	11:33:44
1	Zn 213.857†	2226.2	1687.2	39.028 µg/L	39.028 ppb	11:34:04
2	Sc RADIAL	57061.6	57061.6	102 %		11:32:41
2	Al 396.153Radial†	45396.9	44441.9	30713 µg/L	30713 ppb	11:32:41
2	Ca 317.933Radial†	7106.1	6767.6	5875.3 µg/L	5875.3 ppb	11:32:41
2	Fe 238.204 Radial†	2938.6	2860.7	22343 µg/L	22343 ppb	11:33:01
2	K 766.490 Radial†	4035.7	3730.2	2562.6 µg/L	2562.6 ppb	11:32:41
2	Mg 279.077 IEC†	443.4	423.6	3666.2 µg/L	3666.2 ppb	11:33:01
2	Na 589.592 Radial†	1555.0	932.5	289.85 µg/L	289.85 ppb	11:32:41
2	Sr 421.552†	6056.5	5894.2	58.376 µg/L	58.376 ppb	11:32:41
2	Sc 361.383	2003187.6	2003187.6	102.66 %		11:34:11
2	Y 371.029	1379822.8	1379822.8	102.92 %		11:34:11
2	Ag 328.068†	-824.9	-269.6	-0.3836 µg/L	-0.3836 ppb	11:34:16
2	As 188.979†	1.9	1.1	2.9542 µg/L	2.9542 ppb	11:34:37
2	B 249.677†	486.9	127.3	-6.2847 µg/L	-6.2847 ppb	11:34:16
2	Ba 233.527†	16229.4	15832.5	396.29 µg/L	396.29 ppb	11:34:16
2	Be 313.107†	1531.8	4840.2	2.6516 µg/L	2.6516 ppb	11:34:16
2	Cd 226.502†	-71.0	73.5	-0.5740 µg/L	-0.5740 ppb	11:34:37
2	Co 228.616†	209.8	211.4	7.8617 µg/L	7.8617 ppb	11:34:37
2	Cr 267.716†	1019.2	1043.1	22.131 µg/L	22.131 ppb	11:34:16
2	Cu 324.752†	3569.8	924.8	9.3206 µg/L	9.3206 ppb	11:34:16
2	Mn 257.610†	106543.9	104025.6	346.86 µg/L	346.86 ppb	11:34:16
2	Mo 202.031†	-11.2	-5.0	0.3366 µg/L	0.3366 ppb	11:34:37
2	Ni 231.604†	591.5	266.9	14.299 µg/L	14.299 ppb	11:34:37
2	P 214.914†	127.5	100.3	195.14 µg/L	195.14 ppb	11:34:37
2	Pb 220.353†	183.4	81.2	21.585 µg/L	21.585 ppb	11:34:37

2	S 181.975 Axial†	34.3	14.9	62.774 µg/L	62.774 ppb	11:34:37
2	Sb 206.836†	28.3	2.0	1.0712 µg/L	1.0712 ppb	11:34:37
2	Se 196.026†	4.0	-6.9	46.303 µg/L	46.303 ppb	11:34:37
2	SiO2†	63972.9	61062.2	12648 µg/L	12648 ppb	11:34:16
2	Si 251.611†	76603.0	74308.2	5890.6 µg/L	5890.6 ppb	11:34:16
2	Sn 189.927†	-3.2	-5.0	-4.1968 µg/L	-4.1968 ppb	11:34:37
2	Ti 334.940†	451045.9	439214.1	1021.3 µg/L	1021.3 ppb	11:34:11
2	Tl 190.801†	-35.2	-8.6	3.8669 µg/L	3.8669 ppb	11:34:37
2	U 409.014†	-300.7	-219.2	-22.492 µg/L	-22.492 ppb	11:34:16
2	V 292.402†	4017.0	3987.1	43.681 µg/L	43.681 ppb	11:34:16
2	Zn 213.857†	2215.9	1663.3	38.472 µg/L	38.472 ppb	11:34:37
3	Sc RADIAL	56935.4	56935.4	102 %		11:33:07
3	Al 396.153Radial†	45269.5	44415.5	30694 µg/L	30694 ppb	11:33:07
3	Ca 317.933Radial†	7084.9	6762.3	5870.7 µg/L	5870.7 ppb	11:33:07
3	Fe 238.204 Radial†	2945.3	2873.6	22444 µg/L	22444 ppb	11:33:27
3	K 766.490 Radial†	4054.8	3757.6	2581.5 µg/L	2581.5 ppb	11:33:07
3	Mg 279.077 IEC†	439.4	420.6	3640.1 µg/L	3640.1 ppb	11:33:27
3	Na 589.592 Radial†	1567.4	947.9	294.66 µg/L	294.66 ppb	11:33:07
3	Sr 421.552†	6069.5	5920.1	58.633 µg/L	58.633 ppb	11:33:07
3	Sc 361.383	1991751.9	1991751.9	102.07 %		11:34:43
3	Y 371.029	1373659.1	1373659.1	102.46 %		11:34:43
3	Ag 328.068†	-793.3	-243.2	-0.1990 µg/L	-0.1990 ppb	11:34:49
3	As 188.979†	-0.8	-1.5	-1.7998 µg/L	-1.7998 ppb	11:35:10
3	B 249.677†	480.7	123.8	-6.4834 µg/L	-6.4834 ppb	11:34:49
3	Ba 233.527†	15169.8	14885.2	372.58 µg/L	372.58 ppb	11:34:49
3	Be 313.107†	1404.7	4724.3	2.6030 µg/L	2.6030 ppb	11:34:49
3	Cd 226.502†	-63.3	80.7	-0.3983 µg/L	-0.3983 ppb	11:35:10
3	Co 228.616†	174.4	177.8	6.4080 µg/L	6.4080 ppb	11:35:10
3	Cr 267.716†	917.5	949.2	20.139 µg/L	20.139 ppb	11:34:49
3	Cu 324.752†	3540.0	915.5	9.2723 µg/L	9.2723 ppb	11:34:49
3	Mn 257.610†	98458.0	96699.6	322.64 µg/L	322.64 ppb	11:34:49
3	Mo 202.031†	-4.8	1.2	0.9753 µg/L	0.9753 ppb	11:35:10
3	Ni 231.604†	548.3	227.9	12.253 µg/L	12.253 ppb	11:35:10
3	P 214.914†	115.0	88.8	171.48 µg/L	171.48 ppb	11:35:10
3	Pb 220.353†	169.8	68.9	18.447 µg/L	18.447 ppb	11:35:10
3	S 181.975 Axial†	34.9	15.7	66.061 µg/L	66.061 ppb	11:35:10
3	Sb 206.836†	27.9	1.7	0.8941 µg/L	0.8941 ppb	11:35:10
3	Se 196.026†	-0.4	-11.2	40.477 µg/L	40.477 ppb	11:35:10
3	SiO2†	60203.8	57727.3	11957 µg/L	11957 ppb	11:34:49
3	Si 251.611†	71881.7	70111.1	5557.9 µg/L	5557.9 ppb	11:34:49
3	Sn 189.927†	-5.1	-6.9	-5.0331 µg/L	-5.0331 ppb	11:35:10
3	Ti 334.940†	420607.9	411916.5	957.79 µg/L	957.79 ppb	11:34:43
3	Tl 190.801†	-33.2	-6.8	5.6476 µg/L	5.6476 ppb	11:35:10
3	U 409.014†	-367.2	-286.0	-28.308 µg/L	-28.308 ppb	11:34:49
3	V 292.402†	3645.7	3645.8	40.176 µg/L	40.176 ppb	11:34:49
3	Zn 213.857†	1933.8	1399.3	32.158 µg/L	32.158 ppb	11:35:10

Mean Data: 1202024783|945403|5

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1995119.8	102.24 %	0.360			0.35%
Sc RADIAL	56823.8	102 %	0.6			0.54%
Y 371.029	1375223.1	102.58 %	0.302			0.29%
Ag 328.068†	-283.2	-0.4864 µg/L	0.35038	-0.4864 ppb	0.35038	72.03%
Al 396.153Radial†	44493.2	30748 µg/L	77.7	30748 ppb	77.7	0.25%
As 188.979†	-0.0	0.9427 µg/L	2.45983	0.9427 ppb	2.45983	260.94%
B 249.677†	127.0	-6.3566 µg/L	0.11016	-6.3566 ppb	0.11016	1.73%
Ba 233.527†	15513.2	388.30 µg/L	13.615	388.30 ppb	13.615	3.51%
Be 313.107†	4768.1	2.6150 µg/L	0.03228	2.6150 ppb	0.03228	1.23%
Ca 317.933Radial†	6765.0	5873.0 µg/L	2.32	5873.0 ppb	2.32	0.04%
Cd 226.502†	82.8	-0.3436 µg/L	0.26204	-0.3436 ppb	0.26204	76.25%
Co 228.616†	201.1	7.4218 µg/L	0.88053	7.4218 ppb	0.88053	11.86%
Cr 267.716†	1016.7	21.571 µg/L	1.2500	21.571 ppb	1.2500	5.79%
Cu 324.752†	921.8	9.3167 µg/L	0.04266	9.3167 ppb	0.04266	0.46%
Fe 238.204 Radial†	2875.9	22462 µg/L	128.8	22462 ppb	128.8	0.57%
K 766.490 Radial†	3744.0	2572.1 µg/L	9.43	2572.1 ppb	9.43	0.37%
Mg 279.077 IEC†	423.5	3665.1 µg/L	24.45	3665.1 ppb	24.45	0.67%
Mn 257.610†	101512.6	338.56 µg/L	13.790	338.56 ppb	13.790	4.07%
Mo 202.031†	-2.9	0.5524 µg/L	0.36623	0.5524 ppb	0.36623	66.30%
Na 589.592 Radial†	937.3	291.34 µg/L	2.880	291.34 ppb	2.880	0.99%

Ni 231.604†	258.9	13.883 µg/L	1.4664	13.883 ppb	1.4664	10.56%
P 214.914†	97.4	189.07 µg/L	15.471	189.07 ppb	15.471	8.18%
Pb 220.353†	76.3	20.333 µg/L	1.6621	20.333 ppb	1.6621	8.17%
S 181.975 Axial†	15.0	63.352 µg/L	2.4720	63.352 ppb	2.4720	3.90%
Sb 206.836†	-0.3	-1.0798 µg/L	3.57346	-1.0798 ppb	3.57346	330.93%
Se 196.026†	-6.8	46.736 µg/L	6.4865	46.736 ppb	6.4865	13.88%
SiO2†	59959.7	12419 µg/L	400.4	12419 ppb	400.4	3.22%
Si 251.611†	72901.7	5779.1 µg/L	191.58	5779.1 ppb	191.58	3.32%
Sn 189.927†	-5.6	-4.4693 µg/L	0.48837	-4.4693 ppb	0.48837	10.93%
Sr 421.552†	5917.7	58.609 µg/L	0.2222	58.609 ppb	0.2222	0.38%
Ti 334.940†	429389.1	998.42 µg/L	35.281	998.42 ppb	35.281	3.53%
Tl 190.801†	-5.7	7.4962 µg/L	4.82686	7.4962 ppb	4.82686	64.39%
U 409.014†	-260.0	-26.050 µg/L	3.1186	-26.050 ppb	3.1186	11.97%
V 292.402†	3891.8	42.712 µg/L	2.2168	42.712 ppb	2.2168	5.19%
Zn 213.857†	1583.3	36.552 µg/L	3.8162	36.552 ppb	3.8162	10.44%

Sequence No.: 8

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 11:35:20

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	56478.3	56478.3	101 %		11:35:58
1	Al 396.153Radial†	6958.1	6897.0	4755.8 µg/L	4755.8 ppb	11:35:58
1	Ca 317.933Radial†	5574.6	5325.3	4623.1 µg/L	4623.1 ppb	11:36:18
1	Fe 238.204 Radial†	628.9	606.7	4749.3 µg/L	4749.3 ppb	11:36:18
1	K 766.490 Radial†	7333.5	7031.5	4830.5 µg/L	4830.5 ppb	11:35:58
1	Mg 279.077 IEC†	572.4	555.6	4843.5 µg/L	4843.5 ppb	11:36:18
1	Na 589.592 Radial†	31608.0	30661.0	9530.6 µg/L	9530.6 ppb	11:35:58
1	Sr 421.552†	48856.1	48270.6	478.07 µg/L	478.07 ppb	11:35:58
1	Sc 361.383	1981452.6	1981452.6	101.54 %		11:37:22
1	Y 371.029	1360395.9	1360395.9	101.47 %		11:37:22
1	Ag 328.068†	64152.4	63711.2	490.83 µg/L	490.83 ppb	11:37:27
1	As 188.979†	267.9	263.1	486.27 µg/L	486.27 ppb	11:37:48
1	B 249.677†	11909.6	11381.5	475.79 µg/L	475.79 ppb	11:37:27
1	Ba 233.527†	19652.4	19376.9	485.80 µg/L	485.80 ppb	11:37:27
1	Be 313.107†	785043.0	776458.1	487.61 µg/L	487.61 ppb	11:37:22
1	Cd 226.502†	18522.7	18383.9	484.14 µg/L	484.14 ppb	11:37:27
1	Co 228.616†	10510.9	10358.2	489.10 µg/L	489.10 ppb	11:37:27
1	Cr 267.716†	23554.5	23246.8	492.94 µg/L	492.94 ppb	11:37:27
1	Cu 324.752†	76214.0	72502.9	487.89 µg/L	487.89 ppb	11:37:27
1	Mn 257.610†	151799.2	149731.4	495.63 µg/L	495.63 ppb	11:37:22
1	Mo 202.031†	5063.0	4991.9	510.49 µg/L	510.49 ppb	11:37:48
1	Ni 231.604†	9784.6	9326.5	489.45 µg/L	489.45 ppb	11:37:27
1	P 214.914†	1253.1	1210.2	2429.1 µg/L	2429.1 ppb	11:37:48
1	Pb 220.353†	2060.6	1931.9	493.29 µg/L	493.29 ppb	11:37:48
1	S 181.975 Axial†	256.1	233.7	986.09 µg/L	986.09 ppb	11:37:48
1	Sb 206.836†	569.7	535.5	501.48 µg/L	501.48 ppb	11:37:48
1	Se 196.026†	369.6	353.2	513.27 µg/L	513.27 ppb	11:37:48
1	SiO2†	26815.1	25152.8	5209.8 µg/L	5209.8 ppb	11:37:27
1	Si 251.611†	31622.9	30830.4	2444.0 µg/L	2444.0 ppb	11:37:27
1	Sn 189.927†	1171.5	1151.7	507.21 µg/L	507.21 ppb	11:37:48
1	Ti 334.940†	215573.5	212140.6	493.06 µg/L	493.06 ppb	11:37:22
1	Tl 190.801†	348.4	368.9	500.64 µg/L	500.64 ppb	11:37:48
1	U 409.014†	5730.1	5716.8	495.36 µg/L	495.36 ppb	11:37:27
1	V 292.402†	48207.4	47548.7	495.39 µg/L	495.39 ppb	11:37:27
1	Zn 213.857†	21198.3	20380.9	484.41 µg/L	484.41 ppb	11:37:27
2	Sc RADIAL	56686.1	56686.1	102 %		11:36:24
2	Al 396.153Radial†	6938.1	6852.1	4724.8 µg/L	4724.8 ppb	11:36:24
2	Ca 317.933Radial†	5527.6	5258.8	4565.4 µg/L	4565.4 ppb	11:36:44
2	Fe 238.204 Radial†	627.2	602.8	4718.5 µg/L	4718.5 ppb	11:36:44
2	K 766.490 Radial†	7273.7	6946.0	4771.8 µg/L	4771.8 ppb	11:36:24
2	Mg 279.077 IEC†	570.1	551.4	4806.3 µg/L	4806.3 ppb	11:36:44
2	Na 589.592 Radial†	31549.4	30488.8	9477.1 µg/L	9477.1 ppb	11:36:24
2	Sr 421.552†	48783.7	48022.3	475.62 µg/L	475.62 ppb	11:36:24
2	Sc 361.383	1979464.5	1979464.5	101.44 %		11:37:55
2	Y 371.029	1357993.7	1357993.7	101.30 %		11:37:55
2	Ag 328.068†	64138.3	63760.7	491.21 µg/L	491.21 ppb	11:38:00
2	As 188.979†	270.2	265.6	491.01 µg/L	491.01 ppb	11:38:21
2	B 249.677†	11982.4	11465.1	479.32 µg/L	479.32 ppb	11:38:00
2	Ba 233.527†	19668.1	19411.8	486.68 µg/L	486.68 ppb	11:38:00
2	Be 313.107†	784300.8	776503.0	487.64 µg/L	487.64 ppb	11:37:55
2	Cd 226.502†	18611.0	18489.3	486.92 µg/L	486.92 ppb	11:38:00
2	Co 228.616†	10524.3	10381.7	490.21 µg/L	490.21 ppb	11:38:00
2	Cr 267.716†	23573.3	23288.6	493.82 µg/L	493.82 ppb	11:38:00
2	Cu 324.752†	76234.9	72598.9	488.53 µg/L	488.53 ppb	11:38:00
2	Mn 257.610†	151991.8	150071.4	496.75 µg/L	496.75 ppb	11:37:55
2	Mo 202.031†	5022.0	4956.5	506.86 µg/L	506.86 ppb	11:38:21
2	Ni 231.604†	9774.2	9326.0	489.42 µg/L	489.42 ppb	11:38:00
2	P 214.914†	1245.1	1203.5	2415.5 µg/L	2415.5 ppb	11:38:21
2	Pb 220.353†	2058.1	1931.5	493.18 µg/L	493.18 ppb	11:38:21

2	S 181.975 Axial†	253.2	231.1	975.11 µg/L	975.11 ppb	11:38:21
2	Sb 206.836†	564.8	531.2	497.40 µg/L	497.40 ppb	11:38:21
2	Se 196.026†	363.1	347.1	504.60 µg/L	504.60 ppb	11:38:21
2	SiO2†	26777.7	25142.4	5207.6 µg/L	5207.6 ppb	11:38:00
2	Si 251.611†	31557.1	30796.7	2441.3 µg/L	2441.3 ppb	11:38:00
2	Sn 189.927†	1171.3	1152.7	507.63 µg/L	507.63 ppb	11:38:21
2	Ti 334.940†	215303.2	212087.3	492.94 µg/L	492.94 ppb	11:37:55
2	Tl 190.801†	342.8	363.7	493.69 µg/L	493.69 ppb	11:38:21
2	U 409.014†	5678.3	5671.4	491.42 µg/L	491.42 ppb	11:38:00
2	V 292.402†	48175.7	47565.1	495.53 µg/L	495.53 ppb	11:38:00
2	Zn 213.857†	21208.5	20411.9	485.15 µg/L	485.15 ppb	11:38:00
3	Sc RADIAL	56406.5	56406.5	101 %		11:36:50
3	Al 396.153Radial†	6931.6	6879.5	4745.5 µg/L	4745.5 ppb	11:36:50
3	Ca 317.933Radial†	5554.7	5312.6	4612.1 µg/L	4612.1 ppb	11:37:10
3	Fe 238.204 Radial†	625.7	604.4	4730.3 µg/L	4730.3 ppb	11:37:10
3	K 766.490 Radial†	7301.1	7008.6	4814.8 µg/L	4814.8 ppb	11:36:50
3	Mg 279.077 IEC†	569.4	553.5	4823.2 µg/L	4823.2 ppb	11:37:10
3	Na 589.592 Radial†	31504.9	30598.7	9511.2 µg/L	9511.2 ppb	11:36:50
3	Sr 421.552†	48673.7	48151.6	476.90 µg/L	476.90 ppb	11:36:50
3	Sc 361.383	1967431.0	1967431.0	100.82 %		11:38:28
3	Y 371.029	1349456.5	1349456.5	100.66 %		11:38:28
3	Ag 328.068†	61055.3	61089.7	470.51 µg/L	470.51 ppb	11:38:34
3	As 188.979†	234.0	231.3	427.59 µg/L	427.59 ppb	11:38:54
3	B 249.677†	11319.1	10879.4	454.66 µg/L	454.66 ppb	11:38:34
3	Ba 233.527†	18312.5	18185.9	455.93 µg/L	455.93 ppb	11:38:34
3	Be 313.107†	730609.6	727980.0	457.17 µg/L	457.17 ppb	11:38:28
3	Cd 226.502†	17245.3	17247.0	454.16 µg/L	454.16 ppb	11:38:34
3	Co 228.616†	9648.3	9576.3	452.13 µg/L	452.13 ppb	11:38:34
3	Cr 267.716†	21083.5	20961.4	444.48 µg/L	444.48 ppb	11:38:34
3	Cu 324.752†	70361.6	67233.4	452.48 µg/L	452.48 ppb	11:38:34
3	Mn 257.610†	141917.3	140995.8	466.74 µg/L	466.74 ppb	11:38:28
3	Mo 202.031†	4176.3	4148.0	424.22 µg/L	424.22 ppb	11:38:54
3	Ni 231.604†	9019.9	8636.8	453.26 µg/L	453.26 ppb	11:38:34
3	P 214.914†	1059.0	1026.5	2055.8 µg/L	2055.8 ppb	11:38:54
3	Pb 220.353†	1801.5	1689.4	431.25 µg/L	431.25 ppb	11:38:54
3	S 181.975 Axial†	229.0	208.6	880.04 µg/L	880.04 ppb	11:38:54
3	Sb 206.836†	481.1	451.5	422.36 µg/L	422.36 ppb	11:38:54
3	Se 196.026†	306.7	293.4	427.67 µg/L	427.67 ppb	11:38:54
3	SiO2†	25265.3	23803.8	4930.4 µg/L	4930.4 ppb	11:38:34
3	Si 251.611†	29699.4	29144.5	2310.4 µg/L	2310.4 ppb	11:38:34
3	Sn 189.927†	962.2	952.4	419.43 µg/L	419.43 ppb	11:38:54
3	Ti 334.940†	200069.6	198276.5	460.82 µg/L	460.82 ppb	11:38:28
3	Tl 190.801†	307.0	330.2	448.47 µg/L	448.47 ppb	11:38:54
3	U 409.014†	5167.7	5199.2	450.43 µg/L	450.43 ppb	11:38:34
3	V 292.402†	43925.8	43640.5	454.35 µg/L	454.35 ppb	11:38:34
3	Zn 213.857†	19592.5	18937.0	450.06 µg/L	450.06 ppb	11:38:34

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1976116.1	101.27 %	0.389			0.38%
Sc RADIAL	56523.6	101 %	0.3			0.26%
Y 371.029	1355948.7	101.14 %	0.429			0.42%
Ag 328.068†	62853.9	484.18 µg/L	11.841	484.18 ppb	11.841	2.45%
QC value within limits for Ag 328.068 Recovery = 96.84%						
Al 396.153Radial†	6876.2	4742.1 µg/L	15.76	4742.1 ppb	15.76	0.33%
QC value within limits for Al 396.153Radial Recovery = 94.84%						
As 188.979†	253.3	468.29 µg/L	35.331	468.29 ppb	35.331	7.54%
QC value within limits for As 188.979 Recovery = 93.66%						
B 249.677†	11242.0	469.93 µg/L	13.334	469.93 ppb	13.334	2.84%
QC value within limits for B 249.677 Recovery = 93.99%						
Ba 233.527†	18991.5	476.14 µg/L	17.507	476.14 ppb	17.507	3.68%
QC value within limits for Ba 233.527 Recovery = 95.23%						
Be 313.107†	760313.7	477.47 µg/L	17.585	477.47 ppb	17.585	3.68%
QC value within limits for Be 313.107 Recovery = 95.49%						
Ca 317.933Radial†	5298.9	4600.2 µg/L	30.65	4600.2 ppb	30.65	0.67%
QC value within limits for Ca 317.933Radial Recovery = 92.00%						
Cd 226.502†	18040.0	475.07 µg/L	18.163	475.07 ppb	18.163	3.82%
QC value within limits for Cd 226.502 Recovery = 95.01%						
Co 228.616†	10105.4	477.14 µg/L	21.673	477.14 ppb	21.673	4.54%



QC value within limits for Co 228.616 Recovery = 95.43%						
Cr 267.716†	22498.9	477.08 µg/L	28.236	477.08 ppb	28.236	5.92%
QC value within limits for Cr 267.716 Recovery = 95.42%						
Cu 324.752†	70778.4	476.30 µg/L	20.634	476.30 ppb	20.634	4.33%
QC value within limits for Cu 324.752 Recovery = 95.26%						
Fe 238.204 Radial†	604.6	4732.7 µg/L	15.54	4732.7 ppb	15.54	0.33%
QC value within limits for Fe 238.204 Radial Recovery = 94.65%						
K 766.490 Radial†	6995.3	4805.7 µg/L	30.39	4805.7 ppb	30.39	0.63%
QC value within limits for K 766.490 Radial Recovery = 96.11%						
Mg 279.077 IEC†	553.5	4824.3 µg/L	18.60	4824.3 ppb	18.60	0.39%
QC value within limits for Mg 279.077 IEC Recovery = 96.49%						
Mn 257.610†	146932.9	486.37 µg/L	17.014	486.37 ppb	17.014	3.50%
QC value within limits for Mn 257.610 Recovery = 97.27%						
Mo 202.031†	4698.8	480.52 µg/L	48.794	480.52 ppb	48.794	10.15%
QC value within limits for Mo 202.031 Recovery = 96.10%						
Na 589.592 Radial†	30582.8	9506.3 µg/L	27.11	9506.3 ppb	27.11	0.29%
QC value within limits for Na 589.592 Radial Recovery = 95.06%						
Ni 231.604†	9096.4	477.38 µg/L	20.887	477.38 ppb	20.887	4.38%
QC value within limits for Ni 231.604 Recovery = 95.48%						
P 214.914†	1146.7	2300.1 µg/L	211.72	2300.1 ppb	211.72	9.20%
QC value within limits for P 214.914 Recovery = 92.00%						
Pb 220.353†	1850.9	472.57 µg/L	35.785	472.57 ppb	35.785	7.57%
QC value within limits for Pb 220.353 Recovery = 94.51%						
S 181.975 Axial†	224.5	947.08 µg/L	58.316	947.08 ppb	58.316	6.16%
QC value within limits for S 181.975 Axial Recovery = 94.71%						
Sb 206.836†	506.0	473.75 µg/L	44.547	473.75 ppb	44.547	9.40%
QC value within limits for Sb 206.836 Recovery = 94.75%						
Se 196.026†	331.2	481.84 µg/L	47.119	481.84 ppb	47.119	9.78%
QC value within limits for Se 196.026 Recovery = 96.37%						
SiO2†	24699.7	5115.9 µg/L	160.69	5115.9 ppb	160.69	3.14%
QC value within limits for SiO2 Recovery = 95.67%						
Si 251.611†	30257.2	2398.6 µg/L	76.40	2398.6 ppb	76.40	3.19%
QC value within limits for Si 251.611 Recovery = 95.94%						
Sn 189.927†	1085.6	478.09 µg/L	50.807	478.09 ppb	50.807	10.63%
QC value within limits for Sn 189.927 Recovery = 95.62%						
Sr 421.552†	48148.2	476.86 µg/L	1.230	476.86 ppb	1.230	0.26%
QC value within limits for Sr 421.552 Recovery = 95.37%						
Ti 334.940†	207501.5	482.27 µg/L	18.580	482.27 ppb	18.580	3.85%
QC value within limits for Ti 334.940 Recovery = 96.45%						
Tl 190.801†	354.3	480.93 µg/L	28.326	480.93 ppb	28.326	5.89%
QC value within limits for Tl 190.801 Recovery = 96.19%						
U 409.014†	5529.1	479.07 µg/L	24.882	479.07 ppb	24.882	5.19%
QC value within limits for U 409.014 Recovery = 95.81%						
V 292.402†	46251.4	481.76 µg/L	23.733	481.76 ppb	23.733	4.93%
QC value within limits for V 292.402 Recovery = 96.35%						
Zn 213.857†	19909.9	473.21 µg/L	20.046	473.21 ppb	20.046	4.24%
QC value within limits for Zn 213.857 Recovery = 94.64%						
All analyte(s) passed QC.						

Sequence No.: 9  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/11/2010 11:39:03  
 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	55363.2	55363.2	99.1 %		11:39:36
1	Al 396.153Radial†	-16.5	1.0	0.6634 µg/L	0.6634 ppb	11:39:36
1	Ca 317.933Radial†	190.8	6.2	5.3837 µg/L	5.3837 ppb	11:39:57
1	Fe 238.204 Radial†	18.6	3.7	29.289 µg/L	29.289 ppb	11:39:57
1	K 766.490 Radial†	177.5	-40.0	-27.470 µg/L	-27.470 ppb	11:39:36
1	Mg 279.077 IEC†	14.8	4.7	41.154 µg/L	41.154 ppb	11:39:57
1	Na 589.592 Radial†	536.4	-48.2	-14.988 µg/L	-14.988 ppb	11:39:36
1	Sr 421.552†	43.4	11.2	0.1114 µg/L	0.1114 ppb	11:39:36
1	Sc 361.383	1945250.2	1945250.2	99.688 %		11:40:58
1	Y 371.029	1340772.7	1340772.7	100.01 %		11:40:58
1	Ag 328.068†	-477.1	55.3	0.4277 µg/L	0.4277 ppb	11:41:04
1	As 188.979†	-2.3	-3.0	-5.6129 µg/L	-5.6129 ppb	11:41:24
1	B 249.677†	324.0	-22.0	-0.9390 µg/L	-0.9390 ppb	11:41:24
1	Ba 233.527†	-13.8	9.4	0.2367 µg/L	0.2367 ppb	11:41:24
1	Be 313.107†	-3274.6	63.2	0.0395 µg/L	0.0395 ppb	11:41:04
1	Cd 226.502†	-132.7	9.6	0.2489 µg/L	0.2489 ppb	11:41:24
1	Co 228.616†	-0.9	6.1	0.2896 µg/L	0.2896 ppb	11:41:24
1	Cr 267.716†	-31.4	18.9	0.3998 µg/L	0.3998 ppb	11:41:24
1	Cu 324.752†	2465.6	-79.3	-0.5287 µg/L	-0.5287 ppb	11:41:04
1	Mn 257.610†	-168.3	70.8	0.2364 µg/L	0.2364 ppb	11:41:24
1	Mo 202.031†	1.8	7.7	0.7883 µg/L	0.7883 ppb	11:41:24
1	Ni 231.604†	301.7	-6.7	-0.3501 µg/L	-0.3501 ppb	11:41:24
1	P 214.914†	18.4	-5.5	-11.137 µg/L	-11.137 ppb	11:41:24
1	Pb 220.353†	95.6	-1.5	-0.3701 µg/L	-0.3701 ppb	11:41:24
1	S 181.975 Axial†	16.6	-1.9	-7.9980 µg/L	-7.9980 ppb	11:41:24
1	Sb 206.836†	25.7	0.1	0.1264 µg/L	0.1264 ppb	11:41:24
1	Se 196.026†	11.7	1.0	1.4346 µg/L	1.4346 ppb	11:41:24
1	SiO2†	1310.1	59.4	12.313 µg/L	12.313 ppb	11:41:04
1	Si 251.611†	354.3	43.5	3.4494 µg/L	3.4494 ppb	11:41:24
1	Sn 189.927†	2.0	0.1	0.0420 µg/L	0.0420 ppb	11:41:24
1	Ti 334.940†	312.7	157.6	0.3632 µg/L	0.3632 ppb	11:41:04
1	Tl 190.801†	-26.9	-1.2	-1.6792 µg/L	-1.6792 ppb	11:41:24
1	U 409.014†	-168.6	-95.3	-8.2818 µg/L	-8.2818 ppb	11:41:04
1	V 292.402†	-34.7	39.3	0.4059 µg/L	0.4059 ppb	11:41:04
1	Zn 213.857†	481.4	-12.3	-0.2961 µg/L	-0.2961 ppb	11:41:24
2	Sc RADIAL	55518.3	55518.3	99.4 %		11:40:02
2	Al 396.153Radial†	14.7	32.4	22.413 µg/L	22.413 ppb	11:40:02
2	Ca 317.933Radial†	185.9	0.8	0.7032 µg/L	0.7032 ppb	11:40:22
2	Fe 238.204 Radial†	16.3	1.3	10.431 µg/L	10.431 ppb	11:40:22
2	K 766.490 Radial†	153.8	-64.4	-44.215 µg/L	-44.215 ppb	11:40:02
2	Mg 279.077 IEC†	9.9	-0.3	-2.5862 µg/L	-2.5862 ppb	11:40:22
2	Na 589.592 Radial†	533.3	-52.8	-16.421 µg/L	-16.421 ppb	11:40:02
2	Sr 421.552†	39.9	7.7	0.0758 µg/L	0.0758 ppb	11:40:02
2	Sc 361.383	1967933.0	1967933.0	100.85 %		11:41:30
2	Y 371.029	1353976.2	1353976.2	101.00 %		11:41:30
2	Ag 328.068†	-514.4	23.9	0.1874 µg/L	0.1874 ppb	11:41:36
2	As 188.979†	0.6	-0.2	-0.4156 µg/L	-0.4156 ppb	11:41:56
2	B 249.677†	350.1	0.1	-0.0027 µg/L	-0.0027 ppb	11:41:56
2	Ba 233.527†	-8.6	14.7	0.3693 µg/L	0.3693 ppb	11:41:56
2	Be 313.107†	-3194.3	180.6	0.1134 µg/L	0.1134 ppb	11:41:36
2	Cd 226.502†	-132.8	11.1	0.2899 µg/L	0.2899 ppb	11:41:56
2	Co 228.616†	-9.4	-2.3	-0.1098 µg/L	-0.1098 ppb	11:41:56
2	Cr 267.716†	-35.2	15.4	0.3269 µg/L	0.3269 ppb	11:41:56
2	Cu 324.752†	2511.3	-62.5	-0.4186 µg/L	-0.4186 ppb	11:41:36
2	Mn 257.610†	-149.7	91.2	0.3032 µg/L	0.3032 ppb	11:41:56
2	Mo 202.031†	-2.8	3.2	0.3230 µg/L	0.3230 ppb	11:41:56
2	Ni 231.604†	304.1	-7.8	-0.4115 µg/L	-0.4115 ppb	11:41:56
2	P 214.914†	14.7	-9.3	-19.122 µg/L	-19.122 ppb	11:41:56
2	Pb 220.353†	96.2	-2.0	-0.5152 µg/L	-0.5152 ppb	11:41:56

2	S 181.975 Axial†	14.4	-4.3	-17.952 µg/L	-17.952 ppb	11:41:56
2	Sb 206.836†	29.4	3.6	3.3295 µg/L	3.3295 ppb	11:41:56
2	Se 196.026†	14.5	3.6	5.1808 µg/L	5.1808 ppb	11:41:56
2	SiO2†	1303.8	38.1	7.8829 µg/L	7.8829 ppb	11:41:36
2	Si 251.611†	374.7	59.7	4.7327 µg/L	4.7327 ppb	11:41:56
2	Sn 189.927†	-4.8	-6.7	-2.9461 µg/L	-2.9461 ppb	11:41:56
2	Ti 334.940†	311.8	153.0	0.3561 µg/L	0.3561 ppb	11:41:36
2	Tl 190.801†	-20.8	5.1	6.9201 µg/L	6.9201 ppb	11:41:56
2	U 409.014†	0.3	74.0	6.4260 µg/L	6.4260 ppb	11:41:36
2	V 292.402†	-18.9	55.4	0.5809 µg/L	0.5809 ppb	11:41:36
2	Zn 213.857†	498.2	-1.2	-0.0273 µg/L	-0.0273 ppb	11:41:56
3	Sc RADIAL	55797.7	55797.7	99.9 %		11:40:28
3	Al 396.153Radial†	1.4	19.0	13.119 µg/L	13.119 ppb	11:40:28
3	Ca 317.933Radial†	190.6	4.5	3.9442 µg/L	3.9442 ppb	11:40:48
3	Fe 238.204 Radial†	17.2	2.1	16.623 µg/L	16.623 ppb	11:40:48
3	K 766.490 Radial†	155.6	-63.3	-43.521 µg/L	-43.521 ppb	11:40:28
3	Mg 279.077 IEC†	10.2	-0.1	-0.5582 µg/L	-0.5582 ppb	11:40:48
3	Na 589.592 Radial†	556.3	-32.6	-10.124 µg/L	-10.124 ppb	11:40:28
3	Sr 421.552†	31.6	-0.9	-0.0085 µg/L	-0.0085 ppb	11:40:28
3	Sc 361.383	1959049.5	1959049.5	100.40 %		11:42:03
3	Y 371.029	1350428.0	1350428.0	100.73 %		11:42:03
3	Ag 328.068†	-482.5	53.3	0.4104 µg/L	0.4104 ppb	11:42:08
3	As 188.979†	-1.1	-1.9	-3.4493 µg/L	-3.4493 ppb	11:42:29
3	B 249.677†	334.4	-13.9	-0.5929 µg/L	-0.5929 ppb	11:42:29
3	Ba 233.527†	-7.2	16.0	0.4020 µg/L	0.4020 ppb	11:42:29
3	Be 313.107†	-2800.6	558.4	0.3506 µg/L	0.3506 ppb	11:42:08
3	Cd 226.502†	-127.0	16.2	0.4255 µg/L	0.4255 ppb	11:42:29
3	Co 228.616†	-8.5	-1.5	-0.0700 µg/L	-0.0700 ppb	11:42:29
3	Cr 267.716†	-28.4	22.0	0.4672 µg/L	0.4672 ppb	11:42:29
3	Cu 324.752†	2471.2	-91.1	-0.6102 µg/L	-0.6102 ppb	11:42:08
3	Mn 257.610†	-119.5	120.5	0.4009 µg/L	0.4009 ppb	11:42:29
3	Mo 202.031†	-2.9	3.0	0.3074 µg/L	0.3074 ppb	11:42:29
3	Ni 231.604†	313.0	2.4	0.1251 µg/L	0.1251 ppb	11:42:29
3	P 214.914†	24.0	0.0	0.1354 µg/L	0.1354 ppb	11:42:29
3	Pb 220.353†	86.4	-11.3	-2.8875 µg/L	-2.8875 ppb	11:42:29
3	S 181.975 Axial†	17.5	-1.1	-4.6486 µg/L	-4.6486 ppb	11:42:29
3	Sb 206.836†	23.4	-2.3	-2.1682 µg/L	-2.1682 ppb	11:42:29
3	Se 196.026†	16.9	6.0	8.7100 µg/L	8.7100 ppb	11:42:29
3	SiO2†	1284.6	24.8	5.1404 µg/L	5.1404 ppb	11:42:08
3	Si 251.611†	373.4	60.1	4.7643 µg/L	4.7643 ppb	11:42:29
3	Sn 189.927†	-0.5	-2.4	-1.0762 µg/L	-1.0762 ppb	11:42:29
3	Ti 334.940†	457.1	299.1	0.6958 µg/L	0.6958 ppb	11:42:08
3	Tl 190.801†	-23.2	2.6	3.5471 µg/L	3.5471 ppb	11:42:29
3	U 409.014†	-87.7	-13.6	-1.1836 µg/L	-1.1836 ppb	11:42:08
3	V 292.402†	-49.9	24.4	0.2553 µg/L	0.2553 ppb	11:42:08
3	Zn 213.857†	490.5	-6.7	-0.1599 µg/L	-0.1599 ppb	11:42:29

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1957410.9	100.31 %	0.586			0.58%
Sc RADIAL	55559.7	99.5 %	0.39			0.40%
Y 371.029	1348392.3	100.58 %	0.510			0.51%
Ag 328.068†	44.2	0.3418 µg/L	0.13407	0.3418 ppb	0.13407	39.22%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	17.5	12.065 µg/L	10.9128	12.065 ppb	10.9128	90.45%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.7	-3.1593 µg/L	2.61075	-3.1593 ppb	2.61075	82.64%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-12.0	-0.5115 µg/L	0.47344	-0.5115 ppb	0.47344	92.55%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	13.4	0.3360 µg/L	0.08756	0.3360 ppb	0.08756	26.06%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	267.4	0.1678 µg/L	0.16251	0.1678 ppb	0.16251	96.84%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	3.9	3.3437 µg/L	2.39732	3.3437 ppb	2.39732	71.70%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	12.3	0.3214 µg/L	0.09246	0.3214 ppb	0.09246	28.76%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.8	0.0366 µg/L	0.21999	0.0366 ppb	0.21999	601.47%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	18.8 0.3980 µg/L	0.07019 0.3980 ppb	0.07019 17.64%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	-77.6 -0.5192 µg/L	0.09616 -0.5192 ppb	0.09616 18.52%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	2.4 18.781 µg/L	9.6125 18.781 ppb	9.6125 51.18%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	-55.9 -38.402 µg/L	9.4738 -38.402 ppb	9.4738 24.67%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	1.5 12.670 µg/L	24.6889 12.670 ppb	24.6889 194.86%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	94.2 0.3135 µg/L	0.08275 0.3135 ppb	0.08275 26.40%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	4.6 0.4729 µg/L	0.27327 0.4729 ppb	0.27327 57.78%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	-44.5 -13.844 µg/L	3.3008 -13.844 ppb	3.3008 23.84%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-4.0 -0.2122 µg/L	0.29367 -0.2122 ppb	0.29367 138.42%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	-4.9 -10.041 µg/L	9.6754 -10.041 ppb	9.6754 96.36%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	-4.9 -1.2576 µg/L	1.41338 -1.2576 ppb	1.41338 112.39%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	-2.4 -10.200 µg/L	6.9196 -10.200 ppb	6.9196 67.84%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	0.5 0.4292 µg/L	2.76132 0.4292 ppb	2.76132 643.36%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	3.5 5.1085 µg/L	3.63820 5.1085 ppb	3.63820 71.22%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	40.8 8.4453 µg/L	3.61907 8.4453 ppb	3.61907 42.85%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	54.4 4.3155 µg/L	0.75019 4.3155 ppb	0.75019 17.38%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	-3.0 -1.3268 µg/L	1.50971 -1.3268 ppb	1.50971 113.79%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	6.0 0.0596 µg/L	0.06159 0.0596 ppb	0.06159 103.41%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	203.2 0.4717 µg/L	0.19409 0.4717 ppb	0.19409 41.14%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	2.2 2.9293 µg/L	4.33280 2.9293 ppb	4.33280 147.91%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	-11.6 -1.0131 µg/L	7.35536 -1.0131 ppb	7.35536 726.02%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	39.7 0.4140 µg/L	0.16297 0.4140 ppb	0.16297 39.36%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	-6.7 -0.1611 µg/L	0.13441 -0.1611 ppb	0.13441 83.44%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

Sequence No.: 10

Sample ID: 245389002|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 308

Date Collected: 2/11/2010 11:42:38

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389002|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57238.9	57238.9	103 %		11:43:17
1	Al 396.153Radial†	108468.6	105833.6	73138 µg/L	73138 ppb	11:43:17
1	Ca 317.933Radial†	21990.3	21266.3	18462 µg/L	18462 ppb	11:43:37
1	Fe 238.204 Radial†	12402.2	12083.8	94383 µg/L	94383 ppb	11:43:37
1	K 766.490 Radial†	15475.9	14878.4	10221 µg/L	10221 ppb	11:43:17
1	Mg 279.077 IEC†	1613.2	1563.5	13518 µg/L	13518 ppb	11:43:37
1	Na 589.592 Radial†	2001.9	1363.7	423.90 µg/L	423.90 ppb	11:43:37
1	Sr 421.552†	19287.5	18783.3	186.03 µg/L	186.03 ppb	11:43:17
1	Sc 361.383	1960059.8	1960059.8	100.45 %		11:44:41
1	Y 371.029	1374714.7	1374714.7	102.54 %		11:44:41
1	Ag 328.068†	-1748.4	-1206.7	-2.0278 µg/L	-2.0278 ppb	11:44:47
1	As 188.979†	9.4	8.5	20.340 µg/L	20.340 ppb	11:45:08
1	B 249.677†	964.7	613.3	-23.384 µg/L	-23.384 ppb	11:44:47
1	Ba 233.527†	53214.2	53000.5	1326.7 µg/L	1326.7 ppb	11:44:47
1	Be 313.107†	12223.9	15517.5	8.5697 µg/L	8.5697 ppb	11:44:47
1	Cd 226.502†	217.0	358.7	-1.1574 µg/L	-1.1574 ppb	11:45:08
1	Co 228.616†	1117.6	1119.7	46.473 µg/L	46.473 ppb	11:45:08
1	Cr 267.716†	3919.2	3952.1	83.871 µg/L	83.871 ppb	11:44:47
1	Cu 324.752†	8081.6	5493.1	50.034 µg/L	50.034 ppb	11:44:47
1	Mn 257.610†	822273.7	818852.6	2720.1 µg/L	2720.1 ppb	11:44:41
1	Mo 202.031†	1.1	7.0	4.3039 µg/L	4.3039 ppb	11:45:08
1	Ni 231.604†	1452.8	1137.0	60.895 µg/L	60.895 ppb	11:45:08
1	P 214.914†	400.0	374.3	706.07 µg/L	706.07 ppb	11:45:08
1	Pb 220.353†	571.9	472.0	120.93 µg/L	120.93 ppb	11:45:08
1	S 181.975 Axial†	127.3	108.2	456.59 µg/L	456.59 ppb	11:45:08
1	Sb 206.836†	34.9	9.1	5.9556 µg/L	5.9556 ppb	11:45:08
1	Se 196.026†	-34.5	-45.1	176.12 µg/L	176.12 ppb	11:45:08
1	SiO2†	232938.5	230646.7	47773 µg/L	47773 ppb	11:44:41
1	Si 251.611†	281454.5	279889.6	22188 µg/L	22188 ppb	11:44:41
1	Sn 189.927†	-22.4	-24.2	-19.212 µg/L	-19.212 ppb	11:45:08
1	Ti 334.940†	1336661.5	1330554.7	3093.7 µg/L	3093.7 ppb	11:44:41
1	Tl 190.801†	-59.1	-33.1	11.006 µg/L	11.006 ppb	11:45:08
1	U 409.014†	-1001.6	-923.4	-94.412 µg/L	-94.412 ppb	11:44:47
1	V 292.402†	18503.8	18495.5	201.53 µg/L	201.53 ppb	11:44:47
1	Zn 213.857†	8936.0	8401.0	195.51 µg/L	195.51 ppb	11:44:47
2	Sc RADIAL	56764.7	56764.7	102 %		11:43:43
2	Al 396.153Radial†	109580.7	107811.6	74505 µg/L	74505 ppb	11:43:43
2	Ca 317.933Radial†	21799.1	21257.4	18455 µg/L	18455 ppb	11:44:03
2	Fe 238.204 Radial†	12265.4	12050.4	94121 µg/L	94121 ppb	11:44:03
2	K 766.490 Radial†	15533.0	15060.7	10346 µg/L	10346 ppb	11:43:43
2	Mg 279.077 IEC†	1590.3	1554.1	13437 µg/L	13437 ppb	11:44:03
2	Na 589.592 Radial†	2003.8	1381.9	429.56 µg/L	429.56 ppb	11:44:03
2	Sr 421.552†	19400.6	19051.7	188.69 µg/L	188.69 ppb	11:43:43
2	Sc 361.383	1977752.4	1977752.4	101.35 %		11:45:15
2	Y 371.029	1387077.3	1387077.3	103.47 %		11:45:15
2	Ag 328.068†	-1702.4	-1145.7	-1.6064 µg/L	-1.6064 ppb	11:45:20
2	As 188.979†	8.1	7.2	17.831 µg/L	17.831 ppb	11:45:41
2	B 249.677†	940.8	581.2	-24.600 µg/L	-24.600 ppb	11:45:20
2	Ba 233.527†	52558.2	51879.3	1298.7 µg/L	1298.7 ppb	11:45:20
2	Be 313.107†	12029.2	15216.6	8.3926 µg/L	8.3926 ppb	11:45:20
2	Cd 226.502†	208.2	348.1	-1.4088 µg/L	-1.4088 ppb	11:45:41
2	Co 228.616†	1108.7	1100.9	45.649 µg/L	45.649 ppb	11:45:41
2	Cr 267.716†	3864.1	3862.8	81.976 µg/L	81.976 ppb	11:45:20
2	Cu 324.752†	7959.2	5300.3	48.702 µg/L	48.702 ppb	11:45:20
2	Mn 257.610†	822379.5	811633.9	2696.2 µg/L	2696.2 ppb	11:45:15
2	Mo 202.031†	-2.6	3.4	3.9201 µg/L	3.9201 ppb	11:45:41
2	Ni 231.604†	1429.7	1101.2	59.016 µg/L	59.016 ppb	11:45:41
2	P 214.914†	398.9	369.6	697.29 µg/L	697.29 ppb	11:45:41
2	Pb 220.353†	553.7	448.9	115.11 µg/L	115.11 ppb	11:45:41

2	S 181.975 Axial†	129.5	109.2	460.85 µg/L	460.85 ppb	11:45:41
2	Sb 206.836†	26.3	0.3	-2.2099 µg/L	-2.2099 ppb	11:45:41
2	Se 196.026†	-35.6	-45.9	174.36 µg/L	174.36 ppb	11:45:41
2	SiO2†	232785.8	228421.5	47312 µg/L	47312 ppb	11:45:15
2	Si 251.611†	281325.8	277256.0	21979 µg/L	21979 ppb	11:45:15
2	Sn 189.927†	-19.7	-21.4	-17.965 µg/L	-17.965 ppb	11:45:41
2	Ti 334.940†	1335088.4	1317098.4	3062.4 µg/L	3062.4 ppb	11:45:15
2	Tl 190.801†	-54.9	-28.4	16.973 µg/L	16.973 ppb	11:45:41
2	U 409.014†	-955.8	-869.3	-89.676 µg/L	-89.676 ppb	11:45:20
2	V 292.402†	18247.0	18077.3	197.20 µg/L	197.20 ppb	11:45:20
2	Zn 213.857†	8828.8	8215.6	191.10 µg/L	191.10 ppb	11:45:20
3	Sc RADIAL	57549.2	57549.2	103 %		11:44:09
3	Al 396.153Radial†	109699.6	106457.5	73570 µg/L	73570 ppb	11:44:09
3	Ca 317.933Radial†	22022.8	21182.2	18389 µg/L	18389 ppb	11:44:29
3	Fe 238.204 Radial†	12424.9	12040.7	94045 µg/L	94045 ppb	11:44:29
3	K 766.490 Radial†	15612.2	14929.2	10256 µg/L	10256 ppb	11:44:09
3	Mg 279.077 IEC†	1612.1	1553.9	13435 µg/L	13435 ppb	11:44:29
3	Na 589.592 Radial†	2033.4	1383.8	430.12 µg/L	430.12 ppb	11:44:29
3	Sr 421.552†	19472.3	18861.2	186.80 µg/L	186.80 ppb	11:44:09
3	Sc 361.383	1971972.7	1971972.7	101.06 %		11:45:48
3	Y 371.029	1381448.9	1381448.9	103.05 %		11:45:48
3	Ag 328.068†	-1712.0	-1160.1	-1.7944 µg/L	-1.7944 ppb	11:45:54
3	As 188.979†	7.5	6.6	16.794 µg/L	16.794 ppb	11:46:14
3	B 249.677†	933.9	577.1	-24.740 µg/L	-24.740 ppb	11:45:54
3	Ba 233.527†	49943.6	49444.2	1237.7 µg/L	1237.7 ppb	11:45:54
3	Be 313.107†	11110.1	14341.8	7.9043 µg/L	7.9043 ppb	11:45:54
3	Cd 226.502†	160.5	301.6	-2.6322 µg/L	-2.6322 ppb	11:46:14
3	Co 228.616†	993.5	990.1	40.749 µg/L	40.749 ppb	11:46:14
3	Cr 267.716†	3589.4	3602.1	76.444 µg/L	76.444 ppb	11:45:54
3	Cu 324.752†	7656.8	5024.1	46.835 µg/L	46.835 ppb	11:45:54
3	Mn 257.610†	780816.4	772884.0	2568.1 µg/L	2568.1 ppb	11:45:48
3	Mo 202.031†	-4.9	1.0	3.6785 µg/L	3.6785 ppb	11:46:14
3	Ni 231.604†	1308.2	985.2	52.923 µg/L	52.923 ppb	11:46:14
3	P 214.914†	367.1	339.4	635.39 µg/L	635.39 ppb	11:46:14
3	Pb 220.353†	525.6	422.7	108.37 µg/L	108.37 ppb	11:46:14
3	S 181.975 Axial†	120.7	100.9	425.62 µg/L	425.62 ppb	11:46:14
3	Sb 206.836†	33.9	8.0	4.9765 µg/L	4.9765 ppb	11:46:14
3	Se 196.026†	-17.6	-28.2	199.51 µg/L	199.51 ppb	11:46:14
3	SiO2†	223211.9	219621.0	45489 µg/L	45489 ppb	11:45:48
3	Si 251.611†	269699.8	266565.2	21131 µg/L	21131 ppb	11:45:48
3	Sn 189.927†	-28.9	-30.5	-21.978 µg/L	-21.978 ppb	11:46:14
3	Ti 334.940†	1261300.9	1247943.9	2901.5 µg/L	2901.5 ppb	11:45:48
3	Tl 190.801†	-50.6	-24.3	20.466 µg/L	20.466 ppb	11:46:14
3	U 409.014†	-975.8	-891.9	-91.620 µg/L	-91.620 ppb	11:45:54
3	V 292.402†	17103.0	16998.1	186.06 µg/L	186.06 ppb	11:45:54
3	Zn 213.857†	8379.2	7796.2	181.10 µg/L	181.10 ppb	11:45:54

Mean Data: 245389002|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1969928.3	100.95 %	0.462			0.46%
Sc RADIAL	57184.2	102 %	0.7			0.69%
Y 371.029	1381080.3	103.02 %	0.462			0.45%
Ag 328.068†	-1170.8	-1.8095 µg/L	0.21115	-1.8095 ppb	0.21115	11.67%
Al 396.153Radial†	106700.9	73738 µg/L	698.8	73738 ppb	698.8	0.95%
As 188.979†	7.5	18.322 µg/L	1.8233	18.322 ppb	1.8233	9.95%
B 249.677†	590.5	-24.241 µg/L	0.7455	-24.241 ppb	0.7455	3.08%
Ba 233.527†	51441.3	1287.7 µg/L	45.52	1287.7 ppb	45.52	3.53%
Be 313.107†	15025.3	8.2889 µg/L	0.34461	8.2889 ppb	0.34461	4.16%
Ca 317.933Radial†	21235.3	18435 µg/L	40.1	18435 ppb	40.1	0.22%
Cd 226.502†	336.2	-1.7328 µg/L	0.78896	-1.7328 ppb	0.78896	45.53%
Co 228.616†	1070.2	44.291 µg/L	3.0944	44.291 ppb	3.0944	6.99%
Cr 267.716†	3805.7	80.763 µg/L	3.8588	80.763 ppb	3.8588	4.78%
Cu 324.752†	5272.5	48.523 µg/L	1.6067	48.523 ppb	1.6067	3.31%
Fe 238.204 Radial†	12058.3	94183 µg/L	177.0	94183 ppb	177.0	0.19%
K 766.490 Radial†	14956.1	10275 µg/L	64.6	10275 ppb	64.6	0.63%
Mg 279.077 IEC†	1557.2	13463 µg/L	47.4	13463 ppb	47.4	0.35%
Mn 257.610†	801123.5	2661.5 µg/L	81.77	2661.5 ppb	81.77	3.07%
Mo 202.031†	3.8	3.9675 µg/L	0.31536	3.9675 ppb	0.31536	7.95%
Na 589.592 Radial†	1376.5	427.86 µg/L	3.443	427.86 ppb	3.443	0.80%

Ni 231.604†	1074.5	57.611 µg/L	4.1675	57.611 ppb	4.1675	7.23%
P 214.914†	361.1	679.58 µg/L	38.522	679.58 ppb	38.522	5.67%
Pb 220.353†	447.9	114.80 µg/L	6.282	114.80 ppb	6.282	5.47%
S 181.975 Axial†	106.1	447.69 µg/L	19.230	447.69 ppb	19.230	4.30%
Sb 206.836†	5.8	2.9074 µg/L	4.45869	2.9074 ppb	4.45869	153.36%
Se 196.026†	-39.7	183.33 µg/L	14.041	183.33 ppb	14.041	7.66%
SiO2†	226229.7	46858 µg/L	1207.6	46858 ppb	1207.6	2.58%
Si 251.611†	274570.3	21766 µg/L	559.4	21766 ppb	559.4	2.57%
Sn 189.927†	-25.4	-19.718 µg/L	2.0536	-19.718 ppb	2.0536	10.41%
Sr 421.552†	18898.7	187.17 µg/L	1.368	187.17 ppb	1.368	0.73%
Ti 334.940†	1298532.3	3019.2 µg/L	103.08	3019.2 ppb	103.08	3.41%
Tl 190.801†	-28.6	16.148 µg/L	4.7835	16.148 ppb	4.7835	29.62%
U 409.014†	-894.9	-91.903 µg/L	2.3806	-91.903 ppb	2.3806	2.59%
V 292.402†	17857.0	194.93 µg/L	7.978	194.93 ppb	7.978	4.09%
Zn 213.857†	8137.6	189.24 µg/L	7.386	189.24 ppb	7.386	3.90%

Sequence No.: 11

Sample ID: 245389003|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 309

Date Collected: 2/11/2010 11:46:24

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389003|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58097.8	58097.8	104 %		11:46:56
1	Al 396.153Radial†	253832.4	243981.8	168610 µg/L	168610 ppb	11:46:56
1	Ca 317.933Radial†	26696.8	25472.7	22114 µg/L	22114 ppb	11:47:17
1	Fe 238.204 Radial†	18867.0	18118.4	141520 µg/L	141520 ppb	11:47:17
1	K 766.490 Radial†	19897.0	18904.4	12987 µg/L	12987 ppb	11:46:56
1	Mg 279.077 IEC†	2446.6	2341.2	20242 µg/L	20242 ppb	11:47:17
1	Na 589.592 Radial†	5396.6	4597.6	1429.1 µg/L	1429.1 ppb	11:47:17
1	Sr 421.552†	31067.9	29827.6	295.41 µg/L	295.41 ppb	11:46:56
1	Sc 361.383	1992226.2	1992226.2	102.10 %		11:48:21
1	Y 371.029	1405527.7	1405527.7	104.84 %		11:48:21
1	Ag 328.068†	-2377.3	-1794.6	-2.9975 µg/L	-2.9975 ppb	11:48:27
1	As 188.979†	11.1	10.1	25.751 µg/L	25.751 ppb	11:48:47
1	B 249.677†	1193.3	821.7	-39.163 µg/L	-39.163 ppb	11:48:27
1	Ba 233.527†	92997.6	91112.0	2280.6 µg/L	2280.6 ppb	11:48:27
1	Be 313.107†	23636.6	26499.5	14.273 µg/L	14.273 ppb	11:48:27
1	Cd 226.502†	384.8	519.7	-2.2222 µg/L	-2.2222 ppb	11:48:27
1	Co 228.616†	1482.8	1459.4	55.981 µg/L	55.981 ppb	11:48:47
1	Cr 267.716†	6187.1	6110.4	129.66 µg/L	129.66 ppb	11:48:27
1	Cu 324.752†	9453.9	6707.3	64.745 µg/L	64.745 ppb	11:48:27
1	Mn 257.610†	929250.8	910416.7	3028.9 µg/L	3028.9 ppb	11:48:21
1	Mo 202.031†	-30.1	-23.6	2.9613 µg/L	2.9613 ppb	11:48:47
1	Ni 231.604†	1912.3	1563.8	83.910 µg/L	83.910 ppb	11:48:47
1	P 214.914†	457.4	424.1	796.15 µg/L	796.15 ppb	11:48:47
1	Pb 220.353†	690.8	579.2	151.76 µg/L	151.76 ppb	11:48:47
1	S 181.975 Axial†	109.1	88.3	372.48 µg/L	372.48 ppb	11:48:47
1	Sb 206.836†	42.3	15.8	11.342 µg/L	11.342 ppb	11:48:47
1	Se 196.026†	-51.7	-61.4	274.60 µg/L	274.60 ppb	11:48:47
1	SiO2†	266752.8	260022.7	53857 µg/L	53857 ppb	11:48:21
1	Si 251.611†	322720.0	315784.0	25033 µg/L	25033 ppb	11:48:21
1	Sn 189.927†	-45.0	-46.0	-33.079 µg/L	-33.079 ppb	11:48:47
1	Ti 334.940†	2736324.6	2680002.9	6231.6 µg/L	6231.6 ppb	11:48:21
1	Tl 190.801†	-88.2	-60.6	16.801 µg/L	16.801 ppb	11:48:47
1	U 409.014†	-1361.2	-1259.5	-130.36 µg/L	-130.36 ppb	11:48:21
1	V 292.402†	27190.9	26706.9	291.62 µg/L	291.62 ppb	11:48:27
1	Zn 213.857†	10867.9	10149.6	234.64 µg/L	234.64 ppb	11:48:27
2	Sc RADIAL	58195.4	58195.4	104 %		11:47:22
2	Al 396.153Radial†	257314.0	246913.1	170630 µg/L	170630 ppb	11:47:22
2	Ca 317.933Radial†	26741.4	25472.4	22114 µg/L	22114 ppb	11:47:43
2	Fe 238.204 Radial†	18926.8	18145.4	141730 µg/L	141730 ppb	11:47:43
2	K 766.490 Radial†	20088.3	19055.8	13091 µg/L	13091 ppb	11:47:22
2	Mg 279.077 IEC†	2455.0	2345.3	20278 µg/L	20278 ppb	11:47:43
2	Na 589.592 Radial†	5415.2	4606.7	1431.9 µg/L	1431.9 ppb	11:47:43
2	Sr 421.552†	31474.3	30167.3	298.78 µg/L	298.78 ppb	11:47:22
2	Sc 361.383	1992019.7	1992019.7	102.09 %		11:48:55
2	Y 371.029	1405507.9	1405507.9	104.84 %		11:48:55
2	Ag 328.068†	-2318.6	-1737.3	-2.5542 µg/L	-2.5542 ppb	11:49:01
2	As 188.979†	13.4	12.4	30.022 µg/L	30.022 ppb	11:49:21
2	B 249.677†	1202.3	830.7	-38.896 µg/L	-38.896 ppb	11:49:01
2	Ba 233.527†	92755.7	90884.4	2274.9 µg/L	2274.9 ppb	11:49:01
2	Be 313.107†	23565.1	26431.9	14.218 µg/L	14.218 ppb	11:49:01
2	Cd 226.502†	393.3	528.1	-2.0267 µg/L	-2.0267 ppb	11:49:01
2	Co 228.616†	1464.8	1441.9	55.080 µg/L	55.080 ppb	11:49:21
2	Cr 267.716†	6199.9	6123.7	129.94 µg/L	129.94 ppb	11:49:01
2	Cu 324.752†	9435.3	6689.9	64.658 µg/L	64.658 ppb	11:49:01
2	Mn 257.610†	936377.6	917492.3	3052.4 µg/L	3052.4 ppb	11:48:55
2	Mo 202.031†	-28.0	-21.5	3.1836 µg/L	3.1836 ppb	11:49:21
2	Ni 231.604†	1886.3	1538.5	82.586 µg/L	82.586 ppb	11:49:21
2	P 214.914†	457.5	424.3	796.96 µg/L	796.96 ppb	11:49:21
2	Pb 220.353†	681.4	570.1	149.53 µg/L	149.53 ppb	11:49:21



2	S 181.975 Axial†	114.3	93.4	393.97 µg/L	393.97 ppb	11:49:21
2	Sb 206.836†	40.0	13.6	9.2446 µg/L	9.2446 ppb	11:49:21
2	Se 196.026†	-57.8	-67.4	266.59 µg/L	266.59 ppb	11:49:21
2	SiO2†	268316.7	261581.7	54180 µg/L	54180 ppb	11:48:55
2	Si 251.611†	324619.0	317676.9	25183 µg/L	25183 ppb	11:48:55
2	Sn 189.927†	-54.3	-55.1	-37.080 µg/L	-37.080 ppb	11:49:21
2	Ti 334.940†	2751158.4	2694811.5	6266.0 µg/L	6266.0 ppb	11:48:55
2	Tl 190.801†	-82.5	-55.1	24.790 µg/L	24.790 ppb	11:49:21
2	U 409.014†	-1290.5	-1190.4	-124.39 µg/L	-124.39 ppb	11:48:55
2	V 292.402†	27070.9	26592.0	290.47 µg/L	290.47 ppb	11:49:01
2	Zn 213.857†	10844.0	10127.2	234.09 µg/L	234.09 ppb	11:49:01
3	Sc RADIAL	58355.2	58355.2	105 %		11:47:48
3	Al 396.153Radial†	257603.3	246513.8	170360 µg/L	170360 ppb	11:47:48
3	Ca 317.933Radial†	26856.2	25512.0	22148 µg/L	22148 ppb	11:48:09
3	Fe 238.204 Radial†	18968.1	18135.3	141650 µg/L	141650 ppb	11:48:09
3	K 766.490 Radial†	20135.3	19048.1	13086 µg/L	13086 ppb	11:47:48
3	Mg 279.077 IEC†	2463.7	2347.2	20294 µg/L	20294 ppb	11:48:09
3	Na 589.592 Radial†	5456.2	4631.7	1439.7 µg/L	1439.7 ppb	11:48:09
3	Sr 421.552†	31571.3	30177.5	298.88 µg/L	298.88 ppb	11:47:48
3	Sc 361.383	1983759.5	1983759.5	101.66 %		11:49:29
3	Y 371.029	1397176.9	1397176.9	104.22 %		11:49:29
3	Ag 328.068†	-2251.6	-1680.8	-2.2335 µg/L	-2.2335 ppb	11:49:35
3	As 188.979†	17.8	16.7	38.056 µg/L	38.056 ppb	11:49:55
3	B 249.677†	1149.1	783.3	-40.858 µg/L	-40.858 ppb	11:49:35
3	Ba 233.527†	87725.3	86314.6	2160.5 µg/L	2160.5 ppb	11:49:35
3	Be 313.107†	21922.9	24912.6	13.347 µg/L	13.347 ppb	11:49:35
3	Cd 226.502†	358.9	495.7	-2.8758 µg/L	-2.8758 ppb	11:49:35
3	Co 228.616†	1326.4	1311.7	49.384 µg/L	49.384 ppb	11:49:55
3	Cr 267.716†	5755.3	5711.6	121.20 µg/L	121.20 ppb	11:49:35
3	Cu 324.752†	9091.2	6390.0	62.631 µg/L	62.631 ppb	11:49:35
3	Mn 257.610†	902666.9	888151.9	2955.3 µg/L	2955.3 ppb	11:49:29
3	Mo 202.031†	-29.9	-23.5	2.9799 µg/L	2.9799 ppb	11:49:55
3	Ni 231.604†	1738.9	1401.2	75.379 µg/L	75.379 ppb	11:49:55
3	P 214.914†	417.1	386.4	719.56 µg/L	719.56 ppb	11:49:55
3	Pb 220.353†	644.9	537.0	141.07 µg/L	141.07 ppb	11:49:55
3	S 181.975 Axial†	101.4	81.2	342.78 µg/L	342.78 ppb	11:49:55
3	Sb 206.836†	35.0	8.8	4.8668 µg/L	4.8668 ppb	11:49:55
3	Se 196.026†	-51.9	-61.8	274.24 µg/L	274.24 ppb	11:49:55
3	SiO2†	261527.5	255997.9	53024 µg/L	53024 ppb	11:49:29
3	Si 251.611†	316206.7	310726.2	24632 µg/L	24632 ppb	11:49:29
3	Sn 189.927†	-46.6	-47.8	-33.864 µg/L	-33.864 ppb	11:49:55
3	Ti 334.940†	2643756.0	2600386.2	6046.4 µg/L	6046.4 ppb	11:49:29
3	Tl 190.801†	-78.7	-51.7	27.041 µg/L	27.041 ppb	11:49:55
3	U 409.014†	-1304.1	-1209.1	-126.00 µg/L	-126.00 ppb	11:49:29
3	V 292.402†	25364.1	25023.6	274.30 µg/L	274.30 ppb	11:49:35
3	Zn 213.857†	10283.7	9620.4	222.00 µg/L	222.00 ppb	11:49:35

Mean Data: 245389003|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1989335.1	101.95 %	0.248			0.24%
Sc RADIAL	58216.1	104 %	0.2			0.22%
Y 371.029	1402737.5	104.63 %	0.359			0.34%
Ag 328.068†	-1737.6	-2.5951 µg/L	0.38364	-2.5951 ppb	0.38364	14.78%
Al 396.153Radial†	245802.9	169870 µg/L	1098.6	169870 ppb	1098.6	0.65%
As 188.979†	13.1	31.277 µg/L	6.2479	31.277 ppb	6.2479	19.98%
B 249.677†	811.9	-39.639 µg/L	1.0641	-39.639 ppb	1.0641	2.68%
Ba 233.527†	89437.0	2238.7 µg/L	67.75	2238.7 ppb	67.75	3.03%
Be 313.107†	25948.0	13.946 µg/L	0.5196	13.946 ppb	0.5196	3.73%
Ca 317.933Radial†	25485.7	22125 µg/L	19.8	22125 ppb	19.8	0.09%
Cd 226.502†	514.5	-2.3749 µg/L	0.44466	-2.3749 ppb	0.44466	18.72%
Co 228.616†	1404.3	53.482 µg/L	3.5772	53.482 ppb	3.5772	6.69%
Cr 267.716†	5981.9	126.93 µg/L	4.969	126.93 ppb	4.969	3.91%
Cu 324.752†	6595.7	64.011 µg/L	1.1961	64.011 ppb	1.1961	1.87%
Fe 238.204 Radial†	18133.0	141630 µg/L	106.3	141630 ppb	106.3	0.08%
K 766.490 Radial†	19002.8	13055 µg/L	58.6	13055 ppb	58.6	0.45%
Mg 279.077 IEC†	2344.6	20271 µg/L	26.5	20271 ppb	26.5	0.13%
Mn 257.610†	905353.6	3012.2 µg/L	50.64	3012.2 ppb	50.64	1.68%
Mo 202.031†	-22.9	3.0416 µg/L	0.12332	3.0416 ppb	0.12332	4.05%
Na 589.592 Radial†	4612.0	1433.6 µg/L	5.50	1433.6 ppb	5.50	0.38%

Ni 231.604†	1501.1	80.625 µg/L	4.5912	80.625 ppb	4.5912	5.69%
P 214.914†	411.6	770.89 µg/L	44.457	770.89 ppb	44.457	5.77%
Pb 220.353†	562.1	147.45 µg/L	5.639	147.45 ppb	5.639	3.82%
S 181.975 Axial†	87.6	369.74 µg/L	25.703	369.74 ppb	25.703	6.95%
Sb 206.836†	12.7	8.4844 µg/L	3.30379	8.4844 ppb	3.30379	38.94%
Se 196.026†	-63.5	271.81 µg/L	4.523	271.81 ppb	4.523	1.66%
SiO2†	259200.8	53687 µg/L	596.8	53687 ppb	596.8	1.11%
Si 251.611†	314729.1	24949 µg/L	284.9	24949 ppb	284.9	1.14%
Sn 189.927†	-49.6	-34.674 µg/L	2.1204	-34.674 ppb	2.1204	6.12%
Sr 421.552†	30057.5	297.69 µg/L	1.972	297.69 ppb	1.972	0.66%
Ti 334.940†	2658400.2	6181.3 µg/L	118.11	6181.3 ppb	118.11	1.91%
Tl 190.801†	-55.8	22.877 µg/L	5.3813	22.877 ppb	5.3813	23.52%
U 409.014†	-1219.7	-126.92 µg/L	3.089	-126.92 ppb	3.089	2.43%
V 292.402†	26107.5	285.46 µg/L	9.685	285.46 ppb	9.685	3.39%
Zn 213.857†	9965.7	230.24 µg/L	7.144	230.24 ppb	7.144	3.10%

Sequence No.: 12

Sample ID: 245389004|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 310

Date Collected: 2/11/2010 11:50:04

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389004|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57496.4	57496.4	103 %		11:50:37
1	Al 396.153Radial†	206250.7	200323.3	138440 µg/L	138440 ppb	11:50:37
1	Ca 317.933Radial†	23715.4	22845.6	19833 µg/L	19833 ppb	11:50:58
1	Fe 238.204 Radial†	15449.0	14988.7	117070 µg/L	117070 ppb	11:50:58
1	K 766.490 Radial†	19853.5	19062.2	13095 µg/L	13095 ppb	11:50:37
1	Mg 279.077 IEC†	2212.3	2138.3	18501 µg/L	18501 ppb	11:50:58
1	Na 589.592 Radial†	3869.8	3169.0	985.05 µg/L	985.05 ppb	11:50:58
1	Sr 421.552†	26138.9	25353.0	251.10 µg/L	251.10 ppb	11:50:37
1	Sc 361.383	1968145.1	1968145.1	100.86 %		11:52:02
1	Y 371.029	1402121.7	1402121.7	104.59 %		11:52:02
1	Ag 328.068†	-1962.9	-1412.2	-2.0221 µg/L	-2.0221 ppb	11:52:08
1	As 188.979†	15.9	15.0	33.474 µg/L	33.474 ppb	11:52:28
1	B 249.677†	1130.3	773.6	-28.468 µg/L	-28.468 ppb	11:52:08
1	Ba 233.527†	82836.6	82152.3	2056.3 µg/L	2056.3 ppb	11:52:08
1	Be 313.107†	19857.4	23035.8	12.535 µg/L	12.535 ppb	11:52:08
1	Cd 226.502†	290.5	430.8	-1.8070 µg/L	-1.8070 ppb	11:52:28
1	Co 228.616†	1202.5	1199.3	46.081 µg/L	46.081 ppb	11:52:28
1	Cr 267.716†	4862.4	4871.3	103.36 µg/L	103.36 ppb	11:52:08
1	Cu 324.752†	9843.9	7207.2	64.706 µg/L	64.706 ppb	11:52:08
1	Mn 257.610†	964531.7	956532.7	3178.3 µg/L	3178.3 ppb	11:52:02
1	Mo 202.031†	-23.1	-17.0	2.7118 µg/L	2.7118 ppb	11:52:28
1	Ni 231.604†	1780.1	1455.5	77.922 µg/L	77.922 ppb	11:52:28
1	P 214.914†	394.4	367.1	690.33 µg/L	690.33 ppb	11:52:28
1	Pb 220.353†	550.9	448.8	117.74 µg/L	117.74 ppb	11:52:28
1	S 181.975 Axial†	93.3	74.0	312.12 µg/L	312.12 ppb	11:52:28
1	Sb 206.836†	40.7	14.7	10.777 µg/L	10.777 ppb	11:52:28
1	Se 196.026†	-38.1	-48.5	228.42 µg/L	228.42 ppb	11:52:28
1	SiO2†	278163.3	274532.6	56863 µg/L	56863 ppb	11:52:02
1	Si 251.611†	336480.2	333294.3	26421 µg/L	26421 ppb	11:52:02
1	Sn 189.927†	-54.2	-55.7	-34.913 µg/L	-34.913 ppb	11:52:28
1	Ti 334.940†	2205292.7	2186299.8	5083.5 µg/L	5083.5 ppb	11:52:02
1	Tl 190.801†	-70.8	-44.5	23.368 µg/L	23.368 ppb	11:52:28
1	U 409.014†	-1323.5	-1238.4	-125.00 µg/L	-125.00 ppb	11:52:02
1	V 292.402†	20781.7	20678.3	226.66 µg/L	226.66 ppb	11:52:08
1	Zn 213.857†	9357.9	8782.8	203.20 µg/L	203.20 ppb	11:52:08
2	Sc RADIAL	57844.4	57844.4	104 %		11:51:03
2	Al 396.153Radial†	206616.0	199470.9	137850 µg/L	137850 ppb	11:51:03
2	Ca 317.933Radial†	23737.6	22728.5	19732 µg/L	19732 ppb	11:51:23
2	Fe 238.204 Radial†	15465.2	14914.1	116490 µg/L	116490 ppb	11:51:23
2	K 766.490 Radial†	19853.0	18945.7	13015 µg/L	13015 ppb	11:51:03
2	Mg 279.077 IEC†	2215.9	2128.8	18419 µg/L	18419 ppb	11:51:23
2	Na 589.592 Radial†	3906.2	3181.6	988.95 µg/L	988.95 ppb	11:51:23
2	Sr 421.552†	26303.0	25358.6	251.15 µg/L	251.15 ppb	11:51:03
2	Sc 361.383	1990651.4	1990651.4	102.01 %		11:52:36
2	Y 371.029	1416675.3	1416675.3	105.67 %		11:52:36
2	Ag 328.068†	-2048.8	-1474.4	-2.5431 µg/L	-2.5431 ppb	11:52:42
2	As 188.979†	13.5	12.5	28.898 µg/L	28.898 ppb	11:53:02
2	B 249.677†	1149.9	780.1	-27.892 µg/L	-27.892 ppb	11:52:42
2	Ba 233.527†	83314.3	81692.0	2044.8 µg/L	2044.8 ppb	11:52:42
2	Be 313.107†	20027.0	22979.5	12.517 µg/L	12.517 ppb	11:52:42
2	Cd 226.502†	267.0	404.5	-2.4355 µg/L	-2.4355 ppb	11:53:02
2	Co 228.616†	1183.5	1167.1	44.655 µg/L	44.655 ppb	11:53:02
2	Cr 267.716†	4856.4	4810.9	102.08 µg/L	102.08 ppb	11:52:42
2	Cu 324.752†	9881.6	7133.8	64.132 µg/L	64.132 ppb	11:52:42
2	Mn 257.610†	967901.0	949023.5	3153.4 µg/L	3153.4 ppb	11:52:36
2	Mo 202.031†	-33.6	-27.0	1.6633 µg/L	1.6633 ppb	11:53:02
2	Ni 231.604†	1780.8	1436.3	76.906 µg/L	76.906 ppb	11:53:02
2	P 214.914†	405.8	373.9	704.69 µg/L	704.69 ppb	11:53:02
2	Pb 220.353†	552.9	444.6	116.65 µg/L	116.65 ppb	11:53:02

2	S 181.975 Axial†	90.9	70.5	297.68 µg/L	297.68 ppb	11:53:02
2	Sb 206.836†	29.4	3.2	0.0480 µg/L	0.0480 ppb	11:53:02
2	Se 196.026†	-41.8	-51.8	222.28 µg/L	222.28 ppb	11:53:02
2	SiO2†	279117.3	272349.7	56411 µg/L	56411 ppb	11:52:36
2	Si 251.611†	337611.5	330631.4	26210 µg/L	26210 ppb	11:52:36
2	Sn 189.927†	-40.1	-41.3	-28.515 µg/L	-28.515 ppb	11:53:02
2	Ti 334.940†	2210556.9	2166739.9	5038.0 µg/L	5038.0 ppb	11:52:36
2	Tl 190.801†	-72.7	-45.5	21.413 µg/L	21.413 ppb	11:53:02
2	U 409.014†	-1202.6	-1105.1	-113.33 µg/L	-113.33 ppb	11:52:36
2	V 292.402†	20886.8	20548.3	225.25 µg/L	225.25 ppb	11:52:42
2	Zn 213.857†	9397.1	8716.2	201.64 µg/L	201.64 ppb	11:52:42
3	Sc RADIAL	58192.2	58192.2	104 %		11:51:29
3	Al 396.153Radial†	209064.3	200628.1	138650 µg/L	138650 ppb	11:51:29
3	Ca 317.933Radial†	23535.7	22397.8	19444 µg/L	19444 ppb	11:51:49
3	Fe 238.204 Radial†	15361.1	14724.9	115010 µg/L	115010 ppb	11:51:49
3	K 766.490 Radial†	20119.4	19086.8	13112 µg/L	13112 ppb	11:51:29
3	Mg 279.077 IEC†	2202.5	2103.2	18197 µg/L	18197 ppb	11:51:49
3	Na 589.592 Radial†	3872.3	3126.5	971.83 µg/L	971.83 ppb	11:51:49
3	Sr 421.552†	26479.6	25376.3	251.33 µg/L	251.33 ppb	11:51:29
3	Sc 361.383	1975924.1	1975924.1	101.26 %		11:53:10
3	Y 371.029	1404130.8	1404130.8	104.74 %		11:53:10
3	Ag 328.068†	-1869.2	-1312.0	-1.4874 µg/L	-1.4874 ppb	11:53:16
3	As 188.979†	12.5	11.6	27.163 µg/L	27.163 ppb	11:53:36
3	B 249.677†	1137.5	776.2	-27.296 µg/L	-27.296 ppb	11:53:16
3	Ba 233.527†	78498.0	77544.3	1941.0 µg/L	1941.0 ppb	11:53:16
3	Be 313.107†	18509.7	21627.3	11.735 µg/L	11.735 ppb	11:53:16
3	Cd 226.502†	236.7	376.5	-3.0111 µg/L	-3.0111 ppb	11:53:36
3	Co 228.616†	1074.9	1068.5	40.362 µg/L	40.362 ppb	11:53:36
3	Cr 267.716†	4488.0	4482.5	95.114 µg/L	95.114 ppb	11:53:16
3	Cu 324.752†	9387.8	6718.3	61.135 µg/L	61.135 ppb	11:53:16
3	Mn 257.610†	929683.8	918353.5	3051.8 µg/L	3051.8 ppb	11:53:10
3	Mo 202.031†	-27.0	-20.8	2.2437 µg/L	2.2437 ppb	11:53:36
3	Ni 231.604†	1621.7	1292.1	69.319 µg/L	69.319 ppb	11:53:36
3	P 214.914†	373.5	345.0	647.29 µg/L	647.29 ppb	11:53:36
3	Pb 220.353†	512.3	408.5	107.55 µg/L	107.55 ppb	11:53:36
3	S 181.975 Axial†	77.1	57.6	243.19 µg/L	243.19 ppb	11:53:36
3	Sb 206.836†	32.8	6.8	3.4961 µg/L	3.4961 ppb	11:53:36
3	Se 196.026†	-49.8	-59.9	206.81 µg/L	206.81 ppb	11:53:36
3	SiO2†	270600.0	265977.7	55091 µg/L	55091 ppb	11:53:10
3	Si 251.611†	327564.5	323176.1	25619 µg/L	25619 ppb	11:53:10
3	Sn 189.927†	-36.5	-38.0	-26.936 µg/L	-26.936 ppb	11:53:36
3	Ti 334.940†	2117061.4	2090558.6	4860.8 µg/L	4860.8 ppb	11:53:10
3	Tl 190.801†	-69.9	-43.3	22.325 µg/L	22.325 ppb	11:53:36
3	U 409.014†	-1303.2	-1213.2	-122.49 µg/L	-122.49 ppb	11:53:10
3	V 292.402†	19348.4	19181.7	211.00 µg/L	211.00 ppb	11:53:16
3	Zn 213.857†	8836.8	8231.6	190.16 µg/L	190.16 ppb	11:53:16

Mean Data: 245389004|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1978240.2	101.38 %	0.586			0.58%
Sc RADIAL	57844.3	104 %	0.6			0.60%
Y 371.029	1407642.6	105.00 %	0.588			0.56%
Ag 328.068†	-1399.5	-2.0175 µg/L	0.52789	-2.0175 ppb	0.52789	26.17%
Al 396.153Radial†	200140.8	138310 µg/L	414.5	138310 ppb	414.5	0.30%
As 188.979†	13.0	29.845 µg/L	3.2607	29.845 ppb	3.2607	10.93%
B 249.677†	776.6	-27.885 µg/L	0.5861	-27.885 ppb	0.5861	2.10%
Ba 233.527†	80462.9	2014.0 µg/L	63.53	2014.0 ppb	63.53	3.15%
Be 313.107†	22547.6	12.262 µg/L	0.4568	12.262 ppb	0.4568	3.73%
Ca 317.933Radial†	22657.3	19670 µg/L	201.6	19670 ppb	201.6	1.03%
Cd 226.502†	403.9	-2.4179 µg/L	0.60228	-2.4179 ppb	0.60228	24.91%
Co 228.616†	1145.0	43.699 µg/L	2.9766	43.699 ppb	2.9766	6.81%
Cr 267.716†	4721.5	100.19 µg/L	4.439	100.19 ppb	4.439	4.43%
Cu 324.752†	7019.8	63.325 µg/L	1.9179	63.325 ppb	1.9179	3.03%
Fe 238.204 Radial†	14875.9	116190 µg/L	1061.9	116190 ppb	1061.9	0.91%
K 766.490 Radial†	19031.5	13074 µg/L	51.8	13074 ppb	51.8	0.40%
Mg 279.077 IEC†	2123.4	18372 µg/L	157.0	18372 ppb	157.0	0.85%
Mn 257.610†	941303.3	3127.8 µg/L	67.03	3127.8 ppb	67.03	2.14%
Mo 202.031†	-21.6	2.2063 µg/L	0.52521	2.2063 ppb	0.52521	23.81%
Na 589.592 Radial†	3159.0	981.94 µg/L	8.976	981.94 ppb	8.976	0.91%

Ni 231.604†	1394.7	74.715 µg/L	4.7011	74.715 ppb	4.7011	6.29%
P 214.914†	362.0	680.77 µg/L	29.868	680.77 ppb	29.868	4.39%
Pb 220.353†	434.0	113.98 µg/L	5.595	113.98 ppb	5.595	4.91%
S 181.975 Axial†	67.4	284.33 µg/L	36.351	284.33 ppb	36.351	12.78%
Sb 206.836†	8.2	4.7737 µg/L	5.47739	4.7737 ppb	5.47739	114.74%
Se 196.026†	-53.4	219.17 µg/L	11.133	219.17 ppb	11.133	5.08%
SiO2†	270953.3	56121 µg/L	920.7	56121 ppb	920.7	1.64%
Si 251.611†	329033.9	26083 µg/L	415.8	26083 ppb	415.8	1.59%
Sn 189.927†	-45.0	-30.121 µg/L	4.2245	-30.121 ppb	4.2245	14.03%
Sr 421.552†	25362.6	251.19 µg/L	0.121	251.19 ppb	0.121	0.05%
Ti 334.940†	2147866.1	4994.1 µg/L	117.63	4994.1 ppb	117.63	2.36%
Tl 190.801†	-44.4	22.369 µg/L	0.9781	22.369 ppb	0.9781	4.37%
U 409.014†	-1185.6	-120.27 µg/L	6.142	-120.27 ppb	6.142	5.11%
V 292.402†	20136.1	220.97 µg/L	8.665	220.97 ppb	8.665	3.92%
Zn 213.857†	8576.8	198.34 µg/L	7.119	198.34 ppb	7.119	3.59%

Sequence No.: 13

Sample ID: 245389005|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 311

Date Collected: 2/11/2010 11:53:45

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389005|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57975.5	57975.5	104 %		11:54:18
1	Al 396.153Radial†	176119.3	169647.1	117240 µg/L	117240 ppb	11:54:18
1	Ca 317.933Radial†	24142.2	23066.4	20025 µg/L	20025 ppb	11:54:38
1	Fe 238.204 Radial†	13041.9	12546.3	97994 µg/L	97994 ppb	11:54:38
1	K 766.490 Radial†	17295.9	16439.5	11294 µg/L	11294 ppb	11:54:18
1	Mg 279.077 IEC†	1702.7	1629.7	14091 µg/L	14091 ppb	11:54:38
1	Na 589.592 Radial†	2612.6	1927.1	599.02 µg/L	599.02 ppb	11:54:38
1	Sr 421.552†	23213.7	22325.8	221.12 µg/L	221.12 ppb	11:54:18
1	Sc 361.383	1984907.9	1984907.9	101.72 %		11:55:43
1	Y 371.029	1399222.0	1399222.0	104.37 %		11:55:43
1	Ag 328.068†	-1865.7	-1300.2	-2.5094 µg/L	-2.5094 ppb	11:55:49
1	As 188.979†	13.1	12.1	27.042 µg/L	27.042 ppb	11:56:09
1	B 249.677†	997.1	633.1	-24.443 µg/L	-24.443 ppb	11:55:49
1	Ba 233.527†	78564.5	77258.9	1933.8 µg/L	1933.8 ppb	11:55:49
1	Be 313.107†	16761.8	19826.3	10.754 µg/L	10.754 ppb	11:55:49
1	Cd 226.502†	223.1	362.1	-1.4806 µg/L	-1.4806 ppb	11:56:09
1	Co 228.616†	1013.8	1003.6	38.123 µg/L	38.123 ppb	11:56:09
1	Cr 267.716†	3829.1	3814.7	80.959 µg/L	80.959 ppb	11:55:49
1	Cu 324.752†	8233.9	5542.0	50.865 µg/L	50.865 ppb	11:55:49
1	Mn 257.610†	704032.3	692363.5	2302.3 µg/L	2302.3 ppb	11:55:43
1	Mo 202.031†	-20.8	-14.5	2.2396 µg/L	2.2396 ppb	11:56:09
1	Ni 231.604†	1400.6	1067.5	57.301 µg/L	57.301 ppb	11:56:09
1	P 214.914†	399.5	368.9	704.60 µg/L	704.60 ppb	11:56:09
1	Pb 220.353†	519.8	413.6	108.30 µg/L	108.30 ppb	11:56:09
1	S 181.975 Axial†	124.6	104.0	438.62 µg/L	438.62 ppb	11:56:09
1	Sb 206.836†	28.1	2.0	-0.8210 µg/L	-0.8210 ppb	11:56:09
1	Se 196.026†	-34.0	-44.2	186.35 µg/L	186.35 ppb	11:56:09
1	SiO2†	275711.2	269792.9	55881 µg/L	55881 ppb	11:55:43
1	Si 251.611†	333373.7	327422.9	25956 µg/L	25956 ppb	11:55:43
1	Sn 189.927†	-30.4	-31.9	-22.917 µg/L	-22.917 ppb	11:56:09
1	Ti 334.940†	1953589.3	1920388.8	4465.4 µg/L	4465.4 ppb	11:55:43
1	Tl 190.801†	-73.7	-46.7	6.9908 µg/L	6.9908 ppb	11:56:09
1	U 409.014†	-1033.0	-941.8	-96.603 µg/L	-96.603 ppb	11:55:43
1	V 292.402†	18831.9	18587.4	202.88 µg/L	202.88 ppb	11:55:49
1	Zn 213.857†	8203.9	7569.8	175.43 µg/L	175.43 ppb	11:55:49
2	Sc RADIAL	58045.4	58045.4	104 %		11:54:44
2	Al 396.153Radial†	176474.2	169784.1	117330 µg/L	117330 ppb	11:54:44
2	Ca 317.933Radial†	24178.5	23073.3	20031 µg/L	20031 ppb	11:55:04
2	Fe 238.204 Radial†	13051.2	12540.1	97946 µg/L	97946 ppb	11:55:04
2	K 766.490 Radial†	17343.3	16465.1	11311 µg/L	11311 ppb	11:54:44
2	Mg 279.077 IEC†	1699.4	1624.5	14046 µg/L	14046 ppb	11:55:04
2	Na 589.592 Radial†	2609.3	1920.9	597.08 µg/L	597.08 ppb	11:55:04
2	Sr 421.552†	23209.5	22294.8	220.81 µg/L	220.81 ppb	11:54:44
2	Sc 361.383	1993619.7	1993619.7	102.17 %		11:56:17
2	Y 371.029	1404713.2	1404713.2	104.78 %		11:56:17
2	Ag 328.068†	-1764.3	-1192.9	-1.7184 µg/L	-1.7184 ppb	11:56:23
2	As 188.979†	18.0	16.9	35.931 µg/L	35.931 ppb	11:56:43
2	B 249.677†	999.2	630.9	-24.511 µg/L	-24.511 ppb	11:56:23
2	Ba 233.527†	77652.6	76028.8	1903.0 µg/L	1903.0 ppb	11:56:23
2	Be 313.107†	16496.5	19494.7	10.552 µg/L	10.552 ppb	11:56:23
2	Cd 226.502†	221.4	359.5	-1.5443 µg/L	-1.5443 ppb	11:56:43
2	Co 228.616†	1015.6	1001.1	38.039 µg/L	38.039 ppb	11:56:43
2	Cr 267.716†	3796.4	3766.3	79.930 µg/L	79.930 ppb	11:56:23
2	Cu 324.752†	8150.1	5424.6	50.069 µg/L	50.069 ppb	11:56:23
2	Mn 257.610†	704052.2	689358.4	2292.3 µg/L	2292.3 ppb	11:56:17
2	Mo 202.031†	-22.0	-15.6	2.1251 µg/L	2.1251 ppb	11:56:43
2	Ni 231.604†	1404.5	1065.4	57.188 µg/L	57.188 ppb	11:56:43
2	P 214.914†	399.2	366.8	700.59 µg/L	700.59 ppb	11:56:43
2	Pb 220.353†	514.7	406.4	106.48 µg/L	106.48 ppb	11:56:43

2	S 181.975 Axial†	119.9	98.8	417.07 µg/L	417.07 ppb	11:56:43
2	Sb 206.836†	35.2	8.8	5.5531 µg/L	5.5531 ppb	11:56:43
2	Se 196.026†	-33.3	-43.4	187.41 µg/L	187.41 ppb	11:56:43
2	SiO2†	275856.1	268750.2	55665 µg/L	55665 ppb	11:56:17
2	Si 251.611†	333444.8	326060.4	25848 µg/L	25848 ppb	11:56:17
2	Sn 189.927†	-29.3	-30.6	-22.375 µg/L	-22.375 ppb	11:56:43
2	Ti 334.940†	1954685.9	1913069.7	4448.4 µg/L	4448.4 ppb	11:56:17
2	Tl 190.801†	-65.7	-38.5	17.767 µg/L	17.767 ppb	11:56:43
2	U 409.014†	-1104.0	-1006.8	-102.24 µg/L	-102.24 ppb	11:56:17
2	V 292.402†	18514.4	18195.8	198.83 µg/L	198.83 ppb	11:56:23
2	Zn 213.857†	8069.6	7403.2	171.45 µg/L	171.45 ppb	11:56:23
3	Sc RADIAL	57803.3	57803.3	104 %		11:55:10
3	Al 396.153Radial†	176575.9	170593.4	117890 µg/L	117890 ppb	11:55:10
3	Ca 317.933Radial†	24216.7	23207.6	20148 µg/L	20148 ppb	11:55:30
3	Fe 238.204 Radial†	13063.5	12604.6	98449 µg/L	98449 ppb	11:55:30
3	K 766.490 Radial†	17317.2	16509.7	11342 µg/L	11342 ppb	11:55:10
3	Mg 279.077 IEC†	1695.8	1628.0	14075 µg/L	14075 ppb	11:55:30
3	Na 589.592 Radial†	2631.5	1952.9	607.02 µg/L	607.02 ppb	11:55:30
3	Sr 421.552†	23254.7	22432.0	222.17 µg/L	222.17 ppb	11:55:10
3	Sc 361.383	1975687.0	1975687.0	101.25 %		11:56:51
3	Y 371.029	1391208.4	1391208.4	103.77 %		11:56:51
3	Ag 328.068†	-1678.0	-1123.4	-1.2201 µg/L	-1.2201 ppb	11:56:56
3	As 188.979†	11.8	10.9	24.861 µg/L	24.861 ppb	11:57:17
3	B 249.677†	996.6	637.2	-24.518 µg/L	-24.518 ppb	11:56:56
3	Ba 233.527†	73492.9	72610.3	1817.4 µg/L	1817.4 ppb	11:56:56
3	Be 313.107†	15311.2	18470.5	9.9648 µg/L	9.9648 ppb	11:56:56
3	Cd 226.502†	183.8	324.3	-2.5333 µg/L	-2.5333 ppb	11:57:17
3	Co 228.616†	887.6	883.7	32.795 µg/L	32.795 ppb	11:57:17
3	Cr 267.716†	3520.4	3527.4	74.861 µg/L	74.861 ppb	11:56:56
3	Cu 324.752†	7794.6	5145.9	48.266 µg/L	48.266 ppb	11:56:56
3	Mn 257.610†	678718.0	670591.5	2230.3 µg/L	2230.3 ppb	11:56:51
3	Mo 202.031†	-22.5	-16.3	2.0737 µg/L	2.0737 ppb	11:57:17
3	Ni 231.604†	1287.6	962.4	51.789 µg/L	51.789 ppb	11:57:17
3	P 214.914†	356.3	328.1	621.27 µg/L	621.27 ppb	11:57:17
3	Pb 220.353†	475.6	372.4	97.805 µg/L	97.805 ppb	11:57:17
3	S 181.975 Axial†	114.8	94.8	400.05 µg/L	400.05 ppb	11:57:17
3	Sb 206.836†	37.1	11.0	7.6542 µg/L	7.6542 ppb	11:57:17
3	Se 196.026†	-33.3	-43.6	188.38 µg/L	188.38 ppb	11:57:17
3	SiO2†	268056.5	263497.6	54577 µg/L	54577 ppb	11:56:51
3	Si 251.611†	323843.9	319540.2	25331 µg/L	25331 ppb	11:56:51
3	Sn 189.927†	-29.2	-30.8	-22.509 µg/L	-22.509 ppb	11:57:17
3	Ti 334.940†	1873075.6	1849831.2	4301.3 µg/L	4301.3 ppb	11:56:51
3	Tl 190.801†	-57.7	-31.2	26.129 µg/L	26.129 ppb	11:57:17
3	U 409.014†	-1049.9	-963.2	-98.534 µg/L	-98.534 ppb	11:56:51
3	V 292.402†	17377.8	17237.7	189.02 µg/L	189.02 ppb	11:56:56
3	Zn 213.857†	7671.9	7082.1	163.76 µg/L	163.76 ppb	11:56:56

## Mean Data: 245389005|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1984738.2	101.71 %	0.460			0.45%
Sc RADIAL	57941.4	104 %	0.2			0.22%
Y 371.029	1398381.2	104.31 %	0.507			0.49%
Ag 328.068†	-1205.5	-1.8160 µg/L	0.65013	-1.8160 ppb	0.65013	35.80%
Al 396.153Radial†	170008.2	117490 µg/L	353.4	117490 ppb	353.4	0.30%
As 188.979†	13.3	29.278 µg/L	5.8639	29.278 ppb	5.8639	20.03%
B 249.677†	633.8	-24.491 µg/L	0.0417	-24.491 ppb	0.0417	0.17%
Ba 233.527†	75299.3	1884.8 µg/L	60.29	1884.8 ppb	60.29	3.20%
Be 313.107†	19263.8	10.424 µg/L	0.4100	10.424 ppb	0.4100	3.93%
Ca 317.933Radial†	23115.8	20068 µg/L	69.1	20068 ppb	69.1	0.34%
Cd 226.502†	348.6	-1.8528 µg/L	0.59027	-1.8528 ppb	0.59027	31.86%
Co 228.616†	962.8	36.319 µg/L	3.0518	36.319 ppb	3.0518	8.40%
Cr 267.716†	3702.8	78.584 µg/L	3.2643	78.584 ppb	3.2643	4.15%
Cu 324.752†	5370.8	49.733 µg/L	1.3314	49.733 ppb	1.3314	2.68%
Fe 238.204 Radial†	12563.6	98130 µg/L	277.8	98130 ppb	277.8	0.28%
K 766.490 Radial†	16471.4	11316 µg/L	24.4	11316 ppb	24.4	0.22%
Mg 279.077 IEC†	1627.4	14071 µg/L	22.7	14071 ppb	22.7	0.16%
Mn 257.610†	684104.5	2275.0 µg/L	38.98	2275.0 ppb	38.98	1.71%
Mo 202.031†	-15.5	2.1462 µg/L	0.08493	2.1462 ppb	0.08493	3.96%
Na 589.592 Radial†	1933.6	601.04 µg/L	5.269	601.04 ppb	5.269	0.88%

Ni 231.604†	1031.8	55.426 µg/L	3.1498	55.426 ppb	3.1498	5.68%
P 214.914†	354.6	675.49 µg/L	46.994	675.49 ppb	46.994	6.96%
Pb 220.353†	397.5	104.20 µg/L	5.609	104.20 ppb	5.609	5.38%
S 181.975 Axial†	99.2	418.58 µg/L	19.327	418.58 ppb	19.327	4.62%
Sb 206.836†	7.3	4.1288 µg/L	4.41350	4.1288 ppb	4.41350	106.90%
Se 196.026†	-43.7	187.38 µg/L	1.013	187.38 ppb	1.013	0.54%
SiO2†	267346.9	55374 µg/L	698.9	55374 ppb	698.9	1.26%
Si 251.611†	324341.2	25711 µg/L	334.0	25711 ppb	334.0	1.30%
Sn 189.927†	-31.1	-22.600 µg/L	0.2822	-22.600 ppb	0.2822	1.25%
Sr 421.552†	22350.8	221.36 µg/L	0.713	221.36 ppb	0.713	0.32%
Ti 334.940†	1894429.9	4405.0 µg/L	90.23	4405.0 ppb	90.23	2.05%
Tl 190.801†	-38.8	16.962 µg/L	9.5943	16.962 ppb	9.5943	56.56%
U 409.014†	-970.6	-99.127 µg/L	2.8668	-99.127 ppb	2.8668	2.89%
V 292.402†	18006.9	196.91 µg/L	7.123	196.91 ppb	7.123	3.62%
Zn 213.857†	7351.7	170.21 µg/L	5.931	170.21 ppb	5.931	3.48%



Sequence No.: 14  
 Sample ID: 245389006|945403|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 312  
 Date Collected: 2/11/2010 11:57:26  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245389006|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57564.2	57564.2	103 %		11:57:59
1	Al 396.153Radial†	202770.9	196711.9	135940 µg/L	135940 ppb	11:57:59
1	Ca 317.933Radial†	41264.9	39842.1	34589 µg/L	34589 ppb	11:57:59
1	Fe 238.204 Radial†	14667.6	14213.0	111010 µg/L	111010 ppb	11:58:19
1	K 766.490 Radial†	19603.3	18796.8	12913 µg/L	12913 ppb	11:57:59
1	Mg 279.077 IEC†	1893.2	1826.2	15789 µg/L	15789 ppb	11:58:19
1	Na 589.592 Radial†	3495.1	2801.1	870.68 µg/L	870.68 ppb	11:58:19
1	Sr 421.552†	30515.3	29568.3	292.85 µg/L	292.85 ppb	11:57:59
1	Sc 361.383	1964088.7	1964088.7	100.65 %		11:59:24
1	Y 371.029	1391914.3	1391914.3	103.83 %		11:59:24
1	Ag 328.068†	-2066.6	-1519.2	-3.2111 µg/L	-3.2111 ppb	11:59:30
1	As 188.979†	8.3	7.5	18.459 µg/L	18.459 ppb	11:59:50
1	B 249.677†	1110.6	756.3	-26.050 µg/L	-26.050 ppb	11:59:30
1	Ba 233.527†	80055.4	79558.7	1991.4 µg/L	1991.4 ppb	11:59:30
1	Be 313.107†	19151.1	22374.8	12.136 µg/L	12.136 ppb	11:59:30
1	Cd 226.502†	269.8	410.8	-1.6577 µg/L	-1.6577 ppb	11:59:50
1	Co 228.616†	1058.6	1058.7	39.525 µg/L	39.525 ppb	11:59:50
1	Cr 267.716†	4330.2	4352.4	92.368 µg/L	92.368 ppb	11:59:30
1	Cu 324.752†	8428.7	5821.4	54.552 µg/L	54.552 ppb	11:59:30
1	Mn 257.610†	724809.9	720342.6	2396.5 µg/L	2396.5 ppb	11:59:24
1	Mo 202.031†	-24.1	-18.1	2.3704 µg/L	2.3704 ppb	11:59:50
1	Ni 231.604†	1581.9	1262.3	67.698 µg/L	67.698 ppb	11:59:50
1	P 214.914†	486.1	459.1	883.74 µg/L	883.74 ppb	11:59:50
1	Pb 220.353†	561.6	460.6	120.86 µg/L	120.86 ppb	11:59:50
1	S 181.975 Axial†	107.8	88.6	373.68 µg/L	373.68 ppb	11:59:50
1	Sb 206.836†	32.9	7.1	2.5260 µg/L	2.5260 ppb	11:59:50
1	Se 196.026†	-45.3	-55.7	199.81 µg/L	199.81 ppb	11:59:50
1	SiO2†	270884.1	267870.2	55483 µg/L	55483 ppb	11:59:24
1	Si 251.611†	327876.9	325435.8	25798 µg/L	25798 ppb	11:59:24
1	Sn 189.927†	-40.3	-42.0	-28.633 µg/L	-28.633 ppb	11:59:50
1	Ti 334.940†	2182364.6	2168036.2	5041.4 µg/L	5041.4 ppb	11:59:24
1	Tl 190.801†	-68.6	-42.4	20.055 µg/L	20.055 ppb	11:59:50
1	U 409.014†	-1344.1	-1261.7	-127.07 µg/L	-127.07 ppb	11:59:24
1	V 292.402†	20905.8	20844.1	227.62 µg/L	227.62 ppb	11:59:30
1	Zn 213.857†	8977.2	8423.6	195.10 µg/L	195.10 ppb	11:59:30
2	Sc RADIAL	57736.9	57736.9	103 %		11:58:25
2	Al 396.153Radial†	204815.2	198100.5	136900 µg/L	136900 ppb	11:58:25
2	Ca 317.933Radial†	41586.5	40033.3	34755 µg/L	34755 ppb	11:58:25
2	Fe 238.204 Radial†	14686.9	14189.1	110830 µg/L	110830 ppb	11:58:45
2	K 766.490 Radial†	19633.1	18768.7	12894 µg/L	12894 ppb	11:58:25
2	Mg 279.077 IEC†	1887.6	1815.3	15694 µg/L	15694 ppb	11:58:45
2	Na 589.592 Radial†	3489.3	2785.4	865.80 µg/L	865.80 ppb	11:58:45
2	Sr 421.552†	30758.8	29715.2	294.30 µg/L	294.30 ppb	11:58:25
2	Sc 361.383	1963842.9	1963842.9	100.64 %		11:59:58
2	Y 371.029	1392005.9	1392005.9	103.83 %		11:59:58
2	Ag 328.068†	-2091.4	-1544.1	-3.4091 µg/L	-3.4091 ppb	12:00:03
2	As 188.979†	8.8	7.9	19.305 µg/L	19.305 ppb	12:00:24
2	B 249.677†	1156.8	802.3	-24.021 µg/L	-24.021 ppb	12:00:03
2	Ba 233.527†	80637.2	80146.8	2006.1 µg/L	2006.1 ppb	12:00:03
2	Be 313.107†	19218.4	22444.1	12.182 µg/L	12.182 ppb	12:00:03
2	Cd 226.502†	253.6	394.7	-2.0628 µg/L	-2.0628 ppb	12:00:24
2	Co 228.616†	1044.7	1045.0	38.892 µg/L	38.892 ppb	12:00:24
2	Cr 267.716†	4342.4	4365.1	92.638 µg/L	92.638 ppb	12:00:03
2	Cu 324.752†	8330.0	5724.3	53.873 µg/L	53.873 ppb	12:00:03
2	Mn 257.610†	723043.6	718677.7	2390.9 µg/L	2390.9 ppb	11:59:58
2	Mo 202.031†	-22.8	-16.8	2.4985 µg/L	2.4985 ppb	12:00:24
2	Ni 231.604†	1544.3	1225.2	65.747 µg/L	65.747 ppb	12:00:24
2	P 214.914†	479.1	452.2	870.15 µg/L	870.15 ppb	12:00:24
2	Pb 220.353†	550.3	449.4	118.05 µg/L	118.05 ppb	12:00:24

2	S 181.975 Axial†	103.1	83.9	353.89 µg/L	353.89 ppb	12:00:24
2	Sb 206.836†	39.9	14.0	8.9609 µg/L	8.9609 ppb	12:00:24
2	Se 196.026†	-38.0	-48.6	209.61 µg/L	209.61 ppb	12:00:24
2	SiO2†	270773.0	267793.5	55467 µg/L	55467 ppb	11:59:58
2	Si 251.611†	327500.4	325102.4	25772 µg/L	25772 ppb	11:59:58
2	Sn 189.927†	-34.7	-36.4	-26.180 µg/L	-26.180 ppb	12:00:24
2	Ti 334.940†	2179006.9	2164971.2	5034.3 µg/L	5034.3 ppb	11:59:58
2	Tl 190.801†	-70.7	-44.5	17.196 µg/L	17.196 ppb	12:00:24
2	U 409.014†	-1303.1	-1221.1	-123.53 µg/L	-123.53 ppb	11:59:58
2	V 292.402†	20963.6	20904.2	228.22 µg/L	228.22 ppb	12:00:03
2	Zn 213.857†	9048.2	8495.3	196.84 µg/L	196.84 ppb	12:00:03
3	Sc RADIAL	57225.3	57225.3	102 %		11:58:51
3	Al 396.153Radial†	202838.9	197942.9	136790 µg/L	136790 ppb	11:58:51
3	Ca 317.933Radial†	40956.5	39778.1	34533 µg/L	34533 ppb	11:58:51
3	Fe 238.204 Radial†	14734.6	14362.6	112180 µg/L	112180 ppb	11:59:11
3	K 766.490 Radial†	19542.1	18849.7	12950 µg/L	12950 ppb	11:58:51
3	Mg 279.077 IEC†	1906.3	1849.9	15994 µg/L	15994 ppb	11:59:11
3	Na 589.592 Radial†	3468.3	2795.1	868.82 µg/L	868.82 ppb	11:59:11
3	Sr 421.552†	30354.8	29586.9	293.03 µg/L	293.03 ppb	11:58:51
3	Sc 361.383	1974145.0	1974145.0	101.17 %		12:00:32
3	Y 371.029	1398056.0	1398056.0	104.28 %		12:00:32
3	Ag 328.068†	-1952.4	-1395.9	-2.2958 µg/L	-2.2958 ppb	12:00:37
3	As 188.979†	5.8	4.9	13.827 µg/L	13.827 ppb	12:00:58
3	B 249.677†	1119.8	759.7	-26.527 µg/L	-26.527 ppb	12:00:37
3	Ba 233.527†	75993.4	75138.5	1880.8 µg/L	1880.8 ppb	12:00:37
3	Be 313.107†	17672.9	20816.7	11.254 µg/L	11.254 ppb	12:00:37
3	Cd 226.502†	207.8	348.1	-3.4498 µg/L	-3.4498 ppb	12:00:58
3	Co 228.616†	931.6	927.9	33.874 µg/L	33.874 ppb	12:00:58
3	Cr 267.716†	4000.8	4004.9	84.994 µg/L	84.994 ppb	12:00:37
3	Cu 324.752†	8129.4	5482.8	52.439 µg/L	52.439 ppb	12:00:37
3	Mn 257.610†	695742.6	687942.9	2289.5 µg/L	2289.5 ppb	12:00:32
3	Mo 202.031†	-20.8	-14.7	2.7645 µg/L	2.7645 ppb	12:00:58
3	Ni 231.604†	1428.3	1102.4	59.323 µg/L	59.323 ppb	12:00:58
3	P 214.914†	438.3	409.3	781.44 µg/L	781.44 ppb	12:00:58
3	Pb 220.353†	526.2	422.7	111.19 µg/L	111.19 ppb	12:00:58
3	S 181.975 Axial†	99.2	79.5	335.31 µg/L	335.31 ppb	12:00:58
3	Sb 206.836†	29.2	3.3	-0.9460 µg/L	-0.9460 ppb	12:00:58
3	Se 196.026†	-30.8	-41.3	223.58 µg/L	223.58 ppb	12:00:58
3	SiO2†	262823.0	258531.3	53548 µg/L	53548 ppb	12:00:32
3	Si 251.611†	317783.7	313799.8	24876 µg/L	24876 ppb	12:00:32
3	Sn 189.927†	-40.1	-41.5	-28.535 µg/L	-28.535 ppb	12:00:58
3	Ti 334.940†	2082364.1	2058146.4	4785.9 µg/L	4785.9 ppb	12:00:32
3	Tl 190.801†	-71.5	-44.9	14.285 µg/L	14.285 ppb	12:00:58
3	U 409.014†	-1198.9	-1111.3	-114.18 µg/L	-114.18 ppb	12:00:32
3	V 292.402†	19500.7	19349.5	212.38 µg/L	212.38 ppb	12:00:37
3	Zn 213.857†	8503.7	7910.2	182.79 µg/L	182.79 ppb	12:00:37

Mean Data: 245389006|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1967358.9	100.82 %	0.301			0.30%
Sc RADIAL	57508.8	103 %	0.5			0.45%
Y 371.029	1393992.0	103.98 %	0.263			0.25%
Ag 328.068†	-1486.4	-2.9720 µg/L	0.59392	-2.9720 ppb	0.59392	19.98%
Al 396.153Radial†	197585.1	136550 µg/L	525.4	136550 ppb	525.4	0.38%
As 188.979†	6.8	17.197 µg/L	2.9488	17.197 ppb	2.9488	17.15%
B 249.677†	772.8	-25.533 µg/L	1.3308	-25.533 ppb	1.3308	5.21%
Ba 233.527†	78281.4	1959.4 µg/L	68.53	1959.4 ppb	68.53	3.50%
Be 313.107†	21878.5	11.857 µg/L	0.5228	11.857 ppb	0.5228	4.41%
Ca 317.933Radial†	39884.5	34626 µg/L	115.3	34626 ppb	115.3	0.33%
Cd 226.502†	384.6	-2.3901 µg/L	0.93977	-2.3901 ppb	0.93977	39.32%
Co 228.616†	1010.6	37.430 µg/L	3.0964	37.430 ppb	3.0964	8.27%
Cr 267.716†	4240.8	90.000 µg/L	4.3375	90.000 ppb	4.3375	4.82%
Cu 324.752†	5676.2	53.621 µg/L	1.0787	53.621 ppb	1.0787	2.01%
Fe 238.204 Radial†	14254.9	111340 µg/L	734.6	111340 ppb	734.6	0.66%
K 766.490 Radial†	18805.1	12919 µg/L	28.2	12919 ppb	28.2	0.22%
Mg 279.077 IEC†	1830.5	15826 µg/L	153.1	15826 ppb	153.1	0.97%
Mn 257.610†	708987.8	2358.9 µg/L	60.25	2358.9 ppb	60.25	2.55%
Mo 202.031†	-16.5	2.5445 µg/L	0.20105	2.5445 ppb	0.20105	7.90%
Na 589.592 Radial†	2793.8	868.43 µg/L	2.464	868.43 ppb	2.464	0.28%

Ni 231.604†	1196.6	64.256 µg/L	4.3817	64.256 ppb	4.3817	6.82%
P 214.914†	440.2	845.11 µg/L	55.555	845.11 ppb	55.555	6.57%
Pb 220.353†	444.2	116.70 µg/L	4.976	116.70 ppb	4.976	4.26%
S 181.975 Axial†	84.0	354.29 µg/L	19.190	354.29 ppb	19.190	5.42%
Sb 206.836†	8.1	3.5137 µg/L	5.02676	3.5137 ppb	5.02676	143.06%
Se 196.026†	-48.5	211.00 µg/L	11.945	211.00 ppb	11.945	5.66%
SiO2†	264731.7	54833 µg/L	1112.2	54833 ppb	1112.2	2.03%
Si 251.611†	321446.0	25482 µg/L	525.1	25482 ppb	525.1	2.06%
Sn 189.927†	-40.0	-27.783 µg/L	1.3887	-27.783 ppb	1.3887	5.00%
Sr 421.552†	29623.5	293.39 µg/L	0.792	293.39 ppb	0.792	0.27%
Ti 334.940†	2130384.6	4953.9 µg/L	145.55	4953.9 ppb	145.55	2.94%
Tl 190.801†	-43.9	17.178 µg/L	2.8852	17.178 ppb	2.8852	16.80%
U 409.014†	-1198.0	-121.59 µg/L	6.662	-121.59 ppb	6.662	5.48%
V 292.402†	20365.9	222.74 µg/L	8.978	222.74 ppb	8.978	4.03%
Zn 213.857†	8276.4	191.58 µg/L	7.662	191.58 ppb	7.662	4.00%

Sequence No.: 15

Sample ID: 245389007|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 313

Date Collected: 2/11/2010 12:01:07

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389007|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58445.6	58445.6	105 %			12:01:40
1	Al 396.153Radial†	99847.8	95412.5	65937 µg/L		65937 ppb	12:01:40
1	Ca 317.933Radial†	29259.8	27768.7	24107 µg/L		24107 ppb	12:01:40
1	Fe 238.204 Radial†	11648.1	11113.6	86804 µg/L		86804 ppb	12:02:00
1	K 766.490 Radial†	17193.0	16207.2	11134 µg/L		11134 ppb	12:01:40
1	Mg 279.077 IEC†	1412.3	1339.1	11571 µg/L		11571 ppb	12:02:00
1	Na 589.592 Radial†	1961.4	1284.7	399.33 µg/L		399.33 ppb	12:01:40
1	Sr 421.552†	17917.5	17085.9	169.22 µg/L		169.22 ppb	12:01:40
1	Sc 361.383	1984641.3	1984641.3	101.71 %			12:03:04
1	Y 371.029	1383069.4	1383069.4	103.17 %			12:03:04
1	Ag 328.068†	-1676.5	-1114.4	-1.9166 µg/L		-1.9166 ppb	12:03:10
1	As 188.979†	6.5	5.6	14.197 µg/L		14.197 ppb	12:03:31
1	B 249.677†	1037.9	673.4	-16.928 µg/L		-16.928 ppb	12:03:10
1	Ba 233.527†	45518.7	44778.0	1120.9 µg/L		1120.9 ppb	12:03:10
1	Be 313.107†	11154.4	14315.3	7.5340 µg/L		7.5340 ppb	12:03:10
1	Cd 226.502†	180.5	320.2	-1.3286 µg/L		-1.3286 ppb	12:03:31
1	Co 228.616†	1034.5	1024.1	40.420 µg/L		40.420 ppb	12:03:31
1	Cr 267.716†	3355.3	3349.3	71.085 µg/L		71.085 ppb	12:03:10
1	Cu 324.752†	7458.0	4780.2	44.190 µg/L		44.190 ppb	12:03:10
1	Mn 257.610†	882403.7	867834.2	2881.2 µg/L		2881.2 ppb	12:03:04
1	Mo 202.031†	-9.7	-3.6	2.9297 µg/L		2.9297 ppb	12:03:31
1	Ni 231.604†	1242.8	912.6	49.017 µg/L		49.017 ppb	12:03:31
1	P 214.914†	417.5	386.6	735.76 µg/L		735.76 ppb	12:03:31
1	Pb 220.353†	511.3	405.4	103.80 µg/L		103.80 ppb	12:03:31
1	S 181.975 Axial†	145.7	124.7	526.30 µg/L		526.30 ppb	12:03:31
1	Sb 206.836†	31.7	5.6	2.3208 µg/L		2.3208 ppb	12:03:31
1	Se 196.026†	-29.8	-40.1	162.75 µg/L		162.75 ppb	12:03:31
1	SiO2†	255504.5	249961.7	51773 µg/L		51773 ppb	12:03:04
1	Si 251.611†	309008.6	303510.8	24060 µg/L		24060 ppb	12:03:04
1	Sn 189.927†	-35.9	-37.3	-24.418 µg/L		-24.418 ppb	12:03:31
1	Ti 334.940†	1675257.3	1646986.0	3829.8 µg/L		3829.8 ppb	12:03:04
1	Tl 190.801†	-60.7	-33.9	14.710 µg/L		14.710 ppb	12:03:31
1	U 409.014†	-885.7	-797.1	-82.733 µg/L		-82.733 ppb	12:03:10
1	V 292.402†	16977.7	16766.9	182.83 µg/L		182.83 ppb	12:03:10
1	Zn 213.857†	8749.8	8107.7	189.03 µg/L		189.03 ppb	12:03:10
2	Sc RADIAL	58250.6	58250.6	104 %			12:02:06
2	Al 396.153Radial†	100140.4	96012.3	66351 µg/L		66351 ppb	12:02:06
2	Ca 317.933Radial†	29328.3	27928.0	24246 µg/L		24246 ppb	12:02:06
2	Fe 238.204 Radial†	11518.8	11026.9	86127 µg/L		86127 ppb	12:02:26
2	K 766.490 Radial†	17242.8	16309.9	11205 µg/L		11205 ppb	12:02:06
2	Mg 279.077 IEC†	1388.8	1321.0	11415 µg/L		11415 ppb	12:02:26
2	Na 589.592 Radial†	1929.1	1260.0	391.67 µg/L		391.67 ppb	12:02:06
2	Sr 421.552†	17987.6	17210.4	170.45 µg/L		170.45 ppb	12:02:06
2	Sc 361.383	1978738.5	1978738.5	101.40 %			12:03:38
2	Y 371.029	1379476.8	1379476.8	102.90 %			12:03:38
2	Ag 328.068†	-1712.2	-1154.5	-2.2575 µg/L		-2.2575 ppb	12:03:44
2	As 188.979†	4.0	3.2	9.6753 µg/L		9.6753 ppb	12:04:04
2	B 249.677†	1021.9	660.7	-17.107 µg/L		-17.107 ppb	12:03:44
2	Ba 233.527†	45861.2	45249.2	1132.7 µg/L		1132.7 ppb	12:03:44
2	Be 313.107†	11231.4	14423.9	7.6114 µg/L		7.6114 ppb	12:03:44
2	Cd 226.502†	192.9	333.0	-0.9141 µg/L		-0.9141 ppb	12:04:04
2	Co 228.616†	1045.9	1038.4	41.145 µg/L		41.145 ppb	12:04:04
2	Cr 267.716†	3466.0	3468.4	73.609 µg/L		73.609 ppb	12:03:44
2	Cu 324.752†	7425.9	4770.5	44.030 µg/L		44.030 ppb	12:03:44
2	Mn 257.610†	872899.7	861050.0	2858.7 µg/L		2858.7 ppb	12:03:38
2	Mo 202.031†	-15.7	-9.6	2.2868 µg/L		2.2868 ppb	12:04:04
2	Ni 231.604†	1229.3	903.0	48.499 µg/L		48.499 ppb	12:04:04
2	P 214.914†	409.4	379.9	722.63 µg/L		722.63 ppb	12:04:04
2	Pb 220.353†	520.7	416.1	106.59 µg/L		106.59 ppb	12:04:04

2	S 181.975 Axial†	150.4	129.8	547.62 µg/L	547.62 ppb	12:04:04
2	Sb 206.836†	36.3	10.2	6.5668 µg/L	6.5668 ppb	12:04:04
2	Se 196.026†	-21.5	-32.0	172.65 µg/L	172.65 ppb	12:04:04
2	SiO2†	253313.3	248550.2	51481 µg/L	51481 ppb	12:03:38
2	Si 251.611†	306320.5	301766.2	23922 µg/L	23922 ppb	12:03:38
2	Sn 189.927†	-35.7	-37.1	-24.315 µg/L	-24.315 ppb	12:04:04
2	Ti 334.940†	1659892.4	1636747.5	3806.0 µg/L	3806.0 ppb	12:03:38
2	Tl 190.801†	-59.1	-32.6	16.143 µg/L	16.143 ppb	12:04:04
2	U 409.014†	-934.1	-847.4	-87.019 µg/L	-87.019 ppb	12:03:44
2	V 292.402†	17056.4	16894.2	184.05 µg/L	184.05 ppb	12:03:44
2	Zn 213.857†	8808.0	8190.7	191.06 µg/L	191.06 ppb	12:03:44
3	Sc RADIAL	58918.4	58918.4	106 %		12:02:32
3	Al 396.153Radial†	100214.7	94994.6	65648 µg/L	65648 ppb	12:02:32
3	Ca 317.933Radial†	29278.3	27561.9	23928 µg/L	23928 ppb	12:02:32
3	Fe 238.204 Radial†	11610.7	10988.8	85830 µg/L	85830 ppb	12:02:52
3	K 766.490 Radial†	17395.2	16267.0	11175 µg/L	11175 ppb	12:02:32
3	Mg 279.077 IEC†	1403.0	1319.5	11402 µg/L	11402 ppb	12:02:52
3	Na 589.592 Radial†	1953.6	1262.3	392.37 µg/L	392.37 ppb	12:02:32
3	Sr 421.552†	18028.4	17053.6	168.90 µg/L	168.90 ppb	12:02:32
3	Sc 361.383	1991383.1	1991383.1	102.05 %		12:04:11
3	Y 371.029	1387167.7	1387167.7	103.47 %		12:04:11
3	Ag 328.068†	-1610.0	-1043.7	-1.5111 µg/L	-1.5111 ppb	12:04:17
3	As 188.979†	5.9	5.0	13.088 µg/L	13.088 ppb	12:04:37
3	B 249.677†	1008.1	640.7	-17.800 µg/L	-17.800 ppb	12:04:17
3	Ba 233.527†	43411.4	42561.5	1065.4 µg/L	1065.4 ppb	12:04:17
3	Be 313.107†	10369.4	13508.9	7.0902 µg/L	7.0902 ppb	12:04:17
3	Cd 226.502†	134.9	274.9	-2.4151 µg/L	-2.4151 ppb	12:04:37
3	Co 228.616†	953.8	941.7	36.865 µg/L	36.865 ppb	12:04:37
3	Cr 267.716†	3154.3	3141.2	66.668 µg/L	66.668 ppb	12:04:17
3	Cu 324.752†	7129.1	4433.1	41.721 µg/L	41.721 ppb	12:04:17
3	Mn 257.610†	853458.3	836533.7	2777.6 µg/L	2777.6 ppb	12:04:11
3	Mo 202.031†	-17.7	-11.5	2.0870 µg/L	2.0870 ppb	12:04:37
3	Ni 231.604†	1152.0	819.5	44.116 µg/L	44.116 ppb	12:04:37
3	P 214.914†	375.3	343.9	649.34 µg/L	649.34 ppb	12:04:37
3	Pb 220.353†	486.1	379.0	97.084 µg/L	97.084 ppb	12:04:37
3	S 181.975 Axial†	136.3	115.0	485.10 µg/L	485.10 ppb	12:04:37
3	Sb 206.836†	33.1	6.8	3.5213 µg/L	3.5213 ppb	12:04:37
3	Se 196.026†	-31.2	-41.3	158.52 µg/L	158.52 ppb	12:04:37
3	SiO2†	248844.1	242584.8	50245 µg/L	50245 ppb	12:04:11
3	Si 251.611†	300942.4	294578.2	23352 µg/L	23352 ppb	12:04:11
3	Sn 189.927†	-24.4	-25.8	-19.297 µg/L	-19.297 ppb	12:04:37
3	Ti 334.940†	1608667.2	1576158.8	3665.1 µg/L	3665.1 ppb	12:04:11
3	Tl 190.801†	-54.9	-28.1	20.559 µg/L	20.559 ppb	12:04:37
3	U 409.014†	-855.3	-764.3	-79.742 µg/L	-79.742 ppb	12:04:17
3	V 292.402†	15924.5	15678.3	171.50 µg/L	171.50 ppb	12:04:17
3	Zn 213.857†	8281.8	7620.0	177.43 µg/L	177.43 ppb	12:04:17

Mean Data: 245389007|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1984921.0	101.72 %	0.324			0.32%
Sc RADIAL	58538.2	105 %	0.6			0.59%
Y 371.029	1383238.0	103.18 %	0.287			0.28%
Ag 328.068†	-1104.2	-1.8951 µg/L	0.37365	-1.8951 ppb	0.37365	19.72%
Al 396.153Radial†	95473.1	65979 µg/L	353.5	65979 ppb	353.5	0.54%
As 188.979†	4.6	12.320 µg/L	2.3565	12.320 ppb	2.3565	19.13%
B 249.677†	658.3	-17.278 µg/L	0.4605	-17.278 ppb	0.4605	2.66%
Ba 233.527†	44196.3	1106.3 µg/L	35.93	1106.3 ppb	35.93	3.25%
Be 313.107†	14082.7	7.4119 µg/L	0.28123	7.4119 ppb	0.28123	3.79%
Ca 317.933Radial†	27752.9	24094 µg/L	159.3	24094 ppb	159.3	0.66%
Cd 226.502†	309.4	-1.5526 µg/L	0.77514	-1.5526 ppb	0.77514	49.93%
Co 228.616†	1001.4	39.477 µg/L	2.2907	39.477 ppb	2.2907	5.80%
Cr 267.716†	3319.6	70.454 µg/L	3.5134	70.454 ppb	3.5134	4.99%
Cu 324.752†	4661.3	43.314 µg/L	1.3814	43.314 ppb	1.3814	3.19%
Fe 238.204 Radial†	11043.1	86254 µg/L	499.5	86254 ppb	499.5	0.58%
K 766.490 Radial†	16261.4	11171 µg/L	35.5	11171 ppb	35.5	0.32%
Mg 279.077 IEC†	1326.5	11463 µg/L	94.4	11463 ppb	94.4	0.82%
Mn 257.610†	855139.3	2839.1 µg/L	54.51	2839.1 ppb	54.51	1.92%
Mo 202.031†	-8.2	2.4345 µg/L	0.44035	2.4345 ppb	0.44035	18.09%
Na 589.592 Radial†	1269.0	394.46 µg/L	4.236	394.46 ppb	4.236	1.07%

Ni 231.604†	878.4	47.211 µg/L	2.6924	47.211 ppb	2.6924	5.70%
P 214.914†	370.1	702.58 µg/L	46.568	702.58 ppb	46.568	6.63%
Pb 220.353†	400.1	102.49 µg/L	4.887	102.49 ppb	4.887	4.77%
S 181.975 Axial†	123.2	519.67 µg/L	31.779	519.67 ppb	31.779	6.12%
Sb 206.836†	7.6	4.1363 µg/L	2.18881	4.1363 ppb	2.18881	52.92%
Se 196.026†	-37.8	164.64 µg/L	7.253	164.64 ppb	7.253	4.41%
SiO2†	247032.2	51167 µg/L	811.1	51167 ppb	811.1	1.59%
Si 251.611†	299951.7	23778 µg/L	375.3	23778 ppb	375.3	1.58%
Sn 189.927†	-33.4	-22.677 µg/L	2.9274	-22.677 ppb	2.9274	12.91%
Sr 421.552†	17116.7	169.52 µg/L	0.820	169.52 ppb	0.820	0.48%
Ti 334.940†	1619964.1	3767.0 µg/L	89.02	3767.0 ppb	89.02	2.36%
Tl 190.801†	-31.5	17.138 µg/L	3.0487	17.138 ppb	3.0487	17.79%
U 409.014†	-802.9	-83.165 µg/L	3.6577	-83.165 ppb	3.6577	4.40%
V 292.402†	16446.5	179.46 µg/L	6.922	179.46 ppb	6.922	3.86%
Zn 213.857†	7972.8	185.84 µg/L	7.350	185.84 ppb	7.350	3.95%

Sequence No.: 16  
 Sample ID: 245389008|945403|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 314  
 Date Collected: 2/11/2010 12:04:46  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245389008|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56776.7	56776.7	102 %		12:05:19
1	Al 396.153Radial†	86395.4	84986.3	58731 µg/L	58731 ppb	12:05:19
1	Ca 317.933Radial†	18080.7	17595.9	15276 µg/L	15276 ppb	12:05:19
1	Fe 238.204 Radial†	11325.0	11122.9	86877 µg/L	86877 ppb	12:05:39
1	K 766.490 Radial†	16797.8	16301.4	11199 µg/L	11199 ppb	12:05:19
1	Mg 279.077 IEC†	1342.6	1310.1	11319 µg/L	11319 ppb	12:05:39
1	Na 589.592 Radial†	1844.3	1224.7	380.67 µg/L	380.67 ppb	12:05:19
1	Sr 421.552†	17351.1	17032.1	168.69 µg/L	168.69 ppb	12:05:19
1	Sc 361.383	1972201.9	1972201.9	101.07 %		12:06:43
1	Y 371.029	1375056.7	1375056.7	102.57 %		12:06:43
1	Ag 328.068†	-1678.4	-1126.7	-1.9000 µg/L	-1.9000 ppb	12:06:49
1	As 188.979†	11.8	10.9	24.411 µg/L	24.411 ppb	12:07:09
1	B 249.677†	1043.0	684.8	-16.451 µg/L	-16.451 ppb	12:06:49
1	Ba 233.527†	48800.0	48306.9	1209.3 µg/L	1209.3 ppb	12:06:49
1	Be 313.107†	10736.0	13970.5	7.2695 µg/L	7.2695 ppb	12:06:49
1	Cd 226.502†	172.1	313.0	-1.5117 µg/L	-1.5117 ppb	12:07:09
1	Co 228.616†	1069.1	1064.8	42.083 µg/L	42.083 ppb	12:07:09
1	Cr 267.716†	4429.8	4433.3	94.066 µg/L	94.066 ppb	12:06:49
1	Cu 324.752†	6422.6	3802.0	37.626 µg/L	37.626 ppb	12:06:49
1	Mn 257.610†	885221.4	876094.5	2908.5 µg/L	2908.5 ppb	12:06:43
1	Mo 202.031†	13.5	19.2	5.2678 µg/L	5.2678 ppb	12:07:09
1	Ni 231.604†	1510.8	1185.5	63.351 µg/L	63.351 ppb	12:07:09
1	P 214.914†	462.0	433.2	829.66 µg/L	829.66 ppb	12:07:09
1	Pb 220.353†	457.7	355.5	90.690 µg/L	90.690 ppb	12:07:09
1	S 181.975 Axial†	157.1	136.9	577.55 µg/L	577.55 ppb	12:07:09
1	Sb 206.836†	39.3	13.3	10.045 µg/L	10.045 ppb	12:07:09
1	Se 196.026†	-26.9	-37.4	169.55 µg/L	169.55 ppb	12:07:09
1	SiO2†	229337.0	225655.6	46739 µg/L	46739 ppb	12:06:43
1	Si 251.611†	276911.4	273669.6	21694 µg/L	21694 ppb	12:06:43
1	Sn 189.927†	-24.1	-25.8	-19.353 µg/L	-19.353 ppb	12:07:09
1	Ti 334.940†	1719449.7	1701100.0	3955.6 µg/L	3955.6 ppb	12:06:43
1	Tl 190.801†	-63.9	-37.4	11.469 µg/L	11.469 ppb	12:07:09
1	U 409.014†	-901.6	-818.3	-84.049 µg/L	-84.049 ppb	12:06:49
1	V 292.402†	18450.3	18329.2	198.98 µg/L	198.98 ppb	12:06:49
1	Zn 213.857†	7953.1	7373.7	171.41 µg/L	171.41 ppb	12:06:49
2	Sc RADIAL	57364.9	57364.9	103 %		12:05:45
2	Al 396.153Radial†	86774.9	84484.5	58385 µg/L	58385 ppb	12:05:45
2	Ca 317.933Radial†	18178.3	17508.6	15200 µg/L	15200 ppb	12:05:45
2	Fe 238.204 Radial†	11315.3	10999.3	85911 µg/L	85911 ppb	12:06:05
2	K 766.490 Radial†	16863.9	16196.3	11127 µg/L	11127 ppb	12:05:45
2	Mg 279.077 IEC†	1338.6	1292.8	11169 µg/L	11169 ppb	12:06:05
2	Na 589.592 Radial†	1892.0	1252.5	389.31 µg/L	389.31 ppb	12:05:45
2	Sr 421.552†	17454.7	16957.9	167.95 µg/L	167.95 ppb	12:05:45
2	Sc 361.383	1993354.9	1993354.9	102.15 %		12:07:16
2	Y 371.029	1389710.9	1389710.9	103.66 %		12:07:16
2	Ag 328.068†	-1581.7	-1014.4	-1.1310 µg/L	-1.1310 ppb	12:07:22
2	As 188.979†	4.6	3.8	11.165 µg/L	11.165 ppb	12:07:42
2	B 249.677†	988.1	620.2	-18.663 µg/L	-18.663 ppb	12:07:22
2	Ba 233.527†	48235.8	47242.2	1182.6 µg/L	1182.6 ppb	12:07:22
2	Be 313.107†	10668.6	13791.7	7.1705 µg/L	7.1705 ppb	12:07:22
2	Cd 226.502†	185.1	324.0	-1.1149 µg/L	-1.1149 ppb	12:07:42
2	Co 228.616†	1087.4	1071.5	42.470 µg/L	42.470 ppb	12:07:42
2	Cr 267.716†	4405.0	4362.5	92.564 µg/L	92.564 ppb	12:07:22
2	Cu 324.752†	6337.1	3650.9	36.477 µg/L	36.477 ppb	12:07:22
2	Mn 257.610†	888174.6	869691.0	2887.2 µg/L	2887.2 ppb	12:07:16
2	Mo 202.031†	10.2	15.9	4.8906 µg/L	4.8906 ppb	12:07:42
2	Ni 231.604†	1497.6	1156.7	61.826 µg/L	61.826 ppb	12:07:42
2	P 214.914†	467.8	434.0	832.04 µg/L	832.04 ppb	12:07:42
2	Pb 220.353†	461.8	354.7	90.499 µg/L	90.499 ppb	12:07:42

2	S 181.975 Axial†	157.2	135.3	571.01 µg/L	571.01 ppb	12:07:42
2	Sb 206.836†	36.0	9.6	6.6503 µg/L	6.6503 ppb	12:07:42
2	Se 196.026†	-25.5	-35.8	169.36 µg/L	169.36 ppb	12:07:42
2	SiO2†	229579.7	223485.3	46289 µg/L	46289 ppb	12:07:16
2	Si 251.611†	277289.2	271131.9	21493 µg/L	21493 ppb	12:07:16
2	Sn 189.927†	-37.4	-38.6	-24.906 µg/L	-24.906 ppb	12:07:42
2	Ti 334.940†	1722532.1	1686064.0	3920.6 µg/L	3920.6 ppb	12:07:16
2	Tl 190.801†	-69.1	-41.9	4.9345 µg/L	4.9345 ppb	12:07:42
2	U 409.014†	-835.5	-744.1	-77.469 µg/L	-77.469 ppb	12:07:22
2	V 292.402†	18216.0	17906.0	194.51 µg/L	194.51 ppb	12:07:22
2	Zn 213.857†	7838.8	7178.3	166.80 µg/L	166.80 ppb	12:07:22
3	Sc RADIAL	57641.0	57641.0	103 %		12:06:10
3	Al 396.153Radial†	86447.9	83763.1	57886 µg/L	57886 ppb	12:06:10
3	Ca 317.933Radial†	18100.8	17348.7	15061 µg/L	15061 ppb	12:06:10
3	Fe 238.204 Radial†	11317.4	10948.6	85515 µg/L	85515 ppb	12:06:31
3	K 766.490 Radial†	16759.6	16016.6	11003 µg/L	11003 ppb	12:06:10
3	Mg 279.077 IEC†	1337.9	1285.9	11109 µg/L	11109 ppb	12:06:31
3	Na 589.592 Radial†	1848.6	1201.6	373.51 µg/L	373.51 ppb	12:06:10
3	Sr 421.552†	17397.4	16821.0	166.60 µg/L	166.60 ppb	12:06:10
3	Sc 361.383	1982034.1	1982034.1	101.57 %		12:07:50
3	Y 371.029	1381401.4	1381401.4	103.04 %		12:07:50
3	Ag 328.068†	-1584.5	-1026.0	-1.2990 µg/L	-1.2990 ppb	12:07:55
3	As 188.979†	8.6	7.7	18.436 µg/L	18.436 ppb	12:08:16
3	B 249.677†	955.4	593.5	-19.584 µg/L	-19.584 ppb	12:07:55
3	Ba 233.527†	46504.1	45807.0	1146.7 µg/L	1146.7 ppb	12:07:55
3	Be 313.107†	9945.5	13139.5	6.8059 µg/L	6.8059 ppb	12:07:55
3	Cd 226.502†	125.9	266.7	-2.5839 µg/L	-2.5839 ppb	12:08:16
3	Co 228.616†	961.5	953.6	37.145 µg/L	37.145 ppb	12:08:16
3	Cr 267.716†	4085.6	4072.6	86.415 µg/L	86.415 ppb	12:07:55
3	Cu 324.752†	6173.3	3525.1	35.576 µg/L	35.576 ppb	12:07:55
3	Mn 257.610†	859417.8	846345.6	2810.0 µg/L	2810.0 ppb	12:07:50
3	Mo 202.031†	14.0	19.7	5.2589 µg/L	5.2589 ppb	12:08:16
3	Ni 231.604†	1366.8	1036.3	55.502 µg/L	55.502 ppb	12:08:16
3	P 214.914†	421.2	390.8	743.89 µg/L	743.89 ppb	12:08:16
3	Pb 220.353†	420.1	316.2	80.685 µg/L	80.685 ppb	12:08:16
3	S 181.975 Axial†	144.7	123.9	522.93 µg/L	522.93 ppb	12:08:16
3	Sb 206.836†	37.8	11.6	8.5532 µg/L	8.5532 ppb	12:08:16
3	Se 196.026†	-24.7	-35.1	169.25 µg/L	169.25 ppb	12:08:16
3	SiO2†	224429.7	219698.7	45505 µg/L	45505 ppb	12:07:50
3	Si 251.611†	271344.3	266829.5	21152 µg/L	21152 ppb	12:07:50
3	Sn 189.927†	-35.1	-36.5	-23.942 µg/L	-23.942 ppb	12:08:16
3	Ti 334.940†	1661008.9	1635125.0	3802.1 µg/L	3802.1 ppb	12:07:50
3	Tl 190.801†	-59.7	-33.0	15.456 µg/L	15.456 ppb	12:08:16
3	U 409.014†	-860.8	-773.7	-79.977 µg/L	-79.977 ppb	12:07:55
3	V 292.402†	17299.8	17105.9	186.22 µg/L	186.22 ppb	12:07:55
3	Zn 213.857†	7580.4	6967.7	161.81 µg/L	161.81 ppb	12:07:55

Mean Data: 245389008|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1982530.3	101.60 %	0.542			0.53%
Sc RADIAL	57260.9	103 %	0.8			0.77%
Y 371.029	1382056.3	103.09 %	0.548			0.53%
Ag 328.068†	-1055.7	-1.4434 µg/L	0.40432	-1.4434 ppb	0.40432	28.01%
Al 396.153Radial†	84411.3	58334 µg/L	424.9	58334 ppb	424.9	0.73%
As 188.979†	7.5	18.004 µg/L	6.6336	18.004 ppb	6.6336	36.84%
B 249.677†	632.8	-18.233 µg/L	1.6105	-18.233 ppb	1.6105	8.83%
Ba 233.527†	47118.7	1179.5 µg/L	31.41	1179.5 ppb	31.41	2.66%
Be 313.107†	13633.9	7.0820 µg/L	0.24417	7.0820 ppb	0.24417	3.45%
Ca 317.933Radial†	17484.4	15179 µg/L	108.8	15179 ppb	108.8	0.72%
Cd 226.502†	301.2	-1.7368 µg/L	0.75991	-1.7368 ppb	0.75991	43.75%
Co 228.616†	1030.0	40.566 µg/L	2.9691	40.566 ppb	2.9691	7.32%
Cr 267.716†	4289.5	91.015 µg/L	4.0537	91.015 ppb	4.0537	4.45%
Cu 324.752†	3659.3	36.559 µg/L	1.0277	36.559 ppb	1.0277	2.81%
Fe 238.204 Radial†	11023.6	86101 µg/L	700.5	86101 ppb	700.5	0.81%
K 766.490 Radial†	16171.4	11110 µg/L	98.9	11110 ppb	98.9	0.89%
Mg 279.077 IEC†	1296.3	11199 µg/L	108.2	11199 ppb	108.2	0.97%
Mn 257.610†	864043.7	2868.6 µg/L	51.86	2868.6 ppb	51.86	1.81%
Mo 202.031†	18.3	5.1391 µg/L	0.21528	5.1391 ppb	0.21528	4.19%
Na 589.592 Radial†	1226.2	381.16 µg/L	7.913	381.16 ppb	7.913	2.08%



Ni 231.604†	1126.2	60.226 µg/L	4.1622	60.226 ppb	4.1622	6.91%
P 214.914†	419.3	801.86 µg/L	50.220	801.86 ppb	50.220	6.26%
Pb 220.353†	342.1	87.291 µg/L	5.7221	87.291 ppb	5.7221	6.56%
S 181.975 Axial†	132.0	557.16 µg/L	29.823	557.16 ppb	29.823	5.35%
Sb 206.836†	11.5	8.4160 µg/L	1.70135	8.4160 ppb	1.70135	20.22%
Se 196.026†	-36.1	169.39 µg/L	0.152	169.39 ppb	0.152	0.09%
SiO2†	222946.5	46178 µg/L	624.4	46178 ppb	624.4	1.35%
Si 251.611†	270543.6	21447 µg/L	274.1	21447 ppb	274.1	1.28%
Sn 189.927†	-33.6	-22.734 µg/L	2.9671	-22.734 ppb	2.9671	13.05%
Sr 421.552†	16937.0	167.75 µg/L	1.060	167.75 ppb	1.060	0.63%
Ti 334.940†	1674096.3	3892.8 µg/L	80.41	3892.8 ppb	80.41	2.07%
Tl 190.801†	-37.5	10.620 µg/L	5.3118	10.620 ppb	5.3118	50.02%
U 409.014†	-778.7	-80.498 µg/L	3.3207	-80.498 ppb	3.3207	4.13%
V 292.402†	17780.4	193.24 µg/L	6.475	193.24 ppb	6.475	3.35%
Zn 213.857†	7173.3	166.67 µg/L	4.803	166.67 ppb	4.803	2.88%

Sequence No.: 17

Sample ID: 245389009|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 315

Date Collected: 2/11/2010 12:08:25

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389009|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57152.4	57152.4	102 %			12:08:58
1	Al 396.153Radial†	230892.9	225605.0	155910 µg/L		155910 ppb	12:08:58
1	Ca 317.933Radial†	30624.6	29734.7	25814 µg/L		25814 ppb	12:09:19
1	Fe 238.204 Radial†	14982.7	14623.4	114220 µg/L		114220 ppb	12:09:19
1	K 766.490 Radial†	19849.4	19174.2	13172 µg/L		13172 ppb	12:08:58
1	Mg 279.077 IEC†	2219.5	2158.2	18677 µg/L		18677 ppb	12:09:19
1	Na 589.592 Radial†	4976.2	4272.6	1328.1 µg/L		1328.1 ppb	12:09:19
1	Sr 421.552†	29074.8	28374.2	281.02 µg/L		281.02 ppb	12:08:58
1	Sc 361.383	1987103.0	1987103.0	101.83 %			12:10:23
1	Y 371.029	1401559.7	1401559.7	104.55 %			12:10:23
1	Ag 328.068†	-2061.8	-1490.7	-2.7987 µg/L		-2.7987 ppb	12:10:29
1	As 188.979†	17.0	15.9	34.705 µg/L		34.705 ppb	12:10:49
1	B 249.677†	1142.1	774.5	-26.938 µg/L		-26.938 ppb	12:10:29
1	Ba 233.527†	76292.1	74942.0	1875.9 µg/L		1875.9 ppb	12:10:29
1	Be 313.107†	20589.0	23566.5	12.819 µg/L		12.819 ppb	12:10:29
1	Cd 226.502†	259.7	397.7	-2.3590 µg/L		-2.3590 ppb	12:10:49
1	Co 228.616†	1039.2	1027.5	37.689 µg/L		37.689 ppb	12:10:49
1	Cr 267.716†	5036.6	4996.3	106.01 µg/L		106.01 ppb	12:10:29
1	Cu 324.752†	8257.5	5556.3	53.216 µg/L		53.216 ppb	12:10:29
1	Mn 257.610†	587711.9	577372.3	1923.9 µg/L		1923.9 ppb	12:10:23
1	Mo 202.031†	-33.3	-26.9	1.5947 µg/L		1.5947 ppb	12:10:49
1	Ni 231.604†	1718.5	1378.2	73.833 µg/L		73.833 ppb	12:10:49
1	P 214.914†	495.6	462.8	894.61 µg/L		894.61 ppb	12:10:49
1	Pb 220.353†	536.0	429.0	113.76 µg/L		113.76 ppb	12:10:49
1	S 181.975 Axial†	110.7	90.2	380.47 µg/L		380.47 ppb	12:10:49
1	Sb 206.836†	36.5	10.2	6.0126 µg/L		6.0126 ppb	12:10:49
1	Se 196.026†	-41.3	-51.4	214.73 µg/L		214.73 ppb	12:10:49
1	SiO2†	268024.5	261945.2	54256 µg/L		54256 ppb	12:10:23
1	Si 251.611†	324156.9	318010.0	25209 µg/L		25209 ppb	12:10:23
1	Sn 189.927†	-46.7	-47.8	-31.139 µg/L		-31.139 ppb	12:10:49
1	Ti 334.940†	2283513.9	2242253.0	5213.7 µg/L		5213.7 ppb	12:10:23
1	Tl 190.801†	-74.1	-47.0	16.440 µg/L		16.440 ppb	12:10:49
1	U 409.014†	-1261.6	-1165.1	-118.60 µg/L		-118.60 ppb	12:10:23
1	V 292.402†	21037.6	20732.9	226.89 µg/L		226.89 ppb	12:10:29
1	Zn 213.857†	9169.8	8509.5	196.82 µg/L		196.82 ppb	12:10:29
2	Sc RADIAL	57449.0	57449.0	103 %			12:09:24
2	Al 396.153Radial†	229868.3	223444.5	154420 µg/L		154420 ppb	12:09:24
2	Ca 317.933Radial†	30463.5	29423.6	25544 µg/L		25544 ppb	12:09:44
2	Fe 238.204 Radial†	14979.2	14544.4	113600 µg/L		113600 ppb	12:09:44
2	K 766.490 Radial†	19780.1	19006.7	13057 µg/L		13057 ppb	12:09:24
2	Mg 279.077 IEC†	2211.0	2138.7	18508 µg/L		18508 ppb	12:09:44
2	Na 589.592 Radial†	4983.1	4254.3	1322.4 µg/L		1322.4 ppb	12:09:44
2	Sr 421.552†	28960.0	28115.9	278.46 µg/L		278.46 ppb	12:09:24
2	Sc 361.383	1987420.1	1987420.1	101.85 %			12:10:57
2	Y 371.029	1402057.4	1402057.4	104.58 %			12:10:57
2	Ag 328.068†	-2002.5	-1432.2	-2.3826 µg/L		-2.3826 ppb	12:11:02
2	As 188.979†	8.8	7.8	19.748 µg/L		19.748 ppb	12:11:23
2	B 249.677†	1137.0	769.3	-26.835 µg/L		-26.835 ppb	12:11:02
2	Ba 233.527†	76491.3	75125.6	1880.5 µg/L		1880.5 ppb	12:11:02
2	Be 313.107†	20607.0	23580.9	12.819 µg/L		12.819 ppb	12:11:02
2	Cd 226.502†	260.1	398.1	-2.2784 µg/L		-2.2784 ppb	12:11:23
2	Co 228.616†	1053.6	1041.5	38.303 µg/L		38.303 ppb	12:11:23
2	Cr 267.716†	4989.1	4948.9	105.01 µg/L		105.01 ppb	12:11:02
2	Cu 324.752†	8279.0	5576.1	53.263 µg/L		53.263 ppb	12:11:02
2	Mn 257.610†	591697.5	581193.5	1936.5 µg/L		1936.5 ppb	12:10:57
2	Mo 202.031†	-26.2	-19.9	2.2856 µg/L		2.2856 ppb	12:11:23
2	Ni 231.604†	1719.2	1378.6	73.845 µg/L		73.845 ppb	12:11:23
2	P 214.914†	491.4	458.6	886.18 µg/L		886.18 ppb	12:11:23
2	Pb 220.353†	531.9	424.9	112.66 µg/L		112.66 ppb	12:11:23

2	S 181.975 Axial†	109.7	89.2	376.18 µg/L	376.18 ppb	12:11:23
2	Sb 206.836†	40.1	13.8	9.4074 µg/L	9.4074 ppb	12:11:23
2	Se 196.026†	-44.6	-54.6	208.61 µg/L	208.61 ppb	12:11:23
2	SiO2†	268998.4	262859.3	54445 µg/L	54445 ppb	12:10:57
2	Si 251.611†	325549.0	319326.0	25314 µg/L	25314 ppb	12:10:57
2	Sn 189.927†	-36.9	-38.2	-26.864 µg/L	-26.864 ppb	12:11:23
2	Ti 334.940†	2293422.8	2251624.2	5235.5 µg/L	5235.5 ppb	12:10:57
2	Tl 190.801†	-74.4	-47.3	16.080 µg/L	16.080 ppb	12:11:23
2	U 409.014†	-1245.3	-1148.9	-117.09 µg/L	-117.09 ppb	12:10:57
2	V 292.402†	21149.1	20839.2	227.92 µg/L	227.92 ppb	12:11:02
2	Zn 213.857†	9225.0	8562.2	198.12 µg/L	198.12 ppb	12:11:02
3	Sc RADIAL	57933.3	57933.3	104 %		12:09:50
3	Al 396.153Radial†	230777.4	222452.7	153730 µg/L	153730 ppb	12:09:50
3	Ca 317.933Radial†	30513.5	29224.3	25371 µg/L	25371 ppb	12:10:10
3	Fe 238.204 Radial†	14965.8	14409.7	112550 µg/L	112550 ppb	12:10:10
3	K 766.490 Radial†	19906.4	18967.8	13031 µg/L	13031 ppb	12:09:50
3	Mg 279.077 IEC†	2210.6	2120.5	18350 µg/L	18350 ppb	12:10:10
3	Na 589.592 Radial†	4967.6	4198.8	1305.1 µg/L	1305.1 ppb	12:10:10
3	Sr 421.552†	29121.3	28036.1	277.67 µg/L	277.67 ppb	12:09:50
3	Sc 361.383	1980271.8	1980271.8	101.48 %		12:11:31
3	Y 371.029	1393666.3	1393666.3	103.96 %		12:11:31
3	Ag 328.068†	-1899.9	-1338.2	-1.8242 µg/L	-1.8242 ppb	12:11:36
3	As 188.979†	3.1	2.3	9.4216 µg/L	9.4216 ppb	12:11:57
3	B 249.677†	1078.4	715.6	-28.552 µg/L	-28.552 ppb	12:11:36
3	Ba 233.527†	71959.4	70931.1	1775.5 µg/L	1775.5 ppb	12:11:36
3	Be 313.107†	18918.8	21990.4	11.894 µg/L	11.894 ppb	12:11:36
3	Cd 226.502†	211.9	351.5	-3.3950 µg/L	-3.3950 ppb	12:11:57
3	Co 228.616†	935.9	929.2	33.401 µg/L	33.401 ppb	12:11:57
3	Cr 267.716†	4639.4	4621.9	98.071 µg/L	98.071 ppb	12:11:36
3	Cu 324.752†	7868.2	5200.7	50.594 µg/L	50.594 ppb	12:11:36
3	Mn 257.610†	570159.1	562067.0	1873.1 µg/L	1873.1 ppb	12:11:31
3	Mo 202.031†	-18.0	-11.9	3.0652 µg/L	3.0652 ppb	12:11:57
3	Ni 231.604†	1563.0	1230.8	66.071 µg/L	66.071 ppb	12:11:57
3	P 214.914†	461.2	430.6	829.73 µg/L	829.73 ppb	12:11:57
3	Pb 220.353†	494.4	389.8	103.70 µg/L	103.70 ppb	12:11:57
3	S 181.975 Axial†	102.8	82.7	349.09 µg/L	349.09 ppb	12:11:57
3	Sb 206.836†	38.4	12.2	8.0547 µg/L	8.0547 ppb	12:11:57
3	Se 196.026†	-40.0	-50.2	212.21 µg/L	212.21 ppb	12:11:57
3	SiO2†	261660.5	256582.1	53145 µg/L	53145 ppb	12:11:31
3	Si 251.611†	316410.0	311474.4	24691 µg/L	24691 ppb	12:11:31
3	Sn 189.927†	-35.1	-36.5	-26.036 µg/L	-26.036 ppb	12:11:57
3	Ti 334.940†	2200513.5	2168201.0	5041.5 µg/L	5041.5 ppb	12:11:31
3	Tl 190.801†	-77.1	-50.3	10.004 µg/L	10.004 ppb	12:11:57
3	U 409.014†	-1228.2	-1136.5	-115.86 µg/L	-115.86 ppb	12:11:31
3	V 292.402†	19664.0	19450.8	213.50 µg/L	213.50 ppb	12:11:36
3	Zn 213.857†	8635.8	8014.3	185.10 µg/L	185.10 ppb	12:11:36

Mean Data: 245389009|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1984931.6	101.72 %	0.207			0.20%
Sc RADIAL	57511.5	103 %	0.7			0.69%
Y 371.029	1399094.4	104.36 %	0.351			0.34%
Ag 328.068†	-1420.4	-2.3352 µg/L	0.48899	-2.3352 ppb	0.48899	20.94%
Al 396.153Radial†	223834.1	154690 µg/L	1113.9	154690 ppb	1113.9	0.72%
As 188.979†	8.7	21.291 µg/L	12.7121	21.291 ppb	12.7121	59.71%
B 249.677†	753.1	-27.442 µg/L	0.9628	-27.442 ppb	0.9628	3.51%
Ba 233.527†	73666.2	1843.9 µg/L	59.34	1843.9 ppb	59.34	3.22%
Be 313.107†	23045.9	12.511 µg/L	0.5340	12.511 ppb	0.5340	4.27%
Ca 317.933Radial†	29460.9	25576 µg/L	223.3	25576 ppb	223.3	0.87%
Cd 226.502†	382.5	-2.6775 µg/L	0.62269	-2.6775 ppb	0.62269	23.26%
Co 228.616†	999.4	36.464 µg/L	2.6704	36.464 ppb	2.6704	7.32%
Cr 267.716†	4855.7	103.03 µg/L	4.325	103.03 ppb	4.325	4.20%
Cu 324.752†	5444.3	52.357 µg/L	1.5275	52.357 ppb	1.5275	2.92%
Fe 238.204 Radial†	14525.8	113460 µg/L	843.7	113460 ppb	843.7	0.74%
K 766.490 Radial†	19049.6	13087 µg/L	75.3	13087 ppb	75.3	0.58%
Mg 279.077 IEC†	2139.1	18512 µg/L	163.6	18512 ppb	163.6	0.88%
Mn 257.610†	573544.3	1911.2 µg/L	33.56	1911.2 ppb	33.56	1.76%
Mo 202.031†	-19.5	2.3152 µg/L	0.73570	2.3152 ppb	0.73570	31.78%
Na 589.592 Radial†	4241.9	1318.5 µg/L	11.95	1318.5 ppb	11.95	0.91%

Ni 231.604†	1329.2	71.249 µg/L	4.4850	71.249 ppb	4.4850	6.29%
P 214.914†	450.7	870.17 µg/L	35.277	870.17 ppb	35.277	4.05%
Pb 220.353†	414.5	110.04 µg/L	5.520	110.04 ppb	5.520	5.02%
S 181.975 Axial†	87.4	368.58 µg/L	17.011	368.58 ppb	17.011	4.62%
Sb 206.836†	12.1	7.8249 µg/L	1.70900	7.8249 ppb	1.70900	21.84%
Se 196.026†	-52.1	211.85 µg/L	3.077	211.85 ppb	3.077	1.45%
SiO2†	260462.2	53948 µg/L	702.4	53948 ppb	702.4	1.30%
Si 251.611†	316270.1	25072 µg/L	333.3	25072 ppb	333.3	1.33%
Sn 189.927†	-40.8	-28.013 µg/L	2.7385	-28.013 ppb	2.7385	9.78%
Sr 421.552†	28175.4	279.05 µg/L	1.750	279.05 ppb	1.750	0.63%
Ti 334.940†	2220692.8	5163.6 µg/L	106.28	5163.6 ppb	106.28	2.06%
Tl 190.801†	-48.2	14.175 µg/L	3.6164	14.175 ppb	3.6164	25.51%
U 409.014†	-1150.2	-117.18 µg/L	1.374	-117.18 ppb	1.374	1.17%
V 292.402†	20341.0	222.77 µg/L	8.045	222.77 ppb	8.045	3.61%
Zn 213.857†	8362.0	193.35 µg/L	7.170	193.35 ppb	7.170	3.71%

Sequence No.: 18

Sample ID: 245389010|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 316

Date Collected: 2/11/2010 12:12:06

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389010|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56763.4	56763.4	102 %		12:12:39
1	Al 396.153Radial†	66331.3	65268.8	45105 µg/L	45105 ppb	12:12:39
1	Ca 317.933Radial†	23679.4	23107.6	20061 µg/L	20061 ppb	12:12:39
1	Fe 238.204 Radial†	9123.0	8959.4	69979 µg/L	69979 ppb	12:12:59
1	K 766.490 Radial†	12825.3	12397.4	8516.9 µg/L	8516.9 ppb	12:12:39
1	Mg 279.077 IEC†	1149.0	1120.0	9681.6 µg/L	9681.6 ppb	12:12:59
1	Na 589.592 Radial†	2574.1	1943.0	603.94 µg/L	603.94 ppb	12:12:39
1	Sr 421.552†	13245.1	12996.8	128.72 µg/L	128.72 ppb	12:12:39
1	Sc 361.383	1990350.1	1990350.1	102.00 %		12:14:03
1	Y 371.029	1392399.8	1392399.8	103.86 %		12:14:03
1	Ag 328.068†	-1493.2	-930.0	-1.7472 µg/L	-1.7472 ppb	12:14:08
1	As 188.979†	-0.2	-0.9	1.2717 µg/L	1.2717 ppb	12:14:29
1	B 249.677†	816.6	453.5	-17.199 µg/L	-17.199 ppb	12:14:08
1	Ba 233.527†	32682.9	32065.5	802.72 µg/L	802.72 ppb	12:14:08
1	Be 313.107†	6708.7	9925.2	5.1547 µg/L	5.1547 ppb	12:14:08
1	Cd 226.502†	116.9	257.4	-1.0065 µg/L	-1.0065 ppb	12:14:29
1	Co 228.616†	755.3	747.5	29.429 µg/L	29.429 ppb	12:14:29
1	Cr 267.716†	8666.5	8547.0	181.21 µg/L	181.21 ppb	12:14:08
1	Cu 324.752†	11210.0	8437.7	66.430 µg/L	66.430 ppb	12:14:08
1	Mn 257.610†	574358.8	563339.5	1872.0 µg/L	1872.0 ppb	12:14:03
1	Mo 202.031†	141.1	144.2	17.404 µg/L	17.404 ppb	12:14:29
1	Ni 231.604†	2705.2	2342.8	123.95 µg/L	123.95 ppb	12:14:29
1	P 214.914†	1838.7	1778.8	3588.7 µg/L	3588.7 ppb	12:14:29
1	Pb 220.353†	411.3	305.8	77.904 µg/L	77.904 ppb	12:14:29
1	S 181.975 Axial†	179.3	157.2	663.40 µg/L	663.40 ppb	12:14:29
1	Sb 206.836†	35.1	8.8	4.6449 µg/L	4.6449 ppb	12:14:29
1	Se 196.026†	-17.8	-28.2	136.60 µg/L	136.60 ppb	12:14:29
1	SiO2†	202926.3	197693.6	40947 µg/L	40947 ppb	12:14:03
1	Si 251.611†	245153.7	240036.1	19028 µg/L	19028 ppb	12:14:03
1	Sn 189.927†	-29.6	-30.9	-20.033 µg/L	-20.033 ppb	12:14:29
1	Ti 334.940†	1244201.1	1219655.3	2836.1 µg/L	2836.1 ppb	12:14:03
1	Tl 190.801†	-56.1	-29.3	4.4831 µg/L	4.4831 ppb	12:14:29
1	U 409.014†	-966.2	-873.5	-86.786 µg/L	-86.786 ppb	12:14:08
1	V 292.402†	14310.3	14103.9	153.81 µg/L	153.81 ppb	12:14:08
1	Zn 213.857†	9034.5	8362.1	195.65 µg/L	195.65 ppb	12:14:08
2	Sc RADIAL	57367.7	57367.7	103 %		12:13:05
2	Al 396.153Radial†	66636.7	64878.8	44835 µg/L	44835 ppb	12:13:05
2	Ca 317.933Radial†	23784.8	22964.9	19937 µg/L	19937 ppb	12:13:05
2	Fe 238.204 Radial†	9071.9	8815.2	68852 µg/L	68852 ppb	12:13:25
2	K 766.490 Radial†	12901.4	12338.5	8476.4 µg/L	8476.4 ppb	12:13:05
2	Mg 279.077 IEC†	1144.0	1103.3	9536.8 µg/L	9536.8 ppb	12:13:25
2	Na 589.592 Radial†	2573.7	1915.9	595.52 µg/L	595.52 ppb	12:13:05
2	Sr 421.552†	13345.2	12957.1	128.33 µg/L	128.33 ppb	12:13:05
2	Sc 361.383	1979970.9	1979970.9	101.47 %		12:14:36
2	Y 371.029	1386049.6	1386049.6	103.39 %		12:14:36
2	Ag 328.068†	-1500.0	-944.4	-1.9218 µg/L	-1.9218 ppb	12:14:42
2	As 188.979†	4.9	4.0	10.370 µg/L	10.370 ppb	12:15:02
2	B 249.677†	793.1	434.6	-17.403 µg/L	-17.403 ppb	12:14:42
2	Ba 233.527†	32774.3	32323.5	809.18 µg/L	809.18 ppb	12:14:42
2	Be 313.107†	6792.8	10042.6	5.2130 µg/L	5.2130 ppb	12:14:42
2	Cd 226.502†	102.9	244.2	-1.2260 µg/L	-1.2260 ppb	12:15:02
2	Co 228.616†	761.8	757.8	29.832 µg/L	29.832 ppb	12:15:02
2	Cr 267.716†	8707.7	8632.1	183.02 µg/L	183.02 ppb	12:14:42
2	Cu 324.752†	11289.8	8573.9	67.189 µg/L	67.189 ppb	12:14:42
2	Mn 257.610†	580214.7	572062.5	1900.7 µg/L	1900.7 ppb	12:14:36
2	Mo 202.031†	146.8	150.6	18.012 µg/L	18.012 ppb	12:15:02
2	Ni 231.604†	2693.1	2344.8	124.04 µg/L	124.04 ppb	12:15:02
2	P 214.914†	1836.6	1786.1	3604.5 µg/L	3604.5 ppb	12:15:02
2	Pb 220.353†	402.4	299.2	76.258 µg/L	76.258 ppb	12:15:02

2	S 181.975 Axial†	174.4	153.3	646.98 µg/L	646.98 ppb	12:15:02
2	Sb 206.836†	30.4	4.3	0.4939 µg/L	0.4939 ppb	12:15:02
2	Se 196.026†	-34.7	-45.0	109.70 µg/L	109.70 ppb	12:15:02
2	SiO2†	204583.3	200369.6	41502 µg/L	41502 ppb	12:14:36
2	Si 251.611†	247099.8	243214.0	19280 µg/L	19280 ppb	12:14:36
2	Sn 189.927†	-23.3	-24.9	-17.291 µg/L	-17.291 ppb	12:15:02
2	Ti 334.940†	1255340.5	1237027.9	2876.5 µg/L	2876.5 ppb	12:14:36
2	Tl 190.801†	-52.3	-25.8	9.3821 µg/L	9.3821 ppb	12:15:02
2	U 409.014†	-1055.2	-966.2	-94.667 µg/L	-94.667 ppb	12:14:42
2	V 292.402†	14331.3	14198.1	154.65 µg/L	154.65 ppb	12:14:42
2	Zn 213.857†	9047.0	8420.9	197.12 µg/L	197.12 ppb	12:14:42
3	Sc RADIAL	56875.8	56875.8	102 %		12:13:31
3	Al 396.153Radial†	66507.0	65312.4	45135 µg/L	45135 ppb	12:13:31
3	Ca 317.933Radial†	23728.7	23110.0	20063 µg/L	20063 ppb	12:13:31
3	Fe 238.204 Radial†	9108.3	8927.2	69727 µg/L	69727 ppb	12:13:51
3	K 766.490 Radial†	13010.4	12554.2	8624.6 µg/L	8624.6 ppb	12:13:31
3	Mg 279.077 IEC†	1153.2	1121.9	9698.0 µg/L	9698.0 ppb	12:13:51
3	Na 589.592 Radial†	2577.7	1941.5	603.48 µg/L	603.48 ppb	12:13:31
3	Sr 421.552†	13291.7	13016.9	128.92 µg/L	128.92 ppb	12:13:31
3	Sc 361.383	1985936.8	1985936.8	101.77 %		12:15:10
3	Y 371.029	1387256.7	1387256.7	103.48 %		12:15:10
3	Ag 328.068†	-1464.3	-904.8	-1.6326 µg/L	-1.6326 ppb	12:15:15
3	As 188.979†	7.5	6.6	15.184 µg/L	15.184 ppb	12:15:36
3	B 249.677†	800.1	439.0	-17.696 µg/L	-17.696 ppb	12:15:15
3	Ba 233.527†	30869.8	30355.2	759.90 µg/L	759.90 ppb	12:15:15
3	Be 313.107†	6075.7	9317.8	4.8153 µg/L	4.8153 ppb	12:15:15
3	Cd 226.502†	87.9	229.1	-1.7362 µg/L	-1.7362 ppb	12:15:36
3	Co 228.616†	659.3	654.9	25.281 µg/L	25.281 ppb	12:15:36
3	Cr 267.716†	8006.0	7916.9	167.85 µg/L	167.85 ppb	12:15:15
3	Cu 324.752†	10756.1	8016.0	63.562 µg/L	63.562 ppb	12:15:15
3	Mn 257.610†	554289.3	544870.9	1810.9 µg/L	1810.9 ppb	12:15:10
3	Mo 202.031†	135.5	139.0	16.858 µg/L	16.858 ppb	12:15:36
3	Ni 231.604†	2426.9	2075.3	109.90 µg/L	109.90 ppb	12:15:36
3	P 214.914†	1652.2	1599.6	3222.6 µg/L	3222.6 ppb	12:15:36
3	Pb 220.353†	390.5	286.3	72.937 µg/L	72.937 ppb	12:15:36
3	S 181.975 Axial†	160.2	138.8	585.85 µg/L	585.85 ppb	12:15:36
3	Sb 206.836†	32.6	6.4	2.5845 µg/L	2.5845 ppb	12:15:36
3	Se 196.026†	-21.6	-32.0	130.41 µg/L	130.41 ppb	12:15:36
3	SiO2†	196994.1	192306.9	39832 µg/L	39832 ppb	12:15:10
3	Si 251.611†	237862.3	233405.9	18503 µg/L	18503 ppb	12:15:10
3	Sn 189.927†	-21.9	-23.5	-16.725 µg/L	-16.725 ppb	12:15:36
3	Ti 334.940†	1193016.7	1172073.4	2725.4 µg/L	2725.4 ppb	12:15:10
3	Tl 190.801†	-50.0	-23.4	11.175 µg/L	11.175 ppb	12:15:36
3	U 409.014†	-919.3	-829.5	-82.932 µg/L	-82.932 ppb	12:15:15
3	V 292.402†	13347.3	13188.8	144.33 µg/L	144.33 ppb	12:15:15
3	Zn 213.857†	8505.6	7862.1	183.76 µg/L	183.76 ppb	12:15:15

Mean Data: 245389010|945403|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1985419.3	101.75 %	0.267			0.26%
Sc RADIAL	57002.3	102 %	0.6			0.56%
Y 371.029	1388568.7	103.58 %	0.252			0.24%
Ag 328.068†	-926.4	-1.7672 µg/L	0.14563	-1.7672 ppb	0.14563	8.24%
Al 396.153Radial†	65153.3	45025 µg/L	165.0	45025 ppb	165.0	0.37%
As 188.979†	3.2	8.9418 µg/L	7.06529	8.9418 ppb	7.06529	79.01%
B 249.677†	442.4	-17.433 µg/L	0.2501	-17.433 ppb	0.2501	1.43%
Ba 233.527†	31581.4	790.60 µg/L	26.781	790.60 ppb	26.781	3.39%
Be 313.107†	9761.9	5.0610 µg/L	0.21480	5.0610 ppb	0.21480	4.24%
Ca 317.933Radial†	23060.8	20020 µg/L	72.2	20020 ppb	72.2	0.36%
Cd 226.502†	243.5	-1.3229 µg/L	0.37437	-1.3229 ppb	0.37437	28.30%
Co 228.616†	720.0	28.181 µg/L	2.5193	28.181 ppb	2.5193	8.94%
Cr 267.716†	8365.3	177.36 µg/L	8.283	177.36 ppb	8.283	4.67%
Cu 324.752†	8342.6	65.727 µg/L	1.9132	65.727 ppb	1.9132	2.91%
Fe 238.204 Radial†	8900.6	69519 µg/L	591.3	69519 ppb	591.3	0.85%
K 766.490 Radial†	12430.0	8539.3 µg/L	76.58	8539.3 ppb	76.58	0.90%
Mg 279.077 IEC†	1115.1	9638.8 µg/L	88.72	9638.8 ppb	88.72	0.92%
Mn 257.610†	560091.0	1861.2 µg/L	45.87	1861.2 ppb	45.87	2.46%
Mo 202.031†	144.6	17.425 µg/L	0.5774	17.425 ppb	0.5774	3.31%
Na 589.592 Radial†	1933.4	600.98 µg/L	4.734	600.98 ppb	4.734	0.79%

Ni 231.604†	2254.3	119.29 µg/L	8.139	119.29 ppb	8.139	6.82%
P 214.914†	1721.5	3471.9 µg/L	216.05	3471.9 ppb	216.05	6.22%
Pb 220.353†	297.1	75.700 µg/L	2.5299	75.700 ppb	2.5299	3.34%
S 181.975 Axial†	149.8	632.08 µg/L	40.864	632.08 ppb	40.864	6.46%
Sb 206.836†	6.5	2.5744 µg/L	2.07549	2.5744 ppb	2.07549	80.62%
Se 196.026†	-35.1	125.57 µg/L	14.087	125.57 ppb	14.087	11.22%
SiO2†	196790.0	40760 µg/L	850.6	40760 ppb	850.6	2.09%
Si 251.611†	238885.4	18937 µg/L	396.7	18937 ppb	396.7	2.09%
Sn 189.927†	-26.4	-18.016 µg/L	1.7697	-18.016 ppb	1.7697	9.82%
Sr 421.552†	12990.3	128.66 µg/L	0.302	128.66 ppb	0.302	0.23%
Ti 334.940†	1209585.5	2812.7 µg/L	78.21	2812.7 ppb	78.21	2.78%
Tl 190.801†	-26.2	8.3467 µg/L	3.46398	8.3467 ppb	3.46398	41.50%
U 409.014†	-889.8	-88.128 µg/L	5.9812	-88.128 ppb	5.9812	6.79%
V 292.402†	13830.3	150.93 µg/L	5.728	150.93 ppb	5.728	3.80%
Zn 213.857†	8215.0	192.18 µg/L	7.325	192.18 ppb	7.325	3.81%

Sequence No.: 19

Sample ID: 245389011|945403|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 317

Date Collected: 2/11/2010 12:15:45

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245389011|945403|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57429.3	57429.3	103 %			12:16:18
1	Al 396.153Radial†	85299.3	82955.0	57328 µg/L	57328 ppb	12:16:18	
1	Ca 317.933Radial†	29179.2	28185.1	24469 µg/L	24469 ppb	12:16:39	
1	Fe 238.204 Radial†	10089.7	9795.3	76508 µg/L	76508 ppb	12:16:39	
1	K 766.490 Radial†	19032.8	18286.7	12563 µg/L	12563 ppb	12:16:18	
1	Mg 279.077 IEC†	1499.9	1448.1	12533 µg/L	12533 ppb	12:16:39	
1	Na 589.592 Radial†	1733.1	1095.9	340.63 µg/L	340.63 ppb	12:16:39	
1	Sr 421.552†	22289.2	21639.5	214.32 µg/L	214.32 ppb	12:16:18	
1	Sc 361.383	1961844.1	1961844.1	100.54 %		12:17:43	
1	Y 371.029	1376925.3	1376925.3	102.71 %		12:17:43	
1	Ag 328.068†	-1591.6	-1049.2	-2.1573 µg/L	-2.1573 ppb	12:17:49	
1	As 188.979†	10.5	9.6	21.027 µg/L	21.027 ppb	12:18:09	
1	B 249.677†	1163.8	810.5	-5.7980 µg/L	-5.7980 ppb	12:17:49	
1	Ba 233.527†	48055.7	47821.5	1197.1 µg/L	1197.1 ppb	12:17:49	
1	Be 313.107†	11019.3	14308.3	7.6891 µg/L	7.6891 ppb	12:17:49	
1	Cd 226.502†	147.8	289.8	-0.9605 µg/L	-0.9605 ppb	12:18:09	
1	Co 228.616†	881.7	884.0	34.670 µg/L	34.670 ppb	12:18:09	
1	Cr 267.716†	3576.8	3608.0	76.559 µg/L	76.559 ppb	12:17:49	
1	Cu 324.752†	9965.9	7359.9	60.095 µg/L	60.095 ppb	12:17:49	
1	Mn 257.610†	661223.4	657920.6	2185.6 µg/L	2185.6 ppb	12:17:43	
1	Mo 202.031†	24.7	30.4	6.0200 µg/L	6.0200 ppb	12:18:09	
1	Ni 231.604†	1335.3	1018.8	54.469 µg/L	54.469 ppb	12:18:09	
1	P 214.914†	790.3	762.2	1508.0 µg/L	1508.0 ppb	12:18:09	
1	Pb 220.353†	514.4	414.3	105.98 µg/L	105.98 ppb	12:18:09	
1	S 181.975 Axial†	355.4	334.9	1413.2 µg/L	1413.2 ppb	12:18:09	
1	Sb 206.836†	43.0	17.2	13.096 µg/L	13.096 ppb	12:18:09	
1	Se 196.026†	-29.3	-40.0	133.85 µg/L	133.85 ppb	12:18:09	
1	SiO2†	248908.5	246320.3	51019 µg/L	51019 ppb	12:17:43	
1	Si 251.611†	300703.7	298780.9	23685 µg/L	23685 ppb	12:17:43	
1	Sn 189.927†	-38.3	-40.0	-24.433 µg/L	-24.433 ppb	12:18:09	
1	Ti 334.940†	1475146.5	1467087.6	3411.4 µg/L	3411.4 ppb	12:17:43	
1	Tl 190.801†	-55.6	-29.6	11.856 µg/L	11.856 ppb	12:18:09	
1	U 409.014†	-924.9	-846.2	-85.587 µg/L	-85.587 ppb	12:17:49	
1	V 292.402†	15437.3	15428.6	167.88 µg/L	167.88 ppb	12:17:49	
1	Zn 213.857†	9789.8	9242.1	216.56 µg/L	216.56 ppb	12:17:49	
2	Sc RADIAL	56813.0	56813.0	102 %		12:16:44	
2	Al 396.153Radial†	85516.7	84068.4	58097 µg/L	58097 ppb	12:16:44	
2	Ca 317.933Radial†	29116.0	28430.7	24682 µg/L	24682 ppb	12:17:05	
2	Fe 238.204 Radial†	10083.9	9896.0	77294 µg/L	77294 ppb	12:17:05	
2	K 766.490 Radial†	19105.4	18558.8	12750 µg/L	12750 ppb	12:16:44	
2	Mg 279.077 IEC†	1496.1	1460.2	12637 µg/L	12637 ppb	12:17:05	
2	Na 589.592 Radial†	1742.6	1123.5	349.22 µg/L	349.22 ppb	12:17:05	
2	Sr 421.552†	22250.8	21836.9	216.27 µg/L	216.27 ppb	12:16:44	
2	Sc 361.383	1950076.9	1950076.9	99.936 %		12:18:16	
2	Y 371.029	1367444.6	1367444.6	102.00 %		12:18:16	
2	Ag 328.068†	-1574.7	-1041.7	-2.0519 µg/L	-2.0519 ppb	12:18:22	
2	As 188.979†	5.3	4.5	11.585 µg/L	11.585 ppb	12:18:43	
2	B 249.677†	1190.5	844.2	-4.7956 µg/L	-4.7956 ppb	12:18:22	
2	Ba 233.527†	47813.1	47867.2	1198.2 µg/L	1198.2 ppb	12:18:22	
2	Be 313.107†	10997.1	14352.3	7.7057 µg/L	7.7057 ppb	12:18:22	
2	Cd 226.502†	169.5	312.3	-0.4552 µg/L	-0.4552 ppb	12:18:43	
2	Co 228.616†	870.3	877.9	34.321 µg/L	34.321 ppb	12:18:43	
2	Cr 267.716†	3503.7	3556.3	75.462 µg/L	75.462 ppb	12:18:22	
2	Cu 324.752†	9973.4	7427.3	60.657 µg/L	60.657 ppb	12:18:22	
2	Mn 257.610†	663793.3	664460.8	2207.3 µg/L	2207.3 ppb	12:18:16	
2	Mo 202.031†	27.1	33.0	6.3063 µg/L	6.3063 ppb	12:18:43	
2	Ni 231.604†	1321.5	1013.1	54.177 µg/L	54.177 ppb	12:18:43	
2	P 214.914†	778.0	754.6	1492.1 µg/L	1492.1 ppb	12:18:43	
2	Pb 220.353†	501.8	404.7	103.56 µg/L	103.56 ppb	12:18:43	



2	S 181.975 Axial†	361.8	343.5	1449.2 µg/L	1449.2 ppb	12:18:43
2	Sb 206.836†	38.4	12.8	8.9730 µg/L	8.9730 ppb	12:18:43
2	Se 196.026†	-22.1	-32.9	145.94 µg/L	145.94 ppb	12:18:43
2	SiO2†	249810.5	248716.8	51516 µg/L	51516 ppb	12:18:16
2	Si 251.611†	302196.2	302079.1	23947 µg/L	23947 ppb	12:18:16
2	Sn 189.927†	-30.2	-32.2	-21.049 µg/L	-21.049 ppb	12:18:43
2	Ti 334.940†	1478680.7	1479477.7	3440.2 µg/L	3440.2 ppb	12:18:16
2	Tl 190.801†	-63.0	-37.3	2.0157 µg/L	2.0157 ppb	12:18:43
2	U 409.014†	-964.6	-891.5	-89.642 µg/L	-89.642 ppb	12:18:22
2	V 292.402†	15330.2	15414.1	167.82 µg/L	167.82 ppb	12:18:22
2	Zn 213.857†	9723.5	9234.6	216.34 µg/L	216.34 ppb	12:18:22
3	Sc RADIAL	56729.9	56729.9	102 %		12:17:10
3	Al 396.153Radial†	86054.7	84721.0	58548 µg/L	58548 ppb	12:17:10
3	Ca 317.933Radial†	29302.5	28656.2	24878 µg/L	24878 ppb	12:17:31
3	Fe 238.204 Radial†	10165.4	9990.8	78034 µg/L	78034 ppb	12:17:31
3	K 766.490 Radial†	19192.2	18671.8	12827 µg/L	12827 ppb	12:17:10
3	Mg 279.077 IEC†	1504.3	1470.4	12725 µg/L	12725 ppb	12:17:31
3	Na 589.592 Radial†	1732.8	1116.3	347.00 µg/L	347.00 ppb	12:17:31
3	Sr 421.552†	22440.9	22056.1	218.44 µg/L	218.44 ppb	12:17:10
3	Sc 361.383	1954594.6	1954594.6	100.17 %		12:18:50
3	Y 371.029	1370159.1	1370159.1	102.20 %		12:18:50
3	Ag 328.068†	-1507.6	-971.1	-1.5216 µg/L	-1.5216 ppb	12:18:55
3	As 188.979†	9.3	8.5	18.997 µg/L	18.997 ppb	12:19:16
3	B 249.677†	1117.3	768.4	-8.3673 µg/L	-8.3673 ppb	12:18:55
3	Ba 233.527†	46041.5	45987.9	1151.2 µg/L	1151.2 ppb	12:18:55
3	Be 313.107†	10229.7	13560.7	7.2729 µg/L	7.2729 ppb	12:18:55
3	Cd 226.502†	120.5	263.0	-1.8430 µg/L	-1.8430 ppb	12:19:16
3	Co 228.616†	775.0	780.7	30.080 µg/L	30.080 ppb	12:19:16
3	Cr 267.716†	3344.4	3389.1	71.915 µg/L	71.915 ppb	12:18:55
3	Cu 324.752†	9650.3	7081.6	58.437 µg/L	58.437 ppb	12:18:55
3	Mn 257.610†	636584.0	635761.7	2112.5 µg/L	2112.5 ppb	12:18:50
3	Mo 202.031†	23.6	29.4	5.9725 µg/L	5.9725 ppb	12:19:16
3	Ni 231.604†	1210.4	899.1	48.204 µg/L	48.204 ppb	12:19:16
3	P 214.914†	700.6	675.6	1330.2 µg/L	1330.2 ppb	12:19:16
3	Pb 220.353†	482.3	384.1	98.287 µg/L	98.287 ppb	12:19:16
3	S 181.975 Axial†	322.8	303.7	1281.6 µg/L	1281.6 ppb	12:19:16
3	Sb 206.836†	32.3	6.6	3.2529 µg/L	3.2529 ppb	12:19:16
3	Se 196.026†	-25.5	-36.3	143.04 µg/L	143.04 ppb	12:19:16
3	SiO2†	241192.1	239535.0	49614 µg/L	49614 ppb	12:18:50
3	Si 251.611†	291586.7	290788.4	23052 µg/L	23052 ppb	12:18:50
3	Sn 189.927†	-22.4	-24.3	-17.662 µg/L	-17.662 ppb	12:19:16
3	Ti 334.940†	1409202.3	1406695.3	3270.9 µg/L	3270.9 ppb	12:18:50
3	Tl 190.801†	-52.6	-26.8	14.354 µg/L	14.354 ppb	12:19:16
3	U 409.014†	-865.9	-790.7	-81.005 µg/L	-81.005 ppb	12:18:55
3	V 292.402†	14536.3	14586.1	159.38 µg/L	159.38 ppb	12:18:55
3	Zn 213.857†	9371.7	8860.8	207.38 µg/L	207.38 ppb	12:18:55

Mean Data: 245389011|945403|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1955505.2	100.21 %		0.304			0.30%
Sc RADIAL	56990.7	102 %		0.7			0.67%
Y 371.029	1371509.7	102.30 %		0.364			0.36%
Ag 328.068†	-1020.7	-1.9103 µg/L		0.34068	-1.9103 ppb	0.34068	17.83%
Al 396.153Radial†	83914.8	57991 µg/L		617.1	57991 ppb	617.1	1.06%
As 188.979†	7.6	17.203 µg/L		4.9696	17.203 ppb	4.9696	28.89%
B 249.677†	807.7	-6.3203 µg/L		1.84227	-6.3203 ppb	1.84227	29.15%
Ba 233.527†	47225.5	1182.1 µg/L		26.84	1182.1 ppb	26.84	2.27%
Be 313.107†	14073.8	7.5559 µg/L		0.24521	7.5559 ppb	0.24521	3.25%
Ca 317.933Radial†	28424.0	24676 µg/L		204.6	24676 ppb	204.6	0.83%
Cd 226.502†	288.4	-1.0863 µg/L		0.70239	-1.0863 ppb	0.70239	64.66%
Co 228.616†	847.5	33.024 µg/L		2.5553	33.024 ppb	2.5553	7.74%
Cr 267.716†	3517.8	74.645 µg/L		2.4275	74.645 ppb	2.4275	3.25%
Cu 324.752†	7289.6	59.729 µg/L		1.1542	59.729 ppb	1.1542	1.93%
Fe 238.204 Radial†	9894.0	77279 µg/L		763.3	77279 ppb	763.3	0.99%
K 766.490 Radial†	18505.8	12713 µg/L		136.0	12713 ppb	136.0	1.07%
Mg 279.077 IEC†	1459.6	12631 µg/L		96.2	12631 ppb	96.2	0.76%
Mn 257.610†	652714.4	2168.4 µg/L		49.67	2168.4 ppb	49.67	2.29%
Mo 202.031†	30.9	6.0996 µg/L		0.18058	6.0996 ppb	0.18058	2.96%
Na 589.592 Radial†	1111.9	345.62 µg/L		4.459	345.62 ppb	4.459	1.29%

Ni 231.604†	977.0	52.283 µg/L	3.5359	52.283 ppb	3.5359	6.76%
P 214.914†	730.8	1443.4 µg/L	98.36	1443.4 ppb	98.36	6.81%
Pb 220.353†	401.0	102.61 µg/L	3.933	102.61 ppb	3.933	3.83%
S 181.975 Axial†	327.4	1381.3 µg/L	88.25	1381.3 ppb	88.25	6.39%
Sb 206.836†	12.2	8.4405 µg/L	4.94284	8.4405 ppb	4.94284	58.56%
Se 196.026†	-36.4	140.94 µg/L	6.312	140.94 ppb	6.312	4.48%
SiO2†	244857.4	50716 µg/L	986.4	50716 ppb	986.4	1.95%
Si 251.611†	297216.1	23561 µg/L	460.2	23561 ppb	460.2	1.95%
Sn 189.927†	-32.2	-21.048 µg/L	3.3855	-21.048 ppb	3.3855	16.08%
Sr 421.552†	21844.2	216.35 µg/L	2.064	216.35 ppb	2.064	0.95%
Ti 334.940†	1451086.9	3374.1 µg/L	90.57	3374.1 ppb	90.57	2.68%
Tl 190.801†	-31.2	9.4088 µg/L	6.52325	9.4088 ppb	6.52325	69.33%
U 409.014†	-842.8	-85.411 µg/L	4.3213	-85.411 ppb	4.3213	5.06%
V 292.402†	15143.0	165.03 µg/L	4.887	165.03 ppb	4.887	2.96%
Zn 213.857†	9112.5	213.43 µg/L	5.236	213.43 ppb	5.236	2.45%

Sequence No.: 20

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 12:19:25

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	56503.6	56503.6	101 %		12:20:03
1	Al 396.153Radial†	6812.1	6749.6	4654.0 µg/L	4654.0 ppb	12:20:23
1	Ca 317.933Radial†	5501.9	5251.0	4558.6 µg/L	4558.6 ppb	12:20:23
1	Fe 238.204 Radial†	612.0	589.8	4617.1 µg/L	4617.1 ppb	12:20:23
1	K 766.490 Radial†	7244.5	6940.2	4767.8 µg/L	4767.8 ppb	12:20:03
1	Mg 279.077 IEC†	565.1	548.3	4779.4 µg/L	4779.4 ppb	12:20:23
1	Na 589.592 Radial†	31534.4	30574.4	9503.7 µg/L	9503.7 ppb	12:20:03
1	Sr 421.552†	48454.2	47851.8	473.93 µg/L	473.93 ppb	12:20:03
1	Sc 361.383	1973227.7	1973227.7	101.12 %		12:21:27
1	Y 371.029	1349685.0	1349685.0	100.68 %		12:21:27
1	Ag 328.068†	64179.0	64000.8	493.06 µg/L	493.06 ppb	12:21:32
1	As 188.979†	268.3	264.6	489.05 µg/L	489.05 ppb	12:21:53
1	B 249.677†	11924.3	11444.9	478.53 µg/L	478.53 ppb	12:21:32
1	Ba 233.527†	19730.9	19355.2	489.77 µg/L	489.77 ppb	12:21:32
1	Be 313.107†	778337.7	773049.7	485.47 µg/L	485.47 ppb	12:21:27
1	Cd 226.502†	18515.4	18452.7	485.97 µg/L	485.97 ppb	12:21:32
1	Co 228.616†	10523.7	10413.9	491.73 µg/L	491.73 ppb	12:21:32
1	Cr 267.716†	23570.0	23358.8	495.31 µg/L	495.31 ppb	12:21:32
1	Cu 324.752†	76280.1	72881.2	490.42 µg/L	490.42 ppb	12:21:32
1	Mn 257.610†	150489.9	149059.8	493.39 µg/L	493.39 ppb	12:21:27
1	Mo 202.031†	5018.6	4968.8	508.12 µg/L	508.12 ppb	12:21:53
1	Ni 231.604†	9783.8	9365.9	491.52 µg/L	491.52 ppb	12:21:32
1	P 214.914†	1236.8	1199.2	2406.4 µg/L	2406.4 ppb	12:21:53
1	Pb 220.353†	2058.4	1938.2	494.86 µg/L	494.86 ppb	12:21:53
1	S 181.975 Axial†	248.6	227.2	958.86 µg/L	958.86 ppb	12:21:53
1	Sb 206.836†	563.2	531.3	497.57 µg/L	497.57 ppb	12:21:53
1	Se 196.026†	355.5	340.8	495.22 µg/L	495.22 ppb	12:21:53
1	SiO2†	26880.3	25327.2	5245.9 µg/L	5245.9 ppb	12:21:32
1	Si 251.611†	31640.6	30977.7	2455.7 µg/L	2455.7 ppb	12:21:32
1	Sn 189.927†	1157.5	1142.7	503.23 µg/L	503.23 ppb	12:21:53
1	Ti 334.940†	214585.4	212048.3	492.85 µg/L	492.85 ppb	12:21:27
1	Tl 190.801†	352.2	374.0	507.53 µg/L	507.53 ppb	12:21:53
1	U 409.014†	5806.5	5815.9	503.98 µg/L	503.98 ppb	12:21:32
1	V 292.402†	48285.0	47823.3	498.20 µg/L	498.20 ppb	12:21:32
1	Zn 213.857†	21198.0	20467.6	486.48 µg/L	486.48 ppb	12:21:32
2	Sc RADIAL	55968.8	55968.8	100 %		12:20:29
2	Al 396.153Radial†	6852.4	6854.1	4726.3 µg/L	4726.3 ppb	12:20:49
2	Ca 317.933Radial†	5551.4	5352.3	4646.6 µg/L	4646.6 ppb	12:20:49
2	Fe 238.204 Radial†	619.1	602.7	4717.6 µg/L	4717.6 ppb	12:20:49
2	K 766.490 Radial†	7224.2	6988.4	4800.9 µg/L	4800.9 ppb	12:20:29
2	Mg 279.077 IEC†	568.3	556.7	4852.8 µg/L	4852.8 ppb	12:20:49
2	Na 589.592 Radial†	31368.0	30706.1	9544.6 µg/L	9544.6 ppb	12:20:29
2	Sr 421.552†	48296.6	48152.1	476.90 µg/L	476.90 ppb	12:20:29
2	Sc 361.383	1957687.9	1957687.9	100.33 %		12:22:00
2	Y 371.029	1340471.4	1340471.4	99.989 %		12:22:00
2	Ag 328.068†	63916.5	64243.0	494.91 µg/L	494.91 ppb	12:22:06
2	As 188.979†	266.9	265.3	490.43 µg/L	490.43 ppb	12:22:26
2	B 249.677†	11822.6	11437.2	478.15 µg/L	478.15 ppb	12:22:06
2	Ba 233.527†	19543.4	19503.2	488.97 µg/L	488.97 ppb	12:22:06
2	Be 313.107†	770754.0	771600.4	484.56 µg/L	484.56 ppb	12:22:00
2	Cd 226.502†	18375.1	18458.2	486.10 µg/L	486.10 ppb	12:22:06
2	Co 228.616†	10482.5	10455.5	493.70 µg/L	493.70 ppb	12:22:06
2	Cr 267.716†	23389.8	23364.2	495.43 µg/L	495.43 ppb	12:22:06
2	Cu 324.752†	75777.3	72978.7	491.09 µg/L	491.09 ppb	12:22:06
2	Mn 257.610†	149276.1	149031.3	493.31 µg/L	493.31 ppb	12:22:00
2	Mo 202.031†	4967.7	4957.5	506.97 µg/L	506.97 ppb	12:22:26
2	Ni 231.604†	9699.8	9359.0	491.15 µg/L	491.15 ppb	12:22:06
2	P 214.914†	1237.1	1209.2	2426.8 µg/L	2426.8 ppb	12:22:26
2	Pb 220.353†	2046.1	1942.1	495.87 µg/L	495.87 ppb	12:22:26

2	S 181.975 Axial†	252.9	233.6	985.56 µg/L	985.56 ppb	12:22:26
2	Sb 206.836†	561.5	534.1	500.13 µg/L	500.13 ppb	12:22:26
2	Se 196.026†	355.0	343.0	498.66 µg/L	498.66 ppb	12:22:26
2	SiO2†	26670.3	25329.0	5246.3 µg/L	5246.3 ppb	12:22:06
2	Si 251.611†	31447.3	31033.3	2460.1 µg/L	2460.1 ppb	12:22:06
2	Sn 189.927†	1157.7	1152.0	507.34 µg/L	507.34 ppb	12:22:26
2	Ti 334.940†	212521.6	211675.7	491.98 µg/L	491.98 ppb	12:22:00
2	Tl 190.801†	350.6	375.2	509.07 µg/L	509.07 ppb	12:22:26
2	U 409.014†	5690.5	5745.8	497.88 µg/L	497.88 ppb	12:22:06
2	V 292.402†	47904.8	47823.4	498.20 µg/L	498.20 ppb	12:22:06
2	Zn 213.857†	21041.3	20477.7	486.71 µg/L	486.71 ppb	12:22:06
3	Sc RADIAL	56336.6	56336.6	101 %		12:20:55
3	Al 396.153Radial†	6869.1	6826.1	4708.7 µg/L	4708.7 ppb	12:21:15
3	Ca 317.933Radial†	5535.4	5300.3	4601.5 µg/L	4601.5 ppb	12:21:15
3	Fe 238.204 Radial†	616.7	596.2	4666.5 µg/L	4666.5 ppb	12:21:15
3	K 766.490 Radial†	7320.4	7036.7	4834.2 µg/L	4834.2 ppb	12:20:55
3	Mg 279.077 IEC†	568.1	552.8	4817.8 µg/L	4817.8 ppb	12:21:15
3	Na 589.592 Radial†	31609.1	30740.7	9555.4 µg/L	9555.4 ppb	12:20:55
3	Sr 421.552†	48682.1	48219.6	477.57 µg/L	477.57 ppb	12:20:55
3	Sc 361.383	1965290.8	1965290.8	100.72 %		12:22:33
3	Y 371.029	1344267.5	1344267.5	100.27 %		12:22:33
3	Ag 328.068†	60499.1	60603.3	466.75 µg/L	466.75 ppb	12:22:39
3	As 188.979†	231.7	229.3	423.93 µg/L	423.93 ppb	12:22:59
3	B 249.677†	11192.5	10766.0	449.93 µg/L	449.93 ppb	12:22:39
3	Ba 233.527†	18138.3	18032.7	452.08 µg/L	452.08 ppb	12:22:39
3	Be 313.107†	730156.0	728318.7	457.38 µg/L	457.38 ppb	12:22:33
3	Cd 226.502†	16923.4	16946.0	446.23 µg/L	446.23 ppb	12:22:39
3	Co 228.616†	9543.6	9482.9	447.70 µg/L	447.70 ppb	12:22:39
3	Cr 267.716†	20822.5	20725.0	439.47 µg/L	439.47 ppb	12:22:39
3	Cu 324.752†	69644.7	66597.5	448.20 µg/L	448.20 ppb	12:22:39
3	Mn 257.610†	141983.4	141214.7	467.45 µg/L	467.45 ppb	12:22:33
3	Mo 202.031†	4137.0	4113.5	420.69 µg/L	420.69 ppb	12:22:59
3	Ni 231.604†	8899.7	8527.1	447.50 µg/L	447.50 ppb	12:22:39
3	P 214.914†	1060.3	1028.9	2061.2 µg/L	2061.2 ppb	12:22:59
3	Pb 220.353†	1788.5	1678.4	428.45 µg/L	428.45 ppb	12:22:59
3	S 181.975 Axial†	222.1	202.0	852.40 µg/L	852.40 ppb	12:22:59
3	Sb 206.836†	479.4	450.4	421.34 µg/L	421.34 ppb	12:22:59
3	Se 196.026†	308.3	295.4	430.29 µg/L	430.29 ppb	12:22:59
3	SiO2†	25035.2	23602.7	4888.7 µg/L	4888.7 ppb	12:22:39
3	Si 251.611†	29471.6	28950.4	2295.0 µg/L	2295.0 ppb	12:22:39
3	Sn 189.927†	951.4	942.7	415.16 µg/L	415.16 ppb	12:22:59
3	Ti 334.940†	200905.7	199322.8	463.25 µg/L	463.25 ppb	12:22:33
3	Tl 190.801†	308.0	331.6	450.30 µg/L	450.30 ppb	12:22:59
3	U 409.014†	5105.0	5142.5	445.51 µg/L	445.51 ppb	12:22:39
3	V 292.402†	43368.1	43134.2	449.09 µg/L	449.09 ppb	12:22:39
3	Zn 213.857†	19338.0	18705.5	444.56 µg/L	444.56 ppb	12:22:39

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1965402.1	100.72 %	0.398			0.40%
Sc RADIAL	56269.7	101 %	0.5			0.49%
Y 371.029	1344808.0	100.31 %	0.345			0.34%
Ag 328.068†	62949.1	484.91 µg/L	15.749	484.91 ppb	15.749	3.25%
QC value within limits for Ag 328.068 Recovery = 96.98%						
Al 396.153Radial†	6809.9	4696.3 µg/L	37.69	4696.3 ppb	37.69	0.80%
QC value within limits for Al 396.153Radial Recovery = 93.93%						
As 188.979†	253.1	467.80 µg/L	38.005	467.80 ppb	38.005	8.12%
QC value within limits for As 188.979 Recovery = 93.56%						
B 249.677†	11216.0	468.87 µg/L	16.404	468.87 ppb	16.404	3.50%
QC value within limits for B 249.677 Recovery = 93.77%						
Ba 233.527†	19023.7	476.94 µg/L	21.532	476.94 ppb	21.532	4.51%
QC value within limits for Ba 233.527 Recovery = 95.39%						
Be 313.107†	757656.3	475.81 µg/L	15.962	475.81 ppb	15.962	3.35%
QC value within limits for Be 313.107 Recovery = 95.16%						
Ca 317.933Radial†	5301.2	4602.2 µg/L	44.00	4602.2 ppb	44.00	0.96%
QC value within limits for Ca 317.933Radial Recovery = 92.04%						
Cd 226.502†	17952.3	472.77 µg/L	22.978	472.77 ppb	22.978	4.86%
QC value within limits for Cd 226.502 Recovery = 94.55%						
Co 228.616†	10117.4	477.71 µg/L	26.008	477.71 ppb	26.008	5.44%

QC value within limits for Co 228.616 Recovery = 95.54%							
Cr 267.716†	22482.7	476.74 µg/L	32.275	476.74 ppb	32.275	6.77%	
QC value within limits for Cr 267.716 Recovery = 95.35%							
Cu 324.752†	70819.1	476.57 µg/L	24.572	476.57 ppb	24.572	5.16%	
QC value within limits for Cu 324.752 Recovery = 95.31%							
Fe 238.204 Radial†	596.2	4667.1 µg/L	50.21	4667.1 ppb	50.21	1.08%	
QC value within limits for Fe 238.204 Radial Recovery = 93.34%							
K 766.490 Radial†	6988.4	4801.0 µg/L	33.15	4801.0 ppb	33.15	0.69%	
QC value within limits for K 766.490 Radial Recovery = 96.02%							
Mg 279.077 IEC†	552.6	4816.7 µg/L	36.74	4816.7 ppb	36.74	0.76%	
QC value within limits for Mg 279.077 IEC Recovery = 96.33%							
Mn 257.610†	146435.2	484.72 µg/L	14.953	484.72 ppb	14.953	3.08%	
QC value within limits for Mn 257.610 Recovery = 96.94%							
Mo 202.031†	4680.0	478.59 µg/L	50.148	478.59 ppb	50.148	10.48%	
QC value within limits for Mo 202.031 Recovery = 95.72%							
Na 589.592 Radial†	30673.7	9534.5 µg/L	27.28	9534.5 ppb	27.28	0.29%	
QC value within limits for Na 589.592 Radial Recovery = 95.35%							
Ni 231.604†	9084.0	476.72 µg/L	25.307	476.72 ppb	25.307	5.31%	
QC value within limits for Ni 231.604 Recovery = 95.34%							
P 214.914†	1145.8	2298.1 µg/L	205.46	2298.1 ppb	205.46	8.94%	
QC value within limits for P 214.914 Recovery = 91.92%							
Pb 220.353†	1852.9	473.06 µg/L	38.637	473.06 ppb	38.637	8.17%	
QC value within limits for Pb 220.353 Recovery = 94.61%							
S 181.975 Axial†	220.9	932.27 µg/L	70.450	932.27 ppb	70.450	7.56%	
QC value within limits for S 181.975 Axial Recovery = 93.23%							
Sb 206.836†	505.3	473.02 µg/L	44.767	473.02 ppb	44.767	9.46%	
QC value within limits for Sb 206.836 Recovery = 94.60%							
Se 196.026†	326.4	474.72 µg/L	38.520	474.72 ppb	38.520	8.11%	
QC value within limits for Se 196.026 Recovery = 94.94%							
SiO2†	24753.0	5127.0 µg/L	206.34	5127.0 ppb	206.34	4.02%	
QC value within limits for SiO2 Recovery = 95.88%							
Si 251.611†	30320.5	2403.6 µg/L	94.08	2403.6 ppb	94.08	3.91%	
QC value within limits for Si 251.611 Recovery = 96.14%							
Sn 189.927†	1079.1	475.24 µg/L	52.076	475.24 ppb	52.076	10.96%	
QC value within limits for Sn 189.927 Recovery = 95.05%							
Sr 421.552†	48074.5	476.13 µg/L	1.939	476.13 ppb	1.939	0.41%	
QC value within limits for Sr 421.552 Recovery = 95.23%							
Ti 334.940†	207682.3	482.70 µg/L	16.843	482.70 ppb	16.843	3.49%	
QC value within limits for Ti 334.940 Recovery = 96.54%							
Tl 190.801†	360.3	488.97 µg/L	33.492	488.97 ppb	33.492	6.85%	
QC value within limits for Tl 190.801 Recovery = 97.79%							
U 409.014†	5568.0	482.46 µg/L	32.139	482.46 ppb	32.139	6.66%	
QC value within limits for U 409.014 Recovery = 96.49%							
V 292.402†	46260.3	481.83 µg/L	28.351	481.83 ppb	28.351	5.88%	
QC value within limits for V 292.402 Recovery = 96.37%							
Zn 213.857†	19883.6	472.58 µg/L	24.271	472.58 ppb	24.271	5.14%	
QC value within limits for Zn 213.857 Recovery = 94.52%							

All analyte(s) passed QC.

Sequence No.: 21

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 12:23:08

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	55459.1	55459.1	99.3 %		12:23:41
1	Al 396.153Radial†	4.7	22.4	15.434 µg/L	15.434 ppb	12:23:41
1	Ca 317.933Radial†	187.2	2.2	1.9481 µg/L	1.9481 ppb	12:24:01
1	Fe 238.204 Radial†	17.4	2.5	19.247 µg/L	19.247 ppb	12:24:01
1	K 766.490 Radial†	147.6	-70.4	-48.373 µg/L	-48.373 ppb	12:23:41
1	Mg 279.077 IEC†	17.2	7.0	61.376 µg/L	61.376 ppb	12:24:01
1	Na 589.592 Radial†	570.9	-14.4	-4.4817 µg/L	-4.4817 ppb	12:23:41
1	Sr 421.552†	66.1	34.0	0.3368 µg/L	0.3368 ppb	12:23:41
1	Sc 361.383	1971531.8	1971531.8	101.04 %		12:25:03
1	Y 371.029	1353198.1	1353198.1	100.94 %		12:25:03
1	Ag 328.068†	-572.9	-33.1	-0.2473 µg/L	-0.2473 ppb	12:25:09
1	As 188.979†	-4.9	-5.6	-10.450 µg/L	-10.450 ppb	12:25:29
1	B 249.677†	325.4	-25.0	-1.0594 µg/L	-1.0594 ppb	12:25:29
1	Ba 233.527†	-14.8	8.5	0.2152 µg/L	0.2152 ppb	12:25:29
1	Be 313.107†	-3343.4	38.9	0.0243 µg/L	0.0243 ppb	12:25:09
1	Cd 226.502†	-136.2	8.0	0.2072 µg/L	0.2072 ppb	12:25:29
1	Co 228.616†	-6.1	1.0	0.0451 µg/L	0.0451 ppb	12:25:29
1	Cr 267.716†	-36.1	14.6	0.3093 µg/L	0.3093 ppb	12:25:29
1	Cu 324.752†	2452.4	-125.4	-0.8398 µg/L	-0.8398 ppb	12:25:09
1	Mn 257.610†	-145.1	96.0	0.3176 µg/L	0.3176 ppb	12:25:29
1	Mo 202.031†	1.5	7.4	0.7564 µg/L	0.7564 ppb	12:25:29
1	Ni 231.604†	308.8	-3.7	-0.1947 µg/L	-0.1947 ppb	12:25:29
1	P 214.914†	25.5	1.4	2.8370 µg/L	2.8370 ppb	12:25:29
1	Pb 220.353†	102.0	3.6	0.9104 µg/L	0.9104 ppb	12:25:29
1	S 181.975 Axial†	16.1	-2.6	-10.848 µg/L	-10.848 ppb	12:25:29
1	Sb 206.836†	19.7	-6.1	-5.6496 µg/L	-5.6496 ppb	12:25:29
1	Se 196.026†	15.3	4.4	6.2837 µg/L	6.2837 ppb	12:25:29
1	SiO2†	1280.1	12.2	2.5332 µg/L	2.5332 ppb	12:25:09
1	Si 251.611†	371.8	56.1	4.4491 µg/L	4.4491 ppb	12:25:29
1	Sn 189.927†	0.4	-1.5	-0.6528 µg/L	-0.6528 ppb	12:25:29
1	Ti 334.940†	287.2	128.2	0.2932 µg/L	0.2932 ppb	12:25:09
1	Tl 190.801†	-22.9	3.1	4.2037 µg/L	4.2037 ppb	12:25:29
1	U 409.014†	-26.6	47.4	4.1124 µg/L	4.1124 ppb	12:25:09
1	V 292.402†	-10.2	64.0	0.6714 µg/L	0.6714 ppb	12:25:09
1	Zn 213.857†	489.3	-11.0	-0.2648 µg/L	-0.2648 ppb	12:25:29
2	Sc RADIAL	55016.2	55016.2	98.5 %		12:24:07
2	Al 396.153Radial†	-10.1	7.4	5.1069 µg/L	5.1069 ppb	12:24:07
2	Ca 317.933Radial†	190.6	7.3	6.3290 µg/L	6.3290 ppb	12:24:27
2	Fe 238.204 Radial†	17.1	2.4	18.414 µg/L	18.414 ppb	12:24:27
2	K 766.490 Radial†	171.8	-44.7	-30.686 µg/L	-30.686 ppb	12:24:07
2	Mg 279.077 IEC†	13.7	3.7	31.814 µg/L	31.814 ppb	12:24:27
2	Na 589.592 Radial†	504.7	-76.9	-23.918 µg/L	-23.918 ppb	12:24:07
2	Sr 421.552†	8.6	-23.8	-0.2360 µg/L	-0.2360 ppb	12:24:07
2	Sc 361.383	1964088.2	1964088.2	100.65 %		12:25:35
2	Y 371.029	1350230.4	1350230.4	100.72 %		12:25:35
2	Ag 328.068†	-582.6	-44.9	-0.3401 µg/L	-0.3401 ppb	12:25:41
2	As 188.979†	-0.0	-0.8	-1.4617 µg/L	-1.4617 ppb	12:26:01
2	B 249.677†	334.2	-15.1	-0.6410 µg/L	-0.6410 ppb	12:26:01
2	Ba 233.527†	-7.0	16.3	0.4081 µg/L	0.4081 ppb	12:26:01
2	Be 313.107†	-3163.4	205.2	0.1287 µg/L	0.1287 ppb	12:25:41
2	Cd 226.502†	-131.0	12.6	0.3308 µg/L	0.3308 ppb	12:26:01
2	Co 228.616†	-2.5	4.6	0.2159 µg/L	0.2159 ppb	12:26:01
2	Cr 267.716†	-28.1	22.5	0.4762 µg/L	0.4762 ppb	12:26:01
2	Cu 324.752†	2463.3	-105.3	-0.7048 µg/L	-0.7048 ppb	12:25:41
2	Mn 257.610†	-133.5	107.0	0.3551 µg/L	0.3551 ppb	12:26:01
2	Mo 202.031†	-0.5	5.4	0.5548 µg/L	0.5548 ppb	12:26:01
2	Ni 231.604†	314.4	3.0	0.1590 µg/L	0.1590 ppb	12:26:01
2	P 214.914†	30.4	6.3	12.899 µg/L	12.899 ppb	12:26:01
2	Pb 220.353†	99.7	1.6	0.4178 µg/L	0.4178 ppb	12:26:01

2	S 181.975 Axial†	17.9	-0.7	-3.1457 µg/L	-3.1457 ppb	12:26:01
2	Sb 206.836†	25.6	-0.1	-0.1260 µg/L	-0.1260 ppb	12:26:01
2	Se 196.026†	20.9	10.0	14.381 µg/L	14.381 ppb	12:26:01
2	SiO2†	1260.9	-2.0	-0.4160 µg/L	-0.4160 ppb	12:25:41
2	Si 251.611†	359.6	45.4	3.5994 µg/L	3.5994 ppb	12:26:01
2	Sn 189.927†	-0.2	-2.1	-0.9216 µg/L	-0.9216 ppb	12:26:01
2	Ti 334.940†	324.6	166.4	0.3846 µg/L	0.3846 ppb	12:25:41
2	Tl 190.801†	-25.4	0.6	0.7627 µg/L	0.7627 ppb	12:26:01
2	U 409.014†	-57.9	16.2	1.4013 µg/L	1.4013 ppb	12:25:41
2	V 292.402†	-40.9	33.4	0.3531 µg/L	0.3531 ppb	12:25:41
2	Zn 213.857†	486.6	-11.8	-0.2846 µg/L	-0.2846 ppb	12:26:01
3	Sc RADIAL	55146.1	55146.1	98.8 %		12:24:33
3	Al 396.153Radial†	17.0	34.8	24.044 µg/L	24.044 ppb	12:24:33
3	Ca 317.933Radial†	184.9	1.1	0.9253 µg/L	0.9253 ppb	12:24:53
3	Fe 238.204 Radial†	16.4	1.5	11.885 µg/L	11.885 ppb	12:24:53
3	K 766.490 Radial†	153.8	-63.3	-43.499 µg/L	-43.499 ppb	12:24:33
3	Mg 279.077 IEC†	12.2	2.1	18.319 µg/L	18.319 ppb	12:24:53
3	Na 589.592 Radial†	531.1	-51.5	-15.999 µg/L	-15.999 ppb	12:24:33
3	Sr 421.552†	48.2	16.2	0.1609 µg/L	0.1609 ppb	12:24:33
3	Sc 361.383	1957305.6	1957305.6	100.31 %		12:26:07
3	Y 371.029	1343973.3	1343973.3	100.25 %		12:26:07
3	Ag 328.068†	-548.1	-12.5	-0.0910 µg/L	-0.0910 ppb	12:26:13
3	As 188.979†	1.4	0.6	1.1855 µg/L	1.1855 ppb	12:26:34
3	B 249.677†	334.8	-13.3	-0.5634 µg/L	-0.5634 ppb	12:26:34
3	Ba 233.527†	-11.2	12.1	0.3035 µg/L	0.3035 ppb	12:26:34
3	Be 313.107†	-3091.2	266.3	0.1671 µg/L	0.1671 ppb	12:26:13
3	Cd 226.502†	-144.2	-1.0	-0.0285 µg/L	-0.0285 ppb	12:26:34
3	Co 228.616†	-8.6	-1.6	-0.0752 µg/L	-0.0752 ppb	12:26:34
3	Cr 267.716†	-12.8	37.6	0.7963 µg/L	0.7963 ppb	12:26:34
3	Cu 324.752†	2473.9	-86.3	-0.5782 µg/L	-0.5782 ppb	12:26:13
3	Mn 257.610†	-77.4	162.5	0.5382 µg/L	0.5382 ppb	12:26:34
3	Mo 202.031†	0.9	6.7	0.6895 µg/L	0.6895 ppb	12:26:34
3	Ni 231.604†	314.4	4.1	0.2170 µg/L	0.2170 ppb	12:26:34
3	P 214.914†	33.2	9.2	18.846 µg/L	18.846 ppb	12:26:34
3	Pb 220.353†	100.5	2.8	0.7130 µg/L	0.7130 ppb	12:26:34
3	S 181.975 Axial†	15.3	-3.3	-13.747 µg/L	-13.747 ppb	12:26:34
3	Sb 206.836†	26.8	1.1	1.0564 µg/L	1.0564 ppb	12:26:34
3	Se 196.026†	9.9	-0.9	-1.2580 µg/L	-1.2580 ppb	12:26:34
3	SiO2†	1269.8	11.2	2.3119 µg/L	2.3119 ppb	12:26:13
3	Si 251.611†	394.4	81.4	6.4506 µg/L	6.4506 ppb	12:26:34
3	Sn 189.927†	-2.1	-4.0	-1.7784 µg/L	-1.7784 ppb	12:26:34
3	Ti 334.940†	435.9	278.5	0.6462 µg/L	0.6462 ppb	12:26:13
3	Tl 190.801†	-28.3	-2.4	-3.2612 µg/L	-3.2612 ppb	12:26:34
3	U 409.014†	-43.5	30.4	2.6348 µg/L	2.6348 ppb	12:26:13
3	V 292.402†	-19.4	54.7	0.5745 µg/L	0.5745 ppb	12:26:13
3	Zn 213.857†	495.1	-1.7	-0.0417 µg/L	-0.0417 ppb	12:26:34

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1964308.5	100.66 %	0.365			0.36%
Sc RADIAL	55207.1	98.9 %	0.41			0.41%
Y 371.029	1349133.9	100.63 %	0.351			0.35%
Ag 328.068†	-30.2	-0.2262 µg/L	0.12590	-0.2262 ppb	0.12590	55.67%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	21.5	14.862 µg/L	9.4813	14.862 ppb	9.4813	63.80%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.9	-3.5754 µg/L	6.09893	-3.5754 ppb	6.09893	170.58%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-17.8	-0.7546 µg/L	0.26682	-0.7546 ppb	0.26682	35.36%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	12.3	0.3089 µg/L	0.09656	0.3089 ppb	0.09656	31.26%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	170.1	0.1067 µg/L	0.07389	0.1067 ppb	0.07389	69.25%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	3.5	3.0675 µg/L	2.87051	3.0675 ppb	2.87051	93.58%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.5	0.1698 µg/L	0.18254	0.1698 ppb	0.18254	107.48%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	1.3	0.0619 µg/L	0.14626	0.0619 ppb	0.14626	236.12%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	24.9	0.5273 µg/L	0.24746	0.5273 ppb	0.24746	46.93%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-105.6	-0.7076 µg/L	0.13078	-0.7076 ppb	0.13078	18.48%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	2.1	16.515 µg/L	4.0317	16.515 ppb	4.0317	24.41%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-59.5	-40.853 µg/L	9.1358	-40.853 ppb	9.1358	22.36%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	4.3	37.170 µg/L	22.0224	37.170 ppb	22.0224	59.25%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	121.8	0.4036 µg/L	0.11800	0.4036 ppb	0.11800	29.23%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	6.5	0.6669 µg/L	0.10267	0.6669 ppb	0.10267	15.39%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-47.6	-14.799 µg/L	9.7734	-14.799 ppb	9.7734	66.04%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	1.1	0.0604 µg/L	0.22287	0.0604 ppb	0.22287	368.89%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	5.6	11.528 µg/L	8.0923	11.528 ppb	8.0923	70.20%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	2.7	0.6804 µg/L	0.24788	0.6804 ppb	0.24788	36.43%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-2.2	-9.2469 µg/L	5.47890	-9.2469 ppb	5.47890	59.25%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-1.7	-1.5731 µg/L	3.57954	-1.5731 ppb	3.57954	227.55%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	4.5	6.4688 µg/L	7.82104	6.4688 ppb	7.82104	120.90%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	7.1	1.4764 µg/L	1.64260	1.4764 ppb	1.64260	111.26%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	61.0	4.8330 µg/L	1.46383	4.8330 ppb	1.46383	30.29%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-2.5	-1.1176 µg/L	0.58781	-1.1176 ppb	0.58781	52.60%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	8.8	0.0873 µg/L	0.29343	0.0873 ppb	0.29343	336.31%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	191.0	0.4413 µg/L	0.18321	0.4413 ppb	0.18321	41.51%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.4	0.5684 µg/L	3.73624	0.5684 ppb	3.73624	657.35%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	31.3	2.7162 µg/L	1.35736	2.7162 ppb	1.35736	49.97%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	50.7	0.5330 µg/L	0.16318	0.5330 ppb	0.16318	30.62%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-8.1	-0.1970 µg/L	0.13491	-0.1970 ppb	0.13491	68.48%
QC value within limits for Zn 213.857 Recovery = Not calculated						
All analyte(s) passed QC.						



## ICPMS #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Monday, February 15, 2010 09:29:40

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.498

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	7663.5	7663.456	183.201	2.4
Mg	24.0	80446.5	80446.526	1406.481	1.7
Co	58.9	185881.8	185881.796	1828.731	1.0
Rh	102.9	331984.9	331984.897	3412.916	1.0
In	114.9	442302.5	442302.526	2761.177	0.6
Pb	208.0	335915.3	335915.332	1439.959	0.4
[> Ba	137.9	393831.4	393831.438	2895.607	0.7
[ Ba++	69.0	8399.0	0.021	0.000	1.7
[> Ce	139.9	473929.9	473929.938	1678.067	0.4
[ CeO	155.9	12978.9	0.027	0.001	2.0
Bkgd	220.0	20.2	20.200	2.992	14.8

### Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow
5.75	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	9	5.5	7681.7
Co	59	9	5.8	182033.1
In	115	9	6.0	440620.6

## 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	581	2072	0.640
Be	9.0	9.0	2051	2088	0.627
Mg	24.0	24.0	5681	2100	0.580
Mg	25.0	25.0	5945	2100	0.590
Mg	26.0	25.9	6152	2100	0.605
Co	58.9	58.9	14186	2125	0.605
Rh	102.9	102.9	24871	2180	0.603
In	114.9	114.9	27785	2200	0.593
Ce	139.9	139.9	33857	2220	0.602
Pb	206.0	206.0	49948	2305	0.624
Pb	207.0	207.0	50147	2240	0.640
Pb	208.0	208.0	50451	2265	0.719
U	238.1	238.0	57719	2275	0.748

## ICPMS#5 - Summary Report

Sample ID: Blank  
 Sample Date/Time: Monday, February 15, 2010 21:44:09  
 Sample Type:  
 Sample Description:  
 Number of Replicates: 3  
 Batch ID:  
 Method File: c:\elandata\Method\6020 2.mth  
 Dataset File: c:\elandata\Dataset\100215\Blank.279

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		84	
Be	9		ug/L		24	
B	11		ug/L		599	
Na	23		ug/L		22019	
Mg	24		ug/L		3667	
Al	27		ug/L		10004	
P	31		ug/L		10074	
K	39		ug/L		614978	
Ca	43		ug/L		417	
> Sc	45		ug/L		992057	
Ti	47		ug/L		496	
V	51		ug/L		5490	
Cr	52		ug/L		4411	
Cr	53		ug/L		125925	
Mn	55		ug/L		2250	
Fe	57		ug/L		8197	
Co	59		ug/L		160	
Ni	60		ug/L		195	
Cu	63		ug/L		451	
Cu	65		ug/L		257	
Zn	66		ug/L		366	
Zn	67		ug/L		16501	
Zn	68		ug/L		1710	
> Ge	74		ug/L		737378	
As	75		ug/L		-844	
Se	77		ug/L		9209	
Se	82		ug/L		19	
Kr	83		ug/L		178	
Sr	88		ug/L		447	
Y	89		ug/L		119	
Mo	98		ug/L		187	
Ag	107		ug/L		102	
Cd	111		ug/L		43	
Cd	114		ug/L		87	
> In	115		ug/L		483919	
Sn	120		ug/L		330	
Sb	121		ug/L		593	
Sb	123		ug/L		456	
Ba	135		ug/L		59	
Ba	137		ug/L		99	
Ho	165		ug/L		22	
> Lu	175		ug/L		738308	
Tl	205		ug/L		1629	
Pb	208		ug/L		1100	
Bi	209		ug/L		75	
Th	232		ug/L		1379	
U	238		ug/L		1069	

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Simple Linear	1.0000
Be	9Linear Thru Zero	
B	11Simple Linear	
Na	23Simple Linear	
Mg	24Simple Linear	
Al	27Simple Linear	
P	31Simple Linear	
K	39Simple Linear	
Ca	43Simple Linear	
Sc	45Linear Thru Zero	
Ti	47Simple Linear	1.0000
V	51Simple Linear	
Cr	52Simple Linear	
Cr	53Simple Linear	
Mn	55Simple Linear	
Fe	57Simple Linear	
Co	59Simple Linear	
Ni	60Linear Thru Zero	
Cu	63Simple Linear	
Cu	65Simple Linear	
Zn	66Simple Linear	
Zn	67Simple Linear	
Zn	68Simple Linear	
Ge	74Simple Linear	
As	75Simple Linear	
Se	77Simple Linear	
Se	82Simple Linear	
Kr	83Simple Linear	
Sr	88Simple Linear	
Y	89Simple Linear	
Mo	98Simple Linear	
Ag	107Simple Linear	
Cd	111Simple Linear	
Cd	114Simple Linear	
In	115Simple Linear	
Sn	120Simple Linear	
Sb	121Simple Linear	
Sb	123Simple Linear	
Ba	135Simple Linear	
Ba	137Simple Linear	
Ho	165Simple Linear	
Lu	175Simple Linear	
Tl	205Simple Linear	
Pb	208Simple Linear	
Bi	209Simple Linear	
Th	232Simple Linear	
U	238Simple Linear	

Sample ID: Blank

Report Date/Time: Monday, February 15, 2010 21:46:53

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
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: Standard 1

Sample Date/Time: Monday, February 15, 2010 21:50:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\Standard 1.280

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	0.713	23690	0.025
Be	9	10.000	ug/L	3.122	4847	0.005
B	11	20.000	ug/L	5.904	11149	0.011
Na	23	1000.000	ug/L	13.919	4497805	4.653
Mg	24	1000.000	ug/L	7.168	3221926	3.342
Al	27	1000.000	ug/L	7.733	5192549	5.384
P	31	1000.000	ug/L	1.950	314974	0.317
K	39	1000.000	ug/L	2.497	8350854	8.051
Ca	43	1000.000	ug/L	0.663	19561	0.020
> Sc	45		ug/L		963239	963238.718
Ti	47	10.000	ug/L	4.591	9999	0.010
V	51	10.000	ug/L	4.530	116455	0.115
Cr	52	10.000	ug/L	1.482	91462	0.091
Cr	53		ug/L		130535	0.009
Mn	55	10.000	ug/L	2.876	150401	0.154
Fe	57	1000.000	ug/L	1.719	311382	0.315
Co	59	10.000	ug/L	2.738	119028	0.123
Ni	60	10.000	ug/L	0.704	26214	0.027
Cu	63		ug/L		64543	0.067
Cu	65	10.000	ug/L	3.233	31822	0.033
Zn	66	10.000	ug/L	1.336	20729	0.027
Zn	67		ug/L		18377	0.002
Zn	68		ug/L		16228	0.020
> Ge	74		ug/L		742548	742547.567
As	75	10.000	ug/L	4.821	18660	0.026
Se	77		ug/L		10612	0.002
Se	82	10.000	ug/L	1.153	2239	0.003
Kr	83		ug/L		156	-0.000
Sr	88	10.000	ug/L	3.568	264967	0.545
Y	89		ug/L		147	0.000
Mo	98	10.000	ug/L	2.887	58902	0.121
Ag	107	10.000	ug/L	0.515	109148	0.225
Cd	111	10.000	ug/L	1.148	25982	0.053
Cd	114		ug/L		60870	0.125
> In	115		ug/L		485610	485610.138
Sn	120	10.000	ug/L	0.735	109459	0.225
Sb	121	10.000	ug/L	1.775	84033	0.172
Sb	123		ug/L		64992	0.133
Ba	135		ug/L		26259	0.035
Ba	137	10.000	ug/L	1.345	46661	0.063
Ho	165		ug/L		25	0.000
> Lu	175		ug/L		741223	741223.231
Tl	205	10.000	ug/L	4.259	297005	0.399
Pb	208	10.000	ug/L	0.941	526074	0.708
Bi	209		ug/L		155	0.000
Th	232	10.000	ug/L	1.824	627631	0.845
U	238	10.000	ug/L	1.374	639244	0.861

Sample ID: Standard 1

Report Date/Time: Monday, February 15, 2010 21:52:56

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: Standard 1

Report Date/Time: Monday, February 15, 2010 21:52:56

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: Standard 1

Report Date/Time: Monday, February 15, 2010 21:52:56

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## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Monday, February 15, 2010 21:56:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\Standard 2.281

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	99.980	ug/L	1.339	237219	0.240
Be	9	100.003	ug/L	3.187	49642	0.050
B	11	200.004	ug/L	3.732	109118	0.110
Na	23	10000.257	ug/L	9.788	46057519	46.651
Mg	24	10008.333	ug/L	12.448	35993070	36.489
Al	27	9988.395	ug/L	9.352	47551635	48.185
P	31	10000.552	ug/L	3.410	3154719	3.186
K	39	9998.770	ug/L	2.396	79107701	79.520
Ca	43	9999.946	ug/L	1.926	196614	0.199
> Sc	45		ug/L		987231	987230.565
Ti	47	100.017	ug/L	0.799	99742	0.101
V	51	99.942	ug/L	0.958	1082085	1.091
Cr	52	99.935	ug/L	1.803	842759	0.849
Cr	53		ug/L		230350	0.106
Mn	55	99.901	ug/L	2.087	1383288	1.399
Fe	57	9999.073	ug/L	1.651	3089250	3.121
Co	59	99.896	ug/L	2.527	1102947	1.117
Ni	60	99.939	ug/L	1.209	251361	0.254
Cu	63		ug/L		603599	0.611
Cu	65	99.950	ug/L	2.166	308418	0.312
Zn	66	100.000	ug/L	1.128	204653	0.274
Zn	67		ug/L		49601	0.044
Zn	68		ug/L		149658	0.199
> Ge	74		ug/L		745333	745333.489
As	75	100.023	ug/L	2.149	199673	0.269
Se	77		ug/L		25809	0.022
Se	82	99.986	ug/L	2.710	21989	0.029
Kr	83		ug/L		206	0.000
Sr	88	99.903	ug/L	0.519	2366138	4.959
Y	89		ug/L		377	0.001
Mo	98	100.020	ug/L	2.435	588665	1.234
Ag	107	99.939	ug/L	1.144	1009408	2.116
Cd	111	100.000	ug/L	1.328	254875	0.534
Cd	114		ug/L		593183	1.243
> In	115		ug/L		477054	477053.613
Sn	120	99.959	ug/L	0.840	1029928	2.158
Sb	121	99.991	ug/L	1.426	813154	1.703
Sb	123		ug/L		638284	1.337
Ba	135		ug/L		261250	0.368
Ba	137	100.022	ug/L	2.063	455552	0.642
Ho	165		ug/L		41	0.000
> Lu	175		ug/L		709247	709247.259
Tl	205	99.864	ug/L	1.891	2484945	3.502
Pb	208	99.894	ug/L	2.634	4534492	6.395
Bi	209		ug/L		488	0.001
Th	232	99.857	ug/L	2.855	5234471	7.382
U	238	99.854	ug/L	1.672	5320104	7.502

Sample ID: Standard 2

Report Date/Time: Monday, February 15, 2010 21:59:01

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: Standard 2

Report Date/Time: Monday, February 15, 2010 21:59:01

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## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Monday, February 15, 2010 22:02:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 1.282

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.316	ug/L	0.960	118332	0.126
Be	9	53.265	ug/L	1.291	25220	0.027
B	11	106.325	ug/L	6.251	55534	0.058
Na	23	4946.431	ug/L	15.632	21696437	23.075
Mg	24	4719.401	ug/L	9.862	16177960	17.206
Al	27	5308.917	ug/L	12.315	24081426	25.611
P	31	4781.290	ug/L	1.870	1442763	1.523
K	39	5359.930	ug/L	1.422	40700339	42.628
Ca	43	5075.266	ug/L	1.466	95330	0.101
Sc	45		ug/L		941032	941032.083
Ti	47	51.540	ug/L	2.323	49236	0.052
V	51	54.062	ug/L	3.385	560139	0.590
Cr	52	53.624	ug/L	2.794	432925	0.456
Cr	53		ug/L		179006	0.063
Mn	55	55.455	ug/L	0.633	732937	0.777
Fe	57	4656.790	ug/L	2.485	1375257	1.454
Co	59	53.199	ug/L	4.108	559790	0.595
Ni	60	53.521	ug/L	1.399	128408	0.136
Cu	63		ug/L		311973	0.331
Cu	65	53.094	ug/L	0.464	156298	0.166
Zn	66	53.205	ug/L	1.930	105913	0.146
Zn	67		ug/L		32542	0.023
Zn	68		ug/L		78114	0.106
Ge	74		ug/L		723879	723878.877
As	75	50.636	ug/L	0.362	97767	0.136
Se	77		ug/L		17977	0.012
Se	82	52.298	ug/L	3.104	11182	0.015
Kr	83		ug/L		193	0.000
Sr	88	54.059	ug/L	1.655	1249788	2.683
Y	89		ug/L		197	0.000
Mo	98	51.038	ug/L	3.079	293228	0.630
Ag	107	53.813	ug/L	1.999	530506	1.139
Cd	111	51.661	ug/L	1.758	128539	0.276
Cd	114		ug/L		305543	0.656
In	115		ug/L		465669	465668.916
Sn	120	52.605	ug/L	3.298	529093	1.136
Sb	121	53.021	ug/L	2.669	421041	0.903
Sb	123		ug/L		332217	0.713
Ba	135		ug/L		133208	0.192
Ba	137	51.795	ug/L	2.121	230634	0.333
Ho	165		ug/L		62	0.000
Lu	175		ug/L		693068	693068.272
Tl	205	51.959	ug/L	3.219	1264380	1.822
Pb	208	54.657	ug/L	0.715	2425994	3.499
Bi	209		ug/L		549	0.001
Th	232	52.622	ug/L	2.357	2697279	3.890
U	238	54.977	ug/L	1.256	2863395	4.130

Sample ID: QC Std 1

Report Date/Time: Monday, February 15, 2010 22:05:06

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7	104.632				
Be	9	106.529				
B	11	106.325				
Na	23	98.929				
Mg	24	94.388				
Al	27	105.127				
P	31	95.626				
K	39	107.199				
Ca	43	101.505				
> Sc	45		94.9			
Ti	47	103.080				
V	51	108.124				
Cr	52	107.249				
Cr	53					
Mn	55	110.911				
Fe	57	93.136				
Co	59	106.399				
Ni	60	107.042				
Cu	63					
Cu	65	106.188				
Zn	66	106.409				
Zn	67					
Zn	68					
> Ge	74		98.2			
As	75	101.272				
Se	77					
Se	82	104.597				
Kr	83					
Sr	88	108.118				
Y	89					
Mo	98	102.077				
Ag	107	107.625				
Cd	111	103.322				
Cd	114					
> In	115		96.2			
Sn	120	105.210				
Sb	121	106.043				
Sb	123					
Ba	135					
Ba	137	103.590				
Ho	165					
> Lu	175		93.9			
Tl	205	103.918				
Pb	208	109.314				
Bi	209					
Th	232	105.244				
U	238	109.954				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 QC Std 1 Mn 55ICV is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Monday, February 15, 2010 22:08:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 2.283

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.010	ug/L	27.695	103	0.000
Be	9	-0.006	ug/L	100.102	20	-0.000
B	11	5.074	ug/L	14.633	3184	0.003
Na	23	0.431	ug/L	225.622	22685	0.002
Mg	24	0.548	ug/L	109.439	5334	0.002
Al	27	-0.385	ug/L	149.726	7669	-0.002
P	31	4.019	ug/L	116.523	10700	0.001
K	39	10.807	ug/L	34.119	660610	0.086
Ca	43	2.303	ug/L	68.008	436	0.000
> Sc	45		ug/L		936243	936243.154
Ti	47	0.092	ug/L	17.686	555	0.000
V	51	-0.104	ug/L	888.676	4202	-0.001
Cr	52	0.313	ug/L	8.053	6660	0.003
Cr	53		ug/L		139919	0.023
Mn	55	0.006	ug/L	63.114	2205	0.000
Fe	57	5.253	ug/L	10.940	9268	0.002
Co	59	0.010	ug/L	5.917	257	0.000
Ni	60	0.011	ug/L	111.639	209	0.000
Cu	63		ug/L		495	0.000
Cu	65	0.009	ug/L	120.756	269	0.000
Zn	66	0.017	ug/L	104.493	392	0.000
Zn	67		ug/L		17061	0.001
Zn	68		ug/L		1763	0.000
> Ge	74		ug/L		721026	721026.288
As	75	-0.040	ug/L	1341.878	-904	-0.000
Se	77		ug/L		10727	0.002
Se	82	0.098	ug/L	58.515	39	0.000
Kr	83		ug/L		175	0.000
Sr	88	0.006	ug/L	12.697	575	0.000
Y	89		ug/L		102	-0.000
Mo	98	0.044	ug/L	17.965	440	0.001
Ag	107	0.005	ug/L	19.702	152	0.000
Cd	111	0.007	ug/L	45.049	60	0.000
Cd	114		ug/L		125	0.000
> In	115		ug/L		471658	471657.940
Sn	120	0.022	ug/L	22.256	543	0.000
Sb	121	0.402	ug/L	13.182	3812	0.007
Sb	123		ug/L		2966	0.005
Ba	135		ug/L		62	0.000
Ba	137	0.005	ug/L	95.594	115	0.000
Ho	165		ug/L		28	0.000
> Lu	175		ug/L		706271	706271.065
Tl	205	0.227	ug/L	25.809	7178	0.008
Pb	208	0.006	ug/L	5.532	1332	0.000
Bi	209		ug/L		74	0.000
Th	232	0.026	ug/L	17.897	2667	0.002
U	238	0.008	ug/L	8.552	1467	0.001

Sample ID: QC Std 2

Report Date/Time: Monday, February 15, 2010 22:11:15

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		94.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		97.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		95.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: QC Std 2

Report Date/Time: Monday, February 15, 2010 22:11:15

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Monday, February 15, 2010 22:14:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 3.284

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.393	ug/L	1.490	25573	0.027
Be	9	0.569	ug/L	4.071	288	0.000
B	11	17.249	ug/L	1.496	9398	0.009
Na	23	244.624	ug/L	4.730	1083268	1.141
Mg	24	15.703	ug/L	23.103	56783	0.057
Al	27	36.039	ug/L	21.280	171042	0.174
P	31	52.049	ug/L	4.901	24899	0.017
K	39	302.500	ug/L	8.937	2818451	2.406
Ca	43	214.169	ug/L	7.155	4355	0.004
> Sc	45		ug/L		931553	931553.408
Ti	47	9.228	ug/L	2.309	9105	0.009
V	51	11.335	ug/L	7.793	120404	0.124
Cr	52	11.903	ug/L	3.173	98355	0.101
Cr	53		ug/L		140709	0.024
Mn	55	6.300	ug/L	3.347	84273	0.088
Fe	57	115.763	ug/L	2.392	41350	0.036
Co	59	1.199	ug/L	0.617	12639	0.013
Ni	60	2.318	ug/L	3.314	5678	0.006
Cu	63		ug/L		7410	0.008
Cu	65	1.203	ug/L	3.080	3742	0.004
Zn	66	11.398	ug/L	2.520	22925	0.031
Zn	67		ug/L		19227	0.004
Zn	68		ug/L		17530	0.022
> Ge	74		ug/L		722380	722380.194
As	75	5.442	ug/L	2.154	9749	0.015
Se	77		ug/L		10808	0.002
Se	82	5.751	ug/L	3.435	1244	0.002
Kr	83		ug/L		165	-0.000
Sr	88	12.398	ug/L	0.468	291975	0.615
Y	89		ug/L		111	-0.000
Mo	98	0.563	ug/L	0.278	3472	0.007
Ag	107	1.105	ug/L	1.579	11188	0.023
Cd	111	1.128	ug/L	2.943	2897	0.006
Cd	114		ug/L		6748	0.014
> In	115		ug/L		473744	473743.739
Sn	120	5.676	ug/L	3.364	58374	0.123
Sb	121	3.416	ug/L	3.637	28142	0.058
Sb	123		ug/L		21791	0.045
Ba	135		ug/L		5547	0.008
Ba	137	2.196	ug/L	2.471	10031	0.014
Ho	165		ug/L		24	0.000
> Lu	175		ug/L		704753	704752.993
Tl	205	1.289	ug/L	1.852	33405	0.045
Pb	208	2.496	ug/L	1.625	113659	0.160
Bi	209		ug/L		95	0.000
Th	232	1.308	ug/L	0.675	69480	0.097
U	238	0.270	ug/L	3.535	15335	0.020

Sample ID: QC Std 3

Report Date/Time: Monday, February 15, 2010 22:17:21

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# Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	113.929				
Be	9	113.715				
B	11	114.995				
Na	23	97.850				
Mg	24	104.685				
Al	27	120.130				
P	31	104.098				
K	39	100.833				
Ca	43	107.084				
> Sc	45		93.9			
Ti	47	92.276				
V	51	113.351				
Cr	52	119.035				
Cr	53					
Mn	55	126.007				
Fe	57	115.763				
Co	59	119.869				
Ni	60	115.905				
Cu	63					
Cu	65	120.318				
Zn	66	113.976				
Zn	67					
Zn	68					
> Ge	74		98.0			
As	75	108.850				
Se	77					
Se	82	115.019				
Kr	83					
Sr	88	123.976				
Y	89					
Mo	98	112.551				
Ag	107	110.549				
Cd	111	112.772				
Cd	114					
> In	115		97.9			
Sn	120	113.529				
Sb	121	113.864				
Sb	123					
Ba	135					
Ba	137	109.783				
Ho	165					
> Lu	175		95.5			
Tl	205	128.859				
Pb	208	124.810				
Bi	209					
Th	232	130.827				
U	238	135.219				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Th	232	CRDL is out of limits
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: Monday, February 15, 2010 22:20:44

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 4.285

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.052	ug/L	17.991	180	0.000
Be	9	0.071	ug/L	20.392	51	0.000
B	11	1.672	ug/L	8.739	1306	0.001
Na	23	91470.766	ug/L	1.483	365659360	426.711
Mg	24	85827.725	ug/L	5.028	268097913	312.920
Al	27	97261.938	ug/L	10.371	401407572	469.200
P	31	87908.235	ug/L	4.972	23993310	28.008
K	39	93001.518	ug/L	5.890	634581341	739.643
Ca	43	88712.552	ug/L	1.670	1511491	1.763
> Sc	45		ug/L		857148	857147.892
Ti	47	1661.784	ug/L	3.229	1431475	1.670
V	51	0.618	ug/L	26.483	10536	0.007
Cr	52	2.854	ug/L	7.202	24569	0.024
Cr	53		ug/L		100447	-0.010
Mn	55	6.194	ug/L	3.602	76251	0.087
Fe	57	97353.617	ug/L	3.630	26036614	30.389
Co	59	0.350	ug/L	3.811	3488	0.004
Ni	60	3.168	ug/L	2.870	7078	0.008
Cu	63		ug/L		14051	0.016
Cu	65	3.287	ug/L	3.131	9017	0.010
Zn	66	4.072	ug/L	2.286	7607	0.011
Zn	67		ug/L		14430	-0.000
Zn	68		ug/L		2738	0.002
> Ge	74		ug/L		652636	652636.261
As	75	0.351	ug/L	89.715	-125	0.001
Se	77		ug/L		11178	0.005
Se	82	-1.398	ug/L	3.739	-252	-0.000
Kr	83		ug/L		540	0.001
Sr	88	3.215	ug/L	2.461	69135	0.160
Y	89		ug/L		836	0.002
Mo	98	1843.236	ug/L	1.493	9791955	22.736
Ag	107	0.110	ug/L	3.389	1094	0.002
Cd	111	0.499	ug/L	22.278	1185	0.003
Cd	114		ug/L		15500	0.036
> In	115		ug/L		430692	430691.826
Sn	120	0.286	ug/L	3.343	2954	0.006
Sb	121	0.114	ug/L	20.375	1364	0.002
Sb	123		ug/L		1076	0.002
Ba	135		ug/L		1756	0.003
Ba	137	0.717	ug/L	3.086	3063	0.005
Ho	165		ug/L		13065	0.020
> Lu	175		ug/L		646608	646608.442
Tl	205	0.030	ug/L	1.968	2103	0.001
Pb	208	0.229	ug/L	2.980	10436	0.015
Bi	209		ug/L		7522	0.012
Th	232	0.020	ug/L	42.195	2154	0.001
U	238	-0.012	ug/L	3.149	353	-0.001

Sample ID: QC Std 4

Report Date/Time: Monday, February 15, 2010 22:23:27

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

Sample ID: QC Std 4

Report Date/Time: Monday, February 15, 2010 22:23:27

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## QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	91.471				
	Mg	24	85.828				
	Al	27	97.262				
	P	31	87.908				
	K	39	93.002				
	Ca	43	88.713				
>	Sc	45		86.4			
	Ti	47	83.089				
	V	51					
	Cr	52	86.478				
	Cr	53					
	Mn	55	106.796				
	Fe	57	97.354				
	Co	59	148.781				
	Ni	60	95.706				
	Cu	63					
	Cu	65	98.417				
	Zn	66	108.302				
	Zn	67					
	Zn	68					
>	Ge	74		88.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	108.627				
	Y	89					
	Mo	98	92.162				
	Ag	107					
	Cd	111	112.334				
	Cd	114					
>	In	115		89.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137	89.846				
	Ho	165					
>	Lu	175		87.6			
	Tl	205					
	Pb	208	121.105				
	Bi	209					
	Th	232					
	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

Sample ID: QC Std 4

Report Date/Time: Monday, February 15, 2010 22:23:27

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## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Monday, February 15, 2010 22:26:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 5.286

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	18.661	ug/L	1.886	35502	0.045
Be	9	18.183	ug/L	1.559	7243	0.009
B	11	18.298	ug/L	4.687	8433	0.010
Na	23	93184.900	ug/L	6.708	343875398	434.707
Mg	24	84982.916	ug/L	3.688	244887429	309.840
Al	27	101406.344	ug/L	6.060	386693481	489.193
P	31	90455.508	ug/L	1.287	22787102	28.819
K	39	92441.255	ug/L	5.506	581460711	735.187
Ca	43	90676.209	ug/L	2.106	1424963	1.802
> Sc	45		ug/L		790497	790497.090
Ti	47	1715.356	ug/L	3.012	1363225	1.724
V	51	22.051	ug/L	2.643	194641	0.241
Cr	52	24.409	ug/L	1.606	167520	0.207
Cr	53		ug/L		112401	0.015
Mn	55	28.670	ug/L	2.322	319132	0.402
Fe	57	101052.348	ug/L	1.520	24938341	31.544
Co	59	21.751	ug/L	0.740	192439	0.243
Ni	60	23.013	ug/L	3.259	46455	0.059
Cu	63		ug/L		109688	0.138
Cu	65	22.986	ug/L	3.841	56948	0.072
Zn	66	22.763	ug/L	0.818	39167	0.062
Zn	67		ug/L		19201	0.008
Zn	68		ug/L		26235	0.040
> Ge	74		ug/L		622829	622828.692
As	75	20.887	ug/L	5.518	34277	0.056
Se	77		ug/L		13180	0.009
Se	82	19.197	ug/L	2.798	3541	0.006
Kr	83		ug/L		490	0.001
Sr	88	25.844	ug/L	1.475	534962	1.283
Y	89		ug/L		807	0.002
Mo	98	1877.869	ug/L	2.357	9649284	23.164
Ag	107	19.622	ug/L	2.276	173122	0.415
Cd	111	19.648	ug/L	1.606	43766	0.105
Cd	114		ug/L		115395	0.277
> In	115		ug/L		416706	416705.736
Sn	120	21.384	ug/L	2.936	192622	0.462
Sb	121	21.992	ug/L	1.872	156589	0.375
Sb	123		ug/L		120663	0.289
Ba	135		ug/L		47097	0.073
Ba	137	20.347	ug/L	2.101	83826	0.131
Ho	165		ug/L		13079	0.020
> Lu	175		ug/L		640807	640807.333
Tl	205	21.314	ug/L	2.966	480384	0.748
Pb	208	22.021	ug/L	0.249	904331	1.410
Bi	209		ug/L		8257	0.013
Th	232	23.000	ug/L	2.809	1090609	1.700
U	238	24.019	ug/L	1.324	1157165	1.804

Sample ID: QC Std 5

Report Date/Time: Monday, February 15, 2010 22:29:33

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	93.303				
Be	9	90.916				
B	11	91.489				
Na	23	93.185				
Mg	24	84.983				
Al	27	101.406				
P	31	90.456				
K	39	92.441				
Ca	43	90.676				
> Sc	45		79.7			
Ti	47	85.768				
V	51	110.257				
Cr	52	104.761				
Cr	53					
Mn	55	111.123				
Fe	57	101.052				
Co	59	107.491				
Ni	60	98.724				
Cu	63					
Cu	65	98.483				
Zn	66	95.802				
Zn	67					
Zn	68					
> Ge	74		84.5			
As	75	104.437				
Se	77					
Se	82	95.983				
Kr	83					
Sr	88	112.562				
Y	89					
Mo	98	93.893				
Ag	107	98.108				
Cd	111	96.106				
Cd	114					
> In	115		86.1			
Sn	120	106.919				
Sb	121	109.959				
Sb	123					
Ba	135					
Ba	137	97.834				
Ho	165					
> Lu	175		86.8			
Tl	205	106.569				
Pb	208	109.075				
Bi	209					
Th	232	114.999				
U	238	120.096				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for QKSc		45	
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: Monday, February 15, 2010 22:32:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 6.287

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.938	ug/L	2.606	98857	0.125
Be	9	52.256	ug/L	4.582	20817	0.026
B	11	97.349	ug/L	3.509	42849	0.054
Na	23	4377.153	ug/L	8.276	16175078	20.419
Mg	24	4260.858	ug/L	3.194	12314802	15.535
Al	27	4856.703	ug/L	3.773	18558035	23.429
P	31	4449.502	ug/L	3.828	1130253	1.418
K	39	4692.819	ug/L	4.359	30074422	37.322
Ca	43	4873.390	ug/L	0.913	77067	0.097
> Sc	45		ug/L		792149	792149.474
Ti	47	51.160	ug/L	3.227	41113	0.051
V	51	51.186	ug/L	5.412	446422	0.559
Cr	52	53.229	ug/L	3.067	361678	0.452
Cr	53		ug/L		151849	0.065
Mn	55	55.584	ug/L	4.729	618057	0.778
Fe	57	4830.445	ug/L	3.253	1200283	1.508
Co	59	54.576	ug/L	2.868	483409	0.610
Ni	60	54.349	ug/L	2.935	109716	0.138
Cu	63		ug/L		268938	0.339
Cu	65	53.993	ug/L	4.696	133679	0.169
Zn	66	51.747	ug/L	4.133	91668	0.142
Zn	67		ug/L		27611	0.020
Zn	68		ug/L		66163	0.100
> Ge	74		ug/L		644313	644313.480
As	75	49.317	ug/L	4.767	84699	0.133
Se	77		ug/L		15703	0.012
Se	82	51.642	ug/L	1.208	9827	0.015
Kr	83		ug/L		159	0.000
Sr	88	52.113	ug/L	2.364	1118428	2.587
Y	89		ug/L		323	0.001
Mo	98	49.830	ug/L	2.948	265822	0.615
Ag	107	52.451	ug/L	3.446	479961	1.110
Cd	111	50.786	ug/L	3.219	117291	0.271
Cd	114		ug/L		275971	0.638
> In	115		ug/L		432299	432298.660
Sn	120	51.713	ug/L	2.723	482883	1.117
Sb	121	53.373	ug/L	2.468	393520	0.909
Sb	123		ug/L		310051	0.716
Ba	135		ug/L		122785	0.175
Ba	137	48.392	ug/L	2.685	218246	0.311
Ho	165		ug/L		68	0.000
> Lu	175		ug/L		702103	702102.564
Tl	205	50.507	ug/L	2.399	1244901	1.771
Pb	208	53.875	ug/L	3.054	2421610	3.449
Bi	209		ug/L		608	0.001
Th	232	54.492	ug/L	3.881	2828296	4.028
U	238	56.381	ug/L	2.911	2973816	4.236

Sample ID: QC Std 6

Report Date/Time: Monday, February 15, 2010 22:35:41

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	103.876				
Be	9	104.511				
B	11	97.349				
Na	23	87.543				
Mg	24	85.217				
Al	27	96.172				
P	31	88.990				
K	39	93.856				
Ca	43	97.468				
> Sc	45		79.8			
Ti	47	102.321				
V	51	102.372				
Cr	52	106.457				
Cr	53					
Mn	55	111.168				
Fe	57	96.609				
Co	59	109.153				
Ni	60	108.697				
Cu	63					
Cu	65	107.985				
Zn	66	103.494				
Zn	67					
Zn	68					
> Ge	74		87.4			
As	75	98.635				
Se	77					
Se	82	103.285				
Kr	83					
Sr	88	104.225				
Y	89					
Mo	98	99.660				
Ag	107	104.902				
Cd	111	101.572				
Cd	114					
> In	115		89.3			
Sn	120	103.426				
Sb	121	106.747				
Sb	123					
Ba	135					
Ba	137	96.784				
Ho	165					
> Lu	175		95.1			
Tl	205	101.015				
Pb	208	107.751				
Bi	209					
Th	232	108.984				
U	238	112.762				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Na	23	CCV is out of limits (+/- 10%)
QC Std 6	Mg	24	CCV is out of limits (+/- 10%)
QC Std 6	P	31	CCV is out of limits (+/- 10%)
Lu 175 Int Std for QSc		45	
QC Std 6	Mn	55	CCV is out of limits (+/- 10%)
QC Std 6	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 6

Report Date/Time: Monday, February 15, 2010 22:35:41

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 15, 2010 22:39:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.288

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.030	ug/L	18.553	127	0.000
Be	9	0.001	ug/L	607.640	20	0.000
B	11	2.882	ug/L	18.197	1761	0.002
Na	23	0.761	ug/L	29.574	20682	0.004
Mg	24	1.378	ug/L	4.014	7002	0.005
Al	27	0.581	ug/L	36.214	10337	0.003
P	31	-2.817	ug/L	22.911	7432	-0.001
K	39	6.210	ug/L	94.338	537277	0.049
Ca	43	2.983	ug/L	47.717	385	0.000
> Sc	45		ug/L		803083	803082.960
Ti	47	0.090	ug/L	27.247	475	0.000
V	51	-0.773	ug/L	70.011	-2319	-0.008
Cr	52	-0.059	ug/L	28.047	3170	-0.000
Cr	53		ug/L		113999	0.015
Mn	55	-0.004	ug/L	68.854	1775	-0.000
Fe	57	2.389	ug/L	15.340	7236	0.001
Co	59	0.006	ug/L	33.225	182	0.000
Ni	60	0.013	ug/L	51.460	183	0.000
Cu	63		ug/L		409	0.000
Cu	65	0.016	ug/L	68.639	249	0.000
Zn	66	0.016	ug/L	28.834	350	0.000
Zn	67		ug/L		13892	-0.001
Zn	68		ug/L		1434	-0.000
> Ge	74		ug/L		647745	647744.646
As	75	-0.176	ug/L	38.126	-1047	-0.000
Se	77		ug/L		9398	0.002
Se	82	0.100	ug/L	114.630	36	0.000
Kr	83		ug/L		147	-0.000
Sr	88	0.003	ug/L	71.022	480	0.000
Y	89		ug/L		89	-0.000
Mo	98	0.068	ug/L	6.158	544	0.001
Ag	107	0.005	ug/L	14.504	138	0.000
Cd	111	0.009	ug/L	31.313	60	0.000
Cd	114		ug/L		105	0.000
> In	115		ug/L		445817	445817.492
Sn	120	0.018	ug/L	31.869	481	0.000
Sb	121	0.141	ug/L	16.698	1615	0.002
Sb	123		ug/L		1227	0.002
Ba	135		ug/L		71	0.000
Ba	137	0.002	ug/L	152.226	106	0.000
Ho	165		ug/L		22	0.000
> Lu	175		ug/L		717371	717370.812
Tl	205	0.323	ug/L	21.136	9726	0.011
Pb	208	0.005	ug/L	12.576	1302	0.000
Bi	209		ug/L		71	-0.000
Th	232	0.030	ug/L	5.669	2922	0.002
U	238	0.008	ug/L	23.617	1477	0.001

Sample ID: QC Std 7

Report Date/Time: Monday, February 15, 2010 22:41:50

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		81.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		87.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		92.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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 10

Sample Date/Time: Monday, February 15, 2010 22:45:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 10.289

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	891.559	ug/L	0.695	1635120	2.142
Be	9	932.233	ug/L	1.549	357767	0.469
B	11	1.466	ug/L	8.977	1076	0.001
Na	23	48473.063	ug/L	11.208	172560098	226.127
Mg	24	42660.869	ug/L	1.445	118743492	155.538
Al	27	47657.617	ug/L	4.200	175492448	229.905
P	31	22301.693	ug/L	3.207	5432477	7.105
K	39	46923.623	ug/L	8.859	285475617	373.184
Ca	43	46455.334	ug/L	0.568	705231	0.923
> Sc	45		ug/L		763393	763393.169
Ti	47	40.982	ug/L	3.669	31834	0.041
V	51	937.545	ug/L	1.665	7815014	10.231
Cr	52	925.586	ug/L	3.290	6009451	7.866
Cr	53		ug/L		842452	0.977
Mn	55	1006.691	ug/L	1.263	10765041	14.099
Fe	57	50619.051	ug/L	0.398	12068858	15.801
Co	59	958.019	ug/L	1.205	8162375	10.692
Ni	60	851.133	ug/L	1.918	1654373	2.167
Cu	63		ug/L		4071728	5.333
Cu	65	804.360	ug/L	0.182	1918059	2.512
Zn	66	2216.100	ug/L	1.988	3725739	6.074
Zn	67		ug/L		585219	0.932
Zn	68		ug/L		2670605	4.352
> Ge	74		ug/L		613396	613395.840
As	75	819.135	ug/L	2.001	1350750	2.203
Se	77		ug/L		69886	0.101
Se	82	469.957	ug/L	2.722	84996	0.139
Kr	83		ug/L		305	0.000
Sr	88	1001.866	ug/L	1.781	20450359	49.731
Y	89		ug/L		787	0.002
Mo	98	944.697	ug/L	3.094	4791125	11.653
Ag	107	215.924	ug/L	1.474	1879688	4.571
Cd	111	834.198	ug/L	2.075	1832383	4.456
Cd	114		ug/L		4551954	11.071
> In	115		ug/L		411283	411283.401
Sn	120	965.336	ug/L	1.686	8571065	20.844
Sb	121	229.826	ug/L	2.440	1610288	3.915
Sb	123		ug/L		1288413	3.133
Ba	135		ug/L		1895294	2.797
Ba	137	843.282	ug/L	0.519	3670240	5.416
Ho	165		ug/L		507	0.001
> Lu	175		ug/L		677650	677649.582
Tl	205	469.485	ug/L	2.675	11158518	16.466
Pb	208	4782.296	ug/L	0.976	207457223	306.148
Bi	209		ug/L		5940	0.009
Th	232	2545.613	ug/L	1.467	127519994	188.188
U	238	5346.630	ug/L	0.510	272188021	401.671

Sample ID: QC Std 10

Report Date/Time: Monday, February 15, 2010 22:47:55

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7	89.156				
Be	9	93.223				
B	11					
Na	23	96.946				
Mg	24	85.322				
Al	27	95.315				
P	31	89.207				
K	39	93.847				
Ca	43	92.911				
> Sc	45		77.0			
Ti	47					
V	51	93.755				
Cr	52	92.559				
Cr	53					
Mn	55	100.669				
Fe	57	101.238				
Co	59	95.602				
Ni	60	85.113				
Cu	63					
Cu	65	80.436				
Zn	66	88.644				
Zn	67					
Zn	68					
> Ge	74		83.2			
As	75	81.914				
Se	77					
Se	82	93.991				
Kr	83					
Sr	88	100.187				
Y	89					
Mo	98	94.470				
Ag	107	86.369				
Cd	111	83.420				
Cd	114					
> In	115		85.0			
Sn	120	96.534				
Sb	121	91.930				
Sb	123					
Ba	135					
Ba	137	84.328				
Ho	165					
> Lu	175		91.8			
Tl	205	93.897				
Pb	208	95.646				
Bi	209					
Th	232	101.825				
U	238	106.933				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Li	7	7LRS is out of limits (+/- 10%)
QC Std 10	Mg	24	24LRS is out of limits (+/- 10%)
QC Std 10	P	31	31LRS is out of limits (+/- 10%)
Lu 175 Int Std for QC	Sc	45	
QC Std 10	Ni	60	60LRS is out of limits (+/- 10%)
QC Std 10	Cu	65	65LRS is out of limits (+/- 10%)
QC Std 10	Zn	66	66LRS is out of limits (+/- 10%)

Sample ID: QC Std 10

Report Date/Time: Monday, February 15, 2010 22:47:55

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QC Std 10	As	75LRS is out of limits (+/- 10%)
QC Std 10	Ag	107LRS is out of limits (+/- 10%)
QC Std 10	Cd	111LRS is out of limits (+/- 10%)
QC Std 10	Ba	137LRS is out of limits (+/- 10%)

## QC Action

QC Action Line: Continue

# ICPMS#5 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Monday, February 15, 2010 22:51:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 11.290

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.925	ug/L	2.405	105789	0.127
Be	9	52.586	ug/L	3.645	21999	0.026
B	11	100.722	ug/L	3.133	46546	0.055
Na	23	4887.978	ug/L	12.174	18973442	22.802
Mg	24	4424.630	ug/L	3.073	13415933	16.132
Al	27	5452.556	ug/L	8.411	21894500	26.304
P	31	4500.087	ug/L	2.354	1200574	1.434
K	39	4949.483	ug/L	4.571	33248164	39.363
Ca	43	4889.044	ug/L	2.105	81172	0.097
> Sc	45		ug/L		831566	831566.019
Ti	47	49.929	ug/L	3.737	42143	0.050
V	51	51.031	ug/L	0.726	467660	0.557
Cr	52	51.277	ug/L	2.806	366015	0.436
Cr	53		ug/L		148728	0.052
Mn	55	54.663	ug/L	3.314	638361	0.766
Fe	57	4763.164	ug/L	1.218	1243168	1.487
Co	59	53.427	ug/L	2.215	496976	0.598
Ni	60	54.327	ug/L	1.569	115168	0.138
Cu	63		ug/L		275002	0.330
Cu	65	52.565	ug/L	3.374	136716	0.164
Zn	66	52.575	ug/L	1.213	94669	0.144
Zn	67		ug/L		28640	0.021
Zn	68		ug/L		67228	0.100
> Ge	74		ug/L		654761	654760.901
As	75	48.890	ug/L	1.994	85343	0.132
Se	77		ug/L		14840	0.010
Se	82	51.664	ug/L	1.889	9990	0.015
Kr	83		ug/L		170	0.000
Sr	88	52.375	ug/L	2.981	1138117	2.600
Y	89		ug/L		171	0.000
Mo	98	49.665	ug/L	0.470	268319	0.613
Ag	107	52.149	ug/L	0.584	483285	1.104
Cd	111	51.301	ug/L	0.977	119988	0.274
Cd	114		ug/L		278597	0.636
> In	115		ug/L		437701	437701.379
Sn	120	52.720	ug/L	1.098	498585	1.138
Sb	121	54.352	ug/L	1.840	405775	0.926
Sb	123		ug/L		315629	0.720
Ba	135		ug/L		125653	0.177
Ba	137	47.779	ug/L	3.324	218056	0.307
Ho	165		ug/L		59	0.000
> Lu	175		ug/L		710548	710547.629
Tl	205	51.924	ug/L	3.932	1295008	1.821
Pb	208	54.670	ug/L	1.984	2487275	3.500
Bi	209		ug/L		571	0.001
Th	232	55.013	ug/L	2.729	2890333	4.067
U	238	58.397	ug/L	2.874	3117306	4.387

Sample ID: QC Std 11

Report Date/Time: Monday, February 15, 2010 22:54:00

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	105.851				
Be	9	105.172				
B	11	100.722				
Na	23	97.760				
Mg	24	88.493				
Al	27	107.971				
P	31	90.002				
K	39	98.990				
Ca	43	97.781				
> Sc	45		83.8			
Ti	47	99.859				
V	51	102.062				
Cr	52	102.553				
Cr	53					
Mn	55	109.326				
Fe	57	95.263				
Co	59	106.853				
Ni	60	108.653				
Cu	63					
Cu	65	105.130				
Zn	66	105.150				
Zn	67					
Zn	68					
> Ge	74		88.8			
As	75	97.780				
Se	77					
Se	82	103.327				
Kr	83					
Sr	88	104.749				
Y	89					
Mo	98	99.329				
Ag	107	104.298				
Cd	111	102.601				
Cd	114					
> In	115		90.4			
Sn	120	105.440				
Sb	121	108.705				
Sb	123					
Ba	135					
Ba	137	95.559				
Ho	165					
> Lu	175		96.2			
Tl	205	103.848				
Pb	208	109.340				
Bi	209					
Th	232	110.026				
U	238	116.795				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Mg	24	CCV is out of limits (+/- 10%)
QC Std 11	Th	232	CCV is out of limits (+/- 10%)
QC Std 11	U	238	CCV is out of limits (+/- 10%)

### QC Action

Sample ID: QC Std 11  
 Report Date/Time: Monday, February 15, 2010 22:54:00  
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QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Monday, February 15, 2010 22:57:25

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 12.291

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.076	ug/L	4.539	226	0.000
Be	9	0.008	ug/L	57.099	24	0.000
B	11	3.022	ug/L	23.070	1908	0.002
Na	23	0.082	ug/L	448.572	19013	0.000
Mg	24	0.829	ug/L	58.780	5668	0.003
Al	27	1.299	ug/L	139.613	13674	0.006
P	31	-0.500	ug/L	496.684	8421	-0.000
K	39	15.951	ug/L	44.389	628902	0.127
Ca	43	1.394	ug/L	211.020	378	0.000
> Sc	45		ug/L		843141	843141.002
Ti	47	0.030	ug/L	62.153	448	0.000
V	51	-0.144	ug/L	239.020	3298	-0.002
Cr	52	-0.086	ug/L	62.584	3126	-0.001
Cr	53		ug/L		118476	0.014
Mn	55	-0.001	ug/L	510.479	1899	-0.000
Fe	57	1.211	ug/L	87.679	7283	0.000
Co	59	0.024	ug/L	11.797	363	0.000
Ni	60	0.030	ug/L	22.545	230	0.000
Cu	63		ug/L		538	0.000
Cu	65	0.038	ug/L	12.428	320	0.000
Zn	66	0.012	ug/L	46.219	349	0.000
Zn	67		ug/L		15053	0.000
Zn	68		ug/L		1773	0.000
> Ge	74		ug/L		659078	659078.415
As	75	0.189	ug/L	86.207	-418	0.001
Se	77		ug/L		8659	0.001
Se	82	0.129	ug/L	46.327	42	0.000
Kr	83		ug/L		145	-0.000
Sr	88	0.009	ug/L	20.231	613	0.000
Y	89		ug/L		85	-0.000
Mo	98	0.129	ug/L	8.510	883	0.002
Ag	107	0.007	ug/L	7.903	160	0.000
Cd	111	0.006	ug/L	115.154	54	0.000
Cd	114		ug/L		134	0.000
> In	115		ug/L		445325	445324.852
Sn	120	0.083	ug/L	7.100	1103	0.002
Sb	121	0.856	ug/L	10.274	7038	0.015
Sb	123		ug/L		5549	0.012
Ba	135		ug/L		76	0.000
Ba	137	0.007	ug/L	46.956	130	0.000
Ho	165		ug/L		18	-0.000
> Lu	175		ug/L		719331	719330.717
Tl	205	0.385	ug/L	17.613	11290	0.013
Pb	208	0.038	ug/L	15.732	2804	0.002
Bi	209		ug/L		73	0.000
Th	232	0.077	ug/L	6.584	5422	0.006
U	238	0.061	ug/L	10.937	4350	0.005

Sample ID: QC Std 12

Report Date/Time: Monday, February 15, 2010 23:00:09

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		85.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		89.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		92.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.4			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: QC Std 12

Report Date/Time: Monday, February 15, 2010 23:00:09

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## ICPMS#5 - Summary Report

Sample ID: 1202024785

Sample Date/Time: Monday, February 15, 2010 23:03:35

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 9454072|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\1202024785.292

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.035	ug/L	24.670	144	0.000
Be	9	-0.003	ug/L	572.342	19	-0.000
B	11	1.022	ug/L	22.922	1000	0.001
Na	23	9.096	ug/L	23.331	55442	0.042
Mg	24	2.186	ug/L	39.002	10004	0.008
Al	27	9.767	ug/L	44.330	49092	0.047
P	31	27.004	ug/L	13.164	16093	0.009
K	39	11.662	ug/L	64.908	611186	0.093
Ca	43	7.218	ug/L	18.245	483	0.000
> Sc	45		ug/L		857855	857855.038
Ti	47	0.509	ug/L	19.628	868	0.001
V	51	-0.223	ug/L	312.993	2671	-0.002
Cr	52	0.409	ug/L	19.462	6797	0.003
Cr	53		ug/L		107801	-0.001
Mn	55	0.260	ug/L	5.028	5064	0.004
Fe	57	21.929	ug/L	1.870	12961	0.007
Co	59	0.014	ug/L	2.448	271	0.000
Ni	60	0.182	ug/L	4.584	565	0.000
Cu	63		ug/L		1716	0.002
Cu	65	0.255	ug/L	3.903	904	0.001
Zn	66	1.148	ug/L	1.602	2355	0.003
Zn	67		ug/L		14187	-0.000
Zn	68		ug/L		2974	0.002
> Ge	74		ug/L		646397	646396.551
As	75	-0.282	ug/L	185.595	-1233	-0.001
Se	77		ug/L		7924	-0.000
Se	82	0.313	ug/L	26.466	76	0.000
Kr	83		ug/L		140	-0.000
Sr	88	0.030	ug/L	1.427	1081	0.002
Y	89		ug/L		164	0.000
Mo	98	0.180	ug/L	24.075	1165	0.002
Ag	107	-0.001	ug/L	186.889	84	-0.000
Cd	111	0.012	ug/L	30.412	68	0.000
Cd	114		ug/L		-166	-0.001
> In	115		ug/L		445415	445414.927
Sn	120	20.018	ug/L	1.569	192805	0.432
Sb	121	0.049	ug/L	28.190	921	0.001
Sb	123		ug/L		766	0.001
Ba	135		ug/L		326	0.000
Ba	137	0.093	ug/L	2.512	531	0.001
Ho	165		ug/L		25	0.000
> Lu	175		ug/L		727102	727102.114
Tl	205	0.192	ug/L	17.526	6482	0.007
Pb	208	0.020	ug/L	6.097	1994	0.001
Bi	209		ug/L		222	0.000
Th	232	0.107	ug/L	33.188	7108	0.008
U	238	0.010	ug/L	51.416	1606	0.001

Sample ID: 1202024785

Report Date/Time: Monday, February 15, 2010 23:06:19

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		86.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		87.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		92.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: 1202024785

Report Date/Time: Monday, February 15, 2010 23:06:19

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		87.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		89.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		91.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
Ti 47 Sample is out of limits (over linear range)

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245389001

Sample Date/Time: Monday, February 15, 2010 23:15:51

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389001.294

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	77.191	ug/L	0.915	174515	0.185
Be	9	4.816	ug/L	2.131	2300	0.002
B	11	15.853	ug/L	3.331	8765	0.009
Na	23	1230.272	ug/L	6.044	5419247	5.739
Mg	24	9902.892	ug/L	3.396	33974767	36.105
Al	27	112290.523	ug/L	1.808	509609970	541.700
P	31	355.817	ug/L	0.450	116193	0.113
K	39	8093.760	ug/L	4.658	61146049	64.370
Ca	43	13004.609	ug/L	2.016	243534	0.258
> Sc	45		ug/L		940715	940715.249
Ti	47	1776.531	ug/L	1.039	1680248	1.786
V	51	74.885	ug/L	2.830	773803	0.817
Cr	52	41.422	ug/L	0.240	335347	0.352
Cr	53		ug/L		125167	0.006
Mn	55	721.447	ug/L	2.051	9505616	10.104
Fe	57	51006.234	ug/L	3.065	14982669	15.922
Co	59	17.275	ug/L	1.171	181891	0.193
Ni	60	34.771	ug/L	1.641	83452	0.089
Cu	63		ug/L		144146	0.153
Cu	65	25.070	ug/L	0.978	73898	0.078
Zn	66	103.857	ug/L	2.475	169499	0.285
Zn	67		ug/L		46101	0.055
Zn	68		ug/L		139978	0.233
> Ge	74		ug/L		594412	594411.566
As	75	9.993	ug/L	1.279	15298	0.027
Se	77		ug/L		6105	-0.002
Se	82	2.793	ug/L	14.533	505	0.001
Kr	83		ug/L		731	0.001
Sr	88	155.100	ug/L	1.486	3196286	7.699
Y	89		ug/L		1147662	2.765
Mo	98	1.244	ug/L	1.356	6529	0.015
Ag	107	0.509	ug/L	1.476	4582	0.011
Cd	111	1.628	ug/L	5.678	3649	0.009
Cd	114		ug/L		838	0.002
> In	115		ug/L		415155	415155.495
Sn	120	7.908	ug/L	2.273	71161	0.171
Sb	121	0.156	ug/L	4.517	1614	0.003
Sb	123		ug/L		1337	0.002
Ba	135		ug/L		2312085	3.310
Ba	137	877.196	ug/L	1.381	3935704	5.634
Ho	165		ug/L		79333	0.114
> Lu	175		ug/L		698563	698562.500
Tl	205	1.262	ug/L	2.655	32468	0.044
Pb	208	56.316	ug/L	0.581	2519464	3.605
Bi	209		ug/L		40166	0.057
Th	232	42.986	ug/L	0.824	2221177	3.178
U	238	4.120	ug/L	1.773	217217	0.310

Sample ID: 245389001

Report Date/Time: Monday, February 15, 2010 23:18:35

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			94.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			80.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			85.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.6		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Fe	57	Sample is out of limits (over linear range)

## QC Action

Sample ID: 245389001

Report Date/Time: Monday, February 15, 2010 23:18:35

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QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: 1202024787

Sample Date/Time: Monday, February 15, 2010 23:22:00

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 9454072[ba]

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\1202024787.295

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	77.987	ug/L	0.738	176023	0.187
Be	9	5.034	ug/L	1.201	2399	0.003
B	11	15.342	ug/L	3.253	8486	0.008
Na	23	1176.536	ug/L	2.909	5176122	5.489
Mg	24	10553.607	ug/L	6.016	36161262	38.477
Al	27	123180.635	ug/L	1.625	558058806	594.235
P	31	330.722	ug/L	2.592	108462	0.105
K	39	8033.908	ug/L	5.498	60572805	63.894
Ca	43	12914.124	ug/L	1.443	241411	0.257
> Sc	45		ug/L		939083	939082.976
Ti	47	1752.556	ug/L	0.695	1654773	1.762
V	51	78.405	ug/L	3.999	808320	0.856
Cr	52	42.050	ug/L	1.984	339706	0.357
Cr	53		ug/L		123459	0.005
Mn	55	1075.231	ug/L	1.651	14141065	15.058
Fe	57	52886.647	ug/L	3.984	15504375	16.509
Co	59	21.091	ug/L	2.210	221615	0.236
Ni	60	37.115	ug/L	3.955	88893	0.094
Cu	63		ug/L		142321	0.151
Cu	65	24.975	ug/L	0.587	73491	0.078
Zn	66	101.475	ug/L	2.582	168298	0.278
Zn	67		ug/L		44929	0.052
Zn	68		ug/L		138082	0.226
> Ge	74		ug/L		604159	604158.998
As	75	10.383	ug/L	4.425	16190	0.028
Se	77		ug/L		5795	-0.003
Se	82	2.971	ug/L	18.694	546	0.001
Kr	83		ug/L		729	0.001
Sr	88	155.148	ug/L	1.762	3258812	7.701
Y	89		ug/L		1121430	2.651
Mo	98	1.272	ug/L	2.102	6800	0.016
Ag	107	0.468	ug/L	3.373	4282	0.010
Cd	111	1.467	ug/L	10.996	3360	0.008
Cd	114		ug/L		796	0.002
> In	115		ug/L		423211	423211.481
Sn	120	1.184	ug/L	1.864	11109	0.026
Sb	121	0.137	ug/L	1.626	1510	0.002
Sb	123		ug/L		1234	0.002
Ba	135		ug/L		2308545	3.285
Ba	137	874.561	ug/L	0.032	3947018	5.617
Ho	165		ug/L		76882	0.109
> Lu	175		ug/L		702678	702678.381
Tl	205	1.133	ug/L	2.275	29475	0.040
Pb	208	66.925	ug/L	0.654	3011490	4.284
Bi	209		ug/L		40169	0.057
Th	232	42.691	ug/L	1.392	2218875	3.156
U	238	3.936	ug/L	1.308	208807	0.296

Sample ID: 1202024787

Report Date/Time: Monday, February 15, 2010 23:24:44

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		94.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		81.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		87.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		95.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)
	Fe	57	Sample is out of limits (over linear range)

Sample ID: 1202024787

Report Date/Time: Monday, February 15, 2010 23:24:44

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## QC Action

QC Action Line: Continue

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Sample ID: 1202024787

Report Date/Time: Monday, February 15, 2010 23:24:44

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## ICPMS#5 - Summary Report

Sample ID: 1202024788

Sample Date/Time: Monday, February 15, 2010 23:28:09

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 9454072|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\1202024788.296

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	113.483	ug/L	1.296	284599	0.273
Be	9	26.059	ug/L	1.305	12733	0.013
B	11	57.553	ug/L	2.760	31281	0.032
Na	23	2208.303	ug/L	10.158	10011870	10.302
Mg	24	12456.010	ug/L	0.680	44066282	45.413
Al	27	136382.557	ug/L	2.147	638447984	657.922
P	31	1085.064	ug/L	3.383	345223	0.346
K	39	10200.638	ug/L	6.687	79298782	81.126
Ca	43	13655.570	ug/L	2.360	263735	0.271
> Sc	45		ug/L		970315	970315.171
Ti	47	1936.235	ug/L	1.344	1888974	1.946
V	51	102.886	ug/L	2.491	1094611	1.123
Cr	52	66.813	ug/L	1.388	555240	0.568
Cr	53		ug/L		150169	0.028
Mn	55	722.497	ug/L	1.110	9819785	10.118
Fe	57	56949.681	ug/L	2.530	17254426	17.777
Co	59	39.555	ug/L	2.463	429332	0.442
Ni	60	59.317	ug/L	2.227	146703	0.151
Cu	63		ug/L		283411	0.292
Cu	65	46.864	ug/L	1.571	142276	0.146
Zn	66	139.091	ug/L	2.552	232574	0.381
Zn	67		ug/L		57340	0.072
Zn	68		ug/L		189032	0.308
> Ge	74		ug/L		609386	609386.201
As	75	45.997	ug/L	0.826	74696	0.124
Se	77		ug/L		6684	-0.002
Se	82	8.981	ug/L	6.221	1628	0.003
Kr	83		ug/L		888	0.001
Sr	88	192.503	ug/L	3.101	4017100	9.556
Y	89		ug/L		1157378	2.754
Mo	98	22.961	ug/L	2.709	119238	0.283
Ag	107	24.811	ug/L	3.540	220858	0.525
Cd	111	6.733	ug/L	1.691	15162	0.036
Cd	114		ug/L		25871	0.061
> In	115		ug/L		420642	420642.037
Sn	120	8.122	ug/L	4.847	73982	0.175
Sb	121	23.375	ug/L	2.968	167921	0.398
Sb	123		ug/L		131392	0.312
Ba	135		ug/L		2664074	3.887
Ba	137	1030.172	ug/L	1.065	4534933	6.616
Ho	165		ug/L		77775	0.113
> Lu	175		ug/L		685406	685406.269
Tl	205	51.629	ug/L	2.081	1242621	1.811
Pb	208	155.986	ug/L	1.622	6845106	9.986
Bi	209		ug/L		42438	0.062
Th	232	71.246	ug/L	1.933	3611303	5.267
U	238	33.039	ug/L	0.774	1702256	2.482

Sample ID: 1202024788

Report Date/Time: Monday, February 15, 2010 23:30:53

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		97.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		82.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		86.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.8			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	V	51	Sample is out of limits (over linear range)
	Fe	57	Sample is out of limits (over linear range)
	Ba	137	Sample is out of limits (over linear range)

Sample ID: 1202024788

Report Date/Time: Monday, February 15, 2010 23:30:53

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## QC Action

QC Action Line: Continue

# ICPMS#5 - Summary Report

Sample ID: 1202024790

Sample Date/Time: Monday, February 15, 2010 23:34:19

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 9454072|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\1202024790.297

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	108.301	ug/L	1.420	254392	0.260
Be	9	24.542	ug/L	3.482	12079	0.012
B	11	56.848	ug/L	3.351	31140	0.031
Na	23	2235.893	ug/L	7.839	10230682	10.430
Mg	24	11938.212	ug/L	5.386	42552555	43.526
Al	27	130473.879	ug/L	1.253	615479647	629.418
P	31	1035.007	ug/L	2.665	332202	0.330
K	39	10346.322	ug/L	3.045	81018515	82.284
Ca	43	14299.071	ug/L	3.122	278159	0.284
> Sc	45		ug/L		977702	977701.820
Ti	47	1875.231	ug/L	1.672	1842980	1.885
V	51	100.948	ug/L	2.542	1082019	1.102
Cr	52	64.813	ug/L	2.247	542711	0.551
Cr	53		ug/L		152677	0.029
Mn	55	740.250	ug/L	2.677	10133933	10.367
Fe	57	53251.168	ug/L	2.755	16254340	16.623
Co	59	38.344	ug/L	1.905	419329	0.429
Ni	60	55.963	ug/L	2.138	139447	0.142
Cu	63		ug/L		263461	0.269
Cu	65	43.878	ug/L	3.782	134169	0.137
Zn	66	133.074	ug/L	3.638	222876	0.365
Zn	67		ug/L		54643	0.067
Zn	68		ug/L		178497	0.290
> Ge	74		ug/L		610449	610448.702
As	75	43.980	ug/L	1.783	71507	0.118
Se	77		ug/L		6589	-0.002
Se	82	8.273	ug/L	6.470	1504	0.002
Kr	83		ug/L		836	0.001
Sr	88	184.478	ug/L	1.301	3796426	9.157
Y	89		ug/L		1136262	2.741
Mo	98	22.729	ug/L	0.620	116390	0.280
Ag	107	24.276	ug/L	2.911	213110	0.514
Cd	111	6.599	ug/L	2.128	14653	0.035
Cd	114		ug/L		25308	0.061
> In	115		ug/L		414565	414564.996
Sn	120	7.931	ug/L	1.174	71274	0.171
Sb	121	22.120	ug/L	1.094	156730	0.377
Sb	123		ug/L		121770	0.293
Ba	135		ug/L		2098405	3.062
Ba	137	884.750	ug/L	2.570	3896256	5.682
Ho	165		ug/L		76763	0.112
> Lu	175		ug/L		685813	685813.493
Tl	205	49.666	ug/L	1.936	1195930	1.742
Pb	208	148.906	ug/L	2.070	6537281	9.533
Bi	209		ug/L		39373	0.057
Th	232	65.763	ug/L	2.236	3334818	4.862
U	238	31.566	ug/L	2.054	1627034	2.371

Sample ID: 1202024790

Report Date/Time: Monday, February 15, 2010 23:37:03

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		98.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		82.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		85.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.9			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	V	51	Sample is out of limits (over linear range)
	Fe	57	Sample is out of limits (over linear range)

Sample ID: 1202024790

Report Date/Time: Monday, February 15, 2010 23:37:03

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## QC Action

QC Action Line: Continue

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Sample ID: 1202024790

Report Date/Time: Monday, February 15, 2010 23:37:03

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## ICPMS#5 - Summary Report

Sample ID: 1202024789

Sample Date/Time: Monday, February 15, 2010 23:40:29

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 94540710|ba|

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\1202024789.298

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	17.780	ug/L	1.588	35112	0.043
Be	9	1.155	ug/L	3.661	496	0.001
B	11	5.628	ug/L	9.551	3032	0.003
Na	23	269.034	ug/L	17.009	1046535	1.255
Mg	24	2253.914	ug/L	8.071	6740817	8.218
Al	27	24489.424	ug/L	7.071	96897670	118.139
P	31	87.626	ug/L	5.340	31228	0.028
K	39	1816.546	ug/L	2.774	12360578	14.447
Ca	43	2872.721	ug/L	1.391	47199	0.057
> Sc	45		ug/L		820458	820457.858
Ti	47	419.626	ug/L	2.020	346420	0.422
V	51	16.583	ug/L	4.471	152956	0.181
Cr	52	8.998	ug/L	5.183	66372	0.076
Cr	53		ug/L		112367	0.010
Mn	55	151.989	ug/L	3.217	1747776	2.129
Fe	57	11199.714	ug/L	4.130	2874086	3.496
Co	59	3.933	ug/L	4.336	36218	0.044
Ni	60	8.051	ug/L	2.785	16975	0.020
Cu	63		ug/L		29494	0.035
Cu	65	5.896	ug/L	2.890	15317	0.018
Zn	66	22.117	ug/L	4.561	37238	0.061
Zn	67		ug/L		21345	0.013
Zn	68		ug/L		31180	0.049
> Ge	74		ug/L		609574	609573.995
As	75	2.438	ug/L	7.465	3300	0.007
Se	77		ug/L		6563	-0.002
Se	82	2.519	ug/L	0.814	468	0.001
Kr	83		ug/L		259	0.000
Sr	88	32.353	ug/L	2.118	655000	1.606
Y	89		ug/L		236529	0.580
Mo	98	0.239	ug/L	3.737	1359	0.003
Ag	107	0.095	ug/L	3.350	909	0.002
Cd	111	0.312	ug/L	0.555	715	0.002
Cd	114		ug/L		197	0.000
> In	115		ug/L		407643	407643.211
Sn	120	1.519	ug/L	0.664	13644	0.033
Sb	121	0.003	ug/L	62.483	520	0.000
Sb	123		ug/L		388	0.000
Ba	135		ug/L		449876	0.657
Ba	137	175.506	ug/L	1.851	771525	1.127
Ho	165		ug/L		15502	0.023
> Lu	175		ug/L		684549	684549.163
Tl	205	0.533	ug/L	15.099	14281	0.019
Pb	208	11.791	ug/L	3.056	517538	0.755
Bi	209		ug/L		7909	0.011
Th	232	9.477	ug/L	4.245	480612	0.701
U	238	0.777	ug/L	3.521	40914	0.058

Sample ID: 1202024789

Report Date/Time: Monday, February 15, 2010 23:43:14

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		82.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		82.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		84.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202024789

Report Date/Time: Monday, February 15, 2010 23:43:14

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Monday, February 15, 2010 23:46:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 8.299

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.579	ug/L	0.653	103248	0.126
Be	9	53.966	ug/L	1.783	22180	0.027
B	11	99.083	ug/L	1.277	44992	0.054
Na	23	4980.054	ug/L	5.540	18990460	23.232
Mg	24	4600.486	ug/L	4.692	13702385	16.773
Al	27	5162.507	ug/L	4.532	20352436	24.904
P	31	4569.969	ug/L	1.348	1197671	1.456
K	39	4832.406	ug/L	7.565	31910594	38.432
Ca	43	4921.118	ug/L	1.331	80249	0.098
> Sc	45		ug/L		816868	816868.138
Ti	47	49.669	ug/L	1.944	41190	0.050
V	51	51.452	ug/L	1.987	463132	0.561
Cr	52	52.203	ug/L	2.411	366011	0.444
Cr	53		ug/L		145345	0.051
Mn	55	54.817	ug/L	1.252	628958	0.768
Fe	57	4699.678	ug/L	0.107	1205110	1.467
Co	59	52.915	ug/L	2.948	483508	0.592
Ni	60	53.276	ug/L	0.545	110961	0.136
Cu	63		ug/L		266540	0.326
Cu	65	51.745	ug/L	2.053	132226	0.162
Zn	66	50.440	ug/L	1.213	89617	0.138
Zn	67		ug/L		28008	0.021
Zn	68		ug/L		66230	0.100
> Ge	74		ug/L		645915	645914.565
As	75	49.156	ug/L	1.349	84666	0.132
Se	77		ug/L		13743	0.009
Se	82	51.630	ug/L	1.955	9850	0.015
Kr	83		ug/L		175	0.000
Sr	88	52.608	ug/L	2.581	1113540	2.611
Y	89		ug/L		406	0.001
Mo	98	49.413	ug/L	0.499	259990	0.610
Ag	107	51.405	ug/L	0.748	464043	1.088
Cd	111	51.225	ug/L	1.758	116677	0.274
Cd	114		ug/L		273635	0.642
> In	115		ug/L		426303	426302.861
Sn	120	51.954	ug/L	2.188	478427	1.122
Sb	121	53.814	ug/L	2.848	391234	0.917
Sb	123		ug/L		305525	0.716
Ba	135		ug/L		121400	0.175
Ba	137	47.673	ug/L	1.644	212892	0.306
Ho	165		ug/L		72	0.000
> Lu	175		ug/L		695020	695019.880
Tl	205	51.526	ug/L	1.722	1257535	1.807
Pb	208	53.981	ug/L	0.038	2402803	3.456
Bi	209		ug/L		612	0.001
Th	232	54.914	ug/L	0.791	2822704	4.060
U	238	56.895	ug/L	1.420	2971611	4.274

Sample ID: QC Std 8

Report Date/Time: Monday, February 15, 2010 23:49:21

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Li	7	105.157				
Be	9	107.933				
B	11	99.083				
Na	23	99.601				
Mg	24	92.010				
Al	27	102.228				
P	31	91.399				
K	39	96.648				
Ca	43	98.422				
> Sc	45		82.3			
Ti	47	99.337				
V	51	102.905				
Cr	52	104.407				
Cr	53					
Mn	55	109.635				
Fe	57	93.994				
Co	59	105.830				
Ni	60	106.553				
Cu	63					
Cu	65	103.490				
Zn	66	100.881				
Zn	67					
Zn	68					
> Ge	74		87.6			
As	75	98.311				
Se	77					
Se	82	103.260				
Kr	83					
Sr	88	105.216				
Y	89					
Mo	98	98.825				
Ag	107	102.811				
Cd	111	102.450				
Cd	114					
> In	115		88.1			
Sn	120	103.908				
Sb	121	107.627				
Sb	123					
Ba	135					
Ba	137	95.345				
Ho	165					
> Lu	175		94.1			
Tl	205	103.052				
Pb	208	107.961				
Bi	209					
Th	232	109.828				
U	238	113.790				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
 QC Std 8 U 238CCV is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

# ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Monday, February 15, 2010 23:52:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 9.300

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.045	ug/L	13.403	157	0.000
Be	9	-0.001	ug/L	2137.259	19	-0.000
B	11	3.074	ug/L	24.244	1859	0.002
Na	23	0.442	ug/L	358.646	19681	0.002
Mg	24	0.231	ug/L	229.530	3667	0.001
Al	27	0.034	ug/L	3464.384	8336	0.000
P	31	-3.409	ug/L	36.627	7351	-0.001
K	39	9.884	ug/L	73.247	566394	0.079
Ca	43	1.671	ug/L	88.988	367	0.000
> Sc	45		ug/L		810782	810781.745
Ti	47	0.084	ug/L	42.807	474	0.000
V	51	-0.280	ug/L	215.761	1972	-0.003
Cr	52	0.038	ug/L	78.188	3867	0.000
Cr	53		ug/L		110187	0.009
Mn	55	0.013	ug/L	52.255	1982	0.000
Fe	57	2.498	ug/L	37.458	7331	0.001
Co	59	0.006	ug/L	32.506	181	0.000
Ni	60	0.015	ug/L	55.806	191	0.000
Cu	63		ug/L		408	0.000
Cu	65	0.014	ug/L	79.113	245	0.000
Zn	66	0.029	ug/L	58.321	363	0.000
Zn	67		ug/L		14419	0.000
Zn	68		ug/L		1558	0.000
> Ge	74		ug/L		631171	631171.191
As	75	0.024	ug/L	1172.309	-682	0.000
Se	77		ug/L		7556	-0.001
Se	82	0.406	ug/L	23.725	92	0.000
Kr	83		ug/L		162	0.000
Sr	88	0.004	ug/L	27.227	487	0.000
Y	89		ug/L		123	0.000
Mo	98	0.033	ug/L	32.701	340	0.000
Ag	107	0.002	ug/L	47.049	107	0.000
Cd	111	0.003	ug/L	192.410	44	0.000
Cd	114		ug/L		102	0.000
> In	115		ug/L		429172	429171.584
Sn	120	0.018	ug/L	32.964	459	0.000
Sb	121	0.093	ug/L	25.226	1201	0.002
Sb	123		ug/L		914	0.001
Ba	135		ug/L		74	0.000
Ba	137	0.005	ug/L	40.243	117	0.000
Ho	165		ug/L		22	0.000
> Lu	175		ug/L		712424	712424.392
Tl	205	0.339	ug/L	15.168	10043	0.012
Pb	208	0.005	ug/L	23.421	1291	0.000
Bi	209		ug/L		69	-0.000
Th	232	0.022	ug/L	11.641	2511	0.002
U	238	0.009	ug/L	17.447	1498	0.001

Sample ID: QC Std 9

Report Date/Time: Monday, February 15, 2010 23:55:30

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		81.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		85.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		88.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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: 245389002

Sample Date/Time: Monday, February 15, 2010 23:58:57

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389002.301

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	55.721	ug/L	0.380	117354	0.134
Be	9	3.440	ug/L	3.654	1535	0.002
B	11	14.071	ug/L	3.192	7305	0.008
Na	23	438.867	ug/L	2.285	1812853	2.047
Mg	24	7608.153	ug/L	3.305	24306360	27.739
Al	27	69755.275	ug/L	4.528	294999574	336.506
P	31	341.582	ug/L	5.676	104204	0.109
K	39	7243.094	ug/L	2.958	51018735	57.604
Ca	43	8908.144	ug/L	2.624	155452	0.177
> Sc	45		ug/L		876202	876201.535
Ti	47	1310.187	ug/L	3.992	1153627	1.317
V	51	71.877	ug/L	5.479	691494	0.784
Cr	52	35.488	ug/L	3.840	268011	0.302
Cr	53		ug/L		114030	0.003
Mn	55	1236.584	ug/L	4.060	15166337	17.318
Fe	57	42865.455	ug/L	3.488	11725917	13.381
Co	59	21.698	ug/L	1.094	212740	0.243
Ni	60	29.159	ug/L	3.904	65178	0.074
Cu	63		ug/L		136920	0.156
Cu	65	25.588	ug/L	2.454	70230	0.080
Zn	66	101.904	ug/L	2.342	160035	0.279
Zn	67		ug/L		40716	0.049
Zn	68		ug/L		126422	0.219
> Ge	74		ug/L		572060	572059.936
As	75	9.752	ug/L	5.931	14350	0.026
Se	77		ug/L		5217	-0.003
Se	82	3.294	ug/L	12.836	571	0.001
Kr	83		ug/L		496	0.001
Sr	88	103.611	ug/L	4.349	2073883	5.143
Y	89		ug/L		905741	2.246
Mo	98	1.544	ug/L	0.709	7833	0.019
Ag	107	0.409	ug/L	0.361	3580	0.009
Cd	111	1.399	ug/L	10.027	3051	0.007
Cd	114		ug/L		1299	0.003
> In	115		ug/L		403228	403227.745
Sn	120	0.829	ug/L	0.749	7490	0.018
Sb	121	0.272	ug/L	3.556	2359	0.005
Sb	123		ug/L		1811	0.004
Ba	135		ug/L		1393331	1.995
Ba	137	559.658	ug/L	1.974	2510024	3.594
Ho	165		ug/L		66009	0.095
> Lu	175		ug/L		698338	698337.882
Tl	205	1.154	ug/L	1.367	29809	0.040
Pb	208	63.239	ug/L	1.931	2827828	4.048
Bi	209		ug/L		39039	0.056
Th	232	34.086	ug/L	0.531	1760983	2.520
U	238	5.902	ug/L	1.742	310635	0.443

Sample ID: 245389002

Report Date/Time: Tuesday, February 16, 2010 00:01:42

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		88.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		77.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		83.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		94.6			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

### QC Action

Sample ID: 245389002  
 Report Date/Time: Tuesday, February 16, 2010 00:01:42  
 Page 3

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: 245389003

Sample Date/Time: Tuesday, February 16, 2010 00:05:06

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389003.302

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	46.237	ug/L	2.514	86737	0.111
Be	9	2.594	ug/L	3.410	1037	0.001
B	11	8.318	ug/L	2.383	4041	0.005
Na	23	436.737	ug/L	2.186	1607313	2.037
Mg	24	4956.261	ug/L	2.469	14112353	18.070
Al	27	59446.268	ug/L	3.011	223941283	286.774
P	31	147.597	ug/L	0.563	44628	0.047
K	39	3703.858	ug/L	0.351	23476142	29.457
Ca	43	4380.242	ug/L	1.006	68292	0.087
> Sc	45		ug/L		780495	780495.430
Ti	47	1071.824	ug/L	3.685	841468	1.077
V	51	42.738	ug/L	0.863	368287	0.466
Cr	52	22.421	ug/L	2.469	152162	0.191
Cr	53		ug/L		89585	-0.012
Mn	55	435.858	ug/L	2.608	4766814	6.104
Fe	57	27701.341	ug/L	1.776	6755469	8.647
Co	59	10.230	ug/L	3.345	89448	0.114
Ni	60	17.993	ug/L	2.500	35918	0.046
Cu	63		ug/L		70002	0.089
Cu	65	14.368	ug/L	2.044	35236	0.045
Zn	66	49.816	ug/L	2.138	74752	0.137
Zn	67		ug/L		24227	0.022
Zn	68		ug/L		61268	0.110
> Ge	74		ug/L		545366	545365.545
As	75	5.100	ug/L	10.119	6869	0.014
Se	77		ug/L		4574	-0.004
Se	82	0.227	ug/L	78.063	50	0.000
Kr	83		ug/L		436	0.001
Sr	88	64.005	ug/L	3.815	1244063	3.177
Y	89		ug/L		502276	1.283
Mo	98	0.710	ug/L	2.699	3580	0.009
Ag	107	0.259	ug/L	0.210	2230	0.005
Cd	111	0.754	ug/L	12.719	1610	0.004
Cd	114		ug/L		336	0.001
> In	115		ug/L		391534	391533.789
Sn	120	0.693	ug/L	1.166	6127	0.015
Sb	121	0.096	ug/L	2.279	1119	0.002
Sb	123		ug/L		845	0.001
Ba	135		ug/L		983247	1.372
Ba	137	357.962	ug/L	2.941	1647401	2.299
Ho	165		ug/L		37751	0.053
> Lu	175		ug/L		716814	716814.372
Tl	205	0.647	ug/L	4.190	17833	0.023
Pb	208	30.346	ug/L	3.090	1392978	1.943
Bi	209		ug/L		22308	0.031
Th	232	22.521	ug/L	4.985	1193875	1.665
U	238	2.682	ug/L	4.579	145392	0.202

Sample ID: 245389003

Report Date/Time: Tuesday, February 16, 2010 00:07:50

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		78.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		74.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		80.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.1			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: 245389004  
 Sample Date/Time: Tuesday, February 16, 2010 00:11:15  
 Sample Type:  
 Sample Description: LANL 6020  
 Number of Replicates: 3  
 Batch ID: 9454072[ba]  
 Method File: c:\elandata\Method\6020 2.mth  
 Dataset File: c:\elandata\Dataset\100215\245389004.303

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	75.488	ug/L	2.062	157125	0.181
Be	9	4.553	ug/L	2.245	2003	0.002
B	11	14.635	ug/L	2.519	7491	0.008
Na	23	771.869	ug/L	9.506	3138738	3.601
Mg	24	10224.559	ug/L	6.073	32292848	37.278
Al	27	98289.395	ug/L	2.853	410559018	474.157
P	31	299.597	ug/L	1.251	91447	0.095
K	39	7914.114	ug/L	2.147	55031444	62.941
Ca	43	9883.511	ug/L	2.003	170455	0.196
> Sc	45		ug/L		865948	865948.022
Ti	47	1610.585	ug/L	1.031	1402355	1.619
V	51	76.910	ug/L	2.862	731491	0.839
Cr	52	40.584	ug/L	2.377	302525	0.345
Cr	53		ug/L		115740	0.007
Mn	55	917.116	ug/L	0.565	11124768	12.844
Fe	57	50313.756	ug/L	2.304	13605494	15.706
Co	59	18.778	ug/L	3.662	182014	0.210
Ni	60	33.598	ug/L	0.454	74239	0.086
Cu	63		ug/L		143300	0.165
Cu	65	26.894	ug/L	0.657	72966	0.084
Zn	66	103.967	ug/L	1.449	161928	0.285
Zn	67		ug/L		41583	0.051
Zn	68		ug/L		130721	0.228
> Ge	74		ug/L		567284	567284.366
As	75	9.989	ug/L	2.309	14592	0.027
Se	77		ug/L		5163	-0.003
Se	82	0.940	ug/L	53.294	171	0.000
Kr	83		ug/L		670	0.001
Sr	88	128.373	ug/L	1.614	2515046	6.372
Y	89		ug/L		1076829	2.729
Mo	98	1.269	ug/L	1.429	6328	0.016
Ag	107	0.460	ug/L	1.985	3930	0.010
Cd	111	1.365	ug/L	5.742	2916	0.007
Cd	114		ug/L		820	0.002
> In	115		ug/L		394696	394695.524
Sn	120	0.866	ug/L	3.829	7652	0.019
Sb	121	0.147	ug/L	4.791	1473	0.003
Sb	123		ug/L		1179	0.002
Ba	135		ug/L		1727237	2.531
Ba	137	737.233	ug/L	2.457	3231700	4.735
Ho	165		ug/L		75533	0.111
> Lu	175		ug/L		682576	682576.242
Tl	205	1.104	ug/L	3.749	27932	0.039
Pb	208	54.793	ug/L	1.353	2394900	3.508
Bi	209		ug/L		39007	0.057
Th	232	37.754	ug/L	3.467	1905617	2.791
U	238	4.775	ug/L	2.934	245793	0.359

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		87.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		76.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		81.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Fe	57	Sample is out of limits (over linear range)

### QC Action

Sample ID: 245389004  
 Report Date/Time: Tuesday, February 16, 2010 00:13:59  
 Page 3

QC Action Line: Continue

# ICPMS#5 - Summary Report

Sample ID: 245389005

Sample Date/Time: Tuesday, February 16, 2010 00:17:24

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389005.304

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	63.530	ug/L	1.736	132726	0.153
Be	9	3.877	ug/L	0.328	1715	0.002
B	11	14.908	ug/L	2.069	7651	0.008
Na	23	544.321	ug/L	3.575	2227021	2.539
Mg	24	8332.168	ug/L	2.413	26406131	30.378
Al	27	85969.782	ug/L	5.426	360495222	414.726
P	31	340.591	ug/L	1.517	103158	0.109
K	39	7579.825	ug/L	3.035	52929549	60.282
Ca	43	10286.599	ug/L	1.487	178120	0.204
Sc	45		ug/L		869322	869321.507
Ti	47	1431.942	ug/L	2.160	1251480	1.439
V	51	75.072	ug/L	1.323	716938	0.819
Cr	52	36.672	ug/L	1.591	274781	0.312
Cr	53		ug/L		107569	-0.003
Mn	55	1022.345	ug/L	2.213	12446410	14.318
Fe	57	45327.093	ug/L	1.433	12305772	14.149
Co	59	18.306	ug/L	3.519	178099	0.205
Ni	60	29.179	ug/L	0.396	64748	0.074
Cu	63		ug/L		130145	0.149
Cu	65	24.215	ug/L	1.282	65966	0.076
Zn	66	94.334	ug/L	1.659	148428	0.259
Zn	67		ug/L		38823	0.045
Zn	68		ug/L		119842	0.207
Ge	74		ug/L		573029	573029.038
As	75	9.721	ug/L	4.959	14322	0.026
Se	77		ug/L		4923	-0.004
Se	82	1.242	ug/L	26.773	224	0.000
Kr	83		ug/L		555	0.001
Sr	88	120.326	ug/L	2.656	2402016	5.973
Y	89		ug/L		941755	2.342
Mo	98	1.393	ug/L	0.465	7065	0.017
Ag	107	0.438	ug/L	5.984	3810	0.009
Cd	111	1.287	ug/L	3.570	2801	0.007
Cd	114		ug/L		955	0.002
In	115		ug/L		402191	402190.858
Sn	120	0.816	ug/L	1.166	7356	0.018
Sb	121	0.181	ug/L	4.297	1735	0.003
Sb	123		ug/L		1353	0.002
Ba	135		ug/L		1668269	2.399
Ba	137	702.290	ug/L	3.019	3136785	4.511
Ho	165		ug/L		66934	0.096
Lu	175		ug/L		695528	695528.017
Tl	205	0.989	ug/L	1.779	25651	0.035
Pb	208	56.546	ug/L	1.166	2518593	3.620
Bi	209		ug/L		39269	0.056
Th	232	35.073	ug/L	1.460	1804530	2.593
U	238	5.837	ug/L	0.676	305995	0.439

Sample ID: 245389005

Report Date/Time: Tuesday, February 16, 2010 00:20:08

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		87.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		77.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		83.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		94.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

## QC Action

Sample ID: 245389005

Report Date/Time: Tuesday, February 16, 2010 00:20:08

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QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: 245389006

Sample Date/Time: Tuesday, February 16, 2010 00:23:33

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389006.305

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	78.281	ug/L	1.133	168356	0.188
Be	9	4.370	ug/L	4.439	1986	0.002
B	11	16.906	ug/L	3.237	8858	0.009
Na	23	753.588	ug/L	13.146	3167913	3.515
Mg	24	9586.873	ug/L	2.514	31283696	34.953
Al	27	112962.923	ug/L	1.748	487718274	544.943
P	31	301.145	ug/L	2.554	94938	0.096
K	39	8108.702	ug/L	3.755	58279828	64.489
Ca	43	13954.791	ug/L	0.153	248612	0.277
> Sc	45		ug/L		894950	894950.154
Ti	47	1682.468	ug/L	2.256	1513682	1.691
V	51	77.399	ug/L	1.540	760926	0.845
Cr	52	39.812	ug/L	2.523	306775	0.338
Cr	53		ug/L		117954	0.005
Mn	55	866.380	ug/L	1.977	10859008	12.134
Fe	57	49438.274	ug/L	2.063	13815904	15.432
Co	59	18.113	ug/L	0.856	181433	0.203
Ni	60	31.598	ug/L	1.080	72168	0.080
Cu	63		ug/L		129519	0.144
Cu	65	23.888	ug/L	2.202	66992	0.075
Zn	66	97.199	ug/L	0.133	155814	0.266
Zn	67		ug/L		41599	0.049
Zn	68		ug/L		127839	0.217
> Ge	74		ug/L		583761	583760.967
As	75	8.697	ug/L	2.632	12988	0.023
Se	77		ug/L		5450	-0.003
Se	82	-0.440	ug/L	56.638	-61	-0.000
Kr	83		ug/L		711	0.001
Sr	88	144.247	ug/L	1.476	2826790	7.160
Y	89		ug/L		984492	2.493
Mo	98	1.158	ug/L	0.661	5790	0.014
Ag	107	0.459	ug/L	0.785	3918	0.010
Cd	111	1.344	ug/L	7.736	2868	0.007
Cd	114		ug/L		767	0.002
> In	115		ug/L		394764	394763.531
Sn	120	0.918	ug/L	2.736	8092	0.020
Sb	121	0.115	ug/L	0.754	1258	0.002
Sb	123		ug/L		969	0.002
Ba	135		ug/L		1763078	2.633
Ba	137	760.271	ug/L	3.038	3268999	4.883
Ho	165		ug/L		66387	0.099
> Lu	175		ug/L		669650	669649.613
Tl	205	1.050	ug/L	3.416	26128	0.037
Pb	208	55.480	ug/L	2.482	2378576	3.552
Bi	209		ug/L		38027	0.057
Th	232	37.061	ug/L	3.465	1835163	2.740
U	238	3.627	ug/L	1.822	183373	0.272

Sample ID: 245389006

Report Date/Time: Tuesday, February 16, 2010 00:26:18

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		90.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		79.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		81.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		90.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

Sample ID: 245389006

Report Date/Time: Tuesday, February 16, 2010 00:26:18

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, February 16, 2010 00:29:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 8.306

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.850	ug/L	2.419	103843	0.125
Be	9	52.713	ug/L	3.571	22090	0.026
B	11	97.180	ug/L	2.840	45025	0.053
Na	23	4616.183	ug/L	12.247	17940162	21.534
Mg	24	4399.380	ug/L	6.645	13360745	16.040
Al	27	4480.306	ug/L	6.632	18002892	21.613
P	31	4379.930	ug/L	2.335	1170893	1.395
K	39	4426.249	ug/L	12.020	29808699	35.202
Ca	43	4747.037	ug/L	3.458	78935	0.094
Sc	45		ug/L		833350	833350.153
Ti	47	46.702	ug/L	2.181	39526	0.047
V	51	50.062	ug/L	4.190	459675	0.546
Cr	52	50.193	ug/L	2.323	359065	0.427
Cr	53		ug/L		138369	0.039
Mn	55	52.503	ug/L	3.643	614254	0.735
Fe	57	4552.701	ug/L	3.152	1190621	1.421
Co	59	51.029	ug/L	3.237	475528	0.571
Ni	60	50.839	ug/L	3.707	107955	0.129
Cu	63		ug/L		259554	0.311
Cu	65	50.091	ug/L	1.809	130562	0.156
Zn	66	50.288	ug/L	1.540	89229	0.138
Zn	67		ug/L		26640	0.019
Zn	68		ug/L		65362	0.099
Ge	74		ug/L		645083	645082.795
As	75	48.282	ug/L	1.296	83038	0.130
Se	77		ug/L		13297	0.008
Se	82	50.104	ug/L	0.892	9546	0.015
Kr	83		ug/L		206	0.000
Sr	88	51.614	ug/L	0.407	1091893	2.562
Y	89		ug/L		472	0.001
Mo	98	48.171	ug/L	1.169	253296	0.594
Ag	107	50.378	ug/L	2.197	454415	1.066
Cd	111	49.208	ug/L	0.766	112029	0.263
Cd	114		ug/L		263058	0.617
In	115		ug/L		426027	426027.290
Sn	120	50.880	ug/L	1.492	468315	1.099
Sb	121	52.617	ug/L	1.060	382386	0.896
Sb	123		ug/L		299201	0.701
Ba	135		ug/L		117084	0.169
Ba	137	46.366	ug/L	1.856	206594	0.298
Ho	165		ug/L		74	0.000
Lu	175		ug/L		693555	693554.537
Tl	205	49.788	ug/L	1.308	1212474	1.746
Pb	208	52.612	ug/L	1.897	2336652	3.368
Bi	209		ug/L		579	0.001
Th	232	54.030	ug/L	1.775	2771095	3.994
U	238	55.912	ug/L	2.585	2913641	4.200

Sample ID: QC Std 8

Report Date/Time: Tuesday, February 16, 2010 00:32:25

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7	103.701				
Be	9	105.425				
B	11	97.180				
Na	23	92.324				
Mg	24	87.988				
Al	27	88.719				
P	31	87.599				
K	39	88.525				
Ca	43	94.941				
> Sc	45		84.0			
Ti	47	93.404				
V	51	100.124				
Cr	52	100.385				
Cr	53					
Mn	55	105.006				
Fe	57	91.054				
Co	59	102.058				
Ni	60	101.677				
Cu	63					
Cu	65	100.181				
Zn	66	100.576				
Zn	67					
Zn	68					
> Ge	74		87.5			
As	75	96.565				
Se	77					
Se	82	100.209				
Kr	83					
Sr	88	103.227				
Y	89					
Mo	98	96.342				
Ag	107	100.755				
Cd	111	98.415				
Cd	114					
> In	115		88.0			
Sn	120	101.761				
Sb	121	105.234				
Sb	123					
Ba	135					
Ba	137	92.733				
Ho	165					
> Lu	175		93.9			
Tl	205	99.576				
Pb	208	105.223				
Bi	209					
Th	232	108.061				
U	238	111.823				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Mg	24	CCV is out of limits (+/- 10%)
QC Std 8	Al	27	CCV is out of limits (+/- 10%)
QC Std 8	P	31	CCV is out of limits (+/- 10%)
QC Std 8	K	39	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 8

Report Date/Time: Tuesday, February 16, 2010 00:32:25

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## QC Action

QC Action Line: Continue



## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, February 16, 2010 00:35:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 9.307

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.046	ug/L	13.829	158	0.000
Be	9	-0.014	ug/L	141.724	13	-0.000
B	11	3.105	ug/L	17.781	1863	0.002
Na	23	-0.401	ug/L	105.932	16343	-0.002
Mg	24	1.611	ug/L	47.788	7669	0.006
Al	27	1.686	ug/L	18.557	14674	0.008
P	31	-1.788	ug/L	56.121	7708	-0.001
K	39	8.160	ug/L	24.226	550750	0.065
Ca	43	1.177	ug/L	236.217	357	0.000
> Sc	45		ug/L		804496	804496.397
Ti	47	0.090	ug/L	6.262	475	0.000
V	51	-0.666	ug/L	101.665	-1474	-0.007
Cr	52	0.017	ug/L	446.149	3692	0.000
Cr	53		ug/L		105766	0.005
Mn	55	0.028	ug/L	20.489	2138	0.000
Fe	57	3.399	ug/L	19.381	7499	0.001
Co	59	0.005	ug/L	47.267	176	0.000
Ni	60	0.012	ug/L	41.898	183	0.000
Cu	63		ug/L		503	0.000
Cu	65	0.009	ug/L	24.280	231	0.000
Zn	66	0.042	ug/L	169.685	386	0.000
Zn	67		ug/L		13582	-0.001
Zn	68		ug/L		1459	-0.000
> Ge	74		ug/L		630732	630731.908
As	75	0.296	ug/L	112.850	-224	0.001
Se	77		ug/L		7069	-0.001
Se	82	0.237	ug/L	41.946	60	0.000
Kr	83		ug/L		162	0.000
Sr	88	0.006	ug/L	29.742	497	0.000
Y	89		ug/L		130	0.000
Mo	98	0.033	ug/L	19.036	330	0.000
Ag	107	0.004	ug/L	6.060	122	0.000
Cd	111	0.002	ug/L	317.662	41	0.000
Cd	114		ug/L		97	0.000
> In	115		ug/L		415487	415486.636
Sn	120	0.017	ug/L	31.850	439	0.000
Sb	121	0.106	ug/L	29.869	1259	0.002
Sb	123		ug/L		993	0.001
Ba	135		ug/L		78	0.000
Ba	137	0.008	ug/L	54.262	125	0.000
Ho	165		ug/L		28	0.000
> Lu	175		ug/L		688113	688113.219
Tl	205	0.328	ug/L	16.880	9435	0.011
Pb	208	0.006	ug/L	8.369	1276	0.000
Bi	209		ug/L		80	0.000
Th	232	0.023	ug/L	8.574	2468	0.002
U	238	0.007	ug/L	13.784	1379	0.001

Sample ID: QC Std 9

Report Date/Time: Tuesday, February 16, 2010 00:38:35

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate	Rel. % Difference
Li	7						
Be	9						
B	11						
Na	23						
Mg	24						
Al	27						
P	31						
K	39						
Ca	43						
> Sc	45		81.1				
Ti	47						
V	51						
Cr	52						
Cr	53						
Mn	55						
Fe	57						
Co	59						
Ni	60						
Cu	63						
Cu	65						
Zn	66						
Zn	67						
Zn	68						
> Ge	74		85.5				
As	75						
Se	77						
Se	82						
Kr	83						
Sr	88						
Y	89						
Mo	98						
Ag	107						
Cd	111						
Cd	114						
> In	115		85.9				
Sn	120						
Sb	121						
Sb	123						
Ba	135						
Ba	137						
Ho	165						
> Lu	175		93.2				
Tl	205						
Pb	208						
Bi	209						
Th	232						
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: 245389007

Sample Date/Time: Tuesday, February 16, 2010 00:42:00

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389007.308

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	48.361	ug/L	1.494	96218	0.116
Be	9	2.938	ug/L	1.224	1242	0.001
B	11	14.216	ug/L	2.099	6967	0.008
Na	23	411.801	ug/L	10.828	1607457	1.921
Mg	24	6628.216	ug/L	10.589	20585114	24.895
Al	27	59715.239	ug/L	8.078	238296493	288.072
P	31	297.096	ug/L	3.056	86728	0.095
K	39	7101.573	ug/L	10.999	47197107	56.479
Ca	43	12437.712	ug/L	1.139	204949	0.247
Sc	45		ug/L		827686	827686.402
Ti	47	1162.778	ug/L	1.644	967637	1.169
V	51	60.682	ug/L	2.959	552493	0.662
Cr	52	31.250	ug/L	3.387	223422	0.266
Cr	53		ug/L		99594	-0.007
Mn	55	1030.291	ug/L	3.766	11938912	14.429
Fe	57	36048.329	ug/L	2.907	9317961	11.253
Co	59	19.790	ug/L	1.615	183291	0.221
Ni	60	24.744	ug/L	2.324	52288	0.063
Cu	63		ug/L		110381	0.133
Cu	65	21.810	ug/L	1.668	56586	0.068
Zn	66	85.022	ug/L	2.783	128613	0.233
Zn	67		ug/L		33222	0.038
Zn	68		ug/L		99206	0.178
Ge	74		ug/L		550927	550926.898
As	75	7.390	ug/L	5.386	10318	0.020
Se	77		ug/L		4941	-0.004
Se	82	0.796	ug/L	33.318	144	0.000
Kr	83		ug/L		449	0.001
Sr	88	89.921	ug/L	1.298	1716432	4.464
Y	89		ug/L		729447	1.897
Mo	98	1.139	ug/L	2.163	5553	0.014
Ag	107	0.351	ug/L	4.069	2935	0.007
Cd	111	1.144	ug/L	8.193	2385	0.006
Cd	114		ug/L		1002	0.002
In	115		ug/L		384492	384491.763
Sn	120	1.180	ug/L	1.198	10062	0.025
Sb	121	0.235	ug/L	5.222	2012	0.004
Sb	123		ug/L		1565	0.003
Ba	135		ug/L		1118081	1.616
Ba	137	415.879	ug/L	0.624	1848168	2.671
Ho	165		ug/L		54914	0.079
Lu	175		ug/L		691913	691912.677
Tl	205	1.007	ug/L	1.020	25972	0.035
Pb	208	50.182	ug/L	1.191	2223692	3.212
Bi	209		ug/L		34413	0.050
Th	232	29.467	ug/L	0.229	1508571	2.178
U	238	5.027	ug/L	2.694	262257	0.378

Sample ID: 245389007

Report Date/Time: Tuesday, February 16, 2010 00:44:45

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		83.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		74.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		79.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		93.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

## QC Action

Sample ID: 245389007

Report Date/Time: Tuesday, February 16, 2010 00:44:45

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QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: 245389008  
 Sample Date/Time: Tuesday, February 16, 2010 00:48:11  
 Sample Type:  
 Sample Description: LANL 6020  
 Number of Replicates: 3  
 Batch ID: 9454072|baj  
 Method File: c:\elandata\Method\6020 2.mth  
 Dataset File: c:\elandata\Dataset\100215\245389008.309

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	41.040	ug/L	2.153	79714	0.099
Be	9	2.677	ug/L	6.428	1105	0.001
B	11	11.975	ug/L	3.541	5805	0.007
Na	23	466.143	ug/L	8.629	1772820	2.175
Mg	24	6319.446	ug/L	4.056	18608859	23.040
Al	27	47414.156	ug/L	2.908	184823334	228.730
P	31	529.098	ug/L	3.954	144344	0.169
K	39	6766.753	ug/L	5.527	43948723	53.816
Ca	43	8031.118	ug/L	3.440	129282	0.160
> Sc	45		ug/L		808186	808186.325
Ti	47	1130.175	ug/L	3.286	918015	1.136
V	51	59.703	ug/L	3.202	530694	0.652
Cr	52	30.789	ug/L	2.691	214975	0.262
Cr	53		ug/L		97383	-0.006
Mn	55	1184.367	ug/L	3.456	13398404	16.587
Fe	57	35048.570	ug/L	4.679	8841263	10.941
Co	59	19.478	ug/L	2.375	176108	0.218
Ni	60	27.219	ug/L	3.713	56124	0.069
Cu	63		ug/L		114071	0.141
Cu	65	22.630	ug/L	3.504	57294	0.071
Zn	66	80.856	ug/L	2.176	120750	0.222
Zn	67		ug/L		31838	0.036
Zn	68		ug/L		95817	0.174
> Ge	74		ug/L		543736	543736.361
As	75	6.610	ug/L	2.373	9046	0.018
Se	77		ug/L		4505	-0.004
Se	82	0.338	ug/L	72.667	69	0.000
Kr	83		ug/L		464	0.001
Sr	88	87.893	ug/L	2.708	1687178	4.363
Y	89		ug/L		752249	1.945
Mo	98	1.504	ug/L	3.893	7323	0.019
Ag	107	0.328	ug/L	4.985	2763	0.007
Cd	111	1.075	ug/L	3.169	2255	0.006
Cd	114		ug/L		1066	0.003
> In	115		ug/L		386727	386726.967
Sn	120	2.055	ug/L	3.929	17421	0.044
Sb	121	0.245	ug/L	3.048	2089	0.004
Sb	123		ug/L		1609	0.003
Ba	135		ug/L		1183192	1.680
Ba	137	428.813	ug/L	3.287	1939895	2.754
Ho	165		ug/L		56567	0.080
> Lu	175		ug/L		704733	704733.095
Tl	205	0.969	ug/L	1.442	25489	0.034
Pb	208	44.190	ug/L	3.547	1993387	2.829
Bi	209		ug/L		32708	0.046
Th	232	28.230	ug/L	2.930	1471277	2.087
U	238	4.316	ug/L	4.146	229404	0.324



## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		81.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		73.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		79.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		95.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: 245389009  
 Sample Date/Time: Tuesday, February 16, 2010 00:54:23  
 Sample Type:  
 Sample Description: LANL 6020  
 Number of Replicates: 3  
 Batch ID: 945407[2]baj  
 Method File: c:\elandata\Method\6020 2.mth  
 Dataset File: c:\elandata\Dataset\100215\245389009.310

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	108.734	ug/L	0.269	232285	0.261
Be	9	6.178	ug/L	2.451	2781	0.003
B	11	18.662	ug/L	1.745	9658	0.010
Na	23	1193.494	ug/L	5.721	4967035	5.568
Mg	24	12498.731	ug/L	4.257	40534252	45.569
Al	27	145814.387	ug/L	1.699	625169414	703.422
P	31	365.807	ug/L	3.339	112617	0.117
K	39	9568.866	ug/L	4.794	68216061	76.101
Ca	43	14821.320	ug/L	1.686	262197	0.295
Sc	45		ug/L		888959	888959.157
Ti	47	2037.485	ug/L	0.972	1820812	2.048
V	51	94.713	ug/L	1.319	923606	1.034
Cr	52	55.235	ug/L	1.655	421261	0.469
Cr	53		ug/L		125869	0.015
Mn	55	1085.232	ug/L	2.261	13508524	15.199
Fe	57	63565.184	ug/L	2.132	17640358	19.842
Co	59	26.109	ug/L	1.614	259693	0.292
Ni	60	48.645	ug/L	2.151	110238	0.124
Cu	63		ug/L		161975	0.182
Cu	65	29.878	ug/L	2.203	83161	0.093
Zn	66	127.523	ug/L	2.794	195910	0.350
Zn	67		ug/L		48966	0.065
Zn	68		ug/L		159783	0.283
Ge	74		ug/L		559870	559869.849
As	75	10.427	ug/L	2.022	15060	0.028
Se	77		ug/L		5018	-0.004
Se	82	-2.490	ug/L	19.221	-397	-0.001
Kr	83		ug/L		907	0.001
Sr	88	182.125	ug/L	1.727	3505772	9.040
Y	89		ug/L		1250398	3.224
Mo	98	1.538	ug/L	2.228	7506	0.019
Ag	107	0.593	ug/L	1.405	4954	0.013
Cd	111	1.745	ug/L	3.160	3648	0.009
Cd	114		ug/L		960	0.002
In	115		ug/L		387824	387823.700
Sn	120	1.248	ug/L	3.245	10714	0.027
Sb	121	0.151	ug/L	6.080	1475	0.003
Sb	123		ug/L		1169	0.002
Ba	135		ug/L		2481934	3.797
Ba	137	1024.083	ug/L	1.718	4299413	6.577
Ho	165		ug/L		85686	0.131
Lu	175		ug/L		653623	653623.435
Tl	205	1.327	ug/L	2.422	31867	0.047
Pb	208	73.663	ug/L	0.625	3083161	4.716
Bi	209		ug/L		48856	0.075
Th	232	50.497	ug/L	2.050	2440969	3.733
U	238	5.128	ug/L	2.931	252737	0.385

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		89.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		75.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		80.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		88.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)
	Fe	57	Sample is out of limits (over linear range)
	Ba	137	Sample is out of limits (over linear range)

Sample ID: 245389009

Report Date/Time: Tuesday, February 16, 2010 00:57:08

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: 245389010

Sample Date/Time: Tuesday, February 16, 2010 01:00:33

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389010.311

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	36.252	ug/L	6.183	69661	0.087
Be	9	2.054	ug/L	7.367	844	0.001
B	11	10.917	ug/L	7.731	5278	0.006
Na	23	421.052	ug/L	8.027	1586985	1.964
Mg	24	5402.898	ug/L	6.994	15741712	19.698
Al	27	40624.106	ug/L	5.035	156651234	195.974
P	31	570.020	ug/L	3.319	153346	0.182
K	39	5251.124	ug/L	5.681	33872164	41.762
Ca	43	15632.593	ug/L	2.441	248862	0.311
> Sc	45		ug/L		800112	800111.952
Ti	47	861.861	ug/L	3.583	693083	0.866
V	51	44.645	ug/L	6.054	393808	0.487
Cr	52	22.387	ug/L	4.697	155653	0.190
Cr	53		ug/L		90005	-0.014
Mn	55	989.102	ug/L	3.401	11077593	13.852
Fe	57	26769.019	ug/L	3.110	6688965	8.356
Co	59	13.255	ug/L	5.506	118623	0.148
Ni	60	19.979	ug/L	2.125	40839	0.051
Cu	63		ug/L		121869	0.152
Cu	65	24.402	ug/L	2.517	61158	0.076
Zn	66	82.236	ug/L	5.132	126327	0.225
Zn	67		ug/L		31823	0.035
Zn	68		ug/L		97597	0.172
> Ge	74		ug/L		559960	559959.629
As	75	5.921	ug/L	10.354	8256	0.016
Se	77		ug/L		4963	-0.004
Se	82	0.551	ug/L	51.381	106	0.000
Kr	83		ug/L		354	0.000
Sr	88	73.609	ug/L	1.379	1411286	3.654
Y	89		ug/L		770343	1.995
Mo	98	1.453	ug/L	1.408	7068	0.018
Ag	107	0.246	ug/L	1.655	2097	0.005
Cd	111	0.894	ug/L	2.717	1880	0.005
Cd	114		ug/L		1118	0.003
> In	115		ug/L		386189	386189.153
Sn	120	2.013	ug/L	4.073	17052	0.043
Sb	121	0.222	ug/L	3.862	1933	0.004
Sb	123		ug/L		1540	0.003
Ba	135		ug/L		961714	1.382
Ba	137	360.702	ug/L	4.256	1612123	2.317
Ho	165		ug/L		57312	0.082
> Lu	175		ug/L		695589	695589.289
Tl	205	0.626	ug/L	5.121	16809	0.022
Pb	208	40.593	ug/L	3.961	1809243	2.599
Bi	209		ug/L		26002	0.037
Th	232	21.754	ug/L	3.925	1120216	1.608
U	238	6.103	ug/L	3.524	320011	0.458

Sample ID: 245389010

Report Date/Time: Tuesday, February 16, 2010 01:03:17

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		80.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		75.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		79.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		94.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 TI 47 Sample is out of limits (over linear range)

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245389011

Sample Date/Time: Tuesday, February 16, 2010 01:06:42

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\245389011.312

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.990	ug/L	0.221	106783	0.130
Be	9	3.355	ug/L	1.510	1407	0.002
B	11	18.181	ug/L	2.736	8718	0.010
Na	23	434.804	ug/L	4.035	1686806	2.028
Mg	24	7756.318	ug/L	4.409	23252532	28.279
Al	27	67451.981	ug/L	3.886	267545234	325.394
P	31	506.530	ug/L	4.874	141010	0.161
K	39	8256.055	ug/L	8.930	54458200	65.661
Ca	43	11368.816	ug/L	2.663	186177	0.226
> Sc	45		ug/L		822751	822750.652
Ti	47	1248.888	ug/L	1.825	1032973	1.255
V	51	65.102	ug/L	2.617	588808	0.710
Cr	52	34.009	ug/L	3.686	241298	0.289
Cr	53		ug/L		101284	-0.004
Mn	55	910.727	ug/L	2.815	10490850	12.755
Fe	57	39558.886	ug/L	2.174	10165261	12.348
Co	59	17.386	ug/L	3.382	160019	0.194
Ni	60	28.354	ug/L	3.639	59512	0.072
Cu	63		ug/L		141655	0.172
Cu	65	28.142	ug/L	3.766	72482	0.088
Zn	66	110.284	ug/L	2.930	166854	0.302
Zn	67		ug/L		39833	0.050
Zn	68		ug/L		130519	0.235
> Ge	74		ug/L		551395	551395.370
As	75	7.794	ug/L	3.831	10924	0.021
Se	77		ug/L		4758	-0.004
Se	82	-0.553	ug/L	34.584	-75	-0.000
Kr	83		ug/L		474	0.001
Sr	88	119.443	ug/L	2.412	2323609	5.929
Y	89		ug/L		864033	2.204
Mo	98	2.275	ug/L	4.106	11146	0.028
Ag	107	0.407	ug/L	2.298	3458	0.009
Cd	111	1.471	ug/L	8.768	3115	0.008
Cd	114		ug/L		1646	0.004
> In	115		ug/L		391949	391948.589
Sn	120	1.068	ug/L	1.613	9302	0.023
Sb	121	0.421	ug/L	1.866	3292	0.007
Sb	123		ug/L		2646	0.006
Ba	135		ug/L		1320211	1.886
Ba	137	528.385	ug/L	3.389	2374926	3.394
Ho	165		ug/L		62041	0.089
> Lu	175		ug/L		700136	700136.269
Tl	205	1.020	ug/L	3.419	26582	0.036
Pb	208	53.660	ug/L	3.285	2404875	3.435
Bi	209		ug/L		35076	0.050
Th	232	29.488	ug/L	2.288	1527014	2.180
U	238	8.192	ug/L	2.664	431756	0.615

Sample ID: 245389011

Report Date/Time: Tuesday, February 16, 2010 01:09:26

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		82.9			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		74.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		81.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		94.8			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 01:12:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 6.313

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.522	ug/L	0.907	94862	0.126
Be	9	52.862	ug/L	1.862	19983	0.027
B	11	97.343	ug/L	3.712	40656	0.054
Na	23	4822.552	ug/L	4.901	16921470	22.497
Mg	24	4565.369	ug/L	7.210	12511902	16.645
Al	27	4919.511	ug/L	5.043	17834667	23.732
P	31	4333.370	ug/L	1.595	1044874	1.381
K	39	4306.014	ug/L	4.701	26202037	34.246
Ca	43	4686.953	ug/L	3.228	70308	0.093
> Sc	45		ug/L		751340	751339.703
Ti	47	47.210	ug/L	1.188	36031	0.047
V	51	49.546	ug/L	2.670	410336	0.541
Cr	52	49.963	ug/L	4.443	322324	0.425
Cr	53		ug/L		123832	0.038
Mn	55	52.874	ug/L	1.544	558086	0.740
Fe	57	4584.836	ug/L	1.711	1081411	1.431
Co	59	52.228	ug/L	2.673	438944	0.584
Ni	60	51.853	ug/L	0.528	99333	0.132
Cu	63		ug/L		241620	0.321
Cu	65	50.805	ug/L	2.953	119409	0.159
Zn	66	49.230	ug/L	0.763	81297	0.135
Zn	67		ug/L		23916	0.017
Zn	68		ug/L		59156	0.096
> Ge	74		ug/L		600285	600284.761
As	75	48.200	ug/L	1.301	77144	0.130
Se	77		ug/L		11843	0.007
Se	82	49.360	ug/L	2.398	8751	0.015
Kr	83		ug/L		196	0.000
Sr	88	50.555	ug/L	1.784	1016444	2.509
Y	89		ug/L		414	0.001
Mo	98	47.402	ug/L	2.678	236831	0.585
Ag	107	49.371	ug/L	1.490	423255	1.045
Cd	111	49.041	ug/L	2.776	106079	0.262
Cd	114		ug/L		248862	0.615
> In	115		ug/L		404949	404948.710
Sn	120	50.617	ug/L	4.213	442556	1.093
Sb	121	51.824	ug/L	3.544	357804	0.883
Sb	123		ug/L		281293	0.694
Ba	135		ug/L		112613	0.161
Ba	137	44.417	ug/L	3.388	200105	0.285
Ho	165		ug/L		75	0.000
> Lu	175		ug/L		701230	701230.148
Tl	205	50.301	ug/L	3.134	1238489	1.764
Pb	208	51.986	ug/L	0.950	2334672	3.328
Bi	209		ug/L		588	0.001
Th	232	54.131	ug/L	3.024	2807151	4.002
U	238	56.135	ug/L	1.390	2958058	4.217

Sample ID: QC Std 6

Report Date/Time: Tuesday, February 16, 2010 01:15:33

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Li	7	105.045				
Be	9	105.725				
B	11	97.343				
Na	23	96.451				
Mg	24	91.307				
Al	27	97.416				
P	31	86.667				
K	39	86.120				
Ca	43	93.739				
> Sc	45		75.7			
Ti	47	94.420				
V	51	99.092				
Cr	52	99.926				
Cr	53					
Mn	55	105.748				
Fe	57	91.697				
Co	59	104.455				
Ni	60	103.705				
Cu	63					
Cu	65	101.609				
Zn	66	98.461				
Zn	67					
Zn	68					
> Ge	74		81.4			
As	75	96.401				
Se	77					
Se	82	98.720				
Kr	83					
Sr	88	101.109				
Y	89					
Mo	98	94.804				
Ag	107	98.743				
Cd	111	98.083				
Cd	114					
> In	115		83.7			
Sn	120	101.234				
Sb	121	103.648				
Sb	123					
Ba	135					
Ba	137	88.835				
Ho	165					
> Lu	175		95.0			
Tl	205	100.602				
Pb	208	103.973				
Bi	209					
Th	232	108.262				
U	238	112.270				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	P	31	CCV is out of limits (+/- 10%)
QC Std 6	K	39	CCV is out of limits (+/- 10%)
Lu 175 Int Std for QCStd		45	
QC Std 6	Ba	137	CCV is out of limits (+/- 10%)
QC Std 6	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 6

Report Date/Time: Tuesday, February 16, 2010 01:15:33

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## QC Action

QC Action Line: Continue



## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 01:18:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.314

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.045	ug/L	24.443	143	0.000
Be	9	0.008	ug/L	46.349	21	0.000
B	11	3.086	ug/L	20.751	1694	0.002
Na	23	-0.601	ug/L	307.266	14342	-0.003
Mg	24	0.729	ug/L	28.483	4667	0.003
Al	27	2.148	ug/L	35.047	15008	0.010
P	31	-2.279	ug/L	80.613	6920	-0.001
K	39	11.749	ug/L	30.175	524138	0.093
Ca	43	-0.890	ug/L	280.022	296	-0.000
> Sc	45		ug/L		734215	734214.694
Ti	47	0.082	ug/L	7.253	428	0.000
V	51	-0.390	ug/L	114.703	866	-0.004
Cr	52	0.016	ug/L	230.167	3362	0.000
Cr	53		ug/L		93363	0.000
Mn	55	0.031	ug/L	19.365	1985	0.000
Fe	57	2.115	ug/L	6.531	6551	0.001
Co	59	0.009	ug/L	16.907	194	0.000
Ni	60	0.026	ug/L	28.800	192	0.000
Cu	63		ug/L		469	0.000
Cu	65	0.009	ug/L	74.527	212	0.000
Zn	66	0.001	ug/L	1119.416	287	0.000
Zn	67		ug/L		12412	-0.001
Zn	68		ug/L		1297	-0.000
> Ge	74		ug/L		576595	576594.603
As	75	0.043	ug/L	315.965	-596	0.000
Se	77		ug/L		6191	-0.002
Se	82	0.009	ug/L	854.253	17	0.000
Kr	83		ug/L		166	0.000
Sr	88	0.007	ug/L	14.136	503	0.000
Y	89		ug/L		126	0.000
Mo	98	0.030	ug/L	22.016	301	0.000
Ag	107	0.004	ug/L	11.720	120	0.000
Cd	111	0.005	ug/L	35.027	46	0.000
Cd	114		ug/L		97	0.000
> In	115		ug/L		395963	395962.593
Sn	120	0.021	ug/L	10.766	448	0.000
Sb	121	0.121	ug/L	14.872	1303	0.002
Sb	123		ug/L		996	0.002
Ba	135		ug/L		75	0.000
Ba	137	0.007	ug/L	38.163	121	0.000
Ho	165		ug/L		23	0.000
> Lu	175		ug/L		684471	684470.506
Tl	205	0.332	ug/L	19.550	9490	0.012
Pb	208	0.009	ug/L	10.578	1416	0.001
Bi	209		ug/L		66	-0.000
Th	232	0.028	ug/L	17.038	2712	0.002
U	238	0.011	ug/L	17.231	1575	0.001

Sample ID: QC Std 7

Report Date/Time: Tuesday, February 16, 2010 01:21:43

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		74.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		78.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		81.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits	Message
Lu 175 Int Std for QC	Ge	45		
	Ge	74		

## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, February 16, 2010 06:30:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\Blank.370

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9		ug/L		17	
> Sc	45		ug/L		733269	
[ Ni	60		ug/L		179	
[> Ge	74		ug/L		566712	
As	75		ug/L		-1432	
Se	77		ug/L		7502	
Se	82		ug/L		34	
[ Kr	83		ug/L		124	

Sample ID: Blank

Report Date/Time: Tuesday, February 16, 2010 06:31:16

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	
Ge	74Simple Linear	
As	75Simple Linear	
Se	77Simple Linear	
Se	82Simple Linear	
Kr	83Simple Linear	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45					
[	Ni	60					
[>	Ge	74					
	As	75					
	Se	77					
	Se	82					
[	Kr	83					

### 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 1

Sample Date/Time: Tuesday, February 16, 2010 06:33:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\Standard 1.371

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	10.000	ug/L	0.482	4016	0.006
> Sc	45		ug/L		723461	723460.998
Ni	60	10.000	ug/L	3.353	20037	0.027
> Ge	74		ug/L		576038	576037.804
As	75	10.000	ug/L	3.707	14479	0.028
Se	77		ug/L		8086	0.001
Se	82	10.000	ug/L	1.230	1807	0.003
Kr	83		ug/L		117	-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	

### 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					

### 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: Tuesday, February 16, 2010 06:33:44

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## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, February 16, 2010 06:35:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\Standard 2.372

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	100.001	ug/L	3.108	40251	0.055
> Sc	45		ug/L		727775	727774.978
Ni	60	99.969	ug/L	0.513	193994	0.266
> Ge	74		ug/L		567726	567726.249
As	75	99.979	ug/L	1.838	152271	0.271
Se	77		ug/L		19704	0.021
Se	82	99.984	ug/L	1.923	17232	0.030
Kr	83		ug/L		183	0.000

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45					
Ni	60					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					

### 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 2

Report Date/Time: Tuesday, February 16, 2010 06:36:13

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## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, February 16, 2010 06:38:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 1.373

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	51.366	ug/L	2.435	20498	0.028
> Sc	45		ug/L		720885	720884.692
Ni	60	51.625	ug/L	3.702	99299	0.138
> Ge	74		ug/L		573013	573012.523
As	75	49.289	ug/L	3.403	74991	0.133
Se	77		ug/L		13051	0.010
Se	82	49.607	ug/L	1.325	8645	0.015
Kr	83		ug/L		155	0.000

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % DI	Duplicate Rel. % Difference
Be	9	102.732				
> Sc	45		98.3			
Ni	60	103.249				
> Ge	74		101.1			
As	75	98.579				
Se	77					
Se	82	99.213				
Kr	83					

### 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: Tuesday, February 16, 2010 06:38:42

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## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, February 16, 2010 06:40:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 2.374

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.004	ug/L	257.153	18	0.000
> Sc	45		ug/L		714515	714514.631
Ni	60	-0.002	ug/L	224.603	170	-0.000
> Ge	74		ug/L		571324	571324.309
As	75	0.210	ug/L	254.542	-1123	0.001
Se	77		ug/L		7134	-0.001
Se	82	-0.125	ug/L	48.222	12	-0.000
Kr	83		ug/L		130	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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45		97.4			
Ni	60					
> Ge	74		100.8			
As	75					
Se	77					
Se	82					
Kr	83					

### 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 2

Report Date/Time: Tuesday, February 16, 2010 06:41:16

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, February 16, 2010 06:43:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 3.375

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.539	ug/L	4.374	230	0.000
> Sc	45		ug/L		717474	717474.344
Ni	60	2.271	ug/L	4.390	4514	0.006
> Ge	74		ug/L		565277	565277.095
As	75	5.808	ug/L	11.569	7467	0.016
Se	77		ug/L		7376	-0.000
Se	82	5.506	ug/L	2.470	976	0.002
Kr	83		ug/L		124	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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
Be	9	107.702					
> Sc	45		97.8				
Ni	60	113.541					
> Ge	74		99.7				
As	75	116.169					
Se	77						
Se	82	110.112					
Kr	83						

### 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

Report Date/Time: Tuesday, February 16, 2010 06:43:46

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## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, February 16, 2010 06:45:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 4.376

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.080	ug/L	7.943	47	0.000
[>	Sc	45		ug/L		697223	697223.235
[	Ni	60	3.192	ug/L	3.414	6099	0.009
[>	Ge	74		ug/L		536133	536132.649
	As	75	0.448	ug/L	148.691	-698	0.001
	Se	77		ug/L		8802	0.003
	Se	82	-1.472	ug/L	9.158	-207	-0.000
[	Kr	83		ug/L		437	0.001

### 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	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45		95.1			
[	Ni	60	96.420				
[>	Ge	74		94.6			
	As	75					
	Se	77					
	Se	82					
[	Kr	83					

### 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: Tuesday, February 16, 2010 06:46:17

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## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, February 16, 2010 06:48:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 5.377

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	17.927	ug/L	1.788	6870	0.010
> Sc	45		ug/L		691416	691416.435
Ni	60	21.905	ug/L	1.133	40510	0.058
> Ge	74		ug/L		529849	529848.661
As	75	20.627	ug/L	2.108	28259	0.056
Se	77		ug/L		10793	0.007
Se	82	18.194	ug/L	1.460	2952	0.006
Kr	83		ug/L		427	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9	89.637				
> Sc	45		94.3			
Ni	60	93.975				
> Ge	74		93.5			
As	75	103.136				
Se	77					
Se	82	90.968				
Kr	83					

### 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: Tuesday, February 16, 2010 06:48:48

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 06:50:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth .

Dataset File: c:\elandata\Dataset\100215\QC Std 6.378

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	49.923	ug/L	1.958	19929	0.028
>	Sc	45		ug/L		721296	721296.335
[	Ni	60	49.727	ug/L	0.094	95727	0.132
>	Ge	74		ug/L		564882	564882.455
	As	75	47.604	ug/L	0.568	71395	0.129
	Se	77		ug/L		12965	0.010
	Se	82	48.631	ug/L	4.467	8353	0.015
[	Kr	83		ug/L		122	-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	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9	99.846				
>	Sc	45		98.4			
[	Ni	60	99.454				
>	Ge	74		99.7			
	As	75	95.207				
	Se	77					
	Se	82	97.263				
[	Kr	83					

### 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: Tuesday, February 16, 2010 06:51:20

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 06:53:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.379

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.004	ug/L	400.280	18	0.000
[>	Sc 45		ug/L		715990	715990.267
[	Ni 60	-0.004	ug/L	86.881	166	-0.000
[>	Ge 74		ug/L		569030	569029.779
[	As 75	0.486	ug/L	86.241	-686	0.001
[	Se 77		ug/L		7450	-0.000
[	Se 82	0.023	ug/L	222.040	38	0.000
[	Kr 83		ug/L		116	-0.000

### 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	

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[ Be 9					
[> Sc 45		97.6			
[ Ni 60					
[> Ge 74		100.4			
[ As 75					
[ Se 77					
[ Se 82					
[ Kr 83					

### 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: Tuesday, February 16, 2010 06:53:53

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## ICPMS#5 - Summary Report

Sample ID: 1202024785

Sample Date/Time: Tuesday, February 16, 2010 06:56:01

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\1202024785.380

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.013	ug/L	63.338	21	0.000
> Sc	45		ug/L		715055	715054.564
Ni	60	0.170	ug/L	3.826	499	0.000
> Ge	74		ug/L		536118	536117.975
As	75	0.512	ug/L	27.582	-614	0.001
Se	77		ug/L		6703	-0.001
Se	82	0.744	ug/L	55.965	153	0.000
Kr	83		ug/L		122	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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45		97.5			
Ni	60					
> Ge	74		94.6			
As	75					
Se	77					
Se	82					
Kr	83					

### 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: 1202024785

Report Date/Time: Tuesday, February 16, 2010 06:56:35

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## ICPMS#5 - Summary Report

Sample ID: 1202024786

Sample Date/Time: Tuesday, February 16, 2010 06:58:34

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945407|40|baj

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\1202024786.381

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	17.856	ug/L	2.516	7128	0.010
>	Sc	45		ug/L		720291	720291.029
[	Ni	60	33.565	ug/L	3.156	64540	0.089
>	Ge	74		ug/L		566248	566248.092
	As	75	24.657	ug/L	1.638	36376	0.067
	Se	77		ug/L		16899	0.017
	Se	82	64.786	ug/L	2.958	11146	0.020
[	Kr	83		ug/L		135	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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		98.2		
[	Ni	60				
>	Ge	74		99.9		
	As	75				
	Se	77				
	Se	82				
[	Kr	83				

### 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: 1202024786

Report Date/Time: Tuesday, February 16, 2010 06:59:07

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## ICPMS#5 - Summary Report

Sample ID: 245389001

Sample Date/Time: Tuesday, February 16, 2010 07:01:07

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389001.382

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.504	ug/L	0.715	1878	0.002
>	Sc	45		ug/L		746867	746867.359
[	Ni	60	35.189	ug/L	1.843	70194	0.094
[>	Ge	74		ug/L		499799	499799.166
	As	75	9.796	ug/L	3.578	11991	0.027
	Se	77		ug/L		5017	-0.003
	Se	82	1.518	ug/L	59.534	258	0.000
[	Kr	83		ug/L		653	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		101.9		
[	Ni	60				
[>	Ge	74		88.2		
	As	75				
	Se	77				
	Se	82				
[	Kr	83				

### 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: 245389001

Report Date/Time: Tuesday, February 16, 2010 07:01:40

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## ICPMS#5 - Summary Report

Sample ID: 1202024787

Sample Date/Time: Tuesday, February 16, 2010 07:03:40

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\1202024787.383

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	5.041	ug/L	3.733	2154	0.003
>	Sc	45		ug/L		766220	766220.081
[	Ni	60	37.645	ug/L	2.862	77033	0.100
>	Ge	74		ug/L		503724	503724.161
	As	75	10.595	ug/L	4.818	13176	0.029
	Se	77		ug/L		4756	-0.004
	Se	82	1.776	ug/L	14.160	301	0.001
[	Kr	83		ug/L		685	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		104.5		
[	Ni	60				
>	Ge	74		88.9		
	As	75				
	Se	77				
	Se	82				
[	Kr	83				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202024787

Report Date/Time: Tuesday, February 16, 2010 07:04:13

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## ICPMS#5 - Summary Report

Sample ID: 1202024788

Sample Date/Time: Tuesday, February 16, 2010 07:06:13

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\1202024788.384

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	25.070	ug/L	2.469	11018	0.014
> Sc	45		ug/L		793560	793560.437
[ Ni	60	60.164	ug/L	0.498	127373	0.160
> Ge	74		ug/L		510810	510809.913
[ As	75	45.714	ug/L	4.107	61943	0.124
Se	77		ug/L		5459	-0.003
Se	82	8.351	ug/L	1.223	1323	0.003
[ Kr	83		ug/L		830	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dif	Duplicate Rel. % Difference
[ Be	9					
> Sc	45		108.2			
[ Ni	60					
> Ge	74		90.1			
As	75					
Se	77					
Se	82					
[ Kr	83					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202024788

Report Date/Time: Tuesday, February 16, 2010 07:06:47

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## ICPMS#5 - Summary Report

Sample ID: 1202024790

Sample Date/Time: Tuesday, February 16, 2010 07:08:47

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 945407[2]bej

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\1202024790.385

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	24.418	ug/L	1.182	10619	0.014
>	Sc	45		ug/L		784873	784872.600
[	Ni	60	57.432	ug/L	2.604	120247	0.153
>	Ge	74		ug/L		519658	519657.574
	As	75	44.340	ug/L	2.265	61067	0.120
	Se	77		ug/L		5479	-0.003
	Se	82	7.312	ug/L	6.692	1181	0.002
[	Kr	83		ug/L		796	0.001

### 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	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		107.0			
[	Ni	60					
>	Ge	74		91.7			
	As	75					
	Se	77					
	Se	82					
[	Kr	83					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202024790

Report Date/Time: Tuesday, February 16, 2010 07:09:21

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## ICPMS#5 - Summary Report

Sample ID: 1202024789

Sample Date/Time: Tuesday, February 16, 2010 07:11:22

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 94540710|ba|

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\1202024789.386

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	1.079	ug/L	5.168	437	0.001
> Sc	45		ug/L		705759	705758.775
Ni	60	7.626	ug/L	2.525	14511	0.020
> Ge	74		ug/L		533631	533630.504
As	75	2.967	ug/L	11.763	2935	0.008
Se	77		ug/L		5413	-0.003
Se	82	1.683	ug/L	5.530	304	0.001
Kr	83		ug/L		214	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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45		96.2			
Ni	60					
> Ge	74		94.2			
As	75					
Se	77					
Se	82					
Kr	83					

### 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: 1202024789

Report Date/Time: Tuesday, February 16, 2010 07:11:56

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## ICPMS#5 - Summary Report

Sample ID: 245389002

Sample Date/Time: Tuesday, February 16, 2010 07:13:57

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389002.387

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	3.296	ug/L	2.931	1399	0.002
[ > Sc	45		ug/L		757842	757841.543
[ Ni	60	29.369	ug/L	0.610	59472	0.078
[ > Ge	74		ug/L		513277	513277.124
[ As	75	10.047	ug/L	3.233	12670	0.027
[ Se	77		ug/L		4384	-0.005
[ Se	82	3.622	ug/L	15.564	594	0.001
[ Kr	83		ug/L		473	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[ Be	9					
[ > Sc	45		103.4			
[ Ni	60					
[ > Ge	74		90.6			
[ As	75					
[ Se	77					
[ Se	82					
[ Kr	83					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245389002

Report Date/Time: Tuesday, February 16, 2010 07:14:32

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## ICPMS#5 - Summary Report

Sample ID: 245389003

Sample Date/Time: Tuesday, February 16, 2010 07:16:31

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389003.388

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	2.521	ug/L	1.643	994	0.001
[> Sc	45		ug/L		701389	701389.115
[ Ni	60	17.877	ug/L	2.513	33559	0.048
[> Ge	74		ug/L		501870	501870.296
As	75	5.751	ug/L	1.224	6546	0.016
Se	77		ug/L		4017	-0.005
Se	82	0.509	ug/L	4.681	107	0.000
[ Kr	83		ug/L		369	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[ Be	9					
[> Sc	45		95.7			
[ Ni	60					
[> Ge	74		88.6			
As	75					
Se	77					
Se	82					
[ Kr	83					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245389003

Report Date/Time: Tuesday, February 16, 2010 07:17:04

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 07:19:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth.

Dataset File: c:\elandata\Dataset\100215\QC Std 6.389

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	52.749	ug/L	2.112	18948	0.029
> Sc	45		ug/L		648828	648828.379
Ni	60	52.556	ug/L	3.627	90978	0.140
> Ge	74		ug/L		521598	521598.472
As	75	50.305	ug/L	2.204	69724	0.136
Se	77		ug/L		10530	0.007
Se	82	49.977	ug/L	1.961	7930	0.015
Kr	83		ug/L		178	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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9	105.498				
> Sc	45		88.5			
Ni	60	105.112				
> Ge	74		92.0			
As	75	100.611				
Se	77					
Se	82	99.953				
Kr	83					

### 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: Tuesday, February 16, 2010 07:19:36

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 07:21:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.390

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.006	ug/L	186.916	16	0.000
> Sc	45		ug/L		633199	633199.146
Ni	60	-0.009	ug/L	78.723	139	-0.000
> Ge	74		ug/L		502392	502392.328
As	75	0.839	ug/L	8.850	-127	0.002
Se	77		ug/L		4965	-0.003
Se	82	0.612	ug/L	15.011	123	0.000
Kr	83		ug/L		116	0.000

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45		86.4			
Ni	60					
> Ge	74		88.7			
As	75					
Se	77					
Se	82					
Kr	83					

### 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: Tuesday, February 16, 2010 07:22:10

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## ICPMS#5 - Summary Report

Sample ID: 245389004

Sample Date/Time: Tuesday, February 16, 2010 07:24:09

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|ba|

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389004.391

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	4.367	ug/L	1.851	1783	0.002
>	Sc	45		ug/L		731346	731345.981
	Ni	60	33.261	ug/L	1.290	64983	0.089
>	Ge	74		ug/L		498703	498702.660
	As	75	10.123	ug/L	2.559	12410	0.027
	Se	77		ug/L		4442	-0.004
	Se	82	0.893	ug/L	37.955	164	0.000
	Kr	83		ug/L		614	0.001

### 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	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		99.7			
	Ni	60					
>	Ge	74		88.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					

### 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: 245389004

Report Date/Time: Tuesday, February 16, 2010 07:24:43

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## ICPMS#5 - Summary Report

Sample ID: 245389005

Sample Date/Time: Tuesday, February 16, 2010 07:26:43

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389005.392

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	3.671	ug/L	1.117	1531	0.002
> Sc	45		ug/L		745440	745440.393
Ni	60	29.377	ug/L	2.580	58516	0.078
> Ge	74		ug/L		502898	502897.508
As	75	10.712	ug/L	3.296	13312	0.029
Se	77		ug/L		4138	-0.005
Se	82	1.809	ug/L	10.733	305	0.001
Kr	83		ug/L		555	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45		101.7			
Ni	60					
> Ge	74		88.7			
As	75					
Se	77					
Se	82					
Kr	83					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245389005

Report Date/Time: Tuesday, February 16, 2010 07:27:16

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## ICPMS#5 - Summary Report

Sample ID: 245389006

Sample Date/Time: Tuesday, February 16, 2010 07:29:17

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]baj

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389006.393

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.275	ug/L	0.411	1819	0.002
>	Sc	45		ug/L		761907	761907.438
[	Ni	60	31.789	ug/L	1.496	64711	0.085
>	Ge	74		ug/L		508385	508384.908
	As	75	9.331	ug/L	2.644	11562	0.025
	Se	77		ug/L		4505	-0.004
	Se	82	0.335	ug/L	140.993	82	0.000
[	Kr	83		ug/L		626	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		103.9		
[	Ni	60				
>	Ge	74		89.7		
	As	75				
	Se	77				
	Se	82				
[	Kr	83				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245389006

Report Date/Time: Tuesday, February 16, 2010 07:29:51

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## ICPMS#5 - Summary Report

Sample ID: 245389007

Sample Date/Time: Tuesday, February 16, 2010 07:31:51

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]baj

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389007.394

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.819	ug/L	2.182	1166	0.002
> Sc	45		ug/L		737296	737296.283
[ Ni	60	24.528	ug/L	1.955	48352	0.065
> Ge	74		ug/L		499263	499263.372
As	75	8.012	ug/L	6.643	9569	0.022
Se	77		ug/L		4197	-0.005
Se	82	1.721	ug/L	11.386	290	0.001
[ Kr	83		ug/L		369	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45		100.5			
[ Ni	60					
> Ge	74		88.1			
As	75					
Se	77					
Se	82					
[ Kr	83					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245389007

Report Date/Time: Tuesday, February 16, 2010 07:32:26

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## ICPMS#5 - Summary Report

Sample ID: 245389008

Sample Date/Time: Tuesday, February 16, 2010 07:34:27

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]baj

Method File: c:\elandata\Method\be ni as and se.mth.

Dataset File: c:\elandata\Dataset\100215\245389008.395

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	2.602	ug/L	5.111	1036	0.001
> Sc	45		ug/L		708980	708980.199
[ Ni	60	27.482	ug/L	1.495	52071	0.073
> Ge	74		ug/L		493613	493613.216
As	75	7.516	ug/L	1.726	8801	0.020
Se	77		ug/L		3911	-0.005
Se	82	1.702	ug/L	21.246	283	0.001
[ Kr	83		ug/L		383	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[ Be	9					
> Sc	45		96.7			
[ Ni	60					
> Ge	74		87.1			
As	75					
Se	77					
Se	82					
[ Kr	83					

### 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: 245389008

Report Date/Time: Tuesday, February 16, 2010 07:35:01

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## ICPMS#5 - Summary Report

Sample ID: 245389009

Sample Date/Time: Tuesday, February 16, 2010 07:37:02

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389009.396

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	5.847	ug/L	0.888	2497	0.003
>	Sc	45		ug/L		766637	766637.097
[	Ni	60	47.274	ug/L	2.037	96714	0.126
>	Ge	74		ug/L		494683	494682.539
	As	75	11.374	ug/L	1.341	13984	0.031
	Se	77		ug/L		4180	-0.005
	Se	82	-1.930	ug/L	12.429	-261	-0.001
[	Kr	83		ug/L		863	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	

### 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		87.3		
	As	75				
	Se	77				
	Se	82				
[	Kr	83				

### 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: 245389009

Report Date/Time: Tuesday, February 16, 2010 07:37:37

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## ICPMS#5 - Summary Report

Sample ID: 245389010

Sample Date/Time: Tuesday, February 16, 2010 07:39:37

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389010.397

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.118	ug/L	3.518	840	0.001
> Sc	45		ug/L		703452	703452.097
Ni	60	19.786	ug/L	2.566	37239	0.053
> Ge	74		ug/L		503209	503209.030
As	75	6.812	ug/L	2.328	8013	0.018
Se	77		ug/L		4292	-0.005
Se	82	1.577	ug/L	17.240	271	0.000
Kr	83		ug/L		315	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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
> Sc	45		95.9			
Ni	60					
> Ge	74		88.8			
As	75					
Se	77					
Se	82					
Kr	83					

### 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: 245389010

Report Date/Time: Tuesday, February 16, 2010 07:40:10

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## ICPMS#5 - Summary Report

Sample ID: 245389011

Sample Date/Time: Tuesday, February 16, 2010 07:42:10

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2][ba]

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\245389011.398

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.218	ug/L	3.112	1310	0.002
>	Sc	45		ug/L		726683	726683.165
[	Ni	60	27.810	ug/L	1.163	54017	0.074
>	Ge	74		ug/L		495948	495947.638
	As	75	8.720	ug/L	5.526	10455	0.024
	Se	77		ug/L		4162	-0.005
	Se	82	0.155	ug/L	15.308	53	0.000
[	Kr	83		ug/L		454	0.001

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		99.1		
[	Ni	60				
>	Ge	74		87.5		
	As	75				
	Se	77				
	Se	82				
[	Kr	83				

### 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: 245389011

Report Date/Time: Tuesday, February 16, 2010 07:42:44

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 07:44:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 6.399

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	54.993	ug/L	2.632	19616	0.030
> Sc	45		ug/L		644655	644655.395
Ni	60	53.489	ug/L	2.467	91979	0.142
> Ge	74		ug/L		520113	520113.330
As	75	52.327	ug/L	1.099	72399	0.142
Se	77		ug/L		10571	0.007
Se	82	51.553	ug/L	2.021	8154	0.016
Kr	83		ug/L		168	0.000

### 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	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9	109.986				
> Sc	45		87.9			
Ni	60	106.978				
> Ge	74		91.8			
As	75	104.654				
Se	77					
Se	82	103.105				
Kr	83					

### 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: Tuesday, February 16, 2010 07:45:16

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 07:47:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni as and se.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.400

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.018	ug/L	54.666	21	0.000
[>	Sc	45		ug/L		636785	636784.844
[	Ni	60	0.009	ug/L	81.185	170	0.000
[>	Ge	74		ug/L		501217	501216.514
	As	75	0.487	ug/L	75.538	-598	0.001
	Se	77		ug/L		4834	-0.004
	Se	82	0.340	ug/L	57.862	81	0.000
[	Kr	83		ug/L		117	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	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
[>	Sc	45		86.8			
[	Ni	60					
[>	Ge	74		88.4			
	As	75					
	Se	77					
	Se	82					
[	Kr	83					

### 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: Tuesday, February 16, 2010 07:47:49

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## ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, February 16, 2010 08:03:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\Blank.407

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		682034	
[	U	238		ug/L		2368	

### 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

Sample ID: Blank

Report Date/Time: Tuesday, February 16, 2010 08:04:00

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## ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, February 16, 2010 08:05:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\Standard 1.408

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		671579	671579.184
[	U	238	10.000	ug/L	0.775	663315	0.984

### 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

Sample ID: Standard 1

Report Date/Time: Tuesday, February 16, 2010 08:05:37

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## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, February 16, 2010 08:07:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\Standard 2.409

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		670149	670148.565
[	U	238	99.863	ug/L	1.158	5794208	8.643

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	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

Sample ID: Standard 2

Report Date/Time: Tuesday, February 16, 2010 08:07:16

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, February 16, 2010 08:08:44

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 1.410

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		665564	665563.824
[	U	238	52.265	ug/L	0.513	3012831	4.523

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	Lu	175			97.6		
[	U	238	104.530				

### 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

Sample ID: QC Std 1

Report Date/Time: Tuesday, February 16, 2010 08:08:55

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## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, February 16, 2010 08:10:25

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 2.411

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		669252	669252.284
[	U	238	0.007	ug/L	21.218	2749	0.001

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[>	Lu	175		98.1			
[	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

Sample ID: QC Std 2

Report Date/Time: Tuesday, February 16, 2010 08:10:37

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, February 16, 2010 08:12:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 3.412

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		667721	667721.389
[	U	238	0.210	ug/L	1.070	14437	0.018

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu	175			97.9			
[	U	238	104.857					

### 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

Sample ID: QC Std 3

Report Date/Time: Tuesday, February 16, 2010 08:12:16

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## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, February 16, 2010 08:13:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 4.413

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		586427	586426.741
[	U	238	-0.031	ug/L	0.933	486	-0.003

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu	175			86.0			
[	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

Sample ID: QC Std 4

Report Date/Time: Tuesday, February 16, 2010 08:13:55

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## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, February 16, 2010 08:15:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 5.414

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		586674	586673.981
[	U	238	22.128	ug/L	1.401	1125552	1.915

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			86.0		
[	U	238	110.642				

### 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

Sample ID: QC Std 5

Report Date/Time: Tuesday, February 16, 2010 08:15:34

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 08:17:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 6.415

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		670872	670872.079
[	U	238	50.014	ug/L	0.383	2906177	4.329

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	Lu	175		98.4				
[	U	238	100.028					

### 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

Sample ID: QC Std 6

Report Date/Time: Tuesday, February 16, 2010 08:17:13

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 08:18:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.416

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		681871	681870.633
[	U	238	0.003	ug/L	27.366	2549	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu	175			100.0			
[	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

Sample ID: QC Std 7

Report Date/Time: Tuesday, February 16, 2010 08:18:55

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## ICPMS#5 - Summary Report

Sample ID: 1202024785

Sample Date/Time: Tuesday, February 16, 2010 08:20:26

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\1202024785.417

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		688559	688558.592
[	U	238	ug/L	1.345	773	-0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175		101.0		
[	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: 1202024786

Sample Date/Time: Tuesday, February 16, 2010 08:22:08

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945407[40]ba]

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\1202024786.418

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		669788	669788.247
[	U	238	0.496	ug/L	0.823	31069	0.043

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175			98.2		
[	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

Sample ID: 1202024786

Report Date/Time: Tuesday, February 16, 2010 08:22:19

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## ICPMS#5 - Summary Report

Sample ID: 245389001

Sample Date/Time: Tuesday, February 16, 2010 08:23:48

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 9454072|ba|

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389001.419

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		669354	669354.066
[	U	238	3.507	ug/L	0.141	205477	0.304

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[>	Lu	175		98.1			
[	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

Sample ID: 245389001

Report Date/Time: Tuesday, February 16, 2010 08:24:00

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## ICPMS#5 - Summary Report

Sample ID: 1202024787

Sample Date/Time: Tuesday, February 16, 2010 08:25:30

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945407[2][ba]

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\1202024787.420

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		669827	669826.801
[	U	238	3.522	ug/L	0.045	206514	0.305

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			98.2		
[	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

Sample ID: 1202024787

Report Date/Time: Tuesday, February 16, 2010 08:25:41

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## ICPMS#5 - Summary Report

Sample ID: 1202024788

Sample Date/Time: Tuesday, February 16, 2010 08:27:11

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\1202024788.421

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		646948	646947.653
[	U	238	30.012	ug/L	1.159	1682469	2.597

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175		94.9			
[	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

Sample ID: 1202024788

Report Date/Time: Tuesday, February 16, 2010 08:27:23

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202024790

Sample Date/Time: Tuesday, February 16, 2010 08:28:54

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\1202024790.422

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		655174	655174.211
[	U	238	28.820	ug/L	0.235	1636464	2.494

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175		96.1			
[	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

Sample ID: 1202024790

Report Date/Time: Tuesday, February 16, 2010 08:29:06

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## ICPMS#5 - Summary Report

Sample ID: 1202024789

Sample Date/Time: Tuesday, February 16, 2010 08:30:37

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945407[10]ba]

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\1202024789.423

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		669154	669154.401
[	U	238	0.697	ug/L	1.461	42709	0.060

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	Lu	175			98.1		
[	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#5 - Summary Report

Sample ID: 245389002

Sample Date/Time: Tuesday, February 16, 2010 08:32:20

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|ba|

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389002.424

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		696506	696505.754
[	U	238	5.148	ug/L	0.961	312709	0.446

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	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#5 - Summary Report

Sample ID: 245389003

Sample Date/Time: Tuesday, February 16, 2010 08:34:03

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389003.425

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		690209	690208.644
[	U	238	2.373	ug/L	1.716	144134	0.205

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[>	Lu	175			101.2		
[	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: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 08:35:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 6.426

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		686290	686290.380
[	U	238	51.505	ug/L	2.107	3061437	4.458

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	Lu	175			100.6		
[	U	238	103.011				

### 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

Sample ID: QC Std 6

Report Date/Time: Tuesday, February 16, 2010 08:35:53

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 08:37:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.427

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		682471	682471.374
[	U	238	0.001	ug/L	92.861	2428	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	Lu	175			100.1		
[	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

Sample ID: QC Std 7

Report Date/Time: Tuesday, February 16, 2010 08:37:35

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## ICPMS#5 - Summary Report

Sample ID: 245389004

Sample Date/Time: Tuesday, February 16, 2010 08:39:05

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 9454072|baj

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215245389004.428

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		678908	678907.693
[	U	238	4.239	ug/L	1.766	251420	0.367

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175		99.5			
[	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

Sample ID: 245389004

Report Date/Time: Tuesday, February 16, 2010 08:39:16

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## ICPMS#5 - Summary Report

Sample ID: 245389005

Sample Date/Time: Tuesday, February 16, 2010 08:40:46

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389005.429

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		694913	694913.124
[	U	238	5.218	ug/L	2.638	316183	0.452

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175			101.9		
[	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

Sample ID: 245389005

Report Date/Time: Tuesday, February 16, 2010 08:40:58

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## ICPMS#5 - Summary Report

Sample ID: 245389006

Sample Date/Time: Tuesday, February 16, 2010 08:42:29

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407|2|baj

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389006.430

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		675445	675444.813
[	U	238	3.184	ug/L	0.659	188494	0.276

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[>	Lu	175			99.0		
[	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

Sample ID: 245389006

Report Date/Time: Tuesday, February 16, 2010 08:42:41

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## ICPMS#5 - Summary Report

Sample ID: 245389007

Sample Date/Time: Tuesday, February 16, 2010 08:44:12

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389007.431

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		697846	697846.192
[	U	238	4.306	ug/L	3.431	262398	0.373

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			102.3		
[	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: 245389008

Sample Date/Time: Tuesday, February 16, 2010 08:45:55

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 9454072|ba|

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389008.432

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		704613	704613.261
[	U	238	3.868	ug/L	0.518	238330	0.335

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		103.3			
[	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

Sample ID: 245389008

Report Date/Time: Tuesday, February 16, 2010 08:46:08

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## ICPMS#5 - Summary Report

Sample ID: 245389009

Sample Date/Time: Tuesday, February 16, 2010 08:47:39

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]ba]

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389009.433

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		651628	651627.642
[	U	238	4.476	ug/L	0.821	254667	0.387

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu	175		95.5				
[	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

Sample ID: 245389009

Report Date/Time: Tuesday, February 16, 2010 08:47:53

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## ICPMS#5 - Summary Report

Sample ID: 245389010

Sample Date/Time: Tuesday, February 16, 2010 08:49:22

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]baj

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\245389010.434

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		697691	697691.372
[	U	238	5.337	ug/L	1.659	324670	0.462

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		102.3			
[	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

Sample ID: 245389010

Report Date/Time: Tuesday, February 16, 2010 08:49:34

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## ICPMS#5 - Summary Report

Sample ID: 245389011

Sample Date/Time: Tuesday, February 16, 2010 08:51:04

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945407[2]baj

Method File: c:\elandata\Method\w only.mth

Dataset File: c:\elandata\Dataset\100215\245389011.435

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		690531	690531.117
[	U	238	7.328	ug/L	1.213	440290	0.634

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		101.2			
[	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#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 08:52:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 6.436

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		675333	675332.850
[	U	238	52.202	ug/L	1.724	3053207	4.518

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			99.0		
[	U	238	104.405				

### 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

Sample ID: QC Std 6

Report Date/Time: Tuesday, February 16, 2010 08:52:55

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 08:54:25

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only.mth

Dataset File: c:\elandata\Dataset\100215\QC Std 7.437

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ >	Lu	175		ug/L		686708	686707.529
[	U	238	-0.001	ug/L	182.235	2352	-0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[ >	Lu	175		100.7			
[	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

Sample ID: QC Std 7

Report Date/Time: Tuesday, February 16, 2010 08:54:37

Page 1

=====  
Analysis BegunLogged In Analyst: Administrator  
Spectrometer Model: FIMS-100, S/N B050-9550Technique: AA FIMS-MHS  
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\020410S1.SIF

Batch ID:

Results Data Set: 020410S1

Results Library: C:\data-AA\Administrator\Results\Results.mdb

=====  
Method Loaded

Method Name: WATER

Method Last Saved: 12/28/2009 15:47:50

Method Description: 7470A, 245.2, ILM04 ANALYST JXL

=====  
Sequence No.: 1

Autosampler Location: 1

Sample ID: Calib Blank

Date Collected: 2/4/2010 08:44:57

Analyst:

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]	0.0002	0.0007	0.0002	08:46:00	Yes
2		[0.00]	0.0002	0.0004	0.0002	08:46:34	Yes
Mean:		[0.00]	0.0002				
SD:		0.00	0.0000				
%RSD:		0.00	13.47				

Auto-zero performed.

=====  
Sequence No.: 2

Autosampler Location: 2

Sample ID: S0.2

Date Collected: 2/4/2010 08:46:53

Analyst:

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]	0.0023	0.0090	0.0024	08:47:54	Yes
2		[0.2]	0.0023	0.0086	0.0025	08:48:29	Yes
Mean:		[0.2]	0.0023				
SD:		0.0	0.0000				
%RSD:		0.0	0.06				

Standard number 1 applied. [0.2]

Correlation Coef.: 1.000000 Slope: 0.01131 Intercept: 0.00000

=====  
Sequence No.: 3

Autosampler Location: 3

Sample ID: S0.5

Date Collected: 2/4/2010 08:48:48

Analyst:

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]	0.0058	0.0233	0.0060	08:49:49	Yes
2		[0.5]	0.0057	0.0222	0.0059	08:50:23	Yes
Mean:		[0.5]	0.0058				
SD:		0.0	0.0001				
%RSD:		0.0	1.14				

Standard number 2 applied. [0.5]

Correlation Coef.: 0.999971 Slope: 0.01152 Intercept: -0.00002

=====  
Sequence No.: 4

Autosampler Location: 4

Sample ID: S2.0

Date Collected: 2/4/2010 08:50:43

Analyst:

Data Type: Original

-----  
Replicate Data: S2.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0237	0.0959	0.0239	08:51:45	Yes
2		[2.0]	0.0236	0.0952	0.0238	08:52:19	Yes
Mean:		[2.0]	0.0237				
SD:		0.0	0.0001				
%RSD:		0.0	0.39				

Standard number 3 applied. [2.0]  
Correlation Coef.: 0.999974 Slope: 0.01187 Intercept: -0.00009

Sequence No.: 5

Sample ID: S5.0

Analyst:

Autosampler Location: 5

Date Collected: 2/4/2010 08:52:39

Data Type: Original

-----  
Replicate Data: S5.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0583	0.2349	0.0585	08:53:41	Yes
2		[5.0]	0.0579	0.2323	0.0581	08:54:16	Yes
Mean:		[5.0]	0.0581				
SD:		0.0	0.0002				
%RSD:		0.0	0.41				

Standard number 4 applied. [5.0]  
Correlation Coef.: 0.999963 Slope: 0.01164 Intercept: 0.00003

Sequence No.: 6

Sample ID: S10.0

Analyst:

Autosampler Location: 6

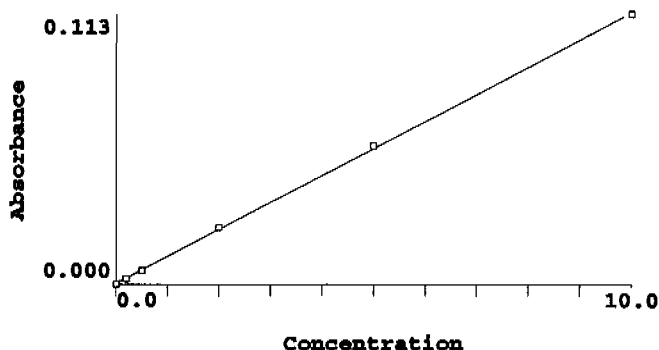
Date Collected: 2/4/2010 08:54:36

Data Type: Original

-----  
Replicate Data: S10.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1133	0.4583	0.1135	08:55:36	Yes
2		[10.0]	0.1124	0.4529	0.1126	08:56:11	Yes
Mean:		[10.0]	0.1128				
SD:		0.0	0.0006				
%RSD:		0.0	0.55				

Standard number 5 applied. [10.0]  
Correlation Coef.: 0.999867 Slope: 0.01131 Intercept: 0.00041

-----  
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	-0.036	0.00	13.5
S0.2	0.0023	0.2	0.164	0.00	0.1
S0.5	0.0058	0.5	0.473	0.00	1.1
S2.0	0.0237	2.0	2.058	0.00	0.4

S5.0 0.0581 5.0 5.101 0.00 0.4  
S10.0 0.1128 10.0 9.940 0.00 0.5  
Correlation Coef.: 0.999867 Slope: 0.01131 Intercept: 0.00041

Sequence No.: 7

Sample ID: ICV

Analyst:

Autosampler Location: 9

Date Collected: 2/4/2010 08:56:30

Data Type: Original

## Replicate Data: ICV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.169	5.169	0.0589	0.2377	0.0591	08:57:31	Yes
2	5.095	5.095	0.0580	0.2345	0.0582	08:58:06	Yes
Mean:	5.132	5.132	0.0585				
SD:	0.053	0.053	0.0006				
%RSD:	1.028	1.028	1.02				

QC value within limits for Hg 253.7 Recovery = 102.64%  
All analyte(s) passed QC.

Sequence No.: 8

Sample ID: ICB

Analyst:

Autosampler Location: 10

Date Collected: 2/4/2010 08:58:26

Data Type: Original

## Replicate Data: ICB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.037	-0.037	-0.0000	-0.0008	0.0002	08:59:27	Yes
2	-0.034	-0.034	0.0000	-0.0005	0.0002	09:00:02	Yes
Mean:	-0.036	-0.036	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	6.056	6.056	>999.9%				

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: 2/4/2010 09:00:22

Data Type: Original

## Replicate Data: CRDL

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.194	0.194	0.0026	0.0100	0.0028	09:01:24	Yes
2	0.194	0.194	0.0026	0.0103	0.0028	09:01:58	Yes
Mean:	0.194	0.194	0.0026				
SD:	0.000	0.000	0.0000				
%RSD:	0.174	0.174	0.15				

QC value within limits for Hg 253.7 Recovery = 96.89%  
All analyte(s) passed QC.

Sequence No.: 10

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/4/2010 09:02:18

Data Type: Original

## Replicate Data: CCV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.979	4.979	0.0567	0.2298	0.0569	09:03:19	Yes
2	4.952	4.952	0.0564	0.2282	0.0566	09:03:54	Yes
Mean:	4.965	4.965	0.0566				
SD:	0.020	0.020	0.0002				
%RSD:	0.393	0.393	0.39				

QC value within limits for Hg 253.7 Recovery = 99.31%  
All analyte(s) passed QC.

Sequence No.: 11  
Sample ID: CCB  
Analyst:

Autosampler Location: 8  
Date Collected: 2/4/2010 09:04:13  
Data Type: Original

## Replicate Data: CCB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.043	-0.043	-0.0001	-0.0013	0.0001	09:05:14	Yes
2	-0.045	-0.045	-0.0001	-0.0011	0.0001	09:05:48	Yes
Mean:	-0.044	-0.044	-0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	2.761	2.761	14.72				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 12  
Sample ID: 1202025230|945591|1  
Analyst: JXL

Autosampler Location: 12  
Date Collected: 2/4/2010 09:06:08  
Data Type: Original

## Replicate Data: 1202025230|945591|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.036	-0.036	0.0000	-0.0003	0.0002	09:07:09	Yes
2	-0.039	-0.039	-0.0000	-0.0003	0.0002	09:07:44	Yes
Mean:	-0.037	-0.037	-0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.900	5.900	177.27				

Sequence No.: 13  
Sample ID: 1202025231|945591|10  
Analyst: JXL

Autosampler Location: 13  
Date Collected: 2/4/2010 09:08:04  
Data Type: Original

## Replicate Data: 1202025231|945591|10

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.814	3.814	0.0435	0.1759	0.0437	09:09:06	Yes
2	3.790	3.790	0.0433	0.1735	0.0435	09:09:41	Yes
Mean:	3.802	3.802	0.0434				
SD:	0.017	0.017	0.0002				
%RSD:	0.442	0.442	0.44				

Sequence No.: 14  
Sample ID: 245119001|945591|1  
Analyst: JXL

Autosampler Location: 14  
Date Collected: 2/4/2010 09:10:02  
Data Type: Original

## Replicate Data: 245119001|945591|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.188	0.188	0.0025	0.0102	0.0027	09:11:03	Yes
2	0.188	0.188	0.0025	0.0099	0.0027	09:11:37	Yes
Mean:	0.188	0.188	0.0025				
SD:	0.000	0.000	0.0000				
%RSD:	0.213	0.213	0.18				

Sequence No.: 15  
Sample ID: 1202025232|945591|1  
Analyst: JXL

Autosampler Location: 15  
Date Collected: 2/4/2010 09:11:56  
Data Type: Original

## Replicate Data: 1202025232|945591|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
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-----  
Replicate Data: 245119003|945591|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.137	0.137	0.0020	0.0082	0.0021	09:22:30	Yes
2	0.141	0.141	0.0020	0.0083	0.0022	09:23:05	Yes
Mean:	0.139	0.139	0.0020				
SD:	0.003	0.003	0.0000				
%RSD:	2.025	2.025	1.61				

Sequence No.: 21

Autosampler Location: 21

Sample ID: 245119004|945591|1

Date Collected: 2/4/2010 09:23:25

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 245119004|945591|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.293	0.293	0.0037	0.0153	0.0039	09:24:26	Yes
2	0.300	0.300	0.0038	0.0159	0.0040	09:25:01	Yes
Mean:	0.296	0.296	0.0038				
SD:	0.005	0.005	0.0001				
%RSD:	1.625	1.625	1.45				

Sequence No.: 22

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/4/2010 09:25:20

Analyst:

Data Type: Original  
-----

## Replicate Data: CCV

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.929	4.929	0.0562	0.2308	0.0563	09:26:21	Yes
2	4.919	4.919	0.0560	0.2293	0.0562	09:26:55	Yes
Mean:	4.924	4.924	0.0561				
SD:	0.007	0.007	0.0001				
%RSD:	0.139	0.139	0.14				

QC value within limits for Hg 253.7 Recovery = 98.48%

All analyte(s) passed QC.  
-----

Sequence No.: 23

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/4/2010 09:27:14

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	0.0004	0.0002	09:28:15	Yes
2	-0.042	-0.042	-0.0001	-0.0002	0.0001	09:28:50	Yes
Mean:	-0.040	-0.040	-0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	7.595	7.595	78.30				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.  
-----

Sequence No.: 24

Autosampler Location: 22

Sample ID: 245119005|945591|1

Date Collected: 2/4/2010 09:29:10

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 245119005|945591|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.261	0.261	0.0034	0.0142	0.0035	09:30:11	Yes
2	0.267	0.267	0.0034	0.0145	0.0036	09:30:46	Yes



Sequence No.: 34

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/4/2010 09:48:25

Data Type: Original

## Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.993	4.993	0.0569	0.2365	0.0571	09:49:26	Yes
2	4.991	4.991	0.0569	0.2343	0.0571	09:50:00	Yes
Mean:	4.992	4.992	0.0569				
SD:	0.001	0.001	0.0000				
%RSD:	0.027	0.027	0.03				

QC value within limits for Hg 253.7 Recovery = 99.84%  
All analyte(s) passed QC.

Sequence No.: 35

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/4/2010 09:50:19

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	0.0001	0.0009	0.0003	09:51:20	Yes
2	-0.031	-0.031	0.0001	0.0006	0.0002	09:51:55	Yes
Mean:	-0.031	-0.031	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	3.440	3.440	20.12				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 36

Sample ID: 245119015|945591|1

Analyst: JXL

Autosampler Location: 32

Date Collected: 2/4/2010 09:52:14

Data Type: Original

## Replicate Data: 245119015|945591|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.154	0.154	0.0021	0.0095	0.0023	09:53:15	Yes
2	0.151	0.151	0.0021	0.0087	0.0023	09:53:51	Yes
Mean:	0.152	0.152	0.0021				
SD:	0.002	0.002	0.0000				
%RSD:	1.590	1.590	1.29				

Sequence No.: 37

Sample ID: 245119016|945591|1

Analyst: JXL

Autosampler Location: 33

Date Collected: 2/4/2010 09:54:10

Data Type: Original

## Replicate Data: 245119016|945591|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.354	0.354	0.0044	0.0186	0.0046	09:55:11	Yes
2	0.357	0.357	0.0044	0.0191	0.0046	09:55:46	Yes
Mean:	0.356	0.356	0.0044				
SD:	0.002	0.002	0.0000				
%RSD:	0.550	0.550	0.50				

Sequence No.: 38

Sample ID: 1202024847|945440|1

Analyst: JXL

Autosampler Location: 34

Date Collected: 2/4/2010 09:56:06

Data Type: Original

## Replicate Data: 1202024847|945440|1

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 1202024852|945440|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.245	2.245	0.0258	0.1063	0.0260	10:06:50	Yes
2	2.228	2.228	0.0256	0.1064	0.0258	10:07:25	Yes
Mean:	2.237	2.237	0.0257				
SD:	0.012	0.012	0.0001				
%RSD:	0.531	0.531	0.52				

Sequence No.: 44

Autosampler Location: 40

Sample ID: 1202024851|945440|5

Date Collected: 2/4/2010 10:07:44

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 1202024851|945440|5

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.000	0.000	0.0004	0.0025	0.0006	10:08:45	Yes
2	-0.003	-0.003	0.0004	0.0024	0.0006	10:09:20	Yes
Mean:	-0.002	-0.002	0.0004				
SD:	0.001	0.001	0.0000				
%RSD:	96.34	96.34	4.26				

Sequence No.: 45

Autosampler Location: 41

Sample ID: 245134002|945440|1

Date Collected: 2/4/2010 10:09:39

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 245134002|945440|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.039	0.039	0.0008	0.0038	0.0010	10:10:40	Yes
2	0.047	0.047	0.0009	0.0046	0.0011	10:11:15	Yes
Mean:	0.043	0.043	0.0009				
SD:	0.006	0.006	0.0001				
%RSD:	13.44	13.44	7.31				

Sequence No.: 46

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/4/2010 10:11:35

Analyst:

Data Type: Original

-----  
Replicate Data: CCV

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.020	5.020	0.0572	0.2369	0.0574	10:12:35	Yes
2	5.017	5.017	0.0572	0.2359	0.0573	10:13:10	Yes
Mean:	5.018	5.018	0.0572				
SD:	0.002	0.002	0.0000				
%RSD:	0.050	0.050	0.05				

QC value within limits for Hg 253.7 Recovery = 100.37%

All analyte(s) passed QC.

Sequence No.: 47

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/4/2010 10:13:29

Analyst:

Data Type: Original

-----  
Replicate Data: CCB

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.033	-0.033	0.0000	0.0004	0.0002	10:14:30	Yes
2	-0.027	-0.027	0.0001	0.0014	0.0003	10:15:05	Yes
Mean:	-0.030	-0.030	0.0001				

SD: 0.004 0.004 0.0000  
%RSD: 13.87 13.87 74.32

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 48

Sample ID: 245134003|945440|1

Analyst: JXL

Autosampler Location: 42

Date Collected: 2/4/2010 10:15:24

Data Type: Original

Replicate Data: 245134003|945440|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.696	0.696	0.0083	0.0347	0.0085	10:16:26	Yes
2	0.692	0.692	0.0082	0.0342	0.0084	10:17:01	Yes
Mean:	0.694	0.694	0.0083				
SD:	0.003	0.003	0.0000				
%RSD:	0.386	0.386	0.37				

Sequence No.: 49

Sample ID: 245134004|945440|1

Analyst: JXL

Autosampler Location: 43

Date Collected: 2/4/2010 10:17:20

Data Type: Original

Replicate Data: 245134004|945440|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.671	0.671	0.0080	0.0335	0.0082	10:18:21	Yes
2	0.669	0.669	0.0080	0.0335	0.0082	10:18:56	Yes
Mean:	0.670	0.670	0.0080				
SD:	0.002	0.002	0.0000				
%RSD:	0.293	0.293	0.28				

Sequence No.: 50

Sample ID: 245134005|945440|1

Analyst: JXL

Autosampler Location: 44

Date Collected: 2/4/2010 10:19:15

Data Type: Original

Replicate Data: 245134005|945440|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.225	0.225	0.0030	0.0127	0.0031	10:20:17	Yes
2	0.226	0.226	0.0030	0.0128	0.0032	10:20:52	Yes
Mean:	0.226	0.226	0.0030				
SD:	0.001	0.001	0.0000				
%RSD:	0.362	0.362	0.31				

Sequence No.: 51

Sample ID: 245134006|945440|1

Analyst: JXL

Autosampler Location: 45

Date Collected: 2/4/2010 10:21:11

Data Type: Original

Replicate Data: 245134006|945440|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.261	0.261	0.0034	0.0147	0.0035	10:22:12	Yes
2	0.262	0.262	0.0034	0.0144	0.0036	10:22:47	Yes
Mean:	0.262	0.262	0.0034				
SD:	0.000	0.000	0.0000				
%RSD:	0.159	0.159	0.14				

Sequence No.: 52

Sample ID: 245134007|945440|1

Analyst: JXL

Autosampler Location: 46

Date Collected: 2/4/2010 10:23:07

Data Type: Original

Sample ID: 1202024864|945445|10  
Analyst: JXL

Date Collected: 2/4/2010 10:32:48  
Data Type: Original

-----  
Replicate Data: 1202024864|945445|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.675	3.675	0.0420	0.1728	0.0422	10:33:50	Yes
2	3.651	3.651	0.0417	0.1712	0.0419	10:34:25	Yes
Mean:	3.663	3.663	0.0418				
SD:	0.018	0.018	0.0002				
%RSD:	0.480	0.480	0.47				

Sequence No.: 58  
Sample ID: CCV  
Analyst:

Autosampler Location: 7  
Date Collected: 2/4/2010 10:34:45  
Data Type: Original

-----  
Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.017	5.017	0.0572	0.2360	0.0573	10:35:45	Yes
2	5.021	5.021	0.0572	0.2356	0.0574	10:36:20	Yes
Mean:	5.019	5.019	0.0572				
SD:	0.003	0.003	0.0000				
%RSD:	0.060	0.060	0.06				

QC value within limits for Hg 253.7 Recovery = 100.38%  
All analyte(s) passed QC.

Sequence No.: 59  
Sample ID: CCB  
Analyst:

Autosampler Location: 8  
Date Collected: 2/4/2010 10:36:39  
Data Type: Original

-----  
Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.027	-0.027	0.0001	0.0011	0.0003	10:37:39	Yes
2	-0.024	-0.024	0.0001	0.0011	0.0003	10:38:14	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	8.319	8.319	21.42				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 60  
Sample ID: 245136001|945445|1  
Analyst: JXL

Autosampler Location: 52  
Date Collected: 2/4/2010 10:38:34  
Data Type: Original

-----  
Replicate Data: 245136001|945445|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.231	0.231	0.0030	0.0125	0.0032	10:39:35	Yes
2	0.229	0.229	0.0030	0.0129	0.0032	10:40:10	Yes
Mean:	0.230	0.230	0.0030				
SD:	0.001	0.001	0.0000				
%RSD:	0.612	0.612	0.53				

Sequence No.: 61  
Sample ID: 1202024865|945445|1  
Analyst: JXL

Autosampler Location: 53  
Date Collected: 2/4/2010 10:40:30  
Data Type: Original

-----  
Replicate Data: 1202024865|945445|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored

-----  
Replicate Data: 245136003|945445|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.265	0.265	0.0034	0.0145	0.0036	10:51:10	Yes
2	0.268	0.268	0.0034	0.0154	0.0036	10:51:45	Yes
Mean:	0.267	0.267	0.0034				
SD:	0.002	0.002	0.0000				
%RSD:	0.893	0.893	0.79				

=====

Sequence No.: 67  
Sample ID: 245136004|945445|1  
Analyst: JXLAutosampler Location: 59  
Date Collected: 2/4/2010 10:52:05  
Data Type: Original-----  
Replicate Data: 245136004|945445|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.216	0.216	0.0029	0.0119	0.0030	10:53:07	Yes
2	0.219	0.219	0.0029	0.0115	0.0031	10:53:41	Yes
Mean:	0.218	0.218	0.0029				
SD:	0.002	0.002	0.0000				
%RSD:	0.961	0.961	0.82				

=====

Sequence No.: 68  
Sample ID: 245136005|945445|1  
Analyst: JXLAutosampler Location: 60  
Date Collected: 2/4/2010 10:54:01  
Data Type: Original-----  
Replicate Data: 245136005|945445|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.392	0.392	0.0048	0.0208	0.0050	10:55:03	Yes
2	0.375	0.375	0.0046	0.0193	0.0048	10:55:38	Yes
Mean:	0.383	0.383	0.0047				
SD:	0.012	0.012	0.0001				
%RSD:	3.111	3.111	2.84				

=====

Sequence No.: 69  
Sample ID: 245136006|945445|1  
Analyst: JXLAutosampler Location: 61  
Date Collected: 2/4/2010 10:55:58  
Data Type: Original-----  
Replicate Data: 245136006|945445|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.138	0.138	0.0020	0.0081	0.0022	10:57:00	Yes
2	0.143	0.143	0.0020	0.0087	0.0022	10:57:35	Yes
Mean:	0.141	0.141	0.0020				
SD:	0.003	0.003	0.0000				
%RSD:	2.183	2.183	1.74				

=====

Sequence No.: 70  
Sample ID: CCV  
Analyst:Autosampler Location: 7  
Date Collected: 2/4/2010 10:57:56  
Data Type: Original-----  
Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.065	5.065	0.0577	0.2375	0.0579	10:58:57	Yes
2	5.022	5.022	0.0572	0.2346	0.0574	10:59:31	Yes
Mean:	5.043	5.043	0.0575				
SD:	0.030	0.030	0.0003				
%RSD:	0.602	0.602	0.60				

QC value within limits for Hg 253.7 Recovery = 100.87%  
All analyte(s) passed QC.

Sequence No.: 71

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/4/2010 10:59:51

Data Type: Original

## Replicate Data: CCB

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.029	-0.029	0.0001	0.0011	0.0003	11:00:52	Yes
2	-0.033	-0.033	0.0000	-0.0000	0.0002	11:01:27	Yes
Mean:	-0.031	-0.031	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	9.316	9.316	54.21				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 72

Sample ID: 245136007|945445|1

Analyst: JXL

Autosampler Location: 62

Date Collected: 2/4/2010 11:01:46

Data Type: Original

## Replicate Data: 245136007|945445|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.214	0.214	0.0028	0.0126	0.0030	11:02:47	Yes
2	0.218	0.218	0.0029	0.0120	0.0031	11:03:22	Yes
Mean:	0.216	0.216	0.0028				
SD:	0.003	0.003	0.0000				
%RSD:	1.299	1.299	1.11				

Sequence No.: 73

Sample ID: 245136008|945445|1

Analyst: JXL

Autosampler Location: 63

Date Collected: 2/4/2010 11:03:42

Data Type: Original

## Replicate Data: 245136008|945445|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.601	0.601	0.0072	0.0298	0.0074	11:04:43	Yes
2	0.596	0.596	0.0071	0.0302	0.0073	11:05:18	Yes
Mean:	0.598	0.598	0.0072				
SD:	0.003	0.003	0.0000				
%RSD:	0.540	0.540	0.51				

Sequence No.: 74

Sample ID: 245136009|945445|1

Analyst: JXL

Autosampler Location: 64

Date Collected: 2/4/2010 11:05:38

Data Type: Original

## Replicate Data: 245136009|945445|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.498	0.498	0.0060	0.0251	0.0062	11:06:39	Yes
2	0.496	0.496	0.0060	0.0250	0.0062	11:07:14	Yes
Mean:	0.497	0.497	0.0060				
SD:	0.001	0.001	0.0000				
%RSD:	0.230	0.230	0.21				

Sequence No.: 75

Sample ID: 245136010|945445|1

Analyst: JXL

Autosampler Location: 65

Date Collected: 2/4/2010 11:07:34

Data Type: Original

## Replicate Data: 245136010|945445|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak
------	------------	----------	----------	------	------	------	------

-----  
Replicate Data: 1202025296|945625|10

Repl	SampleConc	StdndConc	BlndCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.572	3.572	0.0408	0.1678	0.0410	11:18:15	Yes
2	3.566	3.566	0.0407	0.1662	0.0409	11:18:51	Yes
Mean:	3.569	3.569	0.0408				
SD:	0.004	0.004	0.0000				
%RSD:	0.112	0.112	0.11				

Sequence No.: 81

Autosampler Location: 71

Sample ID: 245391001|945625|1

Date Collected: 2/4/2010 11:19:10

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 245391001|945625|1

Repl	SampleConc	StdndConc	BlndCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.417	0.417	0.0051	0.0211	0.0053	11:20:12	Yes
2	0.421	0.421	0.0052	0.0220	0.0054	11:20:47	Yes
Mean:	0.419	0.419	0.0051				
SD:	0.003	0.003	0.0000				
%RSD:	0.618	0.618	0.57				

Sequence No.: 82

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/4/2010 11:21:07

Analyst:

Data Type: Original  
-----

## Replicate Data: CCV

Repl	SampleConc	StdndConc	BlndCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.906	4.906	0.0559	0.2297	0.0561	11:22:07	Yes
2	4.923	4.923	0.0561	0.2302	0.0563	11:22:42	Yes
Mean:	4.914	4.914	0.0560				
SD:	0.012	0.012	0.0001				
%RSD:	0.240	0.240	0.24				

QC value within limits for Hg 253.7 Recovery = 98.29%

All analyte(s) passed QC.  
-----

Sequence No.: 83

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/4/2010 11:23:01

Analyst:

Data Type: Original  
-----

## Replicate Data: CCB

Repl	SampleConc	StdndConc	BlndCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.027	-0.027	0.0001	0.0006	0.0003	11:24:02	Yes
2	-0.024	-0.024	0.0001	0.0013	0.0003	11:24:37	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	8.817	8.817	22.47				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.  
-----

Sequence No.: 84

Autosampler Location: 72

Sample ID: 1202025297|945625|1

Date Collected: 2/4/2010 11:24:56

Analyst: JXL

Data Type: Original  
-----

## Replicate Data: 1202025297|945625|1

Repl	SampleConc	StdndConc	BlndCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.355	0.355	0.0044	0.0192	0.0046	11:25:58	Yes
2	0.344	0.344	0.0043	0.0182	0.0045	11:26:33	Yes

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.128	0.128	0.0019	0.0079	0.0020	11:35:40	Yes
2	0.123	0.123	0.0018	0.0076	0.0020	11:36:15	Yes
Mean:	0.125	0.125	0.0018				
SD:	0.004	0.004	0.0000				
%RSD:	2.902	2.902	2.26				

Sequence No.: 90

Autosampler Location: 78

Sample ID: 245391004|945625|1

Date Collected: 2/4/2010 11:36:35

Analyst: JXL

Data Type: Original

Replicate Data: 245391004|945625|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.330	0.330	0.0041	0.0178	0.0043	11:37:37	Yes
2	0.327	0.327	0.0041	0.0171	0.0043	11:38:11	Yes
Mean:	0.329	0.329	0.0041				
SD:	0.002	0.002	0.0000				
%RSD:	0.492	0.492	0.44				

Sequence No.: 91

Autosampler Location: 79

Sample ID: 245391005|945625|1

Date Collected: 2/4/2010 11:38:31

Analyst: JXL

Data Type: Original

Replicate Data: 245391005|945625|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.309	0.309	0.0039	0.0162	0.0041	11:39:33	Yes
2	0.320	0.320	0.0040	0.0180	0.0042	11:40:08	Yes
Mean:	0.315	0.315	0.0040				
SD:	0.008	0.008	0.0001				
%RSD:	2.464	2.464	2.21				

Sequence No.: 92

Autosampler Location: 80

Sample ID: 245391006|945625|1

Date Collected: 2/4/2010 11:40:28

Analyst: JXL

Data Type: Original

Replicate Data: 245391006|945625|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.122	0.122	0.0018	0.0076	0.0020	11:41:29	Yes
2	0.128	0.128	0.0019	0.0087	0.0020	11:42:04	Yes
Mean:	0.125	0.125	0.0018				
SD:	0.004	0.004	0.0000				
%RSD:	3.081	3.081	2.39				

Sequence No.: 93

Autosampler Location: 81

Sample ID: 245391007|945625|1

Date Collected: 2/4/2010 11:42:24

Analyst: JXL

Data Type: Original

Replicate Data: 245391007|945625|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.158	0.158	0.0022	0.0091	0.0024	11:43:26	Yes
2	0.166	0.166	0.0023	0.0103	0.0025	11:44:01	Yes
Mean:	0.162	0.162	0.0022				
SD:	0.005	0.005	0.0001				
%RSD:	3.166	3.166	2.59				

Sequence No.: 94

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/4/2010 11:44:21



Analyst:

Data Type: Original

-----  
Replicate Data: CCV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.865	4.865	0.0554	0.2292	0.0556	11:45:21	Yes
2	4.828	4.828	0.0550	0.2289	0.0552	11:45:57	Yes
Mean:	4.847	4.847	0.0552				
SD:	0.027	0.027	0.0003				
%RSD:	0.550	0.550	0.55				

QC value within limits for Hg 253.7 Recovery = 96.93%  
All analyte(s) passed QC.

Sequence No.: 95

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/4/2010 11:46:16

Data Type: Original

-----  
Replicate Data: CCB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.023	-0.023	0.0001	0.0012	0.0003	11:47:16	Yes
2	-0.016	-0.016	0.0002	0.0013	0.0004	11:47:51	Yes
Mean:	-0.019	-0.019	0.0002				
SD:	0.005	0.005	0.0001				
%RSD:	26.27	26.27	30.26				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 96

Sample ID: 245391008|945625|1

Analyst: JXL

Autosampler Location: 82

Date Collected: 2/4/2010 11:48:10

Data Type: Original

-----  
Replicate Data: 245391008|945625|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.195	0.195	0.0026	0.0109	0.0028	11:49:12	Yes
2	0.201	0.201	0.0027	0.0114	0.0029	11:49:47	Yes
Mean:	0.198	0.198	0.0026				
SD:	0.004	0.004	0.0000				
%RSD:	2.137	2.137	1.81				

Sequence No.: 97

Sample ID: 245391009|945625|1

Analyst: JXL

Autosampler Location: 83

Date Collected: 2/4/2010 11:50:07

Data Type: Original

-----  
Replicate Data: 245391009|945625|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.426	0.426	0.0052	0.0214	0.0054	11:51:08	Yes
2	0.426	0.426	0.0052	0.0228	0.0054	11:51:43	Yes
Mean:	0.426	0.426	0.0052				
SD:	0.000	0.000	0.0000				
%RSD:	0.002	0.002	0.00				

Sequence No.: 98

Sample ID: 245391010|945625|1

Analyst: JXL

Autosampler Location: 84

Date Collected: 2/4/2010 11:52:03

Data Type: Original

-----  
Replicate Data: 245391010|945625|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.398	0.398	0.0049	0.0205	0.0051	11:53:05	Yes

## Replicate Data: 245383002|945619|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.747	0.747	0.0089	0.0372	0.0090	12:02:48	Yes
2	0.736	0.736	0.0087	0.0368	0.0089	12:03:23	Yes
Mean:	0.742	0.742	0.0088				
SD:	0.008	0.008	0.0001				
%RSD:	1.075	1.075	1.03				

Sequence No.: 104

Sample ID: 245383003|945619|1

Analyst: JXL

Autosampler Location: 90

Date Collected: 2/4/2010 12:03:43

Data Type: Original

## Replicate Data: 245383003|945619|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.354	0.354	0.0044	0.0183	0.0046	12:04:45	Yes
2	0.351	0.351	0.0044	0.0180	0.0046	12:05:20	Yes
Mean:	0.352	0.352	0.0044				
SD:	0.002	0.002	0.0000				
%RSD:	0.436	0.436	0.40				

Sequence No.: 105

Sample ID: 245383004|945619|1

Analyst: JXL

Autosampler Location: 91

Date Collected: 2/4/2010 12:05:40

Data Type: Original

## Replicate Data: 245383004|945619|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.323	0.323	0.0041	0.0171	0.0042	12:06:42	Yes
2	0.322	0.322	0.0040	0.0174	0.0042	12:07:17	Yes
Mean:	0.322	0.322	0.0041				
SD:	0.001	0.001	0.0000				
%RSD:	0.301	0.301	0.27				

Sequence No.: 106

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/4/2010 12:07:37

Data Type: Original

## Replicate Data: CCV

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.951	4.951	0.0564	0.2351	0.0566	12:08:38	Yes
2	4.963	4.963	0.0565	0.2359	0.0567	12:09:12	Yes
Mean:	4.957	4.957	0.0565				
SD:	0.009	0.009	0.0001				
%RSD:	0.172	0.172	0.17				

QC value within limits for Hg 253.7 Recovery = 99.13%

All analyte(s) passed QC.

Sequence No.: 107

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/4/2010 12:09:31

Data Type: Original

## Replicate Data: CCB

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	0.0002	0.0010	0.0004	12:10:32	Yes
2	-0.024	-0.024	0.0001	0.0009	0.0003	12:11:07	Yes
Mean:	-0.023	-0.023	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	9.013	9.013	15.41				

QC value within limits for Hg 253.7 Recovery = Not calculated

-----  
Replicate Data: 245385005|945619|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.237	0.237	0.0031	0.0130	0.0033	12:30:01	Yes
2	0.231	0.231	0.0030	0.0132	0.0032	12:30:36	Yes
Mean:	0.234	0.234	0.0031				
SD:	0.005	0.005	0.0001				
%RSD:	1.980	1.980	1.72				

Sequence No.: 118

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/4/2010 12:30:57

Data Type: Original  
-----

## Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.881	4.881	0.0556	0.2329	0.0558	12:31:57	Yes
2	4.832	4.832	0.0551	0.2345	0.0552	12:32:32	Yes
Mean:	4.856	4.856	0.0553				
SD:	0.035	0.035	0.0004				
%RSD:	0.711	0.711	0.71				

QC value within limits for Hg 253.7 Recovery = 97.13%  
All analyte(s) passed QC.

Sequence No.: 119

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/4/2010 12:32:51

Data Type: Original  
-----

## Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.019	-0.019	0.0002	0.0013	0.0004	12:33:52	Yes
2	-0.024	-0.024	0.0001	0.0009	0.0003	12:34:27	Yes
Mean:	-0.021	-0.021	0.0002				
SD:	0.004	0.004	0.0000				
%RSD:	16.53	16.53	24.39				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 120

Sample ID: 245385006|945619|1

Analyst: JXL

Autosampler Location: 102

Date Collected: 2/4/2010 12:34:46

Data Type: Original  
-----

## Replicate Data: 245385006|945619|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.244	0.244	0.0032	0.0139	0.0034	12:35:48	Yes
2	0.242	0.242	0.0031	0.0135	0.0033	12:36:23	Yes
Mean:	0.243	0.243	0.0032				
SD:	0.001	0.001	0.0000				
%RSD:	0.478	0.478	0.42				

Sequence No.: 121

Sample ID: 245385007|945619|1

Analyst: JXL

Autosampler Location: 103

Date Collected: 2/4/2010 12:36:43

Data Type: Original  
-----

## Replicate Data: 245385007|945619|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.105	0.105	0.0016	0.0073	0.0018	12:37:45	Yes
2	0.116	0.116	0.0017	0.0084	0.0019	12:38:20	Yes
Mean:	0.111	0.111	0.0017				

SD: 0.008 0.008 0.0001  
%RSD: 6.929 6.929 5.23

Sequence No.: 122

Sample ID: 245385008|945619|1

Analyst: JXL

Autosampler Location: 104

Date Collected: 2/4/2010 12:38:41

Data Type: Original

Replicate Data: 245385008|945619|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.169	0.169	0.0023	0.0101	0.0025	12:39:43	Yes
2	0.169	0.169	0.0023	0.0101	0.0025	12:40:17	Yes
Mean:	0.169	0.169	0.0023				
SD:	0.000	0.000	0.0000				
%RSD:	0.102	0.102	0.08				

Sequence No.: 123

Sample ID: 245385009|945619|1

Analyst: JXL

Autosampler Location: 105

Date Collected: 2/4/2010 12:40:38

Data Type: Original

Replicate Data: 245385009|945619|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.227	0.227	0.0030	0.0130	0.0032	12:41:40	Yes
2	0.228	0.228	0.0030	0.0133	0.0032	12:42:14	Yes
Mean:	0.228	0.228	0.0030				
SD:	0.001	0.001	0.0000				
%RSD:	0.353	0.353	0.30				

Sequence No.: 124

Sample ID: 245385010|945619|1

Analyst: JXL

Autosampler Location: 106

Date Collected: 2/4/2010 12:42:35

Data Type: Original

Replicate Data: 245385010|945619|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.198	0.198	0.0026	0.0113	0.0028	12:43:37	Yes
2	0.200	0.200	0.0027	0.0123	0.0029	12:44:12	Yes
Mean:	0.199	0.199	0.0027				
SD:	0.002	0.002	0.0000				
%RSD:	0.828	0.828	0.70				

Sequence No.: 125

Sample ID: 245385011|945619|1

Analyst: JXL

Autosampler Location: 107

Date Collected: 2/4/2010 12:44:32

Data Type: Original

Replicate Data: 245385011|945619|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.225	0.225	0.0029	0.0132	0.0031	12:45:34	Yes
2	0.217	0.217	0.0029	0.0132	0.0030	12:46:09	Yes
Mean:	0.221	0.221	0.0029				
SD:	0.006	0.006	0.0001				
%RSD:	2.544	2.544	2.19				

Sequence No.: 126

Sample ID: 1202025289|945622|1

Analyst: JXL

Autosampler Location: 108

Date Collected: 2/4/2010 12:46:29

Data Type: Original

Replicate Data: 1202025289|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
------	------------	---------	---------	------	------	------	------

#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.006	0.006	0.0005	0.0026	0.0007	12:47:31	Yes
2	0.000	0.000	0.0004	0.0020	0.0006	12:48:06	Yes
Mean:	0.003	0.003	0.0004				
SD:	0.004	0.004	0.0000				
%RSD:	131.2	131.2	10.87				

Sequence No.: 127

Autosampler Location: 109

Sample ID: 1202025290|945622|10

Date Collected: 2/4/2010 12:48:27

Analyst: JXL

Data Type: Original

Replicate Data: 1202025290|945622|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.102	3.102	0.0355	0.1495	0.0357	12:49:29	Yes
2	3.107	3.107	0.0355	0.1486	0.0357	12:50:03	Yes
Mean:	3.104	3.104	0.0355				
SD:	0.003	0.003	0.0000				
%RSD:	0.101	0.101	0.10				

Sequence No.: 128

Autosampler Location: 110

Sample ID: 245389001|945622|1

Date Collected: 2/4/2010 12:50:24

Analyst: JXL

Data Type: Original

Replicate Data: 245389001|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.365	0.365	0.0045	0.0190	0.0047	12:51:26	Yes
2	0.369	0.369	0.0046	0.0197	0.0048	12:52:01	Yes
Mean:	0.367	0.367	0.0046				
SD:	0.003	0.003	0.0000				
%RSD:	0.734	0.734	0.67				

Sequence No.: 129

Autosampler Location: 111

Sample ID: 1202025291|945622|1

Date Collected: 2/4/2010 12:52:21

Analyst: JXL

Data Type: Original

Replicate Data: 1202025291|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.368	0.368	0.0046	0.0197	0.0048	12:53:24	Yes
2	0.367	0.367	0.0046	0.0193	0.0047	12:53:59	Yes
Mean:	0.367	0.367	0.0046				
SD:	0.001	0.001	0.0000				
%RSD:	0.204	0.204	0.19				

Sequence No.: 130

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/4/2010 12:54:19

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.812	4.812	0.0548	0.2292	0.0550	12:55:20	Yes
2	4.761	4.761	0.0543	0.2281	0.0544	12:55:55	Yes
Mean:	4.786	4.786	0.0545				
SD:	0.036	0.036	0.0004				
%RSD:	0.753	0.753	0.75				

QC value within limits for Hg 253.7 Recovery = 95.72%  
All analyte(s) passed QC.

Sequence No.: 131

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/4/2010 12:56:14

Analyst:

Data Type: Original

-----  
Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.029	-0.029	0.0001	0.0001	0.0003	12:57:15	Yes
2	-0.024	-0.024	0.0001	0.0010	0.0003	12:57:50	Yes
Mean:	-0.027	-0.027	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	12.77	12.77	37.34				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

=====

Sequence No.: 132  
Sample ID: 1202025292|945622|1  
Analyst: JXLAutosampler Location: 112  
Date Collected: 2/4/2010 12:58:10  
Data Type: Original-----  
Replicate Data: 1202025292|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.334	2.334	0.0268	0.1133	0.0270	12:59:12	Yes
2	2.324	2.324	0.0267	0.1119	0.0269	12:59:47	Yes
Mean:	2.329	2.329	0.0268				
SD:	0.007	0.007	0.0001				
%RSD:	0.304	0.304	0.30				

=====

Sequence No.: 133  
Sample ID: 1202025294|945622|1  
Analyst: JXLAutosampler Location: 113  
Date Collected: 2/4/2010 13:00:07  
Data Type: Original-----  
Replicate Data: 1202025294|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.330	2.330	0.0268	0.1142	0.0269	13:01:09	Yes
2	2.318	2.318	0.0266	0.1126	0.0268	13:01:44	Yes
Mean:	2.324	2.324	0.0267				
SD:	0.008	0.008	0.0001				
%RSD:	0.350	0.350	0.34				

=====

Sequence No.: 134  
Sample ID: 1202025293|945622|5  
Analyst: JXLAutosampler Location: 114  
Date Collected: 2/4/2010 13:02:05  
Data Type: Original-----  
Replicate Data: 1202025293|945622|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.053	0.053	0.0010	0.0051	0.0012	13:03:07	Yes
2	0.047	0.047	0.0009	0.0048	0.0011	13:03:42	Yes
Mean:	0.050	0.050	0.0010				
SD:	0.004	0.004	0.0001				
%RSD:	8.943	8.943	5.20				

=====

Sequence No.: 135  
Sample ID: 245389002|945622|1  
Analyst: JXLAutosampler Location: 115  
Date Collected: 2/4/2010 13:04:02  
Data Type: Original-----  
Replicate Data: 245389002|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.215	0.215	0.0028	0.0124	0.0030	13:05:04	Yes
2	0.216	0.216	0.0029	0.0131	0.0030	13:05:39	Yes

Mean: 0.215 0.215 0.0028  
SD: 0.001 0.001 0.0000  
%RSD: 0.526 0.526 0.45

Sequence No.: 136

Sample ID: 245389003|945622|1

Analyst: JXL

Autosampler Location: 116

Date Collected: 2/4/2010 13:06:00

Data Type: Original

Replicate Data: 245389003|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.399	0.399	0.0049	0.0218	0.0051	13:07:02	Yes
2	0.403	0.403	0.0050	0.0220	0.0051	13:07:37	Yes
Mean:	0.401	0.401	0.0049				
SD:	0.003	0.003	0.0000				
%RSD:	0.730	0.730	0.67				

Sequence No.: 137

Sample ID: 245389004|945622|1

Analyst: JXL

Autosampler Location: 117

Date Collected: 2/4/2010 13:07:57

Data Type: Original

Replicate Data: 245389004|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.315	0.315	0.0040	0.0173	0.0042	13:09:00	Yes
2	0.318	0.318	0.0040	0.0179	0.0042	13:09:34	Yes
Mean:	0.316	0.316	0.0040				
SD:	0.002	0.002	0.0000				
%RSD:	0.732	0.732	0.66				

Sequence No.: 138

Sample ID: 245389005|945622|1

Analyst: JXL

Autosampler Location: 118

Date Collected: 2/4/2010 13:09:55

Data Type: Original

Replicate Data: 245389005|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.337	0.337	0.0042	0.0183	0.0044	13:10:57	Yes
2	0.345	0.345	0.0043	0.0191	0.0045	13:11:32	Yes
Mean:	0.341	0.341	0.0043				
SD:	0.006	0.006	0.0001				
%RSD:	1.757	1.757	1.59				

Sequence No.: 139

Sample ID: 245389006|945622|1

Analyst: JXL

Autosampler Location: 119

Date Collected: 2/4/2010 13:11:53

Data Type: Original

Replicate Data: 245389006|945622|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.315	0.315	0.0040	0.0173	0.0042	13:12:55	Yes
2	0.320	0.320	0.0040	0.0179	0.0042	13:13:30	Yes
Mean:	0.317	0.317	0.0040				
SD:	0.004	0.004	0.0000				
%RSD:	1.234	1.234	1.11				

Sequence No.: 140

Sample ID: 245389007|945622|1

Analyst: JXL

Autosampler Location: 120

Date Collected: 2/4/2010 13:13:51

Data Type: Original

Replicate Data: 245389007|945622|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.157	0.157	0.0022	0.0100	0.0024	13:14:53	Yes
2	0.157	0.157	0.0022	0.0101	0.0024	13:15:28	Yes
Mean:	0.157	0.157	0.0022				
SD:	0.001	0.001	0.0000				
%RSD:	0.412	0.412	0.34				

Sequence No.: 141

Sample ID: 245389008|945622|1

Analyst: JXL

Autosampler Location: 121

Date Collected: 2/4/2010 13:15:48

Data Type: Original

Replicate Data: 245389008|945622|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.191	0.191	0.0026	0.0117	0.0028	13:16:50	Yes
2	0.194	0.194	0.0026	0.0118	0.0028	13:17:25	Yes
Mean:	0.192	0.192	0.0026				
SD:	0.002	0.002	0.0000				
%RSD:	1.112	1.112	0.94				

Sequence No.: 142

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/4/2010 13:17:46

Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.804	4.804	0.0547	0.2301	0.0549	13:18:46	Yes
2	4.750	4.750	0.0541	0.2274	0.0543	13:19:21	Yes
Mean:	4.777	4.777	0.0544				
SD:	0.038	0.038	0.0004				
%RSD:	0.795	0.795	0.79				

QC value within limits for Hg 253.7 Recovery = 95.55%

All analyte(s) passed QC.

Sequence No.: 143

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/4/2010 13:19:40

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.035	-0.035	0.0000	0.0008	0.0002	13:20:41	Yes
2	-0.035	-0.035	0.0000	0.0009	0.0002	13:21:15	Yes
Mean:	-0.035	-0.035	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.666	0.666	34.30				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 144

Sample ID: 245389009|945622|1

Analyst: JXL

Autosampler Location: 122

Date Collected: 2/4/2010 13:21:35

Data Type: Original

Replicate Data: 245389009|945622|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.336	0.336	0.0042	0.0183	0.0044	13:22:37	Yes
2	0.336	0.336	0.0042	0.0185	0.0044	13:23:12	Yes
Mean:	0.336	0.336	0.0042				
SD:	0.000	0.000	0.0000				
%RSD:	0.026	0.026	0.02				



Sequence No.: 145

Sample ID: 245389010|945622|1

Analyst: JXL

Autosampler Location: 123

Date Collected: 2/4/2010 13:23:33

Data Type: Original

Replicate Data: 245389010|945622|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.152	0.152	0.0021	0.0097	0.0023	13:24:35	Yes
2	0.149	0.149	0.0021	0.0095	0.0023	13:25:10	Yes
Mean:	0.151	0.151	0.0021				
SD:	0.002	0.002	0.0000				
%RSD:	1.526	1.526	1.23				

Sequence No.: 146

Sample ID: 245389011|945622|1

Analyst: JXL

Autosampler Location: 124

Date Collected: 2/4/2010 13:25:31

Data Type: Original

Replicate Data: 245389011|945622|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.171	0.171	0.0023	0.0106	0.0025	13:26:33	Yes
2	0.170	0.170	0.0023	0.0104	0.0025	13:27:08	Yes
Mean:	0.170	0.170	0.0023				
SD:	0.001	0.001	0.0000				
%RSD:	0.626	0.626	0.52				

Sequence No.: 147

Sample ID: 1202024825|945428|1

Analyst: JXL

Autosampler Location: 125

Date Collected: 2/4/2010 13:27:28

Data Type: Original

Replicate Data: 1202024825|945428|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.034	-0.034	0.0000	0.0009	0.0002	13:28:31	Yes
2	-0.037	-0.037	-0.0000	0.0007	0.0002	13:29:06	Yes
Mean:	-0.035	-0.035	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	6.398	6.398	297.45				

Sequence No.: 148

Sample ID: 1202024826|945428|5

Analyst: JXL

Autosampler Location: 126

Date Collected: 2/4/2010 13:29:27

Data Type: Original

Replicate Data: 1202024826|945428|5

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.330	3.330	0.0381	0.1603	0.0383	13:30:29	Yes
2	3.328	3.328	0.0380	0.1595	0.0382	13:31:04	Yes
Mean:	3.329	3.329	0.0381				
SD:	0.001	0.001	0.0000				
%RSD:	0.045	0.045	0.04				

Sequence No.: 149

Sample ID: 245092001|945428|1

Analyst: JXL

Autosampler Location: 127

Date Collected: 2/4/2010 13:31:25

Data Type: Original

Replicate Data: 245092001|945428|1

Repl #	SampleConc ug/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.067	1.067	0.0125	0.0528	0.0127	13:32:26	Yes

2	1.062	1.062	0.0124	0.0525	0.0126	13:33:01	Yes
Mean:	1.064	1.064	0.0124				
SD:	0.003	0.003	0.0000				
%RSD:	0.298	0.298	0.29				

Sequence No.: 150

Autosampler Location: 128

Sample ID: 1202024827|945428|1

Date Collected: 2/4/2010 13:33:22

Analyst: JXL

Data Type: Original

Replicate Data: 1202024827|945428|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	1.023	1.023	0.0120	0.0511	0.0122	13:34:24	Yes
2	1.019	1.019	0.0119	0.0503	0.0121	13:34:59	Yes
Mean:	1.021	1.021	0.0120				
SD:	0.003	0.003	0.0000				
%RSD:	0.300	0.300	0.29				

Sequence No.: 151

Autosampler Location: 129

Sample ID: 1202024828|945428|1

Date Collected: 2/4/2010 13:35:20

Analyst: JXL

Data Type: Original

Replicate Data: 1202024828|945428|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.157	3.157	0.0361	0.1517	0.0363	13:36:22	Yes
2	3.114	3.114	0.0356	0.1502	0.0358	13:36:57	Yes
Mean:	3.136	3.136	0.0359				
SD:	0.030	0.030	0.0003				
%RSD:	0.958	0.958	0.95				

Sequence No.: 152

Autosampler Location: 130

Sample ID: 1202024830|945428|1

Date Collected: 2/4/2010 13:37:18

Analyst: JXL

Data Type: Original

Replicate Data: 1202024830|945428|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.314	3.314	0.0379	0.1594	0.0381	13:38:20	Yes
2	3.314	3.314	0.0379	0.1599	0.0381	13:38:55	Yes
Mean:	3.314	3.314	0.0379				
SD:	0.000	0.000	0.0000				
%RSD:	0.008	0.008	0.01				

Sequence No.: 153

Autosampler Location: 131

Sample ID: 1202024829|945428|5

Date Collected: 2/4/2010 13:39:15

Analyst: JXL

Data Type: Original

Replicate Data: 1202024829|945428|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.195	0.195	0.0026	0.0117	0.0028	13:40:18	Yes
2	0.192	0.192	0.0026	0.0116	0.0028	13:40:53	Yes
Mean:	0.193	0.193	0.0026				
SD:	0.002	0.002	0.0000				
%RSD:	1.108	1.108	0.93				

Sequence No.: 154

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/4/2010 13:41:13

Analyst:

Data Type: Original

## Replicate Data: CCV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.790	4.790	0.0546	0.2317	0.0548	13:42:14	Yes
2	4.784	4.784	0.0545	0.2306	0.0547	13:42:49	Yes
Mean:	4.787	4.787	0.0546				
SD:	0.004	0.004	0.0000				
%RSD:	0.092	0.092	0.09				

QC value within limits for Hg 253.7 Recovery = 95.74%

All analyte(s) passed QC.

Sequence No.: 155

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/4/2010 13:43:08

Data Type: Original

## Replicate Data: CCB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.036	-0.036	-0.0000	0.0007	0.0002	13:44:09	Yes
2	-0.032	-0.032	0.0000	0.0011	0.0002	13:44:44	Yes
Mean:	-0.034	-0.034	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	9.601	9.601	166.99				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 156

Sample ID: 245092002|945428|1

Analyst: JXL

Autosampler Location: 132

Date Collected: 2/4/2010 13:45:03

Data Type: Original

## Replicate Data: 245092002|945428|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	16.09	16.09	0.1824	0.7776	0.1826	13:46:05	Yes
Sample concentration is greater than that of the highest standard.							
2	16.03	16.03	0.1817	0.7747	0.1819	13:46:40	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	16.06	16.06	0.1820				
SD:	0.041	0.041	0.0005				
%RSD:	0.257	0.257	0.26				

Sample concentration is greater than that of the highest standard.

Sequence No.: 157

Sample ID: 245092003|945428|1

Analyst: JXL

Autosampler Location: 133

Date Collected: 2/4/2010 13:47:01

Data Type: Original

## Replicate Data: 245092003|945428|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	6.771	6.771	0.0770	0.3260	0.0772	13:48:03	Yes
2	6.770	6.770	0.0770	0.3245	0.0772	13:48:38	Yes
Mean:	6.771	6.771	0.0770				
SD:	0.001	0.001	0.0000				
%RSD:	0.010	0.010	0.01				

Sequence No.: 158

Sample ID: 245092004|945428|1

Analyst: JXL

Autosampler Location: 134

Date Collected: 2/4/2010 13:48:59

Data Type: Original

## Replicate Data: 245092004|945428|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.439	0.439	0.0054	0.0233	0.0056	13:50:01	Yes

# Miscellaneous

# Prep LogBook

Analyst: FGA  
 Batch: 945402  
 Lab SOP: GL-MA-E-009 REV# 19

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202024779		SW846 3050B	04-FEB-2010 13:30	0.509 g	50 mL	98.23183	.501	g
LCS	1202024780		SW846 3050B	04-FEB-2010 13:30	0.501 g	50 mL	99.8004	.25	mL
SAMPLE	245389001		SW846 3050B	04-FEB-2010 13:30	0.514 g	50 mL	97.27626	.25	mL
DUP	1202024781	245389001	SW846 3050B	04-FEB-2010 13:30	0.515 g	50 mL	97.08738	.25	mL
MS	1202024782	245389001	SW846 3050B	04-FEB-2010 13:30	0.509 g	50 mL	98.23183	.25	mL
MSD	1202024784	245389001	SW846 3050B	04-FEB-2010 13:30	0.508 g	50 mL	98.4252	.25	mL
SDILT	1202024783	245389001	SW846 3050B	04-FEB-2010 13:30	0.514 g	50 mL	97.27626	.25	mL
SAMPLE	245389002		SW846 3050B	04-FEB-2010 13:30	0.5 g	50 mL	100		
SAMPLE	245389003		SW846 3050B	04-FEB-2010 13:30	0.523 g	50 mL	95.60229		
SAMPLE	245389004		SW846 3050B	04-FEB-2010 13:30	0.515 g	50 mL	97.08738		
SAMPLE	245389005		SW846 3050B	04-FEB-2010 13:30	0.506 g	50 mL	98.81423		
SAMPLE	245389006		SW846 3050B	04-FEB-2010 13:30	0.505 g	50 mL	99.0099		
SAMPLE	245389007		SW846 3050B	04-FEB-2010 13:30	0.515 g	50 mL	97.08738		
SAMPLE	245389008		SW846 3050B	04-FEB-2010 13:30	0.5 g	50 mL	100		
SAMPLE	245389009		SW846 3050B	04-FEB-2010 13:30	0.514 g	50 mL	97.27626		
SAMPLE	245389010		SW846 3050B	04-FEB-2010 13:30	0.505 g	50 mL	99.0099		
SAMPLE	245389011		SW846 3050B	04-FEB-2010 13:30	0.513 g	50 mL	97.46589		

Reagent/Solvent Lot ID Amount Description  
 100202 10 mL HYDROCHLORIC ACID  
 1264396 1.25 mL Nitric Acid CONC.

Comments: Brown,rocky soil.

# Prep LogBook

Analyst: FGA  
Batch: 945405  
Lab SOP: GL-MA-E-009 REV# 19

Verified by: \_\_\_\_\_

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202024786	UI062540-MS	.502	g
MS	1202024788	UI091015-A	.5	mL
MS	1202024788	UI091015-B	.5	mL
MSD	1202024790	UI091015-A	.5	mL
MSD	1202024790	UI091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202024785		SW846 3050B	04-FEB-2010 13:30	0.501 g	50 mL	99.8004	SOIL
LCS	1202024786		SW846 3050B	04-FEB-2010 13:30	0.502 g	50 mL	99.60159	SOIL
SAMPLE	245389001		SW846 3050B	04-FEB-2010 13:30	0.513 g	50 mL	97.46589	SOIL
DUP	1202024787	245389001	SW846 3050B	04-FEB-2010 13:30	0.503 g	50 mL	99.40358	SOIL
MS	1202024788	245389001	SW846 3050B	04-FEB-2010 13:30	0.505 g	50 mL	99.0099	SOIL
MSD	1202024790	245389001	SW846 3050B	04-FEB-2010 13:30	0.508 g	50 mL	98.4252	SOIL
SDILT	1202024789	245389001	SW846 3050B	04-FEB-2010 13:30	0.513 g	50 mL	97.46589	SOIL
SAMPLE	245389002		SW846 3050B	04-FEB-2010 13:30	0.511 g	50 mL	97.84736	SOIL
SAMPLE	245389003		SW846 3050B	04-FEB-2010 13:30	0.514 g	50 mL	97.27626	SOIL
SAMPLE	245389004		SW846 3050B	04-FEB-2010 13:30	0.518 g	50 mL	96.5251	SOIL
SAMPLE	245389005		SW846 3050B	04-FEB-2010 13:30	0.518 g	50 mL	96.5251	SOIL
SAMPLE	245389006		SW846 3050B	04-FEB-2010 13:30	0.506 g	50 mL	98.81423	SOIL
SAMPLE	245389007		SW846 3050B	04-FEB-2010 13:30	0.5 g	50 mL	100	SOIL
SAMPLE	245389008		SW846 3050B	04-FEB-2010 13:30	0.522 g	50 mL	95.78544	SOIL
SAMPLE	245389009		SW846 3050B	04-FEB-2010 13:30	0.506 g	50 mL	98.81423	SOIL
SAMPLE	245389010		SW846 3050B	04-FEB-2010 13:30	0.521 g	50 mL	95.96929	SOIL
SAMPLE	245389011		SW846 3050B	04-FEB-2010 13:30	0.507 g	50 mL	98.61933	SOIL

Comments: Brown,rocky soil.

Reagent/Solvent Lot ID	Amount	Description
1203655-02	1.5 mL	Hydrogen Peroxide 30%
1264396	5 mL	Nitric Acid CONC.

# Prep LogBook

Analyst: TXB3  
Batch: 945621  
Lab SOP: GL-MA-E-010 REV# 23

Verified by:

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Type	Sample Id	Lot. Id	Spike Amount	Spike Units
MB	1202025289		SW846 7471A Prep	04-FEB-2010 08:10	LCS	1202025290	U1031809A	.209	g
LCS	1202025290		SW846 7471A Prep	04-FEB-2010 08:10	MS	1202025292	WHG100204-14	.3	mL
SAMPLE	245389001		SW846 7471A Prep	04-FEB-2010 08:10	MSD	1202025294	WHG100204-14	.3	mL
DUP	1202025291	245389001	SW846 7471A Prep	04-FEB-2010 08:10					
MS	1202025292	245389001	SW846 7471A Prep	04-FEB-2010 08:10					
MSD	1202025294	245389001	SW846 7471A Prep	04-FEB-2010 08:10					
SDIL-T	1202025293	245389001	SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389002		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389003		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389004		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389005		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389006		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389007		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389008		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389009		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389010		SW846 7471A Prep	04-FEB-2010 08:10					
SAMPLE	245389011		SW846 7471A Prep	04-FEB-2010 08:10					

Reagent/Solvent Lot ID	Amount	Description
1264796-A	1.125 mL	Hydrochloric Acid Conc.
1257474-1	.375 mL	NITRIC ACID
1255535-C	7.5 mL	5% KMnO4 solution
1255532-C	2 mL	Hg reducing agent
WHG100204-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100204-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG100204-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100204-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100204-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100204-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments: Sample 245389001 is a dry rocky brown soil.  
Digestion Start Date: 04-FEB-10 08:10  
Digestion End Date: 04-FEB-10 08:40

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 11-FEB-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> 945403	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 245389(10-1386)</b> <b>Application Issues:</b> Failed Recovery for MS/PS Failed Recovery for MSD/PSD			
<b>Specification and Requirements Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/PS: QC 1202024782MS 2. Failed Recovery for MSD/PSD: QC 1202024784MSD		1. The matrix spike recovery failed outside of the control limits for antimony and barium 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 matrix spike duplicate recovery failed outside of the control limits for antimony, 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:**  
Christopher Louviere 12-FEB-10

**Data Validator/Group Leader:**  
Eric Lawson 16-FEB-10



**DATA EXCEPTION REPORT**

<b>Mo.Day Yr.</b> 18-FEB-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> 945407	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 245388(10-1386)</b> <b>Application Issues:</b> Failed Recovery for MS/PS 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 1202024788MS  2. Failed Recovery for MSD/PSD: QC 1202024790MSD		The matrix spike and matrix spike duplicate recoveries failed outside of the control limits for 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.	

**Originator's Name:**

Elizabeth Janssen 19-FEB-10

**Data Validator/Group Leader:**

Paul Boyd 19-FEB-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:** LI062540-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:** LI062540-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:** 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:** UI090610-03      **Opened:** 10-JUN-09      **Catalog Number :** 060074-06-01  
**Name:** ICPMS Tungsten - 10mg/L      **Received:** 10-JUN-09      **Lot Number :** 1016338  
**Type:** Source Material      **Expires:** 10-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

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
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
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

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

**Serial ID:** UI090828-42      **Opened:** 16-SEP-09      **Amount :** 500 mL  
**Name:** TRACE ICP Na-1000SOUR      **Received:** 27-AUG-09      **Catalog Number :** 060011-02-03  
**Type:** Source Material      **Expires:** 16-SEP-10      **Lot Number :** 1017098  
**Employee:** Helen Camello      **Solvent :** 1%HNO3  
**Supplier:** Q2SI  
**Description:** Sodium 1000 +/- 3 ug/mL in 1% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

**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

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
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:** 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:** UI091015-A      **Opened:** 15-OCT-09      **Catalog Number :** 160067-03  
**Name:** ICP-MS DOE SOIL SPIKE      **Received:** 15-OCT-09      **Lot Number :** 1017142  
**Type:** Source Material      **Expires:** 15-OCT-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:** UI091015-B      **Opened:** 15-OCT-09      **Catalog Number :** 160067-03  
**Name:** ICP-MS DOE SOIL SPIKE      **Received:** 15-OCT-09      **Lot Number :** 1017142  
**Type:** Source Material      **Expires:** 15-OCT-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:** 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

**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



# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091212-60      **Opened:** 12-DEC-09      **Amount :** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number :** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1018064  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

**Serial ID:** UI091212-61      **Opened:** 12-DEC-09      **Amount :** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number :** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1018064  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard B  
**Comments:** None

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 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

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 ICV/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:** 02SI  
**Description:** ICPMS ICV/CCV Soln C - 10ppm

# Standard Logbook

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:** 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
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI100114-49.16      **Opened:** 11-FEB-10      **Amount :** 100 ml  
**Name:** Trace ICP ICSAB      **Received:** 18-JAN-10      **Catalog Number :** 160066-04  
**Type:** Source Material      **Expires:** 12-FEB-10      **Lot Number :** 1018458  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si

# Standard Logbook

**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
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:** UI100120-01

**Opened:** 20-JAN-10

**Lot Number :**

1018095

**Name:** METALSPIKE-1

**Received:** 20-JAN-10

**Type:** Source Material

**Expires:** 20-JAN-11

**Employee:** Bryan Davis

**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:** UI100120-06

**Opened:** 20-JAN-10

**Lot Number :**

1018096

**Name:** METALSPIKE-2

**Received:** 20-JAN-10

**Type:** Source Material

**Expires:** 20-JAN-11

**Employee:** Bryan Davis

**Supplier:** OS2I

**Description:** Metals Spike Mix II

**Comments:** None

# Standard Logbook

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
Vanadium	100 ug/mL	Zinc	100 ug/mL

**Serial ID:** UI100126-11      **Opened:** 26-JAN-10      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 26-JAN-10      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 26-JAN-11      **Lot Number :** 1018321  
**Employee:** Elizabeth Janssen      **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
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:** UI100210-48      **Opened:** 11-FEB-10      **Amount :** 1000 mL  
**Name:** Trace ICP ICSA      **Received:** 10-FEB-10      **Catalog Number :** 160005-02  
**Type:** Source Material      **Expires:** 11-FEB-11      **Lot Number :** 1018807  
**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:** UI100211-40      **Opened:** 11-FEB-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 10-FEB-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 11-FEB-11      **Lot Number :** 1018409  
**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:** UI100211-41      **Opened:** 11-FEB-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 10-FEB-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 11-FEB-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** Q2SI  
**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:** UMS090303-01      **Opened:** 03-MAR-09      **Amount :** 250 mL  
**Name:** ICPMSCaSPIKEB      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-100-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 14-81JB  
**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

# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UMS090303-02      **Opened:** 03-MAR-09      **Catalog Number :** ZGEL-102-250  
**Name:** ICPMSCaSPIKEA      **Received:** 03-MAR-09      **Lot Number :** 14-83JB  
**Type:** Source Material      **Expires:** 28-FEB-10  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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:** UMS090303-03      **Opened:** 03-MAR-09      **Amount :** 250 ml  
**Name:** ICPMSCaSPIKEA      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-101-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 15-199JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution C  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

**Serial ID:** IHG100203-01      **Opened:** 03-FEB-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 03-FEB-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 04-FEB-10      **Solvent :** 1mL HNO3 + Type1 H2O  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 1st Source 200 ug/L  
**Comments:** Prepare fresh daily

<b>Parent Material</b>	<b>Analyte</b>	<b>Parent Conc.</b>	<b>Aliquot</b>	<b>Final Vol.</b>	<b>Final Conc.</b>
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

# Standard Logbook

**Serial ID:** IHG100203-02      **Opened:** 03-FEB-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Intermediate      **Expires:** 04-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 2nd Source 200 ug/L  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** IHG100204-01      **Opened:** 04-FEB-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 04-FEB-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 05-FEB-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.	Allquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** IHG100204-02      **Opened:** 04-FEB-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Intermediate      **Expires:** 05-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 2nd Source 200 ug/L  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** WHG100203-07      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALSO.2CRA      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working Standard 1st Source CAL S 0.2/CRA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L



# Standard Logbook

**Serial ID:** WHG100203-08      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS0.5      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury Working Standard 1st Source CAL S 0.5  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

**Serial ID:** WHG100203-09      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS2.0      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-FEB-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.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

**Serial ID:** WHG100203-10      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS5.0CCV      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-FEB-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.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

**Serial ID:** WHG100203-11      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS10.0      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working 1st Source CAL S 10.0  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

# Standard Logbook

**Serial ID:** WHG100203-12      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKS5.0ICV      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury Working 2nd Source S 5.0/ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100203-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

**Serial ID:** WHG100204-07      **Opened:** 04-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALSO.2CRA      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 11-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working Standard 1st Source CAL S 0.2/CRA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100204-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

**Serial ID:** WHG100204-08      **Opened:** 04-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALSO.5      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 11-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury Working Standard 1st Source CAL S 0.5  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100204-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

**Serial ID:** WHG100204-09      **Opened:** 04-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALSO.2.0      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 11-FEB-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.	Allquot	Final Vol.	Final Conc.
IHG100204-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

# Standard Logbook

**Serial ID:** WHG100204-10      **Opened:** 04-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS5.0CCV      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 11-FEB-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.
IHG100204-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

**Serial ID:** WHG100204-11      **Opened:** 04-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS10.0      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 11-FEB-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.
IHG100204-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

**Serial ID:** WHG100204-12      **Opened:** 04-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKS5.0ICV      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 11-FEB-10  
**Employee:** Tara Griffin      **Verified:** 20-JUL-07  
**Supplier:** GEL  
**Description:** Mercury Working 2nd Source S 5.0/ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100204-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

**Serial ID:** WHG100204-14      **Opened:** 04-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGSOILMSSPIKE      **Received:** 04-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 11-FEB-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

# Standard Logbook

**Serial ID:** WI100211-42      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.1 PPM STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.1 PPM CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
WI100211-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100211-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100211-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100211-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100211-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

# Standard Logbook

**Serial ID:** WI100211-43      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.5/CCV STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**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.
UI090828-42	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
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

# Standard Logbook

**Serial ID:** WI100211-44      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP SCAL 1.0      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL and 1 %HNO3-1266496  
**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
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

# Standard Logbook

**Serial ID:** WI100211-45      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP S-10 STD      **Received:** 22-APR-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP S-10 CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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
UI090828-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

**Serial ID:** WI100211-46      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL AND 1%HNO3-1266496  
**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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
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:** W1100211-47      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL & 1%HNO3-1266496  
**Employee:** Helen Camello  
**Supplier:** 02si  
**Description:** PQL Working Standard  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	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
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



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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:** WMS100215-04      **Opened:** 15-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 15-FEB-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 16-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1269792  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100215-04A      **Opened:** 15-FEB-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 15-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 16-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
WMS100215-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100215-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100215-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100215-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100215-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100215-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100215-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100215-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100215-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100215-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100215-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

<b>Parent Material</b>	<b>Analyte</b>	<b>Parent Conc.</b>	<b>Alliquot</b>	<b>Final Vol.</b>	<b>Final Conc.</b>
WMS100215-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

<b>Serial ID:</b> <u>WMS100215-05</u>	<b>Opened:</b> <u>15-FEB-10</u>	<b>Balance Id :</b> <u>40245216</u>
<b>Name:</b> <u>ICPMS ICV</u>	<b>Received:</b> <u>15-FEB-10</u>	<b>Pipet Id :</b> <u>3541598</u>
<b>Type:</b> <u>Working</u>	<b>Expires:</b> <u>16-FEB-10</u>	<b>Solvent :</b> <u>2%HNO3/1%HCl - 1269792</u>
<b>Employee:</b> <u>Paul Boyd</u>		
<b>Supplier:</b> <u>GEL</u>		
<b>Description:</b> <u>ICPMS ICV</u>		
<b>Comments:</b> <u>None</u>		

Parent Material	Analyte	Parent Conc.	Alliquot	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
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

# Standard Logbook

**Serial ID:** WMS100215-06      **Opened:** 15-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 15-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 16-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**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:** WMS100215-07      **Opened:** 15-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 15-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 16-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl - 1269792  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100215-08      **Opened:** 15-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 15-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 16-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	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

# Standard Logbook

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
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100215-70      **Opened:** 15-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS LINEAR RANGE ST      **Received:** 15-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 16-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**Employee:** Paul Boyd  
**Supplier:** 02SI  
**Description:** ICPMS LINEAR RANGE STANDARD  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 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

**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

# Standard Logbook

**Serial ID:** 1203655-02      **Opened:** 15-OCT-09      **Lot Number :** ZU74081198 mL  
**Name:** B-H2O2      **Received:** 15-OCT-09  
**Type:** Reagent/Solvent      **Expires:** 15-OCT-10  
**Employee:** Francena Armstrong  
**Supplier:** EM SCIENCE  
**Description:** Hydrogen Peroxide 30%  
**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:** 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.	Allquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

**Serial ID:** 1255535-C      **Opened:** 15-JAN-10      **Balance Id :** BAL-002  
**Name:** B-KMnO4-MER      **Received:** 15-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 15-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** 5% KMnO4 solution  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

**Serial ID:** 1257474-1      **Opened:** 20-JAN-10      **Instrument Id :** MERCURY  
**Name:** B-HNO3-MER      **Received:** 20-JAN-10      **Lot Number :** H20053  
**Type:** Reagent/Solvent      **Expires:** 20-JAN-11  
**Employee:** Tara Griffin  
**Supplier:** Mallinckrodt Chemicals  
**Description:** NITRIC ACID



# Standard Logbook

Comments: None

Serial ID: 1264396      Opened: 03-FEB-10      Lot Number : H51025 L  
 Name: I-HNO3      Received: 02-FEB-10  
 Type: Reagent/Solvent      Expires: 03-FEB-11  
 Employee: Bryan Davis  
 Supplier: BAKER  
 Description: Nitric Acid CONC.  
 Comments: None

Serial ID: 1264796-A      Opened: 04-FEB-10      Lot Number : 200930201  
 Name: B-HCl-MER      Received: 04-FEB-10  
 Type: Reagent/Solvent      Expires: 04-FEB-11  
 Employee: Tara Griffin  
 Supplier: Aristar  
 Description: Hydrochloric Acid Conc.  
 Comments: None

Serial ID: 1266496      Opened: 08-FEB-10      Amount : 20 L  
 Name: B-ICP-RINSE SOLN      Received: 20-JAN-10      Lot Number : H04040+G34050  
 Type: Reagent/Solvent      Expires: 14-FEB-10      Solvent : 3%HCL+1%HNO3  
 Employee: Helen Camello  
 Supplier: GEL  
 Description: 3%HCL+1%HNO3 RINSE SOLN.  
 Comments: None

Serial ID: 1269792      Opened: 15-FEB-10      Solvent : Type I Water  
 Name: B-2%HNO3/1%HCl-ICPMS      Received: 15-FEB-10  
 Type: Reagent/Solvent      Expires: 22-FEB-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

# **Metals Analysis**

# Case Narrative

**Metals Fractional Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1386-1**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245390001	RE14-10-7693
1202024735	Method Blank (MB) ICP
1202024736	Laboratory Control Sample (LCS)
1202024739	245392001(RE15-10-8074L) Serial Dilution (SD)
1202024737	245392001(RE15-10-8074D) Sample Duplicate (DUP)
1202024738	245392001(RE15-10-8074S) Matrix Spike (MS)
1202024740	Method Blank (MB) ICP-MS
1202024741	Laboratory Control Sample (LCS)
1202024744	245392001(RE15-10-8074L) Serial Dilution (SD)
1202024742	245382001(RE15-10-8444D) Sample Duplicate (DUP)
1202024743	245382001(RE15-10-8444S) Matrix Spike (MS)
1202024802	Method Blank (MB) CVAA
1202024803	Laboratory Control Sample (LCS)
1202024811	245392001(RE15-10-8074L) Serial Dilution (SD)
1202024804	245392001(RE15-10-8074D) Sample Duplicate (DUP)
1202024805	245392001(RE15-10-8074S) Matrix Spike (MS)

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

**Method/Analysis Information**

<b>Analytical Batch:</b>	945379, 945381 and 945416
<b>Prep Batch :</b>	945378, 945380 and 945413
<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.

**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: 245392001 (RE15-10-8074)-ICP, ICP-MS and CVAA and 245382001 (RE15-10-8444)-ICP-MS.

**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. All applicable elements met the acceptance criteria.

**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 (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.

##### **Additional Comments**

Due to random laboratory the DUP and MS were performed on 245382001. The SDILT was performed on 245392001. The paperwork was not corrected in prep to reflect the correct QC sample.

#### **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: Nik-DeA. Emon Date: 2-19-10



# Sample Data Summary

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

SDG No: 10-1386-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245390001

BASIS: As Received

DATE COLLECTED 15-JAN-10

CLIENT ID: RE14-10-7693

LEVEL: Low

DATE RECEIVED 23-JAN-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	70.2	ug/L	J	68	200	200	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	BAJ	02/13/10 03:44	100212-3	945381
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-39-3	Barium	1.27	ug/L	J	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	02/13/10 03:44	100212-3	945381
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	02/13/10 03:44	100212-3	945381
7440-70-2	Calcium	67.3	ug/L	J	50	200	200	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-47-3	Chromium	2.2	ug/L	J	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	02/11/10 17:56	021110B-1	945379
7439-89-6	Iron	82.4	ug/L	J	30	100	100	1	P	HSC	02/11/10 17:56	021110B-1	945379
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	BAJ	02/13/10 20:43	100213-5	945381
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	02/11/10 17:56	021110B-1	945379
7439-96-5	Manganese	1.33	ug/L	J	1	5	5	1	MS	BAJ	02/13/10 20:43	100213-5	945381
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	02/04/10 10:13	020410W1-6	945416
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-09-7	Potassium	105	ug/L	J	50	150	150	1	P	HSC	02/11/10 17:56	021110B-1	945379
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-23-5	Sodium	164	ug/L	J	100	300	300	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	BAJ	02/13/10 17:32	100213-4	945381
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	SKJ	02/13/10 19:43	100213-2	945381
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	02/11/10 17:56	021110B-1	945379
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	02/11/10 17:56	021110B-1	945379

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945379	945378	SW846 3005A	50	mL	50	mL	02/03/10	FGA
945381	945380	SW846 3005A	50	mL	50	mL	02/03/10	FGA
945416	945413	SW846 7470A Prep	20	mL	20	mL	02/03/10	TXB3

# **Quality Control Summary**

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,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	4.92	ug/L	5	ug/L	98.4	90.0 – 110.0	AV	04-FEB-10 09:27	020410W1-6
	Aluminum	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Arsenic	450	ug/L	500	ug/L	89.9	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Barium	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Calcium	4880	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Chromium	473	ug/L	500	ug/L	94.5	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Cobalt	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Copper	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Nickel	485	ug/L	500	ug/L	97	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Potassium	2410	ug/L	2500	ug/L	96.3	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Selenium	2440	ug/L	2500	ug/L	97.5	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Silver	253	ug/L	250	ug/L	101.2	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Sodium	2390	ug/L	2500	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Vanadium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Zinc	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	11-FEB-10 14:26	021110B-1
	Antimony	52.9	ug/L	50	ug/L	105.8	90.0 – 110.0	MS	13-FEB-10 00:21	100212-3
	Beryllium	49.7	ug/L	50	ug/L	99.4	90.0 – 110.0	MS	13-FEB-10 00:21	100212-3
	Cadmium	51.2	ug/L	50	ug/L	102.4	90.0 – 110.0	MS	13-FEB-10 00:21	100212-3
	Thallium	54.5	ug/L	50	ug/L	109	90.0 – 110.0	MS	13-FEB-10 13:00	100213-4
	Uranium	52.7	ug/L	50	ug/L	105.4	90.0 – 110.0	MS	13-FEB-10 17:59	100213-2
	Lead	53.6	ug/L	50	ug/L	107.1	90.0 – 110.0	MS	13-FEB-10 19:54	100213-5
	Manganese	53	ug/L	50	ug/L	106	90.0 – 110.0	MS	13-FEB-10 19:54	100213-5
CCV01										
	Mercury	4.95	ug/L	5	ug/L	99	80.0 – 120.0	AV	04-FEB-10 09:33	020410W1-6
	Aluminum	4910	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Arsenic	495	ug/L	500	ug/L	99	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Barium	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Calcium	4830	ug/L	5000	ug/L	96.7	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,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>
	Chromium	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Copper	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Magnesium	5010	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Nickel	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Potassium	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Selenium	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Silver	485	ug/L	500	ug/L	97	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Sodium	9810	ug/L	10000	ug/L	98.1	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Vanadium	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Zinc	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	11-FEB-10 14:49	021110B-1
	Antimony	53.1	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	13-FEB-10 00:52	100212-3
	Beryllium	49.2	ug/L	50	ug/L	98.5	90.0 – 110.0	MS	13-FEB-10 00:52	100212-3
	Cadmium	51.4	ug/L	50	ug/L	102.9	90.0 – 110.0	MS	13-FEB-10 00:52	100212-3
	Thallium	54.2	ug/L	50	ug/L	108.4	90.0 – 110.0	MS	13-FEB-10 13:23	100213-4
	Uranium	53.2	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	13-FEB-10 18:08	100213-2
	Lead	53.7	ug/L	50	ug/L	107.5	90.0 – 110.0	MS	13-FEB-10 20:03	100213-5
	Manganese	53.5	ug/L	50	ug/L	107	90.0 – 110.0	MS	13-FEB-10 20:03	100213-5
CCV02	Mercury	4.99	ug/L	5	ug/L	99.9	80.0 – 120.0	AV	04-FEB-10 09:57	020410W1-6
	Aluminum	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Arsenic	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Barium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Calcium	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Cobalt	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Copper	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Magnesium	5300	ug/L	5000	ug/L	106.1	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,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>
	Nickel	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Potassium	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Selenium	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Silver	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Sodium	10500	ug/L	10000	ug/L	105	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Zinc	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	11-FEB-10 15:15	021110B-1
	Antimony	53.4	ug/L	50	ug/L	106.7	90.0 – 110.0	MS	13-FEB-10 01:47	100212-3
	Beryllium	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	13-FEB-10 01:47	100212-3
	Cadmium	51.1	ug/L	50	ug/L	102.3	90.0 – 110.0	MS	13-FEB-10 01:47	100212-3
	Thallium	54.2	ug/L	50	ug/L	108.5	90.0 – 110.0	MS	13-FEB-10 14:04	100213-4
	Uranium	54.4	ug/L	50	ug/L	108.7	90.0 – 110.0	MS	13-FEB-10 18:21	100213-2
	Lead	53.5	ug/L	50	ug/L	107	90.0 – 110.0	MS	13-FEB-10 20:24	100213-5
	Manganese	53.7	ug/L	50	ug/L	107.4	90.0 – 110.0	MS	13-FEB-10 20:24	100213-5
CCV03										
	Mercury	5.08	ug/L	5	ug/L	101.7	80.0 – 120.0	AV	04-FEB-10 10:21	020410W1-6
	Aluminum	4750	ug/L	5000	ug/L	94.9	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Arsenic	466	ug/L	500	ug/L	93.2	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Barium	468	ug/L	500	ug/L	93.6	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Calcium	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Chromium	467	ug/L	500	ug/L	93.4	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Cobalt	470	ug/L	500	ug/L	94	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Copper	466	ug/L	500	ug/L	93.2	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Iron	4750	ug/L	5000	ug/L	95.1	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Magnesium	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Nickel	467	ug/L	500	ug/L	93.5	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Potassium	4810	ug/L	5000	ug/L	96.2	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Selenium	475	ug/L	500	ug/L	94.9	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Silver	474	ug/L	500	ug/L	94.7	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1
	Sodium	9790	ug/L	10000	ug/L	98	90.0 – 110.0	P	11-FEB-10 15:57	021110B-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Vanadium	471	ug/L	500	ug/L	94.1	90.0 - 110.0	P	11-FEB-10 15:57	021110B-1
	Zinc	466	ug/L	500	ug/L	93.2	90.0 - 110.0	P	11-FEB-10 15:57	021110B-1
	Antimony	53.7	ug/L	50	ug/L	107.3	90.0 - 110.0	MS	13-FEB-10 02:30	100212-3
	Beryllium	51.3	ug/L	50	ug/L	102.5	90.0 - 110.0	MS	13-FEB-10 02:30	100212-3
	Cadmium	51.6	ug/L	50	ug/L	103.2	90.0 - 110.0	MS	13-FEB-10 02:30	100212-3
	Thallium	53.7	ug/L	50	ug/L	107.4	90.0 - 110.0	MS	13-FEB-10 14:40	100213-4
	Uranium	55.1	ug/L	50	ug/L	110.1	90.0 - 110.0	MS	13-FEB-10 18:37	100213-2
	Lead	52.9	ug/L	50	ug/L	105.7	90.0 - 110.0	MS	13-FEB-10 20:34	100213-5
	Manganese	53.7	ug/L	50	ug/L	107.3	90.0 - 110.0	MS	13-FEB-10 20:34	100213-5
CCV04	Mercury	5.18	ug/L	5	ug/L	103.5	80.0 - 120.0	AV	04-FEB-10 10:45	020410W1-6
	Aluminum	4880	ug/L	5000	ug/L	97.7	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Arsenic	462	ug/L	500	ug/L	92.4	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Barium	460	ug/L	500	ug/L	92.1	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Chromium	459	ug/L	500	ug/L	91.9	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Cobalt	462	ug/L	500	ug/L	92.3	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Copper	455	ug/L	500	ug/L	91.1	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Iron	4820	ug/L	5000	ug/L	96.5	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Magnesium	4990	ug/L	5000	ug/L	99.9	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Nickel	461	ug/L	500	ug/L	92.1	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Potassium	4800	ug/L	5000	ug/L	95.9	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Selenium	461	ug/L	500	ug/L	92.2	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Silver	465	ug/L	500	ug/L	93	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Sodium	9690	ug/L	10000	ug/L	96.9	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Vanadium	462	ug/L	500	ug/L	92.4	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Zinc	458	ug/L	500	ug/L	91.6	90.0 - 110.0	P	11-FEB-10 16:37	021110B-1
	Antimony	53.8	ug/L	50	ug/L	107.6	90.0 - 110.0	MS	13-FEB-10 03:25	100212-3
	Beryllium	50.6	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	13-FEB-10 03:25	100212-3
	Cadmium	51.7	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	13-FEB-10 03:25	100212-3

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,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>
	Thallium	54.1	ug/L	50	ug/L	108.1	90.0 – 110.0	MS	13-FEB-10 15:20	100213-4
	Uranium	54.2	ug/L	50	ug/L	108.4	90.0 – 110.0	MS	13-FEB-10 18:52	100213-2
	Lead	53	ug/L	50	ug/L	106	90.0 – 110.0	MS	13-FEB-10 20:51	100213-5
	Manganese	52.7	ug/L	50	ug/L	105.5	90.0 – 110.0	MS	13-FEB-10 20:51	100213-5
CCV05										
	Aluminum	4730	ug/L	5000	ug/L	94.5	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Arsenic	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Barium	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Calcium	4750	ug/L	5000	ug/L	95	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Chromium	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Cobalt	490	ug/L	500	ug/L	98	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Copper	480	ug/L	500	ug/L	95.9	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Iron	4780	ug/L	5000	ug/L	95.5	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Magnesium	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Nickel	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Potassium	4750	ug/L	5000	ug/L	94.9	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Selenium	489	ug/L	500	ug/L	97.7	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Silver	480	ug/L	500	ug/L	95.9	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Sodium	9460	ug/L	10000	ug/L	94.6	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Vanadium	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Zinc	487	ug/L	500	ug/L	97.3	90.0 – 110.0	P	11-FEB-10 16:58	021110B-1
	Antimony	53.5	ug/L	50	ug/L	106.9	90.0 – 110.0	MS	13-FEB-10 04:21	100212-3
	Beryllium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	13-FEB-10 04:21	100212-3
	Cadmium	51.1	ug/L	50	ug/L	102.1	90.0 – 110.0	MS	13-FEB-10 04:21	100212-3
	Thallium	54.5	ug/L	50	ug/L	108.9	90.0 – 110.0	MS	13-FEB-10 16:01	100213-4
	Uranium	53.7	ug/L	50	ug/L	107.4	90.0 – 110.0	MS	13-FEB-10 19:06	100213-2
	Lead	54.7	ug/L	50	ug/L	109.5	90.0 – 110.0	MS	13-FEB-10 20:58	100213-5
	Manganese	53.9	ug/L	50	ug/L	107.9	90.0 – 110.0	MS	13-FEB-10 20:58	100213-5
CCV06										
	Aluminum	4740	ug/L	5000	ug/L	94.8	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1



**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,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>
	Arsenic	466	ug/L	500	ug/L	93.3	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Barium	469	ug/L	500	ug/L	93.9	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Calcium	4770	ug/L	5000	ug/L	95.3	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Chromium	468	ug/L	500	ug/L	93.7	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Cobalt	472	ug/L	500	ug/L	94.4	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Copper	467	ug/L	500	ug/L	93.3	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Iron	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Magnesium	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Nickel	471	ug/L	500	ug/L	94.2	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Potassium	4740	ug/L	5000	ug/L	94.7	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Selenium	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Silver	466	ug/L	500	ug/L	93.3	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Sodium	9440	ug/L	10000	ug/L	94.4	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Vanadium	473	ug/L	500	ug/L	94.5	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Zinc	469	ug/L	500	ug/L	93.9	90.0 – 110.0	P	11-FEB-10 17:27	021110B-1
	Thallium	53.7	ug/L	50	ug/L	107.4	90.0 – 110.0	MS	13-FEB-10 16:38	100213-4
	Uranium	54.3	ug/L	50	ug/L	108.6	90.0 – 110.0	MS	13-FEB-10 19:22	100213-2
CCV07	Aluminum	4800	ug/L	5000	ug/L	96	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Arsenic	479	ug/L	500	ug/L	95.7	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Barium	484	ug/L	500	ug/L	96.9	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Calcium	4810	ug/L	5000	ug/L	96.2	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Chromium	483	ug/L	500	ug/L	96.7	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Cobalt	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Copper	480	ug/L	500	ug/L	96	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Iron	4840	ug/L	5000	ug/L	96.8	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Magnesium	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Nickel	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Potassium	4790	ug/L	5000	ug/L	95.7	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1
	Selenium	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	11-FEB-10 18:03	021110B-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,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>
CCV08	Silver	479	ug/L	500	ug/L	95.8	90.0 - 110.0	P	11-FEB-10 18:03	021110B-1
	Sodium	9540	ug/L	10000	ug/L	95.4	90.0 - 110.0	P	11-FEB-10 18:03	021110B-1
	Vanadium	487	ug/L	500	ug/L	97.3	90.0 - 110.0	P	11-FEB-10 18:03	021110B-1
	Zinc	483	ug/L	500	ug/L	96.7	90.0 - 110.0	P	11-FEB-10 18:03	021110B-1
	Thallium	52.5	ug/L	50	ug/L	105.1	90.0 - 110.0	MS	13-FEB-10 17:19	100213-4
	Uranium	54.6	ug/L	50	ug/L	109.2	90.0 - 110.0	MS	13-FEB-10 19:38	100213-2
	Thallium	52.3	ug/L	50	ug/L	104.5	90.0 - 110.0	MS	13-FEB-10 18:00	100213-4
	Uranium	54.6	ug/L	50	ug/L	109.2	90.0 - 110.0	MS	13-FEB-10 19:53	100213-2

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS4,ICPMS5,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	.228	ug/L	.2	ug/L	113.9	70.0 - 130.0	AV	04-FEB-10 09:31	020410W1-6
	Antimony	3.58	ug/L	3	ug/L	119.5	70.0 - 130.0	MS	13-FEB-10 00:33	100212-3
	Beryllium	.477	ug/L	.5	ug/L	95.4	70.0 - 130.0	MS	13-FEB-10 00:33	100212-3
	Cadmium	1.09	ug/L	1	ug/L	109.3	70.0 - 130.0	MS	13-FEB-10 00:33	100212-3
	Thallium	1.24	ug/L	1	ug/L	123.5	70.0 - 130.0	MS	13-FEB-10 13:09	100213-4
	Uranium	.247	ug/L	.2	ug/L	123.5	70.0 - 130.0	MS	13-FEB-10 18:03	100213-2
	Lead	2.59	ug/L	2	ug/L	129.3	70.0 - 130.0	MS	13-FEB-10 19:58	100213-5
	Manganese	6.1	ug/L	5	ug/L	121.9	70.0 - 130.0	MS	13-FEB-10 19:58	100213-5
PQL01										
	Aluminum	201	ug/L	200	ug/L	100.5	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Iron	119	ug/L	100	ug/L	118.9	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Magnesium	304	ug/L	300	ug/L	101.5	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Nickel	4.56	ug/L	5	ug/L	91.2	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Potassium	185	ug/L	150	ug/L	123.1	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Silver	5.04	ug/L	5	ug/L	100.7	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Sodium	294	ug/L	300	ug/L	98	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Arsenic	28.6	ug/L	30	ug/L	95.5	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Barium	4.75	ug/L	5	ug/L	95	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Chromium	4.99	ug/L	5	ug/L	99.9	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Cobalt	4.65	ug/L	5	ug/L	93.1	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Copper	9.86	ug/L	10	ug/L	98.6	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Vanadium	5.04	ug/L	5	ug/L	100.9	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Zinc	9.38	ug/L	10	ug/L	93.8	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Calcium	200	ug/L	200	ug/L	100	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1
	Selenium	28.7	ug/L	30	ug/L	95.7	70.0 - 130.0	P	11-FEB-10 14:33	021110B-1

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1386-1

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	0.066	+/-2	U	0.066	0.2	LIQ	AV	04-FEB-10 09:29	020410W1-6
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 14:30	021110B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 14:30	021110B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	11-FEB-10 14:30	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 14:30	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	11-FEB-10 14:30	021110B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	11-FEB-10 14:30	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 14:30	021110B-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-FEB-10 00:27	100212-3
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	13-FEB-10 00:27	100212-3
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	13-FEB-10 00:27	100212-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 13:05	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 18:01	100213-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	13-FEB-10 19:56	100213-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	13-FEB-10 19:56	100213-5
CCB01	Mercury	0.09	+/-2	J	0.066	0.2	LIQ	AV	04-FEB-10 09:35	020410W1-6
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 14:53	021110B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 14:53	021110B-1
	Chromium	1.23	+/-5	J	1.0	5.0	LIQ	P	11-FEB-10 14:53	021110B-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386-1

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	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Iron	39.3	+/-100	J	30.0	100	LIQ	P	11-FEB-10 14:53	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 14:53	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Potassium	77.71	+/-150	J	50.0	150	LIQ	P	11-FEB-10 14:53	021110B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	11-FEB-10 14:53	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 14:53	021110B-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-FEB-10 00:58	100212-3
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	13-FEB-10 00:58	100212-3
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	13-FEB-10 00:58	100212-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 13:27	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 18:09	100213-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	13-FEB-10 20:05	100213-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	13-FEB-10 20:05	100213-5
<b>CCB02</b>	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	04-FEB-10 09:59	020410W1-6
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 15:19	021110B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 15:19	021110B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	11-FEB-10 15:19	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 15:19	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Potassium	56.33	+/-150	J	50.0	150	LIQ	P	11-FEB-10 15:19	021110B-1

**Metals**  
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**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386-1

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>
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	11-FEB-10 15:19	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 15:19	021110B-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-FEB-10 01:53	100212-3
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	13-FEB-10 01:53	100212-3
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	13-FEB-10 01:53	100212-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 14:08	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 18:23	100213-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	13-FEB-10 20:26	100213-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	13-FEB-10 20:26	100213-5
<b>CCB03</b>	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	04-FEB-10 10:23	020410W1-6
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 16:01	021110B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 16:01	021110B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	11-FEB-10 16:01	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 16:01	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	11-FEB-10 16:01	021110B-1
	Selenium	-5.29	+/-30	J	5.0	30.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Sodium	186.28	+/-300	J	100	300	LIQ	P	11-FEB-10 16:01	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 16:01	021110B-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-FEB-10 02:36	100212-3

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386-1

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>
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	13-FEB-10 02:36	100212-3
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	13-FEB-10 02:36	100212-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 14:44	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 18:38	100213-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	13-FEB-10 20:35	100213-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	13-FEB-10 20:35	100213-5
<b>CCB04</b>	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	04-FEB-10 10:47	020410W1-6
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 16:41	021110B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 16:41	021110B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	11-FEB-10 16:41	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 16:41	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	11-FEB-10 16:41	021110B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Sodium	121.62	+/-300	J	100	300	LIQ	P	11-FEB-10 16:41	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 16:41	021110B-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-FEB-10 03:31	100212-3
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	13-FEB-10 03:31	100212-3
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	13-FEB-10 03:31	100212-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 15:25	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 18:54	100213-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	13-FEB-10 20:53	100213-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	13-FEB-10 20:53	100213-5

SW846

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386-1

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>
CCB05	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 17:02	021110B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 17:02	021110B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	11-FEB-10 17:02	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 17:02	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	11-FEB-10 17:02	021110B-1
	Selenium	-6.0	+/-30	J	5.0	30.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	11-FEB-10 17:02	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 17:02	021110B-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	13-FEB-10 04:27	100212-3
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	13-FEB-10 04:27	100212-3
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	13-FEB-10 04:27	100212-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 16:06	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 19:08	100213-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	13-FEB-10 21:00	100213-5
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	13-FEB-10 21:00	100213-5
CCB06	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 17:31	021110B-1
	Arsenic	-8.04	+/-30	J	5.0	30.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 17:31	021110B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 17:31	021110B-1

SW846



**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1386-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ng/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>
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	11-FEB-10 17:31	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 17:31	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	11-FEB-10 17:31	021110B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	11-FEB-10 17:31	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 17:31	021110B-1
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 16:42	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 19:23	100213-2
<b>CCB07</b>	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	11-FEB-10 18:07	021110B-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	11-FEB-10 18:07	021110B-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	11-FEB-10 18:07	021110B-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	11-FEB-10 18:07	021110B-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	11-FEB-10 18:07	021110B-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Sodium	100	+/-300	U	100	300	LIQ	P	11-FEB-10 18:07	021110B-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	11-FEB-10 18:07	021110B-1
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 17:23	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 19:39	100213-2

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1386-1

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>
CCB08	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	13-FEB-10 18:04	100213-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	13-FEB-10 19:55	100213-2

**METALS**  
**-3b-**  
**PREPARATION BLANK SUMMARY**

SDG NO. 10-1386-1

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>
1202024735	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	-5.55	ug/L	+/-30	J	P	5	30
	Silver	1	ug/L	+/-5	U	P	1	5
	Sodium	100	ug/L	+/-300	U	P	100	300
	Aluminum	68	ug/L	+/-200	U	P	68	200
	Barium	1	ug/L	+/-5	U	P	1	5
	Calcium	50	ug/L	+/-200	U	P	50	200
	Iron	30	ug/L	+/-100	U	P	30	100
	Copper	3	ug/L	+/-10	U	P	3	10
	Cobalt	1	ug/L	+/-5	U	P	1	5
	Chromium	1	ug/L	+/-5	U	P	1	5
	Arsenic	-5.09	ug/L	+/-30	J	P	5	30
	Vanadium	1	ug/L	+/-5	U	P	1	5
	Zinc	3.3	ug/L	+/-10	U	P	3.3	10
1202024740	Antimony	1	ug/L	+/-3	U	MS	1	3
	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
	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/-1	U	MS	0.11	1
1202024802	Mercury	-0.0714	ug/L	+/-0.2	J	AV	0.066	0.2

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386-1

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	492000	ug/L	500000	ug/L	98.5	80.0 - 120.0	11-FEB-10 14:37	021110B-1
	Arsenic	-47.9	ug/L					11-FEB-10 14:37	021110B-1
	Barium	7.7	ug/L					11-FEB-10 14:37	021110B-1
	Calcium	469000	ug/L	500000	ug/L	93.9	80.0 - 120.0	11-FEB-10 14:37	021110B-1
	Chromium	-0.331	ug/L					11-FEB-10 14:37	021110B-1
	Cobalt	1.88	ug/L					11-FEB-10 14:37	021110B-1
	Copper	-2.75	ug/L					11-FEB-10 14:37	021110B-1
	Iron	180000	ug/L	200000	ug/L	90.2	80.0 - 120.0	11-FEB-10 14:37	021110B-1
	Magnesium	469000	ug/L	500000	ug/L	93.8	80.0 - 120.0	11-FEB-10 14:37	021110B-1
	Nickel	-5.64	ug/L					11-FEB-10 14:37	021110B-1
	Potassium	-12.0	ug/L					11-FEB-10 14:37	021110B-1
	Selenium	-29.8	ug/L					11-FEB-10 14:37	021110B-1
	Silver	-8.02	ug/L					11-FEB-10 14:37	021110B-1
	Sodium	25.0	ug/L					11-FEB-10 14:37	021110B-1
	Vanadium	0.707	ug/L					11-FEB-10 14:37	021110B-1
	Zinc	-9.27	ug/L					11-FEB-10 14:37	021110B-1
<b>ICSAB01</b>									
	Aluminum	493000	ug/L	500000	ug/L	98.5	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Arsenic	460	ug/L	500	ug/L	92	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Barium	479	ug/L	500	ug/L	95.8	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Calcium	467000	ug/L	500000	ug/L	93.5	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Chromium	467	ug/L	500	ug/L	93.3	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Cobalt	417	ug/L	500	ug/L	83.3	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Copper	516	ug/L	500	ug/L	103	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Iron	181000	ug/L	200000	ug/L	90.5	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Magnesium	472000	ug/L	500000	ug/L	94.3	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Nickel	412	ug/L	500	ug/L	82.4	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Potassium	4870	ug/L	5000	ug/L	97.4	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Selenium	2240	ug/L	2500	ug/L	89.5	80.0 - 120.0	11-FEB-10 14:40	021110B-1

## METALS

-4-

## Interference Check Sample

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

ICS:

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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>
	Silver	244	ug/L	250	ug/L	97.7	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Sodium	4900	ug/L	5000	ug/L	98.1	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Vanadium	496	ug/L	500	ug/L	99.1	80.0 - 120.0	11-FEB-10 14:40	021110B-1
	Zinc	442	ug/L	500	ug/L	88.4	80.0 - 120.0	11-FEB-10 14:40	021110B-1

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

<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					13-FEB-10 18:04	100213-2
ICSAB01	Uranium	19.7	ug/L	20	ug/L	98.5	80.0 - 120.0	13-FEB-10 18:06	100213-2

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386-1

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>
<b>ICSA01</b>									
	Antimony	0.155	ug/L					13-FEB-10 00:40	100212-3
	Beryllium	0.081	ug/L					13-FEB-10 00:40	100212-3
	Cadmium	0.624	ug/L					13-FEB-10 00:40	100212-3
<b>ICSAB01</b>									
	Antimony	22.0	ug/L	20	ug/L	110	80.0 - 120.0	13-FEB-10 00:46	100212-3
	Beryllium	17.5	ug/L	20	ug/L	87.3	80.0 - 120.0	13-FEB-10 00:46	100212-3
	Cadmium	19.8	ug/L	20.44	ug/L	97.1	80.0 - 120.0	13-FEB-10 00:46	100212-3

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386-1

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	Thallium	-0.031	ug/L					13-FEB-10 13:14	100213-4
ICSAB01	Thallium	21.9	ug/L	20	ug/L	110	80.0 - 120.0	13-FEB-10 13:18	100213-4



**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1386-1

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	Lead	0.242	ug/L					13-FEB-10 20:00	100213-5
	Manganese	6.11	ug/L					13-FEB-10 20:00	100213-5
ICSAB01	Lead	22.3	ug/L	20.19	ug/L	110	80.0 - 120.0	13-FEB-10 20:02	100213-5
	Manganese	27.7	ug/L	25.8	ug/L	107	80.0 - 120.0	13-FEB-10 20:02	100213-5

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1386-1 Client ID: RE15-10-8074S

Contract: LANL01004 Level: Low

Matrix: WATER % Solids:

Sample ID: 245392001 Spike ID: 1202024738

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Sodium	ug/L	75-125	4840		162	J	5000	93.6		P
Vanadium	ug/L	75-125	480		1	U	500	95.9		P
Aluminum	ug/L	75-125	4730		68	U	5000	94.4		P
Arsenic	ug/L	75-125	483		5	U	500	96.6		P
Barium	ug/L	75-125	479		1	U	500	95.6		P
Calcium	ug/L	75-125	4710		50	U	5000	93.3		P
Chromium	ug/L	75-125	475		1	U	500	94.9		P
Cobalt	ug/L	75-125	468		1	U	500	93.6		P
Copper	ug/L	75-125	475		3	U	500	95.1		P
Iron	ug/L	75-125	4750		30	U	5000	94.7		P
Magnesium	ug/L	75-125	4810		85	U	5000	95.7		P
Nickel	ug/L	75-125	477		1.5	U	500	95.4		P
Potassium	ug/L	75-125	4880		197		5000	93.6		P
Selenium	ug/L	75-125	467		5	U	500	93.5		P
Silver	ug/L	75-125	472		1	U	500	94.2		P
Zinc	ug/L	75-125	464		3.3	U	500	92.5		P

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1386-1

Client ID RE15-10-8444S

Contract: LANL01004

Level: Low

Matrix: WATER

% Solids:

Sample ID: 245382001

Spike ID: 1202024743

<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	195		1	U	200	97.5		MS
Beryllium	ug/L	75-125	42		0.1	U	50	83.9		MS
Cadmium	ug/L	75-125	10.3		0.11	U	10	103		MS
Lead	ug/L	75-125	44.7		0.5	U	40	112		MS
Manganese	ug/L	75-125	50.5		1	U	50	99.9		MS
Thallium	ug/L	75-125	80.6		0.3	U	100	80.6		MS
Uranium	ug/L	75-125	56.2		0.05	U	50	112		MS

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-1386-1 Client ID RE15-10-8074S

Contract: LANL01004 Level: Low

Matrix: WATER % Solids:

Sample ID: 245392001 Spike ID: 1202024805

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	2.16		0.066	U	2	108		AV

**Metals**  
**-6-**  
**Duplicate Sample Summary**

SDG No.: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-8074D

Sample ID: 245392001

Duplicate ID: 1202024737

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		1.31 J		200		P
Cobalt	ug/L		1 U		1 U				P
Copper	ug/L		3 U		3 U				P
Iron	ug/L		30 U		30.3 J		200		P
Magnesium	ug/L		85 U		85 U				P
Nickel	ug/L		1.5 U		1.5 U				P
Potassium	ug/L	+/-150	197		195		1.01		P
Selenium	ug/L		5 U		5 U				P
Silver	ug/L		1 U		1 U				P
Sodium	ug/L	+/-300	162 J		167 J		3.3		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.: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-8444D

Sample ID: 245382001

Duplicate ID: 1202024742

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
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.: 10-1386-1

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-8074D

Sample ID: 245392001

Duplicate ID: 1202024804

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**  
**-7-**  
**Laboratory Control Sample Summary**

SDG NO. 10-1386-1

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>
1202024736								
	Arsenic	ug/L	500	490		98	80-120	P
	Barium	ug/L	500	485		97	80-120	P
	Calcium	ug/L	5000	4780		95.5	80-120	P
	Chromium	ug/L	500	480		96.1	80-120	P
	Cobalt	ug/L	500	475		95.1	80-120	P
	Copper	ug/L	500	479		95.8	80-120	P
	Iron	ug/L	5000	4830		96.5	80-120	P
	Magnesium	ug/L	5000	4870		97.4	80-120	P
	Nickel	ug/L	500	485		97	80-120	P
	Aluminum	ug/L	5000	4810		96.2	80-120	P
	Potassium	ug/L	5000	4770		95.4	80-120	P
	Selenium	ug/L	500	467		93.5	80-120	P
	Silver	ug/L	500	476		95.3	80-120	P
	Sodium	ug/L	5000	4840		96.7	80-120	P
	Vanadium	ug/L	500	485		97	80-120	P
	Zinc	ug/L	500	472		94.4	80-120	P



## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1386-1

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>
1202024741								
	Antimony	ug/L	50	53.4		107	80-120	MS
	Beryllium	ug/L	50	41.8		83.5	80-120	MS
	Cadmium	ug/L	50	50.1		100	80-120	MS
	Lead	ug/L	50	55.2		110	80-120	MS
	Manganese	ug/L	50	53.4		107	80-120	MS
	Thallium	ug/L	50	49.8		99.5	80-120	MS
	Uranium	ug/L	50	53.9		108	80-120	MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1386-1

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>
1202024803	Mercury	ug/L	2	2.09		104	80-120	AV

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1386-1 Client ID: RE15-10-8074L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 245392001 Serial Dilution ID: 1202024739

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	197		250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	162	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. 10-1386-1 Client ID: RE15-10-8074L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 245392001 Serial Dilution ID: 1202024744

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	1.75	J	2.5	U	100			MS
Manganese	1.87	J	5	U	100			MS
Thallium	.3	U	5.25					MS
Uranium	.688		.735	J	6.83			MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1386-1 Client ID RE15-10-8074L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 245392001 Serial Dilution ID: 1202024811

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

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**METALS**  
**-13-**  
**SAMPLE PREPARATION SUMMARY**

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SDG No: 10-1386-1

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	945378						
1202024735	MB for batch 945378	MB	W	03-FEB-10	50mL	50mL	
1202024736	LCS for batch 945378	LCS	W	03-FEB-10	50mL	50mL	
1202024738	RE15-10-8074S	MS	W	03-FEB-10	50mL	50mL	
1202024737	RE15-10-8074D	DUP	W	03-FEB-10	50mL	50mL	
245390001	RE14-10-7693	SAMPLE	W	03-FEB-10	50mL	50mL	

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SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1386-1

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 945380							
1202024740	MB for batch 945380	MB	W	03-FEB-10	50mL	50mL	
1202024741	LCS for batch 945380	LCS	W	03-FEB-10	50mL	50mL	
1202024743	RE15-10-8444S	MS	W	03-FEB-10	50mL	50mL	
1202024742	RE15-10-8444D	DUP	W	03-FEB-10	50mL	50mL	
245390001	RE14-10-7693	SAMPLE	W	03-FEB-10	50mL	50mL	

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SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1386-1

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 945413							
1202024802	MB for batch 945413	MB	W	03-FEB-10	20mL	20mL	
1202024803	LCS for batch 945413	LCS	W	03-FEB-10	20mL	20mL	
1202024805	RE15-10-8074S	MS	W	03-FEB-10	20mL	20mL	
1202024804	RE15-10-8074D	DUP	W	03-FEB-10	20mL	20mL	
245390001	RE14-10-7693	SAMPLE	W	03-FEB-10	20mL	20mL	

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SW846



**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 13-FEB-10

End Date: 13-FEB-10

Client Sdg: 10-1386-1

Method MS

Data File: 100212-3

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	00:03		X			X	X																		
S10	1	00:09		X			X	X																		
S100	1	00:15		X			X	X																		
ICV01	1	00:21		X			X	X																		
ICB01	1	00:27		X			X	X																		
CRDL01	1	00:33		X			X	X																		
ICSA01	1	00:40		X			X	X																		
ICSAB01	1	00:46		X			X	X																		
CCV01	1	00:52		X			X	X																		
CCB01	1	00:58		X			X	X																		
ZZZZZ	2	01:04																								
ZZZZZ	40	01:10																								
ZZZZZ	2	01:16																								
ZZZZZ	2	01:22																								
ZZZZZ	2	01:28																								
ZZZZZ	2	01:35																								
ZZZZZ	10	01:41																								
CCV02	1	01:47		X			X	X																		
CCB02	1	01:53		X			X	X																		
ZZZZZ	1	01:59																								
ZZZZZ	1	02:05																								
ZZZZZ	1	02:11																								
ZZZZZ	1	02:18																								
ZZZZZ	5	02:24																								
CCV03	1	02:30		X			X	X																		
CCB03	1	02:36		X			X	X																		
1202024740	1	02:42		X			X	X																		
1202024741	1	02:48		X			X	X																		
ZZZZZ	1	02:54																								
ZZZZZ	1	03:01																								
ZZZZZ	1	03:07																								
ZZZZZ	1	03:13																								
ZZZZZ	1	03:19																								
CCV04	1	03:25		X			X	X																		
CCB04	1	03:31		X			X	X																		
ZZZZZ	1	03:38																								
245390001	1	03:44		X			X	X																		
ZZZZZ	1	03:50																								
1202024742	1	03:56		X			X	X																		
1202024743	1	04:02		X			X	X																		

**Metals**  
**-14-**  
**Analysis Run Log**

[illegible]

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 13-FEB-10

End Date: 13-FEB-10

Client Sdg: 10-1386-1

Method MS

Data File: 100213-4

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	12:47																					X			
S10	1	12:52																					X			
S100	1	12:56																					X			
ICV01	1	13:00																					X			
ICB01	1	13:05																					X			
CRDL01	1	13:09																					X			
ICSA01	1	13:14																					X			
ICSAB01	1	13:18																					X			
CCV01	1	13:23																					X			
CCB01	1	13:27																					X			
ZZZZZZ	2	13:32																								
ZZZZZZ	40	13:37																								
ZZZZZZ	2	13:41																								
ZZZZZZ	2	13:46																								
ZZZZZZ	2	13:50																								
ZZZZZZ	2	13:55																								
ZZZZZZ	10	13:59																								
CCV02	1	14:04																					X			
CCB02	1	14:08																					X			
ZZZZZZ	2	14:13																								
ZZZZZZ	2	14:17																								
ZZZZZZ	2	14:22																								
ZZZZZZ	2	14:26																								
ZZZZZZ	2	14:31																								
ZZZZZZ	2	14:35																								
CCV03	1	14:40																					X			
CCB03	1	14:44																					X			
ZZZZZZ	2	14:49																								
ZZZZZZ	2	14:53																								
ZZZZZZ	2	14:58																								
ZZZZZZ	2	15:02																								
ZZZZZZ	2	15:07																								
ZZZZZZ	2	15:11																								
ZZZZZZ	2	15:16																								
CCV04	1	15:20																					X			
CCB04	1	15:25																					X			
ZZZZZZ	2	15:29																								
ZZZZZZ	40	15:34																								
ZZZZZZ	2	15:39																								
ZZZZZZ	2	15:43																								

**Metals**  
**-14-**  
**Analysis Run Log**

[illegible]

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 13-FEB-10

End Date: 13-FEB-10

Client Sdg: 10-1386-1

Method MS

Data File: 100213-5

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	19:49												X	X											
S10	1	19:50												X	X											
S100	1	19:52												X	X											
ICV01	1	19:54												X	X											
ICB01	1	19:56												X	X											
CRDL01	1	19:58												X	X											
ICSA01	1	20:00												X	X											
ICSAB01	1	20:02												X	X											
CCV01	1	20:03												X	X											
CCB01	1	20:05												X	X											
ZZZZZZ	1	20:07																								
ZZZZZZ	1	20:09																								
ZZZZZZ	1	20:15																								
ZZZZZZ	1	20:17																								
1202024740	1	20:20												X	X											
1202024741	1	20:22												X	X											
CCV02	1	20:24												X	X											
CCB02	1	20:26												X	X											
ZZZZZZ	1	20:28																								
ZZZZZZ	1	20:30																								
ZZZZZZ	1	20:32																								
CCV03	1	20:34												X	X											
CCB03	1	20:35												X	X											
ZZZZZZ	1	20:37																								
ZZZZZZ	1	20:39																								
ZZZZZZ	1	20:41																								
245390001	1	20:43												X	X											
ZZZZZZ	1	20:45																								
1202024742	1	20:47												X	X											
1202024743	1	20:49												X	X											
CCV04	1	20:51												X	X											
CCB04	1	20:53												X	X											
1202024744	5	20:55												X	X											
ZZZZZZ	1	20:57																								
CCV05	1	20:58												X	X											
CCB05	1	21:00												X	X											

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: MER536

Start Date: 04-FEB-10

End Date: 04-FEB-10

Client Sdg: 10-1386-1

Method AV

Data File: 020410W1-6

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	09:15															X									
S0.2	1	09:17															X									
S0.5	1	09:19															X									
S2.0	1	09:21															X									
S5.0	1	09:23															X									
S10	1	09:25															X									
ICV01	1	09:27															X									
ICB01	1	09:29															X									
CRDL01	1	09:31															X									
CCV01	1	09:33															X									
CCB01	1	09:35															X									
ZZZZZZ	1	09:37																								
ZZZZZZ	1	09:39																								
ZZZZZZ	1	09:41																								
ZZZZZZ	1	09:43																								
ZZZZZZ	1	09:45																								
ZZZZZZ	5	09:47																								
ZZZZZZ	1	09:49																								
ZZZZZZ	1	09:51																								
ZZZZZZ	1	09:53																								
ZZZZZZ	1	09:55																								
CCV02	1	09:57															X									
CCB02	1	09:59															X									
ZZZZZZ	1	10:01																								
ZZZZZZ	5	10:03																								
1202024802	1	10:05															X									
1202024803	1	10:07															X									
ZZZZZZ	1	10:09																								
ZZZZZZ	1	10:11																								
245390001	1	10:13															X									
ZZZZZZ	1	10:15																								
1202024804	1	10:17															X									
1202024805	1	10:19															X									
CCV03	1	10:21															X									
CCB03	1	10:23															X									
1202024811	5	10:25															X									
ZZZZZZ	1	10:27																								
ZZZZZZ	1	10:29																								
ZZZZZZ	1	10:31																								
ZZZZZZ	1	10:33																								

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time
ZZZZZZ	1	10:35
ZZZZZZ	1	10:37
ZZZZZZ	1	10:39
ZZZZZZ	5	10:41
ZZZZZZ	1	10:43
CCV04	1	10:45 X
CCB04	1	10:47 X

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 13-FEB-10

End Date: 13-FEB-10

Client Sdg: 10-1386-1

Method MS

Data File: 100213-2

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	17:54																						X		
S10	1	17:56																						X		
S100	1	17:57																						X		
ICV01	1	17:59																						X		
ICB01	1	18:01																						X		
CRDL01	1	18:03																						X		
ICSA01	1	18:04																						X		
ICSAB01	1	18:06																						X		
CCV01	1	18:08																						X		
CCB01	1	18:09																						X		
ZZZZZZ	2	18:11																								
ZZZZZZ	40	18:13																								
ZZZZZZ	2	18:14																								
ZZZZZZ	2	18:16																								
ZZZZZZ	2	18:18																								
ZZZZZZ	2	18:20																								
CCV02	1	18:21																						X		
CCB02	1	18:23																						X		
ZZZZZZ	2	18:25																								
ZZZZZZ	2	18:26																								
ZZZZZZ	2	18:28																								
ZZZZZZ	2	18:30																								
ZZZZZZ	2	18:32																								
ZZZZZZ	10	18:33																								
ZZZZZZ	2	18:35																								
CCV03	1	18:37																						X		
CCB03	1	18:38																						X		
ZZZZZZ	2	18:40																								
ZZZZZZ	40	18:42																								
ZZZZZZ	2	18:44																								
ZZZZZZ	2	18:45																								
ZZZZZZ	2	18:47																								
ZZZZZZ	2	18:49																								
ZZZZZZ	10	18:51																								
CCV04	1	18:52																						X		
CCB04	1	18:54																						X		
ZZZZZZ	2	18:56																								
ZZZZZZ	2	18:57																								
ZZZZZZ	2	18:59																								
ZZZZZZ	2	19:01																								



SW846

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 11-FEB-10

End Date: 11-FEB-10

Client Sdg: 10-1386-1

Method: P

Data File: 021110B-1

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	14:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S0.1	1	14:14			X	X				X	X	X						X	X	X	X				X	X
S0.5	1	14:17	X		X	X			X	X	X	X			X			X	X	X	X				X	X
SCAL	1	14:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S10	1	14:24	X						X				X		X							X				
ICV01	1	14:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICB01	1	14:30	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
PQL01	1	14:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSA01	1	14:37	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSAB01	1	14:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR01	1	14:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR02	1	14:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV01	1	14:49	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB01	1	14:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR03	1	15:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR04	1	15:12	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV02	1	15:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB02	1	15:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZ	1	15:23																								
ZZZZZ	1	15:26																								
ZZZZZ	1	15:30																								
ZZZZZ	1	15:34																								
ZZZZZ	1	15:38																								
ZZZZZ	5	15:42																								
ZZZZZ	1	15:45																								
ZZZZZ	1	15:49																								
ZZZZZ	1	15:53																								
CCV03	1	15:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB03	1	16:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZ	1	16:04																								
ZZZZZ	1	16:08																								
ZZZZZ	1	16:12																								
ZZZZZ	1	16:16																								
ZZZZZ	1	16:20																								
ZZZZZ	1	16:24																								
ZZZZZ	1	16:28																								
ZZZZZ	1	16:31																								
ZZZZZ	1	16:34																								
CCV04	1	16:37	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB04	1	16:41	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time																															
CCV05	1	16:58	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
CCB05	1	17:02	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
1202024735	1	17:06	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
1202024736	1	17:09	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
ZZZZZZ	1	17:13																															
1202024737	1	17:16	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
1202024738	1	17:20	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
1202024739	5	17:24	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
CCV06	1	17:27	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
CCB06	1	17:31	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
ZZZZZZ	1	17:35																															
ZZZZZZ	1	17:38																															
ZZZZZZ	1	17:42																															
ZZZZZZ	1	17:45																															
ZZZZZZ	1	17:49																															
ZZZZZZ	1	17:53																															
245390001	1	17:56	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
ZZZZZZ	1	18:00																															
CCV07	1	18:03	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X
CCB07	1	18:07	X		X	X				X	X	X	X	X		X			X	X	X	X	X			X	X	X	X			X	X

# Standards

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1386-1

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	Analyte	<u>Wavelength</u>	<u>MDL</u>	<u>RDL</u>
		<u>(nm)</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

**METALS**  
**-10-**  
**Instrument Detection Limits**

**SDG NO.** 10-1386-1

**Contract:** LANL01004

**Lab Code:** GEL

**MDL Effective Date:** 01-JUL-09

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	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY				
LIQUID	Mercury		0.066	.2

**METALS**  
**-10-**  
**Instrument Detection Limits**

SDG NO. 10-1386-1

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: GEL

GEL Job No: 10-1386-1

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: **10-1386-1**

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: GEL

GEL Job No: 10-1386-1

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-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1386-1

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: GEL

GEL Job No: 10-1386-1

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

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**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1386-1

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. 10-1386-1

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS5

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Lead	1000	5000	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
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

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1386-1

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS4

<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

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**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1386-1

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA1

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<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

## =====

## Analysis Begun

Start Time: 2/11/2010 14:10:46

Plasma On Time: 2/8/2010 03:37:33

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\021110.sif

Batch ID:

Results Data Set: 021110B

Results Library: c:\pe\optima1\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 2/11/2010 14:10:48

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

## -----

## Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	54739.4	54739.4	100 %		14:11:23
1	Al 396.153Radial†	-13.9	-13.8	[0.00] µg/L		14:11:23
1	Ca 317.933Radial†	181.9	181.3	[0.00] µg/L		14:11:43
1	Fe 238.204 Radial†	15.3	15.3	[0.00] µg/L		14:11:43
1	K 766.490 Radial†	133.4	133.0	[0.00] µg/L		14:11:23
1	Mg 279.077 IEC†	7.8	7.8	[0.00] µg/L		14:11:43
1	Na 589.592 Radial†	544.1	542.5	[0.00] µg/L		14:11:23
1	Sr 421.552†	47.1	46.9	[0.00] µg/L		14:11:23
1	Sc 361.383	1911885.3	1911885.3	100.11 %		14:12:45
1	Y 371.029	1310700.1	1310700.1	100.06 %		14:12:45
1	Ag 328.068†	-547.3	-546.7	[0.00] µg/L		14:12:50
1	As 188.979†	3.5	3.5	[0.00] µg/L		14:13:11
1	B 249.677†	353.5	353.1	[0.00] µg/L		14:13:11
1	Ba 233.527†	-32.2	-32.2	[0.00] µg/L		14:13:11
1	Be 313.107†	-3446.9	-3443.2	[0.00] µg/L		14:12:50
1	Cd 226.502†	-153.7	-153.5	[0.00] µg/L		14:13:11
1	Co 228.616†	-1.3	-1.3	[0.00] µg/L		14:13:11
1	Cr 267.716†	-55.4	-55.3	[0.00] µg/L		14:12:50
1	Cu 324.752†	2504.0	2501.3	[0.00] µg/L		14:12:50
1	Mn 257.610†	-239.6	-239.4	[0.00] µg/L		14:13:11
1	Mo 202.031†	-2.8	-2.8	[0.00] µg/L		14:13:11
1	Ni 231.604†	307.9	307.6	[0.00] µg/L		14:13:11
1	P 214.914†	26.2	26.2	[0.00] µg/L		14:13:11
1	Pb 220.353†	91.7	91.6	[0.00] µg/L		14:13:11
1	S 181.975 Axial†	15.4	15.3	[0.00] µg/L		14:13:11
1	Sb 206.836†	28.4	28.4	[0.00] µg/L		14:13:11
1	Se 196.026†	16.7	16.7	[0.00] µg/L		14:13:11
1	SiO2†	1235.3	1234.0	[0.00] µg/L		14:12:50
1	Si 251.611†	309.0	308.7	[0.00] µg/L		14:13:11
1	Sn 189.927†	-0.7	-0.7	[0.00] µg/L		14:13:11
1	Ti 334.940†	89.4	89.3	[0.00] µg/L		14:12:50
1	Tl 190.801†	-23.5	-23.5	[0.00] µg/L		14:13:11
1	U 409.014†	-77.0	-76.9	[0.00] µg/L		14:12:50
1	V 292.402†	-41.9	-41.9	[0.00] µg/L		14:12:50
1	Zn 213.857†	474.5	474.0	[0.00] µg/L		14:13:11
2	Sc RADIAL	54665.4	54665.4	100 %		14:11:49
2	Al 396.153Radial†	-1.2	-1.2	[0.00] µg/L		14:11:49
2	Ca 317.933Radial†	175.4	175.1	[0.00] µg/L		14:12:09
2	Fe 238.204 Radial†	14.9	14.8	[0.00] µg/L		14:12:09
2	K 766.490 Radial†	144.1	143.8	[0.00] µg/L		14:11:49
2	Mg 279.077 IEC†	11.1	11.1	[0.00] µg/L		14:12:09
2	Na 589.592 Radial†	552.5	551.5	[0.00] µg/L		14:11:49
2	Sr 421.552†	33.2	33.1	[0.00] µg/L		14:11:49
2	Sc 361.383	1909838.0	1909838.0	100.000 %		14:13:17
2	Y 371.029	1310179.5	1310179.5	100.02 %		14:13:17
2	Ag 328.068†	-580.2	-580.2	[0.00] µg/L		14:13:23
2	As 188.979†	-0.5	-0.5	[0.00] µg/L		14:13:43

2	B 249.677†	311.8	311.8	[0.00]	µg/L	14:13:43
2	Ba 233.527†	-19.4	-19.4	[0.00]	µg/L	14:13:43
2	Be 313.107†	-3440.2	-3440.2	[0.00]	µg/L	14:13:23
2	Cd 226.502†	-136.8	-136.8	[0.00]	µg/L	14:13:43
2	Co 228.616†	-8.2	-8.2	[0.00]	µg/L	14:13:43
2	Cr 267.716†	-44.6	-44.6	[0.00]	µg/L	14:13:23
2	Cu 324.752†	2529.2	2529.2	[0.00]	µg/L	14:13:23
2	Mn 257.610†	-247.4	-247.4	[0.00]	µg/L	14:13:43
2	Mo 202.031†	-8.7	-8.7	[0.00]	µg/L	14:13:43
2	Ni 231.604†	295.5	295.5	[0.00]	µg/L	14:13:43
2	P 214.914†	27.9	27.9	[0.00]	µg/L	14:13:43
2	Pb 220.353†	98.3	98.3	[0.00]	µg/L	14:13:43
2	S 181.975 Axial†	16.8	16.8	[0.00]	µg/L	14:13:43
2	Sb 206.836†	27.6	27.6	[0.00]	µg/L	14:13:43
2	Se 196.026†	12.1	12.1	[0.00]	µg/L	14:13:43
2	SiO2†	1235.5	1235.5	[0.00]	µg/L	14:13:23
2	Si 251.611†	316.0	316.0	[0.00]	µg/L	14:13:43
2	Sn 189.927†	-2.2	-2.2	[0.00]	µg/L	14:13:43
2	Ti 334.940†	132.2	132.2	[0.00]	µg/L	14:13:23
2	Tl 190.801†	-27.5	-27.5	[0.00]	µg/L	14:13:43
2	U 409.014†	-52.6	-52.6	[0.00]	µg/L	14:13:23
2	V 292.402†	-46.9	-46.9	[0.00]	µg/L	14:13:23
2	Zn 213.857†	476.6	476.6	[0.00]	µg/L	14:13:43
3	Sc RADIAL	54318.4	54318.4	99.5 %		14:12:15
3	Al 396.153Radial†	-15.3	-15.3	[0.00]	µg/L	14:12:15
3	Ca 317.933Radial†	180.2	181.0	[0.00]	µg/L	14:12:35
3	Fe 238.204 Radial†	13.3	13.4	[0.00]	µg/L	14:12:35
3	K 766.490 Radial†	107.9	108.4	[0.00]	µg/L	14:12:15
3	Mg 279.077 IEC†	14.9	15.0	[0.00]	µg/L	14:12:35
3	Na 589.592 Radial†	529.1	531.6	[0.00]	µg/L	14:12:15
3	Sr 421.552†	38.4	38.6	[0.00]	µg/L	14:12:15
3	Sc 361.383	1907796.9	1907796.9	99.893 %		14:13:49
3	Y 371.029	1308876.2	1308876.2	99.920 %		14:13:49
3	Ag 328.068†	-566.0	-566.6	[0.00]	µg/L	14:13:55
3	As 188.979†	0.4	0.4	[0.00]	µg/L	14:14:15
3	B 249.677†	329.2	329.5	[0.00]	µg/L	14:14:15
3	Ba 233.527†	-26.4	-26.4	[0.00]	µg/L	14:14:15
3	Be 313.107†	-3434.3	-3437.9	[0.00]	µg/L	14:13:55
3	Cd 226.502†	-135.9	-136.0	[0.00]	µg/L	14:14:15
3	Co 228.616†	-17.0	-17.0	[0.00]	µg/L	14:14:15
3	Cr 267.716†	-57.1	-57.2	[0.00]	µg/L	14:13:55
3	Cu 324.752†	2425.2	2427.8	[0.00]	µg/L	14:13:55
3	Mn 257.610†	-245.3	-245.6	[0.00]	µg/L	14:14:15
3	Mo 202.031†	-11.1	-11.1	[0.00]	µg/L	14:14:15
3	Ni 231.604†	303.1	303.5	[0.00]	µg/L	14:14:15
3	P 214.914†	28.8	28.8	[0.00]	µg/L	14:14:15
3	Pb 220.353†	101.6	101.7	[0.00]	µg/L	14:14:15
3	S 181.975 Axial†	12.3	12.3	[0.00]	µg/L	14:14:15
3	Sb 206.836†	24.9	25.0	[0.00]	µg/L	14:14:15
3	Se 196.026†	18.7	18.7	[0.00]	µg/L	14:14:15
3	SiO2†	1279.2	1280.6	[0.00]	µg/L	14:13:55
3	Si 251.611†	313.6	313.9	[0.00]	µg/L	14:14:15
3	Sn 189.927†	0.3	0.3	[0.00]	µg/L	14:14:15
3	Ti 334.940†	126.8	126.9	[0.00]	µg/L	14:13:55
3	Tl 190.801†	-21.9	-21.9	[0.00]	µg/L	14:14:15
3	U 409.014†	-31.2	-31.3	[0.00]	µg/L	14:13:55
3	V 292.402†	-43.8	-43.9	[0.00]	µg/L	14:13:55
3	Zn 213.857†	475.5	476.0	[0.00]	µg/L	14:14:15

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Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1909840.1	2044.21	0.11%	100.00 %
Sc RADIAL	54574.4	224.80	0.41%	100 %
Y 371.029	1309918.6	939.52	0.07%	100.00 %
Ag 328.068†	-564.5	16.85	2.98%	[0.00] µg/L
Al 396.153Radial†	-10.1	7.73	76.30%	[0.00] µg/L
As 188.979†	1.1	2.09	182.38%	[0.00] µg/L
B 249.677†	331.5	20.73	6.25%	[0.00] µg/L
Ba 233.527†	-26.0	6.39	24.57%	[0.00] µg/L

Be 313.107†	-3440.4	2.66	0.08%	[0.00]	µg/L
Ca 317.933Radial†	179.2	3.51	1.96%	[0.00]	µg/L
Cd 226.502†	-142.1	9.89	6.96%	[0.00]	µg/L
Co 228.616†	-8.8	7.85	88.83%	[0.00]	µg/L
Cr 267.716†	-52.4	6.82	13.02%	[0.00]	µg/L
Cu 324.752†	2486.1	52.42	2.11%	[0.00]	µg/L
Fe 238.204 Radial†	14.5	1.00	6.90%	[0.00]	µg/L
K 766.490 Radial†	128.4	18.15	14.13%	[0.00]	µg/L
Mg 279.077 IEC†	11.3	3.62	32.14%	[0.00]	µg/L
Mn 257.610†	-244.1	4.19	1.72%	[0.00]	µg/L
Mo 202.031†	-7.5	4.31	57.15%	[0.00]	µg/L
Na 589.592 Radial†	541.9	9.97	1.84%	[0.00]	µg/L
Ni 231.604†	302.2	6.13	2.03%	[0.00]	µg/L
P 214.914†	27.6	1.32	4.77%	[0.00]	µg/L
Pb 220.353†	97.2	5.13	5.27%	[0.00]	µg/L
S 181.975 Axial†	14.8	2.33	15.71%	[0.00]	µg/L
Sb 206.836†	27.0	1.78	6.62%	[0.00]	µg/L
Se 196.026†	15.8	3.37	21.27%	[0.00]	µg/L
SiO2†	1250.0	26.45	2.12%	[0.00]	µg/L
Si 251.611†	312.9	3.77	1.21%	[0.00]	µg/L
Sn 189.927†	-0.9	1.29	148.06%	[0.00]	µg/L
Sr 421.552†	39.6	6.94	17.54%	[0.00]	µg/L
Ti 334.940†	116.1	23.40	20.15%	[0.00]	µg/L
Tl 190.801†	-24.3	2.88	11.85%	[0.00]	µg/L
U 409.014†	-53.6	22.84	42.60%	[0.00]	µg/L
V 292.402†	-44.2	2.52	5.69%	[0.00]	µg/L
Zn 213.857†	475.5	1.38	0.29%	[0.00]	µg/L

Sequence No.: 2  
 Sample ID: S0.1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 2  
 Date Collected: 2/11/2010 14:14:25  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Analysis Time
1	Sc RADIAL	55015.9	55015.9	101 %	14:15:00
1	K 766.490 Radial†	1529.6	1388.9	[1000] µg/L	14:15:00
1	Sr 421.552†	9551.7	9435.5	[100] µg/L	14:15:00
1	Sc 361.383	1906987.6	1906987.6	99.851 %	14:15:21
1	Y 371.029	1308080.3	1308080.3	99.860 %	14:15:21
1	Ag 328.068†	12337.2	12920.2	[100] µg/L	14:15:27
1	As 188.979†	60.2	59.1	[100] µg/L	14:15:48
1	B 249.677†	2597.7	2270.1	[100] µg/L	14:15:27
1	Ba 233.527†	3962.5	3994.4	[100] µg/L	14:15:27
1	Be 313.107†	151975.4	155643.2	[100] µg/L	14:15:21
1	Cd 226.502†	3678.8	3826.5	[100] µg/L	14:15:27
1	Co 228.616†	2095.6	2107.6	[100] µg/L	14:15:48
1	Cr 267.716†	4700.6	4760.0	[100] µg/L	14:15:27
1	Cu 324.752†	17516.6	15056.7	[100] µg/L	14:15:27
1	Mn 257.610†	30035.0	30324.0	[100] µg/L	14:15:27
1	Mo 202.031†	993.1	1002.1	[100] µg/L	14:15:48
1	Ni 231.604†	2238.0	1939.1	[100] µg/L	14:15:27
1	P 214.914†	275.5	248.3	[500] µg/L	14:15:48
1	Pb 220.353†	495.9	399.5	[100] µg/L	14:15:48
1	S 181.975 Axial†	61.0	46.2	[200] µg/L	14:15:48
1	Sb 206.836†	127.3	100.5	[100] µg/L	14:15:48
1	Se 196.026†	83.6	67.8	[100] µg/L	14:15:48
1	SiO2†	6362.3	5121.8	[1069.5] µg/L	14:15:27
1	Si 251.611†	6526.8	6223.6	[500] µg/L	14:15:27
1	Sn 189.927†	236.7	237.9	[100] µg/L	14:15:48
1	Ti 334.940†	41818.8	41765.2	[100] µg/L	14:15:27
1	Tl 190.801†	52.7	77.0	[100] µg/L	14:15:48
1	U 409.014†	1125.7	1181.0	[100] µg/L	14:15:27
1	V 292.402†	9619.3	9677.9	[100] µg/L	14:15:27
1	Zn 213.857†	4700.1	4231.6	[100] µg/L	14:15:27
2	Sc RADIAL	55171.2	55171.2	101 %	14:15:05
2	K 766.490 Radial†	1577.1	1431.6	[1000] µg/L	14:15:05
2	Sr 421.552†	9725.8	9581.1	[100] µg/L	14:15:05
2	Sc 361.383	1919566.1	1919566.1	100.51 %	14:15:54
2	Y 371.029	1316225.3	1316225.3	100.48 %	14:15:54
2	Ag 328.068†	12296.8	12799.1	[100] µg/L	14:16:00
2	As 188.979†	55.3	53.9	[100] µg/L	14:16:20
2	B 249.677†	2620.3	2275.6	[100] µg/L	14:16:00
2	Ba 233.527†	3925.8	3931.9	[100] µg/L	14:16:00
2	Be 313.107†	153476.8	156139.6	[100] µg/L	14:15:54
2	Cd 226.502†	3613.9	3737.7	[100] µg/L	14:16:00
2	Co 228.616†	2078.6	2076.9	[100] µg/L	14:16:20
2	Cr 267.716†	4668.3	4697.0	[100] µg/L	14:16:00
2	Cu 324.752†	17487.1	14912.4	[100] µg/L	14:16:00
2	Mn 257.610†	29867.9	29960.6	[100] µg/L	14:16:00
2	Mo 202.031†	997.0	999.5	[100] µg/L	14:16:20
2	Ni 231.604†	2232.7	1919.2	[100] µg/L	14:16:00
2	P 214.914†	277.4	248.4	[500] µg/L	14:16:20
2	Pb 220.353†	494.0	394.3	[100] µg/L	14:16:20
2	S 181.975 Axial†	66.3	51.1	[200] µg/L	14:16:20
2	Sb 206.836†	134.2	106.6	[100] µg/L	14:16:20
2	Se 196.026†	81.0	64.7	[100] µg/L	14:16:20
2	SiO2†	6316.5	5034.4	[1069.5] µg/L	14:16:00
2	Si 251.611†	6524.6	6178.6	[500] µg/L	14:16:00
2	Sn 189.927†	229.9	229.6	[100] µg/L	14:16:20
2	Ti 334.940†	41713.2	41385.8	[100] µg/L	14:16:00
2	Tl 190.801†	46.9	70.9	[100] µg/L	14:16:20
2	U 409.014†	1094.4	1142.5	[100] µg/L	14:16:00
2	V 292.402†	9634.9	9630.3	[100] µg/L	14:16:00

2	Zn 213.857†	4683.2	4183.9	[100] µg/L	14:16:00
3	Sc RADIAL	54696.3	54696.3	100 %	14:15:11
3	K 766.490 Radial†	1613.5	1481.5	[1000] µg/L	14:15:11
3	Sr 421.552†	9663.0	9601.9	[100] µg/L	14:15:11
3	Sc 361.383	1914175.0	1914175.0	100.23 %	14:16:26
3	Y 371.029	1314459.8	1314459.8	100.35 %	14:16:26
3	Ag 328.068†	12311.6	12848.2	[100] µg/L	14:16:32
3	As 188.979†	52.2	51.0	[100] µg/L	14:16:53
3	B 249.677†	2607.8	2270.5	[100] µg/L	14:16:32
3	Ba 233.527†	3927.0	3944.1	[100] µg/L	14:16:32
3	Be 313.107†	152121.7	155217.6	[100] µg/L	14:16:26
3	Cd 226.502†	3649.8	3783.7	[100] µg/L	14:16:32
3	Co 228.616†	2092.3	2096.4	[100] µg/L	14:16:53
3	Cr 267.716†	4695.0	4736.7	[100] µg/L	14:16:32
3	Cu 324.752†	17403.9	14878.4	[100] µg/L	14:16:32
3	Mn 257.610†	29812.0	29988.6	[100] µg/L	14:16:32
3	Mo 202.031†	994.2	999.5	[100] µg/L	14:16:53
3	Ni 231.604†	2238.0	1930.8	[100] µg/L	14:16:32
3	P 214.914†	276.9	248.7	[500] µg/L	14:16:53
3	Pb 220.353†	496.4	398.1	[100] µg/L	14:16:53
3	S 181.975 Axial†	63.6	48.7	[200] µg/L	14:16:53
3	Sb 206.836†	131.7	104.5	[100] µg/L	14:16:53
3	Se 196.026†	85.1	69.1	[100] µg/L	14:16:53
3	SiO2†	6274.4	5010.2	[1069.5] µg/L	14:16:32
3	Si 251.611†	6506.8	6179.2	[500] µg/L	14:16:32
3	Sn 189.927†	233.2	233.5	[100] µg/L	14:16:53
3	Ti 334.940†	41628.8	41418.4	[100] µg/L	14:16:32
3	Tl 190.801†	52.0	76.1	[100] µg/L	14:16:53
3	U 409.014†	1167.9	1218.9	[100] µg/L	14:16:32
3	V 292.402†	9645.5	9667.9	[100] µg/L	14:16:32
3	Zn 213.857†	4697.5	4211.3	[100] µg/L	14:16:32

## Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1913576.2	6310.61	0.33%	100.20 %
Sc RADIAL	54961.1	242.12	0.44%	101 %
Y 371.029	1312921.8	4284.80	0.33%	100.23 %
Ag 328.068†	12855.8	60.90	0.47%	[100] µg/L
As 188.979†	54.7	4.13	7.55%	[100] µg/L
B 249.677†	2272.1	3.07	0.13%	[100] µg/L
Ba 233.527†	3956.8	33.13	0.84%	[100] µg/L
Be 313.107†	155666.8	461.42	0.30%	[100] µg/L
Cd 226.502†	3782.6	44.38	1.17%	[100] µg/L
Co 228.616†	2093.6	15.54	0.74%	[100] µg/L
Cr 267.716†	4731.2	31.87	0.67%	[100] µg/L
Cu 324.752†	14949.2	94.66	0.63%	[100] µg/L
K 766.490 Radial†	1434.0	46.37	3.23%	[1000] µg/L
Mn 257.610†	30091.1	202.22	0.67%	[100] µg/L
Mo 202.031†	1000.4	1.54	0.15%	[100] µg/L
Ni 231.604†	1929.7	10.00	0.52%	[100] µg/L
P 214.914†	248.5	0.19	0.08%	[500] µg/L
Pb 220.353†	397.3	2.68	0.67%	[100] µg/L
S 181.975 Axial†	48.7	2.45	5.03%	[200] µg/L
Sb 206.836†	103.8	3.08	2.97%	[100] µg/L
Se 196.026†	67.2	2.24	3.33%	[100] µg/L
SiO2†	5055.5	58.67	1.16%	[1069.5] µg/L
Si 251.611†	6193.8	25.84	0.42%	[500] µg/L
Sn 189.927†	233.7	4.16	1.78%	[100] µg/L
Sr 421.552†	9539.5	90.63	0.95%	[100] µg/L
Ti 334.940†	41523.1	210.28	0.51%	[100] µg/L
Tl 190.801†	74.7	3.29	4.41%	[100] µg/L
U 409.014†	1180.8	38.20	3.23%	[100] µg/L
V 292.402†	9658.7	25.07	0.26%	[100] µg/L
Zn 213.857†	4209.0	23.92	0.57%	[100] µg/L

Sequence No.: 3  
 Sample ID: S0.5  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 3  
 Date Collected: 2/11/2010 14:17:03  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	56431.2	56431.2	103	%	14:17:36
1	Al 396.153Radial†	6754.1	6542.0	[5000]	µg/L	14:17:36
1	Ca 317.933Radial†	5471.1	5111.9	[5000]	µg/L	14:17:56
1	K 766.490 Radial†	7121.7	6759.0	[5000]	µg/L	14:17:36
1	Mg 279.077 IEC†	566.8	536.8	[5000]	µg/L	14:17:56
1	Sr 421.552†	48100.9	46478.6	[500]	µg/L	14:17:36
1	Sc 361.383	1949267.7	1949267.7	102.06	%	14:18:59
1	Y 371.029	1332062.2	1332062.2	101.69	%	14:18:59
1	Ag 328.068†	62715.3	62011.3	[500]	µg/L	14:19:05
1	As 188.979†	268.2	261.6	[500]	µg/L	14:19:26
1	B 249.677†	11715.5	11147.1	[500]	µg/L	14:19:05
1	Ba 233.527†	19296.1	18931.8	[500]	µg/L	14:19:05
1	Be 313.107†	765143.4	753107.4	[500]	µg/L	14:18:59
1	Cd 226.502†	18181.3	17955.7	[500]	µg/L	14:19:05
1	Co 228.616†	10302.5	10103.0	[500]	µg/L	14:19:05
1	Cr 267.716†	23080.8	22666.4	[500]	µg/L	14:19:05
1	Cu 324.752†	74689.8	70693.0	[500]	µg/L	14:19:05
1	Mn 257.610†	147455.4	144716.9	[500]	µg/L	14:18:59
1	Mo 202.031†	4948.3	4855.8	[500]	µg/L	14:19:26
1	Ni 231.604†	9587.6	9091.5	[500]	µg/L	14:19:05
1	P 214.914†	1227.3	1174.8	[2500]	µg/L	14:19:26
1	Pb 220.353†	2024.6	1886.4	[500]	µg/L	14:19:26
1	S 181.975 Axial†	257.2	237.2	[1000]	µg/L	14:19:26
1	Sb 206.836†	565.6	527.2	[500]	µg/L	14:19:26
1	Se 196.026†	349.8	326.9	[500]	µg/L	14:19:26
1	SiO2†	26268.6	24487.3	[5347.5]	µg/L	14:19:05
1	Si 251.611†	30925.0	29986.6	[2500]	µg/L	14:19:05
1	Sn 189.927†	1150.8	1128.4	[500]	µg/L	14:19:26
1	Ti 334.940†	210237.3	205868.8	[500]	µg/L	14:18:59
1	Tl 190.801†	342.7	360.1	[500]	µg/L	14:19:26
1	U 409.014†	5574.8	5515.7	[500]	µg/L	14:19:05
1	V 292.402†	47320.5	46407.6	[500]	µg/L	14:19:05
1	Zn 213.857†	20885.0	19987.0	[500]	µg/L	14:19:05
2	Sc RADIAL	56400.3	56400.3	103	%	14:18:02
2	Al 396.153Radial†	6776.8	6567.5	[5000]	µg/L	14:18:02
2	Ca 317.933Radial†	5446.0	5090.5	[5000]	µg/L	14:18:22
2	K 766.490 Radial†	7209.5	6847.7	[5000]	µg/L	14:18:02
2	Mg 279.077 IEC†	558.9	529.5	[5000]	µg/L	14:18:22
2	Sr 421.552†	48009.1	46415.3	[500]	µg/L	14:18:02
2	Sc 361.383	1969776.8	1969776.8	103.14	%	14:19:33
2	Y 371.029	1347212.9	1347212.9	102.85	%	14:19:33
2	Ag 328.068†	63263.2	61902.7	[500]	µg/L	14:19:38
2	As 188.979†	264.1	254.9	[500]	µg/L	14:19:59
2	B 249.677†	11833.7	11142.2	[500]	µg/L	14:19:38
2	Ba 233.527†	19517.7	18949.8	[500]	µg/L	14:19:38
2	Be 313.107†	769998.9	750009.7	[500]	µg/L	14:19:33
2	Cd 226.502†	18459.9	18040.3	[500]	µg/L	14:19:38
2	Co 228.616†	10435.6	10126.9	[500]	µg/L	14:19:38
2	Cr 267.716†	23319.3	22662.1	[500]	µg/L	14:19:38
2	Cu 324.752†	75284.2	70507.3	[500]	µg/L	14:19:38
2	Mn 257.610†	148076.6	143815.0	[500]	µg/L	14:19:33
2	Mo 202.031†	4926.4	4784.1	[500]	µg/L	14:19:59
2	Ni 231.604†	9732.8	9134.4	[500]	µg/L	14:19:38
2	P 214.914†	1225.6	1160.7	[2500]	µg/L	14:19:59
2	Pb 220.353†	2028.4	1869.5	[500]	µg/L	14:19:59
2	S 181.975 Axial†	257.8	235.1	[1000]	µg/L	14:19:59
2	Sb 206.836†	552.2	508.4	[500]	µg/L	14:19:59
2	Se 196.026†	361.1	334.3	[500]	µg/L	14:19:59
2	SiO2†	26477.9	24422.2	[5347.5]	µg/L	14:19:38

2	Si 251.611†	31253.2	29989.4	[2500]	µg/L	14:19:38
2	Sn 189.927†	1150.3	1116.1	[500]	µg/L	14:19:59
2	Ti 334.940†	211105.1	204565.4	[500]	µg/L	14:19:33
2	Tl 190.801†	338.9	352.9	[500]	µg/L	14:19:59
2	U 409.014†	5592.5	5475.9	[500]	µg/L	14:19:38
2	V 292.402†	47778.9	46369.3	[500]	µg/L	14:19:38
2	Zn 213.857†	21066.0	19949.5	[500]	µg/L	14:19:38
3	Sc RADIAL	56116.0	56116.0	103	%	14:18:27
3	Al 396.153Radial†	6776.6	6600.6	[5000]	µg/L	14:18:27
3	Ca 317.933Radial†	5474.8	5145.3	[5000]	µg/L	14:18:48
3	K 766.490 Radial†	7167.4	6842.1	[5000]	µg/L	14:18:27
3	Mg 279.077 IEC†	570.0	543.0	[5000]	µg/L	14:18:48
3	Sr 421.552†	47985.8	46628.0	[500]	µg/L	14:18:27
3	Sc 361.383	1956384.8	1956384.8	102.44	%	14:20:06
3	Y 371.029	1336938.7	1336938.7	102.06	%	14:20:06
3	Ag 328.068†	58992.1	58153.2	[500]	µg/L	14:20:12
3	As 188.979†	227.0	220.5	[500]	µg/L	14:20:32
3	B 249.677†	10983.9	10391.2	[500]	µg/L	14:20:12
3	Ba 233.527†	17692.5	17297.6	[500]	µg/L	14:20:12
3	Be 313.107†	719301.4	705628.8	[500]	µg/L	14:20:06
3	Cd 226.502†	16595.4	16342.7	[500]	µg/L	14:20:12
3	Co 228.616†	9342.2	9128.8	[500]	µg/L	14:20:12
3	Cr 267.716†	20357.4	19925.5	[500]	µg/L	14:20:12
3	Cu 324.752†	68152.8	64045.2	[500]	µg/L	14:20:12
3	Mn 257.610†	138782.6	135724.9	[500]	µg/L	14:20:06
3	Mo 202.031†	4112.2	4021.9	[500]	µg/L	14:20:32
3	Ni 231.604†	8700.9	8191.7	[500]	µg/L	14:20:12
3	P 214.914†	1052.8	1000.2	[2500]	µg/L	14:20:32
3	Pb 220.353†	1780.7	1641.2	[500]	µg/L	14:20:32
3	S 181.975 Axial†	220.4	200.3	[1000]	µg/L	14:20:32
3	Sb 206.836†	483.7	445.3	[500]	µg/L	14:20:32
3	Se 196.026†	314.2	290.9	[500]	µg/L	14:20:32
3	SiO2†	24349.5	22520.2	[5347.5]	µg/L	14:20:12
3	Si 251.611†	28634.1	27640.0	[2500]	µg/L	14:20:12
3	Sn 189.927†	946.2	924.5	[500]	µg/L	14:20:32
3	Ti 334.940†	196408.6	191619.7	[500]	µg/L	14:20:06
3	Tl 190.801†	311.8	328.7	[500]	µg/L	14:20:32
3	U 409.014†	4970.2	4905.6	[500]	µg/L	14:20:12
3	V 292.402†	42533.9	41566.2	[500]	µg/L	14:20:12
3	Zn 213.857†	18957.2	18030.7	[500]	µg/L	14:20:12

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1958476.4	10413.33	0.53%	102.55	%
Sc RADIAL	56315.8	173.75	0.31%	103	%
Y 371.029	1338737.9	7733.97	0.58%	102.20	%
Ag 328.068†	60689.0	2196.81	3.62%	[500]	µg/L
Al 396.153Radial†	6570.0	29.39	0.45%	[5000]	µg/L
As 188.979†	245.7	22.07	8.99%	[500]	µg/L
B 249.677†	10893.5	435.04	3.99%	[500]	µg/L
Ba 233.527†	18393.1	948.76	5.16%	[500]	µg/L
Be 313.107†	736248.6	26562.75	3.61%	[500]	µg/L
Ca 317.933Radial†	5115.9	27.60	0.54%	[5000]	µg/L
Cd 226.502†	17446.2	956.62	5.48%	[500]	µg/L
Co 228.616†	9786.2	569.47	5.82%	[500]	µg/L
Cr 267.716†	21751.3	1581.21	7.27%	[500]	µg/L
Cu 324.752†	68415.2	3785.63	5.53%	[500]	µg/L
K 766.490 Radial†	6816.2	49.68	0.73%	[5000]	µg/L
Mg 279.077 IEC†	536.5	6.79	1.26%	[5000]	µg/L
Mn 257.610†	141419.0	4951.74	3.50%	[500]	µg/L
Mo 202.031†	4553.9	462.10	10.15%	[500]	µg/L
Ni 231.604†	8805.9	532.32	6.04%	[500]	µg/L
P 214.914†	1111.9	97.02	8.73%	[2500]	µg/L
Pb 220.353†	1799.0	136.97	7.61%	[500]	µg/L
S 181.975 Axial†	224.2	20.73	9.24%	[1000]	µg/L
Sb 206.836†	493.6	42.92	8.69%	[500]	µg/L
Se 196.026†	317.4	23.20	7.31%	[500]	µg/L
SiO2†	23809.9	1117.40	4.69%	[5347.5]	µg/L
Si 251.611†	29205.3	1355.64	4.64%	[2500]	µg/L



Sn 189.927†	1056.3	114.33	10.82%	[500]	µg/L
Sr 421.552†	46507.3	109.22	0.23%	[500]	µg/L
Ti 334.940†	200684.6	7877.46	3.93%	[500]	µg/L
Tl 190.801†	347.2	16.45	4.74%	[500]	µg/L
U 409.014†	5299.1	341.35	6.44%	[500]	µg/L
V 292.402†	44781.0	2784.22	6.22%	[500]	µg/L
Zn 213.857†	19322.4	1118.82	5.79%	[500]	µg/L

Sequence No.: 4  
 Sample ID: SCAL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 4  
 Date Collected: 2/11/2010 14:20:41  
 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	54624.1	54624.1	100 %		14:21:14
1	Al 396.153Radial†	13945.5	13943.0	[10000] µg/L		14:21:14
1	Ca 317.933Radial†	11091.0	10901.8	[10000] µg/L		14:21:34
1	Fe 238.204 Radial†	1237.7	1222.1	[10000] µg/L		14:21:34
1	K 766.490 Radial†	14553.2	14411.5	[10000] µg/L		14:21:14
1	Mg 279.077 IEC†	1145.5	1133.2	[10000] µg/L		14:21:34
1	Na 589.592 Radial†	32001.3	31430.3	[10000] µg/L		14:21:14
1	Sr 421.552†	98763.5	98634.1	[1000] µg/L		14:21:14
1	Sc 361.383	1918837.7	1918837.7	100.47 %		14:22:38
1	Y 371.029	1309873.4	1309873.4	99.997 %		14:22:38
1	Ag 328.068†	129789.4	129745.3	[1000] µg/L		14:22:44
1	As 188.979†	545.1	541.4	[1000] µg/L		14:23:05
1	B 249.677†	24100.3	23655.8	[1000] µg/L		14:22:44
1	Ba 233.527†	40021.0	39859.3	[1000] µg/L		14:22:44
1	Be 313.107†	1583359.7	1579375.6	[1000] µg/L		14:22:38
1	Cd 226.502†	37676.7	37642.1	[1000] µg/L		14:22:44
1	Co 228.616†	21224.5	21133.9	[1000] µg/L		14:22:44
1	Cr 267.716†	47864.2	47692.2	[1000] µg/L		14:22:44
1	Cu 324.752†	152208.7	149008.9	[1000] µg/L		14:22:44
1	Mn 257.610†	300264.6	299100.8	[1000] µg/L		14:22:44
1	Mo 202.031†	10059.0	10019.4	[1000] µg/L		14:23:05
1	Ni 231.604†	19417.1	19023.9	[1000] µg/L		14:22:44
1	P 214.914†	2522.7	2483.2	[5000] µg/L		14:23:05
1	Pb 220.353†	4095.0	3978.6	[1000] µg/L		14:23:05
1	S 181.975 Axial†	497.7	480.5	[2000] µg/L		14:23:05
1	Sb 206.836†	1108.7	1076.5	[1000] µg/L		14:23:05
1	Se 196.026†	705.0	685.9	[1000] µg/L		14:23:05
1	SiO2†	52879.3	51381.3	[10695] µg/L		14:22:44
1	Si 251.611†	63553.1	62942.2	[5000] µg/L		14:22:44
1	Sn 189.927†	2343.4	2333.3	[1000] µg/L		14:23:05
1	Ti 334.940†	431168.6	429030.7	[1000] µg/L		14:22:38
1	Tl 190.801†	726.4	747.3	[1000] µg/L		14:23:05
1	U 409.014†	11460.5	11460.4	[1000] µg/L		14:22:44
1	V 292.402†	98389.1	97972.0	[1000] µg/L		14:22:44
1	Zn 213.857†	42248.3	41574.6	[1000] µg/L		14:22:44
2	Sc RADIAL	55757.6	55757.6	102 %		14:21:40
2	Al 396.153Radial†	13857.6	13573.7	[10000] µg/L		14:21:40
2	Ca 317.933Radial†	11113.5	10698.5	[10000] µg/L		14:22:00
2	Fe 238.204 Radial†	1242.3	1201.4	[10000] µg/L		14:22:00
2	K 766.490 Radial†	14434.4	13999.7	[10000] µg/L		14:21:40
2	Mg 279.077 IEC†	1155.1	1119.3	[10000] µg/L		14:22:00
2	Na 589.592 Radial†	31736.9	30521.6	[10000] µg/L		14:21:40
2	Sr 421.552†	98177.9	96055.0	[1000] µg/L		14:21:40
2	Sc 361.383	1912891.8	1912891.8	100.16 %		14:23:11
2	Y 371.029	1304958.7	1304958.7	99.621 %		14:23:11
2	Ag 328.068†	130617.7	130973.8	[1000] µg/L		14:23:17
2	As 188.979†	550.1	548.1	[1000] µg/L		14:23:38
2	B 249.677†	24305.4	23935.1	[1000] µg/L		14:23:17
2	Ba 233.527†	40326.4	40288.1	[1000] µg/L		14:23:17
2	Be 313.107†	1586929.2	1587837.9	[1000] µg/L		14:23:11
2	Cd 226.502†	37959.2	38040.8	[1000] µg/L		14:23:17
2	Co 228.616†	21379.4	21354.1	[1000] µg/L		14:23:17
2	Cr 267.716†	48340.5	48315.7	[1000] µg/L		14:23:17
2	Cu 324.752†	153521.9	150790.9	[1000] µg/L		14:23:17
2	Mn 257.610†	303225.9	302986.3	[1000] µg/L		14:23:17
2	Mo 202.031†	10012.5	10004.1	[1000] µg/L		14:23:38
2	Ni 231.604†	19568.5	19235.1	[1000] µg/L		14:23:17
2	P 214.914†	2513.0	2481.4	[5000] µg/L		14:23:38
2	Pb 220.353†	4075.3	3971.6	[1000] µg/L		14:23:38

2	S 181.975 Axial†	494.3	478.7	[2000]	µg/L	14:23:38
2	Sb 206.836†	1106.5	1077.8	[1000]	µg/L	14:23:38
2	Se 196.026†	715.1	698.1	[1000]	µg/L	14:23:38
2	SiO2†	53340.3	52005.2	[10695]	µg/L	14:23:17
2	Si 251.611†	64000.9	63585.9	[5000]	µg/L	14:23:17
2	Sn 189.927†	2345.0	2342.2	[1000]	µg/L	14:23:38
2	Ti 334.940†	432325.2	431519.3	[1000]	µg/L	14:23:11
2	Tl 190.801†	726.1	749.2	[1000]	µg/L	14:23:38
2	U 409.014†	11741.1	11776.0	[1000]	µg/L	14:23:17
2	V 292.402†	99181.6	99067.5	[1000]	µg/L	14:23:17
2	Zn 213.857†	42614.4	42070.9	[1000]	µg/L	14:23:17
3	Sc RADIAL	54875.2	54875.2	101	%	14:22:06
3	Al 396.153Radial†	13886.4	13820.4	[10000]	µg/L	14:22:06
3	Ca 317.933Radial†	11079.2	10839.4	[10000]	µg/L	14:22:26
3	Fe 238.204 Radial†	1232.3	1211.0	[10000]	µg/L	14:22:26
3	K 766.490 Radial†	14321.1	14114.2	[10000]	µg/L	14:22:06
3	Mg 279.077 IEC†	1147.7	1130.1	[10000]	µg/L	14:22:26
3	Na 589.592 Radial†	31806.0	31089.8	[10000]	µg/L	14:22:06
3	Sr 421.552†	97911.9	97335.8	[1000]	µg/L	14:22:06
3	Sc 361.383	1943388.7	1943388.7	101.76	%	14:23:44
3	Y 371.029	1326037.1	1326037.1	101.23	%	14:23:44
3	Ag 328.068†	122308.3	120761.4	[1000]	µg/L	14:23:50
3	As 188.979†	468.8	459.6	[1000]	µg/L	14:24:11
3	B 249.677†	22603.8	21882.1	[1000]	µg/L	14:23:50
3	Ba 233.527†	36855.9	36245.6	[1000]	µg/L	14:23:50
3	Be 313.107†	1492194.6	1469875.4	[1000]	µg/L	14:23:44
3	Cd 226.502†	34480.3	34027.2	[1000]	µg/L	14:23:50
3	Co 228.616†	19338.4	19013.4	[1000]	µg/L	14:23:50
3	Cr 267.716†	42475.6	41794.7	[1000]	µg/L	14:23:50
3	Cu 324.752†	139121.1	134233.4	[1000]	µg/L	14:23:50
3	Mn 257.610†	272803.2	268337.9	[1000]	µg/L	14:23:50
3	Mo 202.031†	8402.4	8264.9	[1000]	µg/L	14:24:11
3	Ni 231.604†	17696.7	17089.1	[1000]	µg/L	14:23:50
3	P 214.914†	2160.3	2095.4	[5000]	µg/L	14:24:11
3	Pb 220.353†	3557.4	3398.8	[1000]	µg/L	14:24:11
3	S 181.975 Axial†	437.7	415.3	[2000]	µg/L	14:24:11
3	Sb 206.836†	957.8	914.3	[1000]	µg/L	14:24:11
3	Se 196.026†	625.8	599.2	[1000]	µg/L	14:24:11
3	SiO2†	49204.0	47104.6	[10695]	µg/L	14:23:50
3	Si 251.611†	59050.8	57718.6	[5000]	µg/L	14:23:50
3	Sn 189.927†	1920.9	1888.6	[1000]	µg/L	14:24:11
3	Ti 334.940†	404515.4	397416.1	[1000]	µg/L	14:23:44
3	Tl 190.801†	655.3	668.3	[1000]	µg/L	14:24:11
3	U 409.014†	10336.6	10211.8	[1000]	µg/L	14:23:50
3	V 292.402†	89071.2	87577.8	[1000]	µg/L	14:23:50
3	Zn 213.857†	38626.6	37484.3	[1000]	µg/L	14:23:50

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Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1925039.4	16166.66	0.84%	100.80 %
Sc RADIAL	55085.6	595.31	1.08%	101 %
Y 371.029	1313623.1	11028.13	0.84%	100.28 %
Ag 328.068†	127160.2	5575.45	4.38%	[1000] µg/L
Al 396.153Radial†	13779.0	188.09	1.37%	[10000] µg/L
As 188.979†	516.3	49.27	9.54%	[1000] µg/L
B 249.677†	23157.7	1113.46	4.81%	[1000] µg/L
Ba 233.527†	38797.7	2220.52	5.72%	[1000] µg/L
Be 313.107†	1545696.3	65799.01	4.26%	[1000] µg/L
Ca 317.933Radial†	10813.2	104.13	0.96%	[10000] µg/L
Cd 226.502†	36570.0	2211.18	6.05%	[1000] µg/L
Co 228.616†	20500.4	1292.54	6.30%	[1000] µg/L
Cr 267.716†	45934.2	3598.42	7.83%	[1000] µg/L
Cu 324.752†	144677.7	9088.85	6.28%	[1000] µg/L
Fe 238.204 Radial†	1211.5	10.32	0.85%	[10000] µg/L
K 766.490 Radial†	14175.1	212.58	1.50%	[10000] µg/L
Mg 279.077 IEC†	1127.5	7.31	0.65%	[10000] µg/L
Mn 257.610†	290141.7	18982.26	6.54%	[1000] µg/L
Mo 202.031†	9429.5	1008.55	10.70%	[1000] µg/L
Na 589.592 Radial†	31013.9	459.06	1.48%	[10000] µg/L

Ni 231.604†	18449.4	1182.78	6.41%	[1000]	µg/L
P 214.914†	2353.3	223.38	9.49%	[5000]	µg/L
Pb 220.353†	3783.0	332.79	8.80%	[1000]	µg/L
S 181.975 Axial†	458.2	37.14	8.10%	[2000]	µg/L
Sb 206.836†	1022.9	94.00	9.19%	[1000]	µg/L
Se 196.026†	661.1	53.94	8.16%	[1000]	µg/L
SiO2†	50163.7	2667.59	5.32%	[10695]	µg/L
Si 251.611†	61415.6	3217.81	5.24%	[5000]	µg/L
Sn 189.927†	2188.0	259.31	11.85%	[1000]	µg/L
Sr 421.552†	97341.6	1289.53	1.32%	[1000]	µg/L
Ti 334.940†	419322.0	19011.87	4.53%	[1000]	µg/L
Tl 190.801†	721.6	46.19	6.40%	[1000]	µg/L
U 409.014†	11149.4	827.15	7.42%	[1000]	µg/L
V 292.402†	94872.5	6341.05	6.68%	[1000]	µg/L
Zn 213.857†	40376.6	2517.08	6.23%	[1000]	µg/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 2/11/2010 14:24:20

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	55734.1	55734.1	102 %	14:24:53
1	Al 396.153Radial†	68477.1	67062.5	[50000] µg/L	14:24:53
1	Ca 317.933Radial†	54301.8	52992.8	[50000] µg/L	14:24:53
1	Fe 238.204 Radial†	2420.6	2355.7	[20000] µg/L	14:25:13
1	Mg 279.077 IEC†	5505.9	5380.1	[50000] µg/L	14:25:13
1	Na 589.592 Radial†	62235.4	60398.5	[20000] µg/L	14:24:53
1	Sc 361.383	1922257.7	1922257.7	100.65 %	14:26:17
1	Y 371.029	1306511.6	1306511.6	99.740 %	14:26:17
2	Sc RADIAL	55997.4	55997.4	103 %	14:25:19
2	Al 396.153Radial†	68696.2	66960.7	[50000] µg/L	14:25:19
2	Ca 317.933Radial†	54670.5	53102.1	[50000] µg/L	14:25:19
2	Fe 238.204 Radial†	2419.7	2343.7	[20000] µg/L	14:25:39
2	Mg 279.077 IEC†	5512.9	5361.5	[50000] µg/L	14:25:39
2	Na 589.592 Radial†	62504.6	60374.4	[20000] µg/L	14:25:19
2	Sc 361.383	1943938.9	1943938.9	101.79 %	14:26:25
2	Y 371.029	1321297.0	1321297.0	100.87 %	14:26:25
3	Sc RADIAL	56208.4	56208.4	103 %	14:25:45
3	Al 396.153Radial†	69051.1	67053.9	[50000] µg/L	14:25:45
3	Ca 317.933Radial†	54933.8	53157.7	[50000] µg/L	14:25:45
3	Fe 238.204 Radial†	2417.0	2332.2	[20000] µg/L	14:26:05
3	Mg 279.077 IEC†	5516.6	5344.9	[50000] µg/L	14:26:05
3	Na 589.592 Radial†	62899.5	60529.1	[20000] µg/L	14:25:45
3	Sc 361.383	1959647.9	1959647.9	102.61 %	14:26:33
3	Y 371.029	1332766.9	1332766.9	101.74 %	14:26:33

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1941948.2	18774.43	0.97%	101.68 %
Sc RADIAL	55979.9	237.64	0.42%	103 %
Y 371.029	1320191.8	13162.49	1.00%	100.78 %
Al 396.153Radial†	67025.7	56.44	0.08%	[50000] µg/L
Ca 317.933Radial†	53084.2	83.91	0.16%	[50000] µg/L
Fe 238.204 Radial†	2343.9	11.76	0.50%	[20000] µg/L
Mg 279.077 IEC†	5362.2	17.57	0.33%	[50000] µg/L
Na 589.592 Radial†	60434.0	83.23	0.14%	[20000] µg/L

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	126.0	0.00000	0.999831	
Al 396.153Radial	3	Lin Thru 0	0.0	1.342	0.00000	0.999984	
As 188.979	3	Lin Thru 0	0.0	0.5116	0.00000	0.999791	
B 249.677	3	Lin Thru 0	0.0	22.88	0.00000	0.999715	
Ba 233.527	3	Lin Thru 0	0.0	38.40	0.00000	0.999779	
Be 313.107	3	Lin Thru 0	0.0	1531	0.00000	0.999818	
Ca 317.933Radial	3	Lin Thru 0	0.0	1.062	0.00000	0.999987	
Cd 226.502	3	Lin Thru 0	0.0	36.25	0.00000	0.999822	
Co 228.616	3	Lin Thru 0	0.0	20.32	0.00000	0.999831	
Cr 267.716	3	Lin Thru 0	0.0	45.46	0.00000	0.999766	
Cu 324.752	3	Lin Thru 0	0.0	143.2	0.00000	0.999754	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1180	0.00000	0.999910	
K 766.490 Radial	3	Lin Thru 0	0.0	1.407	0.00000	0.999880	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.1075	0.00000	0.999952	
Mn 257.610	3	Lin Thru 0	0.0	288.8	0.00000	0.999942	
Mo 202.031	3	Lin Thru 0	0.0	9.370	0.00000	0.999888	
Na 589.592 Radia	2	Lin Thru 0	0.0	3.038	0.00000	0.999945	

Ni 231.604	3	Lin Thru 0	0.0	18.29	0.00000	0.999821
P 214.914	3	Lin Thru 0	0.0	0.4657	0.00000	0.999737
Pb 220.353	3	Lin Thru 0	0.0	3.748	0.00000	0.999792
S 181.975 Axial	3	Lin Thru 0	0.0	0.2282	0.00000	0.999946
Sb 206.836	3	Lin Thru 0	0.0	1.016	0.00000	0.999901
Se 196.026	3	Lin Thru 0	0.0	0.6559	0.00000	0.999870
SiO2	3	Lin Thru 0	0.0	4.643	0.00000	0.999791
Si 251.611	3	Lin Thru 0	0.0	12.16	0.00000	0.999805
Sn 189.927	3	Lin Thru 0	0.0	2.174	0.00000	0.999882
Sr 421.552	3	Lin Thru 0	0.0	96.47	0.00000	0.999840
Ti 334.940	3	Lin Thru 0	0.0	415.7	0.00000	0.999852
Tl 190.801	3	Lin Thru 0	0.0	0.7164	0.00000	0.999879
U 409.014	3	Lin Thru 0	0.0	11.05	0.00000	0.999783
V 292.402	3	Lin Thru 0	0.0	93.83	0.00000	0.999742
Zn 213.857	3	Lin Thru 0	0.0	40.05	0.00000	0.999841

Sequence No.: 6  
 Sample ID: ICV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 9  
 Date Collected: 2/11/2010 14:26:41  
 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	56175.2	56175.2	103 %		14:27:15
1	Al 396.153Radial†	6827.4	6643.0	4939.9 µg/L	4939.9 ppb	14:27:35
1	Ca 317.933Radial†	5504.7	5168.7	4866.7 µg/L	4866.7 ppb	14:27:35
1	Fe 238.204 Radial†	619.4	587.3	4988.2 µg/L	4988.2 ppb	14:27:35
1	K 766.490 Radial†	3573.7	3343.4	2376.5 µg/L	2376.5 ppb	14:27:15
1	Mg 279.077 IEC†	579.7	551.9	5140.1 µg/L	5140.1 ppb	14:27:35
1	Na 589.592 Radial†	7985.2	7215.8	2375.5 µg/L	2375.5 ppb	14:27:15
1	Sr 421.552†	49736.5	48279.6	500.47 µg/L	500.47 ppb	14:27:15
1	Sc 361.383	1963746.6	1963746.6	102.82 %		14:28:38
1	Y 371.029	1343456.9	1343456.9	102.56 %		14:28:38
1	Ag 328.068†	32402.4	32077.4	258.20 µg/L	258.20 ppb	14:28:44
1	As 188.979†	252.0	244.0	475.79 µg/L	475.79 ppb	14:29:05
1	B 249.677†	12299.6	11630.5	506.47 µg/L	506.47 ppb	14:28:44
1	Ba 233.527†	19805.3	19287.7	503.14 µg/L	503.14 ppb	14:28:44
1	Be 313.107†	400944.5	393378.7	256.71 µg/L	256.71 ppb	14:28:38
1	Cd 226.502†	18448.5	18084.2	498.85 µg/L	498.85 ppb	14:28:44
1	Co 228.616†	10564.7	10283.6	505.57 µg/L	505.57 ppb	14:28:44
1	Cr 267.716†	22885.3	22309.5	491.04 µg/L	491.04 ppb	14:28:44
1	Cu 324.752†	76882.1	72285.6	505.62 µg/L	505.62 ppb	14:28:44
1	Mn 257.610†	151694.6	147774.6	512.18 µg/L	512.18 ppb	14:28:38
1	Mo 202.031†	5332.7	5193.9	554.49 µg/L	554.49 ppb	14:29:05
1	Ni 231.604†	9713.9	9145.0	499.47 µg/L	499.47 ppb	14:28:44
1	P 214.914†	1269.4	1206.9	2543.7 µg/L	2543.7 ppb	14:29:05
1	Pb 220.353†	2051.9	1898.4	506.85 µg/L	506.85 ppb	14:29:05
1	S 181.975 Axial†	610.0	578.4	2534.1 µg/L	2534.1 ppb	14:29:05
1	Sb 206.836†	565.9	523.4	518.27 µg/L	518.27 ppb	14:29:05
1	Se 196.026†	1740.7	1677.1	2564.5 µg/L	2564.5 ppb	14:29:05
1	SiO2†	50702.0	48060.2	10350 µg/L	10350 ppb	14:28:44
1	Si 251.611†	60656.9	58679.0	4823.7 µg/L	4823.7 ppb	14:28:44
1	Sn 189.927†	1247.6	1214.2	558.50 µg/L	558.50 ppb	14:29:05
1	Ti 334.940†	209346.8	203483.9	489.14 µg/L	489.14 ppb	14:28:38
1	Tl 190.801†	364.1	378.4	534.06 µg/L	534.06 ppb	14:29:05
1	U 409.014†	5596.2	5496.2	496.62 µg/L	496.62 ppb	14:28:44
1	V 292.402†	48924.8	47626.0	514.07 µg/L	514.07 ppb	14:28:44
1	Zn 213.857†	21567.2	20499.6	508.35 µg/L	508.35 ppb	14:28:44
2	Sc RADIAL	56033.1	56033.1	103 %		14:27:40
2	Al 396.153Radial†	6802.0	6635.1	4934.1 µg/L	4934.1 ppb	14:28:01
2	Ca 317.933Radial†	5475.3	5153.6	4852.4 µg/L	4852.4 ppb	14:28:01
2	Fe 238.204 Radial†	614.3	583.8	4958.8 µg/L	4958.8 ppb	14:28:01
2	K 766.490 Radial†	3641.5	3418.3	2429.7 µg/L	2429.7 ppb	14:27:40
2	Mg 279.077 IEC†	579.8	553.4	5154.4 µg/L	5154.4 ppb	14:28:01
2	Na 589.592 Radial†	8029.7	7278.8	2396.2 µg/L	2396.2 ppb	14:27:40
2	Sr 421.552†	50111.3	48767.2	505.53 µg/L	505.53 ppb	14:27:40
2	Sc 361.383	1959108.8	1959108.8	102.58 %		14:29:12
2	Y 371.029	1337906.1	1337906.1	102.14 %		14:29:12
2	Ag 328.068†	32371.7	32122.1	258.56 µg/L	258.56 ppb	14:29:17
2	As 188.979†	250.3	242.8	473.56 µg/L	473.56 ppb	14:29:38
2	B 249.677†	12349.9	11707.8	509.86 µg/L	509.86 ppb	14:29:17
2	Ba 233.527†	19859.1	19385.7	505.69 µg/L	505.69 ppb	14:29:17
2	Be 313.107†	397767.3	391204.5	255.29 µg/L	255.29 ppb	14:29:12
2	Cd 226.502†	18445.9	18124.1	499.96 µg/L	499.96 ppb	14:29:17
2	Co 228.616†	10616.9	10358.7	509.26 µg/L	509.26 ppb	14:29:17
2	Cr 267.716†	22880.0	22357.0	492.09 µg/L	492.09 ppb	14:29:17
2	Cu 324.752†	76966.8	72545.1	507.43 µg/L	507.43 ppb	14:29:17
2	Mn 257.610†	150503.7	146962.9	509.37 µg/L	509.37 ppb	14:29:12
2	Mo 202.031†	5249.3	5124.9	547.12 µg/L	547.12 ppb	14:29:38
2	Ni 231.604†	9710.9	9164.5	500.53 µg/L	500.53 ppb	14:29:17
2	P 214.914†	1234.6	1175.9	2476.8 µg/L	2476.8 ppb	14:29:38
2	Pb 220.353†	2014.2	1866.4	498.27 µg/L	498.27 ppb	14:29:38

2	S 181.975 Axial†	603.9	573.9	2514.5 µg/L	2514.5 ppb	14:29:38
2	Sb 206.836†	552.1	511.3	506.22 µg/L	506.22 ppb	14:29:38
2	Se 196.026†	1718.6	1659.6	2537.7 µg/L	2537.7 ppb	14:29:38
2	SiO2†	50804.5	48276.9	10397 µg/L	10397 ppb	14:29:17
2	Si 251.611†	60707.2	58867.6	4839.2 µg/L	4839.2 ppb	14:29:17
2	Sn 189.927†	1227.9	1197.9	551.01 µg/L	551.01 ppb	14:29:38
2	Ti 334.940†	208068.6	202719.9	487.30 µg/L	487.30 ppb	14:29:12
2	Tl 190.801†	356.4	371.7	524.72 µg/L	524.72 ppb	14:29:38
2	U 409.014†	5657.2	5568.6	503.18 µg/L	503.18 ppb	14:29:17
2	V 292.402†	48911.7	47725.9	515.09 µg/L	515.09 ppb	14:29:17
2	Zn 213.857†	21491.7	20475.7	507.74 µg/L	507.74 ppb	14:29:17
3	Sc RADIAL	55710.7	55710.7	102 %		14:28:06
3	Al 396.153Radial†	6837.6	6708.3	4990.5 µg/L	4990.5 ppb	14:28:27
3	Ca 317.933Radial†	5503.3	5211.9	4907.4 µg/L	4907.4 ppb	14:28:27
3	Fe 238.204 Radial†	619.1	592.0	5027.4 µg/L	5027.4 ppb	14:28:27
3	K 766.490 Radial†	3604.3	3402.4	2418.4 µg/L	2418.4 ppb	14:28:06
3	Mg 279.077 IEC†	577.0	553.9	5157.4 µg/L	5157.4 ppb	14:28:27
3	Na 589.592 Radial†	7999.1	7294.1	2401.2 µg/L	2401.2 ppb	14:28:06
3	Sr 421.552†	49756.2	48701.8	504.85 µg/L	504.85 ppb	14:28:06
3	Sc 361.383	1966591.1	1966591.1	102.97 %		14:29:45
3	Y 371.029	1344829.1	1344829.1	102.67 %		14:29:45
3	Ag 328.068†	30447.1	30133.0	242.44 µg/L	242.44 ppb	14:29:51
3	As 188.979†	212.1	204.8	399.46 µg/L	399.46 ppb	14:30:11
3	B 249.677†	11543.9	10879.3	473.52 µg/L	473.52 ppb	14:29:51
3	Ba 233.527†	18235.3	17735.1	462.62 µg/L	462.62 ppb	14:29:51
3	Be 313.107†	376544.4	369118.7	240.88 µg/L	240.88 ppb	14:29:45
3	Cd 226.502†	16808.4	16465.5	454.14 µg/L	454.14 ppb	14:29:51
3	Co 228.616†	9616.6	9347.9	459.50 µg/L	459.50 ppb	14:29:51
3	Cr 267.716†	20282.2	19749.2	434.69 µg/L	434.69 ppb	14:29:51
3	Cu 324.752†	70054.3	65546.6	458.56 µg/L	458.56 ppb	14:29:51
3	Mn 257.610†	142833.7	138956.0	481.65 µg/L	481.65 ppb	14:29:45
3	Mo 202.031†	4404.7	4285.1	457.51 µg/L	457.51 ppb	14:30:11
3	Ni 231.604†	8886.0	8327.4	454.82 µg/L	454.82 ppb	14:29:51
3	P 214.914†	1057.7	999.5	2101.9 µg/L	2101.9 ppb	14:30:11
3	Pb 220.353†	1779.9	1631.4	435.46 µg/L	435.46 ppb	14:30:11
3	S 181.975 Axial†	527.5	497.5	2179.7 µg/L	2179.7 ppb	14:30:11
3	Sb 206.836†	492.5	451.4	446.41 µg/L	446.41 ppb	14:30:11
3	Se 196.026†	1501.7	1442.5	2207.0 µg/L	2207.0 ppb	14:30:11
3	SiO2†	47105.5	44496.1	9582.5 µg/L	9582.5 ppb	14:29:51
3	Si 251.611†	56262.5	54326.1	4465.9 µg/L	4465.9 ppb	14:29:51
3	Sn 189.927†	1018.6	990.0	455.40 µg/L	455.40 ppb	14:30:11
3	Ti 334.940†	196112.8	190337.3	457.51 µg/L	457.51 ppb	14:29:45
3	Tl 190.801†	328.3	343.2	484.58 µg/L	484.58 ppb	14:30:11
3	U 409.014†	4922.5	4834.1	436.66 µg/L	436.66 ppb	14:29:51
3	V 292.402†	44109.1	42880.5	462.56 µg/L	462.56 ppb	14:29:51
3	Zn 213.857†	19646.9	18604.4	461.29 µg/L	461.29 ppb	14:29:51

## Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1963148.8	102.79 %	0.198			0.19%
Sc RADIAL	55973.0	103 %	0.4			0.43%
Y 371.029	1342064.0	102.45 %	0.280			0.27%
Ag 328.068†	31444.2	253.06 µg/L	9.205	253.06 ppb	9.205	3.64%
QC value within limits for Ag 328.068 Recovery = 101.23%						
Al 396.153Radial†	6662.1	4954.8 µg/L	31.04	4954.8 ppb	31.04	0.63%
QC value within limits for Al 396.153Radial Recovery = 99.10%						
As 188.979†	230.5	449.61 µg/L	43.438	449.61 ppb	43.438	9.66%
QC value less than the lower limit for As 188.979 Recovery = 89.92%						
B 249.677†	11405.9	496.62 µg/L	20.071	496.62 ppb	20.071	4.04%
QC value within limits for B 249.677 Recovery = 99.32%						
Ba 233.527†	18802.8	490.48 µg/L	24.164	490.48 ppb	24.164	4.93%
QC value within limits for Ba 233.527 Recovery = 98.10%						
Be 313.107†	384567.3	250.96 µg/L	8.759	250.96 ppb	8.759	3.49%
QC value within limits for Be 313.107 Recovery = 100.38%						
Ca 317.933Radial†	5178.1	4875.5 µg/L	28.51	4875.5 ppb	28.51	0.58%
QC value within limits for Ca 317.933Radial Recovery = 97.51%						
Cd 226.502†	17558.0	484.32 µg/L	26.137	484.32 ppb	26.137	5.40%
QC value within limits for Cd 226.502 Recovery = 96.86%						
Co 228.616†	9996.7	491.44 µg/L	27.727	491.44 ppb	27.727	5.64%



QC value within limits for Co 228.616 Recovery = 98.29%							
Cr 267.716†	21471.9	472.61 µg/L	32.838	472.61 ppb	32.838	6.95%	
QC value within limits for Cr 267.716 Recovery = 94.52%							
Cu 324.752†	70125.8	490.54 µg/L	27.712	490.54 ppb	27.712	5.65%	
QC value within limits for Cu 324.752 Recovery = 98.11%							
Fe 238.204 Radial†	587.7	4991.5 µg/L	34.44	4991.5 ppb	34.44	0.69%	
QC value within limits for Fe 238.204 Radial Recovery = 99.83%							
K 766.490 Radial†	3388.1	2408.2 µg/L	28.04	2408.2 ppb	28.04	1.16%	
QC value within limits for K 766.490 Radial Recovery = 96.33%							
Mg 279.077 IEC†	553.1	5150.6 µg/L	9.21	5150.6 ppb	9.21	0.18%	
QC value within limits for Mg 279.077 IEC Recovery = 103.01%							
Mn 257.610†	144564.5	501.06 µg/L	16.874	501.06 ppb	16.874	3.37%	
QC value within limits for Mn 257.610 Recovery = 100.21%							
Mo 202.031†	4868.0	519.70 µg/L	53.991	519.70 ppb	53.991	10.39%	
QC value within limits for Mo 202.031 Recovery = 103.94%							
Na 589.592 Radial†	7262.9	2391.0 µg/L	13.66	2391.0 ppb	13.66	0.57%	
QC value within limits for Na 589.592 Radial Recovery = 95.64%							
Ni 231.604†	8879.0	484.94 µg/L	26.089	484.94 ppb	26.089	5.38%	
QC value within limits for Ni 231.604 Recovery = 96.99%							
P 214.914†	1127.4	2374.2 µg/L	238.13	2374.2 ppb	238.13	10.03%	
QC value within limits for P 214.914 Recovery = 94.97%							
Pb 220.353†	1798.7	480.19 µg/L	38.976	480.19 ppb	38.976	8.12%	
QC value within limits for Pb 220.353 Recovery = 96.04%							
S 181.975 Axial†	549.9	2409.5 µg/L	199.20	2409.5 ppb	199.20	8.27%	
QC value within limits for S 181.975 Axial Recovery = 96.38%							
Sb 206.836†	495.4	490.30 µg/L	38.486	490.30 ppb	38.486	7.85%	
QC value within limits for Sb 206.836 Recovery = 98.06%							
Se 196.026†	1593.1	2436.4 µg/L	199.13	2436.4 ppb	199.13	8.17%	
QC value within limits for Se 196.026 Recovery = 97.46%							
SiO2†	46944.4	10110 µg/L	457.2	10110 ppb	457.2	4.52%	
QC value within limits for SiO2 Recovery = 94.53%							
Si 251.611†	57290.9	4709.6 µg/L	211.21	4709.6 ppb	211.21	4.48%	
QC value within limits for Si 251.611 Recovery = 94.19%							
Sn 189.927†	1134.1	521.64 µg/L	57.487	521.64 ppb	57.487	11.02%	
QC value within limits for Sn 189.927 Recovery = 104.33%							
Sr 421.552†	48582.8	503.62 µg/L	2.743	503.62 ppb	2.743	0.54%	
QC value within limits for Sr 421.552 Recovery = 100.72%							
Ti 334.940†	198847.0	477.98 µg/L	17.751	477.98 ppb	17.751	3.71%	
QC value within limits for Ti 334.940 Recovery = 95.60%							
Tl 190.801†	364.4	514.45 µg/L	26.290	514.45 ppb	26.290	5.11%	
QC value within limits for Tl 190.801 Recovery = 102.89%							
U 409.014†	5299.6	478.82 µg/L	36.655	478.82 ppb	36.655	7.66%	
QC value within limits for U 409.014 Recovery = 95.76%							
V 292.402†	46077.4	497.24 µg/L	30.036	497.24 ppb	30.036	6.04%	
QC value within limits for V 292.402 Recovery = 99.45%							
Zn 213.857†	19859.9	492.46 µg/L	26.995	492.46 ppb	26.995	5.48%	
QC value within limits for Zn 213.857 Recovery = 98.49%							
QC Failed. Continue with analysis.							

Sequence No.: 7

Sample ID: ICB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 10

Date Collected: 2/11/2010 14:30:21

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	55908.8	55908.8	102 %		14:30:53
1	Al 396.153Radial†	-5.0	5.2	3.8899 µg/L	3.8899 ppb	14:30:53
1	Ca 317.933Radial†	192.7	9.0	8.4299 µg/L	8.4299 ppb	14:31:14
1	Fe 238.204 Radial†	14.3	-0.6	-4.9645 µg/L	-4.9645 ppb	14:31:14
1	K 766.490 Radial†	107.9	-23.1	-16.426 µg/L	-16.426 ppb	14:30:53
1	Mg 279.077 IEC†	15.7	4.0	37.295 µg/L	37.295 ppb	14:31:14
1	Na 589.592 Radial†	574.2	18.7	6.1420 µg/L	6.1420 ppb	14:30:53
1	Sr 421.552†	57.3	16.3	0.1694 µg/L	0.1694 ppb	14:30:53
1	Sc 361.383	1944300.1	1944300.1	101.80 %		14:32:16
1	Y 371.029	1332393.9	1332393.9	101.72 %		14:32:16
1	Ag 328.068†	-508.2	65.3	0.5177 µg/L	0.5177 ppb	14:32:21
1	As 188.979†	2.4	1.2	2.3247 µg/L	2.3247 ppb	14:32:42
1	B 249.677†	341.3	3.8	0.1701 µg/L	0.1701 ppb	14:32:42
1	Ba 233.527†	-14.2	12.0	0.3135 µg/L	0.3135 ppb	14:32:42
1	Be 313.107†	-3420.4	80.6	0.0526 µg/L	0.0526 ppb	14:32:21
1	Cd 226.502†	-141.7	2.9	0.0816 µg/L	0.0816 ppb	14:32:42
1	Co 228.616†	-8.8	0.2	0.0094 µg/L	0.0094 ppb	14:32:42
1	Cr 267.716†	-52.4	0.9	0.0196 µg/L	0.0196 ppb	14:32:21
1	Cu 324.752†	2516.4	-14.3	-0.1006 µg/L	-0.1006 ppb	14:32:21
1	Mn 257.610†	-222.7	25.3	0.0856 µg/L	0.0856 ppb	14:32:42
1	Mo 202.031†	-0.2	7.3	0.7799 µg/L	0.7799 ppb	14:32:42
1	Ni 231.604†	301.0	-6.6	-0.3591 µg/L	-0.3591 ppb	14:32:42
1	P 214.914†	32.4	4.2	8.9740 µg/L	8.9740 ppb	14:32:42
1	Pb 220.353†	88.6	-10.1	-2.7035 µg/L	-2.7035 ppb	14:32:42
1	S 181.975 Axial†	16.5	1.4	6.0966 µg/L	6.0966 ppb	14:32:42
1	Sb 206.836†	22.8	-4.6	-4.5144 µg/L	-4.5144 ppb	14:32:42
1	Se 196.026†	21.7	5.5	8.3158 µg/L	8.3158 ppb	14:32:42
1	SiO2†	1261.7	-10.7	-2.2937 µg/L	-2.2937 ppb	14:32:21
1	Si 251.611†	339.4	20.5	1.6875 µg/L	1.6875 ppb	14:32:42
1	Sn 189.927†	1.1	2.0	0.9031 µg/L	0.9031 ppb	14:32:42
1	Ti 334.940†	148.3	29.6	0.0683 µg/L	0.0683 ppb	14:32:21
1	Tl 190.801†	-21.8	2.8	3.9713 µg/L	3.9713 ppb	14:32:42
1	U 409.014†	-33.0	21.2	1.9223 µg/L	1.9223 ppb	14:32:21
1	V 292.402†	-53.1	-7.9	-0.0767 µg/L	-0.0767 ppb	14:32:21
1	Zn 213.857†	482.8	-1.3	-0.0325 µg/L	-0.0325 ppb	14:32:42
2	Sc RADIAL	55881.3	55881.3	102 %		14:31:19
2	Al 396.153Radial†	-15.6	-5.1	-3.7901 µg/L	-3.7901 ppb	14:31:19
2	Ca 317.933Radial†	181.6	-1.8	-1.6610 µg/L	-1.6610 ppb	14:31:40
2	Fe 238.204 Radial†	14.4	-0.5	-4.0234 µg/L	-4.0234 ppb	14:31:40
2	K 766.490 Radial†	165.7	33.4	23.714 µg/L	23.714 ppb	14:31:19
2	Mg 279.077 IEC†	9.4	-2.1	-19.910 µg/L	-19.910 ppb	14:31:40
2	Na 589.592 Radial†	521.5	-32.6	-10.727 µg/L	-10.727 ppb	14:31:19
2	Sr 421.552†	60.7	19.7	0.2040 µg/L	0.2040 ppb	14:31:19
2	Sc 361.383	1964760.3	1964760.3	102.88 %		14:32:48
2	Y 371.029	1347613.8	1347613.8	102.88 %		14:32:48
2	Ag 328.068†	-518.5	60.5	0.4799 µg/L	0.4799 ppb	14:32:53
2	As 188.979†	-1.3	-2.4	-4.7694 µg/L	-4.7694 ppb	14:33:14
2	B 249.677†	344.7	3.6	0.1600 µg/L	0.1600 ppb	14:33:14
2	Ba 233.527†	-16.3	10.1	0.2637 µg/L	0.2637 ppb	14:33:14
2	Be 313.107†	-3298.7	234.0	0.1527 µg/L	0.1527 ppb	14:32:53
2	Cd 226.502†	-133.3	12.6	0.3477 µg/L	0.3477 ppb	14:33:14
2	Co 228.616†	-4.9	4.1	0.2028 µg/L	0.2028 ppb	14:33:14
2	Cr 267.716†	-12.9	39.8	0.8752 µg/L	0.8752 ppb	14:32:53
2	Cu 324.752†	2529.4	-27.4	-0.1918 µg/L	-0.1918 ppb	14:32:53
2	Mn 257.610†	-202.1	47.7	0.1654 µg/L	0.1654 ppb	14:33:14
2	Mo 202.031†	1.2	8.7	0.9303 µg/L	0.9303 ppb	14:33:14
2	Ni 231.604†	305.7	-5.0	-0.2753 µg/L	-0.2753 ppb	14:33:14
2	P 214.914†	24.2	-4.1	-8.8167 µg/L	-8.8167 ppb	14:33:14
2	Pb 220.353†	97.8	-2.1	-0.5597 µg/L	-0.5597 ppb	14:33:14

2	S 181.975 Axial†	15.1	-0.1	-0.5770 µg/L	-0.5770 ppb	14:33:14
2	Sb 206.836†	27.2	-0.5	-0.4890 µg/L	-0.4890 ppb	14:33:14
2	Se 196.026†	14.7	-1.6	-2.3575 µg/L	-2.3575 ppb	14:33:14
2	SiO2†	1242.8	-41.9	-9.0338 µg/L	-9.0338 ppb	14:32:53
2	Si 251.611†	360.2	37.3	3.0664 µg/L	3.0664 ppb	14:33:14
2	Sn 189.927†	0.7	1.6	0.7280 µg/L	0.7280 ppb	14:33:14
2	Ti 334.940†	261.8	138.4	0.3344 µg/L	0.3344 ppb	14:32:53
2	Tl 190.801†	-26.1	-1.1	-1.5598 µg/L	-1.5598 ppb	14:33:14
2	U 409.014†	-15.1	39.0	3.5273 µg/L	3.5273 ppb	14:32:53
2	V 292.402†	-42.6	2.8	0.0426 µg/L	0.0426 ppb	14:32:53
2	Zn 213.857†	491.7	2.4	0.0627 µg/L	0.0627 ppb	14:33:14
3	Sc RADIAL	56329.8	56329.8	103 %		14:31:45
3	Al 396.153Radial†	2.8	12.8	9.5317 µg/L	9.5317 ppb	14:31:45
3	Ca 317.933Radial†	174.0	-10.6	-9.9765 µg/L	-9.9765 ppb	14:32:05
3	Fe 238.204 Radial†	15.1	0.1	1.1942 µg/L	1.1942 ppb	14:32:05
3	K 766.490 Radial†	116.0	-16.0	-11.375 µg/L	-11.375 ppb	14:31:45
3	Mg 279.077 IEC†	9.4	-2.1	-19.858 µg/L	-19.858 ppb	14:32:05
3	Na 589.592 Radial†	536.5	-22.1	-7.2800 µg/L	-7.2800 ppb	14:31:45
3	Sr 421.552†	17.2	-22.9	-0.2369 µg/L	-0.2369 ppb	14:31:45
3	Sc 361.383	1963041.8	1963041.8	102.79 %		14:33:20
3	Y 371.029	1346546.9	1346546.9	102.80 %		14:33:20
3	Ag 328.068†	-542.7	36.6	0.2929 µg/L	0.2929 ppb	14:33:26
3	As 188.979†	1.8	0.6	1.1689 µg/L	1.1689 ppb	14:33:46
3	B 249.677†	343.0	2.2	0.0978 µg/L	0.0978 ppb	14:33:46
3	Ba 233.527†	-18.5	8.0	0.2082 µg/L	0.2082 ppb	14:33:46
3	Be 313.107†	-3230.6	297.4	0.1942 µg/L	0.1942 ppb	14:33:26
3	Cd 226.502†	-130.1	15.5	0.4281 µg/L	0.4281 ppb	14:33:46
3	Co 228.616†	-21.8	-12.4	-0.6104 µg/L	-0.6104 ppb	14:33:46
3	Cr 267.716†	-41.2	12.3	0.2708 µg/L	0.2708 ppb	14:33:26
3	Cu 324.752†	2546.0	-9.1	-0.0637 µg/L	-0.0637 ppb	14:33:26
3	Mn 257.610†	-170.0	78.8	0.2737 µg/L	0.2737 ppb	14:33:46
3	Mo 202.031†	0.3	7.9	0.8413 µg/L	0.8413 ppb	14:33:46
3	Ni 231.604†	307.9	-2.6	-0.1428 µg/L	-0.1428 ppb	14:33:46
3	P 214.914†	31.7	3.2	7.0023 µg/L	7.0023 ppb	14:33:46
3	Pb 220.353†	97.7	-2.1	-0.5651 µg/L	-0.5651 ppb	14:33:46
3	S 181.975 Axial†	14.0	-1.2	-5.1565 µg/L	-5.1565 ppb	14:33:46
3	Sb 206.836†	18.5	-9.0	-8.8540 µg/L	-8.8540 ppb	14:33:46
3	Se 196.026†	7.7	-8.4	-12.762 µg/L	-12.762 ppb	14:33:46
3	SiO2†	1231.2	-52.2	-11.239 µg/L	-11.239 ppb	14:33:26
3	Si 251.611†	338.7	16.6	1.3655 µg/L	1.3655 ppb	14:33:46
3	Sn 189.927†	2.7	3.5	1.5931 µg/L	1.5931 ppb	14:33:46
3	Ti 334.940†	206.7	84.9	0.2057 µg/L	0.2057 ppb	14:33:26
3	Tl 190.801†	-23.5	1.4	1.9821 µg/L	1.9821 ppb	14:33:46
3	U 409.014†	-82.4	-26.6	-2.4037 µg/L	-2.4037 ppb	14:33:26
3	V 292.402†	-5.0	39.3	0.4238 µg/L	0.4238 ppb	14:33:26
3	Zn 213.857†	490.6	1.7	0.0448 µg/L	0.0448 ppb	14:33:46

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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	1957367.4	102.49 %	0.594			0.58%
Sc RADIAL	56040.0	103 %	0.5			0.45%
Y 371.029	1342184.9	102.46 %	0.649			0.63%
Ag 328.068†	54.1	0.4302 µg/L	0.12036	0.4302 ppb	0.12036	27.98%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	4.3	3.2105 µg/L	6.68686	3.2105 ppb	6.68686	208.28%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.2	-0.4253 µg/L	3.80624	-0.4253 ppb	3.80624	895.04%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	3.2	0.1426 µg/L	0.03915	0.1426 ppb	0.03915	27.45%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	10.0	0.2618 µg/L	0.05266	0.2618 ppb	0.05266	20.11%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	204.0	0.1331 µg/L	0.07275	0.1331 ppb	0.07275	54.64%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-1.1	-1.0692 µg/L	9.21745	-1.0692 ppb	9.21745	862.10%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	10.4	0.2858 µg/L	0.18136	0.2858 ppb	0.18136	63.46%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.7	-0.1327 µg/L	0.42483	-0.1327 ppb	0.42483	320.06%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	17.7 0.3886 µg/L	0.43975 0.3886 ppb	0.43975 113.17%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	-16.9 -0.1187 µg/L	0.06593 -0.1187 ppb	0.06593 55.55%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	-0.3 -2.5979 µg/L	3.31761 -2.5979 ppb	3.31761 127.70%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	-1.9 -1.3625 µg/L	21.86298 -1.3625 ppb	21.86298 >999.9%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	-0.1 -0.8244 µg/L	33.01203 -0.8244 ppb	33.01203 >999.9%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	50.6 0.1749 µg/L	0.09441 0.1749 ppb	0.09441 53.98%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	8.0 0.8505 µg/L	0.07561 0.8505 ppb	0.07561 8.89%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	-12.0 -3.9548 µg/L	8.91231 -3.9548 ppb	8.91231 225.35%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-4.7 -0.2590 µg/L	0.10906 -0.2590 ppb	0.10906 42.10%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	1.1 2.3865 µg/L	9.75229 2.3865 ppb	9.75229 408.64%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	-4.8 -1.2761 µg/L	1.23617 -1.2761 ppb	1.23617 96.87%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	0.0 0.1210 µg/L	5.65896 0.1210 ppb	5.65896 >999.9%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	-4.7 -4.6191 µg/L	4.18349 -4.6191 ppb	4.18349 90.57%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-1.5 -2.2678 µg/L	10.53912 -2.2678 ppb	10.53912 464.73%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	-34.9 -7.5220 µg/L	4.66014 -7.5220 ppb	4.66014 61.95%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	24.8 2.0398 µg/L	0.90350 2.0398 ppb	0.90350 44.29%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	2.3 1.0747 µg/L	0.45737 1.0747 ppb	0.45737 42.56%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	4.4 0.0455 µg/L	0.24518 0.0455 ppb	0.24518 539.15%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	84.3 0.2028 µg/L	0.13307 0.2028 ppb	0.13307 65.62%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	1.0 1.4645 µg/L	2.80164 1.4645 ppb	2.80164 191.30%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	11.2 1.0153 µg/L	3.06778 1.0153 ppb	3.06778 302.16%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	11.4 0.1299 µg/L	0.26143 0.1299 ppb	0.26143 201.23%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	0.9 0.0250 µg/L	0.05061 0.0250 ppb	0.05061 202.72%
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: 2/11/2010 14:33:56

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	54747.4	54747.4	100 %		14:34:28
1	Al 396.153Radial†	273.1	282.4	210.27 µg/L	210.27 ppb	14:34:28
1	Ca 317.933Radial†	397.1	216.7	204.01 µg/L	204.01 ppb	14:34:49
1	Fe 238.204 Radial†	30.8	16.2	137.25 µg/L	137.25 ppb	14:34:49
1	K 766.490 Radial†	363.7	234.1	166.40 µg/L	166.40 ppb	14:34:28
1	Mg 279.077 IEC†	45.5	34.1	317.43 µg/L	317.43 ppb	14:34:49
1	Na 589.592 Radial†	1424.0	877.6	288.92 µg/L	288.92 ppb	14:34:28
1	Sr 421.552†	486.3	445.2	4.6152 µg/L	4.6152 ppb	14:34:28
1	Sc 361.383	1940350.4	1940350.4	101.60 %		14:35:51
1	Y 371.029	1331501.6	1331501.6	101.65 %		14:35:51
1	Ag 328.068†	65.6	629.1	5.0332 µg/L	5.0332 ppb	14:35:56
1	As 188.979†	15.0	13.6	26.557 µg/L	26.557 ppb	14:36:17
1	B 249.677†	1481.9	1127.1	49.194 µg/L	49.194 ppb	14:35:56
1	Ba 233.527†	167.0	190.4	4.9664 µg/L	4.9664 ppb	14:36:17
1	Be 313.107†	4123.9	7499.6	4.8957 µg/L	4.8957 ppb	14:35:56
1	Cd 226.502†	43.2	184.7	5.0837 µg/L	5.0837 ppb	14:36:17
1	Co 228.616†	90.6	98.0	4.8213 µg/L	4.8213 ppb	14:36:17
1	Cr 267.716†	181.4	230.9	5.0824 µg/L	5.0824 ppb	14:36:17
1	Cu 324.752†	4005.0	1456.0	10.189 µg/L	10.189 ppb	14:35:56
1	Mn 257.610†	2747.7	2948.6	10.216 µg/L	10.216 ppb	14:35:56
1	Mo 202.031†	89.7	95.8	10.232 µg/L	10.232 ppb	14:36:17
1	Ni 231.604†	390.7	82.4	4.5019 µg/L	4.5019 ppb	14:36:17
1	P 214.914†	110.5	81.1	173.12 µg/L	173.12 ppb	14:36:17
1	Pb 220.353†	141.4	42.0	11.169 µg/L	11.169 ppb	14:36:17
1	S 181.975 Axial†	37.1	21.7	95.029 µg/L	95.029 ppb	14:36:17
1	Sb 206.836†	32.7	5.2	5.2344 µg/L	5.2344 ppb	14:36:17
1	Se 196.026†	25.6	9.4	14.367 µg/L	14.367 ppb	14:36:17
1	SiO2†	2267.0	981.4	211.34 µg/L	211.34 ppb	14:35:56
1	Si 251.611†	1501.7	1165.2	95.786 µg/L	95.786 ppb	14:36:17
1	Sn 189.927†	16.7	17.3	7.9752 µg/L	7.9752 ppb	14:36:17
1	Ti 334.940†	2212.8	2061.9	4.9379 µg/L	4.9379 ppb	14:35:56
1	Tl 190.801†	-5.1	19.2	27.011 µg/L	27.011 ppb	14:36:17
1	U 409.014†	558.4	603.3	54.587 µg/L	54.587 ppb	14:35:56
1	V 292.402†	425.6	463.2	5.0996 µg/L	5.0996 ppb	14:35:56
1	Zn 213.857†	892.7	403.1	10.006 µg/L	10.006 ppb	14:36:17
2	Sc RADIAL	54832.7	54832.7	100 %		14:34:54
2	Al 396.153Radial†	256.5	265.4	197.60 µg/L	197.60 ppb	14:34:54
2	Ca 317.933Radial†	389.1	208.2	196.00 µg/L	196.00 ppb	14:35:15
2	Fe 238.204 Radial†	27.3	12.7	107.86 µg/L	107.86 ppb	14:35:15
2	K 766.490 Radial†	367.8	237.7	168.93 µg/L	168.93 ppb	14:34:54
2	Mg 279.077 IEC†	46.2	34.7	322.64 µg/L	322.64 ppb	14:35:15
2	Na 589.592 Radial†	1434.3	885.7	291.57 µg/L	291.57 ppb	14:34:54
2	Sr 421.552†	510.9	468.9	4.8611 µg/L	4.8611 ppb	14:34:54
2	Sc 361.383	1945380.3	1945380.3	101.86 %		14:36:23
2	Y 371.029	1334631.9	1334631.9	101.89 %		14:36:23
2	Ag 328.068†	83.1	646.1	5.1667 µg/L	5.1667 ppb	14:36:29
2	As 188.979†	13.7	12.3	23.962 µg/L	23.962 ppb	14:36:49
2	B 249.677†	1439.6	1081.8	47.230 µg/L	47.230 ppb	14:36:29
2	Ba 233.527†	163.8	186.8	4.8734 µg/L	4.8734 ppb	14:36:49
2	Be 313.107†	4161.3	7525.8	4.9129 µg/L	4.9129 ppb	14:36:29
2	Cd 226.502†	40.3	181.7	5.0056 µg/L	5.0056 ppb	14:36:49
2	Co 228.616†	95.9	103.0	5.0691 µg/L	5.0691 ppb	14:36:49
2	Cr 267.716†	184.6	233.6	5.1411 µg/L	5.1411 ppb	14:36:49
2	Cu 324.752†	3976.5	1417.8	9.9186 µg/L	9.9186 ppb	14:36:29
2	Mn 257.610†	2754.8	2948.6	10.212 µg/L	10.212 ppb	14:36:29
2	Mo 202.031†	93.7	99.6	10.631 µg/L	10.631 ppb	14:36:49
2	Ni 231.604†	392.3	82.9	4.5279 µg/L	4.5279 ppb	14:36:49
2	P 214.914†	107.2	77.6	165.67 µg/L	165.67 ppb	14:36:49
2	Pb 220.353†	143.7	43.9	11.669 µg/L	11.669 ppb	14:36:49

2	S 181.975 Axial†	37.9	22.4	98.282 µg/L	98.282 ppb	14:36:49
2	Sb 206.836†	37.0	9.4	9.3125 µg/L	9.3125 ppb	14:36:49
2	Se 196.026†	40.5	23.9	36.431 µg/L	36.431 ppb	14:36:49
2	SiO2†	2237.3	946.4	203.81 µg/L	203.81 ppb	14:36:29
2	Si 251.611†	1509.6	1169.2	96.111 µg/L	96.111 ppb	14:36:49
2	Sn 189.927†	28.9	29.3	13.482 µg/L	13.482 ppb	14:36:49
2	Ti 334.940†	2191.1	2034.9	4.8725 µg/L	4.8725 ppb	14:36:29
2	Tl 190.801†	-12.7	11.8	16.671 µg/L	16.671 ppb	14:36:49
2	U 409.014†	565.8	609.0	55.113 µg/L	55.113 ppb	14:36:29
2	V 292.402†	429.8	466.2	5.1319 µg/L	5.1319 ppb	14:36:29
2	Zn 213.857†	888.5	396.7	9.8472 µg/L	9.8472 ppb	14:36:49
3	Sc RADIAL	54719.3	54719.3	100 %		14:35:20
3	Al 396.153Radial†	252.3	261.8	194.95 µg/L	194.95 ppb	14:35:20
3	Ca 317.933Radial†	392.4	212.2	199.82 µg/L	199.82 ppb	14:35:41
3	Fe 238.204 Radial†	27.7	13.1	111.51 µg/L	111.51 ppb	14:35:41
3	K 766.490 Radial†	437.0	307.5	218.53 µg/L	218.53 ppb	14:35:20
3	Mg 279.077 IEC†	40.7	29.3	272.95 µg/L	272.95 ppb	14:35:41
3	Na 589.592 Radial†	1460.8	915.0	301.22 µg/L	301.22 ppb	14:35:20
3	Sr 421.552†	523.6	482.7	5.0036 µg/L	5.0036 ppb	14:35:20
3	Sc 361.383	1939953.9	1939953.9	101.58 %		14:36:55
3	Y 371.029	1330294.0	1330294.0	101.56 %		14:36:55
3	Ag 328.068†	50.3	614.0	4.9107 µg/L	4.9107 ppb	14:37:01
3	As 188.979†	19.6	18.1	35.385 µg/L	35.385 ppb	14:37:21
3	B 249.677†	1372.3	1019.5	44.505 µg/L	44.505 ppb	14:37:01
3	Ba 233.527†	145.4	169.2	4.4133 µg/L	4.4133 ppb	14:37:21
3	Be 313.107†	3478.0	6864.4	4.4811 µg/L	4.4811 ppb	14:37:01
3	Cd 226.502†	11.9	153.8	4.2359 µg/L	4.2359 ppb	14:37:21
3	Co 228.616†	75.0	82.7	4.0666 µg/L	4.0666 ppb	14:37:21
3	Cr 267.716†	166.3	216.1	4.7559 µg/L	4.7559 ppb	14:37:21
3	Cu 324.752†	3902.1	1355.5	9.4837 µg/L	9.4837 ppb	14:37:01
3	Mn 257.610†	2548.1	2752.7	9.5360 µg/L	9.5360 ppb	14:37:01
3	Mo 202.031†	79.0	85.3	9.1080 µg/L	9.1080 ppb	14:37:21
3	Ni 231.604†	393.4	85.1	4.6522 µg/L	4.6522 ppb	14:37:21
3	P 214.914†	100.3	71.1	151.77 µg/L	151.77 ppb	14:37:21
3	Pb 220.353†	126.2	27.0	7.1738 µg/L	7.1738 ppb	14:37:21
3	S 181.975 Axial†	34.7	19.3	84.720 µg/L	84.720 ppb	14:37:21
3	Sb 206.836†	29.4	2.0	2.0741 µg/L	2.0741 ppb	14:37:21
3	Se 196.026†	39.6	23.1	35.285 µg/L	35.285 ppb	14:37:21
3	SiO2†	2171.3	887.6	191.15 µg/L	191.15 ppb	14:37:01
3	Si 251.611†	1361.3	1027.3	84.447 µg/L	84.447 ppb	14:37:21
3	Sn 189.927†	21.9	22.4	10.338 µg/L	10.338 ppb	14:37:21
3	Ti 334.940†	2058.9	1910.8	4.5779 µg/L	4.5779 ppb	14:37:01
3	Tl 190.801†	-4.2	20.2	28.271 µg/L	28.271 ppb	14:37:21
3	U 409.014†	515.1	560.7	50.740 µg/L	50.740 ppb	14:37:01
3	V 292.402†	407.9	445.8	4.8980 µg/L	4.8980 ppb	14:37:01
3	Zn 213.857†	822.6	334.3	8.2901 µg/L	8.2901 ppb	14:37:21

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1941894.9	101.68 %	0.158			0.16%
Sc RADIAL	54766.5	100 %	0.1			0.11%
Y 371.029	1332142.5	101.70 %	0.171			0.17%
Ag 328.068†	629.8	5.0369 µg/L	0.12806	5.0369 ppb	0.12806	2.54%
QC value within limits for Ag 328.068 Recovery = 100.74%						
Al 396.153Radial†	269.9	200.94 µg/L	8.187	200.94 ppb	8.187	4.07%
QC value within limits for Al 396.153Radial Recovery = 100.47%						
As 188.979†	14.7	28.634 µg/L	5.9881	28.634 ppb	5.9881	20.91%
QC value within limits for As 188.979 Recovery = 95.45%						
B 249.677†	1076.2	46.976 µg/L	2.3545	46.976 ppb	2.3545	5.01%
QC value within limits for B 249.677 Recovery = 93.95%						
Ba 233.527†	182.1	4.7510 µg/L	0.29615	4.7510 ppb	0.29615	6.23%
QC value within limits for Ba 233.527 Recovery = 95.02%						
Be 313.107†	7296.6	4.7633 µg/L	0.24448	4.7633 ppb	0.24448	5.13%
QC value within limits for Be 313.107 Recovery = 95.27%						
Ca 317.933Radial†	212.4	199.94 µg/L	4.009	199.94 ppb	4.009	2.00%
QC value within limits for Ca 317.933Radial Recovery = 99.97%						
Cd 226.502†	173.4	4.7751 µg/L	0.46856	4.7751 ppb	0.46856	9.81%
QC value within limits for Cd 226.502 Recovery = 95.50%						
Co 228.616†	94.6	4.6523 µg/L	0.52218	4.6523 ppb	0.52218	11.22%

QC value within limits for Co 228.616 Recovery = 93.05%						
Cr 267.716†	226.9	4.9931 µg/L	0.20751	4.9931 ppb	0.20751	4.16%
QC value within limits for Cr 267.716 Recovery = 99.86%						
Cu 324.752†	1409.7	9.8638 µg/L	0.35593	9.8638 ppb	0.35593	3.61%
QC value within limits for Cu 324.752 Recovery = 98.64%						
Fe 238.204 Radial†	14.0	118.87 µg/L	16.021	118.87 ppb	16.021	13.48%
QC value within limits for Fe 238.204 Radial Recovery = 118.87%						
K 766.490 Radial†	259.7	184.62 µg/L	29.396	184.62 ppb	29.396	15.92%
QC value within limits for K 766.490 Radial Recovery = 123.08%						
Mg 279.077 IEC†	32.7	304.34 µg/L	27.307	304.34 ppb	27.307	8.97%
QC value within limits for Mg 279.077 IEC Recovery = 101.45%						
Mn 257.610†	2883.3	9.9880 µg/L	0.39151	9.9880 ppb	0.39151	3.92%
QC value within limits for Mn 257.610 Recovery = 99.88%						
Mo 202.031†	93.6	9.9904 µg/L	0.78979	9.9904 ppb	0.78979	7.91%
QC value within limits for Mo 202.031 Recovery = 99.90%						
Na 589.592 Radial†	892.8	293.90 µg/L	6.477	293.90 ppb	6.477	2.20%
QC value within limits for Na 589.592 Radial Recovery = 97.97%						
Ni 231.604†	83.5	4.5606 µg/L	0.08032	4.5606 ppb	0.08032	1.76%
QC value within limits for Ni 231.604 Recovery = 91.21%						
P 214.914†	76.6	163.52 µg/L	10.837	163.52 ppb	10.837	6.63%
QC value within limits for P 214.914 Recovery = 109.01%						
Pb 220.353†	37.6	10.004 µg/L	2.4639	10.004 ppb	2.4639	24.63%
QC value within limits for Pb 220.353 Recovery = 100.04%						
S 181.975 Axial†	21.2	92.677 µg/L	7.0801	92.677 ppb	7.0801	7.64%
QC value within limits for S 181.975 Axial Recovery = 92.68%						
Sb 206.836†	5.5	5.5403 µg/L	3.62890	5.5403 ppb	3.62890	65.50%
QC value less than the lower limit for Sb 206.836 Recovery = 55.40%						
Se 196.026†	18.8	28.694 µg/L	12.4212	28.694 ppb	12.4212	43.29%
QC value within limits for Se 196.026 Recovery = 95.65%						
SiO2†	938.5	202.10 µg/L	10.205	202.10 ppb	10.205	5.05%
QC value within limits for SiO2 Recovery = 94.88%						
Si 251.611†	1120.6	92.115 µg/L	6.6423	92.115 ppb	6.6423	7.21%
QC value within limits for Si 251.611 Recovery = 92.11%						
Sn 189.927†	23.0	10.598 µg/L	2.7624	10.598 ppb	2.7624	26.06%
QC value within limits for Sn 189.927 Recovery = 105.98%						
Sr 421.552†	465.6	4.8266 µg/L	0.19650	4.8266 ppb	0.19650	4.07%
QC value within limits for Sr 421.552 Recovery = 96.53%						
Ti 334.940†	2002.5	4.7961 µg/L	0.19174	4.7961 ppb	0.19174	4.00%
QC value within limits for Ti 334.940 Recovery = 95.92%						
Tl 190.801†	17.1	23.984 µg/L	6.3650	23.984 ppb	6.3650	26.54%
QC value within limits for Tl 190.801 Recovery = 119.92%						
U 409.014†	591.0	53.480 µg/L	2.3877	53.480 ppb	2.3877	4.46%
QC value within limits for U 409.014 Recovery = 106.96%						
V 292.402†	458.4	5.0431 µg/L	0.12672	5.0431 ppb	0.12672	2.51%
QC value within limits for V 292.402 Recovery = 100.86%						
Zn 213.857†	378.0	9.3810 µg/L	0.94809	9.3810 ppb	0.94809	10.11%
QC value within limits for Zn 213.857 Recovery = 93.81%						
QC Failed. Continue with analysis.						

Sequence No.: 9  
 Sample ID: IC5A  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 103  
 Date Collected: 2/11/2010 14:37:31  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: IC5A

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	54929.8	54929.8	101 %		14:38:12
1	Al 396.153Radial†	662864.4	658585.8	490860 µg/L	490860 ppb	14:38:07
1	Ca 317.933Radial†	501017.0	497596.3	468520 µg/L	468520 ppb	14:38:07
1	Fe 238.204 Radial†	21302.2	21149.9	179260 µg/L	179260 ppb	14:38:12
1	K 766.490 Radial†	133.6	4.3	3.0615 µg/L	3.0615 ppb	14:38:12
1	Mg 279.077 IEC†	50419.1	50081.6	465880 µg/L	465880 ppb	14:38:12
1	Na 589.592 Radial†	588.4	42.7	14.053 µg/L	14.053 ppb	14:38:12
1	Sr 421.552†	369.2	327.3	3.3927 µg/L	3.3927 ppb	14:38:12
1	Sc 361.383	1857257.4	1857257.4	97.247 %		14:38:45
1	Y 371.029	1267408.3	1267408.3	96.755 %		14:38:45
1	Ag 328.068†	-2882.1	-2399.2	-7.8752 µg/L	-7.8752 ppb	14:38:51
1	As 188.979†	-10.9	-12.4	-38.129 µg/L	-38.129 ppb	14:39:11
1	B 249.677†	826.3	518.2	-70.891 µg/L	-70.891 ppb	14:38:51
1	Ba 233.527†	265.1	298.7	7.7406 µg/L	7.7406 ppb	14:39:11
1	Be 313.107†	-4111.4	-787.4	-0.5240 µg/L	-0.5240 ppb	14:38:51
1	Cd 226.502†	352.3	504.4	-6.3482 µg/L	-6.3482 ppb	14:39:11
1	Co 228.616†	33.3	43.1	2.0584 µg/L	2.0584 ppb	14:39:11
1	Cr 267.716†	-59.0	-8.3	-0.1945 µg/L	-0.1945 ppb	14:39:11
1	Cu 324.752†	-1400.3	-3926.0	-2.5072 µg/L	-2.5072 ppb	14:38:51
1	Mn 257.610†	37.6	282.8	6.1777 µg/L	6.1777 ppb	14:38:51
1	Mo 202.031†	-107.0	-102.5	-4.1257 µg/L	-4.1257 ppb	14:39:11
1	Ni 231.604†	157.1	-140.7	-5.3633 µg/L	-5.3633 ppb	14:39:11
1	P 214.914†	101.4	76.6	162.80 µg/L	162.80 ppb	14:39:11
1	Pb 220.353†	54.2	-41.5	9.1341 µg/L	9.1341 ppb	14:39:11
1	S 181.975 Axial†	32.3	18.4	80.756 µg/L	80.756 ppb	14:39:11
1	Sb 206.836†	58.1	32.8	-8.6501 µg/L	-8.6501 ppb	14:39:11
1	Se 196.026†	34.1	19.3	-25.969 µg/L	-25.969 ppb	14:39:11
1	SiO2†	1033.7	-187.0	-40.276 µg/L	-40.276 ppb	14:39:11
1	Si 251.611†	428.1	127.4	10.470 µg/L	10.470 ppb	14:39:11
1	Sn 189.927†	-61.0	-61.9	5.0665 µg/L	5.0665 ppb	14:39:11
1	Ti 334.940†	10534.2	10716.3	-3.5463 µg/L	-3.5463 ppb	14:38:51
1	Tl 190.801†	-30.9	-7.5	8.6675 µg/L	8.6675 ppb	14:39:11
1	U 409.014†	-29.2	23.6	-51.357 µg/L	-51.357 ppb	14:38:51
1	V 292.402†	-1857.1	-1865.5	1.1351 µg/L	1.1351 ppb	14:38:51
1	Zn 213.857†	1452.2	1017.8	-9.4487 µg/L	-9.4487 ppb	14:39:11
2	Sc RADIAL	55009.9	55009.9	101 %		14:38:23
2	Al 396.153Radial†	661057.1	655833.6	488810 µg/L	488810 ppb	14:38:18
2	Ca 317.933Radial†	498837.3	494708.8	465800 µg/L	465800 ppb	14:38:18
2	Fe 238.204 Radial†	21470.3	21285.8	180410 µg/L	180410 ppb	14:38:23
2	K 766.490 Radial†	106.0	-23.2	-16.506 µg/L	-16.506 ppb	14:38:23
2	Mg 279.077 IEC†	50738.3	50325.3	468150 µg/L	468150 ppb	14:38:23
2	Na 589.592 Radial†	648.0	101.0	33.250 µg/L	33.250 ppb	14:38:23
2	Sr 421.552†	361.1	318.7	3.3032 µg/L	3.3032 ppb	14:38:23
2	Sc 361.383	1846098.6	1846098.6	96.662 %		14:39:17
2	Y 371.029	1260367.6	1260367.6	96.217 %		14:39:17
2	Ag 328.068†	-2932.2	-2468.9	-8.3594 µg/L	-8.3594 ppb	14:39:23
2	As 188.979†	-14.6	-16.3	-45.537 µg/L	-45.537 ppb	14:39:43
2	B 249.677†	858.5	556.6	-69.813 µg/L	-69.813 ppb	14:39:23
2	Ba 233.527†	262.3	297.4	7.7059 µg/L	7.7059 ppb	14:39:43
2	Be 313.107†	-4105.1	-806.4	-0.5367 µg/L	-0.5367 ppb	14:39:23
2	Cd 226.502†	337.6	491.4	-6.8376 µg/L	-6.8376 ppb	14:39:43
2	Co 228.616†	17.7	27.1	1.2707 µg/L	1.2707 ppb	14:39:43
2	Cr 267.716†	-53.0	-2.4	-0.0661 µg/L	-0.0661 ppb	14:39:43
2	Cu 324.752†	-1461.5	-3998.0	-2.8500 µg/L	-2.8500 ppb	14:39:23
2	Mn 257.610†	43.7	289.4	6.2629 µg/L	6.2629 ppb	14:39:23
2	Mo 202.031†	-104.0	-100.0	-3.8203 µg/L	-3.8203 ppb	14:39:43
2	Ni 231.604†	142.4	-154.9	-6.1246 µg/L	-6.1246 ppb	14:39:43
2	P 214.914†	112.7	89.0	187.84 µg/L	187.84 ppb	14:39:43
2	Pb 220.353†	58.0	-37.2	10.116 µg/L	10.116 ppb	14:39:43



2	S 181.975 Axial†	36.2	22.6	98.941 µg/L	98.941 ppb	14:39:43
2	Sb 206.836†	53.9	28.8	-12.353 µg/L	-12.353 ppb	14:39:43
2	Se 196.026†	26.7	11.8	-35.549 µg/L	-35.549 ppb	14:39:43
2	SiO2†	1052.3	-161.4	-34.761 µg/L	-34.761 ppb	14:39:43
2	Si 251.611†	458.0	160.9	13.230 µg/L	13.230 ppb	14:39:43
2	Sn 189.927†	-63.6	-65.0	3.8069 µg/L	3.8069 ppb	14:39:43
2	Ti 334.940†	10748.6	11003.6	-3.0781 µg/L	-3.0781 ppb	14:39:23
2	Tl 190.801†	-35.3	-12.3	2.2973 µg/L	2.2973 ppb	14:39:43
2	U 409.014†	-80.2	-29.4	-56.150 µg/L	-56.150 ppb	14:39:23
2	V 292.402†	-1894.8	-1916.0	0.7299 µg/L	0.7299 ppb	14:39:23
2	Zn 213.857†	1462.8	1037.8	-9.1272 µg/L	-9.1272 ppb	14:39:43
3	Sc RADIAL	54631.5	54631.5	100 %		14:38:35
3	Al 396.153Radial†	667869.4	667182.1	497270 µg/L	497270 ppb	14:38:29
3	Ca 317.933Radial†	503599.4	502894.4	473510 µg/L	473510 ppb	14:38:29
3	Fe 238.204 Radial†	21467.0	21430.1	181630 µg/L	181630 ppb	14:38:35
3	K 766.490 Radial†	96.7	-31.8	-22.617 µg/L	-22.617 ppb	14:38:35
3	Mg 279.077 IEC†	50895.3	50830.8	472850 µg/L	472850 ppb	14:38:35
3	Na 589.592 Radial†	627.0	84.4	27.800 µg/L	27.800 ppb	14:38:35
3	Sr 421.552†	372.9	333.0	3.4514 µg/L	3.4514 ppb	14:38:35
3	Sc 361.383	1825493.4	1825493.4	95.584 %		14:39:49
3	Y 371.029	1244094.0	1244094.0	94.975 %		14:39:49
3	Ag 328.068†	-2843.3	-2410.2	-7.8207 µg/L	-7.8207 ppb	14:39:55
3	As 188.979†	-21.3	-23.4	-59.893 µg/L	-59.893 ppb	14:40:16
3	B 249.677†	774.3	478.6	-73.863 µg/L	-73.863 ppb	14:39:55
3	Ba 233.527†	257.2	295.1	7.6465 µg/L	7.6465 ppb	14:40:16
3	Be 313.107†	-4046.5	-793.0	-0.5281 µg/L	-0.5281 ppb	14:39:55
3	Cd 226.502†	377.7	537.3	-5.7094 µg/L	-5.7094 ppb	14:40:16
3	Co 228.616†	37.6	48.2	2.3043 µg/L	2.3043 ppb	14:40:16
3	Cr 267.716†	-81.4	-32.7	-0.7334 µg/L	-0.7334 ppb	14:40:16
3	Cu 324.752†	-1475.8	-4030.1	-2.9042 µg/L	-2.9042 ppb	14:39:55
3	Mn 257.610†	50.9	297.4	6.2652 µg/L	6.2652 ppb	14:39:55
3	Mo 202.031†	-108.7	-106.2	-4.4310 µg/L	-4.4310 ppb	14:40:16
3	Ni 231.604†	152.6	-142.5	-5.4329 µg/L	-5.4329 ppb	14:40:16
3	P 214.914†	105.4	82.6	175.78 µg/L	175.78 ppb	14:40:16
3	Pb 220.353†	72.0	-21.8	14.642 µg/L	14.642 ppb	14:40:16
3	S 181.975 Axial†	29.0	15.5	67.783 µg/L	67.783 ppb	14:40:16
3	Sb 206.836†	45.6	20.7	-20.949 µg/L	-20.949 ppb	14:40:16
3	Se 196.026†	33.1	18.8	-27.759 µg/L	-27.759 ppb	14:40:16
3	SiO2†	1033.4	-168.9	-36.378 µg/L	-36.378 ppb	14:40:16
3	Si 251.611†	441.5	149.0	12.252 µg/L	12.252 ppb	14:40:16
3	Sn 189.927†	-53.7	-55.3	8.6518 µg/L	8.6518 ppb	14:40:16
3	Ti 334.940†	10848.2	11233.3	-2.7738 µg/L	-2.7738 ppb	14:39:55
3	Tl 190.801†	-26.7	-3.6	14.470 µg/L	14.470 ppb	14:40:16
3	U 409.014†	-83.2	-33.5	-57.162 µg/L	-57.162 ppb	14:39:55
3	V 292.402†	-1928.3	-1973.2	0.2572 µg/L	0.2572 ppb	14:39:55
3	Zn 213.857†	1454.4	1046.1	-9.2482 µg/L	-9.2482 ppb	14:40:16

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1842949.8	96.498 %	0.8438			0.87%
Sc RADIAL	54857.1	101 %	0.4			0.36%
Y 371.029	1257290.0	95.982 %	0.9129			0.95%
Ag 328.068†	-2426.1	-8.0184 µg/L	0.29656	-8.0184 ppb	0.29656	3.70%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	660533.8	492320 µg/L	4412.2	492320 ppb	4412.2	0.90%
QC value within limits for Al 396.153Radial Recovery = 98.46%						
As 188.979†	-17.4	-47.853 µg/L	11.0657	-47.853 ppb	11.0657	23.12%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	517.8	-71.522 µg/L	2.0977	-71.522 ppb	2.0977	2.93%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	297.0	7.6977 µg/L	0.04758	7.6977 ppb	0.04758	0.62%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-795.6	-0.5296 µg/L	0.00649	-0.5296 ppb	0.00649	1.23%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	498399.8	469270 µg/L	3908.9	469270 ppb	3908.9	0.83%
QC value within limits for Ca 317.933Radial Recovery = 93.85%						
Cd 226.502†	511.0	-6.2984 µg/L	0.56575	-6.2984 ppb	0.56575	8.98%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	39.5	1.8778 µg/L	0.53996	1.8778 ppb	0.53996	28.75%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-14.5	-0.3313 µg/L	0.35406	-0.3313 ppb	0.35406	106.86%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-3984.7	-2.7538 µg/L	0.21524	-2.7538 ppb	0.21524	7.82%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	21288.6	180430 µg/L	1187.5	180430 ppb	1187.5	0.66%
QC value within limits for Fe 238.204 Radial Recovery = 90.22%						
K 766.490 Radial†	-16.9	-12.020 µg/L	13.4139	-12.020 ppb	13.4139	111.59%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	50412.6	468960 µg/L	3555.4	468960 ppb	3555.4	0.76%
QC value within limits for Mg 279.077 IEC Recovery = 93.79%						
Mn 257.610†	289.9	6.2353 µg/L	0.04986	6.2353 ppb	0.04986	0.80%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-102.9	-4.1257 µg/L	0.30534	-4.1257 ppb	0.30534	7.40%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	76.0	25.034 µg/L	9.8929	25.034 ppb	9.8929	39.52%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-146.0	-5.6403 µg/L	0.42090	-5.6403 ppb	0.42090	7.46%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	82.7	175.47 µg/L	12.518	175.47 ppb	12.518	7.13%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-33.5	11.297 µg/L	2.9376	11.297 ppb	2.9376	26.00%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	18.8	82.493 µg/L	15.6511	82.493 ppb	15.6511	18.97%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	27.4	-13.984 µg/L	6.3094	-13.984 ppb	6.3094	45.12%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	16.6	-29.759 µg/L	5.0935	-29.759 ppb	5.0935	17.12%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-172.5	-37.139 µg/L	2.8350	-37.139 ppb	2.8350	7.63%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	145.8	11.984 µg/L	1.3994	11.984 ppb	1.3994	11.68%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-60.7	5.8417 µg/L	2.51374	5.8417 ppb	2.51374	43.03%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	326.3	3.3825 µg/L	0.07464	3.3825 ppb	0.07464	2.21%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	10984.4	-3.1328 µg/L	0.38914	-3.1328 ppb	0.38914	12.42%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-7.8	8.4783 µg/L	6.08871	8.4783 ppb	6.08871	71.81%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-13.1	-54.890 µg/L	3.1009	-54.890 ppb	3.1009	5.65%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-1918.2	0.7074 µg/L	0.43934	0.7074 ppb	0.43934	62.11%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	1033.9	-9.2747 µg/L	0.16235	-9.2747 ppb	0.16235	1.75%
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: 2/11/2010 14:40:25  
 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	54743.7	54743.7	100 %		14:41:04
1	Al 396.153Radial†	662601.8	660562.7	492330 µg/L	492330 ppb	14:40:59
1	Ca 317.933Radial†	498259.5	496539.4	467520 µg/L	467520 ppb	14:40:59
1	Fe 238.204 Radial†	21341.6	21261.1	180210 µg/L	180210 ppb	14:41:04
1	K 766.490 Radial†	6958.5	6808.5	4839.5 µg/L	4839.5 ppb	14:41:04
1	Mg 279.077 IEC†	50755.9	50587.7	470600 µg/L	470600 ppb	14:41:04
1	Na 589.592 Radial†	15455.3	14865.6	4893.8 µg/L	4893.8 ppb	14:41:04
1	Sr 421.552†	46875.8	46691.2	484.01 µg/L	484.01 ppb	14:41:04
1	Sc 361.383	1846856.3	1846856.3	96.702 %		14:41:38
1	Y 371.029	1258300.6	1258300.6	96.059 %		14:41:38
1	Ag 328.068†	27332.2	28828.8	243.20 µg/L	243.20 ppb	14:41:44
1	As 188.979†	237.2	244.2	462.48 µg/L	462.48 ppb	14:42:04
1	B 249.677†	11716.6	11784.7	421.73 µg/L	421.73 ppb	14:41:44
1	Ba 233.527†	17712.8	18342.8	478.47 µg/L	478.47 ppb	14:41:44
1	Be 313.107†	339671.1	354695.4	231.45 µg/L	231.45 ppb	14:41:38
1	Cd 226.502†	15868.9	16552.3	436.70 µg/L	436.70 ppb	14:41:44
1	Co 228.616†	8171.6	8459.1	415.69 µg/L	415.69 ppb	14:42:04
1	Cr 267.716†	20395.5	21143.4	465.37 µg/L	465.37 ppb	14:41:44
1	Cu 324.752†	70107.6	70012.4	514.10 µg/L	514.10 ppb	14:41:44
1	Mn 257.610†	126842.6	131412.5	460.20 µg/L	460.20 ppb	14:41:44
1	Mo 202.031†	4309.3	4463.8	483.23 µg/L	483.23 ppb	14:42:04
1	Ni 231.604†	7535.7	7490.5	411.39 µg/L	411.39 ppb	14:42:04
1	P 214.914†	1206.8	1220.3	2570.8 µg/L	2570.8 ppb	14:42:04
1	Pb 220.353†	1703.5	1664.4	464.39 µg/L	464.39 ppb	14:42:04
1	S 181.975 Axial†	587.6	592.8	2597.2 µg/L	2597.2 ppb	14:42:04
1	Sb 206.836†	550.1	541.9	495.21 µg/L	495.21 ppb	14:42:04
1	Se 196.026†	1471.2	1505.6	2238.6 µg/L	2238.6 ppb	14:42:04
1	SiO2†	47866.2	48248.6	10391 µg/L	10391 ppb	14:41:44
1	Si 251.611†	57854.9	59515.0	4892.4 µg/L	4892.4 ppb	14:41:44
1	Sn 189.927†	962.7	996.5	492.28 µg/L	492.28 ppb	14:42:04
1	Ti 334.940†	201101.7	207843.8	470.24 µg/L	470.24 ppb	14:41:44
1	Tl 190.801†	278.9	312.7	461.24 µg/L	461.24 ppb	14:42:04
1	U 409.014†	5055.9	5282.0	424.65 µg/L	424.65 ppb	14:41:44
1	V 292.402†	42477.1	43969.9	495.05 µg/L	495.05 ppb	14:41:44
1	Zn 213.857†	19021.9	19195.0	441.47 µg/L	441.47 ppb	14:41:44
2	Sc RADIAL	55060.7	55060.7	101 %		14:41:16
2	Al 396.153Radial†	664887.8	659025.8	491180 µg/L	491180 ppb	14:41:10
2	Ca 317.933Radial†	499367.7	494778.3	465860 µg/L	465860 ppb	14:41:10
2	Fe 238.204 Radial†	21754.5	21547.8	182640 µg/L	182640 ppb	14:41:16
2	K 766.490 Radial†	7103.8	6912.7	4913.5 µg/L	4913.5 ppb	14:41:16
2	Mg 279.077 IEC†	51410.3	50945.0	473920 µg/L	473920 ppb	14:41:16
2	Na 589.592 Radial†	15635.7	14955.7	4923.5 µg/L	4923.5 ppb	14:41:16
2	Sr 421.552†	47418.4	46960.1	486.80 µg/L	486.80 ppb	14:41:16
2	Sc 361.383	1837075.1	1837075.1	96.190 %		14:42:10
2	Y 371.029	1253427.6	1253427.6	95.687 %		14:42:10
2	Ag 328.068†	27052.1	28688.2	242.21 µg/L	242.21 ppb	14:42:16
2	As 188.979†	226.7	234.5	443.77 µg/L	443.77 ppb	14:42:37
2	B 249.677†	11617.2	11745.8	418.76 µg/L	418.76 ppb	14:42:16
2	Ba 233.527†	17456.8	18174.2	474.07 µg/L	474.07 ppb	14:42:16
2	Be 313.107†	337736.8	354554.8	231.36 µg/L	231.36 ppb	14:42:10
2	Cd 226.502†	15582.5	16341.8	430.62 µg/L	430.62 ppb	14:42:16
2	Co 228.616†	8172.6	8505.1	417.96 µg/L	417.96 ppb	14:42:37
2	Cr 267.716†	20089.6	20937.7	460.84 µg/L	460.84 ppb	14:42:16
2	Cu 324.752†	69141.0	69393.5	510.12 µg/L	510.12 ppb	14:42:16
2	Mn 257.610†	124994.1	130189.1	456.15 µg/L	456.15 ppb	14:42:16
2	Mo 202.031†	4295.8	4473.5	484.36 µg/L	484.36 ppb	14:42:37
2	Ni 231.604†	7541.0	7537.5	413.99 µg/L	413.99 ppb	14:42:37
2	P 214.914†	1237.1	1258.5	2651.1 µg/L	2651.1 ppb	14:42:37
2	Pb 220.353†	1701.2	1671.4	466.10 µg/L	466.10 ppb	14:42:37

2	S 181.975 Axial†	598.3	607.2	2660.4 µg/L	2660.4 ppb	14:42:37
2	Sb 206.836†	550.2	545.1	498.59 µg/L	498.59 ppb	14:42:37
2	Se 196.026†	1466.3	1508.6	2247.3 µg/L	2247.3 ppb	14:42:37
2	SiO2†	47231.2	47852.0	10305 µg/L	10305 ppb	14:42:16
2	Si 251.611†	57079.6	59027.6	4852.4 µg/L	4852.4 ppb	14:42:16
2	Sn 189.927†	972.7	1012.1	499.64 µg/L	499.64 ppb	14:42:37
2	Ti 334.940†	198343.7	206083.8	465.72 µg/L	465.72 ppb	14:42:16
2	Tl 190.801†	259.5	294.1	435.56 µg/L	435.56 ppb	14:42:37
2	U 409.014†	4974.7	5225.3	419.28 µg/L	419.28 ppb	14:42:16
2	V 292.402†	41844.6	43546.2	490.82 µg/L	490.82 ppb	14:42:16
2	Zn 213.857†	18719.4	18985.3	435.92 µg/L	435.92 ppb	14:42:16
3	Sc RADIAL	54836.5	54836.5	100 %		14:41:27
3	Al 396.153Radial†	666707.4	663530.3	494540 µg/L	494540 ppb	14:41:21
3	Ca 317.933Radial†	500342.9	497771.9	468680 µg/L	468680 ppb	14:41:21
3	Fe 238.204 Radial†	21386.7	21269.9	180290 µg/L	180290 ppb	14:41:27
3	K 766.490 Radial†	6994.6	6832.8	4856.7 µg/L	4856.7 ppb	14:41:27
3	Mg 279.077 IEC†	50805.9	50551.7	470260 µg/L	470260 ppb	14:41:27
3	Na 589.592 Radial†	15470.0	14854.1	4890.0 µg/L	4890.0 ppb	14:41:27
3	Sr 421.552†	46844.7	46581.2	482.87 µg/L	482.87 ppb	14:41:27
3	Sc 361.383	1833431.9	1833431.9	95.999 %		14:42:43
3	Y 371.029	1252123.0	1252123.0	95.588 %		14:42:43
3	Ag 328.068†	27588.4	29302.7	247.00 µg/L	247.00 ppb	14:42:49
3	As 188.979†	241.1	250.0	473.71 µg/L	473.71 ppb	14:43:09
3	B 249.677†	11855.2	12017.8	431.89 µg/L	431.89 ppb	14:42:49
3	Ba 233.527†	17813.9	18582.3	484.71 µg/L	484.71 ppb	14:42:49
3	Be 313.107†	338767.0	356325.5	232.51 µg/L	232.51 ppb	14:42:43
3	Cd 226.502†	15965.4	16772.9	442.77 µg/L	442.77 ppb	14:42:49
3	Co 228.616†	8119.3	8466.6	416.04 µg/L	416.04 ppb	14:43:09
3	Cr 267.716†	20600.1	21511.0	473.46 µg/L	473.46 ppb	14:42:49
3	Cu 324.752†	70720.9	71182.1	522.28 µg/L	522.28 ppb	14:42:49
3	Mn 257.610†	127685.2	133250.6	466.59 µg/L	466.59 ppb	14:42:49
3	Mo 202.031†	4277.4	4463.2	483.17 µg/L	483.17 ppb	14:43:09
3	Ni 231.604†	7478.0	7487.4	411.22 µg/L	411.22 ppb	14:43:09
3	P 214.914†	1197.0	1219.3	2568.4 µg/L	2568.4 ppb	14:43:09
3	Pb 220.353†	1703.7	1677.5	467.96 µg/L	467.96 ppb	14:43:09
3	S 181.975 Axial†	585.7	595.2	2608.0 µg/L	2608.0 ppb	14:43:09
3	Sb 206.836†	542.2	537.9	491.06 µg/L	491.06 ppb	14:43:09
3	Se 196.026†	1453.1	1497.9	2227.0 µg/L	2227.0 ppb	14:43:09
3	SiO2†	48266.6	49028.1	10558 µg/L	10558 ppb	14:42:49
3	Si 251.611†	58341.2	60459.7	4970.1 µg/L	4970.1 ppb	14:42:49
3	Sn 189.927†	964.4	1005.4	496.36 µg/L	496.36 ppb	14:43:09
3	Ti 334.940†	202865.6	211203.9	478.37 µg/L	478.37 ppb	14:42:49
3	Tl 190.801†	278.4	314.2	463.55 µg/L	463.55 ppb	14:43:09
3	U 409.014†	5159.4	5428.1	437.79 µg/L	437.79 ppb	14:42:49
3	V 292.402†	42697.4	44521.1	500.97 µg/L	500.97 ppb	14:42:49
3	Zn 213.857†	19157.2	19480.1	448.59 µg/L	448.59 ppb	14:42:49

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1839121.1	96.297 %	0.3635			0.38%
Sc RADIAL	54880.3	101 %	0.3			0.30%
Y 371.029	1254617.1	95.778 %	0.2486			0.26%
Ag 328.068†	28939.9	244.14 µg/L	2.532	244.14 ppb	2.532	1.04%
QC value within limits for Ag 328.068 Recovery = 97.66%						
Al 396.153Radial†	661039.6	492680 µg/L	1706.7	492680 ppb	1706.7	0.35%
QC value within limits for Al 396.153Radial Recovery = 98.54%						
As 188.979†	242.9	459.99 µg/L	15.123	459.99 ppb	15.123	3.29%
QC value within limits for As 188.979 Recovery = 92.00%						
B 249.677†	11849.4	424.12 µg/L	6.887	424.12 ppb	6.887	1.62%
QC value within limits for B 249.677 Recovery = 84.82%						
Ba 233.527†	18366.5	479.08 µg/L	5.348	479.08 ppb	5.348	1.12%
QC value within limits for Ba 233.527 Recovery = 95.82%						
Be 313.107†	355191.9	231.77 µg/L	0.640	231.77 ppb	0.640	0.28%
QC value within limits for Be 313.107 Recovery = 92.71%						
Ca 317.933Radial†	496363.2	467360 µg/L	1416.6	467360 ppb	1416.6	0.30%
QC value within limits for Ca 317.933Radial Recovery = 93.47%						
Cd 226.502†	16555.7	436.70 µg/L	6.077	436.70 ppb	6.077	1.39%
QC value within limits for Cd 226.502 Recovery = 87.34%						
Co 228.616†	8476.9	416.56 µg/L	1.225	416.56 ppb	1.225	0.29%

QC value within limits for Co 228.616 Recovery = 83.31%							
Cr 267.716†	21197.4	466.55 µg/L	6.392	466.55 ppb	6.392	1.37%	
QC value within limits for Cr 267.716 Recovery = 93.31%							
Cu 324.752†	70196.0	515.50 µg/L	6.202	515.50 ppb	6.202	1.20%	
QC value within limits for Cu 324.752 Recovery = 103.10%							
Fe 238.204 Radial†	21359.6	181050 µg/L	1382.0	181050 ppb	1382.0	0.76%	
QC value within limits for Fe 238.204 Radial Recovery = 90.52%							
K 766.490 Radial†	6851.3	4869.9 µg/L	38.72	4869.9 ppb	38.72	0.80%	
QC value within limits for K 766.490 Radial Recovery = 97.40%							
Mg 279.077 IEC†	50694.8	471600 µg/L	2021.9	471600 ppb	2021.9	0.43%	
QC value within limits for Mg 279.077 IEC Recovery = 94.32%							
Mn 257.610†	131617.4	460.98 µg/L	5.261	460.98 ppb	5.261	1.14%	
QC value within limits for Mn 257.610 Recovery = 92.20%							
Mo 202.031†	4466.8	483.58 µg/L	0.671	483.58 ppb	0.671	0.14%	
QC value within limits for Mo 202.031 Recovery = 96.72%							
Na 589.592 Radial†	14891.8	4902.4 µg/L	18.32	4902.4 ppb	18.32	0.37%	
QC value within limits for Na 589.592 Radial Recovery = 98.05%							
Ni 231.604†	7505.2	412.20 µg/L	1.552	412.20 ppb	1.552	0.38%	
QC value within limits for Ni 231.604 Recovery = 82.44%							
P 214.914†	1232.7	2596.7 µg/L	47.05	2596.7 ppb	47.05	1.81%	
QC value within limits for P 214.914 Recovery = 103.87%							
Pb 220.353†	1671.1	466.15 µg/L	1.785	466.15 ppb	1.785	0.38%	
QC value within limits for Pb 220.353 Recovery = 93.23%							
S 181.975 Axial†	598.4	2621.9 µg/L	33.79	2621.9 ppb	33.79	1.29%	
QC value within limits for S 181.975 Axial Recovery = 104.87%							
Sb 206.836†	541.6	494.95 µg/L	3.768	494.95 ppb	3.768	0.76%	
QC value within limits for Sb 206.836 Recovery = 98.99%							
Se 196.026†	1504.0	2237.7 µg/L	10.19	2237.7 ppb	10.19	0.46%	
QC value within limits for Se 196.026 Recovery = 89.51%							
SiO2†	48376.2	10418 µg/L	128.9	10418 ppb	128.9	1.24%	
QC value within limits for SiO2 Recovery = 97.41%							
Si 251.611†	59667.4	4905.0 µg/L	59.86	4905.0 ppb	59.86	1.22%	
QC value within limits for Si 251.611 Recovery = 98.10%							
Sn 189.927†	1004.7	496.10 µg/L	3.686	496.10 ppb	3.686	0.74%	
QC value within limits for Sn 189.927 Recovery = 99.22%							
Sr 421.552†	46744.2	484.56 µg/L	2.020	484.56 ppb	2.020	0.42%	
QC value within limits for Sr 421.552 Recovery = 96.91%							
Ti 334.940†	208377.1	471.44 µg/L	6.410	471.44 ppb	6.410	1.36%	
QC value within limits for Ti 334.940 Recovery = 94.29%							
Tl 190.801†	307.0	453.45 µg/L	15.538	453.45 ppb	15.538	3.43%	
QC value within limits for Tl 190.801 Recovery = 90.69%							
U 409.014†	5311.8	427.24 µg/L	9.525	427.24 ppb	9.525	2.23%	
QC value within limits for U 409.014 Recovery = 85.45%							
V 292.402†	44012.4	495.61 µg/L	5.099	495.61 ppb	5.099	1.03%	
QC value within limits for V 292.402 Recovery = 99.12%							
Zn 213.857†	19220.1	441.99 µg/L	6.349	441.99 ppb	6.349	1.44%	
QC value within limits for Zn 213.857 Recovery = 88.40%							
All analyte(s) passed QC.							

Sequence No.: 11  
 Sample ID: LR1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 105  
 Date Collected: 2/11/2010 14:43:19  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: LR1

Rep1#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	54698.7	54698.7	100 %		14:43:59
1	Al 396.153Radial†	649050.7	647585.6	482670 µg/L	482670 ppb	14:43:54
1	Ca 317.933Radial†	489494.3	488202.6	459670 µg/L	459670 ppb	14:43:54
1	Fe 238.204 Radial†	51606.4	51474.6	436280 µg/L	436280 ppb	14:43:59
1	K 766.490 Radial†	59.9	-68.6	-48.776 µg/L	-48.776 ppb	14:43:59
1	Mg 279.077 IEC†	49787.3	49662.9	461710 µg/L	461710 ppb	14:43:59
1	Na 589.592 Radial†	1412387.5	1408635.5	463730 µg/L	463730 ppb	14:43:54
1	Sr 421.552†	535.1	494.4	5.1247 µg/L	5.1247 ppb	14:43:59
1	Sc 361.383	1832827.1	1832827.1	95.968 %		14:44:34
1	Y 371.029	1243371.2	1243371.2	94.920 %		14:44:34
1	Ag 328.068†	-5331.8	-4991.3	-12.516 µg/L	-12.516 ppb	14:44:40
1	As 188.979†	-25.3	-27.5	-52.401 µg/L	-52.401 ppb	14:45:01
1	B 249.677†	1493.7	1225.0	-174.11 µg/L	-174.11 ppb	14:44:40
1	Ba 233.527†	574.9	625.1	16.169 µg/L	16.169 ppb	14:45:01
1	Be 313.107†	-11067.4	-8092.0	-5.2972 µg/L	-5.2972 ppb	14:44:40
1	Cd 226.502†	1038.3	1224.0	-15.542 µg/L	-15.542 ppb	14:44:40
1	Co 228.616†	189.5	206.3	10.066 µg/L	10.066 ppb	14:45:01
1	Cr 267.716†	137.7	195.9	4.2704 µg/L	4.2704 ppb	14:45:01
1	Cu 324.752†	-8795.2	-11650.9	-20.741 µg/L	-20.741 ppb	14:44:40
1	Mn 257.610†	-7006.5	-7056.8	15.101 µg/L	15.101 ppb	14:44:34
1	Mo 202.031†	-203.3	-204.2	-5.2185 µg/L	-5.2185 ppb	14:45:01
1	Ni 231.604†	92.3	-206.0	-5.6060 µg/L	-5.6060 ppb	14:45:01
1	P 214.914†	278.7	262.7	357.28 µg/L	357.28 ppb	14:45:01
1	Pb 220.353†	191.0	101.8	23.594 µg/L	23.594 ppb	14:45:01
1	S 181.975 Axial†	34.6	21.2	93.001 µg/L	93.001 ppb	14:45:01
1	Sb 206.836†	60.3	35.8	-5.1147 µg/L	-5.1147 ppb	14:45:01
1	Se 196.026†	-124.6	-145.7	431.09 µg/L	431.09 ppb	14:45:01
1	SiO2†	971.9	-237.3	-51.105 µg/L	-51.105 ppb	14:45:01
1	Si 251.611†	-251.2	-574.6	-47.235 µg/L	-47.235 ppb	14:45:01
1	Sn 189.927†	-32.5	-33.0	-9.5042 µg/L	-9.5042 ppb	14:45:01
1	Ti 334.940†	13370.7	13816.4	4.0770 µg/L	4.0770 ppb	14:44:40
1	Tl 190.801†	-49.5	-27.3	33.449 µg/L	33.449 ppb	14:45:01
1	U 409.014†	138681.8	144562.6	13000 µg/L	13000 ppb	14:44:40
1	V 292.402†	-5434.6	-5618.7	4.9101 µg/L	4.9101 ppb	14:44:40
1	Zn 213.857†	2732.6	2371.8	12.479 µg/L	12.479 ppb	14:45:01
2	Sc RADIAL	54113.0	54113.0	99.2 %		14:44:11
2	Al 396.153Radial†	645987.5	651505.9	485590 µg/L	485590 ppb	14:44:06
2	Ca 317.933Radial†	485663.6	489625.6	461010 µg/L	461010 ppb	14:44:06
2	Fe 238.204 Radial†	51235.5	51657.9	437830 µg/L	437830 ppb	14:44:11
2	K 766.490 Radial†	83.9	-43.8	-31.167 µg/L	-31.167 ppb	14:44:11
2	Mg 279.077 IEC†	49624.6	50036.5	465180 µg/L	465180 ppb	14:44:11
2	Na 589.592 Radial†	1405673.5	1417117.7	466520 µg/L	466520 ppb	14:44:06
2	Sr 421.552†	505.9	470.7	4.8794 µg/L	4.8794 ppb	14:44:11
2	Sc 361.383	1837825.9	1837825.9	96.229 %		14:45:07
2	Y 371.029	1247268.6	1247268.6	95.217 %		14:45:07
2	Ag 328.068†	-5248.4	-4889.5	-11.624 µg/L	-11.624 ppb	14:45:13
2	As 188.979†	-21.7	-23.6	-44.761 µg/L	-44.761 ppb	14:45:33
2	B 249.677†	1467.3	1193.4	-176.30 µg/L	-176.30 ppb	14:45:13
2	Ba 233.527†	558.0	605.8	15.663 µg/L	15.663 ppb	14:45:33
2	Be 313.107†	-10966.6	-7955.9	-5.2083 µg/L	-5.2083 ppb	14:45:13
2	Cd 226.502†	1019.9	1202.0	-16.327 µg/L	-16.327 ppb	14:45:13
2	Co 228.616†	178.5	194.3	9.4767 µg/L	9.4767 ppb	14:45:33
2	Cr 267.716†	83.6	139.3	3.0246 µg/L	3.0246 ppb	14:45:33
2	Cu 324.752†	-8717.3	-11545.0	-19.786 µg/L	-19.786 ppb	14:45:13
2	Mn 257.610†	-6988.4	-7018.1	15.303 µg/L	15.303 ppb	14:45:07
2	Mo 202.031†	-191.4	-191.4	-3.7840 µg/L	-3.7840 ppb	14:45:33
2	Ni 231.604†	81.9	-217.1	-6.1913 µg/L	-6.1913 ppb	14:45:33
2	P 214.914†	298.0	282.1	398.14 µg/L	398.14 ppb	14:45:33
2	Pb 220.353†	188.3	98.5	22.919 µg/L	22.919 ppb	14:45:33

2	S 181.975 Axial†	34.5	21.1	92.318 µg/L	92.318 ppb	14:45:33
2	Sb 206.836†	49.5	24.4	-16.430 µg/L	-16.430 ppb	14:45:33
2	Se 196.026†	-135.7	-156.8	414.89 µg/L	414.89 ppb	14:45:33
2	SiO2†	995.7	-215.3	-46.357 µg/L	-46.357 ppb	14:45:33
2	Si 251.611†	-242.1	-564.4	-46.400 µg/L	-46.400 ppb	14:45:33
2	Sn 189.927†	-48.8	-49.9	-17.017 µg/L	-17.017 ppb	14:45:33
2	Ti 334.940†	13350.9	13757.9	3.6830 µg/L	3.6830 ppb	14:45:13
2	Tl 190.801†	-50.6	-28.2	32.395 µg/L	32.395 ppb	14:45:33
2	U 409.014†	138028.8	143491.0	12902 µg/L	12902 ppb	14:45:13
2	V 292.402†	-5635.2	-5811.8	2.9425 µg/L	2.9425 ppb	14:45:13
2	Zn 213.857†	2709.5	2340.1	11.417 µg/L	11.417 ppb	14:45:33
3	Sc RADIAL	54398.5	54398.5	99.7 %		14:44:23
3	Al 396.153Radial†	647423.4	649527.5	484110 µg/L	484110 ppb	14:44:18
3	Ca 317.933Radial†	488211.3	489611.2	461000 µg/L	461000 ppb	14:44:18
3	Fe 238.204 Radial†	51015.9	51166.4	433670 µg/L	433670 ppb	14:44:23
3	K 766.490 Radial†	138.6	10.6	7.5591 µg/L	7.5591 ppb	14:44:23
3	Mg 279.077 IEC†	49363.7	49512.1	460310 µg/L	460310 ppb	14:44:23
3	Na 589.592 Radial†	1412371.3	1416397.4	466280 µg/L	466280 ppb	14:44:18
3	Sr 421.552†	507.2	469.3	4.8646 µg/L	4.8646 ppb	14:44:23
3	Sc 361.383	1837461.1	1837461.1	96.210 %		14:45:40
3	Y 371.029	1245635.1	1245635.1	95.093 %		14:45:40
3	Ag 328.068†	-5107.3	-4744.0	-10.729 µg/L	-10.729 ppb	14:45:45
3	As 188.979†	-16.7	-18.5	-34.960 µg/L	-34.960 ppb	14:46:06
3	B 249.677†	1484.3	1211.3	-173.35 µg/L	-173.35 ppb	14:45:45
3	Ba 233.527†	553.8	601.6	15.554 µg/L	15.554 ppb	14:46:06
3	Be 313.107†	-10842.7	-7829.4	-5.1258 µg/L	-5.1258 ppb	14:45:45
3	Cd 226.502†	1000.6	1182.1	-16.404 µg/L	-16.404 ppb	14:45:45
3	Co 228.616†	166.8	182.2	8.8812 µg/L	8.8812 ppb	14:46:06
3	Cr 267.716†	114.6	171.5	3.7340 µg/L	3.7340 ppb	14:46:06
3	Cu 324.752†	-8778.8	-11610.6	-20.823 µg/L	-20.823 ppb	14:45:45
3	Mn 257.610†	-6849.7	-6875.4	15.438 µg/L	15.438 ppb	14:45:40
3	Mo 202.031†	-180.2	-179.7	-2.7014 µg/L	-2.7014 ppb	14:46:06
3	Ni 231.604†	78.6	-220.5	-6.4261 µg/L	-6.4261 ppb	14:46:06
3	P 214.914†	292.5	276.4	389.07 µg/L	389.07 ppb	14:46:06
3	Pb 220.353†	166.9	76.3	17.067 µg/L	17.067 ppb	14:46:06
3	S 181.975 Axial†	27.8	14.1	61.607 µg/L	61.607 ppb	14:46:06
3	Sb 206.836†	44.0	18.8	-21.940 µg/L	-21.940 ppb	14:46:06
3	Se 196.026†	-130.2	-151.2	416.38 µg/L	416.38 ppb	14:46:06
3	SiO2†	1012.2	-197.9	-42.626 µg/L	-42.626 ppb	14:46:06
3	Si 251.611†	-265.6	-588.9	-48.410 µg/L	-48.410 ppb	14:46:06
3	Sn 189.927†	-42.0	-42.7	-13.864 µg/L	-13.864 ppb	14:46:06
3	Ti 334.940†	13514.7	13930.9	4.4846 µg/L	4.4846 ppb	14:45:45
3	Tl 190.801†	-39.7	-17.0	47.407 µg/L	47.407 ppb	14:46:06
3	U 409.014†	138148.6	143644.0	12917 µg/L	12917 ppb	14:45:45
3	V 292.402†	-5603.1	-5779.6	2.8210 µg/L	2.8210 ppb	14:45:45
3	Zn 213.857†	2726.7	2358.5	12.353 µg/L	12.353 ppb	14:46:06

## Mean Data: LRL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1836038.0	96.136 %	0.1459			0.15%
Sc RADIAL	54403.4	99.7 %	0.54			0.54%
Y 371.029	1245425.0	95.077 %	0.1494			0.16%
Ag 328.068†	-4875.0	-11.623 µg/L	0.8935	-11.623 ppb	0.8935	7.69%
Al 396.153Radial†	649539.7	484120 µg/L	1461.0	484120 ppb	1461.0	0.30%
QC value within limits for Al 396.153Radial Recovery = 96.82%						
As 188.979†	-23.2	-44.041 µg/L	8.7426	-44.041 ppb	8.7426	19.85%
B 249.677†	1209.9	-174.59 µg/L	1.536	-174.59 ppb	1.536	0.88%
Ba 233.527†	610.9	15.795 µg/L	0.3282	15.795 ppb	0.3282	2.08%
Be 313.107†	-7959.1	-5.2104 µg/L	0.08573	-5.2104 ppb	0.08573	1.65%
Ca 317.933Radial†	489146.5	460560 µg/L	769.6	460560 ppb	769.6	0.17%
QC value within limits for Ca 317.933Radial Recovery = 92.11%						
Cd 226.502†	1202.7	-16.091 µg/L	0.4769	-16.091 ppb	0.4769	2.96%
Co 228.616†	194.3	9.4746 µg/L	0.59237	9.4746 ppb	0.59237	6.25%
Cr 267.716†	168.9	3.6764 µg/L	0.62486	3.6764 ppb	0.62486	17.00%
Cu 324.752†	-11602.2	-20.450 µg/L	0.5769	-20.450 ppb	0.5769	2.82%
Fe 238.204 Radial†	51433.0	435930 µg/L	2105.0	435930 ppb	2105.0	0.48%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.19%						
K 766.490 Radial†	-33.9	-24.128 µg/L	28.8197	-24.128 ppb	28.8197	119.44%
Mg 279.077 IEC†	49737.1	462400 µg/L	2510.3	462400 ppb	2510.3	0.54%

QC value within limits for Mg 279.077 IEC Recovery = 92.48%							
Mn 257.610†	-6983.5	15.281 µg/L	0.1695	15.281 ppb	0.1695	1.11%	
Mo 202.031†	-191.8	-3.9013 µg/L	1.26264	-3.9013 ppb	1.26264	32.36%	
Na 589.592 Radial†	1414050.2	465510 µg/L	1548.3	465510 ppb	1548.3	0.33%	
QC value within limits for Na 589.592 Radial Recovery = 93.10%							
Ni 231.604†	-214.5	-6.0745 µg/L	0.42234	-6.0745 ppb	0.42234	6.95%	
P 214.914†	273.7	381.50 µg/L	21.461	381.50 ppb	21.461	5.63%	
Pb 220.353†	92.2	21.194 µg/L	3.5893	21.194 ppb	3.5893	16.94%	
S 181.975 Axial†	18.8	82.309 µg/L	17.9317	82.309 ppb	17.9317	21.79%	
Sb 206.836†	26.4	-14.495 µg/L	8.5779	-14.495 ppb	8.5779	59.18%	
Se 196.026†	-151.2	420.79 µg/L	8.956	420.79 ppb	8.956	2.13%	
SiO2†	-216.8	-46.696 µg/L	4.2500	-46.696 ppb	4.2500	9.10%	
Si 251.611†	-576.0	-47.348 µg/L	1.0098	-47.348 ppb	1.0098	2.13%	
Sn 189.927†	-41.9	-13.462 µg/L	3.7726	-13.462 ppb	3.7726	28.02%	
Sr 421.552†	478.1	4.9562 µg/L	0.14608	4.9562 ppb	0.14608	2.95%	
Ti 334.940†	13835.1	4.0815 µg/L	0.40078	4.0815 ppb	0.40078	9.82%	
Tl 190.801†	-24.2	37.750 µg/L	8.3798	37.750 ppb	8.3798	22.20%	
U 409.014†	143899.2	12939 µg/L	52.5	12939 ppb	52.5	0.41%	
QC value less than the lower limit for U 409.014 Recovery = 86.26%							
V 292.402†	-5736.7	3.5579 µg/L	1.17264	3.5579 ppb	1.17264	32.96%	
Zn 213.857†	2356.8	12.083 µg/L	0.5800	12.083 ppb	0.5800	4.80%	
QC Failed. Continue with analysis.							



Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 2/11/2010 14:46:15

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	55399.0	55399.0	102 %		14:46:58
1	Al 396.153Radial†	399.7	403.8	92.521 µg/L	92.521 ppb	14:46:58
1	Ca 317.933Radial†	334.1	149.9	141.18 µg/L	141.18 ppb	14:47:18
1	Fe 238.204 Radial†	7.1	-7.5	138.28 µg/L	138.28 ppb	14:47:18
1	K 766.490 Radial†	420398.0	414012.0	294280 µg/L	294280 ppb	14:46:52
1	Mg 279.077 IEC†	6.8	-4.5	128.44 µg/L	128.44 ppb	14:47:18
1	Na 589.592 Radial†	1342.1	780.2	256.86 µg/L	256.86 ppb	14:46:58
1	Sr 421.552†	951196.0	936997.9	9713.1 µg/L	9713.1 ppb	14:46:52
1	Sc 361.383	1973675.2	1973675.2	103.34 %		14:48:49
1	Y 371.029	1341693.6	1341693.6	102.43 %		14:48:49
1	Ag 328.068†	-7295.5	-6495.0	14.834 µg/L	14.834 ppb	14:48:55
1	As 188.979†	5210.7	5041.0	9833.2 µg/L	9833.2 ppb	14:48:55
1	B 249.677†	116645.4	112541.3	4957.2 µg/L	4957.2 ppb	14:48:49
1	Ba 233.527†	564583.2	546348.7	14244 µg/L	14244 ppb	14:48:49
1	Be 313.107†	4590165.2	4445144.6	2899.1 µg/L	2899.1 ppb	14:48:39
1	Cd 226.502†	360765.0	349238.8	9644.6 µg/L	9644.6 ppb	14:48:49
1	Co 228.616†	199452.7	193010.6	9487.0 µg/L	9487.0 ppb	14:48:49
1	Cr 267.716†	1141741.3	1104866.0	24309 µg/L	24309 ppb	14:48:49
1	Cu 324.752†	2993464.1	2894159.5	20216 µg/L	20216 ppb	14:48:49
1	Mn 257.610†	2858381.7	2766176.3	9578.9 µg/L	9578.9 ppb	14:48:49
1	Mo 202.031†	98264.3	95093.6	10148 µg/L	10148 ppb	14:48:49
1	Ni 231.604†	183070.7	176847.4	9657.8 µg/L	9657.8 ppb	14:48:49
1	P 214.914†	7469.6	7200.4	13482 µg/L	13482 ppb	14:48:55
1	Pb 220.353†	97644.4	94389.0	25180 µg/L	25180 ppb	14:48:49
1	S 181.975 Axial†	12516.5	12096.9	53001 µg/L	53001 ppb	14:48:55
1	Sb 206.836†	11239.2	10848.7	10569 µg/L	10569 ppb	14:48:55
1	Se 196.026†	6584.9	6356.1	9690.0 µg/L	9690.0 ppb	14:48:55
1	SiO2†	476520.0	459857.7	99033 µg/L	99033 ppb	14:48:49
1	Si 251.611†	580361.7	561278.0	46140 µg/L	46140 ppb	14:48:49
1	Sn 189.927†	23760.5	22992.8	10575 µg/L	10575 ppb	14:48:55
1	Ti 334.940†	4290484.1	4151599.7	9986.4 µg/L	9986.4 ppb	14:48:39
1	Tl 190.801†	7036.0	6832.7	9632.0 µg/L	9632.0 ppb	14:48:55
1	U 409.014†	835.4	862.0	78.046 µg/L	78.046 ppb	14:48:49
1	V 292.402†	975452.7	943947.6	10194 µg/L	10194 ppb	14:48:49
1	Zn 213.857†	598917.9	579071.4	14385 µg/L	14385 ppb	14:48:49
2	Sc RADIAL	55030.3	55030.3	101 %		14:47:30
2	Al 396.153Radial†	384.6	391.5	90.444 µg/L	90.444 ppb	14:47:30
2	Ca 317.933Radial†	398.0	215.6	202.97 µg/L	202.97 ppb	14:47:50
2	Fe 238.204 Radial†	10.5	-4.0	160.36 µg/L	160.36 ppb	14:47:50
2	K 766.490 Radial†	423060.2	419427.1	298130 µg/L	298130 ppb	14:47:24
2	Mg 279.077 IEC†	11.3	-0.0	164.54 µg/L	164.54 ppb	14:47:50
2	Na 589.592 Radial†	1212.5	660.6	217.48 µg/L	217.48 ppb	14:47:30
2	Sr 421.552†	957912.4	949937.4	9847.2 µg/L	9847.2 ppb	14:47:24
2	Sc 361.383	1973904.3	1973904.3	103.35 %		14:49:14
2	Y 371.029	1342735.7	1342735.7	102.51 %		14:49:14
2	Ag 328.068†	-6836.3	-6049.9	16.075 µg/L	16.075 ppb	14:49:19
2	As 188.979†	5005.3	4841.7	9444.3 µg/L	9444.3 ppb	14:49:19
2	B 249.677†	114403.0	110358.5	4860.1 µg/L	4860.1 ppb	14:49:14
2	Ba 233.527†	548071.4	530309.5	13826 µg/L	13826 ppb	14:49:14
2	Be 313.107†	4469193.3	4327583.5	2822.5 µg/L	2822.5 ppb	14:49:04
2	Cd 226.502†	349367.5	338170.7	9338.9 µg/L	9338.9 ppb	14:49:14
2	Co 228.616†	192536.9	186296.8	9156.8 µg/L	9156.8 ppb	14:49:14
2	Cr 267.716†	1093055.4	1057632.1	23270 µg/L	23270 ppb	14:49:14
2	Cu 324.752†	2898656.7	2802093.0	19573 µg/L	19573 ppb	14:49:14
2	Mn 257.610†	2761508.2	2672125.9	9253.2 µg/L	9253.2 ppb	14:49:14
2	Mo 202.031†	94921.3	91848.1	9802.1 µg/L	9802.1 ppb	14:49:14
2	Ni 231.604†	176871.2	170828.6	9329.1 µg/L	9329.1 ppb	14:49:14
2	P 214.914†	7023.8	6768.2	12612 µg/L	12612 ppb	14:49:19
2	Pb 220.353†	95131.3	91946.6	24529 µg/L	24529 ppb	14:49:14

2	S 181.975 Axial†	12036.4	11630.9	50959 µg/L	50959 ppb	14:49:19
2	Sb 206.836†	10693.6	10319.6	10054 µg/L	10054 ppb	14:49:19
2	Se 196.026†	6359.9	6137.7	9357.1 µg/L	9357.1 ppb	14:49:19
2	SiO2†	465181.8	448834.1	96659 µg/L	96659 ppb	14:49:14
2	Si 251.611†	566752.0	548044.9	45052 µg/L	45052 ppb	14:49:14
2	Sn 189.927†	22166.4	21447.8	9864.4 µg/L	9864.4 ppb	14:49:19
2	Ti 334.940†	4180020.8	4044239.7	9728.1 µg/L	9728.1 ppb	14:49:04
2	Tl 190.801†	6890.0	6690.7	9431.4 µg/L	9431.4 ppb	14:49:19
2	U 409.014†	947.2	970.1	87.818 µg/L	87.818 ppb	14:49:14
2	V 292.402†	941864.4	911339.9	9841.7 µg/L	9841.7 ppb	14:49:14
2	Zn 213.857†	579745.6	560454.1	13922 µg/L	13922 ppb	14:49:14
3	Sc RADIAL	56038.9	56038.9	103 %		14:48:02
3	Al 396.153Radial†	479.5	477.1	179.56 µg/L	179.56 ppb	14:48:02
3	Ca 317.933Radial†	383.6	194.4	183.07 µg/L	183.07 ppb	14:48:22
3	Fe 238.204 Radial†	9.4	-5.4	124.22 µg/L	124.22 ppb	14:48:22
3	K 766.490 Radial†	428756.3	417423.2	296700 µg/L	296700 ppb	14:47:56
3	Mg 279.077 IEC†	6.3	-5.2	95.926 µg/L	95.926 ppb	14:48:22
3	Na 589.592 Radial†	1260.6	685.8	225.77 µg/L	225.77 ppb	14:48:02
3	Sr 421.552†	974533.2	949026.3	9837.8 µg/L	9837.8 ppb	14:47:56
3	Sc 361.383	1967182.2	1967182.2	103.00 %		14:49:39
3	Y 371.029	1337106.2	1337106.2	102.08 %		14:49:39
3	Ag 328.068†	-5873.5	-5137.8	14.957 µg/L	14.957 ppb	14:49:44
3	As 188.979†	4335.2	4207.7	8207.5 µg/L	8207.5 ppb	14:49:44
3	B 249.677†	103256.6	99915.3	4398.2 µg/L	4398.2 ppb	14:49:39
3	Ba 233.527†	483121.0	469064.3	12229 µg/L	12229 ppb	14:49:39
3	Be 313.107†	4064814.3	3949767.9	2576.0 µg/L	2576.0 ppb	14:49:28
3	Cd 226.502†	306350.7	297562.9	8217.4 µg/L	8217.4 ppb	14:49:39
3	Co 228.616†	167417.3	162546.1	7988.6 µg/L	7988.6 ppb	14:49:39
3	Cr 267.716†	928569.1	901554.3	19836 µg/L	19836 ppb	14:49:39
3	Cu 324.752†	2527919.1	2451745.7	17126 µg/L	17126 ppb	14:49:39
3	Mn 257.610†	2402081.4	2332306.4	8076.5 µg/L	8076.5 ppb	14:49:39
3	Mo 202.031†	82713.5	80310.0	8570.8 µg/L	8570.8 ppb	14:49:39
3	Ni 231.604†	153785.8	149000.9	8137.1 µg/L	8137.1 ppb	14:49:39
3	P 214.914†	6020.9	5817.7	10807 µg/L	10807 ppb	14:49:44
3	Pb 220.353†	84806.2	82236.9	21938 µg/L	21938 ppb	14:49:39
3	S 181.975 Axial†	10412.0	10093.6	44224 µg/L	44224 ppb	14:49:44
3	Sb 206.836†	9221.8	8926.1	8701.4 µg/L	8701.4 ppb	14:49:44
3	Se 196.026†	5513.0	5336.4	8135.5 µg/L	8135.5 ppb	14:49:44
3	SiO2†	415353.7	401996.4	86572 µg/L	86572 ppb	14:49:39
3	Si 251.611†	505959.6	490898.3	40354 µg/L	40354 ppb	14:49:39
3	Sn 189.927†	18682.4	18138.7	8342.5 µg/L	8342.5 ppb	14:49:44
3	Ti 334.940†	3801346.2	3690423.2	8877.0 µg/L	8877.0 ppb	14:49:28
3	Tl 190.801†	6155.2	6000.1	8459.0 µg/L	8459.0 ppb	14:49:44
3	U 409.014†	834.8	864.1	78.225 µg/L	78.225 ppb	14:49:39
3	V 292.402†	816284.9	792534.9	8558.2 µg/L	8558.2 ppb	14:49:39
3	Zn 213.857†	507712.5	492437.5	12233 µg/L	12233 ppb	14:49:39

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1971587.2	103.23 %	0.200			0.19%
Sc RADIAL	55489.4	102 %	0.9			0.92%
Y 371.029	1340511.8	102.34 %	0.229			0.22%
Ag 328.068†	-5894.2	15.288 µg/L	0.6836	15.288 ppb	0.6836	4.47%
Al 396.153Radial†	424.2	120.84 µg/L	50.861	120.84 ppb	50.861	42.09%
As 188.979†	4696.8	9161.7 µg/L	848.90	9161.7 ppb	848.90	9.27%
QC value within limits for As 188.979 Recovery = 91.62%						
B 249.677†	107605.0	4738.5 µg/L	298.66	4738.5 ppb	298.66	6.30%
QC value within limits for B 249.677 Recovery = 94.77%						
Ba 233.527†	515240.8	13433 µg/L	1063.5	13433 ppb	1063.5	7.92%
QC value less than the lower limit for Ba 233.527 Recovery = 89.55%						
Be 313.107†	4240832.0	2765.9 µg/L	168.81	2765.9 ppb	168.81	6.10%
QC value within limits for Be 313.107 Recovery = 92.20%						
Ca 317.933Radial†	186.6	175.74 µg/L	31.540	175.74 ppb	31.540	17.95%
Cd 226.502†	328324.1	9067.0 µg/L	751.45	9067.0 ppb	751.45	8.29%
QC value within limits for Cd 226.502 Recovery = 90.67%						
Co 228.616†	180617.8	8877.5 µg/L	787.27	8877.5 ppb	787.27	8.87%
QC value less than the lower limit for Co 228.616 Recovery = 88.77%						
Cr 267.716†	1021350.8	22472 µg/L	2340.9	22472 ppb	2340.9	10.42%
QC value less than the lower limit for Cr 267.716 Recovery = 89.89%						

Cu 324.752†	2715999.4	18972 µg/L	1630.6	18972 ppb	1630.6	8.59%
QC value within limits for Cu 324.752 Recovery = 94.86%						
Fe 238.204 Radial†	-5.6	140.95 µg/L	18.221	140.95 ppb	18.221	12.93%
K 766.490 Radial†	416954.1	296370 µg/L	1946.1	296370 ppb	1946.1	0.66%
QC value within limits for K 766.490 Radial Recovery = 98.79%						
Mg 279.077 IEC†	-3.2	129.64 µg/L	34.323	129.64 ppb	34.323	26.48%
Mn 257.610†	2590202.9	8969.5 µg/L	790.37	8969.5 ppb	790.37	8.81%
QC value less than the lower limit for Mn 257.610 Recovery = 89.70%						
Mo 202.031†	89083.9	9507.1 µg/L	829.20	9507.1 ppb	829.20	8.72%
QC value within limits for Mo 202.031 Recovery = 95.07%						
Na 589.592 Radial†	708.9	233.37 µg/L	20.762	233.37 ppb	20.762	8.90%
Ni 231.604†	165559.0	9041.3 µg/L	800.17	9041.3 ppb	800.17	8.85%
QC value within limits for Ni 231.604 Recovery = 90.41%						
P 214.914†	6595.5	12300 µg/L	1364.7	12300 ppb	1364.7	11.09%
QC value less than the lower limit for P 214.914 Recovery = 82.00%						
Pb 220.353†	89524.2	23882 µg/L	1714.8	23882 ppb	1714.8	7.18%
QC value within limits for Pb 220.353 Recovery = 95.53%						
S 181.975 Axial†	11273.8	49394 µg/L	4592.8	49394 ppb	4592.8	9.30%
QC value within limits for S 181.975 Axial Recovery = 98.79%						
Sb 206.836†	10031.5	9774.9 µg/L	964.64	9774.9 ppb	964.64	9.87%
QC value within limits for Sb 206.836 Recovery = 97.75%						
Se 196.026†	5943.4	9060.9 µg/L	818.48	9060.9 ppb	818.48	9.03%
QC value within limits for Se 196.026 Recovery = 90.61%						
SiO2†	436896.1	94088 µg/L	6616.3	94088 ppb	6616.3	7.03%
QC value less than the lower limit for SiO2 Recovery = 87.93%						
Si 251.611†	533407.1	43849 µg/L	3074.8	43849 ppb	3074.8	7.01%
QC value less than the lower limit for Si 251.611 Recovery = 87.70%						
Sn 189.927†	20859.8	9594.0 µg/L	1140.59	9594.0 ppb	1140.59	11.89%
QC value within limits for Sn 189.927 Recovery = 95.94%						
Sr 421.552†	945320.6	9799.4 µg/L	74.86	9799.4 ppb	74.86	0.76%
QC value within limits for Sr 421.552 Recovery = 97.99%						
Ti 334.940†	3962087.5	9530.5 µg/L	580.46	9530.5 ppb	580.46	6.09%
QC value within limits for Ti 334.940 Recovery = 95.30%						
Tl 190.801†	6507.8	9174.1 µg/L	627.37	9174.1 ppb	627.37	6.84%
QC value within limits for Tl 190.801 Recovery = 91.74%						
U 409.014†	898.7	81.363 µg/L	5.5909	81.363 ppb	5.5909	6.87%
V 292.402†	882607.5	9531.4 µg/L	861.08	9531.4 ppb	861.08	9.03%
QC value within limits for V 292.402 Recovery = 95.31%						
Zn 213.857†	543987.7	13513 µg/L	1132.6	13513 ppb	1132.6	8.38%
QC value within limits for Zn 213.857 Recovery = 90.09%						
QC Failed. Continue with analysis.						

Sequence No.: 13

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 14:49:53

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Conc. Units	Sample	Analysis Time
1	Sc RADIAL	56804.1	56804.1	104	%			14:50:31
1	Al 396.153Radial†	6842.1	6583.7	4896.3	µg/L	4896.3	ppb	14:50:31
1	Ca 317.933Radial†	5575.3	5177.3	4874.7	µg/L	4874.7	ppb	14:50:52
1	Fe 238.204 Radial†	620.0	581.2	4936.5	µg/L	4936.5	ppb	14:50:52
1	K 766.490 Radial†	7520.1	7096.5	5044.1	µg/L	5044.1	ppb	14:50:31
1	Mg 279.077 IEC†	574.4	540.6	5034.2	µg/L	5034.2	ppb	14:50:52
1	Na 589.592 Radial†	31573.0	29791.8	9807.5	µg/L	9807.5	ppb	14:50:31
1	Sr 421.552†	48614.5	46666.6	483.75	µg/L	483.75	ppb	14:50:31
1	Sc 361.383	1985086.2	1985086.2	103.94	%			14:51:55
1	Y 371.029	1355705.3	1355705.3	103.50	%			14:51:55
1	Ag 328.068†	63419.1	61579.6	492.20	µg/L	492.20	ppb	14:52:00
1	As 188.979†	283.1	271.2	529.04	µg/L	529.04	ppb	14:52:21
1	B 249.677†	12082.8	11293.3	491.77	µg/L	491.77	ppb	14:52:00
1	Ba 233.527†	19621.7	18904.0	493.12	µg/L	493.12	ppb	14:52:00
1	Be 313.107†	773609.6	747725.8	488.12	µg/L	488.12	ppb	14:51:55
1	Cd 226.502†	18494.8	17935.8	494.76	µg/L	494.76	ppb	14:52:00
1	Co 228.616†	10503.4	10114.1	497.19	µg/L	497.19	ppb	14:52:00
1	Cr 267.716†	23548.0	22707.7	499.79	µg/L	499.79	ppb	14:52:00
1	Cu 324.752†	76174.0	70800.5	495.24	µg/L	495.24	ppb	14:52:00
1	Mn 257.610†	149145.1	143735.7	498.19	µg/L	498.19	ppb	14:51:55
1	Mo 202.031†	5080.3	4895.3	522.62	µg/L	522.62	ppb	14:52:21
1	Ni 231.604†	9759.2	9087.1	496.31	µg/L	496.31	ppb	14:52:00
1	P 214.914†	1255.3	1180.1	2486.8	µg/L	2486.8	ppb	14:52:21
1	Pb 220.353†	2124.3	1946.6	519.63	µg/L	519.63	ppb	14:52:21
1	S 181.975 Axial†	258.7	234.1	1025.7	µg/L	1025.7	ppb	14:52:21
1	Sb 206.836†	589.1	539.9	533.84	µg/L	533.84	ppb	14:52:21
1	Se 196.026†	360.1	330.7	511.73	µg/L	511.73	ppb	14:52:21
1	SiO2†	26768.3	24503.7	5277.0	µg/L	5277.0	ppb	14:52:00
1	Si 251.611†	31600.0	30089.3	2473.5	µg/L	2473.5	ppb	14:52:00
1	Sn 189.927†	1182.0	1138.1	523.47	µg/L	523.47	ppb	14:52:21
1	Ti 334.940†	213092.8	204899.2	492.55	µg/L	492.55	ppb	14:51:55
1	Tl 190.801†	347.4	358.5	506.37	µg/L	506.37	ppb	14:52:21
1	U 409.014†	5696.3	5534.0	500.04	µg/L	500.04	ppb	14:52:00
1	V 292.402†	48064.4	46286.7	499.57	µg/L	499.57	ppb	14:52:00
1	Zn 213.857†	21219.3	19939.4	494.39	µg/L	494.39	ppb	14:52:00
2	Sc RADIAL	56818.7	56818.7	104	%			14:50:57
2	Al 396.153Radial†	6864.1	6603.1	4910.8	µg/L	4910.8	ppb	14:50:57
2	Ca 317.933Radial†	5535.1	5137.3	4837.1	µg/L	4837.1	ppb	14:51:17
2	Fe 238.204 Radial†	615.6	576.8	4899.1	µg/L	4899.1	ppb	14:51:17
2	K 766.490 Radial†	7426.8	7005.0	4979.1	µg/L	4979.1	ppb	14:50:57
2	Mg 279.077 IEC†	575.7	541.7	5044.4	µg/L	5044.4	ppb	14:51:17
2	Na 589.592 Radial†	31604.5	29814.2	9814.9	µg/L	9814.9	ppb	14:50:57
2	Sr 421.552†	48545.6	46588.5	482.94	µg/L	482.94	ppb	14:50:57
2	Sc 361.383	1982851.3	1982851.3	103.82	%			14:52:28
2	Y 371.029	1354649.3	1354649.3	103.41	%			14:52:28
2	Ag 328.068†	64081.0	62286.0	497.83	µg/L	497.83	ppb	14:52:34
2	As 188.979†	276.6	265.3	517.47	µg/L	517.47	ppb	14:52:54
2	B 249.677†	12111.5	11334.1	493.59	µg/L	493.59	ppb	14:52:34
2	Ba 233.527†	19855.9	19150.8	499.56	µg/L	499.56	ppb	14:52:34
2	Be 313.107†	767601.6	742777.9	484.89	µg/L	484.89	ppb	14:52:28
2	Cd 226.502†	18724.1	18176.8	501.42	µg/L	501.42	ppb	14:52:34
2	Co 228.616†	10623.9	10241.5	503.47	µg/L	503.47	ppb	14:52:34
2	Cr 267.716†	23965.4	23135.3	509.20	µg/L	509.20	ppb	14:52:34
2	Cu 324.752†	76944.2	71624.9	501.00	µg/L	501.00	ppb	14:52:34
2	Mn 257.610†	147951.6	142747.9	494.77	µg/L	494.77	ppb	14:52:28
2	Mo 202.031†	5059.8	4881.0	521.09	µg/L	521.09	ppb	14:52:54
2	Ni 231.604†	9897.9	9231.3	504.18	µg/L	504.18	ppb	14:52:34
2	P 214.914†	1254.5	1180.6	2487.4	µg/L	2487.4	ppb	14:52:54
2	Pb 220.353†	2113.7	1938.7	517.51	µg/L	517.51	ppb	14:52:54

2	S 181.975 Axial†	253.9	229.7	1006.6 µg/L	1006.6 ppb	14:52:54
2	Sb 206.836†	570.0	522.0	516.18 µg/L	516.18 ppb	14:52:54
2	Se 196.026†	357.5	328.5	508.28 µg/L	508.28 ppb	14:52:54
2	SiO2†	27016.3	24771.5	5334.7 µg/L	5334.7 ppb	14:52:34
2	Si 251.611†	31927.7	30439.2	2502.3 µg/L	2502.3 ppb	14:52:34
2	Sn 189.927†	1183.2	1140.5	524.61 µg/L	524.61 ppb	14:52:54
2	Ti 334.940†	211586.4	203679.4	489.61 µg/L	489.61 ppb	14:52:28
2	Tl 190.801†	345.3	356.8	503.93 µg/L	503.93 ppb	14:52:54
2	U 409.014†	5694.5	5538.4	500.46 µg/L	500.46 ppb	14:52:34
2	V 292.402†	48494.6	46753.2	504.55 µg/L	504.55 ppb	14:52:34
2	Zn 213.857†	21488.9	20222.1	501.41 µg/L	501.41 ppb	14:52:34
3	Sc RADIAL	57349.9	57349.9	105 %		14:51:23
3	Al 396.153Radial†	6954.4	6628.0	4931.1 µg/L	4931.1 ppb	14:51:23
3	Ca 317.933Radial†	5532.3	5085.5	4788.3 µg/L	4788.3 ppb	14:51:43
3	Fe 238.204 Radial†	617.1	572.8	4864.4 µg/L	4864.4 ppb	14:51:43
3	K 766.490 Radial†	7512.2	7020.2	4989.9 µg/L	4989.9 ppb	14:51:23
3	Mg 279.077 IEC†	569.2	530.4	4937.8 µg/L	4937.8 ppb	14:51:43
3	Na 589.592 Radial†	31885.8	29800.8	9810.5 µg/L	9810.5 ppb	14:51:23
3	Sr 421.552†	49101.8	46686.0	483.95 µg/L	483.95 ppb	14:51:23
3	Sc 361.383	1990626.4	1990626.4	104.23 %		14:53:01
3	Y 371.029	1359542.7	1359542.7	103.79 %		14:53:01
3	Ag 328.068†	60113.1	58238.1	465.39 µg/L	465.39 ppb	14:53:07
3	As 188.979†	235.3	224.6	438.16 µg/L	438.16 ppb	14:53:28
3	B 249.677†	11347.7	10555.7	459.50 µg/L	459.50 ppb	14:53:07
3	Ba 233.527†	18299.9	17583.2	458.65 µg/L	458.65 ppb	14:53:07
3	Be 313.107†	726470.7	700428.5	457.24 µg/L	457.24 ppb	14:53:01
3	Cd 226.502†	17137.6	16584.2	457.44 µg/L	457.44 ppb	14:53:07
3	Co 228.616†	9675.2	9291.3	456.68 µg/L	456.68 ppb	14:53:07
3	Cr 267.716†	21632.8	20807.2	457.96 µg/L	457.96 ppb	14:53:07
3	Cu 324.752†	71181.3	65806.4	460.35 µg/L	460.35 ppb	14:53:07
3	Mn 257.610†	140886.2	135412.6	469.36 µg/L	469.36 ppb	14:53:01
3	Mo 202.031†	4241.7	4077.1	435.30 µg/L	435.30 ppb	14:53:28
3	Ni 231.604†	9011.2	8343.3	455.69 µg/L	455.69 ppb	14:53:07
3	P 214.914†	1075.3	1004.1	2111.2 µg/L	2111.2 ppb	14:53:28
3	Pb 220.353†	1866.0	1693.1	451.84 µg/L	451.84 ppb	14:53:28
3	S 181.975 Axial†	232.5	208.2	912.40 µg/L	912.40 ppb	14:53:28
3	Sb 206.836†	504.7	457.3	451.62 µg/L	451.62 ppb	14:53:28
3	Se 196.026†	310.0	281.6	436.86 µg/L	436.86 ppb	14:53:28
3	SiO2†	25184.9	22912.8	4934.4 µg/L	4934.4 ppb	14:53:07
3	Si 251.611†	29623.3	28108.2	2310.6 µg/L	2310.6 ppb	14:53:07
3	Sn 189.927†	974.4	935.7	430.40 µg/L	430.40 ppb	14:53:28
3	Ti 334.940†	200395.3	192146.5	461.88 µg/L	461.88 ppb	14:53:01
3	Tl 190.801†	314.8	326.3	461.00 µg/L	461.00 ppb	14:53:28
3	U 409.014†	5084.0	4931.3	445.50 µg/L	445.50 ppb	14:53:07
3	V 292.402†	43900.0	42162.6	454.79 µg/L	454.79 ppb	14:53:07
3	Zn 213.857†	19753.8	18476.6	458.11 µg/L	458.11 ppb	14:53:07

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1986188.0	104.00 %	0.210			0.20%
Sc RADIAL	56990.9	104 %	0.6			0.55%
Y 371.029	1356632.4	103.57 %	0.197			0.19%
Ag 328.068†	60701.2	485.14 µg/L	17.336	485.14 ppb	17.336	3.57%
QC value within limits for Ag 328.068 Recovery = 97.03%						
Al 396.153Radial†	6604.9	4912.7 µg/L	17.49	4912.7 ppb	17.49	0.36%
QC value within limits for Al 396.153Radial Recovery = 98.25%						
As 188.979†	253.7	494.89 µg/L	49.467	494.89 ppb	49.467	10.00%
QC value within limits for As 188.979 Recovery = 98.98%						
B 249.677†	11061.0	481.62 µg/L	19.175	481.62 ppb	19.175	3.98%
QC value within limits for B 249.677 Recovery = 96.32%						
Ba 233.527†	18546.0	483.78 µg/L	21.996	483.78 ppb	21.996	4.55%
QC value within limits for Ba 233.527 Recovery = 96.76%						
Be 313.107†	730310.7	476.75 µg/L	16.971	476.75 ppb	16.971	3.56%
QC value within limits for Be 313.107 Recovery = 95.35%						
Ca 317.933Radial†	5133.4	4833.4 µg/L	43.35	4833.4 ppb	43.35	0.90%
QC value within limits for Ca 317.933Radial Recovery = 96.67%						
Cd 226.502†	17565.6	484.54 µg/L	23.706	484.54 ppb	23.706	4.89%
QC value within limits for Cd 226.502 Recovery = 96.91%						
Co 228.616†	9882.3	485.78 µg/L	25.392	485.78 ppb	25.392	5.23%

QC value within limits for Co 228.616 Recovery = 97.16%						
Cr 267.716†	22216.8	488.98 µg/L	27.276	488.98 ppb	27.276	5.58%
QC value within limits for Cr 267.716 Recovery = 97.80%						
Cu 324.752†	69410.6	485.53 µg/L	21.996	485.53 ppb	21.996	4.53%
QC value within limits for Cu 324.752 Recovery = 97.11%						
Fe 238.204 Radial†	576.9	4900.0 µg/L	36.10	4900.0 ppb	36.10	0.74%
QC value within limits for Fe 238.204 Radial Recovery = 98.00%						
K 766.490 Radial†	7040.6	5004.4 µg/L	34.84	5004.4 ppb	34.84	0.70%
QC value within limits for K 766.490 Radial Recovery = 100.09%						
Mg 279.077 IEC†	537.5	5005.5 µg/L	58.81	5005.5 ppb	58.81	1.17%
QC value within limits for Mg 279.077 IEC Recovery = 100.11%						
Mn 257.610†	140632.1	487.44 µg/L	15.748	487.44 ppb	15.748	3.23%
QC value within limits for Mn 257.610 Recovery = 97.49%						
Mo 202.031†	4617.8	493.00 µg/L	49.981	493.00 ppb	49.981	10.14%
QC value within limits for Mo 202.031 Recovery = 98.60%						
Na 589.592 Radial†	29802.3	9811.0 µg/L	3.72	9811.0 ppb	3.72	0.04%
QC value within limits for Na 589.592 Radial Recovery = 98.11%						
Ni 231.604†	8887.2	485.39 µg/L	26.026	485.39 ppb	26.026	5.36%
QC value within limits for Ni 231.604 Recovery = 97.08%						
P 214.914†	1121.6	2361.8 µg/L	217.03	2361.8 ppb	217.03	9.19%
QC value within limits for P 214.914 Recovery = 94.47%						
Pb 220.353†	1859.5	496.33 µg/L	38.539	496.33 ppb	38.539	7.76%
QC value within limits for Pb 220.353 Recovery = 99.27%						
S 181.975 Axial†	224.0	981.57 µg/L	60.664	981.57 ppb	60.664	6.18%
QC value within limits for S 181.975 Axial Recovery = 98.16%						
Sb 206.836†	506.4	500.55 µg/L	43.281	500.55 ppb	43.281	8.65%
QC value within limits for Sb 206.836 Recovery = 100.11%						
Se 196.026†	313.6	485.62 µg/L	42.263	485.62 ppb	42.263	8.70%
QC value within limits for Se 196.026 Recovery = 97.12%						
SiO2†	24062.6	5182.0 µg/L	216.38	5182.0 ppb	216.38	4.18%
QC value within limits for SiO2 Recovery = 96.91%						
Si 251.611†	29545.6	2428.8 µg/L	103.33	2428.8 ppb	103.33	4.25%
QC value within limits for Si 251.611 Recovery = 97.15%						
Sn 189.927†	1071.4	492.83 µg/L	54.065	492.83 ppb	54.065	10.97%
QC value within limits for Sn 189.927 Recovery = 98.57%						
Sr 421.552†	46647.0	483.55 µg/L	0.535	483.55 ppb	0.535	0.11%
QC value within limits for Sr 421.552 Recovery = 96.71%						
Ti 334.940†	200241.7	481.35 µg/L	16.923	481.35 ppb	16.923	3.52%
QC value within limits for Ti 334.940 Recovery = 96.27%						
Tl 190.801†	347.2	490.43 µg/L	25.519	490.43 ppb	25.519	5.20%
QC value within limits for Tl 190.801 Recovery = 98.09%						
U 409.014†	5334.6	482.00 µg/L	31.611	482.00 ppb	31.611	6.56%
QC value within limits for U 409.014 Recovery = 96.40%						
V 292.402†	45067.5	486.30 µg/L	27.408	486.30 ppb	27.408	5.64%
QC value within limits for V 292.402 Recovery = 97.26%						
Zn 213.857†	19546.0	484.64 µg/L	23.239	484.64 ppb	23.239	4.80%
QC value within limits for Zn 213.857 Recovery = 96.93%						
All analyte(s) passed QC.						

Sequence No.: 14

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 14:53:37

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56199.9	56199.9	103 %			14:54:10
1	Al 396.153Radial†	38.0	47.1	35.072 µg/L	35.072 ppb	35.072 ppb	14:54:10
1	Ca 317.933Radial†	231.4	45.6	42.930 µg/L	42.930 ppb	42.930 ppb	14:54:31
1	Fe 238.204 Radial†	23.4	8.2	69.822 µg/L	69.822 ppb	69.822 ppb	14:54:31
1	K 766.490 Radial†	243.5	108.1	76.828 µg/L	76.828 ppb	76.828 ppb	14:54:10
1	Mg 279.077 IEC†	18.5	6.7	62.643 µg/L	62.643 ppb	62.643 ppb	14:54:31
1	Na 589.592 Radial†	743.1	179.7	59.159 µg/L	59.159 ppb	59.159 ppb	14:54:10
1	Sr 421.552†	105.8	63.2	0.6552 µg/L	0.6552 ppb	0.6552 ppb	14:54:10
1	Sc 361.383	1982476.6	1982476.6	103.80 %			14:55:33
1	Y 371.029	1357413.1	1357413.1	103.63 %			14:55:33
1	Ag 328.068†	-522.2	61.5	0.4946 µg/L	0.4946 ppb	0.4946 ppb	14:55:38
1	As 188.979†	1.8	0.6	1.0901 µg/L	1.0901 ppb	1.0901 ppb	14:55:59
1	B 249.677†	408.1	61.7	2.6625 µg/L	2.6625 ppb	2.6625 ppb	14:55:59
1	Ba 233.527†	2.5	28.5	0.7415 µg/L	0.7415 ppb	0.7415 ppb	14:55:59
1	Be 313.107†	-3213.4	344.8	0.2250 µg/L	0.2250 ppb	0.2250 ppb	14:55:38
1	Cd 226.502†	-134.6	12.5	0.3368 µg/L	0.3368 ppb	0.3368 ppb	14:55:59
1	Co 228.616†	-7.7	1.4	0.0712 µg/L	0.0712 ppb	0.0712 ppb	14:55:59
1	Cr 267.716†	4.1	56.4	1.2401 µg/L	1.2401 ppb	1.2401 ppb	14:55:59
1	Cu 324.752†	2752.9	165.9	1.1688 µg/L	1.1688 ppb	1.1688 ppb	14:55:38
1	Mn 257.610†	-137.5	111.6	0.3934 µg/L	0.3934 ppb	0.3934 ppb	14:55:59
1	Mo 202.031†	2.7	10.2	1.0859 µg/L	1.0859 ppb	1.0859 ppb	14:55:59
1	Ni 231.604†	309.2	-4.3	-0.2339 µg/L	-0.2339 ppb	-0.2339 ppb	14:55:59
1	P 214.914†	25.1	-3.5	-7.5860 µg/L	-7.5860 ppb	-7.5860 ppb	14:55:59
1	Pb 220.353†	124.3	22.6	6.0147 µg/L	6.0147 ppb	6.0147 ppb	14:55:59
1	S 181.975 Axial†	16.6	1.2	5.2644 µg/L	5.2644 ppb	5.2644 ppb	14:55:59
1	Sb 206.836†	32.4	4.3	4.2069 µg/L	4.2069 ppb	4.2069 ppb	14:55:59
1	Se 196.026†	17.5	1.0	1.6734 µg/L	1.6734 ppb	1.6734 ppb	14:55:59
1	SiO2†	1299.2	1.6	0.3503 µg/L	0.3503 ppb	0.3503 ppb	14:55:38
1	Si 251.611†	379.1	52.3	4.3027 µg/L	4.3027 ppb	4.3027 ppb	14:55:59
1	Sn 189.927†	7.8	8.4	3.8780 µg/L	3.8780 ppb	3.8780 ppb	14:55:59
1	Ti 334.940†	271.8	145.7	0.3462 µg/L	0.3462 ppb	0.3462 ppb	14:55:38
1	Tl 190.801†	-19.8	5.2	7.2432 µg/L	7.2432 ppb	7.2432 ppb	14:55:59
1	U 409.014†	-9.7	44.3	3.9980 µg/L	3.9980 ppb	3.9980 ppb	14:55:38
1	V 292.402†	-10.8	33.8	0.3839 µg/L	0.3839 ppb	0.3839 ppb	14:55:38
1	Zn 213.857†	539.3	44.0	1.0899 µg/L	1.0899 ppb	1.0899 ppb	14:55:59
2	Sc RADIAL	56663.5	56663.5	104 %			14:54:36
2	Al 396.153Radial†	53.4	61.6	45.892 µg/L	45.892 ppb	45.892 ppb	14:54:36
2	Ca 317.933Radial†	224.0	36.6	34.458 µg/L	34.458 ppb	34.458 ppb	14:54:57
2	Fe 238.204 Radial†	18.3	3.1	26.399 µg/L	26.399 ppb	26.399 ppb	14:54:57
2	K 766.490 Radial†	257.1	119.2	84.727 µg/L	84.727 ppb	84.727 ppb	14:54:36
2	Mg 279.077 IEC†	17.6	5.7	53.162 µg/L	53.162 ppb	53.162 ppb	14:54:57
2	Na 589.592 Radial†	788.5	217.6	71.620 µg/L	71.620 ppb	71.620 ppb	14:54:36
2	Sr 421.552†	88.8	46.0	0.4764 µg/L	0.4764 ppb	0.4764 ppb	14:54:36
2	Sc 361.383	1976808.7	1976808.7	103.51 %			14:56:05
2	Y 371.029	1355511.3	1355511.3	103.48 %			14:56:05
2	Ag 328.068†	-510.0	71.8	0.5752 µg/L	0.5752 ppb	0.5752 ppb	14:56:10
2	As 188.979†	1.2	0.0	0.0279 µg/L	0.0279 ppb	0.0279 ppb	14:56:31
2	B 249.677†	396.3	51.4	2.2364 µg/L	2.2364 ppb	2.2364 ppb	14:56:31
2	Ba 233.527†	2.6	28.5	0.7438 µg/L	0.7438 ppb	0.7438 ppb	14:56:31
2	Be 313.107†	-3268.6	282.6	0.1844 µg/L	0.1844 ppb	0.1844 ppb	14:56:10
2	Cd 226.502†	-122.2	24.1	0.6618 µg/L	0.6618 ppb	0.6618 ppb	14:56:31
2	Co 228.616†	-10.0	-0.8	-0.0395 µg/L	-0.0395 ppb	-0.0395 ppb	14:56:31
2	Cr 267.716†	5.1	57.3	1.2611 µg/L	1.2611 ppb	1.2611 ppb	14:56:31
2	Cu 324.752†	2702.2	124.6	0.8738 µg/L	0.8738 ppb	0.8738 ppb	14:56:10
2	Mn 257.610†	-107.9	139.8	0.4856 µg/L	0.4856 ppb	0.4856 ppb	14:56:31
2	Mo 202.031†	-1.1	6.4	0.6888 µg/L	0.6888 ppb	0.6888 ppb	14:56:31
2	Ni 231.604†	302.7	-9.7	-0.5298 µg/L	-0.5298 ppb	-0.5298 ppb	14:56:31
2	P 214.914†	20.2	-8.1	-17.441 µg/L	-17.441 ppb	-17.441 ppb	14:56:31
2	Pb 220.353†	118.9	17.7	4.7183 µg/L	4.7183 ppb	4.7183 ppb	14:56:31

2	S 181.975 Axial†	14.4	-0.9	-4.1582 µg/L	-4.1582 ppb	14:56:31
2	Sb 206.836†	28.3	0.4	0.3915 µg/L	0.3915 ppb	14:56:31
2	Se 196.026†	9.3	-6.9	-10.429 µg/L	-10.429 ppb	14:56:31
2	SiO2†	1222.9	-68.6	-14.765 µg/L	-14.765 ppb	14:56:10
2	Si 251.611†	359.0	34.0	2.7936 µg/L	2.7936 ppb	14:56:31
2	Sn 189.927†	7.1	7.7	3.5568 µg/L	3.5568 ppb	14:56:31
2	Ti 334.940†	232.6	108.6	0.2576 µg/L	0.2576 ppb	14:56:10
2	Tl 190.801†	-24.5	0.6	0.8244 µg/L	0.8244 ppb	14:56:31
2	U 409.014†	-107.5	-50.2	-4.5523 µg/L	-4.5523 ppb	14:56:10
2	V 292.402†	15.1	58.8	0.6333 µg/L	0.6333 ppb	14:56:10
2	Zn 213.857†	534.3	40.7	1.0126 µg/L	1.0126 ppb	14:56:31
3	Sc RADIAL	56320.6	56320.6	103 %		14:55:02
3	Al 396.153Radial†	8.5	18.4	13.663 µg/L	13.663 ppb	14:55:02
3	Ca 317.933Radial†	216.9	31.1	29.241 µg/L	29.241 ppb	14:55:23
3	Fe 238.204 Radial†	17.6	2.6	21.668 µg/L	21.668 ppb	14:55:23
3	K 766.490 Radial†	236.5	100.7	71.584 µg/L	71.584 ppb	14:55:02
3	Mg 279.077 IEC†	12.2	0.5	5.0859 µg/L	5.0859 ppb	14:55:23
3	Na 589.592 Radial†	760.7	195.3	64.287 µg/L	64.287 ppb	14:55:02
3	Sr 421.552†	71.7	29.9	0.3097 µg/L	0.3097 ppb	14:55:02
3	Sc 361.383	1993913.4	1993913.4	104.40 %		14:56:37
3	Y 371.029	1367504.2	1367504.2	104.40 %		14:56:37
3	Ag 328.068†	-498.3	87.2	0.6944 µg/L	0.6944 ppb	14:56:43
3	As 188.979†	0.4	-0.8	-1.5138 µg/L	-1.5138 ppb	14:57:03
3	B 249.677†	385.9	38.1	1.6564 µg/L	1.6564 ppb	14:57:03
3	Ba 233.527†	1.2	27.2	0.7082 µg/L	0.7082 ppb	14:57:03
3	Be 313.107†	-3126.9	445.4	0.2907 µg/L	0.2907 ppb	14:56:43
3	Cd 226.502†	-117.4	29.7	0.8162 µg/L	0.8162 ppb	14:57:03
3	Co 228.616†	-8.6	0.6	0.0304 µg/L	0.0304 ppb	14:57:03
3	Cr 267.716†	2.0	54.3	1.1938 µg/L	1.1938 ppb	14:57:03
3	Cu 324.752†	2701.6	101.6	0.7126 µg/L	0.7126 ppb	14:56:43
3	Mn 257.610†	-86.5	161.3	0.5611 µg/L	0.5611 ppb	14:57:03
3	Mo 202.031†	5.2	12.5	1.3355 µg/L	1.3355 ppb	14:57:03
3	Ni 231.604†	315.6	0.1	0.0043 µg/L	0.0043 ppb	14:57:03
3	P 214.914†	33.2	4.1	8.8077 µg/L	8.8077 ppb	14:57:03
3	Pb 220.353†	109.3	7.5	2.0114 µg/L	2.0114 ppb	14:57:03
3	S 181.975 Axial†	10.6	-4.7	-20.521 µg/L	-20.521 ppb	14:57:03
3	Sb 206.836†	25.8	-2.2	-2.1813 µg/L	-2.1813 ppb	14:57:03
3	Se 196.026†	17.8	1.2	1.8776 µg/L	1.8776 ppb	14:57:03
3	SiO2†	1292.2	-12.3	-2.6550 µg/L	-2.6550 ppb	14:56:43
3	Si 251.611†	371.3	42.8	3.5163 µg/L	3.5163 ppb	14:57:03
3	Sn 189.927†	-2.0	-1.0	-0.4777 µg/L	-0.4777 ppb	14:57:03
3	Ti 334.940†	313.8	184.5	0.4438 µg/L	0.4438 ppb	14:56:43
3	Tl 190.801†	-24.1	1.2	1.6892 µg/L	1.6892 ppb	14:57:03
3	U 409.014†	-22.6	31.9	2.8863 µg/L	2.8863 ppb	14:56:43
3	V 292.402†	-34.6	11.0	0.1363 µg/L	0.1363 ppb	14:56:43
3	Zn 213.857†	532.5	34.5	0.8590 µg/L	0.8590 ppb	14:57:03

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1984399.6	103.90 %	0.456			0.44%
Sc RADIAL	56394.7	103 %	0.4			0.43%
Y 371.029	1360142.9	103.83 %	0.492			0.47%
Ag 328.068†	73.5	0.5881 µg/L	0.10050	0.5881 ppb	0.10050	17.09%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	42.3	31.542 µg/L	16.4016	31.542 ppb	16.4016	52.00%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.1	-0.1319 µg/L	1.30928	-0.1319 ppb	1.30928	992.68%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	50.4	2.1851 µg/L	0.50501	2.1851 ppb	0.50501	23.11%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	28.1	0.7312 µg/L	0.01993	0.7312 ppb	0.01993	2.73%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	357.6	0.2334 µg/L	0.05362	0.2334 ppb	0.05362	22.97%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	37.7	35.543 µg/L	6.9088	35.543 ppb	6.9088	19.44%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	22.1	0.6049 µg/L	0.24471	0.6049 ppb	0.24471	40.45%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.4	0.0207 µg/L	0.05597	0.0207 ppb	0.05597	270.39%



QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	56.0	1.2317 µg/L	0.03444	1.2317 ppb	0.03444	2.80%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	130.7	0.9184 µg/L	0.23134	0.9184 ppb	0.23134	25.19%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	4.6	39.296 µg/L	26.5417	39.296 ppb	26.5417	67.54%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	109.3	77.713 µg/L	6.6157	77.713 ppb	6.6157	8.51%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	4.3	40.297 µg/L	30.8602	40.297 ppb	30.8602	76.58%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	137.6	0.4800 µg/L	0.08402	0.4800 ppb	0.08402	17.50%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	9.7	1.0367 µg/L	0.32615	1.0367 ppb	0.32615	31.46%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	197.5	65.022 µg/L	6.2628	65.022 ppb	6.2628	9.63%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-4.6	-0.2531 µg/L	0.26755	-0.2531 ppb	0.26755	105.70%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-2.5	-5.4063 µg/L	13.25932	-5.4063 ppb	13.25932	245.25%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	15.9	4.2482 µg/L	2.04263	4.2482 ppb	2.04263	48.08%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-1.5	-6.4715 µg/L	13.04721	-6.4715 ppb	13.04721	201.61%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	0.8	0.8057 µg/L	3.21418	0.8057 ppb	3.21418	398.93%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-1.5	-2.2926 µg/L	7.04698	-2.2926 ppb	7.04698	307.37%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-26.4	-5.6898 µg/L	8.00142	-5.6898 ppb	8.00142	140.63%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	43.0	3.5375 µg/L	0.75475	3.5375 ppb	0.75475	21.34%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	5.0	2.3190 µg/L	2.42737	2.3190 ppb	2.42737	104.67%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	46.3	0.4804 µg/L	0.17278	0.4804 ppb	0.17278	35.96%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	146.3	0.3492 µg/L	0.09310	0.3492 ppb	0.09310	26.66%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	2.3	3.2523 µg/L	3.48319	3.2523 ppb	3.48319	107.10%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	8.7	0.7773 µg/L	4.64898	0.7773 ppb	4.64898	598.06%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	34.6	0.3845 µg/L	0.24848	0.3845 ppb	0.24848	64.62%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	39.7	0.9871 µg/L	0.11756	0.9871 ppb	0.11756	11.91%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

## =====

## Analysis Begun

Start Time: 2/11/2010 15:08:34

Plasma On Time: 2/8/2010 03:37:33

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\021110.sif

Batch ID:

Results Data Set: 021110B

Results Library: c:\pe\optima1\Results\Results.mdb

## =====

## Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 2/11/2010 13:51:13

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: 113

Sample ID: LR1

Date Collected: 2/11/2010 15:08:34

Analyst: HSC

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

## =====

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55775.1	55775.1	102 %		15:09:19
1	Al 396.153Radial†	-12.5	-2.1	-1.5477 µg/L	-1.5477 ppb	15:09:19
1	Ca 317.933Radial†	109.7	-71.8	-67.596 µg/L	-67.596 ppb	15:09:39
1	Fe 238.204 Radial†	12.5	-2.2	-18.859 µg/L	-18.859 ppb	15:09:39

1	K 766.490 Radial†	153.1	21.4	15.223 µg/L	15.223 ppb	15:09:19
1	Mg 279.077 IEC†	21.3	9.6	89.132 µg/L	89.132 ppb	15:09:39
1	Na 589.592 Radial†	561.6	7.7	2.5239 µg/L	2.5239 ppb	15:09:19
1	Sr 421.552†	60.6	19.8	0.2050 µg/L	0.2050 ppb	15:09:19
1	Sc 361.383	1979575.8	1979575.8	103.65 %		15:10:41
1	Y 371.029	1359463.7	1359463.7	103.78 %		15:10:41
1	Ag 328.068†	-475.7	105.6	0.7790 µg/L	0.7790 ppb	15:10:47
1	As 188.979†	3.5	2.2	4.2811 µg/L	4.2811 ppb	15:11:08
1	B 249.677†	236.6	-103.2	-4.4890 µg/L	-4.4890 ppb	15:10:47
1	Ba 233.527†	-43.0	-15.5	-0.4185 µg/L	-0.4185 ppb	15:11:08
1	Be 313.107†	-9167.3	-5403.9	-3.5311 µg/L	-3.5311 ppb	15:10:47
1	Cd 226.502†	-304.4	-151.6	-4.1785 µg/L	-4.1785 ppb	15:11:08
1	Co 228.616†	19.8	27.9	1.3617 µg/L	1.3617 ppb	15:11:08
1	Cr 267.716†	233.0	277.1	6.0903 µg/L	6.0903 ppb	15:10:47
1	Cu 324.752†	1310.7	-1221.6	-8.5355 µg/L	-8.5355 ppb	15:10:47
1	Mn 257.610†	14.0	257.6	0.8861 µg/L	0.8861 ppb	15:10:47
1	Mo 202.031†	-13.4	-5.4	-0.5763 µg/L	-0.5763 ppb	15:11:08
1	Ni 231.604†	324.2	10.6	0.5789 µg/L	0.5789 ppb	15:11:08
1	P 214.914†	39.4	10.4	23.307 µg/L	23.307 ppb	15:11:08
1	Pb 220.353†	132.9	31.0	-2.3589 µg/L	-2.3589 ppb	15:11:08
1	S 181.975 Axial†	17.0	1.6	6.9914 µg/L	6.9914 ppb	15:11:08
1	Sb 206.836†	24.0	-3.8	-3.8211 µg/L	-3.8211 ppb	15:11:08
1	Se 196.026†	11.2	-5.0	-7.7508 µg/L	-7.7508 ppb	15:11:08
1	SiO2†	1260.6	-33.8	-7.2860 µg/L	-7.2860 ppb	15:10:47
1	Si 251.611†	175.4	-143.6	-11.809 µg/L	-11.809 ppb	15:11:08
1	Sn 189.927†	6.2	6.9	3.1737 µg/L	3.1737 ppb	15:11:08
1	Ti 334.940†	2413.3	2212.1	5.3130 µg/L	5.3130 ppb	15:10:47
1	Tl 190.801†	-31.2	-5.9	4.3972 µg/L	4.3972 ppb	15:11:08
1	U 409.014†	117155.1	113081.6	10238 µg/L	10238 ppb	15:10:41
1	V 292.402†	-897.2	-821.4	1.8907 µg/L	1.8907 ppb	15:10:47
1	Zn 213.857†	499.8	6.6	0.1728 µg/L	0.1728 ppb	15:11:08
2	Sc RADIAL	55251.0	55251.0	101 %		15:09:44
2	Al 396.153Radial†	-27.7	-17.2	-12.820 µg/L	-12.820 ppb	15:09:44
2	Ca 317.933Radial†	107.7	-72.8	-68.561 µg/L	-68.561 ppb	15:10:05
2	Fe 238.204 Radial†	14.6	-0.1	-0.7560 µg/L	-0.7560 ppb	15:10:05
2	K 766.490 Radial†	163.9	33.5	23.798 µg/L	23.798 ppb	15:09:44
2	Mg 279.077 IEC†	21.5	10.0	92.921 µg/L	92.921 ppb	15:10:05
2	Na 589.592 Radial†	549.7	1.1	0.3683 µg/L	0.3683 ppb	15:09:44
2	Sr 421.552†	65.4	25.1	0.2600 µg/L	0.2600 ppb	15:09:44
2	Sc 361.383	1991488.7	1991488.7	104.28 %		15:11:14
2	Y 371.029	1367480.0	1367480.0	104.39 %		15:11:14
2	Ag 328.068†	-460.8	122.6	0.9153 µg/L	0.9153 ppb	15:11:20
2	As 188.979†	3.4	2.1	4.1976 µg/L	4.1976 ppb	15:11:40
2	B 249.677†	245.3	-96.3	-4.1987 µg/L	-4.1987 ppb	15:11:20
2	Ba 233.527†	-30.4	-3.2	-0.0984 µg/L	-0.0984 ppb	15:11:40
2	Be 313.107†	-9053.1	-5241.5	-3.4251 µg/L	-3.4251 ppb	15:11:20
2	Cd 226.502†	-307.5	-152.7	-4.2119 µg/L	-4.2119 ppb	15:11:40
2	Co 228.616†	2.2	10.9	0.5250 µg/L	0.5250 ppb	15:11:40
2	Cr 267.716†	184.1	229.0	5.0309 µg/L	5.0309 ppb	15:11:20
2	Cu 324.752†	1378.2	-1164.4	-8.1337 µg/L	-8.1337 ppb	15:11:20
2	Mn 257.610†	56.5	298.3	1.0291 µg/L	1.0291 ppb	15:11:20
2	Mo 202.031†	-9.4	-1.5	-0.1584 µg/L	-0.1584 ppb	15:11:40
2	Ni 231.604†	337.2	21.2	1.1562 µg/L	1.1562 ppb	15:11:40
2	P 214.914†	47.1	17.5	38.462 µg/L	38.462 ppb	15:11:40
2	Pb 220.353†	140.3	37.4	-0.6060 µg/L	-0.6060 ppb	15:11:40
2	S 181.975 Axial†	16.6	1.1	4.9128 µg/L	4.9128 ppb	15:11:40
2	Sb 206.836†	18.1	-9.6	-9.5490 µg/L	-9.5490 ppb	15:11:40
2	Se 196.026†	12.7	-3.7	-5.6705 µg/L	-5.6705 ppb	15:11:40
2	SiO2†	1277.1	-25.3	-5.4423 µg/L	-5.4423 ppb	15:11:20
2	Si 251.611†	186.7	-133.8	-10.999 µg/L	-10.999 ppb	15:11:40
2	Sn 189.927†	5.7	6.3	2.9120 µg/L	2.9120 ppb	15:11:40
2	Ti 334.940†	2507.4	2288.5	5.4964 µg/L	5.4964 ppb	15:11:20
2	Tl 190.801†	-28.7	-3.2	8.0207 µg/L	8.0207 ppb	15:11:40
2	U 409.014†	117240.7	112487.6	10184 µg/L	10184 ppb	15:11:14
2	V 292.402†	-895.5	-814.6	1.9102 µg/L	1.9102 ppb	15:11:20
2	Zn 213.857†	510.6	14.1	0.3551 µg/L	0.3551 ppb	15:11:40
3	Sc RADIAL	56112.5	56112.5	103 %		15:10:10
3	Al 396.153Radial†	-19.4	-8.8	-6.5548 µg/L	-6.5548 ppb	15:10:10
3	Ca 317.933Radial†	114.8	-67.5	-63.545 µg/L	-63.545 ppb	15:10:31
3	Fe 238.204 Radial†	16.7	1.7	14.838 µg/L	14.838 ppb	15:10:31
3	K 766.490 Radial†	156.5	23.8	16.907 µg/L	16.907 ppb	15:10:10

3	Mg 279.077 IEC†	18.3	6.5	60.273 µg/L	60.273 ppb	15:10:31
3	Na 589.592 Radial†	544.2	-12.6	-4.1463 µg/L	-4.1463 ppb	15:10:10
3	Sr 421.552†	60.1	18.9	0.1962 µg/L	0.1962 ppb	15:10:10
3	Sc 361.383	1998454.5	1998454.5	104.64 %		15:11:47
3	Y 371.029	1371253.2	1371253.2	104.68 %		15:11:47
3	Ag 328.068†	-504.4	82.5	0.6071 µg/L	0.6071 ppb	15:11:53
3	As 188.979†	2.1	0.9	1.6782 µg/L	1.6782 ppb	15:12:13
3	B 249.677†	284.2	-59.9	-2.6163 µg/L	-2.6163 ppb	15:11:53
3	Ba 233.527†	-15.1	11.6	0.2883 µg/L	0.2883 ppb	15:12:13
3	Be 313.107†	-8272.3	-4465.0	-2.9180 µg/L	-2.9180 ppb	15:11:53
3	Cd 226.502†	-264.9	-111.0	-3.0636 µg/L	-3.0636 ppb	15:12:13
3	Co 228.616†	14.5	22.7	1.1081 µg/L	1.1081 ppb	15:12:13
3	Cr 267.716†	231.8	273.9	6.0206 µg/L	6.0206 ppb	15:11:53
3	Cu 324.752†	1499.3	-1053.3	-7.3552 µg/L	-7.3552 ppb	15:11:53
3	Mn 257.610†	138.5	376.5	1.3032 µg/L	1.3032 ppb	15:11:53
3	Mo 202.031†	-2.6	5.1	0.5398 µg/L	0.5398 ppb	15:12:13
3	Ni 231.604†	337.9	20.7	1.1315 µg/L	1.1315 ppb	15:12:13
3	P 214.914†	49.3	19.5	42.611 µg/L	42.611 ppb	15:12:13
3	Pb 220.353†	138.7	35.4	-0.5823 µg/L	-0.5823 ppb	15:12:13
3	S 181.975 Axial†	15.8	0.3	1.1838 µg/L	1.1838 ppb	15:12:13
3	Sb 206.836†	21.8	-6.1	-6.0924 µg/L	-6.0924 ppb	15:12:13
3	Se 196.026†	12.8	-3.6	-5.5591 µg/L	-5.5591 ppb	15:12:13
3	SiO2†	1308.9	0.8	0.1805 µg/L	0.1805 ppb	15:11:53
3	Si 251.611†	268.0	-56.8	-4.6690 µg/L	-4.6690 ppb	15:12:13
3	Sn 189.927†	4.1	4.8	2.1976 µg/L	2.1976 ppb	15:12:13
3	Ti 334.940†	2521.6	2293.7	5.5115 µg/L	5.5115 ppb	15:11:53
3	Tl 190.801†	-25.5	-0.1	11.785 µg/L	11.785 ppb	15:12:13
3	U 409.014†	111497.5	106607.2	9651.9 µg/L	9651.9 ppb	15:11:47
3	V 292.402†	-762.7	-684.7	2.7514 µg/L	2.7514 ppb	15:11:53
3	Zn 213.857†	523.6	24.8	0.6223 µg/L	0.6223 ppb	15:12:13

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1989839.7	104.19 %		0.500			0.48%
Sc RADIAL	55712.9	102 %		0.8			0.78%
Y 371.029	1366065.6	104.29 %		0.460			0.44%
Ag 328.068†	103.5	0.7671 µg/L		0.15443	0.7671 ppb	0.15443	20.13%
Al 396.153Radial†	-9.4	-6.9743 µg/L		5.64801	-6.9743 ppb	5.64801	80.98%
As 188.979†	1.7	3.3856 µg/L		1.47930	3.3856 ppb	1.47930	43.69%
B 249.677†	-86.4	-3.7680 µg/L		1.00792	-3.7680 ppb	1.00792	26.75%
Ba 233.527†	-2.4	-0.0762 µg/L		0.35392	-0.0762 ppb	0.35392	464.36%
Be 313.107†	-5036.8	-3.2914 µg/L		0.32768	-3.2914 ppb	0.32768	9.96%
Ca 317.933Radial†	-70.7	-66.567 µg/L		2.6618	-66.567 ppb	2.6618	4.00%
Cd 226.502†	-138.4	-3.8180 µg/L		0.65352	-3.8180 ppb	0.65352	17.12%
Co 228.616†	20.5	0.9983 µg/L		0.42901	0.9983 ppb	0.42901	42.97%
Cr 267.716†	260.0	5.7139 µg/L		0.59254	5.7139 ppb	0.59254	10.37%
Cu 324.752†	-1146.4	-8.0081 µg/L		0.60007	-8.0081 ppb	0.60007	7.49%
Fe 238.204 Radial†	-0.2	-1.5922 µg/L		16.86410	-1.5922 ppb	16.86410	>999.9%
K 766.490 Radial†	26.2	18.643 µg/L		4.5435	18.643 ppb	4.5435	24.37%
Mg 279.077 IEC†	8.7	80.775 µg/L		17.8566	80.775 ppb	17.8566	22.11%
Mn 257.610†	310.8	1.0728 µg/L		0.21196	1.0728 ppb	0.21196	19.76%
Mo 202.031†	-0.6	-0.0649 µg/L		0.56388	-0.0649 ppb	0.56388	868.32%
Na 589.592 Radial†	-1.3	-0.4181 µg/L		3.40391	-0.4181 ppb	3.40391	814.20%
Ni 231.604†	17.5	0.9555 µg/L		0.32641	0.9555 ppb	0.32641	34.16%
P 214.914†	15.8	34.793 µg/L		10.1611	34.793 ppb	10.1611	29.20%
Pb 220.353†	34.6	-1.1824 µg/L		1.01895	-1.1824 ppb	1.01895	86.18%
S 181.975 Axial†	1.0	4.3627 µg/L		2.94264	4.3627 ppb	2.94264	67.45%
Sb 206.836†	-6.5	-6.4875 µg/L		2.88435	-6.4875 ppb	2.88435	44.46%
Se 196.026†	-4.1	-6.3268 µg/L		1.23447	-6.3268 ppb	1.23447	19.51%
SiO2†	-19.4	-4.1826 µg/L		3.88938	-4.1826 ppb	3.88938	92.99%
Si 251.611†	-111.4	-9.1588 µg/L		3.90936	-9.1588 ppb	3.90936	42.68%
Sn 189.927†	6.0	2.7611 µg/L		0.50522	2.7611 ppb	0.50522	18.30%
Sr 421.552†	21.3	0.2204 µg/L		0.03458	0.2204 ppb	0.03458	15.69%
Ti 334.940†	2264.8	5.4403 µg/L		0.11049	5.4403 ppb	0.11049	2.03%
Tl 190.801†	-3.0	8.0675 µg/L		3.69388	8.0675 ppb	3.69388	45.79%
U 409.014†	110725.5	10025 µg/L		324.0	10025 ppb	324.0	3.23%
V 292.402†	-773.6	2.1841 µg/L		0.49139	2.1841 ppb	0.49139	22.50%
Zn 213.857†	15.2	0.3834 µg/L		0.22607	0.3834 ppb	0.22607	58.97%

Sequence No.: 2  
 Sample ID: LR2  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 114  
 Date Collected: 2/11/2010 15:12:22  
 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	53713.3	53713.3	98.4 %		15:12:55
1	Al 396.153Radial†	-16.2	-6.3	-4.7161 µg/L	-4.7161 ppb	15:12:55
1	Ca 317.933Radial†	188.0	11.9	11.198 µg/L	11.198 ppb	15:13:15
1	Fe 238.204 Radial†	4.2	-10.3	23.498 µg/L	23.498 ppb	15:13:15
1	K 766.490 Radial†	165.7	39.9	28.393 µg/L	28.393 ppb	15:12:55
1	Mg 279.077 IEC†	10.1	-1.1	-9.7514 µg/L	-9.7514 ppb	15:13:15
1	Na 589.592 Radial†	614.8	82.8	27.252 µg/L	27.252 ppb	15:12:55
1	Sr 421.552†	64.3	25.8	0.2675 µg/L	0.2675 ppb	15:12:55
1	Sc 361.383	1941418.8	1941418.8	101.65 %		15:14:18
1	Y 371.029	1323859.1	1323859.1	101.06 %		15:14:18
1	Ag 328.068†	-525.2	47.9	0.3781 µg/L	0.3781 ppb	15:14:24
1	As 188.979†	-3.1	-4.2	-8.1869 µg/L	-8.1869 ppb	15:14:45
1	B 249.677†	750.9	407.3	17.845 µg/L	17.845 ppb	15:14:24
1	Ba 233.527†	-16.3	10.0	0.2610 µg/L	0.2610 ppb	15:14:45
1	Be 313.107†	-3458.2	38.5	0.0250 µg/L	0.0250 ppb	15:14:24
1	Cd 226.502†	-114.7	29.2	0.8189 µg/L	0.8189 ppb	15:14:45
1	Co 228.616†	107569.3	105828.5	5208.2 µg/L	5208.2 ppb	15:14:24
1	Cr 267.716†	-25.9	26.9	0.5925 µg/L	0.5925 ppb	15:14:45
1	Cu 324.752†	1814.1	-701.5	-4.9124 µg/L	-4.9124 ppb	15:14:24
1	Mn 257.610†	-161.2	85.5	0.2849 µg/L	0.2849 ppb	15:14:45
1	Mo 202.031†	-1.5	6.0	0.6418 µg/L	0.6418 ppb	15:14:45
1	Ni 231.604†	346.8	39.0	-4.0742 µg/L	-4.0742 ppb	15:14:45
1	P 214.914†	5345.7	5231.1	11233 µg/L	11233 ppb	15:14:24
1	Pb 220.353†	111.4	12.4	3.3090 µg/L	3.3090 ppb	15:14:45
1	S 181.975 Axial†	16.5	1.4	5.9830 µg/L	5.9830 ppb	15:14:45
1	Sb 206.836†	21.7	-5.6	-5.5036 µg/L	-5.5036 ppb	15:14:45
1	Se 196.026†	12.6	-3.4	-5.4894 µg/L	-5.4894 ppb	15:14:45
1	SiO2†	400045.4	392288.3	84482 µg/L	84482 ppb	15:14:18
1	Si 251.611†	483396.1	475220.4	39066 µg/L	39066 ppb	15:14:18
1	Sn 189.927†	3.3	4.1	1.8920 µg/L	1.8920 ppb	15:14:45
1	Ti 334.940†	305.9	184.8	0.4456 µg/L	0.4456 ppb	15:14:24
1	Tl 190.801†	-3.7	20.7	11.360 µg/L	11.360 ppb	15:14:45
1	U 409.014†	25.3	78.5	7.1194 µg/L	7.1194 ppb	15:14:24
1	V 292.402†	5.9	50.0	0.5361 µg/L	0.5361 ppb	15:14:24
1	Zn 213.857†	522.6	38.6	0.9665 µg/L	0.9665 ppb	15:14:45
2	Sc RADIAL	54832.8	54832.8	100 %		15:13:21
2	Al 396.153Radial†	1.7	11.8	8.7929 µg/L	8.7929 ppb	15:13:21
2	Ca 317.933Radial†	190.7	10.6	10.005 µg/L	10.005 ppb	15:13:42
2	Fe 238.204 Radial†	3.0	-11.5	14.135 µg/L	14.135 ppb	15:13:42
2	K 766.490 Radial†	204.4	75.0	53.328 µg/L	53.328 ppb	15:13:21
2	Mg 279.077 IEC†	11.2	-0.1	-0.6600 µg/L	-0.6600 ppb	15:13:42
2	Na 589.592 Radial†	630.7	85.9	28.272 µg/L	28.272 ppb	15:13:21
2	Sr 421.552†	34.5	-5.2	-0.0538 µg/L	-0.0538 ppb	15:13:21
2	Sc 361.383	1946646.9	1946646.9	101.93 %		15:14:51
2	Y 371.029	1327034.0	1327034.0	101.31 %		15:14:51
2	Ag 328.068†	-584.6	-9.0	-0.0733 µg/L	-0.0733 ppb	15:14:57
2	As 188.979†	-0.2	-1.3	-2.6409 µg/L	-2.6409 ppb	15:15:17
2	B 249.677†	783.8	437.5	19.174 µg/L	19.174 ppb	15:14:57
2	Ba 233.527†	-20.0	6.4	0.1666 µg/L	0.1666 ppb	15:15:17
2	Be 313.107†	-3481.4	24.9	0.0161 µg/L	0.0161 ppb	15:14:57
2	Cd 226.502†	-101.1	42.9	1.1972 µg/L	1.1972 ppb	15:15:17
2	Co 228.616†	108800.7	106752.3	5253.6 µg/L	5253.6 ppb	15:14:57
2	Cr 267.716†	-17.5	35.2	0.7745 µg/L	0.7745 ppb	15:15:17
2	Cu 324.752†	1718.5	-800.1	-5.6024 µg/L	-5.6024 ppb	15:14:57
2	Mn 257.610†	-163.9	83.3	0.2757 µg/L	0.2757 ppb	15:15:17
2	Mo 202.031†	-3.8	3.8	0.4036 µg/L	0.4036 ppb	15:15:17
2	Ni 231.604†	346.9	38.2	-4.1724 µg/L	-4.1724 ppb	15:15:17
2	P 214.914†	5358.7	5229.8	11230 µg/L	11230 ppb	15:14:57
2	Pb 220.353†	113.9	14.6	3.8918 µg/L	3.8918 ppb	15:15:17

2	S 181.975 Axial†	13.2	-1.8	-7.9889 µg/L	-7.9889 ppb	15:15:17
2	Sb 206.836†	30.6	3.1	3.0533 µg/L	3.0533 ppb	15:15:17
2	Se 196.026†	12.9	-3.2	-5.1244 µg/L	-5.1244 ppb	15:15:17
2	SiO2†	401576.7	392733.7	84577 µg/L	84577 ppb	15:14:51
2	Si 251.611†	485309.6	475820.6	39115 µg/L	39115 ppb	15:14:51
2	Sn 189.927†	3.1	3.9	1.7899 µg/L	1.7899 ppb	15:15:17
2	Ti 334.940†	323.3	201.1	0.4839 µg/L	0.4839 ppb	15:14:57
2	Tl 190.801†	-4.0	20.4	10.781 µg/L	10.781 ppb	15:15:17
2	U 409.014†	85.0	137.0	12.417 µg/L	12.417 ppb	15:14:57
2	V 292.402†	14.9	58.8	0.6334 µg/L	0.6334 ppb	15:14:57
2	Zn 213.857†	510.4	25.2	0.6333 µg/L	0.6333 ppb	15:15:17
3	Sc RADIAL	54620.7	54620.7	100 %		15:13:47
3	Al 396.153Radial†	15.7	25.8	19.227 µg/L	19.227 ppb	15:13:47
3	Ca 317.933Radial†	200.8	21.5	20.218 µg/L	20.218 ppb	15:14:07
3	Fe 238.204 Radial†	4.8	-9.7	21.721 µg/L	21.721 ppb	15:14:07
3	K 766.490 Radial†	161.9	33.3	23.669 µg/L	23.669 ppb	15:13:47
3	Mg 279.077 IEC†	10.5	-0.8	-6.9228 µg/L	-6.9228 ppb	15:14:07
3	Na 589.592 Radial†	616.0	73.6	24.220 µg/L	24.220 ppb	15:13:47
3	Sr 421.552†	73.7	34.1	0.3532 µg/L	0.3532 ppb	15:13:47
3	Sc 361.383	1935972.8	1935972.8	101.37 %		15:15:24
3	Y 371.029	1321116.1	1321116.1	100.85 %		15:15:24
3	Ag 328.068†	-522.4	49.2	0.3871 µg/L	0.3871 ppb	15:15:29
3	As 188.979†	-0.6	-1.7	-3.3886 µg/L	-3.3886 ppb	15:15:50
3	B 249.677†	727.0	385.8	16.903 µg/L	16.903 ppb	15:15:29
3	Ba 233.527†	-11.4	14.8	0.3862 µg/L	0.3862 ppb	15:15:50
3	Be 313.107†	-3553.1	-64.7	-0.0425 µg/L	-0.0425 ppb	15:15:29
3	Cd 226.502†	-114.3	29.4	0.8217 µg/L	0.8217 ppb	15:15:50
3	Co 228.616†	100765.6	99414.3	4892.5 µg/L	4892.5 ppb	15:15:29
3	Cr 267.716†	-15.7	36.9	0.8110 µg/L	0.8110 ppb	15:15:50
3	Cu 324.752†	1744.4	-765.3	-5.3569 µg/L	-5.3569 ppb	15:15:29
3	Mn 257.610†	-168.6	77.8	0.2588 µg/L	0.2588 ppb	15:15:50
3	Mo 202.031†	0.8	8.3	0.8836 µg/L	0.8836 ppb	15:15:50
3	Ni 231.604†	347.2	40.4	-3.6217 µg/L	-3.6217 ppb	15:15:50
3	P 214.914†	4995.9	4900.9	10524 µg/L	10524 ppb	15:15:29
3	Pb 220.353†	111.9	13.2	3.5300 µg/L	3.5300 ppb	15:15:50
3	S 181.975 Axial†	14.6	-0.4	-1.9121 µg/L	-1.9121 ppb	15:15:50
3	Sb 206.836†	26.4	-0.9	-0.9265 µg/L	-0.9265 ppb	15:15:50
3	Se 196.026†	6.2	-9.7	-15.059 µg/L	-15.059 ppb	15:15:50
3	SiO2†	389837.5	383325.3	82551 µg/L	82551 ppb	15:15:24
3	Si 251.611†	470845.5	464176.9	38158 µg/L	38158 ppb	15:15:24
3	Sn 189.927†	2.7	3.6	1.6476 µg/L	1.6476 ppb	15:15:50
3	Ti 334.940†	325.3	204.8	0.4935 µg/L	0.4935 ppb	15:15:29
3	Tl 190.801†	-3.6	20.7	12.467 µg/L	12.467 ppb	15:15:50
3	U 409.014†	27.1	80.3	7.2810 µg/L	7.2810 ppb	15:15:29
3	V 292.402†	-16.9	27.5	0.3000 µg/L	0.3000 ppb	15:15:29
3	Zn 213.857†	508.1	25.7	0.6443 µg/L	0.6443 ppb	15:15:50

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1941346.1	101.65 %	0.279			0.27%
Sc RADIAL	54388.9	99.7 %	1.09			1.09%
Y 371.029	1324003.1	101.08 %	0.226			0.22%
Ag 328.068†	29.4	0.2306 µg/L	0.26325	0.2306 ppb	0.26325	114.16%
Al 396.153Radial†	10.4	7.7681 µg/L	12.00458	7.7681 ppb	12.00458	154.54%
As 188.979†	-2.4	-4.7388 µg/L	3.00947	-4.7388 ppb	3.00947	63.51%
B 249.677†	410.2	17.974 µg/L	1.1410	17.974 ppb	1.1410	6.35%
Ba 233.527†	10.4	0.2713 µg/L	0.11018	0.2713 ppb	0.11018	40.61%
Be 313.107†	-0.4	-0.0005 µg/L	0.03663	-0.0005 ppb	0.03663	>999.9%
Ca 317.933Radial†	14.7	13.807 µg/L	5.5841	13.807 ppb	5.5841	40.44%
Cd 226.502†	33.8	0.9459 µg/L	0.21761	0.9459 ppb	0.21761	23.01%
Co 228.616†	103998.4	5118.1 µg/L	196.69	5118.1 ppb	196.69	3.84%
Cr 267.716†	33.0	0.7260 µg/L	0.11700	0.7260 ppb	0.11700	16.12%
Cu 324.752†	-755.6	-5.2906 µg/L	0.34975	-5.2906 ppb	0.34975	6.61%
Fe 238.204 Radial†	-10.5	19.785 µg/L	4.9725	19.785 ppb	4.9725	25.13%
K 766.490 Radial†	49.4	35.130 µg/L	15.9357	35.130 ppb	15.9357	45.36%
Mg 279.077 IEC†	-0.6	-5.7780 µg/L	4.65251	-5.7780 ppb	4.65251	80.52%
Mn 257.610†	82.2	0.2731 µg/L	0.01325	0.2731 ppb	0.01325	4.85%
Mo 202.031†	6.1	0.6430 µg/L	0.24004	0.6430 ppb	0.24004	37.33%
Na 589.592 Radial†	80.7	26.581 µg/L	2.1079	26.581 ppb	2.1079	7.93%

Ni 231.604†	39.2	-3.9561 µg/L	0.29375	-3.9561 ppb	0.29375	7.43%
P 214.914†	5120.6	10995 µg/L	408.6	10995 ppb	408.6	3.72%
Pb 220.353†	13.4	3.5769 µg/L	0.29424	3.5769 ppb	0.29424	8.23%
S 181.975 Axial†	-0.3	-1.3060 µg/L	7.00565	-1.3060 ppb	7.00565	536.41%
Sb 206.836†	-1.1	-1.1256 µg/L	4.28189	-1.1256 ppb	4.28189	380.41%
Se 196.026†	-5.5	-8.5576 µg/L	5.63334	-8.5576 ppb	5.63334	65.83%
SiO2†	389449.1	83870 µg/L	1143.1	83870 ppb	1143.1	1.36%
Si 251.611†	471739.3	38779 µg/L	538.9	38779 ppb	538.9	1.39%
Sn 189.927†	3.8	1.7765 µg/L	0.12277	1.7765 ppb	0.12277	6.91%
Sr 421.552†	18.2	0.1890 µg/L	0.21456	0.1890 ppb	0.21456	113.55%
Ti 334.940†	196.9	0.4743 µg/L	0.02534	0.4743 ppb	0.02534	5.34%
Tl 190.801†	20.6	11.536 µg/L	0.8566	11.536 ppb	0.8566	7.43%
U 409.014†	98.6	8.9390 µg/L	3.01276	8.9390 ppb	3.01276	33.70%
V 292.402†	45.5	0.4899 µg/L	0.17143	0.4899 ppb	0.17143	35.00%
Zn 213.857†	29.8	0.7480 µg/L	0.18929	0.7480 ppb	0.18929	25.31%

Sequence No.: 3

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 15:15:59

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	54231.5	54231.5	99.4 %		15:16:36
1	Al 396.153Radial†	7106.2	7161.2	5326.1 µg/L	5326.1 ppb	15:16:36
1	Ca 317.933Radial†	5688.9	5545.7	5221.6 µg/L	5221.6 ppb	15:16:56
1	Fe 238.204 Radial†	634.7	624.2	5302.1 µg/L	5302.1 ppb	15:16:56
1	K 766.490 Radial†	7456.0	7374.7	5241.9 µg/L	5241.9 ppb	15:16:36
1	Mg 279.077 IEC†	577.6	570.0	5308.0 µg/L	5308.0 ppb	15:16:56
1	Na 589.592 Radial†	32401.3	32064.3	10556 µg/L	10556 ppb	15:16:36
1	Sr 421.552†	50354.2	50633.0	524.87 µg/L	524.87 ppb	15:16:36
1	Sc 361.383	1899310.9	1899310.9	99.449 %		15:17:59
1	Y 371.029	1297484.4	1297484.4	99.051 %		15:17:59
1	Ag 328.068†	65095.3	66020.7	527.69 µg/L	527.69 ppb	15:18:05
1	As 188.979†	283.8	284.2	554.43 µg/L	554.43 ppb	15:18:26
1	B 249.677†	12153.8	11889.7	517.70 µg/L	517.70 ppb	15:18:05
1	Ba 233.527†	20078.6	20215.9	527.34 µg/L	527.34 ppb	15:18:05
1	Be 313.107†	797857.7	805721.3	525.98 µg/L	525.98 ppb	15:17:59
1	Cd 226.502†	18953.5	19200.7	529.65 µg/L	529.65 ppb	15:18:05
1	Co 228.616†	10779.9	10848.5	533.28 µg/L	533.28 ppb	15:18:05
1	Cr 267.716†	24091.2	24277.1	534.33 µg/L	534.33 ppb	15:18:05
1	Cu 324.752†	77848.6	75794.1	530.18 µg/L	530.18 ppb	15:18:05
1	Mn 257.610†	153606.0	154701.7	536.20 µg/L	536.20 ppb	15:17:59
1	Mo 202.031†	5175.2	5211.4	556.37 µg/L	556.37 ppb	15:18:26
1	Ni 231.604†	10008.1	9761.4	533.14 µg/L	533.14 ppb	15:18:05
1	P 214.914†	1295.2	1274.7	2686.7 µg/L	2686.7 ppb	15:18:26
1	Pb 220.353†	2124.5	2039.1	544.31 µg/L	544.31 ppb	15:18:26
1	S 181.975 Axial†	260.7	247.3	1083.6 µg/L	1083.6 ppb	15:18:26
1	Sb 206.836†	587.4	563.7	557.41 µg/L	557.41 ppb	15:18:26
1	Se 196.026†	370.9	357.1	552.71 µg/L	552.71 ppb	15:18:26
1	SiO2†	27461.3	26363.5	5677.5 µg/L	5677.5 ppb	15:18:05
1	Si 251.611†	32393.9	32260.7	2652.0 µg/L	2652.0 ppb	15:18:05
1	Sn 189.927†	1213.6	1221.2	561.69 µg/L	561.69 ppb	15:18:26
1	Ti 334.940†	219433.8	220534.1	530.14 µg/L	530.14 ppb	15:17:59
1	Tl 190.801†	358.1	384.4	542.92 µg/L	542.92 ppb	15:18:26
1	U 409.014†	5858.6	5944.7	537.16 µg/L	537.16 ppb	15:18:05
1	V 292.402†	49239.4	49556.6	534.84 µg/L	534.84 ppb	15:18:05
1	Zn 213.857†	21646.0	21290.4	527.88 µg/L	527.88 ppb	15:18:05
2	Sc RADIAL	54850.6	54850.6	101 %		15:17:02
2	Al 396.153Radial†	7137.6	7111.8	5289.4 µg/L	5289.4 ppb	15:17:02
2	Ca 317.933Radial†	5661.7	5454.1	5135.3 µg/L	5135.3 ppb	15:17:22
2	Fe 238.204 Radial†	627.5	609.8	5179.7 µg/L	5179.7 ppb	15:17:22
2	K 766.490 Radial†	7509.6	7343.3	5219.6 µg/L	5219.6 ppb	15:17:02
2	Mg 279.077 IEC†	583.7	569.5	5303.7 µg/L	5303.7 ppb	15:17:22
2	Na 589.592 Radial†	32499.9	31794.4	10467 µg/L	10467 ppb	15:17:02
2	Sr 421.552†	50507.4	50213.6	520.52 µg/L	520.52 ppb	15:17:02
2	Sc 361.383	1912998.8	1912998.8	100.17 %		15:18:33
2	Y 371.029	1306161.3	1306161.3	99.713 %		15:18:33
2	Ag 328.068†	65237.5	65694.3	525.07 µg/L	525.07 ppb	15:18:38
2	As 188.979†	280.6	279.0	544.24 µg/L	544.24 ppb	15:18:59
2	B 249.677†	12200.8	11849.2	515.98 µg/L	515.98 ppb	15:18:38
2	Ba 233.527†	20133.5	20126.3	525.01 µg/L	525.01 ppb	15:18:38
2	Be 313.107†	793302.5	795433.1	519.26 µg/L	519.26 ppb	15:18:33
2	Cd 226.502†	18921.4	19032.3	525.02 µg/L	525.02 ppb	15:18:38
2	Co 228.616†	10784.1	10775.1	529.68 µg/L	529.68 ppb	15:18:38
2	Cr 267.716†	24047.5	24060.2	529.56 µg/L	529.56 ppb	15:18:38
2	Cu 324.752†	77783.7	75169.2	525.79 µg/L	525.79 ppb	15:18:38
2	Mn 257.610†	152510.0	152502.3	528.57 µg/L	528.57 ppb	15:18:33
2	Mo 202.031†	5149.2	5148.2	549.62 µg/L	549.62 ppb	15:18:59
2	Ni 231.604†	10009.6	9690.9	529.28 µg/L	529.28 ppb	15:18:38
2	P 214.914†	1298.8	1269.0	2674.9 µg/L	2674.9 ppb	15:18:59
2	Pb 220.353†	2130.1	2029.4	541.73 µg/L	541.73 ppb	15:18:59



2	S 181.975 Axial†	263.5	248.2	1087.5 µg/L	1087.5 ppb	15:18:59
2	Sb 206.836†	579.7	551.8	545.70 µg/L	545.70 ppb	15:18:59
2	Se 196.026†	360.4	343.9	532.32 µg/L	532.32 ppb	15:18:59
2	SiO2†	27531.6	26236.1	5650.1 µg/L	5650.1 ppb	15:18:38
2	Si 251.611†	32505.0	32138.5	2641.9 µg/L	2641.9 ppb	15:18:38
2	Sn 189.927†	1205.3	1204.2	553.89 µg/L	553.89 ppb	15:18:59
2	Ti 334.940†	218053.7	217577.6	523.03 µg/L	523.03 ppb	15:18:33
2	Tl 190.801†	351.0	374.7	529.24 µg/L	529.24 ppb	15:18:59
2	U 409.014†	5767.6	5811.7	525.14 µg/L	525.14 ppb	15:18:38
2	V 292.402†	49305.2	49268.0	531.68 µg/L	531.68 ppb	15:18:38
2	Zn 213.857†	21685.0	21173.7	524.99 µg/L	524.99 ppb	15:18:38
3	Sc RADIAL	55041.7	55041.7	101 %		15:17:27
3	Al 396.153Radial†	7150.5	7100.0	5282.4 µg/L	5282.4 ppb	15:17:27
3	Ca 317.933Radial†	5679.0	5451.7	5133.1 µg/L	5133.1 ppb	15:17:48
3	Fe 238.204 Radial†	630.1	610.3	5182.9 µg/L	5182.9 ppb	15:17:48
3	K 766.490 Radial†	7530.7	7338.3	5216.0 µg/L	5216.0 ppb	15:17:27
3	Mg 279.077 IEC†	585.8	569.6	5302.7 µg/L	5302.7 ppb	15:17:48
3	Na 589.592 Radial†	32646.4	31827.3	10478 µg/L	10478 ppb	15:17:27
3	Sr 421.552†	50673.8	50204.0	520.42 µg/L	520.42 ppb	15:17:27
3	Sc 361.383	1908268.1	1908268.1	99.918 %		15:19:06
3	Y 371.029	1302480.0	1302480.0	99.432 %		15:19:06
3	Ag 328.068†	61722.8	62338.2	498.13 µg/L	498.13 ppb	15:19:11
3	As 188.979†	239.2	238.3	464.88 µg/L	464.88 ppb	15:19:32
3	B 249.677†	11534.0	11212.0	488.05 µg/L	488.05 ppb	15:19:11
3	Ba 233.527†	18616.9	18658.3	486.70 µg/L	486.70 ppb	15:19:11
3	Be 313.107†	758183.0	762248.0	497.60 µg/L	497.60 ppb	15:19:06
3	Cd 226.502†	17482.4	17638.9	486.53 µg/L	486.53 ppb	15:19:11
3	Co 228.616†	9936.5	9953.5	489.22 µg/L	489.22 ppb	15:19:11
3	Cr 267.716†	21502.9	21573.0	474.82 µg/L	474.82 ppb	15:19:11
3	Cu 324.752†	71603.1	69176.0	483.93 µg/L	483.93 ppb	15:19:11
3	Mn 257.610†	146044.9	146409.3	507.47 µg/L	507.47 ppb	15:19:06
3	Mo 202.031†	4268.9	4280.0	456.96 µg/L	456.96 ppb	15:19:32
3	Ni 231.604†	9195.7	8901.1	486.15 µg/L	486.15 ppb	15:19:11
3	P 214.914†	1105.2	1078.5	2268.7 µg/L	2268.7 ppb	15:19:32
3	Pb 220.353†	1828.3	1732.6	462.41 µg/L	462.41 ppb	15:19:32
3	S 181.975 Axial†	232.1	217.5	952.80 µg/L	952.80 ppb	15:19:32
3	Sb 206.836†	493.7	467.1	461.46 µg/L	461.46 ppb	15:19:32
3	Se 196.026†	316.9	301.3	467.33 µg/L	467.33 ppb	15:19:32
3	SiO2†	25842.8	24614.0	5300.8 µg/L	5300.8 ppb	15:19:11
3	Si 251.611†	30435.2	30147.4	2478.3 µg/L	2478.3 ppb	15:19:11
3	Sn 189.927†	977.2	978.9	450.28 µg/L	450.28 ppb	15:19:32
3	Ti 334.940†	207237.8	207292.4	498.29 µg/L	498.29 ppb	15:19:06
3	Tl 190.801†	318.0	342.6	484.22 µg/L	484.22 ppb	15:19:32
3	U 409.014†	5210.6	5268.5	475.96 µg/L	475.96 ppb	15:19:11
3	V 292.402†	44791.7	44872.9	483.94 µg/L	483.94 ppb	15:19:11
3	Zn 213.857†	19890.6	19431.5	481.75 µg/L	481.75 ppb	15:19:11

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1906859.3	99.844 %	0.3640			0.36%
Sc RADIAL	54707.9	100 %	0.8			0.77%
Y 371.029	1302041.9	99.399 %	0.3325			0.33%
Ag 328.068†	64684.4	516.97 µg/L	16.362	516.97 ppb	16.362	3.16%
QC value within limits for Ag 328.068 Recovery = 103.39%						
Al 396.153Radial†	7124.3	5299.3 µg/L	23.43	5299.3 ppb	23.43	0.44%
QC value within limits for Al 396.153Radial Recovery = 105.99%						
As 188.979†	267.2	521.18 µg/L	49.028	521.18 ppb	49.028	9.41%
QC value within limits for As 188.979 Recovery = 104.24%						
B 249.677†	11650.3	507.24 µg/L	16.645	507.24 ppb	16.645	3.28%
QC value within limits for B 249.677 Recovery = 101.45%						
Ba 233.527†	19666.8	513.02 µg/L	22.823	513.02 ppb	22.823	4.45%
QC value within limits for Ba 233.527 Recovery = 102.60%						
Be 313.107†	787800.8	514.28 µg/L	14.831	514.28 ppb	14.831	2.88%
QC value within limits for Be 313.107 Recovery = 102.86%						
Ca 317.933Radial†	5483.8	5163.4 µg/L	50.50	5163.4 ppb	50.50	0.98%
QC value within limits for Ca 317.933Radial Recovery = 103.27%						
Cd 226.502†	18623.9	513.73 µg/L	23.671	513.73 ppb	23.671	4.61%
QC value within limits for Cd 226.502 Recovery = 102.75%						
Co 228.616†	10525.7	517.39 µg/L	24.470	517.39 ppb	24.470	4.73%

QC value within limits for Co 228.616 Recovery = 103.48%						
Cr 267.716†	23303.5	512.91 µg/L	33.067	512.91 ppb	33.067	6.45%
QC value within limits for Cr 267.716 Recovery = 102.58%						
Cu 324.752†	73379.7	513.30 µg/L	25.529	513.30 ppb	25.529	4.97%
QC value within limits for Cu 324.752 Recovery = 102.66%						
Fe 238.204 Radial†	614.8	5221.6 µg/L	69.73	5221.6 ppb	69.73	1.34%
QC value within limits for Fe 238.204 Radial Recovery = 104.43%						
K 766.490 Radial†	7352.1	5225.8 µg/L	14.03	5225.8 ppb	14.03	0.27%
QC value within limits for K 766.490 Radial Recovery = 104.52%						
Mg 279.077 IEC†	569.7	5304.8 µg/L	2.78	5304.8 ppb	2.78	0.05%
QC value within limits for Mg 279.077 IEC Recovery = 106.10%						
Mn 257.610†	151204.4	524.08 µg/L	14.882	524.08 ppb	14.882	2.84%
QC value within limits for Mn 257.610 Recovery = 104.82%						
Mo 202.031†	4879.9	520.98 µg/L	55.549	520.98 ppb	55.549	10.66%
QC value within limits for Mo 202.031 Recovery = 104.20%						
Na 589.592 Radial†	31895.3	10500 µg/L	48.5	10500 ppb	48.5	0.46%
QC value within limits for Na 589.592 Radial Recovery = 105.00%						
Ni 231.604†	9451.1	516.19 µg/L	26.085	516.19 ppb	26.085	5.05%
QC value within limits for Ni 231.604 Recovery = 103.24%						
P 214.914†	1207.4	2543.4 µg/L	237.97	2543.4 ppb	237.97	9.36%
QC value within limits for P 214.914 Recovery = 101.74%						
Pb 220.353†	1933.7	516.15 µg/L	46.558	516.15 ppb	46.558	9.02%
QC value within limits for Pb 220.353 Recovery = 103.23%						
S 181.975 Axial†	237.7	1041.3 µg/L	76.67	1041.3 ppb	76.67	7.36%
QC value within limits for S 181.975 Axial Recovery = 104.13%						
Sb 206.836†	527.5	521.52 µg/L	52.346	521.52 ppb	52.346	10.04%
QC value within limits for Sb 206.836 Recovery = 104.30%						
Se 196.026†	334.1	517.45 µg/L	44.586	517.45 ppb	44.586	8.62%
QC value within limits for Se 196.026 Recovery = 103.49%						
SiO2†	25737.9	5542.8 µg/L	210.05	5542.8 ppb	210.05	3.79%
QC value within limits for SiO2 Recovery = 103.65%						
Si 251.611†	31515.5	2590.7 µg/L	97.53	2590.7 ppb	97.53	3.76%
QC value within limits for Si 251.611 Recovery = 103.63%						
Sn 189.927†	1134.8	521.95 µg/L	62.194	521.95 ppb	62.194	11.92%
QC value within limits for Sn 189.927 Recovery = 104.39%						
Sr 421.552†	50350.2	521.94 µg/L	2.539	521.94 ppb	2.539	0.49%
QC value within limits for Sr 421.552 Recovery = 104.39%						
Ti 334.940†	215134.7	517.15 µg/L	16.720	517.15 ppb	16.720	3.23%
QC value within limits for Ti 334.940 Recovery = 103.43%						
Tl 190.801†	367.2	518.79 µg/L	30.715	518.79 ppb	30.715	5.92%
QC value within limits for Tl 190.801 Recovery = 103.76%						
U 409.014†	5675.0	512.76 µg/L	32.426	512.76 ppb	32.426	6.32%
QC value within limits for U 409.014 Recovery = 102.55%						
V 292.402†	47899.1	516.82 µg/L	28.516	516.82 ppb	28.516	5.52%
QC value within limits for V 292.402 Recovery = 103.36%						
Zn 213.857†	20631.8	511.54 µg/L	25.841	511.54 ppb	25.841	5.05%
QC value within limits for Zn 213.857 Recovery = 102.31%						
All analyte(s) passed QC.						

Sequence No.: 4

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 15:19:41

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	53966.4	53966.4	98.9 %		15:20:14
1	Al 396.153Radial†	-26.0	-16.1	-12.005 µg/L	-12.005 ppb	15:20:14
1	Ca 317.933Radial†	184.6	7.5	7.0536 µg/L	7.0536 ppb	15:20:34
1	Fe 238.204 Radial†	14.2	-0.1	-0.8468 µg/L	-0.8468 ppb	15:20:34
1	K 766.490 Radial†	181.9	55.5	39.479 µg/L	39.479 ppb	15:20:14
1	Mg 279.077 IEC†	12.1	1.0	9.1967 µg/L	9.1967 ppb	15:20:34
1	Na 589.592 Radial†	657.2	122.7	40.408 µg/L	40.408 ppb	15:20:14
1	Sr 421.552†	65.1	26.3	0.2722 µg/L	0.2722 ppb	15:20:14
1	Sc 361.383	1911106.6	1911106.6	100.07 %		15:21:36
1	Y 371.029	1309549.6	1309549.6	99.972 %		15:21:36
1	Ag 328.068†	-559.4	5.5	0.0442 µg/L	0.0442 ppb	15:21:42
1	As 188.979†	-3.0	-4.1	-8.0395 µg/L	-8.0395 ppb	15:22:02
1	B 249.677†	346.9	15.2	0.6669 µg/L	0.6669 ppb	15:22:02
1	Ba 233.527†	-26.7	-0.7	-0.0185 µg/L	-0.0185 ppb	15:22:02
1	Be 313.107†	-3454.2	-11.4	-0.0075 µg/L	-0.0075 ppb	15:21:42
1	Cd 226.502†	-139.0	3.2	0.0893 µg/L	0.0893 ppb	15:22:02
1	Co 228.616†	-9.2	-0.3	-0.0170 µg/L	-0.0170 ppb	15:22:02
1	Cr 267.716†	-37.5	14.9	0.3282 µg/L	0.3282 ppb	15:21:42
1	Cu 324.752†	2557.0	69.2	0.4835 µg/L	0.4835 ppb	15:21:42
1	Mn 257.610†	-212.1	32.2	0.1110 µg/L	0.1110 ppb	15:22:02
1	Mo 202.031†	-8.5	-0.9	-0.1000 µg/L	-0.1000 ppb	15:22:02
1	Ni 231.604†	310.7	8.3	0.4558 µg/L	0.4558 ppb	15:22:02
1	P 214.914†	28.4	0.8	1.6386 µg/L	1.6386 ppb	15:22:02
1	Pb 220.353†	104.0	6.7	1.8057 µg/L	1.8057 ppb	15:22:02
1	S 181.975 Axial†	16.5	1.7	7.4394 µg/L	7.4394 ppb	15:22:02
1	Sb 206.836†	29.0	2.0	1.9993 µg/L	1.9993 ppb	15:22:02
1	Se 196.026†	21.9	6.0	9.1749 µg/L	9.1749 ppb	15:22:02
1	SiO2†	1293.6	42.7	9.2028 µg/L	9.2028 ppb	15:21:42
1	Si 251.611†	353.1	40.0	3.2887 µg/L	3.2887 ppb	15:22:02
1	Sn 189.927†	4.9	5.8	2.6719 µg/L	2.6719 ppb	15:22:02
1	Ti 334.940†	159.7	43.4	0.1039 µg/L	0.1039 ppb	15:21:42
1	Tl 190.801†	-23.8	0.5	0.6768 µg/L	0.6768 ppb	15:22:02
1	U 409.014†	-184.4	-130.7	-11.830 µg/L	-11.830 ppb	15:21:42
1	V 292.402†	-35.9	8.3	0.0760 µg/L	0.0760 ppb	15:21:42
1	Zn 213.857†	494.3	18.4	0.4572 µg/L	0.4572 ppb	15:22:02
2	Sc RADIAL	54869.8	54869.8	101 %		15:20:40
2	Al 396.153Radial†	13.7	23.8	17.738 µg/L	17.738 ppb	15:20:40
2	Ca 317.933Radial†	187.7	7.5	7.0950 µg/L	7.0950 ppb	15:21:00
2	Fe 238.204 Radial†	15.7	1.1	9.3064 µg/L	9.3064 ppb	15:21:00
2	K 766.490 Radial†	257.4	127.6	90.719 µg/L	90.719 ppb	15:20:40
2	Mg 279.077 IEC†	16.3	4.9	45.809 µg/L	45.809 ppb	15:21:00
2	Na 589.592 Radial†	606.0	60.8	20.024 µg/L	20.024 ppb	15:20:40
2	Sr 421.552†	22.5	-17.2	-0.1781 µg/L	-0.1781 ppb	15:20:40
2	Sc 361.383	1897412.4	1897412.4	99.349 %		15:22:08
2	Y 371.029	1298760.9	1298760.9	99.148 %		15:22:08
2	Ag 328.068†	-542.2	18.8	0.1523 µg/L	0.1523 ppb	15:22:14
2	As 188.979†	-3.1	-4.3	-8.3435 µg/L	-8.3435 ppb	15:22:34
2	B 249.677†	336.8	7.5	0.3241 µg/L	0.3241 ppb	15:22:34
2	Ba 233.527†	-16.5	9.4	0.2467 µg/L	0.2467 ppb	15:22:34
2	Be 313.107†	-3415.0	3.0	0.0019 µg/L	0.0019 ppb	15:22:14
2	Cd 226.502†	-128.8	12.5	0.3432 µg/L	0.3432 ppb	15:22:34
2	Co 228.616†	-5.7	3.1	0.1511 µg/L	0.1511 ppb	15:22:34
2	Cr 267.716†	-15.6	36.7	0.8074 µg/L	0.8074 ppb	15:22:14
2	Cu 324.752†	2549.9	80.5	0.5637 µg/L	0.5637 ppb	15:22:14
2	Mn 257.610†	-177.5	65.4	0.2260 µg/L	0.2260 ppb	15:22:34
2	Mo 202.031†	-7.3	0.2	0.0178 µg/L	0.0178 ppb	15:22:34
2	Ni 231.604†	306.5	6.3	0.3468 µg/L	0.3468 ppb	15:22:34
2	P 214.914†	31.7	4.3	9.0650 µg/L	9.0650 ppb	15:22:34
2	Pb 220.353†	106.2	9.7	2.5827 µg/L	2.5827 ppb	15:22:34

2	S 181.975 Axial†	17.2	2.5	10.929 µg/L	10.929 ppb	15:22:34
2	Sb 206.836†	25.7	-1.1	-1.0721 µg/L	-1.0721 ppb	15:22:34
2	Se 196.026†	18.6	2.9	4.4089 µg/L	4.4089 ppb	15:22:34
2	SiO2†	1247.0	5.2	1.1103 µg/L	1.1103 ppb	15:22:14
2	Si 251.611†	359.1	48.5	3.9904 µg/L	3.9904 ppb	15:22:34
2	Sn 189.927†	-1.6	-0.8	-0.3440 µg/L	-0.3440 ppb	15:22:34
2	Ti 334.940†	171.3	56.3	0.1319 µg/L	0.1319 ppb	15:22:14
2	Tl 190.801†	-21.8	2.3	3.2311 µg/L	3.2311 ppb	15:22:34
2	U 409.014†	-98.3	-45.3	-4.1055 µg/L	-4.1055 ppb	15:22:14
2	V 292.402†	-5.8	38.4	0.4080 µg/L	0.4080 ppb	15:22:14
2	Zn 213.857†	499.6	27.3	0.6761 µg/L	0.6761 ppb	15:22:34
3	Sc RADIAL	54385.0	54385.0	99.7 %		15:21:06
3	Al 396.153Radial†	-13.7	-3.6	-2.7248 µg/L	-2.7248 ppb	15:21:06
3	Ca 317.933Radial†	185.2	6.7	6.3429 µg/L	6.3429 ppb	15:21:26
3	Fe 238.204 Radial†	16.3	1.8	15.415 µg/L	15.415 ppb	15:21:26
3	K 766.490 Radial†	182.4	54.6	38.797 µg/L	38.797 ppb	15:21:06
3	Mg 279.077 IEC†	9.2	-2.0	-18.753 µg/L	-18.753 ppb	15:21:26
3	Na 589.592 Radial†	592.4	52.6	17.324 µg/L	17.324 ppb	15:21:06
3	Sr 421.552†	-3.5	-43.1	-0.4464 µg/L	-0.4464 ppb	15:21:06
3	Sc 361.383	1884488.6	1884488.6	98.673 %		15:22:40
3	Y 371.029	1291927.9	1291927.9	98.627 %		15:22:40
3	Ag 328.068†	-522.7	34.8	0.2806 µg/L	0.2806 ppb	15:22:46
3	As 188.979†	2.4	1.3	2.4649 µg/L	2.4649 ppb	15:23:06
3	B 249.677†	335.7	8.8	0.3768 µg/L	0.3768 ppb	15:23:06
3	Ba 233.527†	-11.8	14.1	0.3676 µg/L	0.3676 ppb	15:23:06
3	Be 313.107†	-3127.8	270.6	0.1766 µg/L	0.1766 ppb	15:22:46
3	Cd 226.502†	-124.4	16.0	0.4414 µg/L	0.4414 ppb	15:23:06
3	Co 228.616†	7.6	16.5	0.8149 µg/L	0.8149 ppb	15:23:06
3	Cr 267.716†	-23.5	28.6	0.6295 µg/L	0.6295 ppb	15:22:46
3	Cu 324.752†	2622.5	171.7	1.2017 µg/L	1.2017 ppb	15:22:46
3	Mn 257.610†	-142.0	100.2	0.3497 µg/L	0.3497 ppb	15:23:06
3	Mo 202.031†	3.2	10.8	1.1512 µg/L	1.1512 ppb	15:23:06
3	Ni 231.604†	306.2	8.2	0.4462 µg/L	0.4462 ppb	15:23:06
3	P 214.914†	29.6	2.4	5.0144 µg/L	5.0144 ppb	15:23:06
3	Pb 220.353†	103.4	7.6	2.0339 µg/L	2.0339 ppb	15:23:06
3	S 181.975 Axial†	18.5	3.9	17.268 µg/L	17.268 ppb	15:23:06
3	Sb 206.836†	29.4	2.8	2.8126 µg/L	2.8126 ppb	15:23:06
3	Se 196.026†	10.8	-4.9	-7.3717 µg/L	-7.3717 ppb	15:23:06
3	SiO2†	1294.7	62.1	13.372 µg/L	13.372 ppb	15:22:46
3	Si 251.611†	373.7	65.9	5.4177 µg/L	5.4177 ppb	15:23:06
3	Sn 189.927†	0.7	1.6	0.7177 µg/L	0.7177 ppb	15:23:06
3	Ti 334.940†	234.9	122.0	0.2950 µg/L	0.2950 ppb	15:22:46
3	Tl 190.801†	-24.9	-0.9	-1.2684 µg/L	-1.2684 ppb	15:23:06
3	U 409.014†	-88.3	-35.9	-3.2543 µg/L	-3.2543 ppb	15:22:46
3	V 292.402†	2.7	46.9	0.5091 µg/L	0.5091 ppb	15:22:46
3	Zn 213.857†	512.3	43.6	1.0859 µg/L	1.0859 ppb	15:23:06

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Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1897669.2	99.363 %	0.6970			0.70%
Sc RADIAL	54407.1	99.7 %	0.83			0.83%
Y 371.029	1300079.5	99.249 %	0.6782			0.68%
Ag 328.068†	19.7	0.1590 µg/L	0.11838	0.1590 ppb	0.11838	74.44%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	1.4	1.0028 µg/L	15.21758	1.0028 ppb	15.21758	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.4	-4.6394 µg/L	6.15437	-4.6394 ppb	6.15437	132.66%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	10.5	0.4560 µg/L	0.18460	0.4560 ppb	0.18460	40.49%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.6	0.1986 µg/L	0.19747	0.1986 ppb	0.19747	99.44%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	87.4	0.0570 µg/L	0.10368	0.0570 ppb	0.10368	181.85%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	7.3	6.8305 µg/L	0.42277	6.8305 ppb	0.42277	6.19%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	10.6	0.2913 µg/L	0.18170	0.2913 ppb	0.18170	62.37%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	6.4	0.3163 µg/L	0.43987	0.3163 ppb	0.43987	139.05%

Cr	267.716†	QC value within limits for Co 228.616	Recovery = Not calculated				
		26.7	0.5884 µg/L	0.24227	0.5884 ppb	0.24227	41.18%
Cu	324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated				
		107.2	0.7496 µg/L	0.39354	0.7496 ppb	0.39354	52.50%
Fe	238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated				
		0.9	7.9581 µg/L	8.21418	7.9581 ppb	8.21418	103.22%
K	766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated				
		79.3	56.332 µg/L	29.7823	56.332 ppb	29.7823	52.87%
Mg	279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated				
		1.3	12.084 µg/L	32.3776	12.084 ppb	32.3776	267.93%
Mn	257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated				
		65.9	0.2289 µg/L	0.11938	0.2289 ppb	0.11938	52.15%
Mo	202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated				
		3.3	0.3563 µg/L	0.69086	0.3563 ppb	0.69086	193.88%
Na	589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated				
		78.7	25.918 µg/L	12.6205	25.918 ppb	12.6205	48.69%
Ni	231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated				
		7.6	0.4162 µg/L	0.06037	0.4162 ppb	0.06037	14.50%
P	214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated				
		2.5	5.2393 µg/L	3.71831	5.2393 ppb	3.71831	70.97%
Pb	220.353†	QC value within limits for P 214.914	Recovery = Not calculated				
		8.0	2.1408 µg/L	0.39934	2.1408 ppb	0.39934	18.65%
S	181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated				
		2.7	11.879 µg/L	4.9829	11.879 ppb	4.9829	41.95%
Sb	206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated				
		1.3	1.2466 µg/L	2.04884	1.2466 ppb	2.04884	164.36%
Se	196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated				
		1.4	2.0707 µg/L	8.51747	2.0707 ppb	8.51747	411.33%
SiO2†		QC value within limits for Se 196.026	Recovery = Not calculated				
		36.7	7.8950 µg/L	6.23447	7.8950 ppb	6.23447	78.97%
Si	251.611†	QC value within limits for SiO2	Recovery = Not calculated				
		51.5	4.2323 µg/L	1.08494	4.2323 ppb	1.08494	25.63%
Sn	189.927†	QC value within limits for Si 251.611	Recovery = Not calculated				
		2.2	1.0152 µg/L	1.52977	1.0152 ppb	1.52977	150.68%
Sr	421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated				
		-11.3	-0.1174 µg/L	0.36313	-0.1174 ppb	0.36313	309.29%
Ti	334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated				
		73.9	0.1769 µg/L	0.10323	0.1769 ppb	0.10323	58.35%
Tl	190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated				
		0.6	0.8799 µg/L	2.25661	0.8799 ppb	2.25661	256.47%
U	409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated				
		-70.6	-6.3965 µg/L	4.72449	-6.3965 ppb	4.72449	73.86%
V	292.402†	QC value within limits for U 409.014	Recovery = Not calculated				
		31.2	0.3310 µg/L	0.22659	0.3310 ppb	0.22659	68.45%
Zn	213.857†	QC value within limits for V 292.402	Recovery = Not calculated				
		29.8	0.7397 µg/L	0.31916	0.7397 ppb	0.31916	43.15%
All analyte(s) passed QC.							

Sequence No.: 14

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 15:57:26

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	57410.8	57410.8	105 %		15:58:05
1	Al 396.153Radial†	6675.8	6356.1	4727.0 µg/L	4727.0 ppb	15:58:25
1	Ca 317.933Radial†	5505.2	5054.0	4758.7 µg/L	4758.7 ppb	15:58:25
1	Fe 238.204 Radial†	598.7	554.6	4711.3 µg/L	4711.3 ppb	15:58:25
1	K 766.490 Radial†	7251.0	6764.3	4808.0 µg/L	4808.0 ppb	15:58:05
1	Mg 279.077 IEC†	563.5	524.3	4883.2 µg/L	4883.2 ppb	15:58:25
1	Na 589.592 Radial†	31835.2	29720.5	9784.1 µg/L	9784.1 ppb	15:58:05
1	Sr 421.552†	47847.7	45444.2	471.08 µg/L	471.08 ppb	15:58:05
1	Sc 361.383	1983693.6	1983693.6	103.87 %		15:59:29
1	Y 371.029	1353410.2	1353410.2	103.32 %		15:59:29
1	Ag 328.068†	62797.6	61024.1	487.72 µg/L	487.72 ppb	15:59:34
1	As 188.979†	269.1	257.9	503.15 µg/L	503.15 ppb	15:59:55
1	B 249.677†	11717.3	10949.6	476.85 µg/L	476.85 ppb	15:59:34
1	Ba 233.527†	19343.1	18649.0	486.47 µg/L	486.47 ppb	15:59:34
1	Be 313.107†	754921.5	730256.0	476.72 µg/L	476.72 ppb	15:59:29
1	Cd 226.502†	18224.6	17688.2	487.95 µg/L	487.95 ppb	15:59:34
1	Co 228.616†	10367.0	9989.9	491.09 µg/L	491.09 ppb	15:59:34
1	Cr 267.716†	23052.3	22246.4	489.64 µg/L	489.64 ppb	15:59:34
1	Cu 324.752†	74680.1	69413.7	485.52 µg/L	485.52 ppb	15:59:34
1	Mn 257.610†	145483.3	140311.0	486.31 µg/L	486.31 ppb	15:59:29
1	Mo 202.031†	4926.8	4750.9	507.20 µg/L	507.20 ppb	15:59:55
1	Ni 231.604†	9598.3	8938.8	488.20 µg/L	488.20 ppb	15:59:34
1	P 214.914†	1237.2	1163.5	2452.0 µg/L	2452.0 ppb	15:59:55
1	Pb 220.353†	2038.1	1865.0	497.83 µg/L	497.83 ppb	15:59:55
1	S 181.975 Axial†	250.1	226.0	990.17 µg/L	990.17 ppb	15:59:55
1	Sb 206.836†	555.0	507.4	501.78 µg/L	501.78 ppb	15:59:55
1	Se 196.026†	350.7	321.8	497.82 µg/L	497.82 ppb	15:59:55
1	SiO2†	26261.5	24033.7	5175.8 µg/L	5175.8 ppb	15:59:34
1	Si 251.611†	31015.9	29548.3	2429.0 µg/L	2429.0 ppb	15:59:34
1	Sn 189.927†	1145.1	1103.3	507.48 µg/L	507.48 ppb	15:59:55
1	Ti 334.940†	207638.9	199792.4	480.28 µg/L	480.28 ppb	15:59:29
1	Tl 190.801†	339.0	350.7	495.21 µg/L	495.21 ppb	15:59:55
1	U 409.014†	5639.1	5482.7	495.44 µg/L	495.44 ppb	15:59:34
1	V 292.402†	47231.1	45516.9	491.19 µg/L	491.19 ppb	15:59:34
1	Zn 213.857†	20861.0	19608.8	486.21 µg/L	486.21 ppb	15:59:34
2	Sc RADIAL	56826.1	56826.1	104 %		15:58:31
2	Al 396.153Radial†	6645.2	6392.0	4754.0 µg/L	4754.0 ppb	15:58:51
2	Ca 317.933Radial†	5486.3	5089.8	4792.3 µg/L	4792.3 ppb	15:58:51
2	Fe 238.204 Radial†	599.8	561.5	4769.4 µg/L	4769.4 ppb	15:58:51
2	K 766.490 Radial†	7153.6	6741.7	4791.9 µg/L	4791.9 ppb	15:58:31
2	Mg 279.077 IEC†	560.2	526.7	4905.2 µg/L	4905.2 ppb	15:58:51
2	Na 589.592 Radial†	31532.3	29741.0	9790.8 µg/L	9790.8 ppb	15:58:31
2	Sr 421.552†	47455.8	45535.8	472.03 µg/L	472.03 ppb	15:58:31
2	Sc 361.383	1995410.5	1995410.5	104.48 %		16:00:02
2	Y 371.029	1361782.3	1361782.3	103.96 %		16:00:02
2	Ag 328.068†	62246.7	60141.9	480.68 µg/L	480.68 ppb	16:00:08
2	As 188.979†	257.7	245.5	478.82 µg/L	478.82 ppb	16:00:28
2	B 249.677†	11628.5	10798.3	470.20 µg/L	470.20 ppb	16:00:08
2	Ba 233.527†	19125.6	18331.5	478.19 µg/L	478.19 ppb	16:00:08
2	Be 313.107†	755807.0	726835.7	474.48 µg/L	474.48 ppb	16:00:02
2	Cd 226.502†	17996.1	17366.5	479.06 µg/L	479.06 ppb	16:00:08
2	Co 228.616†	10237.6	9807.4	482.11 µg/L	482.11 ppb	16:00:08
2	Cr 267.716†	22930.0	21999.0	484.19 µg/L	484.19 ppb	16:00:08
2	Cu 324.752†	74042.3	68381.0	478.32 µg/L	478.32 ppb	16:00:08
2	Mn 257.610†	145292.8	139306.3	482.84 µg/L	482.84 ppb	16:00:02
2	Mo 202.031†	4851.2	4650.7	496.51 µg/L	496.51 ppb	16:00:28
2	Ni 231.604†	9492.2	8782.9	479.69 µg/L	479.69 ppb	16:00:08
2	P 214.914†	1221.3	1141.3	2405.0 µg/L	2405.0 ppb	16:00:28
2	Pb 220.353†	1997.7	1814.9	484.45 µg/L	484.45 ppb	16:00:28

2	S 181.975 Axial†	253.2	227.5	996.93 µg/L	996.93 ppb	16:00:28
2	Sb 206.836†	551.9	501.3	495.60 µg/L	495.60 ppb	16:00:28
2	Se 196.026†	351.2	320.3	495.61 µg/L	495.61 ppb	16:00:28
2	SiO2†	26072.1	23704.0	5104.8 µg/L	5104.8 ppb	16:00:08
2	Si 251.611†	30669.0	29040.9	2387.3 µg/L	2387.3 ppb	16:00:08
2	Sn 189.927†	1132.5	1084.8	498.96 µg/L	498.96 ppb	16:00:28
2	Ti 334.940†	207816.1	198788.1	477.86 µg/L	477.86 ppb	16:00:02
2	Tl 190.801†	338.3	348.1	491.58 µg/L	491.58 ppb	16:00:28
2	U 409.014†	5511.6	5328.9	481.50 µg/L	481.50 ppb	16:00:08
2	V 292.402†	46887.0	44920.6	484.74 µg/L	484.74 ppb	16:00:08
2	Zn 213.857†	20639.1	19278.4	478.01 µg/L	478.01 ppb	16:00:08
3	Sc RADIAL	56910.2	56910.2	104 %		15:58:57
3	Al 396.153Radial†	6656.6	6393.5	4756.8 µg/L	4756.8 ppb	15:59:17
3	Ca 317.933Radial†	5495.6	5090.9	4793.4 µg/L	4793.4 ppb	15:59:17
3	Fe 238.204 Radial†	602.2	563.0	4781.1 µg/L	4781.1 ppb	15:59:17
3	K 766.490 Radial†	7220.2	6795.5	4830.2 µg/L	4830.2 ppb	15:58:57
3	Mg 279.077 IEC†	560.3	526.1	4897.6 µg/L	4897.6 ppb	15:59:17
3	Na 589.592 Radial†	31637.3	29796.9	9809.2 µg/L	9809.2 ppb	15:58:57
3	Sr 421.552†	47653.8	45658.4	473.30 µg/L	473.30 ppb	15:58:57
3	Sc 361.383	1998435.1	1998435.1	104.64 %		16:00:35
3	Y 371.029	1364968.8	1364968.8	104.20 %		16:00:35
3	Ag 328.068†	58612.3	56578.4	452.09 µg/L	452.09 ppb	16:00:41
3	As 188.979†	224.3	213.2	415.95 µg/L	415.95 ppb	16:01:01
3	B 249.677†	10895.6	10081.1	438.76 µg/L	438.76 ppb	16:00:41
3	Ba 233.527†	17588.9	16835.1	439.14 µg/L	439.14 ppb	16:00:41
3	Be 313.107†	714187.6	685966.5	447.80 µg/L	447.80 ppb	16:00:35
3	Cd 226.502†	16474.5	15886.3	438.17 µg/L	438.17 ppb	16:00:41
3	Co 228.616†	9303.8	8900.2	437.44 µg/L	437.44 ppb	16:00:41
3	Cr 267.716†	20256.0	19410.4	427.22 µg/L	427.22 ppb	16:00:41
3	Cu 324.752†	67621.8	62137.9	434.71 µg/L	434.71 ppb	16:00:41
3	Mn 257.610†	137721.9	131860.5	457.05 µg/L	457.05 ppb	16:00:35
3	Mo 202.031†	4037.0	3865.6	412.72 µg/L	412.72 ppb	16:01:01
3	Ni 231.604†	8629.5	7944.8	433.92 µg/L	433.92 ppb	16:00:41
3	P 214.914†	1036.7	963.1	2025.7 µg/L	2025.7 ppb	16:01:01
3	Pb 220.353†	1739.6	1565.3	417.74 µg/L	417.74 ppb	16:01:01
3	S 181.975 Axial†	221.7	197.0	863.32 µg/L	863.32 ppb	16:01:01
3	Sb 206.836†	474.2	426.2	421.04 µg/L	421.04 ppb	16:01:01
3	Se 196.026†	306.7	277.3	430.08 µg/L	430.08 ppb	16:01:01
3	SiO2†	24196.5	21873.8	4710.6 µg/L	4710.6 ppb	16:00:41
3	Si 251.611†	28513.0	26936.1	2214.3 µg/L	2214.3 ppb	16:00:41
3	Sn 189.927†	924.9	884.8	406.97 µg/L	406.97 ppb	16:01:01
3	Ti 334.940†	195303.4	186529.0	448.37 µg/L	448.37 ppb	16:00:35
3	Tl 190.801†	301.0	311.9	440.85 µg/L	440.85 ppb	16:01:01
3	U 409.014†	4905.4	4741.6	428.33 µg/L	428.33 ppb	16:00:41
3	V 292.402†	42233.7	40405.6	435.79 µg/L	435.79 ppb	16:00:41
3	Zn 213.857†	18819.8	17509.9	434.12 µg/L	434.12 ppb	16:00:41

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1992513.1	104.33 %	0.408			0.39%
Sc RADIAL	57049.0	105 %	0.6			0.55%
Y 371.029	1360053.7	103.83 %	0.456			0.44%
Ag 328.068†	59248.1	473.50 µg/L	18.871	473.50 ppb	18.871	3.99%
QC value within limits for Ag 328.068 Recovery = 94.70%						
Al 396.153Radial†	6380.5	4745.9 µg/L	16.44	4745.9 ppb	16.44	0.35%
QC value within limits for Al 396.153Radial Recovery = 94.92%						
As 188.979†	238.9	465.97 µg/L	44.997	465.97 ppb	44.997	9.66%
QC value within limits for As 188.979 Recovery = 93.19%						
B 249.677†	10609.7	461.94 µg/L	20.345	461.94 ppb	20.345	4.40%
QC value within limits for B 249.677 Recovery = 92.39%						
Ba 233.527†	17938.5	467.93 µg/L	25.276	467.93 ppb	25.276	5.40%
QC value within limits for Ba 233.527 Recovery = 93.59%						
Be 313.107†	714352.7	466.33 µg/L	16.086	466.33 ppb	16.086	3.45%
QC value within limits for Be 313.107 Recovery = 93.27%						
Ca 317.933Radial†	5078.2	4781.5 µg/L	19.75	4781.5 ppb	19.75	0.41%
QC value within limits for Ca 317.933Radial Recovery = 95.63%						
Cd 226.502†	16980.3	468.39 µg/L	26.545	468.39 ppb	26.545	5.67%
QC value within limits for Cd 226.502 Recovery = 93.68%						
Co 228.616†	9565.8	470.21 µg/L	28.733	470.21 ppb	28.733	6.11%

QC value within limits for Co 228.616 Recovery = 94.04%						
Cr 267.716†	21218.6	467.02 µg/L	34.571	467.02 ppb	34.571	7.40%
QC value within limits for Cr 267.716 Recovery = 93.40%						
Cu 324.752†	66644.2	466.19 µg/L	27.494	466.19 ppb	27.494	5.90%
QC value within limits for Cu 324.752 Recovery = 93.24%						
Fe 238.204 Radial†	559.7	4753.9 µg/L	37.39	4753.9 ppb	37.39	0.79%
QC value within limits for Fe 238.204 Radial Recovery = 95.08%						
K 766.490 Radial†	6767.2	4810.1 µg/L	19.19	4810.1 ppb	19.19	0.40%
QC value within limits for K 766.490 Radial Recovery = 96.20%						
Mg 279.077 IEC†	525.7	4895.3 µg/L	11.18	4895.3 ppb	11.18	0.23%
QC value within limits for Mg 279.077 IEC Recovery = 97.91%						
Mn 257.610†	137159.3	475.40 µg/L	15.982	475.40 ppb	15.982	3.36%
QC value within limits for Mn 257.610 Recovery = 95.08%						
Mo 202.031†	4422.4	472.14 µg/L	51.737	472.14 ppb	51.737	10.96%
QC value within limits for Mo 202.031 Recovery = 94.43%						
Na 589.592 Radial†	29752.8	9794.7 µg/L	13.02	9794.7 ppb	13.02	0.13%
QC value within limits for Na 589.592 Radial Recovery = 97.95%						
Ni 231.604†	8555.5	467.27 µg/L	29.194	467.27 ppb	29.194	6.25%
QC value within limits for Ni 231.604 Recovery = 93.45%						
P 214.914†	1089.3	2294.2 µg/L	233.77	2294.2 ppb	233.77	10.19%
QC value within limits for P 214.914 Recovery = 91.77%						
Pb 220.353†	1748.4	466.67 µg/L	42.900	466.67 ppb	42.900	9.19%
QC value within limits for Pb 220.353 Recovery = 93.33%						
S 181.975 Axial†	216.9	950.14 µg/L	75.264	950.14 ppb	75.264	7.92%
QC value within limits for S 181.975 Axial Recovery = 95.01%						
Sb 206.836†	478.3	472.81 µg/L	44.937	472.81 ppb	44.937	9.50%
QC value within limits for Sb 206.836 Recovery = 94.56%						
Se 196.026†	306.5	474.50 µg/L	38.486	474.50 ppb	38.486	8.11%
QC value within limits for Se 196.026 Recovery = 94.90%						
SiO2†	23203.8	4997.1 µg/L	250.58	4997.1 ppb	250.58	5.01%
QC value within limits for SiO2 Recovery = 93.45%						
Si 251.611†	28508.4	2343.5 µg/L	113.86	2343.5 ppb	113.86	4.86%
QC value within limits for Si 251.611 Recovery = 93.74%						
Sn 189.927†	1024.3	471.14 µg/L	55.734	471.14 ppb	55.734	11.83%
QC value within limits for Sn 189.927 Recovery = 94.23%						
Sr 421.552†	45546.1	472.14 µg/L	1.114	472.14 ppb	1.114	0.24%
QC value within limits for Sr 421.552 Recovery = 94.43%						
Ti 334.940†	195036.5	468.84 µg/L	17.764	468.84 ppb	17.764	3.79%
QC value within limits for Ti 334.940 Recovery = 93.77%						
Tl 190.801†	336.9	475.88 µg/L	30.390	475.88 ppb	30.390	6.39%
QC value within limits for Tl 190.801 Recovery = 95.18%						
U 409.014†	5184.4	468.43 µg/L	35.417	468.43 ppb	35.417	7.56%
QC value within limits for U 409.014 Recovery = 93.69%						
V 292.402†	43614.3	470.57 µg/L	30.297	470.57 ppb	30.297	6.44%
QC value within limits for V 292.402 Recovery = 94.11%						
Zn 213.857†	18799.0	466.11 µg/L	28.010	466.11 ppb	28.010	6.01%
QC value within limits for Zn 213.857 Recovery = 93.22%						
All analyte(s) passed QC.						



Sequence No.: 15

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 16:01:11

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	55658.0	55658.0	102 %		16:01:44
1	Al 396.153Radial†	-23.0	-12.4	-9.2620 µg/L	-9.2620 ppb	16:01:44
1	Ca 317.933Radial†	208.0	24.8	23.363 µg/L	23.363 ppb	16:02:05
1	Fe 238.204 Radial†	15.4	0.6	5.4204 µg/L	5.4204 ppb	16:02:05
1	K 766.490 Radial†	204.3	71.9	51.110 µg/L	51.110 ppb	16:01:44
1	Mg 279.077 IEC†	10.5	-1.0	-9.0434 µg/L	-9.0434 ppb	16:02:05
1	Na 589.592 Radial†	1039.6	477.5	157.20 µg/L	157.20 ppb	16:01:44
1	Sr 421.552†	56.9	16.2	0.1684 µg/L	0.1684 ppb	16:01:44
1	Sc 361.383	1982189.6	1982189.6	103.79 %		16:03:07
1	Y 371.029	1359337.0	1359337.0	103.77 %		16:03:07
1	Ag 328.068†	-578.1	7.5	0.0622 µg/L	0.0622 ppb	16:03:12
1	As 188.979†	-1.3	-2.4	-4.6084 µg/L	-4.6084 ppb	16:03:33
1	B 249.677†	325.8	-17.5	-0.7693 µg/L	-0.7693 ppb	16:03:33
1	Ba 233.527†	-23.3	3.6	0.0946 µg/L	0.0946 ppb	16:03:33
1	Be 313.107†	-3422.1	143.2	0.0935 µg/L	0.0935 ppb	16:03:12
1	Cd 226.502†	-146.3	1.2	0.0321 µg/L	0.0321 ppb	16:03:33
1	Co 228.616†	-12.7	-3.4	-0.1679 µg/L	-0.1679 ppb	16:03:33
1	Cr 267.716†	-41.9	12.0	0.2649 µg/L	0.2649 ppb	16:03:33
1	Cu 324.752†	2411.8	-162.3	-1.1332 µg/L	-1.1332 ppb	16:03:12
1	Mn 257.610†	-218.3	33.8	0.1180 µg/L	0.1180 ppb	16:03:33
1	Mo 202.031†	-10.7	-2.7	-0.2926 µg/L	-0.2926 ppb	16:03:33
1	Ni 231.604†	299.4	-13.7	-0.7472 µg/L	-0.7472 ppb	16:03:33
1	P 214.914†	42.9	13.7	29.528 µg/L	29.528 ppb	16:03:33
1	Pb 220.353†	92.5	-8.1	-2.1696 µg/L	-2.1696 ppb	16:03:33
1	S 181.975 Axial†	17.6	2.1	9.2574 µg/L	9.2574 ppb	16:03:33
1	Sb 206.836†	23.2	-4.6	-4.4961 µg/L	-4.4961 ppb	16:03:33
1	Se 196.026†	12.0	-4.3	-6.4748 µg/L	-6.4748 ppb	16:03:33
1	SiO2†	1238.2	-57.1	-12.288 µg/L	-12.288 ppb	16:03:12
1	Si 251.611†	320.8	-3.8	-0.3112 µg/L	-0.3112 ppb	16:03:33
1	Sn 189.927†	0.5	1.4	0.6395 µg/L	0.6395 ppb	16:03:33
1	Ti 334.940†	134.1	13.1	0.0325 µg/L	0.0325 ppb	16:03:12
1	Tl 190.801†	-24.9	0.3	0.4630 µg/L	0.4630 ppb	16:03:33
1	U 409.014†	-12.1	41.9	3.7948 µg/L	3.7948 ppb	16:03:12
1	V 292.402†	-10.2	34.4	0.3695 µg/L	0.3695 ppb	16:03:12
1	Zn 213.857†	479.7	-13.4	-0.3280 µg/L	-0.3280 ppb	16:03:33
2	Sc RADIAL	55313.8	55313.8	101 %		16:02:10
2	Al 396.153Radial†	-3.9	6.3	4.7164 µg/L	4.7164 ppb	16:02:10
2	Ca 317.933Radial†	201.6	19.8	18.599 µg/L	18.599 ppb	16:02:30
2	Fe 238.204 Radial†	15.1	0.4	3.5581 µg/L	3.5581 ppb	16:02:30
2	K 766.490 Radial†	165.7	35.0	24.913 µg/L	24.913 ppb	16:02:10
2	Mg 279.077 IEC†	9.2	-2.2	-20.801 µg/L	-20.801 ppb	16:02:30
2	Na 589.592 Radial†	1009.9	454.5	149.64 µg/L	149.64 ppb	16:02:10
2	Sr 421.552†	43.0	2.9	0.0298 µg/L	0.0298 ppb	16:02:10
2	Sc 361.383	2000056.5	2000056.5	104.72 %		16:03:39
2	Y 371.029	1371413.4	1371413.4	104.69 %		16:03:39
2	Ag 328.068†	-539.4	49.5	0.3929 µg/L	0.3929 ppb	16:03:44
2	As 188.979†	2.0	0.8	1.5259 µg/L	1.5259 ppb	16:04:05
2	B 249.677†	333.1	-13.4	-0.5861 µg/L	-0.5861 ppb	16:04:05
2	Ba 233.527†	-19.7	7.2	0.1863 µg/L	0.1863 ppb	16:04:05
2	Be 313.107†	-3284.4	304.2	0.1986 µg/L	0.1986 ppb	16:03:44
2	Cd 226.502†	-141.7	6.9	0.1883 µg/L	0.1883 ppb	16:04:05
2	Co 228.616†	-14.8	-5.3	-0.2603 µg/L	-0.2603 ppb	16:04:05
2	Cr 267.716†	-34.1	19.8	0.4350 µg/L	0.4350 ppb	16:04:05
2	Cu 324.752†	2452.1	-144.6	-1.0097 µg/L	-1.0097 ppb	16:03:44
2	Mn 257.610†	-201.5	51.7	0.1804 µg/L	0.1804 ppb	16:04:05
2	Mo 202.031†	-5.9	1.9	0.2060 µg/L	0.2060 ppb	16:04:05
2	Ni 231.604†	302.4	-13.4	-0.7317 µg/L	-0.7317 ppb	16:04:05
2	P 214.914†	22.4	-6.2	-13.288 µg/L	-13.288 ppb	16:04:05
2	Pb 220.353†	100.3	-1.4	-0.3652 µg/L	-0.3652 ppb	16:04:05

2	S 181.975 Axial†	18.4	2.7	12.047 µg/L	12.047 ppb	16:04:05
2	Sb 206.836†	25.7	-2.4	-2.3521 µg/L	-2.3521 ppb	16:04:05
2	Se 196.026†	11.2	-5.1	-7.8216 µg/L	-7.8216 ppb	16:04:05
2	SiO2†	1221.5	-83.6	-18.000 µg/L	-18.000 ppb	16:03:44
2	Si 251.611†	319.3	-8.0	-0.6538 µg/L	-0.6538 ppb	16:04:05
2	Sn 189.927†	1.8	2.6	1.1983 µg/L	1.1983 ppb	16:04:05
2	Ti 334.940†	170.3	46.5	0.1138 µg/L	0.1138 ppb	16:03:44
2	Tl 190.801†	-24.1	1.2	1.7367 µg/L	1.7367 ppb	16:04:05
2	U 409.014†	-68.4	-11.7	-1.0610 µg/L	-1.0610 ppb	16:03:44
2	V 292.402†	-47.0	-0.7	-0.0056 µg/L	-0.0056 ppb	16:03:44
2	Zn 213.857†	481.8	-15.5	-0.3808 µg/L	-0.3808 ppb	16:04:05
3	Sc RADIAL	56238.4	56238.4	103 %		16:02:36
3	Al 396.153Radial†	-4.5	5.7	4.2549 µg/L	4.2549 ppb	16:02:36
3	Ca 317.933Radial†	217.1	31.6	29.725 µg/L	29.725 ppb	16:02:56
3	Fe 238.204 Radial†	15.6	0.7	5.5166 µg/L	5.5166 ppb	16:02:56
3	K 766.490 Radial†	152.3	19.4	13.755 µg/L	13.755 ppb	16:02:36
3	Mg 279.077 IEC†	9.8	-1.7	-16.008 µg/L	-16.008 ppb	16:02:56
3	Na 589.592 Radial†	1347.3	765.5	252.01 µg/L	252.01 ppb	16:02:36
3	Sr 421.552†	41.3	0.5	0.0055 µg/L	0.0055 ppb	16:02:36
3	Sc 361.383	1997138.2	1997138.2	104.57 %		16:04:11
3	Y 371.029	1369234.6	1369234.6	104.53 %		16:04:11
3	Ag 328.068†	-498.6	87.7	0.6980 µg/L	0.6980 ppb	16:04:16
3	As 188.979†	2.9	1.6	3.1103 µg/L	3.1103 ppb	16:04:37
3	B 249.677†	327.9	-17.9	-0.7818 µg/L	-0.7818 ppb	16:04:37
3	Ba 233.527†	-15.6	11.1	0.2887 µg/L	0.2887 ppb	16:04:37
3	Be 313.107†	-3097.4	478.5	0.3124 µg/L	0.3124 ppb	16:04:16
3	Cd 226.502†	-131.7	16.2	0.4453 µg/L	0.4453 ppb	16:04:37
3	Co 228.616†	-2.6	6.4	0.3136 µg/L	0.3136 ppb	16:04:37
3	Cr 267.716†	-14.7	38.4	0.8440 µg/L	0.8440 ppb	16:04:37
3	Cu 324.752†	2433.5	-159.0	-1.1099 µg/L	-1.1099 ppb	16:04:16
3	Mn 257.610†	-172.9	78.8	0.2743 µg/L	0.2743 ppb	16:04:37
3	Mo 202.031†	-1.7	5.9	0.6314 µg/L	0.6314 ppb	16:04:37
3	Ni 231.604†	302.9	-12.6	-0.6873 µg/L	-0.6873 ppb	16:04:37
3	P 214.914†	28.9	0.0	0.1351 µg/L	0.1351 ppb	16:04:37
3	Pb 220.353†	98.8	-2.7	-0.7118 µg/L	-0.7118 ppb	16:04:37
3	S 181.975 Axial†	19.3	3.6	15.780 µg/L	15.780 ppb	16:04:37
3	Sb 206.836†	32.5	4.1	4.0170 µg/L	4.0170 ppb	16:04:37
3	Se 196.026†	15.5	-1.0	-1.5777 µg/L	-1.5777 ppb	16:04:37
3	SiO2†	1280.0	-25.9	-5.5874 µg/L	-5.5874 ppb	16:04:16
3	Si 251.611†	323.6	-3.4	-0.2805 µg/L	-0.2805 ppb	16:04:37
3	Sn 189.927†	1.4	2.2	1.0236 µg/L	1.0236 ppb	16:04:37
3	Ti 334.940†	204.8	79.7	0.1935 µg/L	0.1935 ppb	16:04:16
3	Tl 190.801†	-25.7	-0.3	-0.3909 µg/L	-0.3909 ppb	16:04:37
3	U 409.014†	-62.9	-6.5	-0.5917 µg/L	-0.5917 ppb	16:04:16
3	V 292.402†	-21.9	23.3	0.2547 µg/L	0.2547 ppb	16:04:16
3	Zn 213.857†	484.0	-12.7	-0.3127 µg/L	-0.3127 ppb	16:04:37

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1993128.1	104.36 %	0.502			0.48%
Sc RADIAL	55736.7	102 %	0.9			0.84%
Y 371.029	1366661.7	104.33 %	0.491			0.47%
Ag 328.068†	48.2	0.3844 µg/L	0.31802	0.3844 ppb	0.31802	82.74%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-0.1	-0.0969 µg/L	7.94054	-0.0969 ppb	7.94054	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.0	0.0093 µg/L	4.07671	0.0093 ppb	4.07671	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-16.3	-0.7124 µg/L	0.10959	-0.7124 ppb	0.10959	15.38%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.3	0.1899 µg/L	0.09711	0.1899 ppb	0.09711	51.15%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	308.6	0.2015 µg/L	0.10946	0.2015 ppb	0.10946	54.32%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	25.4	23.896 µg/L	5.5823	23.896 ppb	5.5823	23.36%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	8.1	0.2219 µg/L	0.20862	0.2219 ppb	0.20862	94.02%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.8	-0.0382 µg/L	0.30817	-0.0382 ppb	0.30817	806.94%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	23.4	0.5146 µg/L	0.29767	0.5146 ppb	0.29767	57.84%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-155.3	-1.0843 µg/L	0.06563	-1.0843 ppb	0.06563	6.05%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	0.6	4.8317 µg/L	1.10403	4.8317 ppb	1.10403	22.85%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	42.1	29.926 µg/L	19.1758	29.926 ppb	19.1758	64.08%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-1.6	-15.284 µg/L	5.9121	-15.284 ppb	5.9121	38.68%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	54.8	0.1909 µg/L	0.07866	0.1909 ppb	0.07866	41.20%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	1.7	0.1816 µg/L	0.46249	0.1816 ppb	0.46249	254.69%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	565.9	186.28 µg/L	57.047	186.28 ppb	57.047	30.62%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-13.2	-0.7220 µg/L	0.03109	-0.7220 ppb	0.03109	4.31%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	2.5	5.4583 µg/L	21.89861	5.4583 ppb	21.89861	401.20%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-4.1	-1.0822 µg/L	0.95750	-1.0822 ppb	0.95750	88.48%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	2.8	12.362 µg/L	3.2727	12.362 ppb	3.2727	26.48%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-1.0	-0.9437 µg/L	4.42784	-0.9437 ppb	4.42784	469.19%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-3.5	-5.2914 µg/L	3.28586	-5.2914 ppb	3.28586	62.10%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-55.5	-11.958 µg/L	6.2126	-11.958 ppb	6.2126	51.95%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	-5.1	-0.4151 µg/L	0.20723	-0.4151 ppb	0.20723	49.92%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	2.1	0.9538 µg/L	0.28585	0.9538 ppb	0.28585	29.97%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	6.6	0.0679 µg/L	0.08784	0.0679 ppb	0.08784	129.36%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	46.4	0.1133 µg/L	0.08046	0.1133 ppb	0.08046	71.03%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	0.4	0.6030 µg/L	1.07067	0.6030 ppb	1.07067	177.57%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	7.9	0.7140 µg/L	2.67833	0.7140 ppb	2.67833	375.09%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	19.0	0.2062 µg/L	0.19224	0.2062 ppb	0.19224	93.23%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-13.9	-0.3405 µg/L	0.03570	-0.3405 ppb	0.03570	10.49%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 25

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 16:37:49

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	57270.5	57270.5	105 %		16:38:25
1	Al 396.153Radial†	6958.1	6640.6	4939.3 µg/L	4939.3 ppb	16:38:25
1	Ca 317.933Radial†	5712.0	5263.9	4956.3 µg/L	4956.3 ppb	16:38:46
1	Fe 238.204 Radial†	619.2	575.5	4888.0 µg/L	4888.0 ppb	16:38:46
1	K 766.490 Radial†	7274.3	6803.4	4835.8 µg/L	4835.8 ppb	16:38:25
1	Mg 279.077 IEC†	580.4	541.8	5044.9 µg/L	5044.9 ppb	16:38:46
1	Na 589.592 Radial†	31721.9	29686.7	9772.9 µg/L	9772.9 ppb	16:38:25
1	Sr 421.552†	48411.5	46092.9	477.81 µg/L	477.81 ppb	16:38:25
1	Sc 361.383	2050041.7	2050041.7	107.34 %		16:39:49
1	Y 371.029	1400914.7	1400914.7	106.95 %		16:39:49
1	Ag 328.068†	63102.9	59351.9	474.38 µg/L	474.38 ppb	16:39:55
1	As 188.979†	273.7	253.8	495.14 µg/L	495.14 ppb	16:40:15
1	B 249.677†	11802.0	10663.4	464.23 µg/L	464.23 ppb	16:39:55
1	Ba 233.527†	19451.3	18147.1	473.37 µg/L	473.37 ppb	16:39:55
1	Be 313.107†	769937.6	720722.3	470.49 µg/L	470.49 ppb	16:39:49
1	Cd 226.502†	18413.9	17296.7	477.11 µg/L	477.11 ppb	16:39:55
1	Co 228.616†	10377.6	9676.7	475.69 µg/L	475.69 ppb	16:39:55
1	Cr 267.716†	23222.4	21686.6	477.32 µg/L	477.32 ppb	16:39:55
1	Cu 324.752†	74708.1	67112.7	469.48 µg/L	469.48 ppb	16:39:55
1	Mn 257.610†	148224.3	138331.4	479.47 µg/L	479.47 ppb	16:39:49
1	Mo 202.031†	4976.6	4643.8	495.78 µg/L	495.78 ppb	16:40:15
1	Ni 231.604†	9664.7	8701.5	475.25 µg/L	475.25 ppb	16:39:55
1	P 214.914†	1251.0	1137.8	2398.4 µg/L	2398.4 ppb	16:40:15
1	Pb 220.353†	2064.6	1826.2	487.49 µg/L	487.49 ppb	16:40:15
1	S 181.975 Axial†	253.0	220.8	967.55 µg/L	967.55 ppb	16:40:15
1	Sb 206.836†	561.9	496.5	490.97 µg/L	490.97 ppb	16:40:15
1	Se 196.026†	348.6	308.9	478.47 µg/L	478.47 ppb	16:40:15
1	SiO2†	26407.2	23351.2	5028.8 µg/L	5028.8 ppb	16:39:55
1	Si 251.611†	31109.3	28668.8	2356.7 µg/L	2356.7 ppb	16:39:55
1	Sn 189.927†	1168.8	1089.7	501.23 µg/L	501.23 ppb	16:40:15
1	Ti 334.940†	210704.4	196178.3	471.57 µg/L	471.57 ppb	16:39:49
1	Tl 190.801†	345.6	346.3	489.05 µg/L	489.05 ppb	16:40:15
1	U 409.014†	5635.8	5304.0	479.22 µg/L	479.22 ppb	16:39:55
1	V 292.402†	47452.9	44251.8	477.60 µg/L	477.60 ppb	16:39:55
1	Zn 213.857†	20929.0	19022.1	471.63 µg/L	471.63 ppb	16:39:55
2	Sc RADIAL	57824.5	57824.5	106 %		16:38:51
2	Al 396.153Radial†	6951.6	6571.0	4887.5 µg/L	4887.5 ppb	16:38:51
2	Ca 317.933Radial†	5692.9	5193.8	4890.3 µg/L	4890.3 ppb	16:39:12
2	Fe 238.204 Radial†	614.8	565.7	4804.8 µg/L	4804.8 ppb	16:39:12
2	K 766.490 Radial†	7297.3	6758.7	4804.0 µg/L	4804.0 ppb	16:38:51
2	Mg 279.077 IEC†	578.6	534.8	4980.5 µg/L	4980.5 ppb	16:39:12
2	Na 589.592 Radial†	31791.5	29462.7	9699.2 µg/L	9699.2 ppb	16:38:51
2	Sr 421.552†	48548.0	45779.7	474.56 µg/L	474.56 ppb	16:38:51
2	Sc 361.383	2050967.6	2050967.6	107.39 %		16:40:22
2	Y 371.029	1401478.7	1401478.7	106.99 %		16:40:22
2	Ag 328.068†	63066.7	59291.5	473.89 µg/L	473.89 ppb	16:40:28
2	As 188.979†	260.8	241.7	471.43 µg/L	471.43 ppb	16:40:49
2	B 249.677†	11773.8	10632.2	462.91 µg/L	462.91 ppb	16:40:28
2	Ba 233.527†	19468.8	18155.2	473.58 µg/L	473.58 ppb	16:40:28
2	Be 313.107†	769423.9	719920.1	469.97 µg/L	469.97 ppb	16:40:22
2	Cd 226.502†	18369.5	17247.6	475.77 µg/L	475.77 ppb	16:40:28
2	Co 228.616†	10387.8	9681.8	475.93 µg/L	475.93 ppb	16:40:28
2	Cr 267.716†	23230.7	21684.6	477.27 µg/L	477.27 ppb	16:40:28
2	Cu 324.752†	74607.6	66987.7	468.59 µg/L	468.59 ppb	16:40:28
2	Mn 257.610†	147653.6	137737.6	477.41 µg/L	477.41 ppb	16:40:22
2	Mo 202.031†	4936.1	4604.0	491.53 µg/L	491.53 ppb	16:40:49
2	Ni 231.604†	9650.2	8684.0	474.29 µg/L	474.29 ppb	16:40:28
2	P 214.914†	1239.1	1126.2	2373.7 µg/L	2373.7 ppb	16:40:49
2	Pb 220.353†	2036.6	1799.3	480.30 µg/L	480.30 ppb	16:40:49

2	S 181.975 Axial†	251.7	219.6	962.01 µg/L	962.01 ppb	16:40:49
2	Sb 206.836†	560.6	495.1	489.53 µg/L	489.53 ppb	16:40:49
2	Se 196.026†	352.8	312.7	484.04 µg/L	484.04 ppb	16:40:49
2	SiO2†	26423.9	23355.6	5029.8 µg/L	5029.8 ppb	16:40:28
2	Si 251.611†	31116.7	28662.7	2356.2 µg/L	2356.2 ppb	16:40:28
2	Sn 189.927†	1158.0	1079.2	496.40 µg/L	496.40 ppb	16:40:49
2	Ti 334.940†	210552.3	195948.0	471.02 µg/L	471.02 ppb	16:40:22
2	Tl 190.801†	346.0	346.5	489.25 µg/L	489.25 ppb	16:40:49
2	U 409.014†	5584.5	5253.8	474.70 µg/L	474.70 ppb	16:40:28
2	V 292.402†	47503.1	44278.6	477.84 µg/L	477.84 ppb	16:40:28
2	Zn 213.857†	20951.2	19034.0	471.94 µg/L	471.94 ppb	16:40:28
3	Sc RADIAL	57919.3	57919.3	106 %		16:39:17
3	Al 396.153Radial†	6873.3	6486.5	4826.1 µg/L	4826.1 ppb	16:39:17
3	Ca 317.933Radial†	5675.3	5168.4	4866.3 µg/L	4866.3 ppb	16:39:38
3	Fe 238.204 Radial†	612.6	562.7	4778.5 µg/L	4778.5 ppb	16:39:38
3	K 766.490 Radial†	7223.5	6677.9	4746.6 µg/L	4746.6 ppb	16:39:17
3	Mg 279.077 IEC†	577.0	532.4	4956.6 µg/L	4956.6 ppb	16:39:38
3	Na 589.592 Radial†	31537.3	29174.1	9604.2 µg/L	9604.2 ppb	16:39:17
3	Sr 421.552†	47945.0	45136.6	467.89 µg/L	467.89 ppb	16:39:17
3	Sc 361.383	2047169.0	2047169.0	107.19 %		16:40:56
3	Y 371.029	1398213.9	1398213.9	106.74 %		16:40:56
3	Ag 328.068†	59282.1	55869.9	446.44 µg/L	446.44 ppb	16:41:01
3	As 188.979†	231.4	214.7	418.91 µg/L	418.91 ppb	16:41:22
3	B 249.677†	11101.6	10025.4	436.32 µg/L	436.32 ppb	16:41:01
3	Ba 233.527†	17825.1	16655.3	434.45 µg/L	434.45 ppb	16:41:01
3	Be 313.107†	720453.0	675563.8	441.01 µg/L	441.01 ppb	16:40:56
3	Cd 226.502†	16836.0	15848.7	437.13 µg/L	437.13 ppb	16:41:01
3	Co 228.616†	9439.7	8815.3	433.29 µg/L	433.29 ppb	16:41:01
3	Cr 267.716†	20551.5	19225.2	423.15 µg/L	423.15 ppb	16:41:01
3	Cu 324.752†	68186.1	61125.9	427.64 µg/L	427.64 ppb	16:41:01
3	Mn 257.610†	138984.9	129905.6	450.28 µg/L	450.28 ppb	16:40:56
3	Mo 202.031†	4143.4	3873.0	413.51 µg/L	413.51 ppb	16:41:22
3	Ni 231.604†	8808.1	7915.1	432.30 µg/L	432.30 ppb	16:41:01
3	P 214.914†	1067.2	968.0	2036.9 µg/L	2036.9 ppb	16:41:22
3	Pb 220.353†	1797.4	1579.7	421.60 µg/L	421.60 ppb	16:41:22
3	S 181.975 Axial†	226.2	196.2	859.46 µg/L	859.46 ppb	16:41:22
3	Sb 206.836†	485.7	426.1	420.98 µg/L	420.98 ppb	16:41:22
3	Se 196.026†	307.9	271.4	421.09 µg/L	421.09 ppb	16:41:22
3	SiO2†	24533.6	21637.8	4659.8 µg/L	4659.8 ppb	16:41:01
3	Si 251.611†	28891.7	26640.7	2190.0 µg/L	2190.0 ppb	16:41:01
3	Sn 189.927†	954.7	891.5	410.08 µg/L	410.08 ppb	16:41:22
3	Ti 334.940†	196335.7	183048.9	440.00 µg/L	440.00 ppb	16:40:56
3	Tl 190.801†	308.7	312.2	441.18 µg/L	441.18 ppb	16:41:22
3	U 409.014†	5011.7	4729.1	427.20 µg/L	427.20 ppb	16:41:01
3	V 292.402†	42781.7	39956.1	430.99 µg/L	430.99 ppb	16:41:01
3	Zn 213.857†	19123.4	17365.0	430.51 µg/L	430.51 ppb	16:41:01

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2049392.8	107.31 %	0.104			0.10%
Sc RADIAL	57671.4	106 %	0.6			0.61%
Y 371.029	1400202.5	106.89 %	0.133			0.12%
Ag 328.068†	58171.1	464.90 µg/L	15.993	464.90 ppb	15.993	3.44%
QC value within limits for Ag 328.068 Recovery = 92.98%						
Al 396.153Radial†	6566.1	4884.3 µg/L	56.67	4884.3 ppb	56.67	1.16%
QC value within limits for Al 396.153Radial Recovery = 97.69%						
As 188.979†	236.7	461.83 µg/L	39.012	461.83 ppb	39.012	8.45%
QC value within limits for As 188.979 Recovery = 92.37%						
B 249.677†	10440.3	454.49 µg/L	15.747	454.49 ppb	15.747	3.46%
QC value within limits for B 249.677 Recovery = 90.90%						
Ba 233.527†	17652.5	460.47 µg/L	22.535	460.47 ppb	22.535	4.89%
QC value within limits for Ba 233.527 Recovery = 92.09%						
Be 313.107†	705402.1	460.49 µg/L	16.871	460.49 ppb	16.871	3.66%
QC value within limits for Be 313.107 Recovery = 92.10%						
Ca 317.933Radial†	5208.7	4904.3 µg/L	46.59	4904.3 ppb	46.59	0.95%
QC value within limits for Ca 317.933Radial Recovery = 98.09%						
Cd 226.502†	16797.7	463.34 µg/L	22.703	463.34 ppb	22.703	4.90%
QC value within limits for Cd 226.502 Recovery = 92.67%						
Co 228.616†	9391.3	461.63 µg/L	24.552	461.63 ppb	24.552	5.32%

QC value within limits for Co 228.616 Recovery = 92.33%							
Cr 267.716†	20865.4	459.24 µg/L	31.262	459.24 ppb	31.262	6.81%	
QC value within limits for Cr 267.716 Recovery = 91.85%							
Cu 324.752†	65075.5	455.24 µg/L	23.902	455.24 ppb	23.902	5.25%	
QC value within limits for Cu 324.752 Recovery = 91.05%							
Fe 238.204 Radial†	568.0	4823.8 µg/L	57.17	4823.8 ppb	57.17	1.19%	
QC value within limits for Fe 238.204 Radial Recovery = 96.48%							
K 766.490 Radial†	6746.7	4795.5 µg/L	45.22	4795.5 ppb	45.22	0.94%	
QC value within limits for K 766.490 Radial Recovery = 95.91%							
Mg 279.077 IEC†	536.3	4994.0 µg/L	45.66	4994.0 ppb	45.66	0.91%	
QC value within limits for Mg 279.077 IEC Recovery = 99.88%							
Mn 257.610†	135324.9	469.05 µg/L	16.289	469.05 ppb	16.289	3.47%	
QC value within limits for Mn 257.610 Recovery = 93.81%							
Mo 202.031†	4373.6	466.94 µg/L	46.322	466.94 ppb	46.322	9.92%	
QC value within limits for Mo 202.031 Recovery = 93.39%							
Na 589.592 Radial†	29441.2	9692.1 µg/L	84.60	9692.1 ppb	84.60	0.87%	
QC value within limits for Na 589.592 Radial Recovery = 96.92%							
Ni 231.604†	8433.5	460.62 µg/L	24.525	460.62 ppb	24.525	5.32%	
QC value within limits for Ni 231.604 Recovery = 92.12%							
P 214.914†	1077.3	2269.6 µg/L	201.96	2269.6 ppb	201.96	8.90%	
QC value within limits for P 214.914 Recovery = 90.79%							
Pb 220.353†	1735.0	463.13 µg/L	36.146	463.13 ppb	36.146	7.80%	
QC value within limits for Pb 220.353 Recovery = 92.63%							
S 181.975 Axial†	212.2	929.67 µg/L	60.871	929.67 ppb	60.871	6.55%	
QC value within limits for S 181.975 Axial Recovery = 92.97%							
Sb 206.836†	472.6	467.16 µg/L	39.999	467.16 ppb	39.999	8.56%	
QC value within limits for Sb 206.836 Recovery = 93.43%							
Se 196.026†	297.7	461.20 µg/L	34.847	461.20 ppb	34.847	7.56%	
QC value within limits for Se 196.026 Recovery = 92.24%							
SiO2†	22781.6	4906.1 µg/L	213.31	4906.1 ppb	213.31	4.35%	
QC value within limits for SiO2 Recovery = 91.75%							
Si 251.611†	27990.8	2301.0 µg/L	96.11	2301.0 ppb	96.11	4.18%	
QC value within limits for Si 251.611 Recovery = 92.04%							
Sn 189.927†	1020.1	469.24 µg/L	51.288	469.24 ppb	51.288	10.93%	
QC value within limits for Sn 189.927 Recovery = 93.85%							
Sr 421.552†	45669.7	473.42 µg/L	5.054	473.42 ppb	5.054	1.07%	
QC value within limits for Sr 421.552 Recovery = 94.68%							
Ti 334.940†	191725.1	460.86 µg/L	18.074	460.86 ppb	18.074	3.92%	
QC value within limits for Ti 334.940 Recovery = 92.17%							
Tl 190.801†	335.0	473.16 µg/L	27.695	473.16 ppb	27.695	5.85%	
QC value within limits for Tl 190.801 Recovery = 94.63%							
U 409.014†	5095.6	460.37 µg/L	28.818	460.37 ppb	28.818	6.26%	
QC value within limits for U 409.014 Recovery = 92.07%							
V 292.402†	42828.8	462.14 µg/L	26.978	462.14 ppb	26.978	5.84%	
QC value within limits for V 292.402 Recovery = 92.43%							
Zn 213.857†	18473.7	458.03 µg/L	23.826	458.03 ppb	23.826	5.20%	
QC value within limits for Zn 213.857 Recovery = 91.61%							
All analyte(s) passed QC.							

Sequence No.: 26

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 16:41:31

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	58584.5	58584.5	107 %		16:42:04
1	Al 396.153Radial†	51.2	57.8	43.068 µg/L	43.068 ppb	16:42:04
1	Ca 317.933Radial†	241.7	46.0	43.344 µg/L	43.344 ppb	16:42:24
1	Fe 238.204 Radial†	14.5	-1.0	-8.1938 µg/L	-8.1938 ppb	16:42:24
1	K 766.490 Radial†	158.2	19.0	13.495 µg/L	13.495 ppb	16:42:04
1	Mg 279.077 IEC†	19.4	6.8	63.641 µg/L	63.641 ppb	16:42:24
1	Na 589.592 Radial†	1003.5	392.9	129.35 µg/L	129.35 ppb	16:42:04
1	Sr 421.552†	45.5	2.9	0.0298 µg/L	0.0298 ppb	16:42:04
1	Sc 361.383	2059865.1	2059865.1	107.86 %		16:43:26
1	Y 371.029	1412010.5	1412010.5	107.79 %		16:43:26
1	Ag 328.068†	-580.2	26.6	0.2127 µg/L	0.2127 ppb	16:43:32
1	As 188.979†	-2.2	-3.1	-6.1457 µg/L	-6.1457 ppb	16:43:52
1	B 249.677†	314.7	-39.7	-1.7298 µg/L	-1.7298 ppb	16:43:52
1	Ba 233.527†	-34.6	-6.1	-0.1574 µg/L	-0.1574 ppb	16:43:52
1	Be 313.107†	-3476.5	217.1	0.1418 µg/L	0.1418 ppb	16:43:32
1	Cd 226.502†	-142.5	10.0	0.2771 µg/L	0.2771 ppb	16:43:52
1	Co 228.616†	-11.6	-1.9	-0.0950 µg/L	-0.0950 ppb	16:43:52
1	Cr 267.716†	-40.1	15.2	0.3343 µg/L	0.3343 ppb	16:43:32
1	Cu 324.752†	2513.6	-155.6	-1.0878 µg/L	-1.0878 ppb	16:43:32
1	Mn 257.610†	-238.3	23.1	0.0765 µg/L	0.0765 ppb	16:43:52
1	Mo 202.031†	-4.7	3.2	0.3434 µg/L	0.3434 ppb	16:43:52
1	Ni 231.604†	310.9	-14.0	-0.7640 µg/L	-0.7640 ppb	16:43:52
1	P 214.914†	32.2	2.3	4.9663 µg/L	4.9663 ppb	16:43:52
1	Pb 220.353†	102.0	-2.6	-0.7002 µg/L	-0.7002 ppb	16:43:52
1	S 181.975 Axial†	19.3	3.1	13.368 µg/L	13.368 ppb	16:43:52
1	Sb 206.836†	23.2	-5.4	-5.3618 µg/L	-5.3618 ppb	16:43:52
1	Se 196.026†	20.8	3.4	5.1089 µg/L	5.1089 ppb	16:43:52
1	SiO2†	1256.8	-84.7	-18.250 µg/L	-18.250 ppb	16:43:32
1	Si 251.611†	299.6	-35.1	-2.8840 µg/L	-2.8840 ppb	16:43:52
1	Sn 189.927†	-1.9	-0.9	-0.4213 µg/L	-0.4213 ppb	16:43:52
1	Ti 334.940†	103.7	-20.0	-0.0524 µg/L	-0.0524 ppb	16:43:32
1	Tl 190.801†	-18.7	7.0	9.7650 µg/L	9.7650 ppb	16:43:52
1	U 409.014†	8.9	61.9	5.6031 µg/L	5.6031 ppb	16:43:32
1	V 292.402†	-13.8	31.5	0.3435 µg/L	0.3435 ppb	16:43:32
1	Zn 213.857†	488.8	-22.3	-0.5552 µg/L	-0.5552 ppb	16:43:52
2	Sc RADIAL	57826.0	57826.0	106 %		16:42:30
2	Al 396.153Radial†	36.0	44.1	32.860 µg/L	32.860 ppb	16:42:30
2	Ca 317.933Radial†	243.6	50.8	47.787 µg/L	47.787 ppb	16:42:50
2	Fe 238.204 Radial†	18.8	3.3	27.831 µg/L	27.831 ppb	16:42:50
2	K 766.490 Radial†	189.0	49.9	35.479 µg/L	35.479 ppb	16:42:30
2	Mg 279.077 IEC†	19.0	6.7	61.954 µg/L	61.954 ppb	16:42:50
2	Na 589.592 Radial†	991.6	394.0	129.71 µg/L	129.71 ppb	16:42:30
2	Sr 421.552†	62.3	19.3	0.1997 µg/L	0.1997 ppb	16:42:30
2	Sc 361.383	2019733.9	2019733.9	105.75 %		16:43:58
2	Y 371.029	1384706.2	1384706.2	105.71 %		16:43:58
2	Ag 328.068†	-558.4	36.5	0.2916 µg/L	0.2916 ppb	16:44:04
2	As 188.979†	-1.6	-2.7	-5.2610 µg/L	-5.2610 ppb	16:44:24
2	B 249.677†	316.8	-31.9	-1.4069 µg/L	-1.4069 ppb	16:44:24
2	Ba 233.527†	-28.3	-0.8	-0.0199 µg/L	-0.0199 ppb	16:44:24
2	Be 313.107†	-3437.1	190.3	0.1243 µg/L	0.1243 ppb	16:44:04
2	Cd 226.502†	-144.6	5.4	0.1447 µg/L	0.1447 ppb	16:44:24
2	Co 228.616†	-10.6	-1.2	-0.0595 µg/L	-0.0595 ppb	16:44:24
2	Cr 267.716†	-44.1	10.7	0.2350 µg/L	0.2350 ppb	16:44:04
2	Cu 324.752†	2441.7	-177.3	-1.2343 µg/L	-1.2343 ppb	16:44:04
2	Mn 257.610†	-221.2	34.9	0.1222 µg/L	0.1222 ppb	16:44:24
2	Mo 202.031†	-2.8	4.9	0.5203 µg/L	0.5203 ppb	16:44:24
2	Ni 231.604†	305.8	-13.1	-0.7134 µg/L	-0.7134 ppb	16:44:24
2	P 214.914†	32.5	3.1	6.8494 µg/L	6.8494 ppb	16:44:24
2	Pb 220.353†	110.5	7.3	1.9444 µg/L	1.9444 ppb	16:44:24

2	S 181.975 Axial†	18.0	2.2	9.5789 µg/L	9.5789 ppb	16:44:24
2	Sb 206.836†	26.9	-1.5	-1.5033 µg/L	-1.5033 ppb	16:44:24
2	Se 196.026†	9.1	-7.3	-11.082 µg/L	-11.082 ppb	16:44:24
2	SiO2†	1234.9	-82.3	-17.728 µg/L	-17.728 ppb	16:44:04
2	Si 251.611†	315.8	-14.3	-1.1723 µg/L	-1.1723 ppb	16:44:24
2	Sn 189.927†	-0.9	0.0	0.0122 µg/L	0.0122 ppb	16:44:24
2	Ti 334.940†	107.0	-14.9	-0.0400 µg/L	-0.0400 ppb	16:44:04
2	Tl 190.801†	-22.2	3.3	4.6398 µg/L	4.6398 ppb	16:44:24
2	U 409.014†	11.6	64.6	5.8396 µg/L	5.8396 ppb	16:44:04
2	V 292.402†	-47.1	-0.3	0.0106 µg/L	0.0106 ppb	16:44:04
2	Zn 213.857†	485.9	-16.1	-0.4022 µg/L	-0.4022 ppb	16:44:24
3	Sc RADIAL	58203.8	58203.8	107 %		16:42:56
3	Al 396.153Radial†	16.5	25.6	19.057 µg/L	19.057 ppb	16:42:56
3	Ca 317.933Radial†	234.3	40.6	38.198 µg/L	38.198 ppb	16:43:16
3	Fe 238.204 Radial†	16.0	0.5	4.0830 µg/L	4.0830 ppb	16:43:16
3	K 766.490 Radial†	180.9	41.2	29.300 µg/L	29.300 ppb	16:42:56
3	Mg 279.077 IEC†	18.0	5.6	52.283 µg/L	52.283 ppb	16:43:16
3	Na 589.592 Radial†	920.7	321.4	105.80 µg/L	105.80 ppb	16:42:56
3	Sr 421.552†	52.3	9.5	0.0985 µg/L	0.0985 ppb	16:42:56
3	Sc 361.383	1997484.6	1997484.6	104.59 %		16:44:31
3	Y 371.029	1369124.4	1369124.4	104.52 %		16:44:31
3	Ag 328.068†	-544.9	43.6	0.3481 µg/L	0.3481 ppb	16:44:36
3	As 188.979†	3.1	1.8	3.4746 µg/L	3.4746 ppb	16:44:57
3	B 249.677†	317.2	-28.2	-1.2336 µg/L	-1.2336 ppb	16:44:57
3	Ba 233.527†	-26.0	1.1	0.0301 µg/L	0.0301 ppb	16:44:57
3	Be 313.107†	-3380.0	208.8	0.1363 µg/L	0.1363 ppb	16:44:36
3	Cd 226.502†	-138.7	9.5	0.2617 µg/L	0.2617 ppb	16:44:57
3	Co 228.616†	-17.3	-7.7	-0.3772 µg/L	-0.3772 ppb	16:44:57
3	Cr 267.716†	-57.1	-2.2	-0.0487 µg/L	-0.0487 ppb	16:44:36
3	Cu 324.752†	2481.2	-113.8	-0.7943 µg/L	-0.7943 ppb	16:44:36
3	Mn 257.610†	-222.0	31.9	0.1088 µg/L	0.1088 ppb	16:44:57
3	Mo 202.031†	-5.2	2.6	0.2766 µg/L	0.2766 ppb	16:44:57
3	Ni 231.604†	300.3	-15.1	-0.8254 µg/L	-0.8254 ppb	16:44:57
3	P 214.914†	30.5	1.5	3.4004 µg/L	3.4004 ppb	16:44:57
3	Pb 220.353†	108.4	6.5	1.7342 µg/L	1.7342 ppb	16:44:57
3	S 181.975 Axial†	15.4	-0.1	-0.3301 µg/L	-0.3301 ppb	16:44:57
3	Sb 206.836†	27.4	-0.8	-0.7588 µg/L	-0.7588 ppb	16:44:57
3	Se 196.026†	19.0	2.4	3.5402 µg/L	3.5402 ppb	16:44:57
3	SiO2†	1246.0	-58.7	-12.639 µg/L	-12.639 ppb	16:44:36
3	Si 251.611†	309.0	-17.4	-1.4306 µg/L	-1.4306 ppb	16:44:57
3	Sn 189.927†	-0.1	0.8	0.3816 µg/L	0.3816 ppb	16:44:57
3	Ti 334.940†	122.3	0.8	-0.0015 µg/L	-0.0015 ppb	16:44:36
3	Tl 190.801†	-19.4	5.7	7.9510 µg/L	7.9510 ppb	16:44:57
3	U 409.014†	-119.0	-60.2	-5.4508 µg/L	-5.4508 ppb	16:44:36
3	V 292.402†	-13.3	31.5	0.3324 µg/L	0.3324 ppb	16:44:36
3	Zn 213.857†	491.8	-5.3	-0.1315 µg/L	-0.1315 ppb	16:44:57

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2025694.5	106.07 %	1.655			1.56%
Sc RADIAL	58204.8	107 %	0.7			0.65%
Y 371.029	1388613.7	106.01 %	1.657			1.56%
Ag 328.068†	35.6	0.2841 µg/L	0.06799	0.2841 ppb	0.06799	23.93%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	42.5	31.661 µg/L	12.0501	31.661 ppb	12.0501	38.06%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.4	-2.6440 µg/L	5.31733	-2.6440 ppb	5.31733	201.11%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-33.2	-1.4568 µg/L	0.25185	-1.4568 ppb	0.25185	17.29%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-1.9	-0.0491 µg/L	0.09709	-0.0491 ppb	0.09709	197.73%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	205.4	0.1341 µg/L	0.00896	0.1341 ppb	0.00896	6.68%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	45.8	43.110 µg/L	4.7990	43.110 ppb	4.7990	11.13%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	8.3	0.2278 µg/L	0.07242	0.2278 ppb	0.07242	31.78%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-3.6	-0.1772 µg/L	0.17409	-0.1772 ppb	0.17409	98.23%



Cr	267.716†	7.9	0.1735 µg/L	0.19876	0.1735 ppb	0.19876	114.54%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-148.9	-1.0388 µg/L	0.22407	-1.0388 ppb	0.22407	21.57%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	0.9	7.9067 µg/L	18.31420	7.9067 ppb	18.31420	231.63%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	36.7	26.091 µg/L	11.3376	26.091 ppb	11.3376	43.45%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	6.4	59.293 µg/L	6.1293	59.293 ppb	6.1293	10.34%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	30.0	0.1025 µg/L	0.02350	0.1025 ppb	0.02350	22.92%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	3.6	0.3801 µg/L	0.12595	0.3801 ppb	0.12595	33.13%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	369.4	121.62 µg/L	13.704	121.62 ppb	13.704	11.27%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-14.0	-0.7676 µg/L	0.05609	-0.7676 ppb	0.05609	7.31%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	2.3	5.0720 µg/L	1.72695	5.0720 ppb	1.72695	34.05%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	3.7	0.9928 µg/L	1.46997	0.9928 ppb	1.46997	148.06%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	1.7	7.5391 µg/L	7.07334	7.5391 ppb	7.07334	93.82%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	-2.6	-2.5413 µg/L	2.47086	-2.5413 ppb	2.47086	97.23%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-0.5	-0.8111 µg/L	8.92964	-0.8111 ppb	8.92964	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-75.3	-16.206 µg/L	3.0998	-16.206 ppb	3.0998	19.13%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	-22.2	-1.8290 µg/L	0.92279	-1.8290 ppb	0.92279	50.45%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	-0.0	-0.0092 µg/L	0.40185	-0.0092 ppb	0.40185	>999.9%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	10.5	0.1093 µg/L	0.08548	0.1093 ppb	0.08548	78.18%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-11.4	-0.0313 µg/L	0.02652	-0.0313 ppb	0.02652	84.74%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	5.3	7.4520 µg/L	2.59879	7.4520 ppb	2.59879	34.87%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	22.1	1.9973 µg/L	6.45136	1.9973 ppb	6.45136	323.00%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	20.9	0.2288 µg/L	0.18906	0.2288 ppb	0.18906	82.63%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-14.6	-0.3630 µg/L	0.21454	-0.3630 ppb	0.21454	59.11%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

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Analysis Begun

Start Time: 2/11/2010 16:58:42

Plasma On Time: 2/8/2010 03:37:33

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\021110.sif

Batch ID:

Results Data Set: 021110B

Results Library: c:\pe\optimal\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 1

Sample ID: CCV

Date Collected: 2/11/2010 16:58:44

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	58304.7	58304.7	107 %		16:59:20
1	Al 396.153Radial†	6786.5	6362.5	4732.0 µg/L	4732.0 ppb	16:59:20
1	Ca 317.933Radial†	5536.9	5003.5	4711.1 µg/L	4711.1 ppb	16:59:40
1	Fe 238.204 Radial†	610.2	556.6	4728.2 µg/L	4728.2 ppb	16:59:40
1	K 766.490 Radial†	7283.7	6689.2	4754.7 µg/L	4754.7 ppb	16:59:20
1	Mg 279.077 IEC†	569.3	521.6	4857.3 µg/L	4857.3 ppb	16:59:40
1	Na 589.592 Radial†	31197.2	28659.4	9434.8 µg/L	9434.8 ppb	16:59:20
1	Sr 421.552†	48428.4	45290.4	469.49 µg/L	469.49 ppb	16:59:20
1	Sc 361.383	2048192.0	2048192.0	107.24 %		17:00:43
1	Y 371.029	1396873.4	1396873.4	106.64 %		17:00:43
1	Ag 328.068†	62792.0	59115.0	472.54 µg/L	472.54 ppb	17:00:49
1	As 188.979†	276.2	256.4	500.17 µg/L	500.17 ppb	17:01:09
1	B 249.677†	11976.6	10836.1	471.87 µg/L	471.87 ppb	17:00:49
1	Ba 233.527†	19779.6	18469.6	481.79 µg/L	481.79 ppb	17:00:49
1	Be 313.107†	782023.1	732639.2	478.28 µg/L	478.28 ppb	17:00:43
1	Cd 226.502†	18757.9	17632.9	486.42 µg/L	486.42 ppb	17:00:49
1	Co 228.616†	10618.7	9910.3	487.18 µg/L	487.18 ppb	17:00:49
1	Cr 267.716†	23605.9	22063.7	485.62 µg/L	485.62 ppb	17:00:49
1	Cu 324.752†	75656.1	68059.5	476.07 µg/L	476.07 ppb	17:00:49
1	Mn 257.610†	150274.2	140367.5	486.51 µg/L	486.51 ppb	17:00:43
1	Mo 202.031†	4970.8	4642.6	495.64 µg/L	495.64 ppb	17:01:09
1	Ni 231.604†	9869.6	8900.8	486.13 µg/L	486.13 ppb	17:00:49
1	P 214.914†	1275.8	1162.0	2449.8 µg/L	2449.8 ppb	17:01:09
1	Pb 220.353†	2092.9	1854.3	494.97 µg/L	494.97 ppb	17:01:09
1	S 181.975 Axial†	258.0	225.7	989.09 µg/L	989.09 ppb	17:01:09
1	Sb 206.836†	558.6	493.9	488.34 µg/L	488.34 ppb	17:01:09
1	Se 196.026†	360.2	320.1	495.20 µg/L	495.20 ppb	17:01:09
1	SiO2†	26598.5	23551.8	5072.0 µg/L	5072.0 ppb	17:00:49
1	Si 251.611†	31394.2	28960.7	2380.7 µg/L	2380.7 ppb	17:00:49
1	Sn 189.927†	1171.7	1093.4	502.93 µg/L	502.93 ppb	17:01:09
1	Ti 334.940†	209687.5	195407.3	469.73 µg/L	469.73 ppb	17:00:43
1	Tl 190.801†	351.0	351.5	496.34 µg/L	496.34 ppb	17:01:09
1	U 409.014†	5705.8	5374.0	485.60 µg/L	485.60 ppb	17:00:49
1	V 292.402†	48262.6	45046.7	486.08 µg/L	486.08 ppb	17:00:49
1	Zn 213.857†	21405.2	19483.8	483.11 µg/L	483.11 ppb	17:00:49
2	Sc RADIAL	57809.4	57809.4	106 %		16:59:45
2	Al 396.153Radial†	6713.1	6347.6	4720.4 µg/L	4720.4 ppb	16:59:45
2	Ca 317.933Radial†	5573.2	5082.2	4785.2 µg/L	4785.2 ppb	17:00:06
2	Fe 238.204 Radial†	613.9	565.0	4800.0 µg/L	4800.0 ppb	17:00:06
2	K 766.490 Radial†	7246.0	6712.1	4770.9 µg/L	4770.9 ppb	16:59:45
2	Mg 279.077 IEC†	566.2	523.3	4873.4 µg/L	4873.4 ppb	17:00:06
2	Na 589.592 Radial†	31072.8	28792.1	9478.5 µg/L	9478.5 ppb	16:59:45
2	Sr 421.552†	48008.7	45282.6	469.41 µg/L	469.41 ppb	16:59:45
2	Sc 361.383	1951160.7	1951160.7	102.16 %		17:01:16
2	Y 371.029	1331856.8	1331856.8	101.67 %		17:01:16
2	Ag 328.068†	64120.5	63327.2	506.22 µg/L	506.22 ppb	17:01:22
2	As 188.979†	277.7	270.7	528.08 µg/L	528.08 ppb	17:01:43

2	B 249.677†	12297.9	11706.0	509.91 µg/L	509.91 ppb	17:01:22
2	Ba 233.527†	20306.8	19902.8	519.17 µg/L	519.17 ppb	17:01:22
2	Be 313.107†	802212.2	788663.9	514.85 µg/L	514.85 ppb	17:01:16
2	Cd 226.502†	19256.8	18991.1	523.92 µg/L	523.92 ppb	17:01:22
2	Co 228.616†	10882.2	10660.6	524.05 µg/L	524.05 ppb	17:01:22
2	Cr 267.716†	24198.0	23738.0	522.47 µg/L	522.47 ppb	17:01:22
2	Cu 324.752†	77364.3	73239.8	512.26 µg/L	512.26 ppb	17:01:22
2	Mn 257.610†	154462.4	151435.4	524.84 µg/L	524.84 ppb	17:01:16
2	Mo 202.031†	4974.0	4876.2	520.57 µg/L	520.57 ppb	17:01:43
2	Ni 231.604†	10143.4	9626.4	525.76 µg/L	525.76 ppb	17:01:22
2	P 214.914†	1278.9	1224.2	2579.9 µg/L	2579.9 ppb	17:01:43
2	Pb 220.353†	2103.7	1962.0	523.68 µg/L	523.68 ppb	17:01:43
2	S 181.975 Axial†	261.1	240.7	1054.7 µg/L	1054.7 ppb	17:01:43
2	Sb 206.836†	565.0	526.1	520.02 µg/L	520.02 ppb	17:01:43
2	Se 196.026†	363.5	340.0	525.72 µg/L	525.72 ppb	17:01:43
2	SiO2†	27321.6	25493.0	5490.1 µg/L	5490.1 ppb	17:01:22
2	Si 251.611†	32162.6	31168.6	2562.2 µg/L	2562.2 ppb	17:01:22
2	Sn 189.927†	1172.7	1148.8	528.40 µg/L	528.40 ppb	17:01:43
2	Ti 334.940†	216025.0	211334.0	508.04 µg/L	508.04 ppb	17:01:16
2	Tl 190.801†	350.8	367.7	519.30 µg/L	519.30 ppb	17:01:43
2	U 409.014†	5846.6	5776.4	522.02 µg/L	522.02 ppb	17:01:22
2	V 292.402†	49557.7	48552.4	523.76 µg/L	523.76 ppb	17:01:22
2	Zn 213.857†	21845.1	20906.9	518.41 µg/L	518.41 ppb	17:01:22
3	Sc RADIAL	58043.7	58043.7	106 %		17:00:11
3	Al 396.153Radial†	6748.6	6355.4	4728.2 µg/L	4728.2 ppb	17:00:11
3	Ca 317.933Radial†	5566.3	5054.5	4759.1 µg/L	4759.1 ppb	17:00:32
3	Fe 238.204 Radial†	616.6	565.2	4800.6 µg/L	4800.6 ppb	17:00:32
3	K 766.490 Radial†	7187.1	6629.1	4711.9 µg/L	4711.9 ppb	17:00:11
3	Mg 279.077 IEC†	562.5	517.6	4819.1 µg/L	4819.1 ppb	17:00:32
3	Na 589.592 Radial†	31179.2	28773.8	9472.4 µg/L	9472.4 ppb	17:00:11
3	Sr 421.552†	48277.8	45352.7	470.13 µg/L	470.13 ppb	17:00:11
3	Sc 361.383	2003631.8	2003631.8	104.91 %		17:01:50
3	Y 371.029	1367447.8	1367447.8	104.39 %		17:01:50
3	Ag 328.068†	59826.0	57590.0	460.26 µg/L	460.26 ppb	17:01:56
3	As 188.979†	236.7	224.5	438.03 µg/L	438.03 ppb	17:02:16
3	B 249.677†	11388.2	10523.6	458.12 µg/L	458.12 ppb	17:01:56
3	Ba 233.527†	18491.5	17651.9	460.45 µg/L	460.45 ppb	17:01:56
3	Be 313.107†	746381.1	714882.8	466.69 µg/L	466.69 ppb	17:01:50
3	Cd 226.502†	17452.2	16777.4	462.78 µg/L	462.78 ppb	17:01:56
3	Co 228.616†	9792.8	9343.2	459.24 µg/L	459.24 ppb	17:01:56
3	Cr 267.716†	21341.5	20394.9	448.89 µg/L	448.89 ppb	17:01:56
3	Cu 324.752†	70171.6	64400.7	450.52 µg/L	450.52 ppb	17:01:56
3	Mn 257.610†	143677.7	137196.1	475.54 µg/L	475.54 ppb	17:01:50
3	Mo 202.031†	4142.0	3955.7	422.34 µg/L	422.34 ppb	17:02:16
3	Ni 231.604†	9135.9	8406.0	459.11 µg/L	459.11 ppb	17:01:56
3	P 214.914†	1088.5	1009.9	2124.6 µg/L	2124.6 ppb	17:02:16
3	Pb 220.353†	1832.8	1649.8	440.26 µg/L	440.26 ppb	17:02:16
3	S 181.975 Axial†	227.5	202.0	885.22 µg/L	885.22 ppb	17:02:16
3	Sb 206.836†	480.8	431.3	425.93 µg/L	425.93 ppb	17:02:16
3	Se 196.026†	317.8	287.1	445.21 µg/L	445.21 ppb	17:02:16
3	SiO2†	25159.1	22731.4	4895.3 µg/L	4895.3 ppb	17:01:56
3	Si 251.611†	29597.8	27899.4	2293.5 µg/L	2293.5 ppb	17:01:56
3	Sn 189.927†	953.9	910.2	418.64 µg/L	418.64 ppb	17:02:16
3	Ti 334.940†	199390.2	189940.4	456.58 µg/L	456.58 ppb	17:01:50
3	Tl 190.801†	316.4	325.9	460.38 µg/L	460.38 ppb	17:02:16
3	U 409.014†	5187.8	4998.6	451.60 µg/L	451.60 ppb	17:01:56
3	V 292.402†	44415.7	42380.8	456.99 µg/L	456.99 ppb	17:01:56
3	Zn 213.857†	19887.4	18480.9	458.23 µg/L	458.23 ppb	17:01:56

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2000994.9	104.77 %	2.543			2.43%
Sc RADIAL	58052.6	106 %	0.5			0.43%
Y 371.029	1365392.6	104.23 %	2.485			2.38%
Ag 328.068†	60010.7	479.67 µg/L	23.794	479.67 ppb	23.794	4.96%
QC value within limits for Ag 328.068 Recovery = 95.93%						
Al 396.153Radial†	6355.1	4726.8 µg/L	5.90	4726.8 ppb	5.90	0.12%
QC value within limits for Al 396.153Radial Recovery = 94.54%						
As 188.979†	250.5	488.76 µg/L	46.092	488.76 ppb	46.092	9.43%

QC value within limits for As 188.979 Recovery = 97.75%							
B 249.677†	11021.9	479.97 µg/L	26.827	479.97 ppb	26.827	5.59%	
QC value within limits for B 249.677 Recovery = 95.99%							
Ba 233.527†	18674.8	487.13 µg/L	29.727	487.13 ppb	29.727	6.10%	
QC value within limits for Ba 233.527 Recovery = 97.43%							
Be 313.107†	745395.3	486.60 µg/L	25.138	486.60 ppb	25.138	5.17%	
QC value within limits for Be 313.107 Recovery = 97.32%							
Ca 317.933Radial†	5046.7	4751.8 µg/L	37.61	4751.8 ppb	37.61	0.79%	
QC value within limits for Ca 317.933Radial Recovery = 95.04%							
Cd 226.502†	17800.5	491.04 µg/L	30.831	491.04 ppb	30.831	6.28%	
QC value within limits for Cd 226.502 Recovery = 98.21%							
Co 228.616†	9971.4	490.16 µg/L	32.508	490.16 ppb	32.508	6.63%	
QC value within limits for Co 228.616 Recovery = 98.03%							
Cr 267.716†	22065.5	485.66 µg/L	36.788	485.66 ppb	36.788	7.57%	
QC value within limits for Cr 267.716 Recovery = 97.13%							
Cu 324.752†	68566.7	479.62 µg/L	31.024	479.62 ppb	31.024	6.47%	
QC value within limits for Cu 324.752 Recovery = 95.92%							
Fe 238.204 Radial†	562.3	4776.3 µg/L	41.61	4776.3 ppb	41.61	0.87%	
QC value within limits for Fe 238.204 Radial Recovery = 95.53%							
K 766.490 Radial†	6676.8	4745.8 µg/L	30.47	4745.8 ppb	30.47	0.64%	
QC value within limits for K 766.490 Radial Recovery = 94.92%							
Mg 279.077 IEC†	520.8	4849.9 µg/L	27.89	4849.9 ppb	27.89	0.57%	
QC value within limits for Mg 279.077 IEC Recovery = 97.00%							
Mn 257.610†	142999.7	495.63 µg/L	25.888	495.63 ppb	25.888	5.22%	
QC value within limits for Mn 257.610 Recovery = 99.13%							
Mo 202.031†	4491.5	479.52 µg/L	51.064	479.52 ppb	51.064	10.65%	
QC value within limits for Mo 202.031 Recovery = 95.90%							
Na 589.592 Radial†	28741.7	9461.9 µg/L	23.68	9461.9 ppb	23.68	0.25%	
QC value within limits for Na 589.592 Radial Recovery = 94.62%							
Ni 231.604†	8977.7	490.33 µg/L	33.521	490.33 ppb	33.521	6.84%	
QC value within limits for Ni 231.604 Recovery = 98.07%							
P 214.914†	1132.0	2384.7 µg/L	234.53	2384.7 ppb	234.53	9.83%	
QC value within limits for P 214.914 Recovery = 95.39%							
Pb 220.353†	1822.0	486.30 µg/L	42.376	486.30 ppb	42.376	8.71%	
QC value within limits for Pb 220.353 Recovery = 97.26%							
S 181.975 Axial†	222.8	976.34 µg/L	85.462	976.34 ppb	85.462	8.75%	
QC value within limits for S 181.975 Axial Recovery = 97.63%							
Sb 206.836†	483.8	478.10 µg/L	47.873	478.10 ppb	47.873	10.01%	
QC value within limits for Sb 206.836 Recovery = 95.62%							
Se 196.026†	315.7	488.71 µg/L	40.646	488.71 ppb	40.646	8.32%	
QC value within limits for Se 196.026 Recovery = 97.74%							
SiO2†	23925.4	5152.5 µg/L	305.42	5152.5 ppb	305.42	5.93%	
QC value within limits for SiO2 Recovery = 96.35%							
Si 251.611†	29342.9	2412.1 µg/L	137.10	2412.1 ppb	137.10	5.68%	
QC value within limits for Si 251.611 Recovery = 96.49%							
Sn 189.927†	1050.8	483.32 µg/L	57.445	483.32 ppb	57.445	11.89%	
QC value within limits for Sn 189.927 Recovery = 96.66%							
Sr 421.552†	45308.6	469.68 µg/L	0.398	469.68 ppb	0.398	0.08%	
QC value within limits for Sr 421.552 Recovery = 93.94%							
Ti 334.940†	198893.9	478.12 µg/L	26.734	478.12 ppb	26.734	5.59%	
QC value within limits for Ti 334.940 Recovery = 95.62%							
Tl 190.801†	348.4	492.01 µg/L	29.696	492.01 ppb	29.696	6.04%	
QC value within limits for Tl 190.801 Recovery = 98.40%							
U 409.014†	5383.0	486.40 µg/L	35.218	486.40 ppb	35.218	7.24%	
QC value within limits for U 409.014 Recovery = 97.28%							
V 292.402†	45326.6	488.94 µg/L	33.478	488.94 ppb	33.478	6.85%	
QC value within limits for V 292.402 Recovery = 97.79%							
Zn 213.857†	19623.9	486.59 µg/L	30.241	486.59 ppb	30.241	6.21%	
QC value within limits for Zn 213.857 Recovery = 97.32%							
All analyte(s) passed QC.							

Sequence No.: 2  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 6  
 Date Collected: 2/11/2010 17:02:26  
 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	56368.9	56368.9	103 %		17:03:01
1	Al 396.153Radial†	-30.7	-19.6	-14.585 µg/L	-14.585 ppb	17:03:01
1	Ca 317.933Radial†	198.1	12.6	11.864 µg/L	11.864 ppb	17:03:21
1	Fe 238.204 Radial†	17.2	2.2	18.515 µg/L	18.515 ppb	17:03:21
1	K 766.490 Radial†	209.8	74.8	53.133 µg/L	53.133 ppb	17:03:01
1	Mg 279.077 IEC†	16.1	4.3	39.936 µg/L	39.936 ppb	17:03:21
1	Na 589.592 Radial†	774.1	207.6	68.329 µg/L	68.329 ppb	17:03:01
1	Sr 421.552†	33.0	-7.6	-0.0789 µg/L	-0.0789 ppb	17:03:01
1	Sc 361.383	2029236.5	2029236.5	106.25 %		17:04:24
1	Y 371.029	1388942.8	1388942.8	106.03 %		17:04:24
1	Ag 328.068†	-592.1	7.2	0.0607 µg/L	0.0607 ppb	17:04:29
1	As 188.979†	-0.6	-1.7	-3.3695 µg/L	-3.3695 ppb	17:04:50
1	B 249.677†	324.7	-25.9	-1.1417 µg/L	-1.1417 ppb	17:04:50
1	Ba 233.527†	-22.4	4.9	0.1278 µg/L	0.1278 ppb	17:04:50
1	Be 313.107†	-3566.1	84.2	0.0549 µg/L	0.0549 ppb	17:04:29
1	Cd 226.502†	-151.8	-0.8	-0.0243 µg/L	-0.0243 ppb	17:04:50
1	Co 228.616†	-13.1	-3.5	-0.1727 µg/L	-0.1727 ppb	17:04:50
1	Cr 267.716†	-46.3	8.8	0.1931 µg/L	0.1931 ppb	17:04:50
1	Cu 324.752†	2496.7	-136.3	-0.9495 µg/L	-0.9495 ppb	17:04:29
1	Mn 257.610†	-248.9	9.9	0.0351 µg/L	0.0351 ppb	17:04:50
1	Mo 202.031†	-5.8	2.1	0.2273 µg/L	0.2273 ppb	17:04:50
1	Ni 231.604†	303.7	-16.3	-0.8932 µg/L	-0.8932 ppb	17:04:50
1	P 214.914†	32.7	3.2	6.8843 µg/L	6.8843 ppb	17:04:50
1	Pb 220.353†	96.4	-6.5	-1.7203 µg/L	-1.7203 ppb	17:04:50
1	S 181.975 Axial†	20.6	4.6	20.049 µg/L	20.049 ppb	17:04:50
1	Sb 206.836†	26.8	-1.7	-1.7124 µg/L	-1.7124 ppb	17:04:50
1	Se 196.026†	16.1	-0.6	-0.9715 µg/L	-0.9715 ppb	17:04:50
1	SiO2†	1235.6	-87.2	-18.769 µg/L	-18.769 ppb	17:04:29
1	Si 251.611†	286.6	-43.1	-3.5447 µg/L	-3.5447 ppb	17:04:50
1	Sn 189.927†	-4.0	-2.9	-1.3291 µg/L	-1.3291 ppb	17:04:50
1	Ti 334.940†	152.5	27.4	0.0631 µg/L	0.0631 ppb	17:04:29
1	Tl 190.801†	-22.1	3.5	4.9105 µg/L	4.9105 ppb	17:04:50
1	U 409.014†	-71.0	-13.2	-1.1992 µg/L	-1.1992 ppb	17:04:29
1	V 292.402†	-14.4	30.7	0.3301 µg/L	0.3301 ppb	17:04:29
1	Zn 213.857†	481.1	-22.7	-0.5654 µg/L	-0.5654 ppb	17:04:50
2	Sc RADIAL	56481.9	56481.9	103 %		17:03:27
2	Al 396.153Radial†	9.3	19.1	14.233 µg/L	14.233 ppb	17:03:27
2	Ca 317.933Radial†	192.6	6.9	6.5217 µg/L	6.5217 ppb	17:03:47
2	Fe 238.204 Radial†	14.6	-0.3	-2.9604 µg/L	-2.9604 ppb	17:03:47
2	K 766.490 Radial†	162.5	28.6	20.329 µg/L	20.329 ppb	17:03:27
2	Mg 279.077 IEC†	13.0	1.3	11.979 µg/L	11.979 ppb	17:03:47
2	Na 589.592 Radial†	797.1	228.3	75.169 µg/L	75.169 ppb	17:03:27
2	Sr 421.552†	46.5	5.4	0.0561 µg/L	0.0561 ppb	17:03:27
2	Sc 361.383	2012770.6	2012770.6	105.39 %		17:04:56
2	Y 371.029	1377597.1	1377597.1	105.17 %		17:04:56
2	Ag 328.068†	-578.5	15.6	0.1231 µg/L	0.1231 ppb	17:05:01
2	As 188.979†	2.2	1.0	1.9088 µg/L	1.9088 ppb	17:05:22
2	B 249.677†	310.5	-36.9	-1.6105 µg/L	-1.6105 ppb	17:05:22
2	Ba 233.527†	-26.6	0.8	0.0202 µg/L	0.0202 ppb	17:05:22
2	Be 313.107†	-3607.4	17.5	0.0114 µg/L	0.0114 ppb	17:05:01
2	Cd 226.502†	-140.3	9.0	0.2482 µg/L	0.2482 ppb	17:05:22
2	Co 228.616†	-20.8	-10.9	-0.5380 µg/L	-0.5380 ppb	17:05:22
2	Cr 267.716†	-50.1	4.9	0.1067 µg/L	0.1067 ppb	17:05:22
2	Cu 324.752†	2459.5	-152.4	-1.0650 µg/L	-1.0650 ppb	17:05:01
2	Mn 257.610†	-250.9	6.1	0.0201 µg/L	0.0201 ppb	17:05:22
2	Mo 202.031†	-3.2	4.5	0.4823 µg/L	0.4823 ppb	17:05:22
2	Ni 231.604†	300.2	-17.4	-0.9488 µg/L	-0.9488 ppb	17:05:22
2	P 214.914†	25.9	-3.0	-6.3600 µg/L	-6.3600 ppb	17:05:22
2	Pb 220.353†	99.5	-2.8	-0.7298 µg/L	-0.7298 ppb	17:05:22

2	S 181.975 Axial†	20.2	4.3	19.053 µg/L	19.053 ppb	17:05:22
2	Sb 206.836†	24.6	-3.6	-3.5810 µg/L	-3.5810 ppb	17:05:22
2	Se 196.026†	10.7	-5.7	-8.7427 µg/L	-8.7427 ppb	17:05:22
2	SiO2†	1253.5	-60.7	-13.065 µg/L	-13.065 ppb	17:05:01
2	Si 251.611†	291.0	-36.8	-3.0237 µg/L	-3.0237 ppb	17:05:22
2	Sn 189.927†	-0.9	-0.0	-0.0009 µg/L	-0.0009 ppb	17:05:22
2	Ti 334.940†	142.1	18.7	0.0441 µg/L	0.0441 ppb	17:05:01
2	Tl 190.801†	-21.2	4.2	5.8568 µg/L	5.8568 ppb	17:05:22
2	U 409.014†	-66.1	-9.1	-0.8270 µg/L	-0.8270 ppb	17:05:01
2	V 292.402†	-52.0	-5.1	-0.0519 µg/L	-0.0519 ppb	17:05:01
2	Zn 213.857†	477.8	-22.2	-0.5493 µg/L	-0.5493 ppb	17:05:22
3	Sc RADIAL	56062.3	56062.3	103 %		17:03:53
3	Al 396.153Radial†	-13.3	-2.8	-2.1100 µg/L	-2.1100 ppb	17:03:53
3	Ca 317.933Radial†	193.5	9.2	8.6834 µg/L	8.6834 ppb	17:04:13
3	Fe 238.204 Radial†	13.9	-1.0	-8.5236 µg/L	-8.5236 ppb	17:04:13
3	K 766.490 Radial†	145.6	13.3	9.4734 µg/L	9.4734 ppb	17:03:53
3	Mg 279.077 IEC†	12.4	0.8	7.7063 µg/L	7.7063 ppb	17:04:13
3	Na 589.592 Radial†	762.5	200.4	65.960 µg/L	65.960 ppb	17:03:53
3	Sr 421.552†	41.6	1.0	0.0099 µg/L	0.0099 ppb	17:03:53
3	Sc 361.383	1996457.8	1996457.8	104.54 %		17:05:28
3	Y 371.029	1367454.7	1367454.7	104.39 %		17:05:28
3	Ag 328.068†	-552.2	36.3	0.2878 µg/L	0.2878 ppb	17:05:33
3	As 188.979†	-1.4	-2.4	-4.7806 µg/L	-4.7806 ppb	17:05:54
3	B 249.677†	316.6	-28.6	-1.2466 µg/L	-1.2466 ppb	17:05:54
3	Ba 233.527†	-26.5	0.6	0.0163 µg/L	0.0163 ppb	17:05:54
3	Be 313.107†	-3498.2	94.1	0.0615 µg/L	0.0615 ppb	17:05:33
3	Cd 226.502†	-139.5	8.7	0.2407 µg/L	0.2407 ppb	17:05:54
3	Co 228.616†	-2.0	6.9	0.3417 µg/L	0.3417 ppb	17:05:54
3	Cr 267.716†	-37.2	16.7	0.3684 µg/L	0.3684 ppb	17:05:54
3	Cu 324.752†	2465.1	-128.0	-0.8950 µg/L	-0.8950 ppb	17:05:33
3	Mn 257.610†	-235.5	18.8	0.0637 µg/L	0.0637 ppb	17:05:54
3	Mo 202.031†	0.7	8.2	0.8795 µg/L	0.8795 ppb	17:05:54
3	Ni 231.604†	298.8	-16.4	-0.8963 µg/L	-0.8963 ppb	17:05:54
3	P 214.914†	31.0	2.0	4.4888 µg/L	4.4888 ppb	17:05:54
3	Pb 220.353†	112.9	10.8	2.8917 µg/L	2.8917 ppb	17:05:54
3	S 181.975 Axial†	16.6	1.1	4.7192 µg/L	4.7192 ppb	17:05:54
3	Sb 206.836†	24.2	-3.9	-3.7807 µg/L	-3.7807 ppb	17:05:54
3	Se 196.026†	10.9	-5.4	-8.2970 µg/L	-8.2970 ppb	17:05:54
3	SiO2†	1240.9	-63.0	-13.561 µg/L	-13.561 ppb	17:05:33
3	Si 251.611†	299.0	-26.9	-2.2074 µg/L	-2.2074 ppb	17:05:54
3	Sn 189.927†	0.3	1.1	0.5288 µg/L	0.5288 ppb	17:05:54
3	Ti 334.940†	59.1	-59.6	-0.1438 µg/L	-0.1438 ppb	17:05:33
3	Tl 190.801†	-24.5	0.9	1.2389 µg/L	1.2389 ppb	17:05:54
3	U 409.014†	-14.3	40.0	3.6190 µg/L	3.6190 ppb	17:05:33
3	V 292.402†	-38.2	7.6	0.0916 µg/L	0.0916 ppb	17:05:33
3	Zn 213.857†	475.0	-21.1	-0.5227 µg/L	-0.5227 ppb	17:05:54

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2012821.6	105.39 %	0.858			0.81%
Sc RADIAL	56304.4	103 %	0.4			0.39%
Y 371.029	1377998.2	105.20 %	0.821			0.78%
Ag 328.068†	19.7	0.1572 µg/L	0.11730	0.1572 ppb	0.11730	74.62%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-1.1	-0.8207 µg/L	14.45235	-0.8207 ppb	14.45235	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.1	-2.0804 µg/L	3.52609	-2.0804 ppb	3.52609	169.49%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-30.5	-1.3329 µg/L	0.24603	-1.3329 ppb	0.24603	18.46%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.1	0.0547 µg/L	0.06331	0.0547 ppb	0.06331	115.64%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	65.3	0.0426 µg/L	0.02720	0.0426 ppb	0.02720	63.83%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	9.6	9.0232 µg/L	2.68752	9.0232 ppb	2.68752	29.78%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	5.7	0.1549 µg/L	0.15521	0.1549 ppb	0.15521	100.22%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.5	-0.1230 µg/L	0.44196	-0.1230 ppb	0.44196	359.31%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	10.1 0.2228 µg/L	0.13336 0.2228 ppb	0.13336 59.87%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	-138.9 -0.9698 µg/L	0.08678 -0.9698 ppb	0.08678 8.95%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	0.3 2.3437 µg/L	14.27846 2.3437 ppb	14.27846 609.22%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	38.9 27.645 µg/L	22.7308 27.645 ppb	22.7308 82.22%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	2.1 19.874 µg/L	17.5054 19.874 ppb	17.5054 88.08%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	11.6 0.0396 µg/L	0.02217 0.0396 ppb	0.02217 55.91%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	5.0 0.5297 µg/L	0.32865 0.5297 ppb	0.32865 62.05%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	212.1 69.819 µg/L	4.7822 69.819 ppb	4.7822 6.85%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-16.7 -0.9128 µg/L	0.03120 -0.9128 ppb	0.03120 3.42%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	0.7 1.6710 µg/L	7.05748 1.6710 ppb	7.05748 422.34%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	0.5 0.1472 µg/L	2.42781 0.1472 ppb	2.42781 >999.9%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	3.3 14.607 µg/L	8.5775 14.607 ppb	8.5775 58.72%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	-3.1 -3.0247 µg/L	1.14085 -3.0247 ppb	1.14085 37.72%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-3.9 -6.0037 µg/L	4.36372 -6.0037 ppb	4.36372 72.68%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	-70.3 -15.131 µg/L	3.1599 -15.131 ppb	3.1599 20.88%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	-35.6 -2.9252 µg/L	0.67407 -2.9252 ppb	0.67407 23.04%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	-0.6 -0.2671 µg/L	0.95712 -0.2671 ppb	0.95712 358.38%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	-0.4 -0.0043 µg/L	0.06861 -0.0043 ppb	0.06861 >999.9%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	-4.5 -0.0122 µg/L	0.11438 -0.0122 ppb	0.11438 935.94%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	2.9 4.0021 µg/L	2.43930 4.0021 ppb	2.43930 60.95%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	5.9 0.5309 µg/L	2.68081 0.5309 ppb	2.68081 504.91%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	11.1 0.1233 µg/L	0.19295 0.1233 ppb	0.19295 156.48%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	-22.0 -0.5458 µg/L	0.02154 -0.5458 ppb	0.02154 3.95%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

Sequence No.: 3  
 Sample ID: 1202024735|945379|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 301  
 Date Collected: 2/11/2010 17:06:03  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202024735|945379|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57024.0	57024.0	104 %		17:06:39
1	Al 396.153Radial†	3.8	13.7	10.234 µg/L	10.234 ppb	17:06:39
1	Ca 317.933Radial†	231.7	42.6	40.088 µg/L	40.088 ppb	17:07:00
1	Fe 238.204 Radial†	16.3	1.1	9.4579 µg/L	9.4579 ppb	17:07:00
1	K 766.490 Radial†	191.5	54.9	39.009 µg/L	39.009 ppb	17:06:39
1	Mg 279.077 IEC†	11.8	0.0	0.0368 µg/L	0.0368 ppb	17:07:00
1	Na 589.592 Radial†	804.7	228.3	75.149 µg/L	75.149 ppb	17:06:39
1	Sr 421.552†	53.1	11.3	0.1171 µg/L	0.1171 ppb	17:06:39
1	Sc 361.383	2016505.5	2016505.5	105.59 %		17:08:01
1	Y 371.029	1376693.0	1376693.0	105.10 %		17:08:01
1	Ag 328.068†	-529.5	63.0	0.4982 µg/L	0.4982 ppb	17:08:07
1	As 188.979†	-1.4	-2.4	-4.7484 µg/L	-4.7484 ppb	17:08:27
1	B 249.677†	331.9	-17.2	-0.7554 µg/L	-0.7554 ppb	17:08:27
1	Ba 233.527†	-7.9	18.6	0.4826 µg/L	0.4826 ppb	17:08:27
1	Be 313.107†	-3565.6	63.5	0.0414 µg/L	0.0414 ppb	17:08:07
1	Cd 226.502†	-142.4	7.3	0.1987 µg/L	0.1987 ppb	17:08:27
1	Co 228.616†	-16.9	-7.2	-0.3523 µg/L	-0.3523 ppb	17:08:27
1	Cr 267.716†	-63.1	-7.4	-0.1630 µg/L	-0.1630 ppb	17:08:07
1	Cu 324.752†	2534.8	-85.3	-0.5947 µg/L	-0.5947 ppb	17:08:07
1	Mn 257.610†	-199.3	55.4	0.1930 µg/L	0.1930 ppb	17:08:27
1	Mo 202.031†	-6.9	1.0	0.1054 µg/L	0.1054 ppb	17:08:27
1	Ni 231.604†	306.2	-12.2	-0.6678 µg/L	-0.6678 ppb	17:08:27
1	P 214.914†	36.0	6.5	13.971 µg/L	13.971 ppb	17:08:27
1	Pb 220.353†	100.7	-1.8	-0.4813 µg/L	-0.4813 ppb	17:08:27
1	S 181.975 Axial†	19.7	3.9	16.927 µg/L	16.927 ppb	17:08:27
1	Sb 206.836†	23.9	-4.4	-4.2868 µg/L	-4.2868 ppb	17:08:27
1	Se 196.026†	16.5	-0.2	-0.3267 µg/L	-0.3267 ppb	17:08:27
1	SiO2†	1312.5	-6.9	-1.4898 µg/L	-1.4898 ppb	17:08:07
1	Si 251.611†	379.8	46.8	3.8473 µg/L	3.8473 ppb	17:08:27
1	Sn 189.927†	-3.5	-2.4	-1.1060 µg/L	-1.1060 ppb	17:08:27
1	Ti 334.940†	129.2	6.3	0.0157 µg/L	0.0157 ppb	17:08:07
1	Tl 190.801†	-23.2	2.3	3.2562 µg/L	3.2562 ppb	17:08:27
1	U 409.014†	-29.5	25.7	2.3222 µg/L	2.3222 ppb	17:08:07
1	V 292.402†	-79.6	-31.2	-0.3286 µg/L	-0.3286 ppb	17:08:07
1	Zn 213.857†	527.6	24.2	0.6074 µg/L	0.6074 ppb	17:08:27
2	Sc RADIAL	57156.6	57156.6	105 %		17:07:05
2	Al 396.153Radial†	15.7	25.1	18.694 µg/L	18.694 ppb	17:07:05
2	Ca 317.933Radial†	227.4	38.0	35.784 µg/L	35.784 ppb	17:07:26
2	Fe 238.204 Radial†	16.0	0.8	6.4625 µg/L	6.4625 ppb	17:07:26
2	K 766.490 Radial†	136.3	1.7	1.2106 µg/L	1.2106 ppb	17:07:05
2	Mg 279.077 IEC†	16.8	4.8	44.525 µg/L	44.525 ppb	17:07:26
2	Na 589.592 Radial†	753.3	177.4	58.390 µg/L	58.390 ppb	17:07:05
2	Sr 421.552†	46.8	5.1	0.0533 µg/L	0.0533 ppb	17:07:05
2	Sc 361.383	2023064.5	2023064.5	105.93 %		17:08:33
2	Y 371.029	1380814.8	1380814.8	105.41 %		17:08:33
2	Ag 328.068†	-602.0	-3.8	-0.0290 µg/L	-0.0290 ppb	17:08:39
2	As 188.979†	-4.2	-5.1	-10.045 µg/L	-10.045 ppb	17:09:00
2	B 249.677†	323.7	-25.9	-1.1362 µg/L	-1.1362 ppb	17:09:00
2	Ba 233.527†	-5.6	20.7	0.5402 µg/L	0.5402 ppb	17:09:00
2	Be 313.107†	-3636.2	7.8	0.0051 µg/L	0.0051 ppb	17:08:39
2	Cd 226.502†	-146.3	4.0	0.1083 µg/L	0.1083 ppb	17:09:00
2	Co 228.616†	-17.1	-7.3	-0.3581 µg/L	-0.3581 ppb	17:09:00
2	Cr 267.716†	-53.2	2.1	0.0465 µg/L	0.0465 ppb	17:08:39
2	Cu 324.752†	2469.5	-154.8	-1.0807 µg/L	-1.0807 ppb	17:08:39
2	Mn 257.610†	-202.3	53.1	0.1830 µg/L	0.1830 ppb	17:09:00
2	Mo 202.031†	-6.2	1.7	0.1782 µg/L	0.1782 ppb	17:09:00
2	Ni 231.604†	302.8	-16.4	-0.8939 µg/L	-0.8939 ppb	17:09:00
2	P 214.914†	31.3	1.9	4.3058 µg/L	4.3058 ppb	17:09:00
2	Pb 220.353†	107.7	4.4	1.1869 µg/L	1.1869 ppb	17:09:00



2	S 181.975 Axial†	15.3	-0.3	-1.4851 µg/L	-1.4851 ppb	17:09:00
2	Sb 206.836†	20.0	-8.0	-7.9229 µg/L	-7.9229 ppb	17:09:00
2	Se 196.026†	5.0	-11.1	-16.997 µg/L	-16.997 ppb	17:09:00
2	SiO2†	1337.6	12.7	2.7330 µg/L	2.7330 ppb	17:08:39
2	Si 251.611†	399.7	64.4	5.2966 µg/L	5.2966 ppb	17:09:00
2	Sn 189.927†	0.3	1.1	0.5153 µg/L	0.5153 ppb	17:09:00
2	Ti 334.940†	116.3	-6.3	-0.0181 µg/L	-0.0181 ppb	17:08:39
2	Tl 190.801†	-26.5	-0.8	-1.0523 µg/L	-1.0523 ppb	17:09:00
2	U 409.014†	-22.0	32.9	2.9751 µg/L	2.9751 ppb	17:08:39
2	V 292.402†	-32.5	13.6	0.1498 µg/L	0.1498 ppb	17:08:39
2	Zn 213.857†	530.5	25.2	0.6333 µg/L	0.6333 ppb	17:09:00
3	Sc RADIAL	57148.5	57148.5	105 %		17:07:31
3	Al 396.153Radial†	4.6	14.5	10.823 µg/L	10.823 ppb	17:07:31
3	Ca 317.933Radial†	225.9	36.6	34.423 µg/L	34.423 ppb	17:07:51
3	Fe 238.204 Radial†	16.3	1.1	9.3507 µg/L	9.3507 ppb	17:07:51
3	K 766.490 Radial†	173.6	37.4	26.551 µg/L	26.551 ppb	17:07:31
3	Mg 279.077 IEC†	12.2	0.3	3.2182 µg/L	3.2182 ppb	17:07:51
3	Na 589.592 Radial†	735.7	160.6	52.882 µg/L	52.882 ppb	17:07:31
3	Sr 421.552†	100.3	56.2	0.5828 µg/L	0.5828 ppb	17:07:31
3	Sc 361.383	2009574.4	2009574.4	105.22 %		17:09:06
3	Y 371.029	1372837.5	1372837.5	104.80 %		17:09:06
3	Ag 328.068†	-540.6	50.8	0.4041 µg/L	0.4041 ppb	17:09:11
3	As 188.979†	1.0	-0.2	-0.4677 µg/L	-0.4677 ppb	17:09:32
3	B 249.677†	312.0	-35.0	-1.5332 µg/L	-1.5332 ppb	17:09:32
3	Ba 233.527†	-5.8	20.5	0.5350 µg/L	0.5350 ppb	17:09:32
3	Be 313.107†	-3685.4	-62.1	-0.0405 µg/L	-0.0405 ppb	17:09:11
3	Cd 226.502†	-146.3	3.1	0.0830 µg/L	0.0830 ppb	17:09:32
3	Co 228.616†	-20.5	-10.6	-0.5225 µg/L	-0.5225 ppb	17:09:32
3	Cr 267.716†	-50.5	4.4	0.0966 µg/L	0.0966 ppb	17:09:11
3	Cu 324.752†	2459.5	-148.7	-1.0373 µg/L	-1.0373 ppb	17:09:11
3	Mn 257.610†	-206.3	48.1	0.1675 µg/L	0.1675 ppb	17:09:32
3	Mo 202.031†	-11.3	-3.2	-0.3406 µg/L	-0.3406 ppb	17:09:32
3	Ni 231.604†	312.5	-5.2	-0.2859 µg/L	-0.2859 ppb	17:09:32
3	P 214.914†	27.5	-1.4	-2.9545 µg/L	-2.9545 ppb	17:09:32
3	Pb 220.353†	87.0	-14.5	-3.8647 µg/L	-3.8647 ppb	17:09:32
3	S 181.975 Axial†	18.4	2.6	11.510 µg/L	11.510 ppb	17:09:32
3	Sb 206.836†	21.8	-6.2	-6.1298 µg/L	-6.1298 ppb	17:09:32
3	Se 196.026†	17.1	0.4	0.6716 µg/L	0.6716 ppb	17:09:32
3	SiO2†	1317.4	2.0	0.4359 µg/L	0.4359 ppb	17:09:11
3	Si 251.611†	380.4	48.7	4.0004 µg/L	4.0004 ppb	17:09:32
3	Sn 189.927†	6.0	6.5	3.0096 µg/L	3.0096 ppb	17:09:32
3	Ti 334.940†	145.4	22.0	0.0533 µg/L	0.0533 ppb	17:09:11
3	Tl 190.801†	-24.0	1.4	2.0056 µg/L	2.0056 ppb	17:09:32
3	U 409.014†	-88.7	-30.7	-2.7818 µg/L	-2.7818 ppb	17:09:11
3	V 292.402†	-39.0	7.1	0.0718 µg/L	0.0718 ppb	17:09:11
3	Zn 213.857†	518.1	16.9	0.4238 µg/L	0.4238 ppb	17:09:32

Mean Data: 1202024735|945379|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2016381.5	105.58 %		0.353			0.33%
Sc RADIAL	57109.7	105 %		0.1			0.13%
Y 371.029	1376781.8	105.10 %		0.305			0.29%
Ag 328.068†	36.7	0.2911 µg/L		0.28118	0.2911 ppb	0.28118	96.59%
Al 396.153Radial†	17.8	13.250 µg/L		4.7240	13.250 ppb	4.7240	35.65%
As 188.979†	-2.6	-5.0871 µg/L		4.79772	-5.0871 ppb	4.79772	94.31%
B 249.677†	-26.0	-1.1416 µg/L		0.38896	-1.1416 ppb	0.38896	34.07%
Ba 233.527†	19.9	0.5192 µg/L		0.03187	0.5192 ppb	0.03187	6.14%
Be 313.107†	3.1	0.0020 µg/L		0.04108	0.0020 ppb	0.04108	>999.9%
Ca 317.933Radial†	39.0	36.765 µg/L		2.9574	36.765 ppb	2.9574	8.04%
Cd 226.502†	4.8	0.1300 µg/L		0.06080	0.1300 ppb	0.06080	46.77%
Co 228.616†	-8.3	-0.4110 µg/L		0.09661	-0.4110 ppb	0.09661	23.51%
Cr 267.716†	-0.3	-0.0066 µg/L		0.13775	-0.0066 ppb	0.13775	>999.9%
Cu 324.752†	-129.6	-0.9042 µg/L		0.26891	-0.9042 ppb	0.26891	29.74%
Fe 238.204 Radial†	1.0	8.4237 µg/L		1.69930	8.4237 ppb	1.69930	20.17%
K 766.490 Radial†	31.3	22.257 µg/L		19.2616	22.257 ppb	19.2616	86.54%
Mg 279.077 IEC†	1.7	15.927 µg/L		24.8178	15.927 ppb	24.8178	155.83%
Mn 257.610†	52.2	0.1812 µg/L		0.01284	0.1812 ppb	0.01284	7.09%
Mo 202.031†	-0.2	-0.0190 µg/L		0.28085	-0.0190 ppb	0.28085	>999.9%
Na 589.592 Radial†	188.8	62.140 µg/L		11.5979	62.140 ppb	11.5979	18.66%

Ni 231.604†	-11.3	-0.6158 µg/L	0.30733	-0.6158 ppb	0.30733	49.90%
P 214.914†	2.3	5.1075 µg/L	8.49121	5.1075 ppb	8.49121	166.25%
Pb 220.353†	-4.0	-1.0530 µg/L	2.57386	-1.0530 ppb	2.57386	244.43%
S 181.975 Axial†	2.1	8.9838 µg/L	9.46231	8.9838 ppb	9.46231	105.33%
Sb 206.836†	-6.2	-6.1132 µg/L	1.81812	-6.1132 ppb	1.81812	29.74%
Se 196.026†	-3.6	-5.5505 µg/L	9.92511	-5.5505 ppb	9.92511	178.81%
SiO2†	2.6	0.5597 µg/L	2.11408	0.5597 ppb	2.11408	377.73%
Si 251.611†	53.3	4.3814 µg/L	0.79628	4.3814 ppb	0.79628	18.17%
Sn 189.927†	1.8	0.8063 µg/L	2.07318	0.8063 ppb	2.07318	257.13%
Sr 421.552†	24.2	0.2510 µg/L	0.28905	0.2510 ppb	0.28905	115.14%
Ti 334.940†	7.3	0.0170 µg/L	0.03573	0.0170 ppb	0.03573	210.77%
Tl 190.801†	1.0	1.4032 µg/L	2.21656	1.4032 ppb	2.21656	157.97%
U 409.014†	9.3	0.8385 µg/L	3.15220	0.8385 ppb	3.15220	375.93%
V 292.402†	-3.5	-0.0357 µg/L	0.25669	-0.0357 ppb	0.25669	719.63%
Zn 213.857†	22.1	0.5548 µg/L	0.11420	0.5548 ppb	0.11420	20.58%

Sequence No.: 4

Sample ID: 1202024736|945379|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 302

Date Collected: 2/11/2010 17:09:42

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024736|945379|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57887.6	57887.6	106 %			17:10:14
1	Al 396.153Radial†	6755.7	6379.1	4744.3 µg/L		4744.3 ppb	17:10:14
1	Ca 317.933Radial†	5537.2	5041.1	4746.5 µg/L		4746.5 ppb	17:10:34
1	Fe 238.204 Radial†	613.6	564.0	4790.4 µg/L		4790.4 ppb	17:10:34
1	K 766.490 Radial†	7189.1	6649.2	4726.2 µg/L		4726.2 ppb	17:10:14
1	Mg 279.077 IEC†	562.8	519.3	4835.8 µg/L		4835.8 ppb	17:10:34
1	Na 589.592 Radial†	15965.1	14509.5	4776.6 µg/L		4776.6 ppb	17:10:14
1	Sr 421.552†	47796.4	45021.2	466.70 µg/L		466.70 ppb	17:10:14
1	Sc 361.383	2008098.9	2008098.9	105.14 %			17:11:38
1	Y 371.029	1368971.5	1368971.5	104.51 %			17:11:38
1	Ag 328.068†	63300.1	60767.3	485.74 µg/L		485.74 ppb	17:11:43
1	As 188.979†	276.5	261.8	510.80 µg/L		510.80 ppb	17:12:04
1	B 249.677†	12000.3	11081.6	482.59 µg/L		482.59 ppb	17:11:43
1	Ba 233.527†	20104.6	19146.9	499.45 µg/L		499.45 ppb	17:11:43
1	Be 313.107†	775167.6	740678.1	483.52 µg/L		483.52 ppb	17:11:38
1	Cd 226.502†	18594.4	17826.7	491.77 µg/L		491.77 ppb	17:11:43
1	Co 228.616†	10452.2	9949.6	489.09 µg/L		489.09 ppb	17:11:43
1	Cr 267.716†	23710.5	22602.7	497.48 µg/L		497.48 ppb	17:11:43
1	Cu 324.752†	76600.4	70366.1	492.19 µg/L		492.19 ppb	17:11:43
1	Mn 257.610†	149583.9	142508.7	493.93 µg/L		493.93 ppb	17:11:38
1	Mo 202.031†	4913.5	4680.6	499.70 µg/L		499.70 ppb	17:12:04
1	Ni 231.604†	9931.0	9142.9	499.37 µg/L		499.37 ppb	17:11:43
1	P 214.914†	278.4	237.2	462.73 µg/L		462.73 ppb	17:12:04
1	Pb 220.353†	2084.8	1885.6	503.27 µg/L		503.27 ppb	17:12:04
1	S 181.975 Axial†	1222.6	1148.0	5029.8 µg/L		5029.8 ppb	17:12:04
1	Sb 206.836†	571.0	516.1	510.14 µg/L		510.14 ppb	17:12:04
1	Se 196.026†	347.5	314.7	487.14 µg/L		487.14 ppb	17:12:04
1	SiO2†	51427.5	47661.1	10264 µg/L		10264 ppb	17:11:43
1	Si 251.611†	61457.9	58137.8	4779.2 µg/L		4779.2 ppb	17:11:43
1	Sn 189.927†	1221.1	1162.2	534.55 µg/L		534.55 ppb	17:12:04
1	Ti 334.940†	211480.2	201016.1	483.22 µg/L		483.22 ppb	17:11:38
1	Tl 190.801†	349.1	356.3	503.16 µg/L		503.16 ppb	17:12:04
1	U 409.014†	5894.6	5659.8	511.46 µg/L		511.46 ppb	17:11:43
1	V 292.402†	48631.6	46296.2	499.49 µg/L		499.49 ppb	17:11:43
1	Zn 213.857†	21047.8	19542.3	484.49 µg/L		484.49 ppb	17:11:43
2	Sc RADIAL	58112.3	58112.3	106 %			17:10:40
2	Al 396.153Radial†	6827.4	6421.9	4776.4 µg/L		4776.4 ppb	17:10:40
2	Ca 317.933Radial†	5516.8	5001.8	4709.5 µg/L		4709.5 ppb	17:11:00
2	Fe 238.204 Radial†	610.8	559.1	4748.8 µg/L		4748.8 ppb	17:11:00
2	K 766.490 Radial†	7246.3	6676.7	4745.8 µg/L		4745.8 ppb	17:10:40
2	Mg 279.077 IEC†	562.3	516.8	4812.9 µg/L		4812.9 ppb	17:11:00
2	Na 589.592 Radial†	16166.4	14640.3	4819.6 µg/L		4819.6 ppb	17:10:40
2	Sr 421.552†	48335.2	45353.0	470.14 µg/L		470.14 ppb	17:10:40
2	Sc 361.383	2026791.0	2026791.0	106.12 %			17:12:11
2	Y 371.029	1381380.2	1381380.2	105.46 %			17:12:11
2	Ag 328.068†	62218.1	59192.5	473.15 µg/L		473.15 ppb	17:12:17
2	As 188.979†	271.2	254.4	496.31 µg/L		496.31 ppb	17:12:37
2	B 249.677†	11801.4	10788.9	469.80 µg/L		469.80 ppb	17:12:17
2	Ba 233.527†	19630.6	18523.9	483.20 µg/L		483.20 ppb	17:12:17
2	Be 313.107†	767352.9	726515.2	474.28 µg/L		474.28 ppb	17:12:11
2	Cd 226.502†	18203.3	17295.1	477.09 µg/L		477.09 ppb	17:12:17
2	Co 228.616†	10256.0	9673.0	475.49 µg/L		475.49 ppb	17:12:17
2	Cr 267.716†	23175.5	21890.6	481.81 µg/L		481.81 ppb	17:12:17
2	Cu 324.752†	75278.1	68448.3	478.79 µg/L		478.79 ppb	17:12:17
2	Mn 257.610†	148043.7	139745.4	484.36 µg/L		484.36 ppb	17:12:11
2	Mo 202.031†	4866.0	4592.8	490.32 µg/L		490.32 ppb	17:12:37
2	Ni 231.604†	9768.2	8902.4	486.23 µg/L		486.23 ppb	17:12:17
2	P 214.914†	282.1	238.2	466.16 µg/L		466.16 ppb	17:12:37
2	Pb 220.353†	2073.0	1856.2	495.44 µg/L		495.44 ppb	17:12:37

2	S 181.975 Axial†	1217.9	1132.8	4963.1 µg/L	4963.1 ppb	17:12:37
2	Sb 206.836†	566.8	507.2	501.36 µg/L	501.36 ppb	17:12:37
2	Se 196.026†	337.0	301.8	467.42 µg/L	467.42 ppb	17:12:37
2	SiO2†	50486.8	46323.6	9976.0 µg/L	9976.0 ppb	17:12:17
2	Si 251.611†	60271.7	56481.0	4643.0 µg/L	4643.0 ppb	17:12:17
2	Sn 189.927†	1197.5	1129.3	519.44 µg/L	519.44 ppb	17:12:37
2	Ti 334.940†	209453.2	197251.1	474.17 µg/L	474.17 ppb	17:12:11
2	Tl 190.801†	350.7	354.7	500.89 µg/L	500.89 ppb	17:12:37
2	U 409.014†	5779.6	5499.7	496.98 µg/L	496.98 ppb	17:12:17
2	V 292.402†	47686.7	44979.3	485.32 µg/L	485.32 ppb	17:12:17
2	Zn 213.857†	20718.3	19047.2	472.21 µg/L	472.21 ppb	17:12:17
3	Sc RADIAL	57093.4	57093.4	105 %		17:11:06
3	Al 396.153Radial†	6891.4	6597.5	4908.1 µg/L	4908.1 ppb	17:11:06
3	Ca 317.933Radial†	5599.8	5173.5	4871.2 µg/L	4871.2 ppb	17:11:26
3	Fe 238.204 Radial†	623.4	581.4	4937.6 µg/L	4937.6 ppb	17:11:26
3	K 766.490 Radial†	7255.8	6807.3	4838.6 µg/L	4838.6 ppb	17:11:06
3	Mg 279.077 IEC†	569.9	533.4	4966.6 µg/L	4966.6 ppb	17:11:26
3	Na 589.592 Radial†	16183.5	14927.6	4914.2 µg/L	4914.2 ppb	17:11:06
3	Sr 421.552†	48646.4	46460.6	481.62 µg/L	481.62 ppb	17:11:06
3	Sc 361.383	2012096.1	2012096.1	105.35 %		17:12:44
3	Y 371.029	1370726.0	1370726.0	104.64 %		17:12:44
3	Ag 328.068†	61395.3	58839.7	470.27 µg/L	470.27 ppb	17:12:50
3	As 188.979†	251.1	237.2	462.73 µg/L	462.73 ppb	17:13:11
3	B 249.677†	11570.8	10651.3	463.65 µg/L	463.65 ppb	17:12:50
3	Ba 233.527†	19049.7	18107.6	472.33 µg/L	472.33 ppb	17:12:50
3	Be 313.107†	748659.8	714052.9	466.14 µg/L	466.14 ppb	17:12:44
3	Cd 226.502†	17710.5	16952.6	467.61 µg/L	467.61 ppb	17:12:50
3	Co 228.616†	9886.7	9393.1	461.70 µg/L	461.70 ppb	17:12:50
3	Cr 267.716†	22049.0	20980.9	461.79 µg/L	461.79 ppb	17:12:50
3	Cu 324.752†	72887.9	66697.6	466.58 µg/L	466.58 ppb	17:12:50
3	Mn 257.610†	144566.3	137463.4	476.47 µg/L	476.47 ppb	17:12:44
3	Mo 202.031†	4423.3	4206.0	449.06 µg/L	449.06 ppb	17:13:11
3	Ni 231.604†	9376.0	8597.4	469.57 µg/L	469.57 ppb	17:12:50
3	P 214.914†	259.0	218.2	423.88 µg/L	423.88 ppb	17:13:11
3	Pb 220.353†	1923.0	1728.1	461.18 µg/L	461.18 ppb	17:13:11
3	S 181.975 Axial†	1138.4	1065.7	4669.1 µg/L	4669.1 ppb	17:13:11
3	Sb 206.836†	516.2	463.0	457.46 µg/L	457.46 ppb	17:13:11
3	Se 196.026†	320.5	288.4	447.38 µg/L	447.38 ppb	17:13:11
3	SiO2†	49425.4	45663.6	9833.9 µg/L	9833.9 ppb	17:12:50
3	Si 251.611†	58980.3	55670.0	4576.4 µg/L	4576.4 ppb	17:12:50
3	Sn 189.927†	1089.0	1034.6	475.86 µg/L	475.86 ppb	17:13:11
3	Ti 334.940†	203660.8	193194.5	464.40 µg/L	464.40 ppb	17:12:44
3	Tl 190.801†	315.8	324.0	457.95 µg/L	457.95 ppb	17:13:11
3	U 409.014†	5487.0	5261.8	475.40 µg/L	475.40 ppb	17:12:50
3	V 292.402†	45865.1	43578.4	470.03 µg/L	470.03 ppb	17:12:50
3	Zn 213.857†	20001.8	18509.8	458.86 µg/L	458.86 ppb	17:12:50

Mean Data: 1202024736|945379|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2015662.0	105.54 %	0.515			0.49%
Sc RADIAL	57697.7	106 %	1.0			0.93%
Y 371.029	1373692.6	104.87 %	0.513			0.49%
Ag 328.068†	59599.8	476.39 µg/L	8.230	476.39 ppb	8.230	1.73%
Al 396.153Radial†	6466.2	4809.6 µg/L	86.79	4809.6 ppb	86.79	1.80%
As 188.979†	251.1	489.95 µg/L	24.662	489.95 ppb	24.662	5.03%
B 249.677†	10840.6	472.01 µg/L	9.662	472.01 ppb	9.662	2.05%
Ba 233.527†	18592.8	484.99 µg/L	13.645	484.99 ppb	13.645	2.81%
Be 313.107†	727082.1	474.65 µg/L	8.696	474.65 ppb	8.696	1.83%
Ca 317.933Radial†	5072.1	4775.7 µg/L	84.73	4775.7 ppb	84.73	1.77%
Cd 226.502†	17358.1	478.82 µg/L	12.174	478.82 ppb	12.174	2.54%
Co 228.616†	9671.9	475.43 µg/L	13.698	475.43 ppb	13.698	2.88%
Cr 267.716†	21824.7	480.36 µg/L	17.890	480.36 ppb	17.890	3.72%
Cu 324.752†	68504.0	479.19 µg/L	12.807	479.19 ppb	12.807	2.67%
Fe 238.204 Radial†	568.2	4825.6 µg/L	99.18	4825.6 ppb	99.18	2.06%
K 766.490 Radial†	6711.1	4770.2 µg/L	60.03	4770.2 ppb	60.03	1.26%
Mg 279.077 IEC†	523.2	4871.8 µg/L	82.94	4871.8 ppb	82.94	1.70%
Mn 257.610†	139905.8	484.92 µg/L	8.742	484.92 ppb	8.742	1.80%
Mo 202.031†	4493.1	479.70 µg/L	26.943	479.70 ppb	26.943	5.62%
Na 589.592 Radial†	14692.5	4836.8 µg/L	70.42	4836.8 ppb	70.42	1.46%

Ni 231.604†	8880.9	485.06 µg/L	14.931	485.06 ppb	14.931	3.08%
P 214.914†	231.2	450.92 µg/L	23.486	450.92 ppb	23.486	5.21%
Pb 220.353†	1823.3	486.63 µg/L	22.384	486.63 ppb	22.384	4.60%
S 181.975 Axial†	1115.5	4887.3 µg/L	191.88	4887.3 ppb	191.88	3.93%
Sb 206.836†	495.4	489.65 µg/L	28.225	489.65 ppb	28.225	5.76%
Se 196.026†	301.6	467.31 µg/L	19.884	467.31 ppb	19.884	4.25%
SiO2†	46549.4	10025 µg/L	219.2	10025 ppb	219.2	2.19%
Si 251.611†	56762.9	4666.2 µg/L	103.40	4666.2 ppb	103.40	2.22%
Sn 189.927†	1108.7	509.95 µg/L	30.475	509.95 ppb	30.475	5.98%
Sr 421.552†	45611.6	472.82 µg/L	7.814	472.82 ppb	7.814	1.65%
Ti 334.940†	197153.9	473.93 µg/L	9.414	473.93 ppb	9.414	1.99%
Tl 190.801†	345.0	487.33 µg/L	25.470	487.33 ppb	25.470	5.23%
U 409.014†	5473.8	494.62 µg/L	18.147	494.62 ppb	18.147	3.67%
V 292.402†	44951.3	484.95 µg/L	14.732	484.95 ppb	14.732	3.04%
Zn 213.857†	19033.1	471.85 µg/L	12.817	471.85 ppb	12.817	2.72%

Sequence No.: 6

Sample ID: 1202024737|945379|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 304

Date Collected: 2/11/2010 17:16:54

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024737|945379|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55946.2	55946.2	103 %		17:17:27
1	Al 396.153Radial†	-1.5	8.6	6.4413 µg/L	6.4413 ppb	17:17:27
1	Ca 317.933Radial†	240.2	55.1	51.901 µg/L	51.901 ppb	17:17:47
1	Fe 238.204 Radial†	17.1	2.2	18.775 µg/L	18.775 ppb	17:17:47
1	K 766.490 Radial†	444.7	305.4	217.06 µg/L	217.06 ppb	17:17:27
1	Mg 279.077 IEC†	10.6	-0.9	-8.3534 µg/L	-8.3534 ppb	17:17:47
1	Na 589.592 Radial†	1089.8	521.2	171.59 µg/L	171.59 ppb	17:17:27
1	Sr 421.552†	90.7	48.9	0.5071 µg/L	0.5071 ppb	17:17:27
1	Sc 361.383	2018796.6	2018796.6	105.71 %		17:18:49
1	Y 371.029	1378423.8	1378423.8	105.23 %		17:18:49
1	Ag 328.068†	-562.6	32.2	0.2572 µg/L	0.2572 ppb	17:18:55
1	As 188.979†	3.2	1.8	3.6119 µg/L	3.6119 ppb	17:19:15
1	B 249.677†	756.4	384.1	16.778 µg/L	16.778 ppb	17:18:55
1	Ba 233.527†	-15.9	11.0	0.2862 µg/L	0.2862 ppb	17:19:15
1	Be 313.107†	-3464.6	162.8	0.1063 µg/L	0.1063 ppb	17:18:55
1	Cd 226.502†	-140.3	9.4	0.2573 µg/L	0.2573 ppb	17:19:15
1	Co 228.616†	-19.3	-9.4	-0.4627 µg/L	-0.4627 ppb	17:19:15
1	Cr 267.716†	9.1	61.0	1.3411 µg/L	1.3411 ppb	17:18:55
1	Cu 324.752†	2463.5	-155.5	-1.0839 µg/L	-1.0839 ppb	17:18:55
1	Mn 257.610†	-4.9	239.5	0.8321 µg/L	0.8321 ppb	17:19:15
1	Mo 202.031†	-12.8	-4.6	-0.4881 µg/L	-0.4881 ppb	17:19:15
1	Ni 231.604†	315.6	-3.6	-0.1948 µg/L	-0.1948 ppb	17:19:15
1	P 214.914†	33.2	3.7	8.1714 µg/L	8.1714 ppb	17:19:15
1	Pb 220.353†	98.4	-4.1	-1.0819 µg/L	-1.0819 ppb	17:19:15
1	S 181.975 Axial†	26.4	10.2	44.677 µg/L	44.677 ppb	17:19:15
1	Sb 206.836†	26.5	-1.9	-1.9144 µg/L	-1.9144 ppb	17:19:15
1	Se 196.026†	24.2	7.1	10.869 µg/L	10.869 ppb	17:19:15
1	SiO2†	14936.4	12880.2	2773.8 µg/L	2773.8 ppb	17:18:55
1	Si 251.611†	17009.2	15778.3	1297.1 µg/L	1297.1 ppb	17:18:55
1	Sn 189.927†	6.0	6.6	3.0194 µg/L	3.0194 ppb	17:19:15
1	Ti 334.940†	175.0	49.4	0.1204 µg/L	0.1204 ppb	17:18:55
1	Tl 190.801†	-25.9	-0.2	-0.2619 µg/L	-0.2619 ppb	17:19:15
1	U 409.014†	-76.5	-18.7	-1.7027 µg/L	-1.7027 ppb	17:18:55
1	V 292.402†	-44.6	2.0	0.0212 µg/L	0.0212 ppb	17:18:55
1	Zn 213.857†	542.3	37.4	0.9371 µg/L	0.9371 ppb	17:19:15
2	Sc RADIAL	57853.4	57853.4	106 %		17:17:53
2	Al 396.153Radial†	3.4	13.4	9.9700 µg/L	9.9700 ppb	17:17:53
2	Ca 317.933Radial†	230.0	37.9	35.644 µg/L	35.644 ppb	17:18:13
2	Fe 238.204 Radial†	19.7	4.1	34.991 µg/L	34.991 ppb	17:18:13
2	K 766.490 Radial†	444.7	291.1	206.90 µg/L	206.90 ppb	17:17:53
2	Mg 279.077 IEC†	9.1	-2.7	-25.052 µg/L	-25.052 ppb	17:18:13
2	Na 589.592 Radial†	1092.8	488.9	160.96 µg/L	160.96 ppb	17:17:53
2	Sr 421.552†	27.7	-13.4	-0.1389 µg/L	-0.1389 ppb	17:17:53
2	Sc 361.383	2016082.5	2016082.5	105.56 %		17:19:21
2	Y 371.029	1377323.6	1377323.6	105.15 %		17:19:21
2	Ag 328.068†	-575.2	19.7	0.1589 µg/L	0.1589 ppb	17:19:27
2	As 188.979†	-2.3	-3.3	-6.5009 µg/L	-6.5009 ppb	17:19:47
2	B 249.677†	782.2	409.5	17.881 µg/L	17.881 ppb	17:19:27
2	Ba 233.527†	-5.7	20.6	0.5363 µg/L	0.5363 ppb	17:19:47
2	Be 313.107†	-3485.5	138.6	0.0904 µg/L	0.0904 ppb	17:19:27
2	Cd 226.502†	-133.6	15.6	0.4262 µg/L	0.4262 ppb	17:19:47
2	Co 228.616†	-12.8	-3.3	-0.1623 µg/L	-0.1623 ppb	17:19:47
2	Cr 267.716†	-1.5	51.0	1.1211 µg/L	1.1211 ppb	17:19:27
2	Cu 324.752†	2454.0	-161.4	-1.1225 µg/L	-1.1225 ppb	17:19:27
2	Mn 257.610†	-8.9	235.7	0.8218 µg/L	0.8218 ppb	17:19:47
2	Mo 202.031†	-4.4	3.4	0.3653 µg/L	0.3653 ppb	17:19:47
2	Ni 231.604†	330.8	11.1	0.6100 µg/L	0.6100 ppb	17:19:47
2	P 214.914†	34.8	5.3	11.544 µg/L	11.544 ppb	17:19:47
2	Pb 220.353†	91.8	-10.2	-2.7164 µg/L	-2.7164 ppb	17:19:47

2	S 181.975 Axial†	29.9	13.5	59.125 µg/L	59.125 ppb	17:19:47
2	Sb 206.836†	21.0	-7.0	-6.9379 µg/L	-6.9379 ppb	17:19:47
2	Se 196.026†	17.6	0.8	1.3964 µg/L	1.3964 ppb	17:19:47
2	SiO2†	15041.0	12998.3	2799.3 µg/L	2799.3 ppb	17:19:27
2	Si 251.611†	17116.1	15901.3	1307.2 µg/L	1307.2 ppb	17:19:27
2	Sn 189.927†	2.0	2.8	1.2644 µg/L	1.2644 ppb	17:19:47
2	Ti 334.940†	225.1	97.2	0.2362 µg/L	0.2362 ppb	17:19:27
2	Tl 190.801†	-24.0	1.6	2.2016 µg/L	2.2016 ppb	17:19:47
2	U 409.014†	-103.7	-44.6	-4.0483 µg/L	-4.0483 ppb	17:19:27
2	V 292.402†	-38.0	8.2	0.0928 µg/L	0.0928 ppb	17:19:27
2	Zn 213.857†	548.0	43.5	1.0860 µg/L	1.0860 ppb	17:19:47
3	Sc RADIAL	57038.8	57038.8	105 %		17:18:19
3	Al 396.153Radial†	6.6	16.4	12.252 µg/L	12.252 ppb	17:18:19
3	Ca 317.933Radial†	240.6	51.0	48.064 µg/L	48.064 ppb	17:18:39
3	Fe 238.204 Radial†	19.7	4.4	36.984 µg/L	36.984 ppb	17:18:39
3	K 766.490 Radial†	370.2	225.7	160.46 µg/L	160.46 ppb	17:18:19
3	Mg 279.077 IEC†	9.1	-2.6	-24.277 µg/L	-24.277 ppb	17:18:39
3	Na 589.592 Radial†	1102.3	512.8	168.83 µg/L	168.83 ppb	17:18:19
3	Sr 421.552†	57.0	15.0	0.1558 µg/L	0.1558 ppb	17:18:19
3	Sc 361.383	2021677.4	2021677.4	105.86 %		17:19:53
3	Y 371.029	1380612.8	1380612.8	105.40 %		17:19:53
3	Ag 328.068†	-605.0	-7.0	-0.0512 µg/L	-0.0512 ppb	17:19:59
3	As 188.979†	-0.6	-1.7	-3.3026 µg/L	-3.3026 ppb	17:20:19
3	B 249.677†	741.3	368.9	16.103 µg/L	16.103 ppb	17:19:59
3	Ba 233.527†	-8.6	17.9	0.4669 µg/L	0.4669 ppb	17:20:19
3	Be 313.107†	-3536.7	99.4	0.0648 µg/L	0.0648 ppb	17:19:59
3	Cd 226.502†	-149.2	1.2	0.0301 µg/L	0.0301 ppb	17:20:19
3	Co 228.616†	-15.8	-6.1	-0.3005 µg/L	-0.3005 ppb	17:20:19
3	Cr 267.716†	15.9	67.4	1.4825 µg/L	1.4825 ppb	17:19:59
3	Cu 324.752†	2439.0	-182.0	-1.2663 µg/L	-1.2663 ppb	17:19:59
3	Mn 257.610†	-27.9	217.8	0.7601 µg/L	0.7601 ppb	17:20:19
3	Mo 202.031†	-4.5	3.3	0.3498 µg/L	0.3498 ppb	17:20:19
3	Ni 231.604†	325.7	5.5	0.3019 µg/L	0.3019 ppb	17:20:19
3	P 214.914†	32.2	2.8	6.0543 µg/L	6.0543 ppb	17:20:19
3	Pb 220.353†	97.9	-4.7	-1.2723 µg/L	-1.2723 ppb	17:20:19
3	S 181.975 Axial†	29.3	12.9	56.513 µg/L	56.513 ppb	17:20:19
3	Sb 206.836†	20.9	-7.2	-7.1488 µg/L	-7.1488 ppb	17:20:19
3	Se 196.026†	13.2	-3.4	-5.0190 µg/L	-5.0190 ppb	17:20:19
3	SiO2†	14562.5	12506.9	2693.4 µg/L	2693.4 ppb	17:19:59
3	Si 251.611†	16541.0	15313.1	1258.8 µg/L	1258.8 ppb	17:19:59
3	Sn 189.927†	0.8	1.6	0.7280 µg/L	0.7280 ppb	17:20:19
3	Ti 334.940†	233.0	104.0	0.2529 µg/L	0.2529 ppb	17:19:59
3	Tl 190.801†	-26.6	-0.8	-1.1488 µg/L	-1.1488 ppb	17:20:19
3	U 409.014†	49.1	100.0	9.0425 µg/L	9.0425 ppb	17:19:59
3	V 292.402†	-13.2	31.7	0.3580 µg/L	0.3580 ppb	17:19:59
3	Zn 213.857†	544.7	39.0	0.9745 µg/L	0.9745 ppb	17:20:19

Mean Data: 1202024737|945379|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2018852.2	105.71 %		0.146			0.14%
Sc RADIAL	56946.1	104 %		1.8			1.68%
Y 371.029	1378786.7	105.26 %		0.128			0.12%
Ag 328.068†	15.0	0.1216 µg/L		0.15755	0.1216 ppb	0.15755	129.52%
Al 396.153Radial†	12.8	9.5545 µg/L		2.92758	9.5545 ppb	2.92758	30.64%
As 188.979†	-1.1	-2.0639 µg/L		5.16896	-2.0639 ppb	5.16896	250.45%
B 249.677†	387.5	16.921 µg/L		0.8975	16.921 ppb	0.8975	5.30%
Ba 233.527†	16.5	0.4298 µg/L		0.12911	0.4298 ppb	0.12911	30.04%
Be 313.107†	133.6	0.0872 µg/L		0.02094	0.0872 ppb	0.02094	24.03%
Ca 317.933Radial†	48.0	45.203 µg/L		8.4978	45.203 ppb	8.4978	18.80%
Cd 226.502†	8.7	0.2379 µg/L		0.19879	0.2379 ppb	0.19879	83.57%
Co 228.616†	-6.3	-0.3085 µg/L		0.15038	-0.3085 ppb	0.15038	48.74%
Cr 267.716†	59.8	1.3149 µg/L		0.18211	1.3149 ppb	0.18211	13.85%
Cu 324.752†	-166.3	-1.1576 µg/L		0.09612	-1.1576 ppb	0.09612	8.30%
Fe 238.204 Radial†	3.6	30.250 µg/L		9.9874	30.250 ppb	9.9874	33.02%
K 766.490 Radial†	274.1	194.81 µg/L		30.178	194.81 ppb	30.178	15.49%
Mg 279.077 IEC†	-2.1	-19.227 µg/L		9.4252	-19.227 ppb	9.4252	49.02%
Mn 257.610†	231.0	0.8047 µg/L		0.03897	0.8047 ppb	0.03897	4.84%
Mo 202.031†	0.7	0.0757 µg/L		0.48832	0.0757 ppb	0.48832	645.36%
Na 589.592 Radial†	507.7	167.13 µg/L		5.512	167.13 ppb	5.512	3.30%

Ni 231.604†	4.4	0.2390 µg/L	0.40608	0.2390 ppb	0.40608	169.90%
P 214.914†	3.9	8.5899 µg/L	2.76865	8.5899 ppb	2.76865	32.23%
Pb 220.353†	-6.3	-1.6902 µg/L	0.89379	-1.6902 ppb	0.89379	52.88%
S 181.975 Axial†	12.2	53.438 µg/L	7.6994	53.438 ppb	7.6994	14.41%
Sb 206.836†	-5.4	-5.3337 µg/L	2.96308	-5.3337 ppb	2.96308	55.55%
Se 196.026†	1.5	2.4156 µg/L	7.99307	2.4156 ppb	7.99307	330.89%
SiO2†	12795.1	2755.5 µg/L	55.24	2755.5 ppb	55.24	2.00%
Si 251.611†	15664.2	1287.7 µg/L	25.50	1287.7 ppb	25.50	1.98%
Sn 189.927†	3.6	1.6706 µg/L	1.19847	1.6706 ppb	1.19847	71.74%
Sr 421.552†	16.8	0.1746 µg/L	0.32342	0.1746 ppb	0.32342	185.20%
Ti 334.940†	83.5	0.2032 µg/L	0.07216	0.2032 ppb	0.07216	35.51%
Tl 190.801†	0.2	0.2636 µg/L	1.73594	0.2636 ppb	1.73594	658.51%
U 409.014†	12.2	1.0972 µg/L	6.98008	1.0972 ppb	6.98008	636.19%
V 292.402†	14.0	0.1574 µg/L	0.17744	0.1574 ppb	0.17744	112.76%
Zn 213.857†	40.0	0.9992 µg/L	0.07747	0.9992 ppb	0.07747	7.75%



Sequence No.: 7

Sample ID: 1202024738|945379|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 305

Date Collected: 2/11/2010 17:20:28

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024738|945379|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57909.6	57909.6	106 %		17:21:01
1	Al 396.153Radial†	6777.3	6397.1	4757.8 µg/L	4757.8 ppb	17:21:01
1	Ca 317.933Radial†	5523.2	5026.0	4732.3 µg/L	4732.3 ppb	17:21:21
1	Fe 238.204 Radial†	606.9	557.5	4735.0 µg/L	4735.0 ppb	17:21:21
1	K 766.490 Radial†	7460.7	6902.6	4906.3 µg/L	4906.3 ppb	17:21:01
1	Mg 279.077 IEC†	565.6	521.8	4859.2 µg/L	4859.2 ppb	17:21:21
1	Na 589.592 Radial†	16265.5	14786.8	4867.9 µg/L	4867.9 ppb	17:21:01
1	Sr 421.552†	47793.6	45001.4	466.49 µg/L	466.49 ppb	17:21:01
1	Sc 361.383	2022907.7	2022907.7	105.92 %		17:22:25
1	Y 371.029	1379571.8	1379571.8	105.32 %		17:22:25
1	Ag 328.068†	62546.9	59615.4	476.54 µg/L	476.54 ppb	17:22:31
1	As 188.979†	271.5	255.2	497.80 µg/L	497.80 ppb	17:22:51
1	B 249.677†	12231.4	11216.3	488.49 µg/L	488.49 ppb	17:22:31
1	Ba 233.527†	19758.2	18679.9	487.27 µg/L	487.27 ppb	17:22:31
1	Be 313.107†	775245.3	735354.4	480.05 µg/L	480.05 ppb	17:22:25
1	Cd 226.502†	18210.0	17334.3	478.18 µg/L	478.18 ppb	17:22:31
1	Co 228.616†	10287.6	9721.4	477.86 µg/L	477.86 ppb	17:22:31
1	Cr 267.716†	23341.4	22089.2	486.18 µg/L	486.18 ppb	17:22:31
1	Cu 324.752†	75937.9	69207.3	484.09 µg/L	484.09 ppb	17:22:31
1	Mn 257.610†	149980.9	141842.0	491.61 µg/L	491.61 ppb	17:22:25
1	Mo 202.031†	4883.9	4618.4	493.07 µg/L	493.07 ppb	17:22:51
1	Ni 231.604†	9756.9	8909.4	486.61 µg/L	486.61 ppb	17:22:31
1	P 214.914†	289.5	245.7	481.75 µg/L	481.75 ppb	17:22:51
1	Pb 220.353†	2073.3	1860.2	496.51 µg/L	496.51 ppb	17:22:51
1	S 181.975 Axial†	1237.0	1153.1	5051.9 µg/L	5051.9 ppb	17:22:51
1	Sb 206.836†	572.9	513.9	508.02 µg/L	508.02 ppb	17:22:51
1	Se 196.026†	347.4	312.2	483.19 µg/L	483.19 ppb	17:22:51
1	SiO2†	64070.0	59238.9	12757 µg/L	12757 ppb	17:22:31
1	Si 251.611†	76890.4	72279.8	5941.8 µg/L	5941.8 ppb	17:22:31
1	Sn 189.927†	1213.1	1146.1	527.18 µg/L	527.18 ppb	17:22:51
1	Ti 334.940†	212027.4	200060.3	480.92 µg/L	480.92 ppb	17:22:25
1	Tl 190.801†	345.7	350.7	495.26 µg/L	495.26 ppb	17:22:51
1	U 409.014†	5774.0	5504.9	497.45 µg/L	497.45 ppb	17:22:31
1	V 292.402†	48057.8	45415.9	490.01 µg/L	490.01 ppb	17:22:31
1	Zn 213.857†	20645.9	19016.4	471.43 µg/L	471.43 ppb	17:22:31
2	Sc RADIAL	58549.3	58549.3	107 %		17:21:27
2	Al 396.153Radial†	6751.8	6303.6	4688.4 µg/L	4688.4 ppb	17:21:27
2	Ca 317.933Radial†	5519.6	4965.7	4675.5 µg/L	4675.5 ppb	17:21:47
2	Fe 238.204 Radial†	613.8	557.6	4736.1 µg/L	4736.1 ppb	17:21:47
2	K 766.490 Radial†	7437.3	6804.0	4836.2 µg/L	4836.2 ppb	17:21:27
2	Mg 279.077 IEC†	561.9	512.4	4771.9 µg/L	4771.9 ppb	17:21:47
2	Na 589.592 Radial†	16309.2	14660.1	4826.1 µg/L	4826.1 ppb	17:21:27
2	Sr 421.552†	47894.3	44603.2	462.36 µg/L	462.36 ppb	17:21:27
2	Sc 361.383	2049195.7	2049195.7	107.30 %		17:22:58
2	Y 371.029	1397084.2	1397084.2	106.65 %		17:22:58
2	Ag 328.068†	62768.7	59064.7	472.13 µg/L	472.13 ppb	17:23:04
2	As 188.979†	275.0	255.2	497.82 µg/L	497.82 ppb	17:23:24
2	B 249.677†	12320.5	11151.2	485.63 µg/L	485.63 ppb	17:23:04
2	Ba 233.527†	19771.4	18452.8	481.35 µg/L	481.35 ppb	17:23:04
2	Be 313.107†	767359.0	718615.2	469.12 µg/L	469.12 ppb	17:22:58
2	Cd 226.502†	18220.2	17123.3	472.35 µg/L	472.35 ppb	17:23:04
2	Co 228.616†	10270.9	9581.3	470.98 µg/L	470.98 ppb	17:23:04
2	Cr 267.716†	23306.3	21773.7	479.24 µg/L	479.24 ppb	17:23:04
2	Cu 324.752†	76058.6	68400.2	478.45 µg/L	478.45 ppb	17:23:04
2	Mn 257.610†	148529.0	138672.4	480.64 µg/L	480.64 ppb	17:22:58
2	Mo 202.031†	4833.7	4512.5	481.76 µg/L	481.76 ppb	17:23:24
2	Ni 231.604†	9765.2	8798.9	480.58 µg/L	480.58 ppb	17:23:04
2	P 214.914†	282.4	235.6	460.59 µg/L	460.59 ppb	17:23:24
2	Pb 220.353†	2053.9	1817.1	484.98 µg/L	484.98 ppb	17:23:24

2	S 181.975 Axial†	1215.7	1118.2	4899.3 µg/L	4899.3 ppb	17:23:24
2	Sb 206.836†	563.3	498.0	492.22 µg/L	492.22 ppb	17:23:24
2	Se 196.026†	343.7	304.5	471.64 µg/L	471.64 ppb	17:23:24
2	SiO2†	64274.4	58653.4	12631 µg/L	12631 ppb	17:23:04
2	Si 251.611†	77074.7	71520.4	5879.3 µg/L	5879.3 ppb	17:23:04
2	Sn 189.927†	1204.0	1123.0	516.52 µg/L	516.52 ppb	17:23:24
2	Ti 334.940†	209679.4	195304.0	469.49 µg/L	469.49 ppb	17:22:58
2	Tl 190.801†	342.6	343.6	485.26 µg/L	485.26 ppb	17:23:24
2	U 409.014†	5798.2	5457.5	493.16 µg/L	493.16 ppb	17:23:04
2	V 292.402†	48019.9	44798.5	483.32 µg/L	483.32 ppb	17:23:04
2	Zn 213.857†	20735.8	18850.1	467.32 µg/L	467.32 ppb	17:23:04
3	Sc RADIAL	58354.0	58354.0	107 %		17:21:53
3	Al 396.153Radial†	6812.3	6381.2	4746.9 µg/L	4746.9 ppb	17:21:53
3	Ca 317.933Radial†	5544.4	5006.2	4713.6 µg/L	4713.6 ppb	17:22:13
3	Fe 238.204 Radial†	616.0	561.6	4769.7 µg/L	4769.7 ppb	17:22:13
3	K 766.490 Radial†	7488.0	6874.6	4886.4 µg/L	4886.4 ppb	17:21:53
3	Mg 279.077 IEC†	563.5	515.7	4801.8 µg/L	4801.8 ppb	17:22:13
3	Na 589.592 Radial†	16294.8	14697.5	4838.5 µg/L	4838.5 ppb	17:21:53
3	Sr 421.552†	48119.3	44963.0	466.09 µg/L	466.09 ppb	17:21:53
3	Sc 361.383	2036106.0	2036106.0	106.61 %		17:23:31
3	Y 371.029	1387849.7	1387849.7	105.95 %		17:23:31
3	Ag 328.068†	61576.4	58322.4	466.13 µg/L	466.13 ppb	17:23:37
3	As 188.979†	249.2	232.6	453.70 µg/L	453.70 ppb	17:23:57
3	B 249.677†	12034.6	10956.8	477.09 µg/L	477.09 ppb	17:23:37
3	Ba 233.527†	19123.2	17963.3	468.57 µg/L	468.57 ppb	17:23:37
3	Be 313.107†	751753.5	708575.1	462.56 µg/L	462.56 ppb	17:23:31
3	Cd 226.502†	17639.3	16687.5	460.31 µg/L	460.31 ppb	17:23:37
3	Co 228.616†	9856.8	9254.4	454.88 µg/L	454.88 ppb	17:23:37
3	Cr 267.716†	22230.4	20904.2	460.10 µg/L	460.10 ppb	17:23:37
3	Cu 324.752†	73343.6	66309.2	463.85 µg/L	463.85 ppb	17:23:37
3	Mn 257.610†	145916.4	137111.7	475.24 µg/L	475.24 ppb	17:23:31
3	Mo 202.031†	4492.1	4221.1	450.66 µg/L	450.66 ppb	17:23:57
3	Ni 231.604†	9375.4	8491.8	463.81 µg/L	463.81 ppb	17:23:37
3	P 214.914†	263.1	219.2	426.30 µg/L	426.30 ppb	17:23:57
3	Pb 220.353†	1949.7	1731.6	462.12 µg/L	462.12 ppb	17:23:57
3	S 181.975 Axial†	1168.1	1080.9	4735.8 µg/L	4735.8 ppb	17:23:57
3	Sb 206.836†	527.4	467.8	462.15 µg/L	462.15 ppb	17:23:57
3	Se 196.026†	324.6	288.6	447.45 µg/L	447.45 ppb	17:23:57
3	SiO2†	62546.9	57418.1	12365 µg/L	12365 ppb	17:23:37
3	Si 251.611†	74972.1	70010.0	5755.2 µg/L	5755.2 ppb	17:23:37
3	Sn 189.927†	1108.7	1040.8	478.74 µg/L	478.74 ppb	17:23:57
3	Ti 334.940†	205241.5	192397.6	462.49 µg/L	462.49 ppb	17:23:31
3	Tl 190.801†	321.4	325.8	460.36 µg/L	460.36 ppb	17:23:57
3	U 409.014†	5539.3	5249.4	474.32 µg/L	474.32 ppb	17:23:37
3	V 292.402†	46067.4	43254.8	466.57 µg/L	466.57 ppb	17:23:37
3	Zn 213.857†	19941.2	18229.0	451.90 µg/L	451.90 ppb	17:23:37

Mean Data: 1202024738|945379|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2036069.8	106.61 %		0.688			0.56%
Sc RADIAL	58271.0	107 %		0.6			0.65%
Y 371.029	1388168.6	105.97 %		0.669			0.63%
Ag 328.068†	59000.8	471.60 µg/L		5.225	471.60 ppb	5.225	1.11%
Al 396.153Radial†	6360.6	4731.0 µg/L		37.34	4731.0 ppb	37.34	0.79%
As 188.979†	247.6	483.11 µg/L		25.468	483.11 ppb	25.468	5.27%
B 249.677†	11108.1	483.73 µg/L		5.932	483.73 ppb	5.932	1.23%
Ba 233.527†	18365.3	479.06 µg/L		9.557	479.06 ppb	9.557	1.99%
Be 313.107†	720848.2	470.58 µg/L		8.831	470.58 ppb	8.831	1.88%
Ca 317.933Radial†	4999.3	4707.1 µg/L		28.94	4707.1 ppb	28.94	0.61%
Cd 226.502†	17048.4	470.28 µg/L		9.113	470.28 ppb	9.113	1.94%
Co 228.616†	9519.0	467.91 µg/L		11.797	467.91 ppb	11.797	2.52%
Cr 267.716†	21589.0	475.17 µg/L		13.506	475.17 ppb	13.506	2.84%
Cu 324.752†	67972.2	475.46 µg/L		10.445	475.46 ppb	10.445	2.20%
Fe 238.204 Radial†	558.9	4747.0 µg/L		19.72	4747.0 ppb	19.72	0.42%
K 766.490 Radial†	6860.4	4876.3 µg/L		36.12	4876.3 ppb	36.12	0.74%
Mg 279.077 IEC†	516.6	4811.0 µg/L		44.36	4811.0 ppb	44.36	0.92%
Mn 257.610†	139208.7	482.50 µg/L		8.343	482.50 ppb	8.343	1.73%
Mo 202.031†	4450.7	475.16 µg/L		21.958	475.16 ppb	21.958	4.62%
Na 589.592 Radial†	14714.8	4844.2 µg/L		21.44	4844.2 ppb	21.44	0.44%

Ni 231.604†	8733.4	477.00 µg/L	11.815	477.00 ppb	11.815	2.48%
P 214.914†	233.5	456.21 µg/L	27.982	456.21 ppb	27.982	6.13%
Pb 220.353†	1802.9	481.20 µg/L	17.504	481.20 ppb	17.504	3.64%
S 181.975 Axial†	1117.4	4895.7 µg/L	158.12	4895.7 ppb	158.12	3.23%
Sb 206.836†	493.2	487.46 µg/L	23.297	487.46 ppb	23.297	4.78%
Se 196.026†	301.8	467.43 µg/L	18.236	467.43 ppb	18.236	3.90%
SiO2†	58436.8	12585 µg/L	200.2	12585 ppb	200.2	1.59%
Si 251.611†	71270.0	5858.8 µg/L	94.98	5858.8 ppb	94.98	1.62%
Sn 189.927†	1103.3	507.48 µg/L	25.456	507.48 ppb	25.456	5.02%
Sr 421.552†	44855.9	464.98 µg/L	2.277	464.98 ppb	2.277	0.49%
Ti 334.940†	195920.6	470.97 µg/L	9.303	470.97 ppb	9.303	1.98%
Tl 190.801†	340.0	480.29 µg/L	17.970	480.29 ppb	17.970	3.74%
U 409.014†	5404.0	488.31 µg/L	12.306	488.31 ppb	12.306	2.52%
V 292.402†	44489.8	479.96 µg/L	12.074	479.96 ppb	12.074	2.52%
Zn 213.857†	18698.5	463.55 µg/L	10.294	463.55 ppb	10.294	2.22%

Sequence No.: 8

Sample ID: 1202024739|945379|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 306

Date Collected: 2/11/2010 17:24:07

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024739|945379|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57386.6	57386.6	105 %		17:24:40
1	Al 396.153Radial†	-7.9	2.7	1.9954 µg/L	1.9954 ppb	17:24:40
1	Ca 317.933Radial†	205.1	15.9	14.983 µg/L	14.983 ppb	17:25:00
1	Fe 238.204 Radial†	16.3	1.0	8.8159 µg/L	8.8159 ppb	17:25:00
1	K 766.490 Radial†	217.8	78.7	55.916 µg/L	55.916 ppb	17:24:40
1	Mg 279.077 IEC†	10.5	-1.3	-11.750 µg/L	-11.750 ppb	17:25:00
1	Na 589.592 Radial†	815.3	233.5	76.862 µg/L	76.862 ppb	17:24:40
1	Sr 421.552†	15.8	-24.5	-0.2539 µg/L	-0.2539 ppb	17:24:40
1	Sc 361.383	2030912.5	2030912.5	106.34 %		17:26:03
1	Y 371.029	1389777.5	1389777.5	106.10 %		17:26:03
1	Ag 328.068†	-536.6	59.9	0.4788 µg/L	0.4788 ppb	17:26:08
1	As 188.979†	-2.0	-3.0	-5.8427 µg/L	-5.8427 ppb	17:26:29
1	B 249.677†	405.5	49.9	2.1751 µg/L	2.1751 ppb	17:26:29
1	Ba 233.527†	-18.3	8.8	0.2302 µg/L	0.2302 ppb	17:26:29
1	Be 313.107†	-3495.9	152.9	0.0999 µg/L	0.0999 ppb	17:26:08
1	Cd 226.502†	-145.1	5.7	0.1552 µg/L	0.1552 ppb	17:26:29
1	Co 228.616†	-11.5	-2.0	-0.0986 µg/L	-0.0986 ppb	17:26:29
1	Cr 267.716†	-25.3	28.6	0.6291 µg/L	0.6291 ppb	17:26:08
1	Cu 324.752†	2448.9	-183.1	-1.2781 µg/L	-1.2781 ppb	17:26:08
1	Mn 257.610†	-228.7	29.0	0.1022 µg/L	0.1022 ppb	17:26:29
1	Mo 202.031†	-12.6	-4.3	-0.4579 µg/L	-0.4579 ppb	17:26:29
1	Ni 231.604†	309.0	-11.6	-0.6331 µg/L	-0.6331 ppb	17:26:29
1	P 214.914†	30.1	0.7	1.6207 µg/L	1.6207 ppb	17:26:29
1	Pb 220.353†	99.4	-3.7	-0.9954 µg/L	-0.9954 ppb	17:26:29
1	S 181.975 Axial†	22.1	5.9	25.929 µg/L	25.929 ppb	17:26:29
1	Sb 206.836†	25.5	-2.9	-2.9120 µg/L	-2.9120 ppb	17:26:29
1	Se 196.026†	14.3	-2.4	-3.6570 µg/L	-3.6570 ppb	17:26:29
1	SiO2†	4021.3	2531.5	545.17 µg/L	545.17 ppb	17:26:08
1	Si 251.611†	3738.4	3202.6	263.27 µg/L	263.27 ppb	17:26:08
1	Sn 189.927†	-2.3	-1.3	-0.6146 µg/L	-0.6146 ppb	17:26:29
1	Ti 334.940†	92.2	-29.5	-0.0697 µg/L	-0.0697 ppb	17:26:08
1	Tl 190.801†	-23.6	2.1	2.9500 µg/L	2.9500 ppb	17:26:29
1	U 409.014†	-33.5	22.2	2.0035 µg/L	2.0035 ppb	17:26:08
1	V 292.402†	-6.3	38.3	0.4095 µg/L	0.4095 ppb	17:26:08
1	Zn 213.857†	509.8	3.9	0.1014 µg/L	0.1014 ppb	17:26:29
2	Sc RADIAL	56946.1	56946.1	104 %		17:25:06
2	Al 396.153Radial†	-1.1	9.1	6.7568 µg/L	6.7568 ppb	17:25:06
2	Ca 317.933Radial†	202.6	15.0	14.141 µg/L	14.141 ppb	17:25:26
2	Fe 238.204 Radial†	16.8	1.6	13.754 µg/L	13.754 ppb	17:25:26
2	K 766.490 Radial†	228.2	90.3	64.201 µg/L	64.201 ppb	17:25:06
2	Mg 279.077 IEC†	11.5	-0.2	-2.2308 µg/L	-2.2308 ppb	17:25:26
2	Na 589.592 Radial†	773.8	199.7	65.752 µg/L	65.752 ppb	17:25:06
2	Sr 421.552†	28.9	-11.9	-0.1230 µg/L	-0.1230 ppb	17:25:06
2	Sc 361.383	2023260.0	2023260.0	105.94 %		17:26:35
2	Y 371.029	1385561.3	1385561.3	105.77 %		17:26:35
2	Ag 328.068†	-492.1	100.0	0.7943 µg/L	0.7943 ppb	17:26:41
2	As 188.979†	2.5	1.2	2.3405 µg/L	2.3405 ppb	17:27:01
2	B 249.677†	412.1	57.5	2.5084 µg/L	2.5084 ppb	17:27:01
2	Ba 233.527†	-17.0	10.0	0.2591 µg/L	0.2591 ppb	17:27:01
2	Be 313.107†	-3508.3	128.9	0.0841 µg/L	0.0841 ppb	17:26:41
2	Cd 226.502†	-147.3	3.1	0.0820 µg/L	0.0820 ppb	17:27:01
2	Co 228.616†	-13.8	-4.1	-0.2039 µg/L	-0.2039 ppb	17:27:01
2	Cr 267.716†	-28.2	25.8	0.5665 µg/L	0.5665 ppb	17:26:41
2	Cu 324.752†	2443.3	-179.8	-1.2539 µg/L	-1.2539 ppb	17:26:41
2	Mn 257.610†	-197.5	57.7	0.2017 µg/L	0.2017 ppb	17:27:01
2	Mo 202.031†	-3.9	3.8	0.4107 µg/L	0.4107 ppb	17:27:01
2	Ni 231.604†	307.4	-12.1	-0.6591 µg/L	-0.6591 ppb	17:27:01
2	P 214.914†	24.8	-4.2	-8.8396 µg/L	-8.8396 ppb	17:27:01
2	Pb 220.353†	104.9	1.8	0.4925 µg/L	0.4925 ppb	17:27:01

2	S 181.975 Axial†	22.8	6.7	29.574 µg/L	29.574 ppb	17:27:01
2	Sb 206.836†	23.1	-5.2	-5.1000 µg/L	-5.1000 ppb	17:27:01
2	Se 196.026†	19.6	2.7	4.1485 µg/L	4.1485 ppb	17:27:01
2	SiO2†	4102.3	2622.3	564.73 µg/L	564.73 ppb	17:26:41
2	Si 251.611†	3801.2	3275.3	269.24 µg/L	269.24 ppb	17:26:41
2	Sn 189.927†	4.9	5.5	2.5070 µg/L	2.5070 ppb	17:27:01
2	Ti 334.940†	181.2	54.9	0.1325 µg/L	0.1325 ppb	17:26:41
2	Tl 190.801†	-23.2	2.4	3.3176 µg/L	3.3176 ppb	17:27:01
2	U 409.014†	-46.3	9.9	0.8945 µg/L	0.8945 ppb	17:26:41
2	V 292.402†	-51.8	-4.7	-0.0430 µg/L	-0.0430 ppb	17:26:41
2	Zn 213.857†	504.7	0.9	0.0263 µg/L	0.0263 ppb	17:27:01
3	Sc RADIAL	58468.5	58468.5	107 %		17:25:32
3	Al 396.153Radial†	-18.5	-7.1	-5.2957 µg/L	-5.2957 ppb	17:25:32
3	Ca 317.933Radial†	203.1	10.4	9.8290 µg/L	9.8290 ppb	17:25:52
3	Fe 238.204 Radial†	15.5	-0.0	-0.3821 µg/L	-0.3821 ppb	17:25:52
3	K 766.490 Radial†	182.1	41.6	29.551 µg/L	29.551 ppb	17:25:32
3	Mg 279.077 IEC†	15.1	2.8	25.817 µg/L	25.817 ppb	17:25:52
3	Na 589.592 Radial†	805.9	210.4	69.248 µg/L	69.248 ppb	17:25:32
3	Sr 421.552†	37.0	-5.1	-0.0524 µg/L	-0.0524 ppb	17:25:32
3	Sc 361.383	2073122.0	2073122.0	108.55 %		17:27:07
3	Y 371.029	1418512.2	1418512.2	108.29 %		17:27:07
3	Ag 328.068†	-552.6	55.4	0.4394 µg/L	0.4394 ppb	17:27:13
3	As 188.979†	5.6	4.0	7.9097 µg/L	7.9097 ppb	17:27:33
3	B 249.677†	397.4	34.6	1.5129 µg/L	1.5129 ppb	17:27:33
3	Ba 233.527†	-12.7	14.3	0.3722 µg/L	0.3722 ppb	17:27:33
3	Be 313.107†	-3332.3	370.6	0.2420 µg/L	0.2420 ppb	17:27:13
3	Cd 226.502†	-127.4	24.8	0.6830 µg/L	0.6830 ppb	17:27:33
3	Co 228.616†	-4.3	4.9	0.2423 µg/L	0.2423 ppb	17:27:33
3	Cr 267.716†	-32.4	22.5	0.4955 µg/L	0.4955 ppb	17:27:13
3	Cu 324.752†	2446.7	-232.1	-1.6212 µg/L	-1.6212 ppb	17:27:13
3	Mn 257.610†	-173.1	84.6	0.2919 µg/L	0.2919 ppb	17:27:33
3	Mo 202.031†	-3.6	4.2	0.4523 µg/L	0.4523 ppb	17:27:33
3	Ni 231.604†	314.8	-12.2	-0.6678 µg/L	-0.6678 ppb	17:27:33
3	P 214.914†	24.2	-5.3	-11.334 µg/L	-11.334 ppb	17:27:33
3	Pb 220.353†	104.9	-0.6	-0.1430 µg/L	-0.1430 ppb	17:27:33
3	S 181.975 Axial†	13.4	-2.5	-10.740 µg/L	-10.740 ppb	17:27:33
3	Sb 206.836†	20.3	-8.3	-8.1630 µg/L	-8.1630 ppb	17:27:33
3	Se 196.026†	23.8	6.1	9.2401 µg/L	9.2401 ppb	17:27:33
3	SiO2†	3907.5	2349.7	506.02 µg/L	506.02 ppb	17:27:13
3	Si 251.611†	3582.5	2987.5	245.59 µg/L	245.59 ppb	17:27:13
3	Sn 189.927†	-5.5	-4.2	-1.9149 µg/L	-1.9149 ppb	17:27:33
3	Ti 334.940†	119.8	-5.8	-0.0158 µg/L	-0.0158 ppb	17:27:13
3	Tl 190.801†	-23.4	2.7	3.7578 µg/L	3.7578 ppb	17:27:33
3	U 409.014†	-64.5	-5.8	-0.5290 µg/L	-0.5290 ppb	17:27:13
3	V 292.402†	-56.8	-8.1	-0.0824 µg/L	-0.0824 ppb	17:27:13
3	Zn 213.857†	503.9	-11.4	-0.2797 µg/L	-0.2797 ppb	17:27:33

## Mean Data: 1202024739|945379|5

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2042431.5	106.94 %	%	1.406			1.31%
Sc RADIAL	57600.4	106 %	%	1.4			1.36%
Y 371.029	1397950.3	106.72 %	%	1.369			1.28%
Ag 328.068†	71.8	0.5708 µg/L	µg/L	0.19455	0.5708 ppb	0.19455	34.08%
Al 396.153Radial†	1.5	1.1521 µg/L	µg/L	6.07033	1.1521 ppb	6.07033	526.87%
As 188.979†	0.8	1.4692 µg/L	µg/L	6.91747	1.4692 ppb	6.91747	470.84%
B 249.677†	47.3	2.0655 µg/L	µg/L	0.50675	2.0655 ppb	0.50675	24.53%
Ba 233.527†	11.0	0.2872 µg/L	µg/L	0.07505	0.2872 ppb	0.07505	26.14%
Be 313.107†	217.5	0.1420 µg/L	µg/L	0.08698	0.1420 ppb	0.08698	61.25%
Ca 317.933Radial†	13.8	12.984 µg/L	µg/L	2.7649	12.984 ppb	2.7649	21.29%
Cd 226.502†	11.2	0.3067 µg/L	µg/L	0.32789	0.3067 ppb	0.32789	106.90%
Co 228.616†	-0.4	-0.0201 µg/L	µg/L	0.23322	-0.0201 ppb	0.23322	>999.9%
Cr 267.716†	25.6	0.5637 µg/L	µg/L	0.06684	0.5637 ppb	0.06684	11.86%
Cu 324.752†	-198.3	-1.3844 µg/L	µg/L	0.20542	-1.3844 ppb	0.20542	14.84%
Fe 238.204 Radial†	0.9	7.3958 µg/L	µg/L	7.17410	7.3958 ppb	7.17410	97.00%
K 766.490 Radial†	70.2	49.889 µg/L	µg/L	18.0946	49.889 ppb	18.0946	36.27%
Mg 279.077 IEC†	0.4	3.9453 µg/L	µg/L	19.53041	3.9453 ppb	19.53041	495.03%
Mn 257.610†	57.1	0.1986 µg/L	µg/L	0.09490	0.1986 ppb	0.09490	47.79%
Mo 202.031†	1.3	0.1350 µg/L	µg/L	0.51389	0.1350 ppb	0.51389	380.55%
Na 589.592 Radial†	214.5	70.621 µg/L	µg/L	5.6807	70.621 ppb	5.6807	8.04%

Ni 231.604†	-12.0	-0.6533 µg/L	0.01801	-0.6533 ppb	0.01801	2.76%
P 214.914†	-2.9	-6.1842 µg/L	6.87330	-6.1842 ppb	6.87330	111.14%
Pb 220.353†	-0.8	-0.2153 µg/L	0.74660	-0.2153 ppb	0.74660	346.79%
S 181.975 Axial†	3.4	14.921 µg/L	22.2976	14.921 ppb	22.2976	149.44%
Sb 206.836†	-5.5	-5.3917 µg/L	2.63767	-5.3917 ppb	2.63767	48.92%
Se 196.026†	2.1	3.2439 µg/L	6.49598	3.2439 ppb	6.49598	200.25%
SiO2†	2501.2	538.64 µg/L	29.894	538.64 ppb	29.894	5.55%
Si 251.611†	3155.1	259.37 µg/L	12.302	259.37 ppb	12.302	4.74%
Sn 189.927†	-0.0	-0.0075 µg/L	2.27258	-0.0075 ppb	2.27258	>999.9%
Sr 421.552†	-13.8	-0.1431 µg/L	0.10223	-0.1431 ppb	0.10223	71.45%
Ti 334.940†	6.6	0.0157 µg/L	0.10468	0.0157 ppb	0.10468	668.33%
Tl 190.801†	2.4	3.3418 µg/L	0.40442	3.3418 ppb	0.40442	12.10%
U 409.014†	8.7	0.7896 µg/L	1.26948	0.7896 ppb	1.26948	160.77%
V 292.402†	8.5	0.0947 µg/L	0.27335	0.0947 ppb	0.27335	288.71%
Zn 213.857†	-2.2	-0.0506 µg/L	0.20189	-0.0506 ppb	0.20189	398.61%

Sequence No.: 9

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 2/11/2010 17:27:43

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	59035.7	59035.7	108 %		17:28:20
1	Al 396.153Radial†	6783.5	6281.0	4671.2 µg/L	4671.2 ppb	17:28:41
1	Ca 317.933Radial†	5601.2	4998.8	4706.7 µg/L	4706.7 ppb	17:28:41
1	Fe 238.204 Radial†	616.0	555.0	4714.2 µg/L	4714.2 ppb	17:28:41
1	K 766.490 Radial†	7145.2	6476.8	4603.7 µg/L	4603.7 ppb	17:28:20
1	Mg 279.077 IEC†	569.6	515.2	4798.3 µg/L	4798.3 ppb	17:28:41
1	Na 589.592 Radial†	30872.0	27997.1	9216.7 µg/L	9216.7 ppb	17:28:20
1	Sr 421.552†	47604.8	43967.8	455.78 µg/L	455.78 ppb	17:28:20
1	Sc 361.383	2041194.6	2041194.6	106.88 %		17:29:44
1	Y 371.029	1394791.7	1394791.7	106.48 %		17:29:44
1	Ag 328.068†	63072.7	59578.4	476.23 µg/L	476.23 ppb	17:29:50
1	As 188.979†	267.6	249.3	486.27 µg/L	486.27 ppb	17:30:10
1	B 249.677†	11989.2	10886.2	474.07 µg/L	474.07 ppb	17:29:50
1	Ba 233.527†	19747.0	18502.3	482.64 µg/L	482.64 ppb	17:29:50
1	Be 313.107†	767703.3	721740.7	471.16 µg/L	471.16 ppb	17:29:44
1	Cd 226.502†	18704.8	17643.2	486.70 µg/L	486.70 ppb	17:29:50
1	Co 228.616†	10605.3	9931.7	488.25 µg/L	488.25 ppb	17:29:50
1	Cr 267.716†	23632.0	22163.6	487.82 µg/L	487.82 ppb	17:29:50
1	Cu 324.752†	76228.6	68837.1	481.50 µg/L	481.50 ppb	17:29:50
1	Mn 257.610†	148178.1	138886.7	481.38 µg/L	481.38 ppb	17:29:44
1	Mo 202.031†	4955.0	4643.6	495.75 µg/L	495.75 ppb	17:30:10
1	Ni 231.604†	9868.1	8930.9	487.78 µg/L	487.78 ppb	17:29:50
1	P 214.914†	1270.5	1161.1	2447.3 µg/L	2447.3 ppb	17:30:10
1	Pb 220.353†	2082.6	1851.4	494.18 µg/L	494.18 ppb	17:30:10
1	S 181.975 Axial†	249.9	219.0	959.68 µg/L	959.68 ppb	17:30:10
1	Sb 206.836†	563.4	500.2	494.49 µg/L	494.49 ppb	17:30:10
1	Se 196.026†	362.5	323.3	500.24 µg/L	500.24 ppb	17:30:10
1	SiO2†	26645.9	23681.2	5099.9 µg/L	5099.9 ppb	17:29:50
1	Si 251.611†	31439.9	29103.8	2392.5 µg/L	2392.5 ppb	17:29:50
1	Sn 189.927†	1158.8	1085.1	499.11 µg/L	499.11 ppb	17:30:10
1	Ti 334.940†	206788.8	193365.5	464.82 µg/L	464.82 ppb	17:29:44
1	Tl 190.801†	353.5	355.1	501.20 µg/L	501.20 ppb	17:30:10
1	U 409.014†	5796.1	5476.7	494.90 µg/L	494.90 ppb	17:29:50
1	V 292.402†	48354.5	45287.0	488.65 µg/L	488.65 ppb	17:29:50
1	Zn 213.857†	21383.2	19531.6	484.30 µg/L	484.30 ppb	17:29:50
2	Sc RADIAL	57479.6	57479.6	105 %		17:28:46
2	Al 396.153Radial†	6775.5	6443.2	4792.2 µg/L	4792.2 ppb	17:29:07
2	Ca 317.933Radial†	5568.2	5107.6	4809.2 µg/L	4809.2 ppb	17:29:07
2	Fe 238.204 Radial†	613.4	567.9	4823.2 µg/L	4823.2 ppb	17:29:07
2	K 766.490 Radial†	7368.3	6867.5	4881.4 µg/L	4881.4 ppb	17:28:46
2	Mg 279.077 IEC†	569.1	529.1	4927.1 µg/L	4927.1 ppb	17:29:07
2	Na 589.592 Radial†	31686.3	29543.0	9725.6 µg/L	9725.6 ppb	17:28:46
2	Sr 421.552†	49060.1	46540.9	482.45 µg/L	482.45 ppb	17:28:46
2	Sc 361.383	2046028.0	2046028.0	107.13 %		17:30:18
2	Y 371.029	1397859.6	1397859.6	106.71 %		17:30:18
2	Ag 328.068†	62181.8	58607.4	468.48 µg/L	468.48 ppb	17:30:23
2	As 188.979†	270.5	251.3	490.33 µg/L	490.33 ppb	17:30:44
2	B 249.677†	11883.0	10760.6	468.51 µg/L	468.51 ppb	17:30:23
2	Ba 233.527†	19447.6	18179.1	474.21 µg/L	474.21 ppb	17:30:23
2	Be 313.107†	766991.4	719379.3	469.62 µg/L	469.62 ppb	17:30:18
2	Cd 226.502†	18417.3	17333.6	478.14 µg/L	478.14 ppb	17:30:23
2	Co 228.616†	10411.2	9727.0	478.18 µg/L	478.18 ppb	17:30:23
2	Cr 267.716†	23232.1	21738.1	478.45 µg/L	478.45 ppb	17:30:23
2	Cu 324.752†	75095.1	67610.5	472.94 µg/L	472.94 ppb	17:30:23
2	Mn 257.610†	147694.9	138108.1	478.69 µg/L	478.69 ppb	17:30:18
2	Mo 202.031†	4924.2	4604.0	491.52 µg/L	491.52 ppb	17:30:44
2	Ni 231.604†	9689.5	8742.4	477.48 µg/L	477.48 ppb	17:30:23
2	P 214.914†	1255.9	1144.7	2412.6 µg/L	2412.6 ppb	17:30:44
2	Pb 220.353†	2059.1	1824.8	487.10 µg/L	487.10 ppb	17:30:44

2	S 181.975 Axial†	252.0	220.4	965.86 µg/L	965.86 ppb	17:30:44
2	Sb 206.836†	552.5	488.7	483.25 µg/L	483.25 ppb	17:30:44
2	Se 196.026†	360.1	320.3	495.71 µg/L	495.71 ppb	17:30:44
2	SiO2†	26270.0	23271.4	5011.6 µg/L	5011.6 ppb	17:30:23
2	Si 251.611†	31001.1	28624.7	2353.1 µg/L	2353.1 ppb	17:30:23
2	Sn 189.927†	1147.6	1072.1	493.14 µg/L	493.14 ppb	17:30:44
2	Ti 334.940†	206329.6	192479.8	462.68 µg/L	462.68 ppb	17:30:18
2	Tl 190.801†	343.3	344.8	486.80 µg/L	486.80 ppb	17:30:44
2	U 409.014†	5690.4	5365.3	484.79 µg/L	484.79 ppb	17:30:23
2	V 292.402†	47623.9	44498.2	480.19 µg/L	480.19 ppb	17:30:23
2	Zn 213.857†	21043.3	19167.1	475.24 µg/L	475.24 ppb	17:30:23
3	Sc RADIAL	58545.2	58545.2	107 %		17:29:12
3	Al 396.153Radial†	6838.5	6384.8	4750.3 µg/L	4750.3 ppb	17:29:33
3	Ca 317.933Radial†	5643.2	5081.3	4784.4 µg/L	4784.4 ppb	17:29:33
3	Fe 238.204 Radial†	621.5	564.8	4796.6 µg/L	4796.6 ppb	17:29:33
3	K 766.490 Radial†	7265.1	6643.9	4722.5 µg/L	4722.5 ppb	17:29:12
3	Mg 279.077 IEC†	574.9	524.6	4884.3 µg/L	4884.3 ppb	17:29:33
3	Na 589.592 Radial†	31113.3	28461.2	9369.5 µg/L	9369.5 ppb	17:29:12
3	Sr 421.552†	48089.7	44788.5	464.29 µg/L	464.29 ppb	17:29:12
3	Sc 361.383	2017377.3	2017377.3	105.63 %		17:30:51
3	Y 371.029	1378304.1	1378304.1	105.22 %		17:30:51
3	Ag 328.068†	59471.1	56865.5	454.46 µg/L	454.46 ppb	17:30:57
3	As 188.979†	229.9	216.5	422.47 µg/L	422.47 ppb	17:31:17
3	B 249.677†	11339.4	10403.4	452.85 µg/L	452.85 ppb	17:30:57
3	Ba 233.527†	18247.7	17301.0	451.29 µg/L	451.29 ppb	17:30:57
3	Be 313.107†	738207.7	702297.7	458.47 µg/L	458.47 ppb	17:30:51
3	Cd 226.502†	17185.8	16411.8	452.68 µg/L	452.68 ppb	17:30:57
3	Co 228.616†	9649.4	9143.9	449.43 µg/L	449.43 ppb	17:30:57
3	Cr 267.716†	20989.9	19923.4	438.52 µg/L	438.52 ppb	17:30:57
3	Cu 324.752†	69862.4	63652.3	445.29 µg/L	445.29 ppb	17:30:57
3	Mn 257.610†	142669.2	135308.3	469.00 µg/L	469.00 ppb	17:30:51
3	Mo 202.031†	4082.7	3872.6	413.47 µg/L	413.47 ppb	17:31:17
3	Ni 231.604†	8980.8	8199.9	447.86 µg/L	447.86 ppb	17:30:57
3	P 214.914†	1067.7	983.2	2067.7 µg/L	2067.7 ppb	17:31:17
3	Pb 220.353†	1798.7	1605.6	428.46 µg/L	428.46 ppb	17:31:17
3	S 181.975 Axial†	223.6	196.9	862.47 µg/L	862.47 ppb	17:31:17
3	Sb 206.836†	480.2	427.6	422.29 µg/L	422.29 ppb	17:31:17
3	Se 196.026†	311.3	278.8	432.49 µg/L	432.49 ppb	17:31:17
3	SiO2†	24862.0	22286.7	4799.6 µg/L	4799.6 ppb	17:30:57
3	Si 251.611†	29262.2	27389.5	2251.6 µg/L	2251.6 ppb	17:30:57
3	Sn 189.927†	942.0	892.7	410.61 µg/L	410.61 ppb	17:31:17
3	Ti 334.940†	197920.3	187254.0	450.12 µg/L	450.12 ppb	17:30:51
3	Tl 190.801†	315.4	322.9	456.18 µg/L	456.18 ppb	17:31:17
3	U 409.014†	5127.6	4907.9	443.39 µg/L	443.39 ppb	17:30:57
3	V 292.402†	43917.4	41620.5	448.79 µg/L	448.79 ppb	17:30:57
3	Zn 213.857†	19595.2	18075.2	448.15 µg/L	448.15 ppb	17:30:57

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2034866.6	106.55 %	0.803			0.75%
Sc RADIAL	58353.5	107 %	1.5			1.36%
Y 371.029	1390318.5	106.14 %	0.803			0.76%
Ag 328.068†	58350.4	466.39 µg/L	11.039	466.39 ppb	11.039	2.37%
QC value within limits for Ag 328.068 Recovery = 93.28%						
Al 396.153Radial†	6369.7	4737.9 µg/L	61.46	4737.9 ppb	61.46	1.30%
QC value within limits for Al 396.153Radial Recovery = 94.76%						
As 188.979†	239.1	466.36 µg/L	38.059	466.36 ppb	38.059	8.16%
QC value within limits for As 188.979 Recovery = 93.27%						
B 249.677†	10683.4	465.15 µg/L	11.003	465.15 ppb	11.003	2.37%
QC value within limits for B 249.677 Recovery = 93.03%						
Ba 233.527†	17994.1	469.38 µg/L	16.223	469.38 ppb	16.223	3.46%
QC value within limits for Ba 233.527 Recovery = 93.88%						
Be 313.107†	714472.6	466.42 µg/L	6.926	466.42 ppb	6.926	1.48%
QC value within limits for Be 313.107 Recovery = 93.28%						
Ca 317.933Radial†	5062.6	4766.7 µg/L	53.48	4766.7 ppb	53.48	1.12%
QC value within limits for Ca 317.933Radial Recovery = 95.33%						
Cd 226.502†	17129.5	472.51 µg/L	17.696	472.51 ppb	17.696	3.75%
QC value within limits for Cd 226.502 Recovery = 94.50%						
Co 228.616†	9600.9	471.95 µg/L	20.142	471.95 ppb	20.142	4.27%



Cr	267.716†	21275.0	468.26 µg/L	26.182	468.26 ppb	26.182	5.59%
Cu	324.752†	66699.9	466.58 µg/L	18.924	466.58 ppb	18.924	4.06%
Fe	238.204 Radial†	562.6	4778.0 µg/L	56.85	4778.0 ppb	56.85	1.19%
K	766.490 Radial†	6662.7	4735.8 µg/L	139.33	4735.8 ppb	139.33	2.94%
Mg	279.077 IEC†	523.0	4869.9 µg/L	65.60	4869.9 ppb	65.60	1.35%
Mn	257.610†	137434.4	476.36 µg/L	6.514	476.36 ppb	6.514	1.37%
Mo	202.031†	4373.4	466.91 µg/L	46.335	466.91 ppb	46.335	9.92%
Na	589.592 Radial†	28667.1	9437.3 µg/L	261.13	9437.3 ppb	261.13	2.77%
Ni	231.604†	8624.4	471.04 µg/L	20.725	471.04 ppb	20.725	4.40%
P	214.914†	1096.3	2309.2 µg/L	209.89	2309.2 ppb	209.89	9.09%
Pb	220.353†	1760.6	469.91 µg/L	36.070	469.91 ppb	36.070	7.68%
S	181.975 Axial†	212.1	929.34 µg/L	57.991	929.34 ppb	57.991	6.24%
Sb	206.836†	472.2	466.68 µg/L	38.846	466.68 ppb	38.846	8.32%
Se	196.026†	307.5	476.15 µg/L	37.872	476.15 ppb	37.872	7.95%
SiO2†		23079.8	4970.4 µg/L	154.36	4970.4 ppb	154.36	3.11%
Si	251.611†	28372.7	2332.4 µg/L	72.71	2332.4 ppb	72.71	3.12%
Sn	189.927†	1016.6	467.62 µg/L	49.463	467.62 ppb	49.463	10.58%
Sr	421.552†	45099.0	467.50 µg/L	13.625	467.50 ppb	13.625	2.91%
Ti	334.940†	191033.1	459.21 µg/L	7.946	459.21 ppb	7.946	1.73%
Tl	190.801†	340.9	481.40 µg/L	22.992	481.40 ppb	22.992	4.78%
U	409.014†	5250.0	474.36 µg/L	27.295	474.36 ppb	27.295	5.75%
V	292.402†	43801.9	472.54 µg/L	21.006	472.54 ppb	21.006	4.45%
Zn	213.857†	18924.6	469.23 µg/L	18.806	469.23 ppb	18.806	4.01%

QC value within limits for Co 228.616 Recovery = 94.39%

QC value within limits for Cr 267.716 Recovery = 93.65%

QC value within limits for Cu 324.752 Recovery = 93.32%

QC value within limits for Fe 238.204 Radial Recovery = 95.56%

QC value within limits for K 766.490 Radial Recovery = 94.72%

QC value within limits for Mg 279.077 IEC Recovery = 97.40%

QC value within limits for Mn 257.610 Recovery = 95.27%

QC value within limits for Mo 202.031 Recovery = 93.38%

QC value within limits for Na 589.592 Radial Recovery = 94.37%

QC value within limits for Ni 231.604 Recovery = 94.21%

QC value within limits for P 214.914 Recovery = 92.37%

QC value within limits for Pb 220.353 Recovery = 93.98%

QC value within limits for S 181.975 Axial Recovery = 92.93%

QC value within limits for Sb 206.836 Recovery = 93.34%

QC value within limits for Se 196.026 Recovery = 95.23%

QC value within limits for SiO2 Recovery = 92.95%

QC value within limits for Si 251.611 Recovery = 93.30%

QC value within limits for Sn 189.927 Recovery = 93.52%

QC value within limits for Sr 421.552 Recovery = 93.50%

QC value within limits for Ti 334.940 Recovery = 91.84%

QC value within limits for Tl 190.801 Recovery = 96.28%

QC value within limits for U 409.014 Recovery = 94.87%

QC value within limits for V 292.402 Recovery = 94.51%

QC value within limits for Zn 213.857 Recovery = 93.85%

All analyte(s) passed QC.

Sequence No.: 10

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 2/11/2010 17:31:26

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	57249.4	57249.4	105 %		17:32:01
1	Al 396.153Radial†	-19.1	-8.1	-6.0314 µg/L	-6.0314 ppb	17:32:01
1	Ca 317.933Radial†	186.6	-1.3	-1.1941 µg/L	-1.1941 ppb	17:32:21
1	Fe 238.204 Radial†	16.2	0.9	8.0275 µg/L	8.0275 ppb	17:32:21
1	K 766.490 Radial†	205.8	67.8	48.166 µg/L	48.166 ppb	17:32:01
1	Mg 279.077 IEC†	11.8	-0.0	-0.3578 µg/L	-0.3578 ppb	17:32:21
1	Na 589.592 Radial†	713.1	137.9	45.390 µg/L	45.390 ppb	17:32:01
1	Sr 421.552†	47.1	5.3	0.0553 µg/L	0.0553 ppb	17:32:01
1	Sc 361.383	2021263.0	2021263.0	105.83 %		17:33:23
1	Y 371.029	1385458.4	1385458.4	105.77 %		17:33:23
1	Ag 328.068†	-548.3	46.5	0.3696 µg/L	0.3696 ppb	17:33:29
1	As 188.979†	-3.1	-4.1	-8.0437 µg/L	-8.0437 ppb	17:33:50
1	B 249.677†	328.8	-20.8	-0.9109 µg/L	-0.9109 ppb	17:33:50
1	Ba 233.527†	-23.9	3.4	0.0895 µg/L	0.0895 ppb	17:33:50
1	Be 313.107†	-3534.2	101.1	0.0660 µg/L	0.0660 ppb	17:33:29
1	Cd 226.502†	-135.6	14.0	0.3833 µg/L	0.3833 ppb	17:33:50
1	Co 228.616†	-7.8	1.5	0.0715 µg/L	0.0715 ppb	17:33:50
1	Cr 267.716†	-39.7	14.9	0.3275 µg/L	0.3275 ppb	17:33:29
1	Cu 324.752†	2441.6	-179.0	-1.2495 µg/L	-1.2495 ppb	17:33:29
1	Mn 257.610†	-227.7	28.9	0.1013 µg/L	0.1013 ppb	17:33:50
1	Mo 202.031†	-11.3	-3.1	-0.3352 µg/L	-0.3352 ppb	17:33:50
1	Ni 231.604†	297.1	-21.4	-1.1721 µg/L	-1.1721 ppb	17:33:50
1	P 214.914†	29.1	-0.1	-0.1206 µg/L	-0.1206 ppb	17:33:50
1	Pb 220.353†	93.1	-9.2	-2.4716 µg/L	-2.4716 ppb	17:33:50
1	S 181.975 Axial†	17.0	1.2	5.2600 µg/L	5.2600 ppb	17:33:50
1	Sb 206.836†	21.2	-7.0	-6.8579 µg/L	-6.8579 ppb	17:33:50
1	Se 196.026†	17.1	0.4	0.5587 µg/L	0.5587 ppb	17:33:50
1	SiO2†	1257.7	-61.7	-13.286 µg/L	-13.286 ppb	17:33:29
1	Si 251.611†	315.2	-15.0	-1.2350 µg/L	-1.2350 ppb	17:33:50
1	Sn 189.927†	-0.7	0.2	0.0875 µg/L	0.0875 ppb	17:33:50
1	Ti 334.940†	99.4	-22.2	-0.0533 µg/L	-0.0533 ppb	17:33:29
1	Tl 190.801†	-25.0	0.6	0.8769 µg/L	0.8769 ppb	17:33:50
1	U 409.014†	-2.8	50.9	4.6107 µg/L	4.6107 ppb	17:33:29
1	V 292.402†	-42.3	4.3	0.0496 µg/L	0.0496 ppb	17:33:29
1	Zn 213.857†	478.9	-23.0	-0.5682 µg/L	-0.5682 ppb	17:33:50
2	Sc RADIAL	57058.0	57058.0	105 %		17:32:27
2	Al 396.153Radial†	-2.2	8.1	5.9887 µg/L	5.9887 ppb	17:32:27
2	Ca 317.933Radial†	185.4	-1.8	-1.6973 µg/L	-1.6973 ppb	17:32:47
2	Fe 238.204 Radial†	16.9	1.6	13.808 µg/L	13.808 ppb	17:32:47
2	K 766.490 Radial†	159.2	23.8	16.947 µg/L	16.947 ppb	17:32:27
2	Mg 279.077 IEC†	16.4	4.4	41.355 µg/L	41.355 ppb	17:32:47
2	Na 589.592 Radial†	724.2	150.8	49.634 µg/L	49.634 ppb	17:32:27
2	Sr 421.552†	-4.4	-43.8	-0.4540 µg/L	-0.4540 ppb	17:32:27
2	Sc 361.383	2001081.9	2001081.9	104.78 %		17:33:56
2	Y 371.029	1372125.9	1372125.9	104.75 %		17:33:56
2	Ag 328.068†	-553.2	36.5	0.2946 µg/L	0.2946 ppb	17:34:01
2	As 188.979†	-0.6	-1.7	-3.3761 µg/L	-3.3761 ppb	17:34:22
2	B 249.677†	320.5	-25.5	-1.1231 µg/L	-1.1231 ppb	17:34:22
2	Ba 233.527†	-11.0	15.5	0.4048 µg/L	0.4048 ppb	17:34:22
2	Be 313.107†	-3526.3	74.9	0.0489 µg/L	0.0489 ppb	17:34:01
2	Cd 226.502†	-133.8	14.4	0.3950 µg/L	0.3950 ppb	17:34:22
2	Co 228.616†	-11.0	-1.6	-0.0801 µg/L	-0.0801 ppb	17:34:22
2	Cr 267.716†	-44.3	10.1	0.2231 µg/L	0.2231 ppb	17:34:01
2	Cu 324.752†	2455.1	-143.0	-0.9967 µg/L	-0.9967 ppb	17:34:01
2	Mn 257.610†	-230.3	24.3	0.0842 µg/L	0.0842 ppb	17:34:22
2	Mo 202.031†	-2.3	5.3	0.5710 µg/L	0.5710 ppb	17:34:22
2	Ni 231.604†	304.4	-11.7	-0.6402 µg/L	-0.6402 ppb	17:34:22
2	P 214.914†	29.3	0.4	0.8548 µg/L	0.8548 ppb	17:34:22
2	Pb 220.353†	101.4	-0.5	-0.1165 µg/L	-0.1165 ppb	17:34:22

2	S 181.975 Axial†	19.4	3.7	16.024 µg/L	16.024 ppb	17:34:22
2	Sb 206.836†	27.6	-0.6	-0.5726 µg/L	-0.5726 ppb	17:34:22
2	Se 196.026†	16.9	0.3	0.5139 µg/L	0.5139 ppb	17:34:22
2	SiO2†	1231.1	-75.1	-16.163 µg/L	-16.163 ppb	17:34:01
2	Si 251.611†	308.3	-18.6	-1.5330 µg/L	-1.5330 ppb	17:34:22
2	Sn 189.927†	-2.5	-1.5	-0.6783 µg/L	-0.6783 ppb	17:34:22
2	Ti 334.940†	155.7	32.5	0.0749 µg/L	0.0749 ppb	17:34:01
2	Tl 190.801†	-24.6	0.8	1.0677 µg/L	1.0677 ppb	17:34:22
2	U 409.014†	-70.7	-13.8	-1.2553 µg/L	-1.2553 ppb	17:34:01
2	V 292.402†	13.1	56.7	0.6099 µg/L	0.6099 ppb	17:34:01
2	Zn 213.857†	482.3	-15.3	-0.3800 µg/L	-0.3800 ppb	17:34:22
3	Sc RADIAL	57391.7	57391.7	105 %		17:32:53
3	Al 396.153Radial†	-24.1	-12.7	-9.5161 µg/L	-9.5161 ppb	17:32:53
3	Ca 317.933Radial†	189.2	0.7	0.6854 µg/L	0.6854 ppb	17:33:13
3	Fe 238.204 Radial†	14.2	-1.0	-8.3318 µg/L	-8.3318 ppb	17:33:13
3	K 766.490 Radial†	170.0	33.2	23.601 µg/L	23.601 ppb	17:32:53
3	Mg 279.077 IEC†	13.6	1.6	15.113 µg/L	15.113 ppb	17:33:13
3	Na 589.592 Radial†	706.7	130.1	42.833 µg/L	42.833 ppb	17:32:53
3	Sr 421.552†	21.4	-19.2	-0.1993 µg/L	-0.1993 ppb	17:32:53
3	Sc 361.383	2035877.5	2035877.5	106.60 %		17:34:28
3	Y 371.029	1396783.1	1396783.1	106.63 %		17:34:28
3	Ag 328.068†	-558.0	41.1	0.3273 µg/L	0.3273 ppb	17:34:33
3	As 188.979†	-5.7	-6.5	-12.714 µg/L	-12.714 ppb	17:34:54
3	B 249.677†	310.2	-40.5	-1.7628 µg/L	-1.7628 ppb	17:34:54
3	Ba 233.527†	-23.8	3.7	0.0975 µg/L	0.0975 ppb	17:34:54
3	Be 313.107†	-3295.5	348.9	0.2278 µg/L	0.2278 ppb	17:34:33
3	Cd 226.502†	-134.4	16.1	0.4439 µg/L	0.4439 ppb	17:34:54
3	Co 228.616†	-16.8	-6.9	-0.3385 µg/L	-0.3385 ppb	17:34:54
3	Cr 267.716†	-31.9	22.4	0.4933 µg/L	0.4933 ppb	17:34:33
3	Cu 324.752†	2431.1	-205.5	-1.4364 µg/L	-1.4364 ppb	17:34:33
3	Mn 257.610†	-224.1	33.9	0.1156 µg/L	0.1156 ppb	17:34:54
3	Mo 202.031†	2.2	9.6	1.0266 µg/L	1.0266 ppb	17:34:54
3	Ni 231.604†	311.7	-9.8	-0.5337 µg/L	-0.5337 ppb	17:34:54
3	P 214.914†	26.4	-2.8	-5.9346 µg/L	-5.9346 ppb	17:34:54
3	Pb 220.353†	98.3	-5.0	-1.3370 µg/L	-1.3370 ppb	17:34:54
3	S 181.975 Axial†	14.7	-1.0	-4.4979 µg/L	-4.4979 ppb	17:34:54
3	Sb 206.836†	25.7	-2.9	-2.8125 µg/L	-2.8125 ppb	17:34:54
3	Se 196.026†	12.1	-4.5	-6.8217 µg/L	-6.8217 ppb	17:34:54
3	SiO2†	1207.8	-117.0	-25.202 µg/L	-25.202 ppb	17:34:33
3	Si 251.611†	320.7	-12.0	-0.9854 µg/L	-0.9854 ppb	17:34:54
3	Sn 189.927†	3.6	4.2	1.9540 µg/L	1.9540 ppb	17:34:54
3	Ti 334.940†	152.2	26.6	0.0629 µg/L	0.0629 ppb	17:34:33
3	Tl 190.801†	-31.1	-4.8	-6.7573 µg/L	-6.7573 ppb	17:34:54
3	U 409.014†	18.4	70.9	6.4223 µg/L	6.4223 ppb	17:34:33
3	V 292.402†	-21.9	23.7	0.2672 µg/L	0.2672 ppb	17:34:33
3	Zn 213.857†	481.8	-23.6	-0.5847 µg/L	-0.5847 ppb	17:34:54

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2019407.5	105.74 %	0.915			0.87%
Sc RADIAL	57233.0	105 %	0.3			0.29%
Y 371.029	1384789.1	105.72 %	0.942			0.89%
Ag 328.068†	41.4	0.3305 µg/L	0.03757	0.3305 ppb	0.03757	11.37%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-4.3	-3.1863 µg/L	8.13450	-3.1863 ppb	8.13450	255.30%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-4.1	-8.0447 µg/L	4.66908	-8.0447 ppb	4.66908	58.04%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-28.9	-1.2656 µg/L	0.44348	-1.2656 ppb	0.44348	35.04%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.6	0.1973 µg/L	0.17977	0.1973 ppb	0.17977	91.14%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	175.0	0.1143 µg/L	0.09874	0.1143 ppb	0.09874	86.42%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.8	-0.7353 µg/L	1.25585	-0.7353 ppb	1.25585	170.79%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	14.8	0.4074 µg/L	0.03216	0.4074 ppb	0.03216	7.89%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.4	-0.1157 µg/L	0.20732	-0.1157 ppb	0.20732	179.23%

Cr	267.716†	15.8	0.3480 µg/L	0.13629	0.3480 ppb	0.13629	39.17%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cu	324.752†	-175.8	-1.2276 µg/L	0.22068	-1.2276 ppb	0.22068	17.98%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	0.5	4.5012 µg/L	11.48343	4.5012 ppb	11.48343	255.12%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	41.6	29.571 µg/L	16.4438	29.571 ppb	16.4438	55.61%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	2.0	18.703 µg/L	21.0870	18.703 ppb	21.0870	112.74%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	29.0	0.1004 µg/L	0.01570	0.1004 ppb	0.01570	15.64%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	3.9	0.4208 µg/L	0.69318	0.4208 ppb	0.69318	164.72%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	139.6	45.952 µg/L	3.4354	45.952 ppb	3.4354	7.48%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-14.3	-0.7820 µg/L	0.34199	-0.7820 ppb	0.34199	43.73%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	-0.9	-1.7335 µg/L	3.67082	-1.7335 ppb	3.67082	211.76%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-4.9	-1.3084 µg/L	1.17784	-1.3084 ppb	1.17784	90.02%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	1.3	5.5955 µg/L	10.26528	5.5955 ppb	10.26528	183.46%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	-3.5	-3.4143 µg/L	3.18555	-3.4143 ppb	3.18555	93.30%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-1.3	-1.9164 µg/L	4.24816	-1.9164 ppb	4.24816	221.68%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-84.6	-18.217 µg/L	6.2180	-18.217 ppb	6.2180	34.13%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	-15.2	-1.2511 µg/L	0.27411	-1.2511 ppb	0.27411	21.91%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	1.0	0.4544 µg/L	1.35398	0.4544 ppb	1.35398	297.95%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-19.2	-0.1993 µg/L	0.25463	-0.1993 ppb	0.25463	127.74%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	12.3	0.0282 µg/L	0.07081	0.0282 ppb	0.07081	251.28%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-1.2	-1.6042 µg/L	4.46370	-1.6042 ppb	4.46370	278.25%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	36.0	3.2592 µg/L	4.01326	3.2592 ppb	4.01326	123.13%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	28.2	0.3089 µg/L	0.28245	0.3089 ppb	0.28245	91.44%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-20.6	-0.5110 µg/L	0.11370	-0.5110 ppb	0.11370	22.25%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 17  
 Sample ID: 245390001|945379|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 313  
 Date Collected: 2/11/2010 17:56:35  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245390001|945379|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55824.3	55824.3	102 %		17:57:08
1	Al 396.153Radial†	104.0	111.8	83.297 µg/L	83.297 ppb	17:57:08
1	Ca 317.933Radial†	257.9	73.0	68.751 µg/L	68.751 ppb	17:57:28
1	Fe 238.204 Radial†	24.5	9.4	79.850 µg/L	79.850 ppb	17:57:28
1	K 766.490 Radial†	349.4	213.2	151.54 µg/L	151.54 ppb	17:57:08
1	Mg 279.077 IEC†	11.6	0.1	0.7972 µg/L	0.7972 ppb	17:57:28
1	Na 589.592 Radial†	1089.4	523.1	172.22 µg/L	172.22 ppb	17:57:08
1	Sr 421.552†	90.6	49.0	0.5081 µg/L	0.5081 ppb	17:57:08
1	Sc 361.383	1985542.0	1985542.0	103.96 %		17:58:30
1	Y 371.029	1357334.1	1357334.1	103.62 %		17:58:30
1	Ag 328.068†	-483.9	99.1	0.7963 µg/L	0.7963 ppb	17:58:36
1	As 188.979†	0.2	-1.0	-1.8568 µg/L	-1.8568 ppb	17:58:56
1	B 249.677†	516.1	165.0	7.1717 µg/L	7.1717 ppb	17:58:56
1	Ba 233.527†	19.8	45.1	1.1750 µg/L	1.1750 ppb	17:58:56
1	Be 313.107†	-2971.0	582.7	0.3798 µg/L	0.3798 ppb	17:58:36
1	Cd 226.502†	-138.2	9.2	0.2460 µg/L	0.2460 ppb	17:58:56
1	Co 228.616†	-0.7	8.2	0.3972 µg/L	0.3972 ppb	17:58:56
1	Cr 267.716†	57.0	107.2	2.3593 µg/L	2.3593 ppb	17:58:36
1	Cu 324.752†	2937.1	339.1	2.3796 µg/L	2.3796 ppb	17:58:36
1	Mn 257.610†	402.6	631.4	2.1970 µg/L	2.1970 ppb	17:58:56
1	Mo 202.031†	-5.7	2.1	0.2242 µg/L	0.2242 ppb	17:58:56
1	Ni 231.604†	322.2	7.7	0.4236 µg/L	0.4236 ppb	17:58:56
1	P 214.914†	35.4	6.5	13.598 µg/L	13.598 ppb	17:58:56
1	Pb 220.353†	109.6	8.3	2.1980 µg/L	2.1980 ppb	17:58:56
1	S 181.975 Axial†	23.6	7.9	34.639 µg/L	34.639 ppb	17:58:56
1	Sb 206.836†	21.2	-6.6	-6.4829 µg/L	-6.4829 ppb	17:58:56
1	Se 196.026†	16.2	-0.3	-0.1948 µg/L	-0.1948 ppb	17:58:56
1	SiO2†	9735.7	8114.5	1747.5 µg/L	1747.5 ppb	17:58:36
1	Si 251.611†	10649.6	9930.7	816.36 µg/L	816.36 ppb	17:58:36
1	Sn 189.927†	-0.2	0.6	0.2831 µg/L	0.2831 ppb	17:58:56
1	Ti 334.940†	977.9	824.5	1.9843 µg/L	1.9843 ppb	17:58:36
1	Tl 190.801†	-20.9	4.2	5.8807 µg/L	5.8807 ppb	17:58:56
1	U 409.014†	-15.0	39.2	3.5358 µg/L	3.5358 ppb	17:58:36
1	V 292.402†	29.0	72.1	0.7882 µg/L	0.7882 ppb	17:58:36
1	Zn 213.857†	563.3	66.3	1.6459 µg/L	1.6459 ppb	17:58:56
2	Sc RADIAL	55766.0	55766.0	102 %		17:57:34
2	Al 396.153Radial†	71.2	79.8	59.460 µg/L	59.460 ppb	17:57:34
2	Ca 317.933Radial†	255.9	71.3	67.127 µg/L	67.127 ppb	17:57:54
2	Fe 238.204 Radial†	24.7	9.6	81.728 µg/L	81.728 ppb	17:57:54
2	K 766.490 Radial†	268.5	134.4	95.524 µg/L	95.524 ppb	17:57:34
2	Mg 279.077 IEC†	12.3	0.7	6.6421 µg/L	6.6421 ppb	17:57:54
2	Na 589.592 Radial†	1044.3	480.1	158.05 µg/L	158.05 ppb	17:57:34
2	Sr 421.552†	110.5	68.6	0.7109 µg/L	0.7109 ppb	17:57:34
2	Sc 361.383	1973524.3	1973524.3	103.33 %		17:59:02
2	Y 371.029	1349896.4	1349896.4	103.05 %		17:59:02
2	Ag 328.068†	-521.7	59.7	0.4817 µg/L	0.4817 ppb	17:59:08
2	As 188.979†	-2.2	-3.3	-6.3532 µg/L	-6.3532 ppb	17:59:28
2	B 249.677†	528.1	179.6	7.8089 µg/L	7.8089 ppb	17:59:28
2	Ba 233.527†	27.7	52.8	1.3768 µg/L	1.3768 ppb	17:59:28
2	Be 313.107†	-2868.1	664.9	0.4335 µg/L	0.4335 ppb	17:59:08
2	Cd 226.502†	-124.0	22.2	0.6032 µg/L	0.6032 ppb	17:59:28
2	Co 228.616†	-6.9	2.2	0.1037 µg/L	0.1037 ppb	17:59:28
2	Cr 267.716†	45.2	96.1	2.1146 µg/L	2.1146 ppb	17:59:08
2	Cu 324.752†	2907.3	327.4	2.2980 µg/L	2.2980 ppb	17:59:08
2	Mn 257.610†	424.1	654.5	2.2770 µg/L	2.2770 ppb	17:59:28
2	Mo 202.031†	-4.8	2.9	0.3086 µg/L	0.3086 ppb	17:59:28
2	Ni 231.604†	327.8	15.0	0.8226 µg/L	0.8226 ppb	17:59:28
2	P 214.914†	36.8	8.0	16.908 µg/L	16.908 ppb	17:59:28
2	Pb 220.353†	132.2	30.8	8.2110 µg/L	8.2110 ppb	17:59:28

2	S 181.975 Axial†	24.8	9.2	40.277 µg/L	40.277 ppb	17:59:28
2	Sb 206.836†	25.0	-2.8	-2.7492 µg/L	-2.7492 ppb	17:59:28
2	Se 196.026†	17.0	0.6	1.1538 µg/L	1.1538 ppb	17:59:28
2	SiO2†	9745.9	8181.4	1761.9 µg/L	1761.9 ppb	17:59:08
2	Si 251.611†	10675.1	10017.7	823.51 µg/L	823.51 ppb	17:59:08
2	Sn 189.927†	0.1	0.9	0.4240 µg/L	0.4240 ppb	17:59:28
2	Ti 334.940†	974.4	826.9	1.9895 µg/L	1.9895 ppb	17:59:08
2	Tl 190.801†	-22.6	2.4	3.4340 µg/L	3.4340 ppb	17:59:28
2	U 409.014†	-49.3	5.9	0.5217 µg/L	0.5217 ppb	17:59:08
2	V 292.402†	-1.8	42.4	0.4697 µg/L	0.4697 ppb	17:59:08
2	Zn 213.857†	563.1	69.4	1.7209 µg/L	1.7209 ppb	17:59:28
3	Sc RADIAL	56050.1	56050.1	103 %		17:58:00
3	Al 396.153Radial†	83.1	91.0	67.832 µg/L	67.832 ppb	17:58:00
3	Ca 317.933Radial†	256.0	70.1	65.991 µg/L	65.991 ppb	17:58:20
3	Fe 238.204 Radial†	25.3	10.1	85.666 µg/L	85.666 ppb	17:58:20
3	K 766.490 Radial†	230.8	96.3	68.483 µg/L	68.483 ppb	17:58:00
3	Mg 279.077 IEC†	8.9	-2.6	-24.536 µg/L	-24.536 ppb	17:58:20
3	Na 589.592 Radial†	1060.1	490.3	161.40 µg/L	161.40 ppb	17:58:00
3	Sr 421.552†	113.7	71.2	0.7376 µg/L	0.7376 ppb	17:58:00
3	Sc 361.383	1966271.1	1966271.1	102.95 %		17:59:34
3	Y 371.029	1344259.5	1344259.5	102.62 %		17:59:34
3	Ag 328.068†	-496.7	82.1	0.6618 µg/L	0.6618 ppb	17:59:40
3	As 188.979†	-1.2	-2.3	-4.5157 µg/L	-4.5157 ppb	18:00:01
3	B 249.677†	506.2	160.2	6.9595 µg/L	6.9595 ppb	18:00:01
3	Ba 233.527†	23.3	48.7	1.2683 µg/L	1.2683 ppb	18:00:01
3	Be 313.107†	-2872.5	650.4	0.4240 µg/L	0.4240 ppb	17:59:40
3	Cd 226.502†	-124.2	21.5	0.5853 µg/L	0.5853 ppb	18:00:01
3	Co 228.616†	-10.5	-1.4	-0.0715 µg/L	-0.0715 ppb	18:00:01
3	Cr 267.716†	45.9	97.0	2.1341 µg/L	2.1341 ppb	17:59:40
3	Cu 324.752†	2927.5	357.4	2.5085 µg/L	2.5085 ppb	17:59:40
3	Mn 257.610†	352.0	586.0	2.0416 µg/L	2.0416 ppb	18:00:01
3	Mo 202.031†	-2.7	4.9	0.5290 µg/L	0.5290 ppb	18:00:01
3	Ni 231.604†	333.8	22.1	1.2071 µg/L	1.2071 ppb	18:00:01
3	P 214.914†	31.0	2.5	5.0583 µg/L	5.0583 ppb	18:00:01
3	Pb 220.353†	105.1	4.9	1.3006 µg/L	1.3006 ppb	18:00:01
3	S 181.975 Axial†	23.4	7.9	34.810 µg/L	34.810 ppb	18:00:01
3	Sb 206.836†	24.2	-3.5	-3.4370 µg/L	-3.4370 ppb	18:00:01
3	Se 196.026†	14.4	-1.9	-2.6462 µg/L	-2.6462 ppb	18:00:01
3	SiO2†	9543.8	8019.8	1727.1 µg/L	1727.1 ppb	17:59:40
3	Si 251.611†	10408.6	9797.0	805.36 µg/L	805.36 ppb	17:59:40
3	Sn 189.927†	3.8	4.5	2.0730 µg/L	2.0730 ppb	18:00:01
3	Ti 334.940†	930.1	787.3	1.8968 µg/L	1.8968 ppb	17:59:40
3	Tl 190.801†	-27.3	-2.3	-3.1228 µg/L	-3.1228 ppb	18:00:01
3	U 409.014†	-80.8	-24.9	-2.2705 µg/L	-2.2705 ppb	17:59:40
3	V 292.402†	23.9	67.4	0.7349 µg/L	0.7349 ppb	17:59:40
3	Zn 213.857†	545.7	54.5	1.3498 µg/L	1.3498 ppb	18:00:01

Mean Data: 245390001|945379|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1975112.4	103.42 %		0.510			0.49%
Sc RADIAL	55880.2	102 %		0.3			0.27%
Y 371.029	1350496.7	103.10 %		0.501			0.49%
Ag 328.068†	80.3	0.6466 µg/L		0.15788	0.6466 ppb	0.15788	24.42%
Al 396.153Radial†	94.2	70.197 µg/L		12.0930	70.197 ppb	12.0930	17.23%
As 188.979†	-2.2	-4.2419 µg/L		2.26064	-4.2419 ppb	2.26064	53.29%
B 249.677†	168.2	7.3134 µg/L		0.44209	7.3134 ppb	0.44209	6.04%
Ba 233.527†	48.9	1.2734 µg/L		0.10100	1.2734 ppb	0.10100	7.93%
Be 313.107†	632.7	0.4124 µg/L		0.02867	0.4124 ppb	0.02867	6.95%
Ca 317.933Radial†	71.5	67.290 µg/L		1.3871	67.290 ppb	1.3871	2.06%
Cd 226.502†	17.6	0.4782 µg/L		0.20128	0.4782 ppb	0.20128	42.10%
Co 228.616†	3.0	0.1431 µg/L		0.23682	0.1431 ppb	0.23682	165.44%
Cr 267.716†	100.1	2.2027 µg/L		0.13598	2.2027 ppb	0.13598	6.17%
Cu 324.752†	341.3	2.3954 µg/L		0.10614	2.3954 ppb	0.10614	4.43%
Fe 238.204 Radial†	9.7	82.415 µg/L		2.9682	82.415 ppb	2.9682	3.60%
K 766.490 Radial†	148.0	105.18 µg/L		42.362	105.18 ppb	42.362	40.27%
Mg 279.077 IEC†	-0.6	-5.6988 µg/L		16.57297	-5.6988 ppb	16.57297	290.81%
Mn 257.610†	624.0	2.1719 µg/L		0.11970	2.1719 ppb	0.11970	5.51%
Mo 202.031†	3.3	0.3540 µg/L		0.15740	0.3540 ppb	0.15740	44.47%
Na 589.592 Radial†	497.8	163.89 µg/L		7.405	163.89 ppb	7.405	4.52%

Ni 231.604†	14.9	0.8177 µg/L	0.39177	0.8177 ppb	0.39177	47.91%
P 214.914†	5.7	11.855 µg/L	6.1143	11.855 ppb	6.1143	51.58%
Pb 220.353†	14.6	3.9032 µg/L	3.75754	3.9032 ppb	3.75754	96.27%
S 181.975 Axial†	8.3	36.575 µg/L	3.2068	36.575 ppb	3.2068	8.77%
Sb 206.836†	-4.3	-4.2230 µg/L	1.98707	-4.2230 ppb	1.98707	47.05%
Se 196.026†	-0.5	-0.5624 µg/L	1.92647	-0.5624 ppb	1.92647	342.54%
SiO2†	8105.3	1745.5 µg/L	17.48	1745.5 ppb	17.48	1.00%
Si 251.611†	9915.1	815.08 µg/L	9.140	815.08 ppb	9.140	1.12%
Sn 189.927†	2.0	0.9267 µg/L	0.99518	0.9267 ppb	0.99518	107.39%
Sr 421.552†	62.9	0.6522 µg/L	0.12549	0.6522 ppb	0.12549	19.24%
Ti 334.940†	812.9	1.9569 µg/L	0.05210	1.9569 ppb	0.05210	2.66%
Tl 190.801†	1.5	2.0640 µg/L	4.65545	2.0640 ppb	4.65545	225.56%
U 409.014†	6.8	0.5957 µg/L	2.90385	0.5957 ppb	2.90385	487.46%
V 292.402†	60.6	0.6643 µg/L	0.17061	0.6643 ppb	0.17061	25.68%
Zn 213.857†	63.4	1.5722 µg/L	0.19622	1.5722 ppb	0.19622	12.48%

Sequence No.: 19  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 1  
 Date Collected: 2/11/2010 18:03:46  
 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	57726.1	57726.1	106 %		18:04:22
1	Al 396.153Radial†	6766.7	6407.4	4765.2 µg/L	4765.2 ppb	18:04:22
1	Ca 317.933Radial†	5597.5	5112.8	4814.0 µg/L	4814.0 ppb	18:04:43
1	Fe 238.204 Radial†	618.0	569.7	4839.6 µg/L	4839.6 ppb	18:04:43
1	K 766.490 Radial†	7228.2	6705.1	4766.0 µg/L	4766.0 ppb	18:04:22
1	Mg 279.077 IEC†	567.3	525.0	4889.6 µg/L	4889.6 ppb	18:04:43
1	Na 589.592 Radial†	31079.1	28840.4	9494.4 µg/L	9494.4 ppb	18:04:22
1	Sr 421.552†	47930.5	45274.1	469.32 µg/L	469.32 ppb	18:04:22
1	Sc 361.383	1995865.2	1995865.2	104.50 %		18:05:46
1	Y 371.029	1362757.5	1362757.5	104.03 %		18:05:46
1	Ag 328.068†	63483.9	61312.1	490.10 µg/L	490.10 ppb	18:05:52
1	As 188.979†	273.1	260.2	507.53 µg/L	507.53 ppb	18:06:12
1	B 249.677†	12082.3	11230.0	489.06 µg/L	489.06 ppb	18:05:52
1	Ba 233.527†	19988.9	19153.3	499.62 µg/L	499.62 ppb	18:05:52
1	Be 313.107†	781981.3	751717.1	490.73 µg/L	490.73 ppb	18:05:46
1	Cd 226.502†	18909.7	18236.8	503.08 µg/L	503.08 ppb	18:05:52
1	Co 228.616†	10693.9	10241.8	503.48 µg/L	503.48 ppb	18:05:52
1	Cr 267.716†	23838.7	22863.6	503.22 µg/L	503.22 ppb	18:05:52
1	Cu 324.752†	76544.4	70759.2	494.94 µg/L	494.94 ppb	18:05:52
1	Mn 257.610†	150825.0	144568.3	501.07 µg/L	501.07 ppb	18:05:46
1	Mo 202.031†	4977.2	4770.3	509.27 µg/L	509.27 ppb	18:06:12
1	Ni 231.604†	9935.5	9205.0	502.75 µg/L	502.75 ppb	18:05:52
1	P 214.914†	1265.8	1183.6	2494.1 µg/L	2494.1 ppb	18:06:12
1	Pb 220.353†	2092.9	1905.5	508.60 µg/L	508.60 ppb	18:06:12
1	S 181.975 Axial†	254.0	228.2	999.80 µg/L	999.80 ppb	18:06:12
1	Sb 206.836†	555.5	504.6	498.91 µg/L	498.91 ppb	18:06:12
1	Se 196.026†	366.1	334.5	517.42 µg/L	517.42 ppb	18:06:12
1	SiO2†	26867.3	24459.3	5267.4 µg/L	5267.4 ppb	18:05:52
1	Si 251.611†	31625.0	29949.0	2462.0 µg/L	2462.0 ppb	18:05:52
1	Sn 189.927†	1151.3	1102.5	507.11 µg/L	507.11 ppb	18:06:12
1	Ti 334.940†	210462.3	201274.9	483.84 µg/L	483.84 ppb	18:05:46
1	Tl 190.801†	351.8	360.9	509.62 µg/L	509.62 ppb	18:06:12
1	U 409.014†	5780.2	5584.7	504.65 µg/L	504.65 ppb	18:05:52
1	V 292.402†	48773.6	46715.6	504.04 µg/L	504.04 ppb	18:05:52
1	Zn 213.857†	21610.6	20203.6	500.98 µg/L	500.98 ppb	18:05:52
2	Sc RADIAL	58137.3	58137.3	107 %		18:04:48
2	Al 396.153Radial†	6794.0	6387.8	4750.7 µg/L	4750.7 ppb	18:04:48
2	Ca 317.933Radial†	5592.3	5070.5	4774.2 µg/L	4774.2 ppb	18:05:09
2	Fe 238.204 Radial†	618.1	565.7	4805.7 µg/L	4805.7 ppb	18:05:09
2	K 766.490 Radial†	7287.3	6712.3	4771.1 µg/L	4771.1 ppb	18:04:48
2	Mg 279.077 IEC†	568.2	522.1	4862.2 µg/L	4862.2 ppb	18:05:09
2	Na 589.592 Radial†	31238.6	28782.3	9475.2 µg/L	9475.2 ppb	18:04:48
2	Sr 421.552†	48291.3	45292.3	469.51 µg/L	469.51 ppb	18:04:48
2	Sc 361.383	2007163.9	2007163.9	105.10 %		18:06:19
2	Y 371.029	1370434.0	1370434.0	104.62 %		18:06:19
2	Ag 328.068†	63627.6	61107.0	488.46 µg/L	488.46 ppb	18:06:25
2	As 188.979†	273.7	259.2	505.75 µg/L	505.75 ppb	18:06:46
2	B 249.677†	12114.9	11196.0	487.59 µg/L	487.59 ppb	18:06:25
2	Ba 233.527†	19979.9	19037.1	496.59 µg/L	496.59 ppb	18:06:25
2	Be 313.107†	784264.0	749676.9	489.40 µg/L	489.40 ppb	18:06:19
2	Cd 226.502†	18871.7	18098.7	499.27 µg/L	499.27 ppb	18:06:25
2	Co 228.616†	10694.5	10184.8	500.67 µg/L	500.67 ppb	18:06:25
2	Cr 267.716†	23892.4	22786.3	501.52 µg/L	501.52 ppb	18:06:25
2	Cu 324.752†	76884.7	70670.6	494.32 µg/L	494.32 ppb	18:06:25
2	Mn 257.610†	151108.1	144025.3	499.18 µg/L	499.18 ppb	18:06:19
2	Mo 202.031†	4921.9	4690.8	500.79 µg/L	500.79 ppb	18:06:46
2	Ni 231.604†	9959.3	9174.2	501.07 µg/L	501.07 ppb	18:06:25
2	P 214.914†	1267.5	1178.4	2483.0 µg/L	2483.0 ppb	18:06:46
2	Pb 220.353†	2074.4	1876.6	500.89 µg/L	500.89 ppb	18:06:46



2	S 181.975 Axial†	247.1	220.3	965.20 µg/L	965.20 ppb	18:06:46
2	Sb 206.836†	553.1	499.3	493.56 µg/L	493.56 ppb	18:06:46
2	Se 196.026†	362.2	328.8	508.76 µg/L	508.76 ppb	18:06:46
2	SiO2†	26954.0	24397.1	5254.0 µg/L	5254.0 ppb	18:06:25
2	Si 251.611†	31693.0	29843.4	2453.3 µg/L	2453.3 ppb	18:06:25
2	Sn 189.927†	1148.2	1093.4	502.92 µg/L	502.92 ppb	18:06:46
2	Ti 334.940†	211069.7	200719.2	482.51 µg/L	482.51 ppb	18:06:19
2	Tl 190.801†	350.2	357.5	504.86 µg/L	504.86 ppb	18:06:46
2	U 409.014†	5713.5	5490.1	496.10 µg/L	496.10 ppb	18:06:25
2	V 292.402†	48839.6	46515.7	501.83 µg/L	501.83 ppb	18:06:25
2	Zn 213.857†	21586.8	20064.5	497.52 µg/L	497.52 ppb	18:06:25
3	Sc RADIAL	57420.7	57420.7	105 %		18:05:14
3	Al 396.153Radial†	6887.1	6555.8	4877.6 µg/L	4877.6 ppb	18:05:14
3	Ca 317.933Radial†	5594.0	5137.6	4837.4 µg/L	4837.4 ppb	18:05:34
3	Fe 238.204 Radial†	619.5	574.3	4877.2 µg/L	4877.2 ppb	18:05:34
3	K 766.490 Radial†	7272.3	6783.4	4821.6 µg/L	4821.6 ppb	18:05:14
3	Mg 279.077 IEC†	569.6	530.1	4935.2 µg/L	4935.2 ppb	18:05:34
3	Na 589.592 Radial†	31447.7	29346.9	9661.1 µg/L	9661.1 ppb	18:05:14
3	Sr 421.552†	48895.8	46432.5	481.33 µg/L	481.33 ppb	18:05:14
3	Sc 361.383	2010251.9	2010251.9	105.26 %		18:06:53
3	Y 371.029	1371909.0	1371909.0	104.73 %		18:06:53
3	Ag 328.068†	59865.9	57440.1	459.05 µg/L	459.05 ppb	18:06:58
3	As 188.979†	229.2	216.7	422.67 µg/L	422.67 ppb	18:07:19
3	B 249.677†	11370.0	10470.6	455.76 µg/L	455.76 ppb	18:06:58
3	Ba 233.527†	18395.6	17502.7	456.55 µg/L	456.55 ppb	18:06:58
3	Be 313.107†	741644.3	708039.7	462.22 µg/L	462.22 ppb	18:06:53
3	Cd 226.502†	17275.3	16554.5	456.62 µg/L	456.62 ppb	18:06:58
3	Co 228.616†	9741.1	9263.3	455.31 µg/L	455.31 ppb	18:06:58
3	Cr 267.716†	21256.7	20247.3	445.64 µg/L	445.64 ppb	18:06:58
3	Cu 324.752†	70381.9	64380.2	450.39 µg/L	450.39 ppb	18:06:58
3	Mn 257.610†	143060.5	136158.7	471.95 µg/L	471.95 ppb	18:06:53
3	Mo 202.031†	4127.0	3928.4	419.43 µg/L	419.43 ppb	18:07:19
3	Ni 231.604†	9089.8	8333.5	455.16 µg/L	455.16 ppb	18:06:58
3	P 214.914†	1084.0	1002.2	2108.1 µg/L	2108.1 ppb	18:07:19
3	Pb 220.353†	1818.2	1630.2	435.03 µg/L	435.03 ppb	18:07:19
3	S 181.975 Axial†	224.4	198.4	869.26 µg/L	869.26 ppb	18:07:19
3	Sb 206.836†	480.4	429.5	424.14 µg/L	424.14 ppb	18:07:19
3	Se 196.026†	313.7	282.2	437.85 µg/L	437.85 ppb	18:07:19
3	SiO2†	25019.5	22519.8	4849.8 µg/L	4849.8 ppb	18:06:58
3	Si 251.611†	29405.8	27624.1	2270.8 µg/L	2270.8 ppb	18:06:58
3	Sn 189.927†	955.0	908.2	417.73 µg/L	417.73 ppb	18:07:19
3	Ti 334.940†	198942.9	188889.6	454.05 µg/L	454.05 ppb	18:06:53
3	Tl 190.801†	316.9	325.4	459.73 µg/L	459.73 ppb	18:07:19
3	U 409.014†	5179.0	4973.9	449.35 µg/L	449.35 ppb	18:06:58
3	V 292.402†	44254.0	42087.7	453.84 µg/L	453.84 ppb	18:06:58
3	Zn 213.857†	19673.0	18214.8	451.59 µg/L	451.59 ppb	18:06:58

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2004427.0	104.95 %	0.397			0.38%
Sc RADIAL	57761.4	106 %	0.7			0.62%
Y 371.029	1368366.8	104.46 %	0.375			0.36%
Ag 328.068†	59953.1	479.20 µg/L	17.470	479.20 ppb	17.470	3.65%
QC value within limits for Ag 328.068 Recovery = 95.84%						
Al 396.153Radial†	6450.3	4797.9 µg/L	69.48	4797.9 ppb	69.48	1.45%
QC value within limits for Al 396.153Radial Recovery = 95.96%						
As 188.979†	245.3	478.65 µg/L	48.486	478.65 ppb	48.486	10.13%
QC value within limits for As 188.979 Recovery = 95.73%						
B 249.677†	10965.6	477.47 µg/L	18.814	477.47 ppb	18.814	3.94%
QC value within limits for B 249.677 Recovery = 95.49%						
Ba 233.527†	18564.4	484.26 µg/L	24.039	484.26 ppb	24.039	4.96%
QC value within limits for Ba 233.527 Recovery = 96.85%						
Be 313.107†	736477.9	480.78 µg/L	16.091	480.78 ppb	16.091	3.35%
QC value within limits for Be 313.107 Recovery = 96.16%						
Ca 317.933Radial†	5106.9	4808.5 µg/L	31.95	4808.5 ppb	31.95	0.66%
QC value within limits for Ca 317.933Radial Recovery = 96.17%						
Cd 226.502†	17630.0	486.32 µg/L	25.796	486.32 ppb	25.796	5.30%
QC value within limits for Cd 226.502 Recovery = 97.26%						
Co 228.616†	9896.7	486.49 µg/L	27.038	486.49 ppb	27.038	5.56%

Cr	267.716†	21965.7	483.46 µg/L	32.763	483.46 ppb	32.763	6.78%
QC value within limits for Co 228.616 Recovery = 97.30%							
Cu	324.752†	68603.3	479.88 µg/L	25.545	479.88 ppb	25.545	5.32%
QC value within limits for Cr 267.716 Recovery = 96.69%							
Fe	238.204 Radial†	569.9	4840.8 µg/L	35.77	4840.8 ppb	35.77	0.74%
QC value within limits for Cu 324.752 Recovery = 95.98%							
K	766.490 Radial†	6733.6	4786.2 µg/L	30.77	4786.2 ppb	30.77	0.64%
QC value within limits for Fe 238.204 Radial Recovery = 96.82%							
Mg	279.077 IEC†	525.8	4895.7 µg/L	36.85	4895.7 ppb	36.85	0.75%
QC value within limits for K 766.490 Radial Recovery = 95.72%							
Mn	257.610†	141584.1	490.73 µg/L	16.295	490.73 ppb	16.295	3.32%
QC value within limits for Mg 279.077 IEC Recovery = 97.91%							
Mo	202.031†	4463.2	476.50 µg/L	49.601	476.50 ppb	49.601	10.41%
QC value within limits for Mn 257.610 Recovery = 98.15%							
Na	589.592 Radial†	28989.9	9543.6 µg/L	102.24	9543.6 ppb	102.24	1.07%
QC value within limits for Mo 202.031 Recovery = 95.30%							
Ni	231.604†	8904.3	486.32 µg/L	27.004	486.32 ppb	27.004	5.55%
QC value within limits for Na 589.592 Radial Recovery = 95.44%							
P	214.914†	1121.4	2361.7 µg/L	219.74	2361.7 ppb	219.74	9.30%
QC value within limits for Ni 231.604 Recovery = 97.26%							
Pb	220.353†	1804.1	481.51 µg/L	40.435	481.51 ppb	40.435	8.40%
QC value within limits for P 214.914 Recovery = 94.47%							
S	181.975 Axial†	215.6	944.76 µg/L	67.630	944.76 ppb	67.630	7.16%
QC value within limits for Pb 220.353 Recovery = 96.30%							
Sb	206.836†	477.8	472.20 µg/L	41.713	472.20 ppb	41.713	8.83%
QC value within limits for S 181.975 Axial Recovery = 94.48%							
Se	196.026†	315.2	488.01 µg/L	43.651	488.01 ppb	43.651	8.94%
QC value within limits for Sb 206.836 Recovery = 94.44%							
SiO2†		23792.0	5123.7 µg/L	237.37	5123.7 ppb	237.37	4.63%
QC value within limits for Se 196.026 Recovery = 97.60%							
Si	251.611†	29138.9	2395.4 µg/L	107.92	2395.4 ppb	107.92	4.51%
QC value within limits for SiO2 Recovery = 95.82%							
Sn	189.927†	1034.7	475.92 µg/L	50.437	475.92 ppb	50.437	10.60%
QC value within limits for Si 251.611 Recovery = 95.81%							
Sr	421.552†	45666.3	473.38 µg/L	6.879	473.38 ppb	6.879	1.45%
QC value within limits for Sn 189.927 Recovery = 95.18%							
Ti	334.940†	196961.2	473.47 µg/L	16.830	473.47 ppb	16.830	3.55%
QC value within limits for Sr 421.552 Recovery = 94.68%							
Tl	190.801†	348.0	491.40 µg/L	27.532	491.40 ppb	27.532	5.60%
QC value within limits for Ti 334.940 Recovery = 94.69%							
U	409.014†	5349.6	483.37 µg/L	29.770	483.37 ppb	29.770	6.16%
QC value within limits for Tl 190.801 Recovery = 98.28%							
V	292.402†	45106.3	486.57 µg/L	28.365	486.57 ppb	28.365	5.83%
QC value within limits for U 409.014 Recovery = 96.67%							
Zn	213.857†	19494.3	483.36 µg/L	27.567	483.36 ppb	27.567	5.70%
QC value within limits for V 292.402 Recovery = 97.31%							
QC value within limits for Zn 213.857 Recovery = 96.67%							

All analyte(s) passed QC.

Sequence No.: 20

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 2/11/2010 18:07:29

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	56532.0	56532.0	104 %		18:08:03
1	Al 396.153Radial†	-15.4	-4.8	-3.5570 µg/L	-3.5570 ppb	18:08:03
1	Ca 317.933Radial†	184.3	-1.2	-1.1516 µg/L	-1.1516 ppb	18:08:24
1	Fe 238.204 Radial†	15.7	0.7	5.7821 µg/L	5.7821 ppb	18:08:24
1	K 766.490 Radial†	164.9	30.8	21.873 µg/L	21.873 ppb	18:08:03
1	Mg 279.077 IEC†	16.1	4.2	39.497 µg/L	39.497 ppb	18:08:24
1	Na 589.592 Radial†	629.4	65.8	21.647 µg/L	21.647 ppb	18:08:03
1	Sr 421.552†	25.1	-15.3	-0.1589 µg/L	-0.1589 ppb	18:08:03
1	Sc 361.383	1970116.9	1970116.9	103.16 %		18:09:26
1	Y 371.029	1351478.3	1351478.3	103.17 %		18:09:26
1	Ag 328.068†	-586.1	-3.7	-0.0267 µg/L	-0.0267 ppb	18:09:32
1	As 188.979†	0.4	-0.7	-1.4081 µg/L	-1.4081 ppb	18:09:52
1	B 249.677†	319.9	-21.4	-0.9375 µg/L	-0.9375 ppb	18:09:52
1	Ba 233.527†	-23.6	3.1	0.0818 µg/L	0.0818 ppb	18:09:52
1	Be 313.107†	-3504.0	43.7	0.0286 µg/L	0.0286 ppb	18:09:32
1	Cd 226.502†	-151.5	-4.7	-0.1322 µg/L	-0.1322 ppb	18:09:52
1	Co 228.616†	-11.0	-1.8	-0.0886 µg/L	-0.0886 ppb	18:09:52
1	Cr 267.716†	-63.6	-9.3	-0.2036 µg/L	-0.2036 ppb	18:09:32
1	Cu 324.752†	2393.3	-166.0	-1.1590 µg/L	-1.1590 ppb	18:09:32
1	Mn 257.610†	-254.5	-2.6	-0.0100 µg/L	-0.0100 ppb	18:09:52
1	Mo 202.031†	-8.7	-0.9	-0.0948 µg/L	-0.0948 ppb	18:09:52
1	Ni 231.604†	290.0	-21.0	-1.1506 µg/L	-1.1506 ppb	18:09:52
1	P 214.914†	32.8	4.2	9.1562 µg/L	9.1562 ppb	18:09:52
1	Pb 220.353†	95.7	-4.4	-1.1812 µg/L	-1.1812 ppb	18:09:52
1	S 181.975 Axial†	14.0	-1.2	-5.3162 µg/L	-5.3162 ppb	18:09:52
1	Sb 206.836†	31.3	3.4	3.3775 µg/L	3.3775 ppb	18:09:52
1	Se 196.026†	11.2	-4.9	-7.5535 µg/L	-7.5535 ppb	18:09:52
1	SiO2†	1234.7	-53.1	-11.434 µg/L	-11.434 ppb	18:09:32
1	Si 251.611†	295.0	-26.9	-2.2136 µg/L	-2.2136 ppb	18:09:52
1	Sn 189.927†	1.4	2.3	1.0452 µg/L	1.0452 ppb	18:09:52
1	Ti 334.940†	70.3	-48.0	-0.1186 µg/L	-0.1186 ppb	18:09:32
1	Tl 190.801†	-29.3	-4.1	-5.6836 µg/L	-5.6836 ppb	18:09:52
1	U 409.014†	-64.3	-8.7	-0.7862 µg/L	-0.7862 ppb	18:09:32
1	V 292.402†	-16.1	28.6	0.3039 µg/L	0.3039 ppb	18:09:32
1	Zn 213.857†	475.3	-14.8	-0.3645 µg/L	-0.3645 ppb	18:09:52
2	Sc RADIAL	55658.7	55658.7	102 %		18:08:29
2	Al 396.153Radial†	8.4	18.4	13.722 µg/L	13.722 ppb	18:08:29
2	Ca 317.933Radial†	182.4	-0.3	-0.2942 µg/L	-0.2942 ppb	18:08:50
2	Fe 238.204 Radial†	17.1	2.3	19.276 µg/L	19.276 ppb	18:08:50
2	K 766.490 Radial†	186.5	54.5	38.722 µg/L	38.722 ppb	18:08:29
2	Mg 279.077 IEC†	15.0	3.4	31.500 µg/L	31.500 ppb	18:08:50
2	Na 589.592 Radial†	680.0	124.9	41.106 µg/L	41.106 ppb	18:08:29
2	Sr 421.552†	30.6	-9.6	-0.0993 µg/L	-0.0993 ppb	18:08:29
2	Sc 361.383	2007038.7	2007038.7	105.09 %		18:09:58
2	Y 371.029	1377314.4	1377314.4	105.15 %		18:09:58
2	Ag 328.068†	-493.3	95.1	0.7576 µg/L	0.7576 ppb	18:10:04
2	As 188.979†	-1.7	-2.7	-5.3378 µg/L	-5.3378 ppb	18:10:25
2	B 249.677†	329.1	-18.3	-0.8077 µg/L	-0.8077 ppb	18:10:25
2	Ba 233.527†	-25.2	2.0	0.0533 µg/L	0.0533 ppb	18:10:25
2	Be 313.107†	-3351.2	251.6	0.1643 µg/L	0.1643 ppb	18:10:04
2	Cd 226.502†	-144.2	4.9	0.1335 µg/L	0.1335 ppb	18:10:25
2	Co 228.616†	-14.3	-4.7	-0.2334 µg/L	-0.2334 ppb	18:10:25
2	Cr 267.716†	-47.8	6.9	0.1524 µg/L	0.1524 ppb	18:10:04
2	Cu 324.752†	2466.3	-139.3	-0.9702 µg/L	-0.9702 ppb	18:10:04
2	Mn 257.610†	-245.5	10.5	0.0378 µg/L	0.0378 ppb	18:10:25
2	Mo 202.031†	-7.5	0.4	0.0445 µg/L	0.0445 ppb	18:10:25
2	Ni 231.604†	299.7	-17.0	-0.9313 µg/L	-0.9313 ppb	18:10:25
2	P 214.914†	31.3	2.2	4.7306 µg/L	4.7306 ppb	18:10:25
2	Pb 220.353†	108.5	6.1	1.6290 µg/L	1.6290 ppb	18:10:25

2	S 181.975 Axial†	16.7	1.1	4.8755 µg/L	4.8755 ppb	18:10:25
2	Sb 206.836†	20.8	-7.2	-7.0445 µg/L	-7.0445 ppb	18:10:25
2	Se 196.026†	16.5	-0.1	-0.1477 µg/L	-0.1477 ppb	18:10:25
2	SiO2†	1217.3	-91.6	-19.736 µg/L	-19.736 ppb	18:10:04
2	Si 251.611†	298.1	-29.3	-2.4046 µg/L	-2.4046 ppb	18:10:25
2	Sn 189.927†	0.2	1.0	0.4758 µg/L	0.4758 ppb	18:10:25
2	Ti 334.940†	145.5	22.4	0.0513 µg/L	0.0513 ppb	18:10:04
2	Tl 190.801†	-26.0	-0.5	-0.6548 µg/L	-0.6548 ppb	18:10:25
2	U 409.014†	-106.1	-47.3	-4.2862 µg/L	-4.2862 ppb	18:10:04
2	V 292.402†	-24.2	21.2	0.2243 µg/L	0.2243 ppb	18:10:04
2	Zn 213.857†	472.5	-25.9	-0.6440 µg/L	-0.6440 ppb	18:10:25
3	Sc RADIAL	55952.9	55952.9	103 %		18:08:56
3	Al 396.153Radial†	-23.9	-13.2	-9.8258 µg/L	-9.8258 ppb	18:08:56
3	Ca 317.933Radial†	192.5	8.6	8.1332 µg/L	8.1332 ppb	18:09:16
3	Fe 238.204 Radial†	17.2	2.3	19.451 µg/L	19.451 ppb	18:09:16
3	K 766.490 Radial†	199.1	65.8	46.778 µg/L	46.778 ppb	18:08:56
3	Mg 279.077 IEC†	13.0	1.4	13.321 µg/L	13.321 ppb	18:09:16
3	Na 589.592 Radial†	622.9	65.7	21.628 µg/L	21.628 ppb	18:08:56
3	Sr 421.552†	22.5	-17.6	-0.1825 µg/L	-0.1825 ppb	18:08:56
3	Sc 361.383	1969215.9	1969215.9	103.11 %		18:10:31
3	Y 371.029	1350905.5	1350905.5	103.13 %		18:10:31
3	Ag 328.068†	-575.5	6.4	0.0513 µg/L	0.0513 ppb	18:10:36
3	As 188.979†	-0.8	-1.9	-3.6705 µg/L	-3.6705 ppb	18:10:57
3	B 249.677†	315.0	-25.9	-1.1434 µg/L	-1.1434 ppb	18:10:57
3	Ba 233.527†	-24.5	2.2	0.0583 µg/L	0.0583 ppb	18:10:57
3	Be 313.107†	-3286.5	253.0	0.1652 µg/L	0.1652 ppb	18:10:36
3	Cd 226.502†	-133.6	12.5	0.3430 µg/L	0.3430 ppb	18:10:57
3	Co 228.616†	-14.1	-4.9	-0.2403 µg/L	-0.2403 ppb	18:10:57
3	Cr 267.716†	-66.1	-11.7	-0.2584 µg/L	-0.2584 ppb	18:10:36
3	Cu 324.752†	2477.5	-83.3	-0.5792 µg/L	-0.5792 ppb	18:10:36
3	Mn 257.610†	-225.9	25.1	0.0888 µg/L	0.0888 ppb	18:10:57
3	Mo 202.031†	-9.8	-2.0	-0.2112 µg/L	-0.2112 ppb	18:10:57
3	Ni 231.604†	298.6	-12.6	-0.6902 µg/L	-0.6902 ppb	18:10:57
3	P 214.914†	27.1	-1.4	-2.9216 µg/L	-2.9216 ppb	18:10:57
3	Pb 220.353†	95.5	-4.6	-1.2298 µg/L	-1.2298 ppb	18:10:57
3	S 181.975 Axial†	18.9	3.5	15.355 µg/L	15.355 ppb	18:10:57
3	Sb 206.836†	19.3	-8.3	-8.1417 µg/L	-8.1417 ppb	18:10:57
3	Se 196.026†	11.7	-4.5	-6.8172 µg/L	-6.8172 ppb	18:10:57
3	SiO2†	1221.9	-65.0	-13.993 µg/L	-13.993 ppb	18:10:36
3	Si 251.611†	305.8	-16.3	-1.3398 µg/L	-1.3398 ppb	18:10:57
3	Sn 189.927†	-1.0	-0.1	-0.0571 µg/L	-0.0571 ppb	18:10:57
3	Ti 334.940†	185.2	63.5	0.1517 µg/L	0.1517 ppb	18:10:36
3	Tl 190.801†	-28.1	-3.0	-4.1975 µg/L	-4.1975 ppb	18:10:57
3	U 409.014†	-9.8	44.1	3.9892 µg/L	3.9892 ppb	18:10:36
3	V 292.402†	-52.5	-6.8	-0.0677 µg/L	-0.0677 ppb	18:10:36
3	Zn 213.857†	470.6	-19.2	-0.4765 µg/L	-0.4765 ppb	18:10:57

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1982123.8	103.78 %	1.130			1.09%
Sc RADIAL	56047.9	103 %	0.8			0.79%
Y 371.029	1359899.4	103.82 %	1.152			1.11%
Ag 328.068†	32.6	0.2608 µg/L	0.43206	0.2608 ppb	0.43206	165.69%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	0.1	0.1130 µg/L	12.19532	0.1130 ppb	12.19532	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-1.8	-3.4721 µg/L	1.97235	-3.4721 ppb	1.97235	56.80%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-21.9	-0.9628 µg/L	0.16927	-0.9628 ppb	0.16927	17.58%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.5	0.0645 µg/L	0.01519	0.0645 ppb	0.01519	23.57%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	182.7	0.1193 µg/L	0.07861	0.1193 ppb	0.07861	65.88%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	2.4	2.2291 µg/L	5.13097	2.2291 ppb	5.13097	230.18%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	4.3	0.1147 µg/L	0.23817	0.1147 ppb	0.23817	207.57%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-3.8	-0.1875 µg/L	0.08565	-0.1875 ppb	0.08565	45.69%

QC value within limits for Co 228.616	Recovery = Not calculated		
Cr 267.716†	-4.7 -0.1032 µg/L	0.22302 -0.1032 ppb	0.22302 216.06%
QC value within limits for Cr 267.716	Recovery = Not calculated		
Cu 324.752†	-129.5 -0.9028 µg/L	0.29572 -0.9028 ppb	0.29572 32.76%
QC value within limits for Cu 324.752	Recovery = Not calculated		
Fe 238.204 Radial†	1.8 14.837 µg/L	7.8419 14.837 ppb	7.8419 52.86%
QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
K 766.490 Radial†	50.4 35.791 µg/L	12.7089 35.791 ppb	12.7089 35.51%
QC value within limits for K 766.490 Radial	Recovery = Not calculated		
Mg 279.077 IEC†	3.0 28.106 µg/L	13.4141 28.106 ppb	13.4141 47.73%
QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
Mn 257.610†	11.0 0.0389 µg/L	0.04940 0.0389 ppb	0.04940 127.06%
QC value within limits for Mn 257.610	Recovery = Not calculated		
Mo 202.031†	-0.8 -0.0872 µg/L	0.12800 -0.0872 ppb	0.12800 146.84%
QC value within limits for Mo 202.031	Recovery = Not calculated		
Na 589.592 Radial†	85.4 28.127 µg/L	11.2402 28.127 ppb	11.2402 39.96%
QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
Ni 231.604†	-16.9 -0.9240 µg/L	0.23026 -0.9240 ppb	0.23026 24.92%
QC value within limits for Ni 231.604	Recovery = Not calculated		
P 214.914†	1.7 3.6551 µg/L	6.11031 3.6551 ppb	6.11031 167.17%
QC value within limits for P 214.914	Recovery = Not calculated		
Pb 220.353†	-1.0 -0.2607 µg/L	1.63670 -0.2607 ppb	1.63670 627.82%
QC value within limits for Pb 220.353	Recovery = Not calculated		
S 181.975 Axial†	1.1 4.9715 µg/L	10.33607 4.9715 ppb	10.33607 207.91%
QC value within limits for S 181.975 Axial	Recovery = Not calculated		
Sb 206.836†	-4.0 -3.9362 µg/L	6.35757 -3.9362 ppb	6.35757 161.51%
QC value within limits for Sb 206.836	Recovery = Not calculated		
Se 196.026†	-3.2 -4.8394 µg/L	4.07986 -4.8394 ppb	4.07986 84.30%
QC value within limits for Se 196.026	Recovery = Not calculated		
SiO2†	-69.9 -15.054 µg/L	4.2514 -15.054 ppb	4.2514 28.24%
QC value within limits for SiO2	Recovery = Not calculated		
Si 251.611†	-24.2 -1.9860 µg/L	0.56769 -1.9860 ppb	0.56769 28.58%
QC value within limits for Si 251.611	Recovery = Not calculated		
Sn 189.927†	1.1 0.4880 µg/L	0.55125 0.4880 ppb	0.55125 112.97%
QC value within limits for Sn 189.927	Recovery = Not calculated		
Sr 421.552†	-14.2 -0.1469 µg/L	0.04288 -0.1469 ppb	0.04288 29.20%
QC value within limits for Sr 421.552	Recovery = Not calculated		
Ti 334.940†	12.6 0.0281 µg/L	0.13664 0.0281 ppb	0.13664 485.55%
QC value within limits for Ti 334.940	Recovery = Not calculated		
Tl 190.801†	-2.5 -3.5120 µg/L	2.58356 -3.5120 ppb	2.58356 73.56%
QC value within limits for Tl 190.801	Recovery = Not calculated		
U 409.014†	-4.0 -0.3611 µg/L	4.15405 -0.3611 ppb	4.15405 >999.9%
QC value within limits for U 409.014	Recovery = Not calculated		
V 292.402†	14.4 0.1535 µg/L	0.19568 0.1535 ppb	0.19568 127.50%
QC value within limits for V 292.402	Recovery = Not calculated		
Zn 213.857†	-20.0 -0.4950 µg/L	0.14064 -0.4950 ppb	0.14064 28.41%
QC value within limits for Zn 213.857	Recovery = Not calculated		

All analyte(s) passed QC.

## Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Saturday, February 13, 2010 14:53:47

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.320

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

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		1166.8		1166.848		36.468		3.1
Mg	24.0		14132.2		14132.187		94.630		0.7
Co	58.9		44494.4		44494.392		551.949		1.2
Rh	102.9		86899.9		86899.920		746.363		0.9
In	114.9		120318.0		120317.952		320.860		0.3
Pb	208.0		48341.3		48341.261		540.347		1.1
[> Ba	137.9		96325.0		96324.966		554.527		0.6
[ Ba++	69.0		1075.7		0.011		0.000		3.4
[> Ce	139.9		112930.2		112930.212		483.271		0.4
[ CeO	155.9		2573.6		0.023		0.000		1.7
Bkgd	220.0		2.2		2.200		0.570		25.9

### Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
4.50	Lens Voltage
1000.00	ICP RF Power
-2000.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	4.3	920.7
Co	59	17	4.8	30244.0
In	115	17	5.5	86185.9

## ICPMS #4 TUNING REPORT

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	603	2060	0.705
Be	9.0	9.0	2045	2045	0.720
Mg	24.0	24.0	5678	2065	0.711
Mg	25.0	25.0	5941	2080	0.701
Mg	26.0	26.0	6157	2085	0.699
Co	58.9	59.0	14186	2140	0.662
Rh	102.9	102.9	24867	2230	0.676
In	114.9	114.9	27777	2255	0.695
Ce	139.9	139.9	33853	2310	0.661
Pb	206.0	205.9	49924	2500	0.612
Pb	207.0	206.9	50101	2375	0.618
Pb	208.0	208.0	50436	2570	0.602
U	238.1	238.1	57689	2510	0.645

## ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, February 13, 2010 17:54:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\Blank.067

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		133245	
[	U	238	ug/L		108	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Simple Linear	
U	238Simple Linear	

### 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: Saturday, February 13, 2010 17:54:18

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## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Saturday, February 13, 2010 17:56:17

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\Standard 1.068

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		133045	133045.347
[	U 238	10.000	ug/L	0.899	113896	0.855

### 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: Saturday, February 13, 2010 17:56:27

Page 1

## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Saturday, February 13, 2010 17:57:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\Standard 2.069

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		132397	132397.025
[	U 238	99.978	ug/L	1.656	1108159	8.370

### 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

## ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Saturday, February 13, 2010 17:59:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 1.070

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		132454	132453.536
[	U 238	52.696	ug/L	0.359	584429	4.412

### 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			99.4		
[	U 238	105.393				

### 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 1

Report Date/Time: Saturday, February 13, 2010 17:59:46

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, February 13, 2010 18:01:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 2.071

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		133000	132999.689
[	U	238	ug/L	2.638	467	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		99.8		
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

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Sample ID: QC Std 2

Report Date/Time: Saturday, February 13, 2010 18:01:30

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, February 13, 2010 18:03:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 3.072

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		134508	134508.356
[	U 238	0.247	ug/L	0.076	2885	0.021

### 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			100.9		
[	U 238	123.260				

### 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 3

Report Date/Time: Saturday, February 13, 2010 18:03:11

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, February 13, 2010 18:04:41

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 4.073

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		125043	125043.467
[	U 238	-0.001	ug/L	92.634	89	-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			93.8		
[	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: Saturday, February 13, 2010 18:04:52

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## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Saturday, February 13, 2010 18:06:22

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 5.074

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		125216	125215.619
[	U 238	19.703	ug/L	0.737	206640	1.649

### 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			94.0		
[	U 238	98.513				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 18:08:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.075

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		130951	130950.758
[	U 238	53.170	ug/L	0.111	582989	4.451

### 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			98.3		
[	U 238	106.339				

### 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: Saturday, February 13, 2010 18:08:16

Page 1



## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 18:09:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.076

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		124780	124779.841
[	U 238	0.027	ug/L	4.215	383	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		93.6			
[	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: QC Std 7

Report Date/Time: Saturday, February 13, 2010 18:10:00

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 18:21:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.083

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		127120	127120.012
[	U	238	54.345 ug/L	0.583	578437	4.550

### 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		95.4		
[	U	238	108.689			

### 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: Saturday, February 13, 2010 18:21:57

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 18:23:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.084

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		124686	124686.072
[	U 238	0.027	ug/L	4.586	384	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			93.6		
[	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#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 18:37:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.092

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		126412	126412.105
[	U 238	55.068	ug/L	0.873	582853	4.610

### 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			94.9		
[	U 238	110.135				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	U	238CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 18:37:25

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 18:38:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.093

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		126115	126114.858
[	U	238	ug/L	3.033	420	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		94.6		
[	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: QC Std 7

Report Date/Time: Saturday, February 13, 2010 18:39:09

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 18:52:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.101

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		123789	123788.635
[	U	238	ug/L	0.733	561707	4.537

### 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		92.9		
[	U	238	108.389			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 18:54:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.102

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		123745	123744.892
[	U 238	0.033	ug/L	4.217	447	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			92.9		
[	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

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 18:54:41

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 19:06:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.109

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		125201	125201.183
[	U 238	53.677	ug/L	0.871	562691	4.494

### 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			94.0		
[	U 238	107.355				

### 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: Saturday, February 13, 2010 19:06:47

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 19:08:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.110

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		124477	124476.638
[	U 238	0.029	ug/L	3.003	403	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			93.4		
[	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: Saturday, February 13, 2010 19:08:32

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 19:22:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.118

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		127443	127442.892
[	U	238	ug/L	0.522	579423	4.546

### 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		95.6		
[	U	238	108.595			

### 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: Saturday, February 13, 2010 19:22:28

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 19:23:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.119

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		126455	126454.859
[	U 238	0.026	ug/L	3.052	376	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		94.9			
[	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#4 - Summary Report

Sample ID: 1202024740

Sample Date/Time: Saturday, February 13, 2010 19:25:44

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945381|1|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024740.120

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		119263	119263.384
[	U 238	0.000	ug/L	305.114	98	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			89.5		
[	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

Sample ID: 1202024740

Report Date/Time: Saturday, February 13, 2010 19:25:58

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## ICPMS#4 - Summary Report

Sample ID: 1202024741

Sample Date/Time: Saturday, February 13, 2010 19:27:31

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945381|1|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024741.121

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		120138	120137.921
[ U	238	53.936	ug/L	1.334	542528	4.515

### 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			90.2		
[ 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: 1202024741

Report Date/Time: Saturday, February 13, 2010 19:27:45

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 19:38:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.127

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		124704	124703.830
[	U 238	54.592	ug/L	0.515	570022	4.570

### 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			93.6		
[	U 238	109.183				

### 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#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 19:39:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.128

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		128124	128123.610
[	U 238	0.029	ug/L	8.719	413	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			96.2		
[	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: QC Std 7

Report Date/Time: Saturday, February 13, 2010 19:39:56

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## ICPMS#4 - Summary Report

Sample ID: 245390001

Sample Date/Time: Saturday, February 13, 2010 19:43:15

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945381|1|skj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\245390001.130

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		121206	121205.581
[	U 238	0.001	ug/L	38.456	109	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			91.0		
[	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: 245390001

Report Date/Time: Saturday, February 13, 2010 19:43:30

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## ICPMS#4 - Summary Report

Sample ID: 1202024742

Sample Date/Time: Saturday, February 13, 2010 19:46:46

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945381|1|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024742.132

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		121798	121798.306
[ U 238	-0.003	ug/L	49.409	63	-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			91.4		
[ 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

Sample ID: 1202024742

Report Date/Time: Saturday, February 13, 2010 19:46:59

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## ICPMS#4 - Summary Report

Sample ID: 1202024743

Sample Date/Time: Saturday, February 13, 2010 19:48:31

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945381|1|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024743.133

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		119222	119221.615
[	U 238	56.178	ug/L	0.797	560814	4.703

### 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			89.5		
[	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#4 - Summary Report

Sample ID: 1202024744

Sample Date/Time: Saturday, February 13, 2010 19:50:17

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945381|5|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024744.134

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		126368	126368.047
[	U 238	0.147	ug/L	3.653	1653	0.012

### 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		94.8			
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202024744

Report Date/Time: Saturday, February 13, 2010 19:50:31

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 19:53:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.136

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu 175		ug/L		128511	128511.083
L	U 238	54.573	ug/L	1.494	587178	4.569

### 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			96.4		
L	U 238	109.146				

### 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#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 19:55:32

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.137

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		127744	127744.302
[	U	238	0.030 ug/L	6.903	423	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		95.9		
[	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 #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Friday, February 12, 2010 16:34:26

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.468

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	5725.3	5725.347	70.069	1.2
Mg	24.0	40057.1	40057.139	1440.505	3.6
Co	58.9	141268.4	141268.438	2608.093	1.8
Rh	102.9	297559.6	297559.571	3605.845	1.2
In	114.9	412099.4	412099.418	3972.947	1.0
Pb	208.0	282668.3	282668.274	2129.456	0.8
[> Ba	137.9	362870.6	362870.568	2499.190	0.7
[ Ba++	69.0	6433.6	0.018	0.000	1.6
[> Ce	139.9	442104.1	442104.143	2880.727	0.7
[ CeO	155.9	11803.5	0.027	0.000	1.4
Bkgd	220.0	13.0	13.000	3.021	23.2

### Current Optimization File Data

Current Value	Description
0.87	Nebulizer Gas Flow
5.25	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	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	9	5.0	5694.5
Co	59	9	5.5	145061.8
In	115	9	5.8	400812.0

## 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	571	2060	0.650
Be	9.0	9.0	2043	2080	0.622
Mg	24.0	24.0	5681	2090	0.632
Mg	25.0	24.9	5921	2085	0.665
Mg	26.0	26.0	6162	2085	0.652
Co	58.9	58.9	14186	2115	0.634
Rh	102.9	102.9	24865	2175	0.617
In	114.9	114.9	27791	2190	0.633
Ce	139.9	139.9	33863	2210	0.632
Pb	206.0	206.0	49948	2300	0.632
Pb	207.0	207.0	50159	2245	0.653
Pb	208.0	208.0	50439	2280	0.704
U	238.1	238.0	57720	2300	0.679

## ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, February 13, 2010 00:03:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\Blank.527

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		46	
Be	9		ug/L		23	
B	11		ug/L		300	
Na	23		ug/L		12672	
Mg	24		ug/L		1333	
Al	27		ug/L		8002	
P	31		ug/L		9843	
K	39		ug/L		626810	
Ca	43		ug/L		665	
> Sc	45		ug/L		684248	
Ti	47		ug/L		711	
V	51		ug/L		-19055	
Cr	52		ug/L		13357	
Cr	53		ug/L		239673	
Mn	55		ug/L		3004	
Fe	57		ug/L		10869	
Co	59		ug/L		148	
Ni	60		ug/L		350	
Cu	63		ug/L		506	
Cu	65		ug/L		464	
Zn	66		ug/L		1482	
Zn	67		ug/L		22303	
Zn	68		ug/L		2708	
> Ge	74		ug/L		687039	
As	75		ug/L		-2213	
Se	77		ug/L		21776	
Se	82		ug/L		64	
Kr	83		ug/L		145	
Sr	88		ug/L		398	
Y	89		ug/L		79	
Mo	98		ug/L		200	
Ag	107		ug/L		106	
Cd	111		ug/L		32	
Cd	114		ug/L		86	
> In	115		ug/L		476899	
Sn	120		ug/L		485	
Sb	121		ug/L		633	
Sb	123		ug/L		461	
Ba	135		ug/L		55	
Ba	137		ug/L		85	
Ho	165		ug/L		22	
> Lu	175		ug/L		705705	
Tl	205		ug/L		4215	
Pb	208		ug/L		650	
Bi	209		ug/L		381	
Th	232		ug/L		1074	
U	238		ug/L		572	

Sample ID: Blank

Report Date/Time: Saturday, February 13, 2010 00:06:10

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Simple Linear	
Be	9Simple Linear	
B	11Simple Linear	
Na	23Simple Linear	
Mg	24Simple Linear	
Al	27Simple Linear	
P	31Simple Linear	
K	39Simple Linear	
Ca	43Simple Linear	
Sc	45Simple Linear	
Ti	47Simple Linear	
V	51Simple Linear	
Cr	52Simple Linear	
Cr	53Simple Linear	
Mn	55Simple Linear	
Fe	57Simple Linear	
Co	59Simple Linear	
Ni	60Simple Linear	
Cu	63Simple Linear	
Cu	65Simple Linear	
Zn	66Simple Linear	
Zn	67Simple Linear	
Zn	68Simple Linear	
Ge	74Simple Linear	
As	75Simple Linear	
Se	77Simple Linear	
Se	82Simple Linear	
Kr	83Simple Linear	
Sr	88Simple Linear	
Y	89Simple Linear	
Mo	98Simple Linear	
Ag	107Simple Linear	
Cd	111Simple Linear	
Cd	114Simple Linear	
In	115Simple Linear	
Sn	120Simple Linear	
Sb	121Simple Linear	
Sb	123Simple Linear	
Ba	135Simple Linear	
Ba	137Simple Linear	
Ho	165Simple Linear	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9995
Pb	208Simple Linear	
Bi	209Simple Linear	
Th	232Simple Linear	
U	238Simple Linear	

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
L 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

Sample ID: Blank

Report Date/Time: Saturday, February 13, 2010 00:06:10

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# ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Saturday, February 13, 2010 00:09:32

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\Standard 1.528

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	1.139	20771	0.030
Be	9	10.000	ug/L	1.069	4846	0.007
B	11	20.000	ug/L	2.744	9110	0.013
Na	23	1000.000	ug/L	8.284	3206646	4.641
Mg	24	1000.000	ug/L	13.239	2139462	3.108
Al	27	1000.000	ug/L	13.946	3383813	4.908
P	31	1000.000	ug/L	1.887	249186	0.348
K	39	1000.000	ug/L	8.207	7310812	9.706
Ca	43	1000.000	ug/L	3.238	17465	0.024
> Sc	45		ug/L		688166	688165.625
Ti	47	10.000	ug/L	2.856	9466	0.013
V	51	10.000	ug/L	14.842	85354	0.152
Cr	52	10.000	ug/L	4.736	93095	0.116
Cr	53		ug/L		238567	-0.004
Mn	55	10.000	ug/L	0.601	145409	0.207
Fe	57	1000.000	ug/L	2.784	308510	0.432
Co	59	10.000	ug/L	2.528	119230	0.173
Ni	60	10.000	ug/L	2.727	26021	0.037
Cu	63		ug/L		63905	0.092
Cu	65	10.000	ug/L	0.950	31353	0.045
Zn	66	10.000	ug/L	0.945	20384	0.027
Zn	67		ug/L		24333	0.003
Zn	68		ug/L		16073	0.019
> Ge	74		ug/L		690593	690593.134
As	75	10.000	ug/L	10.549	20118	0.032
Se	77		ug/L		21629	-0.000
Se	82	10.000	ug/L	0.448	2295	0.003
Kr	83		ug/L		138	-0.000
Sr	88	10.000	ug/L	1.004	268544	0.559
Y	89		ug/L		120	0.000
Mo	98	10.000	ug/L	2.458	64109	0.133
Ag	107	10.000	ug/L	1.855	113205	0.236
Cd	111	10.000	ug/L	1.352	27745	0.058
Cd	114		ug/L		66513	0.139
> In	115		ug/L		479334	479334.354
Sn	120	10.000	ug/L	2.200	116967	0.243
Sb	121	10.000	ug/L	2.418	96993	0.201
Sb	123		ug/L		74138	0.154
Ba	135		ug/L		27727	0.039
Ba	137	10.000	ug/L	2.141	48446	0.069
Ho	165		ug/L		23	0.000
> Lu	175		ug/L		705210	705209.542
Tl	205	10.000	ug/L	1.956	313582	0.439
Pb	208	10.000	ug/L	1.076	517016	0.732
Bi	209		ug/L		401	0.000
Th	232	10.000	ug/L	2.641	581089	0.823
U	238	10.000	ug/L	0.881	581846	0.824

Sample ID: Standard 1

Report Date/Time: Saturday, February 13, 2010 00:12:13

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: Standard 1

Report Date/Time: Saturday, February 13, 2010 00:12:13

Page 2

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
L 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

Sample ID: Standard 1

Report Date/Time: Saturday, February 13, 2010 00:12:13

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## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Saturday, February 13, 2010 00:15:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\Standard 2.529

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	100.036	ug/L	2.854	202625	0.312
Be	9	100.050	ug/L	4.598	47882	0.074
B	11	200.071	ug/L	6.613	86292	0.133
Na	23	10004.327	ug/L	6.620	31451491	48.525
Mg	24	10000.447	ug/L	8.543	20251515	31.219
Al	27	10000.205	ug/L	5.242	31906254	49.179
P	31	10000.449	ug/L	5.373	2273146	3.493
K	39	9992.432	ug/L	9.911	59002249	90.165
Ca	43	10001.474	ug/L	3.737	161248	0.248
> Sc	45		ug/L		648784	648784.118
Ti	47	100.023	ug/L	4.915	85045	0.130
V	51	99.943	ug/L	8.139	912328	1.436
Cr	52	100.008	ug/L	2.033	769557	1.167
Cr	53		ug/L		262565	0.055
Mn	55	99.933	ug/L	4.477	1259273	1.938
Fe	57	10001.175	ug/L	6.549	2845801	4.376
Co	59	99.945	ug/L	3.459	1063525	1.640
Ni	60	100.007	ug/L	4.491	243830	0.376
Cu	63		ug/L		575581	0.887
Cu	65	99.992	ug/L	3.434	289148	0.445
Zn	66	100.035	ug/L	2.420	191121	0.284
Zn	67		ug/L		48331	0.040
Zn	68		ug/L		142163	0.209
> Ge	74		ug/L		668835	668834.899
As	75	99.951	ug/L	0.794	204034	0.308
Se	77		ug/L		30536	0.014
Se	82	100.040	ug/L	2.570	22571	0.034
Kr	83		ug/L		195	0.000
Sr	88	99.782	ug/L	0.974	2158600	4.582
Y	89		ug/L		302	0.000
Mo	98	99.955	ug/L	0.756	601211	1.276
Ag	107	99.915	ug/L	1.709	1023886	2.173
Cd	111	99.990	ug/L	1.770	269667	0.572
Cd	114		ug/L		633900	1.346
> In	115		ug/L		471059	471058.992
Sn	120	99.900	ug/L	1.705	1040124	2.207
Sb	121	99.939	ug/L	1.761	892505	1.894
Sb	123		ug/L		693082	1.471
Ba	135		ug/L		266693	0.393
Ba	137	99.979	ug/L	0.937	455518	0.672
Ho	165		ug/L		33	0.000
> Lu	175		ug/L		678142	678142.328
Tl	205	99.702	ug/L	0.501	2289454	3.370
Pb	208	99.794	ug/L	2.041	4110459	6.061
Bi	209		ug/L		816	0.001
Th	232	99.670	ug/L	0.740	4180514	6.163
U	238	99.668	ug/L	3.535	4181563	6.166

Sample ID: Standard 2

Report Date/Time: Saturday, February 13, 2010 00:18:18

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: Standard 2

Report Date/Time: Saturday, February 13, 2010 00:18:18

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## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Saturday, February 13, 2010 00:21:41

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 1.530

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	50.258	ug/L	0.533	109070	0.157
Be	9	49.688	ug/L	0.686	25494	0.037
B	11	105.694	ug/L	4.183	49011	0.070
Na	23	5323.045	ug/L	4.360	17946788	25.819
Mg	24	5822.211	ug/L	7.318	12623561	18.175
Al	27	5429.502	ug/L	10.587	18550218	26.701
P	31	4901.486	ug/L	3.292	1199174	1.712
K	39	5558.700	ug/L	13.006	35483870	50.158
Ca	43	5127.324	ug/L	3.488	88899	0.127
> Sc	45		ug/L		694561	694560.683
Ti	47	50.086	ug/L	2.876	45992	0.065
V	51	50.516	ug/L	3.252	484844	0.726
Cr	52	49.836	ug/L	2.480	417486	0.582
Cr	53		ug/L		236755	-0.009
Mn	55	53.485	ug/L	0.926	723606	1.037
Fe	57	4558.433	ug/L	2.789	1396521	1.995
Co	59	50.366	ug/L	1.820	574242	0.827
Ni	60	50.499	ug/L	1.709	132098	0.190
Cu	63		ug/L		312841	0.450
Cu	65	49.599	ug/L	2.328	153859	0.221
Zn	66	52.109	ug/L	1.389	101880	0.148
Zn	67		ug/L		35758	0.020
Zn	68		ug/L		74363	0.105
> Ge	74		ug/L		679672	679671.623
As	75	49.528	ug/L	0.688	101638	0.153
Se	77		ug/L		23661	0.003
Se	82	49.966	ug/L	0.676	11489	0.017
Kr	83		ug/L		156	0.000
Sr	88	57.743	ug/L	0.607	1256787	2.652
Y	89		ug/L		149	0.000
Mo	98	51.257	ug/L	1.487	310220	0.654
Ag	107	53.281	ug/L	0.630	549266	1.159
Cd	111	51.184	ug/L	0.516	138876	0.293
Cd	114		ug/L		330815	0.698
> In	115		ug/L		473820	473819.801
Sn	120	54.266	ug/L	1.999	568593	1.199
Sb	121	52.914	ug/L	0.414	475695	1.003
Sb	123		ug/L		372798	0.786
Ba	135		ug/L		137734	0.201
Ba	137	52.095	ug/L	1.331	239612	0.350
Ho	165		ug/L		64	0.000
> Lu	175		ug/L		684422	684422.311
Tl	205	56.723	ug/L	3.356	1316094	1.917
Pb	208	56.457	ug/L	0.495	2347587	3.429
Bi	209		ug/L		816	0.001
Th	232	52.697	ug/L	3.598	2230895	3.259
U	238	54.212	ug/L	0.135	2295962	3.354

Sample ID: QC Std 1

Report Date/Time: Saturday, February 13, 2010 00:24:23

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7	100.517				
Be	9	99.376				
B	11	105.694				
Na	23	106.461				
Mg	24	116.444				
Al	27	107.515				
P	31	98.030				
K	39	111.174				
Ca	43	102.546				
> Sc	45		101.5			
Ti	47	100.173				
V	51	101.031				
Cr	52	99.672				
Cr	53					
Mn	55	106.970				
Fe	57	91.169				
Co	59	100.732				
Ni	60	100.998				
Cu	63					
Cu	65	99.197				
Zn	66	104.218				
Zn	67					
Zn	68					
> Ge	74		98.9			
As	75	99.056				
Se	77					
Se	82	99.932				
Kr	83					
Sr	88	115.486				
Y	89					
Mo	98	102.514				
Ag	107	106.563				
Cd	111	102.367				
Cd	114					
> In	115		99.4			
Sn	120	108.531				
Sb	121	105.827				
Sb	123					
Ba	135					
Ba	137	104.190				
Ho	165					
> Lu	175		97.0			
Tl	205	113.446				
Pb	208	112.914				
Bi	209					
Th	232	105.394				
U	238	108.424				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Mg	24	ICV is out of limits (+/- 10%)
QC Std 1	K	39	ICV is out of limits (+/- 10%)
QC Std 1	Sr	88	ICV is out of limits (+/- 10%)
QC Std 1	Tl	205	ICV is out of limits (+/- 10%)
QC Std 1	Pb	208	ICV is out of limits (+/- 10%)

Sample ID: QC Std 1

Report Date/Time: Saturday, February 13, 2010 00:24:23

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, February 13, 2010 00:27:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 2.531

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.018	ug/L	51.133	87	0.000
Be	9	-0.008	ug/L	27.740	20	-0.000
B	11	4.783	ug/L	16.244	2550	0.003
Na	23	0.853	ug/L	60.334	16009	0.004
Mg	24	1.023	ug/L	108.528	3667	0.003
Al	27	0.591	ug/L	115.202	10337	0.003
P	31	-0.855	ug/L	253.188	9950	-0.000
K	39	3.345	ug/L	261.470	667964	0.030
Ca	43	-5.729	ug/L	25.127	586	-0.000
> Sc	45		ug/L		706715	706715.272
Ti	47	-0.022	ug/L	265.688	713	-0.000
V	51	1.328	ug/L	48.465	-6281	0.019
Cr	52	-0.139	ug/L	25.675	12654	-0.002
Cr	53		ug/L		215694	-0.045
Mn	55	-0.006	ug/L	103.987	3022	-0.000
Fe	57	-1.262	ug/L	50.509	10833	-0.001
Co	59	0.004	ug/L	27.976	196	0.000
Ni	60	0.003	ug/L	200.759	369	0.000
Cu	63		ug/L		558	0.000
Cu	65	0.006	ug/L	82.091	498	0.000
Zn	66	-0.019	ug/L	349.292	1454	-0.000
Zn	67		ug/L		22082	-0.001
Zn	68		ug/L		2779	0.000
> Ge	74		ug/L		691967	691966.507
As	75	0.099	ug/L	443.993	-2020	0.000
Se	77		ug/L		18220	-0.005
Se	82	-0.070	ug/L	134.598	48	-0.000
Kr	83		ug/L		150	0.000
Sr	88	0.003	ug/L	66.078	460	0.000
Y	89		ug/L		92	0.000
Mo	98	0.048	ug/L	29.539	490	0.001
Ag	107	0.004	ug/L	51.483	143	0.000
Cd	111	0.011	ug/L	2.339	61	0.000
Cd	114		ug/L		104	0.000
> In	115		ug/L		475551	475551.328
Sn	120	0.067	ug/L	22.512	1189	0.001
Sb	121	0.506	ug/L	17.849	5183	0.010
Sb	123		ug/L		3992	0.007
Ba	135		ug/L		62	0.000
Ba	137	0.003	ug/L	38.865	100	0.000
Ho	165		ug/L		23	0.000
> Lu	175		ug/L		700429	700428.985
Tl	205	0.439	ug/L	22.981	14565	0.015
Pb	208	0.003	ug/L	67.508	788	0.000
Bi	209		ug/L		310	-0.000
Th	232	0.052	ug/L	36.224	3312	0.003
U	238	0.008	ug/L	35.554	898	0.000

Sample ID: QC Std 2

Report Date/Time: Saturday, February 13, 2010 00:30:32

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		103.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		100.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.3			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: QC Std 2

Report Date/Time: Saturday, February 13, 2010 00:30:32

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, February 13, 2010 00:33:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 3.532

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.166	ug/L	1.604	24819	0.035
Be	9	0.477	ug/L	3.764	274	0.000
B	11	17.337	ug/L	1.195	8483	0.012
Na	23	287.492	ug/L	4.132	1003781	1.394
Mg	24	18.790	ug/L	9.810	43065	0.059
Al	27	38.482	ug/L	22.509	142731	0.189
P	31	60.007	ug/L	5.852	25102	0.021
K	39	365.878	ug/L	11.913	2994596	3.301
Ca	43	231.564	ug/L	4.748	4763	0.006
Sc	45		ug/L		710284	710283.761
Ti	47	9.162	ug/L	3.981	9205	0.012
V	51	11.590	ug/L	2.520	98526	0.167
Cr	52	11.173	ug/L	2.538	106468	0.130
Cr	53		ug/L		258454	0.014
Mn	55	6.267	ug/L	1.799	89454	0.122
Fe	57	110.319	ug/L	3.456	45566	0.048
Co	59	1.162	ug/L	3.780	13699	0.019
Ni	60	2.164	ug/L	2.269	6136	0.008
Cu	63		ug/L		7591	0.010
Cu	65	1.077	ug/L	5.339	3888	0.005
Zn	66	10.702	ug/L	3.305	22587	0.030
Zn	67		ug/L		29605	0.010
Zn	68		ug/L		17957	0.022
Ge	74		ug/L		695158	695158.159
As	75	5.282	ug/L	5.590	9077	0.016
Se	77		ug/L		22046	0.000
Se	82	5.182	ug/L	3.326	1276	0.002
Kr	83		ug/L		151	0.000
Sr	88	13.892	ug/L	2.455	300057	0.638
Y	89		ug/L		88	0.000
Mo	98	0.577	ug/L	5.355	3654	0.007
Ag	107	1.142	ug/L	3.253	11775	0.025
Cd	111	1.093	ug/L	2.150	2972	0.006
Cd	114		ug/L		7234	0.015
In	115		ug/L		469744	469743.561
Sn	120	6.072	ug/L	0.490	63495	0.134
Sb	121	3.584	ug/L	0.213	32523	0.068
Sb	123		ug/L		25154	0.053
Ba	135		ug/L		5937	0.008
Ba	137	2.223	ug/L	2.447	10431	0.015
Ho	165		ug/L		20	-0.000
Lu	175		ug/L		693153	693152.525
Tl	205	1.526	ug/L	1.245	39895	0.052
Pb	208	2.684	ug/L	1.410	113623	0.163
Bi	209		ug/L		310	-0.000
Th	232	1.533	ug/L	2.325	66756	0.095
U	238	0.323	ug/L	1.054	14408	0.020

Sample ID: QC Std 3

Report Date/Time: Saturday, February 13, 2010 00:36:38

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	111.661				
Be	9	95.443				
B	11	115.583				
Na	23	114.997				
Mg	24	125.264				
Al	27	128.275				
P	31	120.014				
K	39	121.959				
Ca	43	115.782				
> Sc	45		103.8			
Ti	47	91.618				
V	51	115.900				
Cr	52	111.729				
Cr	53					
Mn	55	125.336				
Fe	57	110.319				
Co	59	116.221				
Ni	60	108.200				
Cu	63					
Cu	65	107.689				
Zn	66	107.024				
Zn	67					
Zn	68					
> Ge	74		101.2			
As	75	105.636				
Se	77					
Se	82	103.645				
Kr	83					
Sr	88	138.920				
Y	89					
Mo	98	115.320				
Ag	107	114.209				
Cd	111	109.349				
Cd	114					
> In	115		98.5			
Sn	120	121.433				
Sb	121	119.463				
Sb	123					
Ba	135					
Ba	137	111.129				
Ho	165					
> Lu	175		98.2			
Tl	205	152.619				
Pb	208	134.199				
Bi	209					
Th	232	153.311				
U	238	161.460				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Sr	88	CRDL is out of limits
QC Std 3	Tl	205	CRDL is out of limits
QC Std 3	Pb	208	CRDL is out of limits
QC Std 3	Th	232	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

Sample ID: QC Std 3

Report Date/Time: Saturday, February 13, 2010 00:36:38

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, February 13, 2010 00:40:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 4.533

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.059	ug/L	23.277	156	0.000
Be	9	0.081	ug/L	4.603	59	0.000
B	11	1.906	ug/L	4.161	1061	0.001
Na	23	98511.438	ug/L	3.085	297471367	477.823
Mg	24	107304.827	ug/L	3.753	208341408	334.975
Al	27	104957.267	ug/L	11.538	321346768	516.163
P	31	92144.608	ug/L	4.308	20027378	32.187
K	39	98532.915	ug/L	5.558	553507110	889.099
Ca	43	91805.251	ug/L	3.408	1415162	2.274
> Sc	45		ug/L		622348	622348.276
Ti	47	1717.838	ug/L	2.169	1391459	2.236
V	51	1.341	ug/L	29.470	-5384	0.019
Cr	52	1.407	ug/L	6.040	22355	0.016
Cr	53		ug/L		152979	-0.104
Mn	55	6.421	ug/L	5.037	80208	0.125
Fe	57	99117.073	ug/L	3.616	26991909	43.373
Co	59	0.386	ug/L	0.751	4078	0.006
Ni	60	3.518	ug/L	2.707	8538	0.013
Cu	63		ug/L		14670	0.023
Cu	65	3.682	ug/L	2.710	10622	0.016
Zn	66	4.486	ug/L	5.028	9118	0.013
Zn	67		ug/L		19278	-0.001
Zn	68		ug/L		3500	0.002
> Ge	74		ug/L		612803	612802.891
As	75	0.768	ug/L	14.002	-524	0.002
Se	77		ug/L		16213	-0.005
Se	82	-1.720	ug/L	3.944	-298	-0.001
Kr	83		ug/L		611	0.001
Sr	88	3.607	ug/L	1.349	72472	0.166
Y	89		ug/L		1020	0.002
Mo	98	1869.881	ug/L	0.816	10392084	23.870
Ag	107	0.131	ug/L	2.845	1342	0.003
Cd	111	0.624	ug/L	23.901	1584	0.004
Cd	114		ug/L		20444	0.047
> In	115		ug/L		435348	435348.084
Sn	120	0.327	ug/L	2.223	3587	0.007
Sb	121	0.155	ug/L	17.575	1858	0.003
Sb	123		ug/L		1430	0.002
Ba	135		ug/L		1868	0.003
Ba	137	0.764	ug/L	1.484	3252	0.005
Ho	165		ug/L		13908	0.022
> Lu	175		ug/L		619085	619084.546
Tl	205	0.033	ug/L	12.807	4388	0.001
Pb	208	0.254	ug/L	1.876	10108	0.015
Bi	209		ug/L		7334	0.011
Th	232	0.035	ug/L	30.986	2301	0.002
U	238	-0.004	ug/L	15.488	353	-0.000

Sample ID: QC Std 4

Report Date/Time: Saturday, February 13, 2010 00:42:44

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23	98.511				
Mg	24	107.305				
Al	27	104.957				
P	31	92.145				
K	39	98.533				
Ca	43	91.805				
> Sc	45		91.0			
Ti	47	85.892				
V	51					
Cr	52	42.627				
Cr	53					
Mn	55	110.702				
Fe	57	99.117				
Co	59	164.328				
Ni	60	106.291				
Cu	63					
Cu	65	110.242				
Zn	66	119.320				
Zn	67					
Zn	68					
> Ge	74		89.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88	121.855				
Y	89					
Mo	98	93.494				
Ag	107					
Cd	111	140.552				
Cd	114					
> In	115		91.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137	95.732				
Ho	165					
> Lu	175		87.7			
Tl	205					
Pb	208	134.217				
Bi	209					
Th	232					
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

Sample ID: QC Std 4

Report Date/Time: Saturday, February 13, 2010 00:42:44

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## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Saturday, February 13, 2010 00:46:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 5.534

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	18.167	ug/L	1.217	34947	0.057
Be	9	17.460	ug/L	2.096	7948	0.013
B	11	18.583	ug/L	0.945	7858	0.012
Na	23	88945.288	ug/L	7.433	265317049	431.423
Mg	24	100245.257	ug/L	5.763	192617528	312.937
Al	27	102250.749	ug/L	2.995	309293835	502.852
P	31	96720.981	ug/L	2.018	20791814	33.786
K	39	103132.998	ug/L	6.711	572693156	930.608
Ca	43	90726.979	ug/L	4.292	1383063	2.247
> Sc	45		ug/L		615299	615298.880
Ti	47	1727.753	ug/L	3.325	1383542	2.248
V	51	24.295	ug/L	6.501	197675	0.349
Cr	52	22.402	ug/L	0.424	172859	0.261
Cr	53		ug/L		154710	-0.099
Mn	55	28.210	ug/L	2.778	339280	0.547
Fe	57	100555.281	ug/L	0.905	27081501	44.003
Co	59	20.677	ug/L	0.778	208925	0.339
Ni	60	22.973	ug/L	3.837	53379	0.086
Cu	63		ug/L		118884	0.193
Cu	65	22.045	ug/L	4.389	60784	0.098
Zn	66	23.260	ug/L	1.117	42229	0.066
Zn	67		ug/L		22632	0.004
Zn	68		ug/L		27229	0.040
> Ge	74		ug/L		620077	620077.433
As	75	21.300	ug/L	3.394	38734	0.066
Se	77		ug/L		16747	-0.005
Se	82	18.408	ug/L	2.013	3898	0.006
Kr	83		ug/L		591	0.001
Sr	88	28.197	ug/L	1.791	576174	1.295
Y	89		ug/L		929	0.002
Mo	98	1867.655	ug/L	1.238	10601584	23.841
Ag	107	20.215	ug/L	1.596	195626	0.440
Cd	111	19.842	ug/L	1.182	50542	0.114
Cd	114		ug/L		139246	0.313
> In	115		ug/L		444706	444706.424
Sn	120	22.357	ug/L	0.254	220134	0.494
Sb	121	21.958	ug/L	1.065	185605	0.416
Sb	123		ug/L		142823	0.320
Ba	135		ug/L		52715	0.085
Ba	137	21.835	ug/L	1.957	91482	0.147
Ho	165		ug/L		13985	0.022
> Lu	175		ug/L		623160	623159.693
Tl	205	23.506	ug/L	0.719	496854	0.795
Pb	208	22.920	ug/L	0.819	868083	1.392
Bi	209		ug/L		8021	0.012
Th	232	24.888	ug/L	3.406	959851	1.539
U	238	26.062	ug/L	1.603	1005163	1.612

Sample ID: QC Std 5

Report Date/Time: Saturday, February 13, 2010 00:48:51

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7	90.833				
Be	9	87.301				
B	11	92.913				
Na	23	88.945				
Mg	24	100.245				
Al	27	102.251				
P	31	98.721				
K	39	103.133				
Ca	43	90.727				
> Sc	45		89.9			
Ti	47	86.388				
V	51	121.474				
Cr	52	96.145				
Cr	53					
Mn	55	109.341				
Fe	57	100.555				
Co	59	102.184				
Ni	60	98.555				
Cu	63					
Cu	65	94.452				
Zn	66	97.894				
Zn	67					
Zn	68					
> Ge	74		90.3			
As	75	106.501				
Se	77					
Se	82	92.041				
Kr	83					
Sr	88	122.808				
Y	89					
Mo	98	93.383				
Ag	107	101.077				
Cd	111	97.054				
Cd	114					
> In	115		93.2			
Sn	120	111.785				
Sb	121	109.791				
Sb	123					
Ba	135					
Ba	137	104.985				
Ho	165					
> Lu	175		88.3			
Tl	205	117.531				
Pb	208	113.529				
Bi	209					
Th	232	124.440				
U	238	130.312				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	V	51	ICSAB is out of limits
QC Std 5	Sr	88	ICSAB is out of limits
QC Std 5	Th	232	ICSAB is out of limits
QC Std 5	U	238	ICSAB is out of limits

Sample ID: QC Std 5

Report Date/Time: Saturday, February 13, 2010 00:48:51

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 00:52:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 6.535

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	49.979	ug/L	0.643	103898	0.156
Be	9	49.229	ug/L	2.338	24191	0.036
B	11	99.724	ug/L	4.414	44300	0.066
Na	23	4795.887	ug/L	9.655	15497876	23.262
Mg	24	5772.649	ug/L	14.174	11991798	18.021
Al	27	5264.675	ug/L	4.309	17238004	25.891
P	31	4864.302	ug/L	1.924	1139946	1.699
K	39	5227.462	ug/L	12.069	31976743	47.169
Ca	43	4962.294	ug/L	0.385	82433	0.123
> Sc	45		ug/L		665321	665321.163
Ti	47	51.494	ug/L	2.177	45275	0.067
V	51	52.036	ug/L	4.293	478821	0.748
Cr	52	51.349	ug/L	4.212	411595	0.599
Cr	53		ug/L		222399	-0.016
Mn	55	54.901	ug/L	1.682	711331	1.065
Fe	57	4632.427	ug/L	2.198	1359030	2.027
Co	59	51.974	ug/L	0.956	567597	0.853
Ni	60	52.057	ug/L	1.683	130424	0.196
Cu	63		ug/L		310003	0.465
Cu	65	50.854	ug/L	1.844	151087	0.226
Zn	66	50.782	ug/L	2.944	100372	0.144
Zn	67		ug/L		34929	0.018
Zn	68		ug/L		74204	0.104
> Ge	74		ug/L		687033	687033.225
As	75	48.340	ug/L	2.489	100192	0.149
Se	77		ug/L		22052	0.000
Se	82	48.079	ug/L	1.424	11177	0.016
Kr	83		ug/L		150	0.000
Sr	88	57.471	ug/L	1.352	1257766	2.639
Y	89		ug/L		265	0.000
Mo	98	50.431	ug/L	2.096	306903	0.644
Ag	107	52.764	ug/L	0.881	546933	1.148
Cd	111	51.438	ug/L	1.292	140334	0.294
Cd	114		ug/L		331450	0.695
> In	115		ug/L		476451	476450.610
Sn	120	54.205	ug/L	1.105	571092	1.198
Sb	121	53.129	ug/L	1.297	480253	1.007
Sb	123		ug/L		370446	0.777
Ba	135		ug/L		138794	0.203
Ba	137	52.677	ug/L	0.393	241592	0.354
Ho	165		ug/L		70	0.000
> Lu	175		ug/L		682457	682456.746
Tl	205	56.108	ug/L	3.265	1298158	1.897
Pb	208	56.335	ug/L	1.444	2335773	3.422
Bi	209		ug/L		878	0.001
Th	232	52.368	ug/L	2.317	2210775	3.238
U	238	53.402	ug/L	2.604	2254866	3.304

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 00:54:58

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	99.957				
Be	9	98.458				
B	11	99.724				
Na	23	95.918				
Mg	24	115.453				
Al	27	104.251				
P	31	97.286				
K	39	104.549				
Ca	43	99.246				
> Sc	45		97.2			
Ti	47	102.988				
V	51	104.071				
Cr	52	102.698				
Cr	53					
Mn	55	109.803				
Fe	57	92.649				
Co	59	103.948				
Ni	60	104.114				
Cu	63					
Cu	65	101.709				
Zn	66	101.563				
Zn	67					
Zn	68					
> Ge	74		100.0			
As	75	96.681				
Se	77					
Se	82	96.158				
Kr	83					
Sr	88	114.942				
Y	89					
Mo	98	100.863				
Ag	107	105.529				
Cd	111	102.876				
Cd	114					
> In	115		99.9			
Sn	120	108.410				
Sb	121	106.258				
Sb	123					
Ba	135					
Ba	137	105.353				
Ho	165					
> Lu	175		96.7			
Tl	205	112.217				
Pb	208	112.670				
Bi	209					
Th	232	104.735				
U	238	106.803				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mg	24	CCV is out of limits (+/- 10%)
QC Std 6	Sr	88	CCV is out of limits (+/- 10%)
QC Std 6	Tl	205	CCV is out of limits (+/- 10%)
QC Std 6	Pb	208	CCV is out of limits (+/- 10%)

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 00:54:58

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## QC Action

QC Action Line: Continue

# ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 00:58:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 7.536

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.026	ug/L	7.875	103	0.000
Be	9	-0.001	ug/L	982.141	23	-0.000
B	11	2.962	ug/L	16.666	1655	0.002
Na	23	-0.020	ug/L	2037.197	12672	-0.000
Mg	24	1.416	ug/L	192.905	4335	0.004
Al	27	1.169	ug/L	64.122	12005	0.006
P	31	-1.105	ug/L	209.260	9616	-0.000
K	39	1.979	ug/L	457.389	642199	0.018
Ca	43	-2.777	ug/L	47.802	621	-0.000
> Sc	45		ug/L		687379	687378.601
Ti	47	0.064	ug/L	44.283	771	0.000
V	51	0.719	ug/L	158.289	-12005	0.010
Cr	52	-0.748	ug/L	8.408	7417	-0.009
Cr	53		ug/L		198248	-0.062
Mn	55	-0.011	ug/L	54.942	2865	-0.000
Fe	57	-1.150	ug/L	27.683	10574	-0.001
Co	59	0.001	ug/L	130.192	165	0.000
Ni	60	0.009	ug/L	123.706	374	0.000
Cu	63		ug/L		538	0.000
Cu	65	0.006	ug/L	30.634	486	0.000
Zn	66	-0.040	ug/L	27.833	1405	-0.000
Zn	67		ug/L		21523	-0.001
Zn	68		ug/L		2677	-0.000
> Ge	74		ug/L		686934	686933.951
As	75	0.262	ug/L	199.995	-1644	0.001
Se	77		ug/L		17076	-0.007
Se	82	0.059	ug/L	236.442	78	0.000
Kr	83		ug/L		144	-0.000
Sr	88	0.002	ug/L	42.750	449	0.000
Y	89		ug/L		78	-0.000
Mo	98	0.074	ug/L	7.928	652	0.001
Ag	107	0.003	ug/L	94.034	139	0.000
Cd	111	0.004	ug/L	92.639	44	0.000
Cd	114		ug/L		98	0.000
> In	115		ug/L		479827	479826.893
Sn	120	0.047	ug/L	19.479	983	0.001
Sb	121	0.233	ug/L	26.756	2759	0.004
Sb	123		ug/L		2095	0.003
Ba	135		ug/L		65	0.000
Ba	137	0.002	ug/L	98.959	94	0.000
Ho	165		ug/L		23	0.000
> Lu	175		ug/L		689718	689717.748
Tl	205	0.384	ug/L	25.224	13059	0.013
Pb	208	0.002	ug/L	45.023	729	0.000
Bi	209		ug/L		350	-0.000
Th	232	0.052	ug/L	32.360	3260	0.003
U	238	0.006	ug/L	37.236	818	0.000

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 01:01:07

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		100.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		100.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.7			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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 8

Sample Date/Time: Saturday, February 13, 2010 01:47:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.544

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.229	ug/L	0.288	97041	0.160
Be	9	50.507	ug/L	2.536	22612	0.037
B	11	101.533	ug/L	5.535	41102	0.067
Na	23	4615.194	ug/L	5.796	13589812	22.386
Mg	24	5150.953	ug/L	2.529	9751379	16.080
Al	27	5457.724	ug/L	1.636	16281181	26.840
P	31	4758.221	ug/L	1.711	1016187	1.662
K	39	5191.962	ug/L	13.938	28988594	46.849
Ca	43	5085.185	ug/L	2.271	76940	0.126
> Sc	45		ug/L		606231	606231.317
Ti	47	49.589	ug/L	3.596	39757	0.065
V	51	53.440	ug/L	4.886	448497	0.768
Cr	52	51.853	ug/L	2.117	378712	0.605
Cr	53		ug/L		201213	-0.018
Mn	55	55.007	ug/L	1.237	649467	1.067
Fe	57	4773.640	ug/L	1.145	1275987	2.089
Co	59	52.472	ug/L	2.717	522089	0.861
Ni	60	52.686	ug/L	2.228	120247	0.198
Cu	63		ug/L		280675	0.462
Cu	65	51.140	ug/L	0.386	138465	0.228
Zn	66	51.224	ug/L	1.625	92933	0.145
Zn	67		ug/L		31355	0.017
Zn	68		ug/L		67336	0.103
> Ge	74		ug/L		630474	630473.921
As	75	49.003	ug/L	0.356	93263	0.151
Se	77		ug/L		20340	0.001
Se	82	48.491	ug/L	1.149	10345	0.016
Kr	83		ug/L		138	0.000
Sr	88	57.075	ug/L	1.630	1150686	2.621
Y	89		ug/L		283	0.000
Mo	98	50.753	ug/L	2.728	284577	0.648
Ag	107	52.774	ug/L	2.230	503879	1.148
Cd	111	51.140	ug/L	2.030	128520	0.293
Cd	114		ug/L		309715	0.706
> In	115		ug/L		439016	439016.309
Sn	120	54.452	ug/L	2.341	528583	1.203
Sb	121	53.360	ug/L	1.258	444426	1.011
Sb	123		ug/L		349407	0.795
Ba	135		ug/L		130411	0.192
Ba	137	49.381	ug/L	3.013	225840	0.332
Ho	165		ug/L		71	0.000
> Lu	175		ug/L		680579	680579.192
Tl	205	56.835	ug/L	2.152	1311616	1.921
Pb	208	56.946	ug/L	0.729	2354615	3.459
Bi	209		ug/L		891	0.001
Th	232	53.425	ug/L	2.322	2249619	3.304
U	238	55.579	ug/L	0.693	2340629	3.438

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 01:49:59

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	102.458				
Be	9	101.014				
B	11	101.533				
Na	23	92.304				
Mg	24	103.019				
Al	27	108.074				
P	31	95.164				
K	39	103.839				
Ca	43	101.704				
> Sc	45		88.6			
Ti	47	99.178				
V	51	106.881				
Cr	52	103.706				
Cr	53					
Mn	55	110.014				
Fe	57	95.473				
Co	59	104.945				
Ni	60	105.372				
Cu	63					
Cu	65	102.280				
Zn	66	102.447				
Zn	67					
Zn	68					
> Ge	74		91.8			
As	75	98.007				
Se	77					
Se	82	96.983				
Kr	83					
Sr	88	114.150				
Y	89					
Mo	98	101.505				
Ag	107	105.547				
Cd	111	102.280				
Cd	114					
> In	115		92.1			
Sn	120	108.905				
Sb	121	106.720				
Sb	123					
Ba	135					
Ba	137	98.762				
Ho	165					
> Lu	175		96.4			
Tl	205	113.669				
Pb	208	113.891				
Bi	209					
Th	232	106.850				
U	238	111.158				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Mn	55	CCV is out of limits (+/- 10%)
QC Std 8	Sr	88	CCV is out of limits (+/- 10%)
QC Std 8	Tl	205	CCV is out of limits (+/- 10%)
QC Std 8	Pb	208	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 01:49:59

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 01:53:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.545

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.033	ug/L	26.068	105	0.000
Be	9	-0.008	ug/L	112.554	17	-0.000
B	11	3.113	ug/L	17.893	1536	0.002
Na	23	1.014	ug/L	94.056	14341	0.005
Mg	24	1.108	ug/L	51.707	3334	0.003
Al	27	-0.394	ug/L	216.303	6001	-0.002
P	31	-1.060	ug/L	214.364	8591	-0.000
K	39	9.319	ug/L	246.510	611768	0.084
Ca	43	-3.450	ug/L	36.352	543	-0.000
> Sc	45		ug/L		613501	613500.981
Ti	47	-0.014	ug/L	333.369	626	-0.000
V	51	1.430	ug/L	147.700	-4738	0.021
Cr	52	-0.268	ug/L	40.508	10053	-0.003
Cr	53		ug/L		173114	-0.068
Mn	55	-0.005	ug/L	191.616	2637	-0.000
Fe	57	0.272	ug/L	452.251	9813	0.000
Co	59	0.005	ug/L	49.329	181	0.000
Ni	60	0.001	ug/L	1228.422	315	0.000
Cu	63		ug/L		509	0.000
Cu	65	-0.007	ug/L	90.311	398	-0.000
Zn	66	0.015	ug/L	229.658	1367	0.000
Zn	67		ug/L		18816	-0.002
Zn	68		ug/L		2427	-0.000
> Ge	74		ug/L		621408	621407.941
As	75	0.568	ug/L	74.091	-905	0.002
Se	77		ug/L		14468	-0.008
Se	82	-0.021	ug/L	381.894	53	-0.000
Kr	83		ug/L		135	0.000
Sr	88	0.004	ug/L	72.916	440	0.000
Y	89		ug/L		80	0.000
Mo	98	0.034	ug/L	29.991	376	0.000
Ag	107	0.004	ug/L	51.405	137	0.000
Cd	111	0.009	ug/L	73.037	51	0.000
Cd	114		ug/L		94	0.000
> In	115		ug/L		441525	441524.644
Sn	120	0.047	ug/L	26.991	906	0.001
Sb	121	0.188	ug/L	38.315	2158	0.004
Sb	123		ug/L		1614	0.003
Ba	135		ug/L		59	0.000
Ba	137	0.003	ug/L	43.996	97	0.000
Ho	165		ug/L		22	0.000
> Lu	175		ug/L		684341	684341.230
Tl	205	0.473	ug/L	22.285	15002	0.016
Pb	208	0.004	ug/L	43.176	800	0.000
Bi	209		ug/L		331	-0.000
Th	232	0.046	ug/L	37.139	2998	0.003
U	238	0.007	ug/L	42.856	869	0.000

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 01:56:08

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		89.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		90.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		92.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.0			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 01:56:08

Page 3



## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 02:30:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.551

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.641	ug/L	2.037	98174	0.161
Be	9	51.272	ug/L	3.277	23041	0.038
B	11	101.353	ug/L	2.097	41187	0.067
Na	23	5155.663	ug/L	15.588	15209607	25.007
Mg	24	5815.069	ug/L	10.993	11041229	18.153
Al	27	5479.626	ug/L	5.622	16411795	26.948
P	31	4776.734	ug/L	1.047	1024090	1.669
K	39	4975.496	ug/L	7.682	27879723	44.896
Ca	43	5083.228	ug/L	3.083	77224	0.126
> Sc	45		ug/L		608508	608508.109
Ti	47	51.640	ug/L	3.404	41515	0.067
V	51	52.828	ug/L	1.274	445069	0.759
Cr	52	52.290	ug/L	1.906	383211	0.610
Cr	53		ug/L		228567	0.025
Mn	55	55.346	ug/L	3.544	655801	1.074
Fe	57	4736.275	ug/L	1.544	1270824	2.073
Co	59	52.651	ug/L	2.326	525841	0.864
Ni	60	52.947	ug/L	0.959	121316	0.199
Cu	63		ug/L		285196	0.468
Cu	65	51.888	ug/L	2.935	140974	0.231
Zn	66	51.320	ug/L	0.932	93399	0.146
Zn	67		ug/L		35008	0.023
Zn	68		ug/L		69087	0.105
> Ge	74		ug/L		632496	632495.881
As	75	48.946	ug/L	1.523	93451	0.151
Se	77		ug/L		22623	0.004
Se	82	49.003	ug/L	1.798	10488	0.016
Kr	83		ug/L		132	-0.000
Sr	88	57.087	ug/L	1.775	1157791	2.621
Y	89		ug/L		264	0.000
Mo	98	50.843	ug/L	0.257	286733	0.649
Ag	107	53.053	ug/L	1.294	509612	1.154
Cd	111	51.614	ug/L	0.798	130488	0.295
Cd	114		ug/L		312635	0.708
> In	115		ug/L		441498	441497.839
Sn	120	54.868	ug/L	1.824	535663	1.212
Sb	121	53.647	ug/L	0.843	449375	1.017
Sb	123		ug/L		347006	0.785
Ba	135		ug/L		132082	0.195
Ba	137	50.280	ug/L	1.261	228981	0.338
Ho	165		ug/L		76	0.000
> Lu	175		ug/L		677647	677646.807
Tl	205	57.866	ug/L	1.880	1329411	1.956
Pb	208	57.181	ug/L	1.352	2354009	3.473
Bi	209		ug/L		717	0.001
Th	232	53.964	ug/L	3.472	2261964	3.337
U	238	55.761	ug/L	1.581	2337953	3.450

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 02:33:02

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	103.281				
Be	9	102.544				
B	11	101.353				
Na	23	103.113				
Mg	24	116.301				
Al	27	108.507				
P	31	95.535				
K	39	99.510				
Ca	43	101.665				
> Sc	45		88.9			
Ti	47	103.280				
V	51	105.657				
Cr	52	104.580				
Cr	53					
Mn	55	110.691				
Fe	57	94.725				
Co	59	105.303				
Ni	60	105.895				
Cu	63					
Cu	65	103.776				
Zn	66	102.640				
Zn	67					
Zn	68					
> Ge	74		92.1			
As	75	97.891				
Se	77					
Se	82	98.006				
Kr	83					
Sr	88	114.174				
Y	89					
Mo	98	101.687				
Ag	107	106.107				
Cd	111	103.228				
Cd	114					
> In	115		92.6			
Sn	120	109.735				
Sb	121	107.293				
Sb	123					
Ba	135					
Ba	137	100.561				
Ho	165					
> Lu	175		96.0			
Tl	205	115.731				
Pb	208	114.362				
Bi	209					
Th	232	107.928				
U	238	111.522				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Mg	24	CCV is out of limits (+/- 10%)
QC Std 8	Mn	55	CCV is out of limits (+/- 10%)
QC Std 8	Sr	88	CCV is out of limits (+/- 10%)
QC Std 8	Tl	205	CCV is out of limits (+/- 10%)
QC Std 8	Pb	208	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 02:33:02

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 02:36:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.552

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.014	ug/L	25.546	70	0.000
Be	9	-0.004	ug/L	115.381	20	-0.000
B	11	3.055	ug/L	16.843	1561	0.002
Na	23	1.287	ug/L	127.173	15676	0.006
Mg	24	0.548	ug/L	190.193	2334	0.002
Al	27	-0.347	ug/L	131.859	6335	-0.002
P	31	-0.321	ug/L	908.011	9035	-0.000
K	39	3.218	ug/L	11.450	597924	0.029
Ca	43	-3.172	ug/L	63.637	565	-0.000
> Sc	45		ug/L		632680	632680.079
Ti	47	-0.040	ug/L	76.002	624	-0.000
V	51	0.320	ug/L	397.764	-14689	0.005
Cr	52	-0.003	ug/L	6842.710	12341	-0.000
Cr	53		ug/L		198914	-0.036
Mn	55	0.006	ug/L	75.855	2857	0.000
Fe	57	0.535	ug/L	138.907	10198	0.000
Co	59	0.003	ug/L	98.855	165	0.000
Ni	60	0.014	ug/L	54.833	357	0.000
Cu	63		ug/L		479	0.000
Cu	65	-0.003	ug/L	240.844	421	-0.000
Zn	66	0.018	ug/L	167.342	1409	0.000
Zn	67		ug/L		21182	0.001
Zn	68		ug/L		2668	0.000
> Ge	74		ug/L		638418	638418.068
As	75	0.376	ug/L	73.715	-1316	0.001
Se	77		ug/L		16770	-0.005
Se	82	-0.080	ug/L	75.128	42	-0.000
Kr	83		ug/L		149	0.000
Sr	88	0.001	ug/L	75.595	397	0.000
Y	89		ug/L		72	-0.000
Mo	98	0.032	ug/L	16.611	368	0.000
Ag	107	0.003	ug/L	55.299	130	0.000
Cd	111	0.006	ug/L	123.983	44	0.000
Cd	114		ug/L		98	0.000
> In	115		ug/L		446680	446679.715
Sn	120	0.047	ug/L	24.389	920	0.001
Sb	121	0.201	ug/L	28.532	2300	0.004
Sb	123		ug/L		1743	0.003
Ba	135		ug/L		64	0.000
Ba	137	0.003	ug/L	45.778	95	0.000
Ho	165		ug/L		23	0.000
> Lu	175		ug/L		680442	680442.048
Ti	205	0.528	ug/L	19.424	16168	0.018
Pb	208	0.002	ug/L	46.678	709	0.000
Bi	209		ug/L		253	-0.000
Th	232	0.048	ug/L	40.121	3026	0.003
U	238	0.006	ug/L	47.889	803	0.000

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 02:39:12

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		92.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		93.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.4			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 02:39:12

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## ICPMS#5 - Summary Report

Sample ID: 1202024740  
 Sample Date/Time: Saturday, February 13, 2010 02:42:38  
 Sample Type:  
 Sample Description: LANL 6020 MB  
 Number of Replicates: 3  
 Batch ID: 945381|1|baj  
 Method File: c:\elandata\Method\6020 2 no lrs.mth  
 Dataset File: c:\elandata\Dataset\100211\1202024740.553

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.019	ug/L	35.694	97	0.000
Be	9	-0.022	ug/L	38.806	14	-0.000
B	11	1.439	ug/L	9.097	1065	0.001
Na	23	2.246	ug/L	132.673	22354	0.011
Mg	24	1.608	ug/L	53.633	5334	0.005
Al	27	10.954	ug/L	29.607	50091	0.054
P	31	-6.149	ug/L	7.435	9348	-0.002
K	39	7.903	ug/L	24.451	754057	0.071
Ca	43	36.541	ug/L	9.135	1433	0.001
> Sc	45		ug/L		763834	763834.053
Ti	47	0.303	ug/L	19.175	1094	0.000
V	51	-5.406	ug/L	10.575	-80611	-0.078
Cr	52	3.937	ug/L	6.949	49978	0.046
Cr	53		ug/L		529405	0.343
Mn	55	0.325	ug/L	10.334	8168	0.006
Fe	57	7.260	ug/L	0.916	14559	0.003
Co	59	-0.004	ug/L	40.953	112	-0.000
Ni	60	0.007	ug/L	97.684	410	0.000
Cu	63		ug/L		791	0.000
Cu	65	0.030	ug/L	24.151	620	0.000
Zn	66	0.892	ug/L	3.534	3110	0.003
Zn	67		ug/L		81554	0.091
Zn	68		ug/L		6852	0.006
> Ge	74		ug/L		663524	663524.485
As	75	-1.464	ug/L	90.789	-5124	-0.005
Se	77		ug/L		47452	0.040
Se	82	0.452	ug/L	21.312	163	0.000
Kr	83		ug/L		153	0.000
Sr	88	0.246	ug/L	3.541	5457	0.011
Y	89		ug/L		104	0.000
Mo	98	0.008	ug/L	42.334	232	0.000
Ag	107	-0.004	ug/L	26.130	64	-0.000
Cd	111	0.001	ug/L	456.145	34	0.000
Cd	114		ug/L		40	-0.000
> In	115		ug/L		450541	450540.576
Sn	120	0.137	ug/L	10.088	1818	0.003
Sb	121	0.034	ug/L	47.528	887	0.001
Sb	123		ug/L		701	0.001
Ba	135		ug/L		225	0.000
Ba	137	0.063	ug/L	7.227	384	0.000
Ho	165		ug/L		30	0.000
> Lu	175		ug/L		706121	706121.491
Tl	205	0.191	ug/L	1.046	8783	0.006
Pb	208	0.022	ug/L	5.323	1605	0.001
Bi	209		ug/L		551	0.000
Th	232	0.005	ug/L	61.702	1289	0.000
U	238	-0.008	ug/L	3.189	239	-0.000

Sample ID: 1202024740  
 Report Date/Time: Saturday, February 13, 2010 02:45:23  
 Page 1



## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		111.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.1			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: 1202024740

Report Date/Time: Saturday, February 13, 2010 02:45:23

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## ICPMS#5 - Summary Report

Sample ID: 1202024741

Sample Date/Time: Saturday, February 13, 2010 02:48:49

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945381|1|ba|

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\1202024741.554

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	41.846	ug/L	1.793	101077	0.131
Be	9	41.755	ug/L	3.111	23842	0.031
B	11	87.746	ug/L	2.476	45358	0.058
Na	23	2393.939	ug/L	2.875	8988494	11.612
Mg	24	2543.968	ug/L	14.798	6127516	7.942
Al	27	2165.648	ug/L	13.442	8237791	10.650
P	31	2084.827	ug/L	2.963	573981	0.728
K	39	2334.501	ug/L	0.629	16994092	21.065
Ca	43	2077.455	ug/L	2.245	40533	0.051
> Sc	45		ug/L		773194	773193.793
Ti	47	42.939	ug/L	2.847	43990	0.056
V	51	36.200	ug/L	5.164	380388	0.520
Cr	52	48.381	ug/L	4.507	451353	0.565
Cr	53		ug/L		573663	0.392
Mn	55	48.585	ug/L	4.067	731608	0.942
Fe	57	1798.148	ug/L	2.940	620429	0.787
Co	59	45.143	ug/L	2.246	572829	0.741
Ni	60	45.273	ug/L	3.042	131809	0.170
Cu	63		ug/L		309393	0.399
Cu	65	43.831	ug/L	2.346	151372	0.195
Zn	66	52.141	ug/L	2.674	100791	0.148
Zn	67		ug/L		103146	0.121
Zn	68		ug/L		76731	0.110
> Ge	74		ug/L		672320	672320.231
As	75	46.090	ug/L	4.793	93379	0.142
Se	77		ug/L		53816	0.048
Se	82	48.481	ug/L	3.126	11022	0.016
Kr	83		ug/L		174	0.000
Sr	88	56.903	ug/L	1.979	1168201	2.613
Y	89		ug/L		180	0.000
Mo	98	49.724	ug/L	2.161	283858	0.635
Ag	107	52.156	ug/L	1.391	507187	1.135
Cd	111	50.094	ug/L	2.956	128189	0.287
Cd	114		ug/L		306794	0.686
> In	115		ug/L		446995	446994.924
Sn	120	52.950	ug/L	3.279	523263	1.170
Sb	121	53.361	ug/L	2.110	452455	1.011
Sb	123		ug/L		358902	0.797
Ba	135		ug/L		127104	0.183
Ba	137	47.228	ug/L	3.209	220107	0.317
Ho	165		ug/L		66	0.000
> Lu	175		ug/L		693661	693661.025
Tl	205	53.054	ug/L	2.177	1247918	1.793
Pb	208	55.632	ug/L	1.663	2344230	3.379
Bi	209		ug/L		1800538	2.595
Th	232	51.430	ug/L	1.153	2206926	3.180
U	238	53.716	ug/L	1.833	2305410	3.323

Sample ID: 1202024741

Report Date/Time: Saturday, February 13, 2010 02:51:34

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		113.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		93.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.3			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: 1202024741

Report Date/Time: Saturday, February 13, 2010 02:51:34

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 03:25:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.560

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	50.210	ug/L	2.089	93428	0.157
Be	9	50.564	ug/L	3.838	22240	0.037
B	11	98.835	ug/L	4.103	39329	0.066
Na	23	4719.008	ug/L	6.110	13639229	22.889
Mg	24	5318.190	ug/L	11.414	9894696	16.602
Al	27	5213.173	ug/L	14.206	15281832	25.638
P	31	4798.087	ug/L	2.811	1006568	1.676
K	39	5897.001	ug/L	20.437	32237844	53.211
Ca	43	5084.446	ug/L	0.769	75602	0.126
> Sc	45		ug/L		595665	595665.211
Ti	47	51.056	ug/L	3.086	40183	0.066
V	51	52.683	ug/L	2.102	434300	0.757
Cr	52	53.436	ug/L	3.039	382938	0.624
Cr	53		ug/L		238587	0.050
Mn	55	55.453	ug/L	3.197	643188	1.076
Fe	57	4752.011	ug/L	2.992	1247977	2.079
Co	59	52.965	ug/L	2.739	517715	0.869
Ni	60	53.251	ug/L	3.324	119400	0.200
Cu	63		ug/L		277517	0.465
Cu	65	51.632	ug/L	3.144	137313	0.230
Zn	66	51.947	ug/L	1.555	92626	0.147
Zn	67		ug/L		35751	0.025
Zn	68		ug/L		68009	0.106
> Ge	74		ug/L		619828	619827.816
As	75	48.059	ug/L	1.431	89895	0.148
Se	77		ug/L		24047	0.007
Se	82	49.125	ug/L	1.819	10300	0.017
Kr	83		ug/L		157	0.000
Sr	88	57.742	ug/L	1.428	1140245	2.652
Y	89		ug/L		249	0.000
Mo	98	51.082	ug/L	1.682	280504	0.652
Ag	107	53.509	ug/L	1.018	500470	1.164
Cd	111	51.727	ug/L	0.606	127341	0.296
Cd	114		ug/L		305533	0.711
> In	115		ug/L		429904	429903.583
Sn	120	54.278	ug/L	1.558	516025	1.199
Sb	121	53.822	ug/L	0.963	439003	1.020
Sb	123		ug/L		341624	0.794
Ba	135		ug/L		128636	0.192
Ba	137	49.570	ug/L	0.978	222971	0.333
Ho	165		ug/L		66	0.000
> Lu	175		ug/L		669317	669317.430
Tl	205	50.706	ug/L	3.433	1151309	1.714
Pb	208	57.417	ug/L	1.606	2334775	3.488
Bi	209		ug/L		709	0.001
Th	232	54.232	ug/L	0.936	2245603	3.354
U	238	56.473	ug/L	1.189	2338970	3.494

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 03:28:31

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Li	7	100.420				
Be	9	101.128				
B	11	98.835				
Na	23	94.380				
Mg	24	106.364				
Al	27	103.231				
P	31	95.962				
K	39	117.940				
Ca	43	101.689				
> Sc	45		87.1			
Ti	47	102.112				
V	51	105.365				
Cr	52	106.872				
Cr	53					
Mn	55	110.907				
Fe	57	95.040				
Co	59	105.929				
Ni	60	106.502				
Cu	63					
Cu	65	103.264				
Zn	66	103.895				
Zn	67					
Zn	68					
> Ge	74		90.2			
As	75	96.117				
Se	77					
Se	82	98.250				
Kr	83					
Sr	88	115.483				
Y	89					
Mo	98	102.163				
Ag	107	107.017				
Cd	111	103.454				
Cd	114					
> In	115		90.1			
Sn	120	108.556				
Sb	121	107.643				
Sb	123					
Ba	135					
Ba	137	99.140				
Ho	165					
> Lu	175		94.8			
Tl	205	101.413				
Pb	208	114.835				
Bi	209					
Th	232	108.463				
U	238	112.946				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	K	39	CCV is out of limits (+/- 10%)
QC Std 8	Mn	55	CCV is out of limits (+/- 10%)
QC Std 8	Sr	88	CCV is out of limits (+/- 10%)
QC Std 8	Pb	208	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 03:28:31

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 03:31:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.561

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.014	ug/L	25.919	68	0.000
Be	9	-0.011	ug/L	59.391	16	-0.000
B	11	3.000	ug/L	17.289	1502	0.002
Na	23	-0.373	ug/L	360.542	10337	-0.002
Mg	24	1.449	ug/L	71.815	4001	0.005
Al	27	0.140	ug/L	879.068	7669	0.001
P	31	-0.820	ug/L	183.212	8719	-0.000
K	39	1.030	ug/L	418.876	572248	0.009
Ca	43	-5.268	ug/L	29.751	520	-0.000
> Sc	45		ug/L		618452	618452.457
Ti	47	0.012	ug/L	184.614	652	0.000
V	51	0.665	ug/L	97.168	-11314	0.010
Cr	52	0.054	ug/L	108.666	12463	0.001
Cr	53		ug/L		203181	-0.022
Mn	55	0.009	ug/L	139.034	2826	0.000
Fe	57	-0.764	ug/L	116.111	9617	-0.000
Co	59	0.001	ug/L	77.698	148	0.000
Ni	60	0.009	ug/L	34.541	338	0.000
Cu	63		ug/L		469	0.000
Cu	65	-0.002	ug/L	741.831	414	-0.000
Zn	66	-0.005	ug/L	439.335	1355	-0.000
Zn	67		ug/L		21241	0.001
Zn	68		ug/L		2634	0.000
> Ge	74		ug/L		632073	632072.858
As	75	-0.047	ug/L	1398.817	-2121	-0.000
Se	77		ug/L		17349	-0.004
Se	82	-0.045	ug/L	182.348	49	-0.000
Kr	83		ug/L		137	0.000
Sr	88	0.001	ug/L	109.940	388	0.000
Y	89		ug/L		70	-0.000
Mo	98	0.035	ug/L	10.821	374	0.000
Ag	107	0.004	ug/L	29.674	133	0.000
Cd	111	0.008	ug/L	111.670	48	0.000
Cd	114		ug/L		79	0.000
> In	115		ug/L		434758	434758.378
Sn	120	0.051	ug/L	26.469	932	0.001
Sb	121	0.217	ug/L	29.498	2358	0.004
Sb	123		ug/L		1796	0.003
Ba	135		ug/L		63	0.000
Ba	137	0.000	ug/L	286.910	83	0.000
Ho	165		ug/L		26	0.000
> Lu	175		ug/L		677400	677399.720
Tl	205	1.838	ug/L	15.898	46228	0.062
Pb	208	0.002	ug/L	9.972	712	0.000
Bi	209		ug/L		199	-0.000
Th	232	0.048	ug/L	31.260	3039	0.003
U	238	0.005	ug/L	32.378	779	0.000

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 03:34:41

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		90.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		91.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.0			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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#5 - Summary Report

Sample ID: 245390001  
 Sample Date/Time: Saturday, February 13, 2010 03:44:19  
 Sample Type:  
 Sample Description: LANL 6020  
 Number of Replicates: 3  
 Batch ID: 945381|1|ba|  
 Method File: c:\elandata\Method\6020 2 no lrs.mth  
 Dataset File: c:\elandata\Dataset\100211\245390001.563

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.089	ug/L	10.063	256	0.000
Be	9	-0.014	ug/L	36.402	17	-0.000
B	11	16.603	ug/L	2.807	8451	0.011
Na	23	125.387	ug/L	8.829	462401	0.608
Mg	24	10.240	ug/L	29.716	25023	0.032
Al	27	60.972	ug/L	4.458	229836	0.300
P	31	-3.538	ug/L	5.724	9701	-0.001
K	39	125.638	ug/L	7.411	1512066	1.134
Ca	43	65.483	ug/L	3.003	1913	0.002
> Sc	45		ug/L		737749	737749.425
Ti	47	1.206	ug/L	6.346	1924	0.002
V	51	-9.567	ug/L	17.787	-121949	-0.137
Cr	52	4.586	ug/L	4.219	53887	0.054
Cr	53		ug/L		608194	0.474
Mn	55	1.323	ug/L	3.014	22174	0.026
Fe	57	25.458	ug/L	1.352	19937	0.011
Co	59	0.007	ug/L	17.196	243	0.000
Ni	60	0.071	ug/L	11.132	573	0.000
Cu	63		ug/L		5492	0.007
Cu	65	0.731	ug/L	3.944	2902	0.003
Zn	66	9.777	ug/L	0.486	19385	0.028
Zn	67		ug/L		84595	0.098
Zn	68		ug/L		18071	0.024
> Ge	74		ug/L		648791	648791.001
As	75	-3.062	ug/L	34.719	-8222	-0.009
Se	77		ug/L		56689	0.056
Se	82	0.141	ug/L	80.420	91	0.000
Kr	83		ug/L		147	0.000
Sr	88	0.420	ug/L	1.193	8694	0.019
Y	89		ug/L		867	0.002
Mo	98	-0.001	ug/L	114.584	176	-0.000
Ag	107	-0.001	ug/L	171.968	90	-0.000
Cd	111	0.003	ug/L	184.214	36	0.000
Cd	114		ug/L		61	-0.000
> In	115		ug/L		432526	432526.142
Sn	120	0.154	ug/L	7.535	1907	0.003
Sb	121	0.085	ug/L	12.959	1272	0.002
Sb	123		ug/L		1005	0.001
Ba	135		ug/L		1531	0.002
Ba	137	0.540	ug/L	3.782	2656	0.004
Ho	165		ug/L		74	0.000
> Lu	175		ug/L		708880	708880.479
Tl	205	0.406	ug/L	6.463	13965	0.014
Pb	208	0.293	ug/L	1.422	13251	0.018
Bi	209		ug/L		298	-0.000
Th	232	0.004	ug/L	44.454	1237	0.000
U	238	-0.001	ug/L	57.812	527	-0.000

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		107.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		94.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		90.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.4			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: 245390001

Report Date/Time: Saturday, February 13, 2010 03:47:04

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## ICPMS#5 - Summary Report

Sample ID: 1202024742

Sample Date/Time: Saturday, February 13, 2010 03:56:40

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945381|1|ba|

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\1202024742.565

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.096	ug/L	3.417	271	0.000
Be	9	-0.016	ug/L	32.361	16	-0.000
B	11	16.316	ug/L	2.831	8270	0.011
Na	23	159.435	ug/L	1.308	581256	0.773
Mg	24	7.575	ug/L	55.848	18681	0.024
Al	27	15.384	ug/L	4.170	64144	0.076
P	31	-3.662	ug/L	39.843	9621	-0.001
K	39	192.686	ug/L	9.776	1948096	1.739
Ca	43	61.971	ug/L	0.580	1840	0.002
> Sc	45		ug/L		734157	734157.155
Ti	47	0.507	ug/L	6.223	1247	0.001
V	51	-8.022	ug/L	21.038	-105181	-0.115
Cr	52	3.305	ug/L	15.254	42612	0.039
Cr	53		ug/L		620951	0.496
Mn	55	0.609	ug/L	2.375	11896	0.012
Fe	57	8.942	ug/L	20.236	14528	0.004
Co	59	-0.001	ug/L	394.514	151	-0.000
Ni	60	0.039	ug/L	7.265	484	0.000
Cu	63		ug/L		2414	0.003
Cu	65	0.239	ug/L	12.279	1279	0.001
Zn	66	1.695	ug/L	5.374	4418	0.005
Zn	67		ug/L		89059	0.108
Zn	68		ug/L		8092	0.009
> Ge	74		ug/L		634688	634688.217
As	75	-2.737	ug/L	43.764	-7418	-0.008
Se	77		ug/L		58916	0.061
Se	82	0.044	ug/L	149.432	68	0.000
Kr	83		ug/L		150	0.000
Sr	88	0.316	ug/L	2.670	6612	0.015
Y	89		ug/L		335	0.001
Mo	98	-0.004	ug/L	39.131	159	-0.000
Ag	107	-0.001	ug/L	49.582	85	-0.000
Cd	111	0.004	ug/L	107.361	38	0.000
Cd	114		ug/L		34	-0.000
> In	115		ug/L		430692	430692.184
Sn	120	1.848	ug/L	1.895	18020	0.041
Sb	121	-0.024	ug/L	10.349	379	-0.000
Sb	123		ug/L		313	-0.000
Ba	135		ug/L		525	0.001
Ba	137	0.169	ug/L	4.764	889	0.001
Ho	165		ug/L		40	0.000
> Lu	175		ug/L		706801	706801.431
Tl	205	0.189	ug/L	8.713	8726	0.006
Pb	208	0.049	ug/L	5.032	2759	0.003
Bi	209		ug/L		336	-0.000
Th	232	-0.010	ug/L	12.921	622	-0.001
U	238	-0.006	ug/L	6.425	295	-0.000

Sample ID: 1202024742

Report Date/Time: Saturday, February 13, 2010 03:59:24

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		107.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		90.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: 1202024742

Report Date/Time: Saturday, February 13, 2010 03:59:24

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# ICPMS#5 - Summary Report

Sample ID: 1202024743

Sample Date/Time: Saturday, February 13, 2010 04:02:50

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945381|1|baj

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\1202024743.566

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	40.531	ug/L	1.335	92081	0.127
Be	9	41.950	ug/L	3.929	22529	0.031
B	11	103.830	ug/L	1.526	50405	0.069
Na	23	2458.942	ug/L	2.620	8683752	11.927
Mg	24	2432.104	ug/L	3.983	5522077	7.592
Al	27	2443.526	ug/L	7.680	8745060	12.017
P	31	2087.296	ug/L	0.844	540568	0.729
K	39	2448.064	ug/L	1.154	16726544	22.090
Ca	43	2128.843	ug/L	1.425	39046	0.053
> Sc	45		ug/L		727096	727096.313
Ti	47	43.312	ug/L	2.151	41733	0.056
V	51	47.085	ug/L	0.770	471710	0.677
Cr	52	51.616	ug/L	1.298	452157	0.602
Cr	53		ug/L		699670	0.612
Mn	55	48.426	ug/L	2.320	686062	0.939
Fe	57	1783.492	ug/L	1.005	578965	0.780
Co	59	44.578	ug/L	1.215	532105	0.732
Ni	60	44.067	ug/L	0.969	120711	0.166
Cu	63		ug/L		283906	0.390
Cu	65	42.601	ug/L	1.361	138412	0.190
Zn	66	52.163	ug/L	1.344	94795	0.148
Zn	67		ug/L		140131	0.189
Zn	68		ug/L		73808	0.113
> Ge	74		ug/L		631743	631743.344
As	75	69.381	ug/L	2.230	133141	0.214
Se	77		ug/L		62246	0.067
Se	82	18.807	ug/L	2.248	4057	0.006
Kr	83		ug/L		186	0.000
Sr	88	57.033	ug/L	1.110	1102627	2.619
Y	89		ug/L		419	0.001
Mo	98	48.848	ug/L	1.689	262590	0.624
Ag	107	51.106	ug/L	0.178	467962	1.112
Cd	111	10.287	ug/L	2.132	24811	0.059
Cd	114		ug/L		58998	0.140
> In	115		ug/L		420872	420871.917
Sn	120	55.527	ug/L	1.320	516751	1.227
Sb	121	195.062	ug/L	1.320	1556002	3.696
Sb	123		ug/L		1243374	2.954
Ba	135		ug/L		121857	0.172
Ba	137	44.730	ug/L	0.943	212932	0.300
Ho	165		ug/L		434	0.001
> Lu	175		ug/L		708354	708353.959
Tl	205	80.449	ug/L	7.275	1928520	2.719
Pb	208	45.731	ug/L	2.651	1967521	2.778
Bi	209		ug/L		935	0.001
Th	232	53.932	ug/L	3.726	2362577	3.335
U	238	55.849	ug/L	3.058	2446953	3.455

Sample ID: 1202024743

Report Date/Time: Saturday, February 13, 2010 04:05:35

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		106.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		88.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.4			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: 1202024743

Report Date/Time: Saturday, February 13, 2010 04:05:35

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## ICPMS#5 - Summary Report

Sample ID: 1202024744

Sample Date/Time: Saturday, February 13, 2010 04:09:01

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945381|5|ba|

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\1202024744.567

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.025	ug/L	20.706	90	0.000
Be	9	-0.008	ug/L	107.184	17	-0.000
B	11	4.736	ug/L	8.772	2210	0.003
Na	23	27.837	ug/L	25.942	94319	0.135
Mg	24	4.240	ug/L	10.424	9336	0.013
Al	27	12.961	ug/L	12.147	46409	0.064
P	31	2.606	ug/L	125.946	9418	0.001
K	39	26.413	ug/L	16.338	710578	0.238
Ca	43	13.204	ug/L	20.088	799	0.000
> Sc	45		ug/L		615964	615964.035
Ti	47	0.365	ug/L	17.493	931	0.000
V	51	-0.840	ug/L	141.062	-24812	-0.012
Cr	52	1.185	ug/L	18.465	20532	0.014
Cr	53		ug/L		305007	0.145
Mn	55	0.412	ug/L	9.344	7622	0.008
Fe	57	10.443	ug/L	12.602	12592	0.005
Co	59	0.004	ug/L	20.010	178	0.000
Ni	60	0.034	ug/L	11.634	394	0.000
Cu	63		ug/L		2234	0.003
Cu	65	0.317	ug/L	6.998	1285	0.001
Zn	66	0.149	ug/L	22.072	1512	0.000
Zn	67		ug/L		35850	0.029
Zn	68		ug/L		3559	0.002
> Ge	74		ug/L		586181	586181.204
As	75	-0.471	ug/L	129.040	-2736	-0.001
Se	77		ug/L		26872	0.014
Se	82	0.066	ug/L	119.962	67	0.000
Kr	83		ug/L		123	-0.000
Sr	88	0.084	ug/L	3.592	1937	0.004
Y	89		ug/L		329	0.001
Mo	98	0.020	ug/L	18.402	277	0.000
Ag	107	-0.004	ug/L	4.223	59	-0.000
Cd	111	0.000	ug/L	1090.304	28	0.000
Cd	114		ug/L		41	-0.000
> In	115		ug/L		412767	412767.030
Sn	120	0.207	ug/L	4.427	2308	0.005
Sb	121	0.030	ug/L	55.184	781	0.001
Sb	123		ug/L		583	0.000
Ba	135		ug/L		471	0.001
Ba	137	0.156	ug/L	2.840	792	0.001
Ho	165		ug/L		44	0.000
> Lu	175		ug/L		677243	677243.062
Tl	205	5.145	ug/L	16.702	122067	0.174
Pb	208	0.344	ug/L	3.626	14756	0.021
Bi	209		ug/L		210	-0.000
Th	232	0.012	ug/L	88.714	1559	0.001
U	238	0.168	ug/L	4.138	7565	0.010

Sample ID: 1202024744

Report Date/Time: Saturday, February 13, 2010 04:11:46

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		90.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		85.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		86.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.0			
Tl	205					
Pb	208					
Bi	209					
Th	232					
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

Sample ID: 1202024744

Report Date/Time: Saturday, February 13, 2010 04:11:46

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 04:21:22

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 6.569

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	49.845	ug/L	3.432	91039	0.156
Be	9	50.775	ug/L	3.608	21915	0.037
B	11	99.719	ug/L	2.830	38951	0.066
Na	23	4779.679	ug/L	5.693	13584321	23.184
Mg	24	5728.714	ug/L	9.750	10479662	17.883
Al	27	4960.635	ug/L	5.261	14285521	24.396
P	31	4703.041	ug/L	1.740	968748	1.643
K	39	5471.384	ug/L	12.772	29385080	49.370
Ca	43	5032.559	ug/L	5.459	73400	0.125
> Sc	45		ug/L		584765	584765.241
Ti	47	50.052	ug/L	1.788	38686	0.065
V	51	52.487	ug/L	6.936	424440	0.754
Cr	52	51.473	ug/L	3.561	362399	0.601
Cr	53		ug/L		230139	0.044
Mn	55	54.445	ug/L	1.331	619938	1.056
Fe	57	4660.896	ug/L	1.780	1201580	2.040
Co	59	51.074	ug/L	1.303	490204	0.838
Ni	60	51.956	ug/L	3.251	114334	0.195
Cu	63		ug/L		269761	0.461
Cu	65	49.583	ug/L	0.816	129492	0.221
Zn	66	51.322	ug/L	1.821	88099	0.146
Zn	67		ug/L		34250	0.025
Zn	68		ug/L		65286	0.106
> Ge	74		ug/L		596591	596590.871
As	75	47.803	ug/L	1.357	86051	0.147
Se	77		ug/L		22747	0.006
Se	82	47.880	ug/L	2.630	9662	0.016
Kr	83		ug/L		147	0.000
Sr	88	56.723	ug/L	4.032	1083831	2.605
Y	89		ug/L		256	0.000
Mo	98	50.041	ug/L	3.952	265880	0.639
Ag	107	52.475	ug/L	4.416	474851	1.141
Cd	111	51.051	ug/L	3.106	121619	0.292
Cd	114		ug/L		297263	0.714
> In	115		ug/L		416305	416304.804
Sn	120	53.650	ug/L	3.120	493635	1.185
Sb	121	53.452	ug/L	3.098	421923	1.013
Sb	123		ug/L		330963	0.794
Ba	135		ug/L		124191	0.186
Ba	137	48.531	ug/L	1.898	217540	0.326
Ho	165		ug/L		70	0.000
> Lu	175		ug/L		667038	667037.623
Tl	205	50.103	ug/L	3.121	1133642	1.694
Pb	208	56.977	ug/L	0.776	2308976	3.461
Bi	209		ug/L		698	0.001
Th	232	54.250	ug/L	2.075	2238962	3.355
U	238	56.188	ug/L	1.394	2319045	3.476

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 04:24:05

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	99.691				
Be	9	101.549				
B	11	99.719				
Na	23	95.594				
Mg	24	114.574				
Al	27	98.230				
P	31	94.061				
K	39	109.428				
Ca	43	100.651				
> Sc	45		85.5			
Ti	47	100.103				
V	51	104.975				
Cr	52	102.946				
Cr	53					
Mn	55	108.891				
Fe	57	93.218				
Co	59	102.148				
Ni	60	103.912				
Cu	63					
Cu	65	99.167				
Zn	66	102.643				
Zn	67					
Zn	68					
> Ge	74		86.8			
As	75	95.606				
Se	77					
Se	82	95.760				
Kr	83					
Sr	88	113.446				
Y	89					
Mo	98	100.081				
Ag	107	104.949				
Cd	111	102.102				
Cd	114					
> In	115		87.3			
Sn	120	107.301				
Sb	121	106.905				
Sb	123					
Ba	135					
Ba	137	97.061				
Ho	165					
> Lu	175		94.5			
Tl	205	100.205				
Pb	208	113.953				
Bi	209					
Th	232	108.501				
U	238	112.376				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mg	24	CCV is out of limits (+/- 10%)
QC Std 6	Sr	88	CCV is out of limits (+/- 10%)
QC Std 6	Pb	208	CCV is out of limits (+/- 10%)
QC Std 6	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 04:24:05

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## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 04:27:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2 no lrs.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 7.570

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.011	ug/L	53.864	59	0.000
Be	9	-0.001	ug/L	1255.386	20	-0.000
B	11	3.188	ug/L	16.765	1499	0.002
Na	23	1.689	ug/L	32.462	15675	0.008
Mg	24	1.742	ug/L	65.510	4334	0.005
Al	27	-0.177	ug/L	893.103	6335	-0.001
P	31	-2.460	ug/L	87.321	7936	-0.001
K	39	7.578	ug/L	64.131	577803	0.068
Ca	43	-2.072	ug/L	13.725	540	-0.000
> Sc	45		ug/L		586902	586901.947
Ti	47	-0.011	ug/L	368.736	601	-0.000
V	51	0.448	ug/L	148.192	-12547	0.006
Cr	52	-0.099	ug/L	155.656	10781	-0.001
Cr	53		ug/L		193305	-0.021
Mn	55	0.012	ug/L	23.558	2716	0.000
Fe	57	-1.003	ug/L	26.093	9065	-0.000
Co	59	0.003	ug/L	59.844	159	0.000
Ni	60	0.008	ug/L	94.381	318	0.000
Cu	63		ug/L		703	0.000
Cu	65	-0.002	ug/L	330.128	394	-0.000
Zn	66	-0.035	ug/L	65.357	1229	-0.000
Zn	67		ug/L		20792	0.002
Zn	68		ug/L		2470	0.000
> Ge	74		ug/L		596900	596900.325
As	75	0.248	ug/L	211.892	-1475	0.001
Se	77		ug/L		15928	-0.005
Se	82	-0.009	ug/L	692.929	54	-0.000
Kr	83		ug/L		131	0.000
Sr	88	0.002	ug/L	82.406	388	0.000
Y	89		ug/L		79	0.000
Mo	98	0.038	ug/L	11.480	375	0.000
Ag	107	0.003	ug/L	8.140	124	0.000
Cd	111	0.010	ug/L	45.519	51	0.000
Cd	114		ug/L		91	0.000
> In	115		ug/L		416825	416824.936
Sn	120	0.054	ug/L	17.925	918	0.001
Sb	121	0.229	ug/L	26.955	2364	0.004
Sb	123		ug/L		1809	0.003
Ba	135		ug/L		55	0.000
Ba	137	0.003	ug/L	88.935	93	0.000
Ho	165		ug/L		23	0.000
> Lu	175		ug/L		670980	670980.155
Tl	205	2.753	ug/L	9.528	66491	0.093
Pb	208	0.003	ug/L	36.481	735	0.000
Bi	209		ug/L		185	-0.000
Th	232	0.056	ug/L	34.312	3333	0.003
U	238	0.006	ug/L	33.310	803	0.000

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 04:30:15

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9998
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9996
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9995
U	238Linear Thru Zero	0.9994

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dif	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		85.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		86.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		87.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		95.1			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	205	CCB is out of limits (+/- PQL)

## QC Action

QC Action Line: Continue

## ICPMS #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Saturday, February 13, 2010 10:14:49

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.480

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	5702.1	5702.138	98.108	1.7
Mg	24.0	53382.2	53382.156	369.934	0.7
Co	58.9	126956.1	126956.090	1481.192	1.2
Rh	102.9	234012.5	234012.506	651.114	0.3
In	114.9	304048.2	304048.187	1620.031	0.5
Pb	208.0	236889.8	236889.778	1242.706	0.5
[> Ba	137.9	270555.9	270555.908	489.635	0.2
[ Ba++	69.0	5659.3	0.021	0.000	1.5
[> Ce	139.9	338733.5	338733.542	1728.021	0.5
[ CeO	155.9	7831.6	0.023	0.000	1.3
Bkgd	220.0	13.8	13.800	1.304	9.4

### Current Optimization File Data

Current Value	Description
0.87	Nebulizer Gas Flow
5.25	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	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	9	5.5	5355.3
Co	59	9	5.8	129010.6
In	115	9	6.0	301212.4



## 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	585	2072	0.621
Be	9.0	9.0	2053	2088	0.617
Mg	24.0	24.0	5687	2100	0.581
Mg	25.0	25.0	5939	2100	0.585
Mg	26.0	25.9	6157	2100	0.592
Co	58.9	58.9	14168	2125	0.589
Rh	102.9	102.9	24868	2180	0.582
In	114.9	114.9	27782	2200	0.579
Ce	139.9	139.9	33866	2220	0.587
Pb	206.0	206.0	49948	2305	0.611
Pb	207.0	207.0	50159	2240	0.650
Pb	208.0	208.0	50451	2265	0.716
U	238.1	238.1	57726	2275	0.762

## ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, February 13, 2010 12:47:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100213\Blank.053

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		584144	
[	TI	205		ug/L		1850	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Simple Linear	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175					
[	TI	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#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Saturday, February 13, 2010 12:52:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\Standard 1.054

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		559965	559964.697
[ TI	205	10.000	ug/L	0.320	238938	0.424

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[> Lu	175					
[ TI	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#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Saturday, February 13, 2010 12:56:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\Standard 2.055

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		554052	554051.604
[	Tl	205	99.765	ug/L	0.503	1896992	3.421

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	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

Sample ID: Standard 2

Report Date/Time: Saturday, February 13, 2010 12:56:40

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## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Saturday, February 13, 2010 13:00:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 1.056

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		550788	550787.866
[	TI	205	54.500	ug/L	1.302	1031011	1.869

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			94.3		
[	TI	205	109.000				

### 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 1

Report Date/Time: Saturday, February 13, 2010 13:01:08

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## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, February 13, 2010 13:05:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 2.057

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		584684	584684.196
[	Tl	205	-0.020	ug/L	10.931	1458	-0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu	175			100.1			
[	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

Sample ID: QC Std 2

Report Date/Time: Saturday, February 13, 2010 13:05:40

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, February 13, 2010 13:09:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 3.058

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		571927	571927.291
[ TI	205	1.235	ug/L	1.416	26027	0.042

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9997

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[> Lu	175			97.9		
[ TI	205	123.498				

### 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 3

Report Date/Time: Saturday, February 13, 2010 13:10:08

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, February 13, 2010 13:14:27

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Tl only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 4.059

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		530602	530602.221
[	Tl	205	-0.031	ug/L	1.635	1120	-0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate	Rel. % Difference
[>	Lu	175			90.8			
[	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#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Saturday, February 13, 2010 13:18:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\dl only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 5.060

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		523376	523376.020
[ TI	205	21.918	ug/L	0.853	395001	0.752

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9997

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[> Lu	175			89.6		
[ TI	205	109.592				

### 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 5

Report Date/Time: Saturday, February 13, 2010 13:19:07

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 13:23:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\tl only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.061

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		562682	562682.271
[	TI	205	54.213	ug/L	0.391	1047744	1.859

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		96.3			
[	TI	205	108.425				

### 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

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 13:23:37

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 13:27:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Ti only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.062

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		583578	583578.315
[	TI	205	-0.033	ug/L	9.529	1194	-0.001

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			99.9		
[	TI	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

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 13:28:09

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 14:04:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\td only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 8.070

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		548816	548816.323
[	Tl	205	54.226	ug/L	0.758	1022122	1.859

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Lu	175			94.0			
[	Tl	205	108.452					

### 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 9

Sample Date/Time: Saturday, February 13, 2010 14:08:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 9.071

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		567137	567136.767
[	TI	205	-0.031	ug/L	9.440	1187	-0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175		97.1			
[	TI	205					

### 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 8

Sample Date/Time: Saturday, February 13, 2010 14:40:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\1 only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 8.078

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		549171	549170.862
[	Tl	205	53.714	ug/L	1.207	1013119	1.842

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	Lu	175			94.0			
[	Tl	205	107.429					

### 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: Saturday, February 13, 2010 14:44:41

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 9.079

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		564802	564801.521
[	Tl	205	-0.052	ug/L	1.475	784	-0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175			96.7		
[	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 9

Report Date/Time: Saturday, February 13, 2010 14:44:53

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 15:20:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Tl only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 8.087

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		546752	546751.652
[	Tl	205	54.066	ug/L	0.814	1015311	1.854

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			93.6		
[	Tl	205	108.133				

### 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 9

Sample Date/Time: Saturday, February 13, 2010 15:25:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 9.088

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		571668	571668.446
[	Tl	205	-0.057	ug/L	2.797	686	-0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	Lu	175			97.9		
[	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

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 15:25:32

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 16:01:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 8.096

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		551605	551605.265
[ TI	205	54.455	ug/L	0.567	1031705	1.867

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9997

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[> Lu	175			94.4		
[ TI	205	108.911				

### 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#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 16:06:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 9.097

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		559224	559223.595
[	TI	205	-0.056	ug/L	4.151	703	-0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175			95.7		
[	TI	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

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 16:06:35

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 16:38:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ti only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 8.104

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		558018	558017.702
[	Tl	205	53.683	ug/L	0.276	1028921	1.841

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175			95.5		
[	Tl	205	107.365				

### 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#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 16:42:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 9.105

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		557455	557455.053
[	Tl	205	-0.050	ug/L	5.729	810	-0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	Lu	175			95.4		
[	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

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 16:43:06

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## ICPMS#5 - Summary Report

Sample ID: 1202024740

Sample Date/Time: Saturday, February 13, 2010 16:47:27

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945381|1|baj

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\1202024740.106

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		542477	542476.980
[	Tl	205	-0.070	ug/L	1.085	418	-0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			92.9		
[	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#5 - Summary Report

Sample ID: 1202024741

Sample Date/Time: Saturday, February 13, 2010 16:52:01

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945381|1|baj

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\1202024741.107

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		556350	556350.047
[	Tl	205	49.763	ug/L	2.240	950963	1.706

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175			95.2		
[	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#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 17:19:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\dl only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 8.113

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		558689	558688.998
[	TI	205	52.540	ug/L	0.852	1008241	1.802

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			95.6		
[	TI	205	105.080				

### 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

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 17:19:27

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## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 17:23:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 9.114

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		562402	562401.936
[	TI	205	0.007	ug/L	18.295	1915	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	Lu	175			96.3			
[	TI	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

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 17:23:59

Page 1

## ICPMS#5 - Summary Report

Sample ID: 245390001

Sample Date/Time: Saturday, February 13, 2010 17:32:55

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945381|1|ba|

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\245390001.116

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		551442	551441.506
[	TI	205	-0.059	ug/L	3.546	628	-0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			94.4		
[	TI	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

Sample ID: 245390001

Report Date/Time: Saturday, February 13, 2010 17:33:08

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202024742

Sample Date/Time: Saturday, February 13, 2010 17:42:01

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945381|1|baj

Method File: c:\elandata\Method\Ti only.mth

Dataset File: C:\elandata\Dataset\100213\1202024742.118

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		553348	553347.788
[ TI	205	-0.067	ug/L	1.617	486	-0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[> Lu	175			94.7		
[ TI	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

Sample ID: 1202024742

Report Date/Time: Saturday, February 13, 2010 17:42:13

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202024743

Sample Date/Time: Saturday, February 13, 2010 17:46:34

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945381|1|baj

Method File: c:\elandata\Method\tl only.mth

Dataset File: C:\elandata\Dataset\100213\1202024743.119

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		546835	546834.946
[	TI	205	80.603	ug/L	1.046	1513111	2.764

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175			93.6		
[	TI	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#5 - Summary Report

Sample ID: 1202024744

Sample Date/Time: Saturday, February 13, 2010 17:51:08

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945381|5|baj

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\1202024744.120

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		559294	559293.900
[	TI	205	ug/L	1.677	21917	0.036

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175		95.7		
[	TI	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

Sample ID: 1202024744

Report Date/Time: Saturday, February 13, 2010 17:51:21

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 18:00:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.122

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		559472	559472.446
[	TI	205	52.261	ug/L	1.442	1004312	1.792

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			95.8		
[	TI	205	104.522				

### 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: Saturday, February 13, 2010 18:00:25

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 18:04:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.123

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		560652	560651.681
[	Tl	205	0.227	ug/L	3.659	6130	0.008

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9997

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			96.0		
[	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#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, February 13, 2010 19:49:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\Blank.633

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		789491	
[	Mn	55		ug/L		2179	
[>	Lu	175		ug/L		556941	
[	Pb	208		ug/L		784	

Sample ID: Blank

Report Date/Time: Saturday, February 13, 2010 19:49:29

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Simple Linear	
Mn	55Simple Linear	
Lu	175Simple Linear	
Pb	208Simple Linear	

## QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc	45					
[	Mn	55					
[>	Lu	175					
[	Pb	208					

## 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: Standard 1

Sample Date/Time: Saturday, February 13, 2010 19:50:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\Standard 1.634

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		788902	788901.551
[	Mn	55	10.000	ug/L	1.091	118614	0.148
[>	Lu	175		ug/L		563794	563794.378
[	Pb	208	10.000	ug/L	1.888	416089	0.737

Sample ID: Standard 1

Report Date/Time: Saturday, February 13, 2010 19:51:18

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Pb	208Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc	45					
[	Mn	55					
[>	Lu	175					
[	Pb	208					

### 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: Saturday, February 13, 2010 19:52:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\Standard 2.635

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		812022	812022.489
[	Mn	55	99.928	ug/L	3.068	1118692	1.375
[>	Lu	175		ug/L		553247	553247.144
[	Pb	208	99.844	ug/L	0.660	3522003	6.365

---

Sample ID: Standard 2

Report Date/Time: Saturday, February 13, 2010 19:53:07

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Pb	208Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc	45					
[	Mn	55					
[>	Lu	175					
[	Pb	208					

### 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 1

Sample Date/Time: Saturday, February 13, 2010 19:54:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 1.636

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		802659	802658.606
[	Mn	55	53.008	ug/L	2.401	587712	0.730
[>	Lu	175		ug/L		558589	558589.299
[	Pb	208	53.552	ug/L	1.910	1907404	3.414

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[>	Sc	45			101.7			
[	Mn	55	106.016					
[>	Lu	175			100.3			
[	Pb	208	107.105					

### 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 1

Report Date/Time: Saturday, February 13, 2010 19:54:57

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## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, February 13, 2010 19:56:27

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 2.637

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		834372	834371.527
[	Mn	55	0.022	ug/L	17.543	2556	0.000
[>	Lu	175		ug/L		556823	556822.656
[	Pb	208	0.005	ug/L	13.284	961	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45			105.7		
[	Mn	55					
[>	Lu	175			100.0		
[	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: Saturday, February 13, 2010 19:56:52

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, February 13, 2010 19:58:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 3.638

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc 45		ug/L		829559	829559.016
[	Mn 55	6.096	ug/L	1.652	71889	0.084
[>	Lu 175		ug/L		560373	560373.172
[	Pb 208	2.585	ug/L	1.592	93110	0.165

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc 45			105.1		
[	Mn 55	121.921				
[>	Lu 175			100.6		
[	Pb 208	129.231				

### 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

Report Date/Time: Saturday, February 13, 2010 19:58:42

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## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, February 13, 2010 20:00:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 4.639

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		691953	691953.489
[	Mn	55	6.110	ug/L	3.119	60064	0.084
[>	Lu	175		ug/L		517489	517489.439
[	Pb	208	0.242	ug/L	2.755	8701	0.015

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		87.6			
[	Mn	55	105.346				
[>	Lu	175		92.9			
[	Pb	208	127.895				

### 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: Saturday, February 13, 2010 20:02:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 5.640

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		655555	655555.008
[	Mn	55	27.729	ug/L	1.538	251963	0.382
[>	Lu	175		ug/L		514883	514882.508
[	Pb	208	22.269	ug/L	1.221	731581	1.420

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45			83.0		
[	Mn	55	107.477				
[>	Lu	175			92.4		
[	Pb	208	110.300				

### 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

Report Date/Time: Saturday, February 13, 2010 20:02:25

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 20:03:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 6.641

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		712075	712074.956
[	Mn	55	53.491	ug/L	1.389	526208	0.736
[>	Lu	175		ug/L		566323	566323.079
[	Pb	208	53.726	ug/L	2.866	1939590	3.425

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		90.2			
[	Mn	55	106.983				
[>	Lu	175		101.7			
[	Pb	208	107.452				

### 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: Saturday, February 13, 2010 20:04:18

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 20:05:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 7.642

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		751821	751821.171
[	Mn	55	0.021	ug/L	33.271	2288	0.000
[>	Lu	175		ug/L		564773	564773.467
[	Pb	208	-0.001	ug/L	204.497	764	-0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45			95.2		
[	Mn	55					
[>	Lu	175		101.4			
[	Pb	208					

### 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: Saturday, February 13, 2010 20:06:12

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## ICPMS#5 - Summary Report

Sample ID: 1202024740

Sample Date/Time: Saturday, February 13, 2010 20:20:43

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945381|1|baj

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\1202024740.647

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		827182	827181.960
[	Mn	55	0.335	ug/L	5.758	6099	0.005
[>	Lu	175		ug/L		571745	571745.073
[	Pb	208	0.017	ug/L	5.774	1410	0.001

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		104.8			
[	Mn	55					
[>	Lu	175		102.7			
[	Pb	208					

### 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: 1202024740

Report Date/Time: Saturday, February 13, 2010 20:21:07

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## ICPMS#5 - Summary Report

Sample ID: 1202024741

Sample Date/Time: Saturday, February 13, 2010 20:22:37

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945381|1|ba|

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\1202024741.648

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		804815	804815.458
[	Mn	55	53.395	ug/L	2.811	593514	0.735
[>	Lu	175		ug/L		561511	561511.312
[	Pb	208	55.230	ug/L	1.367	1977589	3.521

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45			101.9		
[	Mn	55					
[>	Lu	175			100.8		
[	Pb	208					

### 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: 1202024741

Report Date/Time: Saturday, February 13, 2010 20:23:01

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 20:24:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 6.649

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		744481	744480.634
[	Mn	55	53.690	ug/L	0.914	552140	0.739
[>	Lu	175		ug/L		563876	563876.475
[	Pb	208	53.486	ug/L	3.162	1922364	3.410

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc	45			94.3		
[	Mn	55	107.380				
[>	Lu	175		101.2			
[	Pb	208	106.972				

### 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: Saturday, February 13, 2010 20:24:53

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 20:26:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 7.650

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		782623	782623.016
[	Mn	55	0.040	ug/L	24.132	2592	0.001
[>	Lu	175		ug/L		562476	562476.269
[	Pb	208	-0.004	ug/L	33.191	656	-0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		99.1			
[	Mn	55					
[>	Lu	175		101.0			
[	Pb	208					

### 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: Saturday, February 13, 2010 20:26:48

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 20:34:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.654

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		750379	750378.636
[	Mn	55	53.651	ug/L	2.669	555996	0.738
[>	Lu	175		ug/L		575399	575398.939
[	Pb	208	52.853	ug/L	2.182	1938944	3.369

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc	45			95.0		
[	Mn	55	107.302				
[>	Lu	175			103.3		
[	Pb	208	105.705				

### 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

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 20:34:25

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## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 20:35:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.655

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		778672	778671.562
[	Mn	55	0.039	ug/L	18.253	2564	0.001
[>	Lu	175		ug/L		562808	562807.693
[	Pb	208	-0.005	ug/L	28.468	621	-0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45			98.6		
[	Mn	55					
[>	Lu	175		101.1			
[	Pb	208					

### 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 9

Report Date/Time: Saturday, February 13, 2010 20:36:19

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## ICPMS#5 - Summary Report

Sample ID: 245390001

Sample Date/Time: Saturday, February 13, 2010 20:43:36

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945381|1|ba|

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\245390001.859

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		837114	837114.002
[	Mn	55	1.326	ug/L	2.242	17589	0.018
[>	Lu	175		ug/L		577889	577889.042
[	Pb	208	0.279	ug/L	3.435	11103	0.018

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[>	Sc	45			106.0		
[	Mn	55					
[>	Lu	175			103.8		
[	Pb	208					

### 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: 245390001

Report Date/Time: Saturday, February 13, 2010 20:44:00

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## ICPMS#5 - Summary Report

Sample ID: 1202024742

Sample Date/Time: Saturday, February 13, 2010 20:47:26

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945381|1|ba|

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\1202024742.661

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		835056	835056.012
[	Mn	55	0.615	ug/L	1.022	9369	0.008
[>	Lu	175		ug/L		572782	572781.990
[	Pb	208	0.042	ug/L	5.637	2347	0.003

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45			105.8		
[	Mn	55					
[>	Lu	175			102.8		
[	Pb	208					

### 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: 1202024742

Report Date/Time: Saturday, February 13, 2010 20:47:51

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## ICPMS#5 - Summary Report

Sample ID: 1202024743

Sample Date/Time: Saturday, February 13, 2010 20:49:22

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945381|1|ba|

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\1202024743.662

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc 45		ug/L		819820	819820.243
[	Mn 55	50.536	ug/L	1.701	572330	0.696
[>	Lu 175		ug/L		572284	572284.360
[	Pb 208	44.669	ug/L	3.928	1629145	2.848

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Pb	208Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc 45		103.8			
[	Mn 55					
[>	Lu 175		102.8			
[	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: 1202024743

Report Date/Time: Saturday, February 13, 2010 20:49:47

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Saturday, February 13, 2010 20:51:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.663

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		750171	750170.620
[	Mn	55	52.739	ug/L	1.084	546511	0.726
[>	Lu	175		ug/L		575698	575698.197
[	Pb	208	53.010	ug/L	2.561	1945658	3.379

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc	45		95.0			
[	Mn	55	105.477				
[>	Lu	175		103.4			
[	Pb	208	106.020				

### 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 8

Report Date/Time: Saturday, February 13, 2010 20:51:39

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## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 20:53:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.664

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		770470	770470.021
[	Mn	55	0.050	ug/L	9.386	2652	0.001
[>	Lu	175		ug/L		570695	570694.835
[	Pb	208	-0.005	ug/L	5.828	613	-0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Sc	45			97.6		
[	Mn	55					
[>	Lu	175		102.5			
[	Pb	208					

### 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 9

Report Date/Time: Saturday, February 13, 2010 20:53:34

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## ICPMS#5 - Summary Report

Sample ID: 1202024744

Sample Date/Time: Saturday, February 13, 2010 20:55:05

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945381|5|baj

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\1202024744.665

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		752792	752791.842
[	Mn	55	0.404	ug/L	4.532	6264	0.006
[>	Lu	175		ug/L		563975	563975.433
[	Pb	208	0.332	ug/L	1.858	12740	0.021

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		95.4			
[	Mn	55					
[>	Lu	175		101.3			
[	Pb	208					

### 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: 1202024744

Report Date/Time: Saturday, February 13, 2010 20:55:31

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 20:58:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 6.667

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		728918	728917.523
[	Mn	55	53.933	ug/L	3.756	542778	0.742
[>	Lu	175		ug/L		562587	562586.653
[	Pb	208	54.729	ug/L	2.568	1962854	3.489

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. %	Difference
[>	Sc	45			92.3			
[	Mn	55	107.866					
[>	Lu	175		101.0				
[	Pb	208	109.458					

### 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: Saturday, February 13, 2010 20:59:20

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 21:00:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\pb and mn.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 7.668

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		756813	756813.256
[	Mn	55	0.049	ug/L	26.876	2600	0.001
[>	Lu	175		ug/L		566974	566973.553
[	Pb	208	-0.004	ug/L	19.395	657	-0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	0.9999

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	Sc	45			95.9			
[	Mn	55						
[>	Lu	175			101.8			
[	Pb	208						

### 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: Saturday, February 13, 2010 21:01:15

Page 1

Method Name: WATER  
 Method Description: 7470A, 245.2, ILM04 ANALYST JXL  
 Element: Hg

Date: 02/04/2010  
 Technique: FI-MHS  
 Calibration Type:  
 Hg, Calc. Intercept : Linear  
 Wavelength: 253.7 nm  
 Sample Info Name: 020410W1.SIF Results Data Set Name: 020410W1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 02/04/2010  
 Sample ID: Calib Blank

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0035	0.0035	09:15:09	No
2			0.0035	0.0035	09:15:44	No
Mean:			0.0035			
SD :			0.0000			
%RSD:			1.1819			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 02/04/2010  
 Sample ID: S0.2

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0012	0.0047	09:17:07	No
2			0.0011	0.0046	09:17:42	No
Mean:			0.0011			
SD :			0.0001			
%RSD:			10.4951			

[Hg] Standard number 1 applied. [0.200]  
 Correlation Coefficient: 1.00000 Slope: 0.00574  
 Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 02/04/2010  
 Sample ID: S0.5

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0033	0.0068	09:19:05	No
2			0.0034	0.0069	09:19:40	No
Mean:			0.0033			
SD :			0.0000			
%RSD:			1.0729			

[Hg] Standard number 2 applied. [0.500]  
 Correlation Coefficient: 0.99800 Slope: 0.00672  
 Intercept : -0.00007

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 02/04/2010  
 Sample ID: S2.0

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0161	0.0196	09:21:04	No
2			0.0159	0.0194	09:21:39	No
Mean:			0.0160			
SD :			0.0001			
%RSD:			0.8026			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99912  
Intercept : -0.00037

Slope: 0.00813

=====

Element: Hg      Seq. No.: 5      AS Loc.: 5      Date: 02/04/2010  
Sample ID: S5.0

-----

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0411	0.0446	09:23:04	No
2			0.0407	0.0442	09:23:39	No
Mean:			0.0409			
SD :			0.0002			
%RSD:			0.5544			

[Hg] Standard number 4 applied. [5.000]  
Correlation Coefficient: 0.99986      Slope: 0.00825  
Intercept : -0.00044

=====

Element: Hg      Seq. No.: 6      AS Loc.: 6      Date: 02/04/2010  
Sample ID: S10

-----

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0855	0.0890	09:25:05	No
2			0.0837	0.0872	09:25:40	No
Mean:			0.0846			
SD :			0.0012			
%RSD:			1.4768			

[Hg] Standard number 5 applied. [10.00]  
Correlation Coefficient: 0.99986      Slope: 0.00848  
Intercept : -0.00070

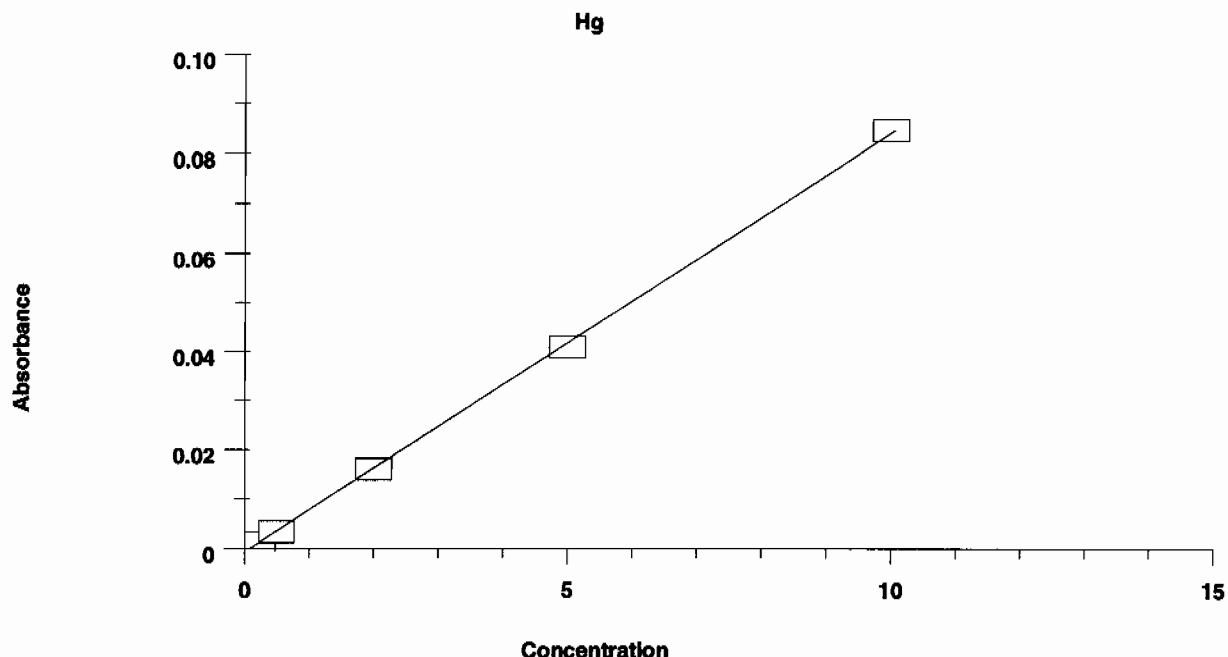
-----

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0035	---	----	----	----
S0.2	0.0011	0.200	0.217	0.0001	10.5
S0.5	0.0033	0.500	0.475	0.0000	1.1
S2.0	0.0160	2.000	1.966	0.0001	0.8
S5.0	0.0409	5.000	4.904	0.0002	0.6
S10	0.0846	10.000	10.06	0.0012	1.5
Calib Blank	0.0035	---	----	----	----

Correlation Coefficient: 0.99986      Slope: 0.00848      Intercept: -0.0007

-----



=====  
 Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 02/04/2010  
 Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.944	4.944	0.0412	0.0447	09:27:10	No
2	4.897	4.897	0.0409	0.0443	09:27:45	No
Mean:	4.920	4.920	0.0410			
SD :	0.0327	0.0327	0.0003			
%RSD:	0.7	0.7	0.6752			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 02/04/2010  
 Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0009	0.0026	09:29:07	No
2	-0.021	-0.021	-0.0009	0.0026	09:29:42	No
Mean:	-0.020	-0.020	-0.0009			
SD :	0.0019	0.0019	0.0000			
%RSD:	9.5	9.5	1.8634			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 02/04/2010  
 Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.235	0.235	0.0013	0.0048	09:31:04	No
2	0.221	0.221	0.0012	0.0047	09:31:39	No
Mean:	0.228	0.228	0.0012			
SD :	0.0099	0.0099	0.0001			
%RSD:	4.3	4.3	6.7636			



QC value within specified limits.

=====

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 02/04/2010  
Sample ID: CCV

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	4.977	4.977	0.0415	0.0450	09:33:04	No
2	4.925	4.925	0.0411	0.0446	09:33:38	No
Mean:	4.951	4.951	0.0413			
SD :	0.0374	0.0374	0.0003			
%RSD:	0.8	0.8	0.7684			

QC value within specified limits.

=====

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 02/04/2010  
Sample ID: CCB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.098	0.098	0.0001	0.0036	09:35:06	No
2	0.081	0.081	0.0000	0.0035	09:35:40	No
Mean:	0.090	0.090	0.0001			
SD :	0.0121	0.0121	0.0001			
%RSD:	13.5	13.5	157.5596			

QC value within specified limits.

=====

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 02/04/2010  
Sample ID: 1202029503|i||947435|MB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.087	-0.087	-0.0014	0.0021	09:37:07	No
2	-0.092	-0.092	-0.0015	0.0020	09:37:42	No
Mean:	-0.090	-0.090	-0.0015			
SD :	0.0035	0.0035	0.0000			
%RSD:	3.9	3.9	2.0220			

=====

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 02/04/2010  
Sample ID: 1202029504|i||LCS

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	2.162	2.162	0.0176	0.0211	09:39:06	No
2	2.118	2.118	0.0173	0.0208	09:39:41	No
Mean:	2.140	2.140	0.0175			
SD :	0.0311	0.0311	0.0003			
%RSD:	1.5	1.5	1.5118			

=====

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 02/04/2010  
Sample ID: 245818013|i||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	-0.0010	0.0024	09:41:07	No
2	-0.053	-0.053	-0.0011	0.0023	09:41:42	No
Mean:	-0.047	-0.047	-0.0011			
SD :	0.0082	0.0082	0.0001			
%RSD:	17.3	17.3	6.3408			

=====

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 02/04/2010  
Sample ID: 1202029505|i||DUP

%RSD: 1.9 1.9 2.2421

=====  
 Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 02/04/2010  
 Sample ID: 1202030522|i|||DUP  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.100	-0.100	-0.0015	0.0019	09:54:55	No
2	-0.117	-0.117	-0.0017	0.0018	09:55:30	No
Mean:	-0.108	-0.108	-0.0016			
SD :	0.0120	0.0120	0.0001			
%RSD:	11.1	11.1	6.3143			

=====  
 Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 02/04/2010  
 Sample ID: CCV  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	5.008	5.008	0.0418	0.0453	09:56:54	No
2	4.980	4.980	0.0416	0.0450	09:57:29	No
Mean:	4.994	4.994	0.0417			
SD :	0.0198	0.0198	0.0002			
%RSD:	0.4	0.4	0.4036			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 02/04/2010  
 Sample ID: CCB  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.066	0.066	-0.0001	0.0034	09:58:57	No
2	0.062	0.062	-0.0002	0.0033	09:59:32	No
Mean:	0.064	0.064	-0.0002			
SD :	0.0031	0.0031	0.0000			
%RSD:	4.8	4.8	17.0761			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 02/04/2010  
 Sample ID: 1202030523|i|||MS  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	2.013	2.013	0.0164	0.0199	10:00:58	No
2	1.976	1.976	0.0161	0.0196	10:01:33	No
Mean:	1.995	1.995	0.0162			
SD :	0.0262	0.0262	0.0002			
%RSD:	1.3	1.3	1.3680			

=====  
 Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 02/04/2010  
 Sample ID: 1202030524|i|5||SDILT  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.053	0.053	-0.0002	0.0032	10:02:57	No
2	0.034	0.034	-0.0004	0.0031	10:03:32	No
Mean:	0.043	0.043	-0.0003			
SD :	0.0134	0.0134	0.0001			
%RSD:	30.8	30.8	34.6693			

=====  
 Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 02/04/2010  
 Sample ID: 1202024802|i||945416|MB  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.047	-0.047	-0.0011	0.0024	10:04:56	No
2	-0.096	-0.096	-0.0015	0.0020	10:05:31	No
Mean:	-0.071	-0.071	-0.0013			
SD :	0.0344	0.0344	0.0003			
%RSD:	48.1	48.1	22.4170			

=====  
 Element: Hg Seq. No.: 27 AS Loc.: 25 Date: 02/04/2010  
 Sample ID: 1202024803|i||LCS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.062	2.062	0.0168	0.0203	10:06:55	No
2	2.111	2.111	0.0172	0.0207	10:07:30	No
Mean:	2.087	2.087	0.0170			
SD :	0.0347	0.0347	0.0003			
%RSD:	1.7	1.7	1.7308			

=====  
 Element: Hg Seq. No.: 28 AS Loc.: 26 Date: 02/04/2010  
 Sample ID: 245382001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.112	-0.112	-0.0016	0.0018	10:08:55	No
2	-0.127	-0.127	-0.0018	0.0017	10:09:29	No
Mean:	-0.119	-0.119	-0.0017			
SD :	0.0104	0.0104	0.0001			
%RSD:	8.7	8.7	5.1630			

=====  
 Element: Hg Seq. No.: 29 AS Loc.: 27 Date: 02/04/2010  
 Sample ID: 245386001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.110	-0.110	-0.0016	0.0019	10:10:55	No
2	-0.118	-0.118	-0.0017	0.0018	10:11:30	No
Mean:	-0.114	-0.114	-0.0017			
SD :	0.0058	0.0058	0.0000			
%RSD:	5.1	5.1	2.9432			

=====  
 Element: Hg Seq. No.: 30 AS Loc.: 28 Date: 02/04/2010  
 Sample ID: 245390001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.122	-0.122	-0.0017	0.0018	10:12:56	No
2	-0.117	-0.117	-0.0017	0.0018	10:13:31	No
Mean:	-0.120	-0.120	-0.0017			
SD :	0.0030	0.0030	0.0000			
%RSD:	2.5	2.5	1.4709			

=====  
 Element: Hg Seq. No.: 31 AS Loc.: 29 Date: 02/04/2010  
 Sample ID: 245392001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.146	-0.146	-0.0019	0.0016	10:14:57	No
2	-0.104	-0.104	-0.0016	0.0019	10:15:32	No
Mean:	-0.125	-0.125	-0.0018			
SD :	0.0298	0.0298	0.0003			

%RSD: 23.9 23.9 14.4140

=====  
 Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 02/04/2010  
 Sample ID: 1202024804|i|||DUP  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.125	-0.125	-0.0018	0.0017	10:16:59	No
2	-0.105	-0.105	-0.0016	0.0019	10:17:34	No
Mean:	-0.115	-0.115	-0.0017			
SD :	0.0142	0.0142	0.0001			
%RSD:	12.3	12.3	7.2130			

=====  
 Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 02/04/2010  
 Sample ID: 1202024805|i|||MS  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.135	2.135	0.0174	0.0209	10:19:00	No
2	2.177	2.177	0.0178	0.0213	10:19:35	No
Mean:	2.156	2.156	0.0176			
SD :	0.0298	0.0298	0.0003			
%RSD:	1.4	1.4	1.4360			

=====  
 Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 02/04/2010  
 Sample ID: CCV  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.151	5.151	0.0430	0.0465	10:21:02	No
2	5.014	5.014	0.0418	0.0453	10:21:38	No
Mean:	5.082	5.082	0.0424			
SD :	0.0971	0.0971	0.0008			
%RSD:	1.9	1.9	1.9409			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 02/04/2010  
 Sample ID: CCB  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.051	0.051	-0.0003	0.0032	10:23:06	No
2	0.046	0.046	-0.0003	0.0032	10:23:41	No
Mean:	0.049	0.049	-0.0003			
SD :	0.0039	0.0039	0.0000			
%RSD:	8.0	8.0	11.7331			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 02/04/2010  
 Sample ID: 1202024811|i|5||SDILT  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.080	-0.080	-0.0014	0.0021	10:25:05	No
2	-0.097	-0.097	-0.0015	0.0020	10:25:40	No
Mean:	-0.089	-0.089	-0.0014			
SD :	0.0120	0.0120	0.0001			
%RSD:	13.5	13.5	7.0108			

=====  
 Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 02/04/2010  
 Sample ID: 245392002|i|||  
 =====

%RSD: 11.2 11.2 6.0606

=====  
 Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 02/04/2010  
 Sample ID: 1202031610|i||MS  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	2.184	2.184	0.0178	0.0213	10:38:39	No
2	2.225	2.225	0.0182	0.0217	10:39:13	No
Mean:	2.205	2.205	0.0180			
SD :	0.0293	0.0293	0.0002			
%RSD:	1.3	1.3	1.3812			

=====  
 Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 02/04/2010  
 Sample ID: 1202031611|i|5||SDILT  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	-0.101	-0.101	-0.0015	0.0019	10:40:37	No
2	-0.090	-0.090	-0.0015	0.0020	10:41:12	No
Mean:	-0.096	-0.096	-0.0015			
SD :	0.0073	0.0073	0.0001			
%RSD:	7.6	7.6	4.0841			

=====  
 Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 02/04/2010  
 Sample ID: 1202031617|i||948363|MB  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	-0.075	-0.075	-0.0013	0.0022	10:42:36	No
2	-0.096	-0.096	-0.0015	0.0020	10:43:11	No
Mean:	-0.085	-0.085	-0.0014			
SD :	0.0154	0.0154	0.0001			
%RSD:	18.1	18.1	9.2159			

=====  
 Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 02/04/2010  
 Sample ID: CCV  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	5.152	5.152	0.0430	0.0465	10:44:36	No
2	5.201	5.201	0.0434	0.0469	10:45:12	No
Mean:	5.177	5.177	0.0432			
SD :	0.0347	0.0347	0.0003			
%RSD:	0.7	0.7	0.6804			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 02/04/2010  
 Sample ID: CCB  
 =====

Repl #	SampleConc µg/L	StdndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.054	0.054	-0.0002	0.0033	10:46:40	No
2	0.039	0.039	-0.0004	0.0031	10:47:15	No
Mean:	0.046	0.046	-0.0003			
SD :	0.0104	0.0104	0.0001			
%RSD:	22.5	22.5	29.0878			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 02/04/2010  
 Sample ID: 1202031619|i||LCS  
 =====

# Miscellaneous

# Prep LogBook

Analyst: FGA  
 Batch: 945378  
 Lab SOP: GL-MA-E-006 REV# 9

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202024735		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
LCS	1202024736		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245375001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245375002		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245378001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245378002		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245382001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245386001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245390001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245392001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
DUP	1202024737	245392001	SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
MS	1202024738	245392001	SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SDILT	1202024739	245392001	SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL
SAMPLE	245392002		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1	.25	mL

Reagent/Solvent Lot ID	Amount	Description	Comments
100202	2.5 mL	HYDROCHLORIC ACID	
1264396	1 mL	Nitric Acid CONC.	

# Prep LogBook

Analyst: FGA  
Batch: 945380  
Lab SOP: GL-MA-E-006 REV# 9

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202024740		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
LCS	1202024741		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245375001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245375002		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245378001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245378002		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245382001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
DUP	1202024742	245382001	SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
MS	1202024743	245382001	SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245386001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245390001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245392001		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SDILT	1202024744	245392001	SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		
SAMPLE	245392002		SW846 3005A	03-FEB-2010 13:30	<2	50 mL	50 mL	1		

Reagent/Solvent Lot ID	Amount	Description	Comments
100202	2.5 mL	HYDROCHLORIC ACID	
1264396	1 mL	Nitric Acid CONC.	



# Prep LogBook

Analyst: TXB3 Verified by: \_\_\_\_\_

Batch: 945413

Lab SOP: GL-MA-E-010 REV# 23

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix	Spike Amount	Spike Units
MB	1202024802		SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		mL
LCS	1202024803		SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER	.2	mL
SAMPLE	245382001		SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		
SAMPLE	245386001		SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		
SAMPLE	245390001		SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		
SAMPLE	245392001		SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		
DUP	1202024804	245392001	SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		
MS	1202024805	245392001	SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		
SDILT	1202024811	245392001	SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		
SAMPLE	245392002		SW846 7470A Prep	03-FEB-2010 11:45	<2	20 mL	20 mL	1	WATER		

Comments Digestion Start Date: 03-FEB-10 11:45  
Digestion End Date: 03-FEB-10 13:45

Reagent/Solvent Lot ID	Amount	Description
1176183	1 mL	Sulfuric Acid, Concentrated
1257474-1	.5 mL	NITRIC ACID
1261483-C	1.5 mL	5% Potassium Persulfate
1255535-C	3 mL	5% KMnO4 solution
1255532-C	1 mL	Hg reducing agent
WHG100203-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG100203-01a	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG100203-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG100203-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG100203-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG100203-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

# 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:** 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:** UI090610-03      **Opened:** 10-JUN-09      **Catalog Number :** 060074-06-01  
**Name:** ICPMS Tungsten - 10mg/L      **Received:** 10-JUN-09      **Lot Number :** 1016338  
**Type:** Source Material      **Expires:** 10-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:** UI090828-42      **Opened:** 16-SEP-09      **Amount :** 500 mL  
**Name:** TRACE ICP Na-1000SOUR      **Received:** 27-AUG-09      **Catalog Number :** 060011-02-03  
**Type:** Source Material      **Expires:** 16-SEP-10      **Lot Number :** 1017098  
**Employee:** Helen Camello      **Solvent :** 1%HNO3  
**Supplier:** 02SI  
**Description:** Sodium 1000 +/- 3 ug/mL in 1% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

**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

# 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:** 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:** UI091217-06      **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:** Q2SI  
**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:** Q2SI  
**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 ICV/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:** 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:** 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		



# 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 :** 1018926  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** 02SI  
**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:** UI100114-48      **Opened:** 22-JAN-10      **Amount :** 1000 mL  
**Name:** Trace ICP ICSA      **Received:** 18-JAN-10      **Catalog Number :** 160005-02  
**Type:** Source Material      **Expires:** 22-JAN-11      **Lot Number :** 1018466  
**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:** UI100114-49.16      **Opened:** 11-FEB-10      **Amount :** 100 ml  
**Name:** Trace ICP ICSAB      **Received:** 18-JAN-10      **Catalog Number :** 160066-04  
**Type:** Source Material      **Expires:** 12-FEB-10      **Lot Number :** 1018458  
**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

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
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:** UI100120-01      **Opened:** 20-JAN-10      **Lot Number :** 1018095  
**Name:** METALSPIKE-1      **Received:** 20-JAN-10  
**Type:** Source Material      **Expires:** 20-JAN-11  
**Employee:** Bryan Davis  
**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:** UI100120-06      **Opened:** 20-JAN-10      **Lot Number :** 1018096  
**Name:** METALSPIKE-2      **Received:** 20-JAN-10  
**Type:** Source Material      **Expires:** 20-JAN-11  
**Employee:** Bryan Davis  
**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
Vanadium	100 ug/mL	Zinc	100 ug/mL

# Standard Logbook

**Serial ID:** UI100120-A      **Opened:** 20-JAN-10      **Catalog Number :** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 20-JAN-10      **Lot Number :** 1018097  
**Type:** Source Material      **Expires:** 20-JAN-11  
**Employee:** Bryan Davis  
**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:** UI100120-B      **Opened:** 20-JAN-10      **Catalog Number :** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 20-JAN-10      **Lot Number :** 1017644  
**Type:** Source Material      **Expires:** 20-JAN-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:** UI100126-11      **Opened:** 26-JAN-10      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 26-JAN-10      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 26-JAN-11      **Lot Number :** 1018321  
**Employee:** Elizabeth Janssen      **Solvent :** 2% HNO3  
**Supplier:** O2SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

# Standard Logbook

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:** UI100128-40      **Opened:** 28-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 28-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 28-JAN-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%ln2%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:** UI100128-41      **Opened:** 28-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 28-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 28-JAN-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%ln2%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:** UI100210-48      **Opened:** 11-FEB-10      **Amount :** 1000 mL  
**Name:** Trace ICP ICSEA      **Received:** 10-FEB-10      **Catalog Number :** 160005-02  
**Type:** Source Material      **Expires:** 11-FEB-11      **Lot Number :** 1018807  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

**Serial ID:** UI100211-40      **Opened:** 11-FEB-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 10-FEB-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 11-FEB-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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:** UI100211-41      **Opened:** 11-FEB-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 10-FEB-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 11-FEB-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION B  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L

# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Sodium	500000 ug/L	Uranium	15000 ug/L

**Serial ID:** UMS090303-01      **Opened:** 03-MAR-09      **Amount :** 250 mL  
**Name:** ICPMSCaSPIKEB      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-100-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 14-81JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution B  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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:** UMS090303-02      **Opened:** 03-MAR-09      **Catalog Number :** ZGEL-102-250  
**Name:** ICPMSCaSPIKEA      **Received:** 03-MAR-09      **Lot Number :** 14-83JB  
**Type:** Source Material      **Expires:** 28-FEB-10  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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:** UMS090303-03      **Opened:** 03-MAR-09      **Amount :** 250 ml  
**Name:** ICPMSCaSPIKEC      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-101-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 15-199JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution C  
**Comments:** None

# Standard Logbook

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:** IHG100203-01      **Opened:** 03-FEB-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 03-FEB-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 04-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:** IHG100203-02      **Opened:** 03-FEB-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Intermediate      **Expires:** 04-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:** WHG100203-01a      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL0.2CRA      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-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.
IHG100203-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

**Serial ID:** WHG100203-02      **Opened:** 03-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL0.5      **Received:** 03-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 10-FEB-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Working 1st Source CAL 0.5  
**Comments:** None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG100203-03      Opened: 03-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL2.0      Received: 03-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 10-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.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG100203-04      Opened: 03-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL5.0CCV      Received: 03-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 10-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.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100203-05      Opened: 03-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL10.0      Received: 03-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 10-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.	Allquot	Final Vol.	Final Conc.
IHG100203-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG100203-06      Opened: 03-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORK5.0ICV      Received: 03-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 10-FEB-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working 2nd Source 5.0/ICV  
 Comments: None



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
IHG100203-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100203-13      Opened: 03-FEB-10      Pipet Id : Hg1289245  
 Name: MHGLIQLCSMSSPIKE      Received: 03-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 10-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.	Alliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100211-42      Opened: 11-FEB-10      Balance Id : 216  
 Name: TRACE ICP 0.1 PPM STD.      Received: 02-NOV-09      Pipet Id : 3581809  
 Type: Working      Expires: 12-FEB-10      Solvent : 3%HCL and 1%HNO3 -1266496  
 Employee: Helen Camello  
 Supplier: GEL  
 Description: TRACE ICP 0.1 PPM CALIBRATION STD.  
 Comments: None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
WI100211-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100211-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100211-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100211-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100211-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100211-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

**Serial ID:** WI100211-43      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.5/CCV STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**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.
UI090828-42	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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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:** WI100211-44      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP SCAL 1.0      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL and 1 %HNO3-1266496  
**Employee:** Helen Camello  
**Supplier:** o2si  
**Description:** Trace ICP Calibration Standard 1.0ppm  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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:** WI100211-45      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP S-10 STD      **Received:** 22-APR-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP S-10 CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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
UI090828-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

**Serial ID:** WI100211-46      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL AND 1%HNO3-1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** Initial Calibration Verification ICP Trace Metals  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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:** WI100211-47      **Opened:** 11-FEB-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 12-FEB-10      **Solvent :** 3%HCL &1%HNO3-1266496  
**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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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:** WMS100212-04      **Opened:** 12-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 12-FEB-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 13-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1266278  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100212-04A      **Opened:** 12-FEB-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 12-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 13-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100212-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100212-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100212-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100212-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100212-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100212-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100212-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100212-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100212-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100212-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100212-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100212-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100212-05      **Opened:** 12-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 12-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 13-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**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
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



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
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:** WMS100212-06      **Opened:** 12-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 12-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 13-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Employee:** Paul Boyd  
**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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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:** WMS100212-07      **Opened:** 12-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 12-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 13-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100212-08      **Opened:** 12-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 12-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 13-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100213-04      **Opened:** 13-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 13-FEB-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 14-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1266278  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100213-04A      **Opened:** 13-FEB-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 13-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 14-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100213-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100213-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100213-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100213-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100213-05      **Opened:** 13-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 13-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 14-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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:** WMS100213-06      **Opened:** 13-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 13-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 14-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
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:** WMS100213-07      **Opened:** 13-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 13-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 14-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100213-08      **Opened:** 13-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 13-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 14-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICSAB

# Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	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
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	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

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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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Serial ID: 1252836      Opened: 08-JAN-10      Lot Number : H20053 L  
Name: I-HNO3      Received: 08-JAN-10  
Type: Reagent/Solvent      Expires: 08-JAN-11  
Employee: Francena Armstrong  
Supplier: BAKER  
Description: Nitric Acid CONC.  
Comments: None

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# Standard Logbook

**Serial ID:** 1252838      **Opened:** 08-JAN-10      **Lot Number :** H41032  
**Name:** I-HCL      **Received:** 08-JAN-10      **Preservative\_Id :** 5 none  
**Type:** Reagent/Solvent      **Expires:** 08-JAN-11  
**Employee:** Francena Armstrong  
**Supplier:** J.T. BAKER  
**Description:** HYDROCHLORIC ACID  
**Comments:** None

**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:** 1255535-C      **Opened:** 15-JAN-10      **Balance Id :** BAL-002  
**Name:** B-KMnO4-MER      **Received:** 15-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 15-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:** 1257474-1      **Opened:** 20-JAN-10      **Instrument Id :** MERCURY  
**Name:** B-HNO3-MER      **Received:** 20-JAN-10      **Lot Number :** H20053  
**Type:** Reagent/Solvent      **Expires:** 20-JAN-11  
**Employee:** Tara Griffin  
**Supplier:** Mallinckrodt Chemicals  
**Description:** NITRIC ACID  
**Comments:** None

**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

# Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1215906	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1264396      Opened: 03-FEB-10      Lot Number : H51025 L

Name: I-HNO3      Received: 02-FEB-10

Type: Reagent/Solvent      Expires: 03-FEB-11

Employee: Bryan Davis

Supplier: BAKER

Description: Nitric Acid CONC.

Comments: None

Serial ID: 1266278      Opened: 08-FEB-10      Solvent : Type I Water

Name: B-2%HNO3/1%HCl-ICPMS      Received: 08-FEB-10

Type: Reagent/Solvent      Expires: 15-FEB-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.
1252836	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1252838	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1266496      Opened: 08-FEB-10      Amount : 20 L

Name: B-ICP-RINSE SOLN      Received: 20-JAN-10      Lot Number : H04040+G34050

Type: Reagent/Solvent      Expires: 14-FEB-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 10-1386**

**Method/Analysis Information**

**Product:** pH  
**Analytical Batch:** 945107 **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>
245389001	RE14-10-7689
245389002	RE14-10-7679
245389003	RE14-10-7680
245389004	RE14-10-7686
245389005	RE14-10-7688
245389006	RE14-10-7684
245389007	RE14-10-7687
245389008	RE14-10-7681
245389009	RE14-10-7682
245389010	RE14-10-7685
245389011	RE14-10-7683
1202024169	245383001(RE15-10-8439) Sample Duplicate (DUP)
1202024170	245389010(RE14-10-7685) Sample Duplicate (DUP)
1202024171	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 pH Meter Orion 370.

**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: 245383001 (RE15-10-8439) and 245389010 (RE14-10-7685).

##### **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: 1202024169 (RE15-10-8439), 1202024170 (RE14-10-7685), 245389001 (RE14-10-7689), 245389002 (RE14-10-7679), 245389003 (RE14-10-7680), 245389004 (RE14-10-7686), 245389005 (RE14-10-7688), 245389006 (RE14-10-7684), 245389007 (RE14-10-7687), 245389008 (RE14-10-7681), 245389009 (RE14-10-7682), 245389010 (RE14-10-7685) and 245389011 (RE14-10-7683).

##### **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:** 944834      **Method:** SW9012A Cyanide and Total  
**Prep Batch :** 944833      **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>
245389001	RE14-10-7689
245389002	RE14-10-7679
245389003	RE14-10-7680
245389004	RE14-10-7686
245389005	RE14-10-7688
245389006	RE14-10-7684
245389007	RE14-10-7687
245389008	RE14-10-7681
245389009	RE14-10-7682
245389010	RE14-10-7685
245389011	RE14-10-7683
1202023375	Method Blank (MB)
1202023376	245385004(RE15-10-7307) Sample Duplicate (DUP)
1202023377	245385005(RE15-10-7301) Sample Duplicate (DUP)
1202023378	245385004(RE15-10-7307) Matrix Spike (MS)
1202023379	245385005(RE15-10-7301) Matrix Spike (MS)
1202023380	245385004(RE15-10-7307) Matrix Spike Duplicate (MSD)
1202023381	245385005(RE15-10-7301) Matrix Spike Duplicate (MSD)
1202023382	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: 245385004 (RE15-10-7307) and 245385005 (RE15-10-7301).

**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 spike duplicate recovery falls outside of the client specified acceptance limits. Since both the spike recovery and the RPD between the spike and spike duplicate fall within acceptance limits, the data is reported. 1202023380 (RE15-10-7307).

**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 values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202023376 (RE15-10-7307) and 1202023377 (RE15-10-7301).

**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: 1202023382 (LCS).

**Sample Re-analysis**

The samples in this SDG did not require re-analysis.

**Miscellaneous Information**

**Data Exception (DER) Documentation**

The following DERs were generated for this SDG: 791380 1202023380 (RE15-10-7307).

**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:** 944910 **Method:** EPA 300.0 Nitrate in Soil  
**Prep Batch :** 944902 **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>
245389001	RE14-10-7689
245389002	RE14-10-7679
245389003	RE14-10-7680
245389004	RE14-10-7686
245389005	RE14-10-7688
245389006	RE14-10-7684
245389007	RE14-10-7687
245389008	RE14-10-7681
245389009	RE14-10-7682
245389010	RE14-10-7685
245389011	RE14-10-7683
1202023563	Method Blank (MB)
1202023564	245389001(RE14-10-7689) Sample Duplicate (DUP)
1202023565	245389011(RE14-10-7683) Sample Duplicate (DUP)
1202023566	245389001(RE14-10-7689) Matrix Spike (MS)
1202023567	245389011(RE14-10-7683) Matrix Spike (MS)
1202023568	245389001(RE14-10-7689) Matrix Spike Duplicate (MSD)
1202023569	245389011(RE14-10-7683) Matrix Spike Duplicate (MSD)
1202023570	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: 245389001 (RE14-10-7689) and 245389011 (RE14-10-7683).

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202023566 (RE14-10-7689).

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

The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202023568 (RE14-10-7689).

**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 samples in this SDG did not require re-analysis.

### **Miscellaneous Information**

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

The following DER was generated for this SDG: 791565 1202023566 (RE14-10-7689) and 1202023568 (RE14-10-7689).

#### **Manual Integrations**

The following samples from this sample group had to be manually integrated due to errors in the instrument software peak integration: 1202023564 (RE14-10-7689), 245389001 (RE14-10-7689), 245389003 (RE14-10-7680) and 245389005 (RE14-10-7688).

#### **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: 17Feb10

# 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: 10-1386 GEL Work Order: 245389

**The Qualifiers in this report are defined as follows:**

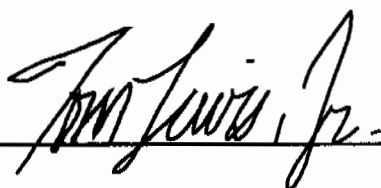
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

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 Lewis, 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: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7683  
Sample ID: 245389011  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 25.4%

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 19.4C	H	6.63	0.010	0.100	SU	1	EXF1	01/25/10	1550	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	86.0	316	ug/kg	1	AXC2	01/29/10	1544	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.82	0.402	1.34	mg/kg	1	MAR1	02/10/10	0622	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7689  
Sample ID: 245389001  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 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 20.4C	H	8.11	0.010	0.100	SU	1	EXF1	01/25/10	1524	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	78.2	287	ug/kg	1	AXC2	01/29/10	1532	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.35	0.345	1.15	mg/kg	1	MAR1	02/09/10	2308	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7679  
Sample ID: 245389002  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 21.4%

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 20.1C	H	7.27	0.010	0.100	SU	1	EXF1	01/25/10	1526	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	93.6	83.2	306	ug/kg	1	AXC2	01/29/10	1533	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.49	0.375	1.25	mg/kg	1	MAR102	10/10/10	0104	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7680  
Sample ID: 245389003  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 12%

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 20.2C	H	7.87	0.010	0.100	SU	1	EXF1	01/25/10	1530	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	77.3	284	ug/kg	1	AXC2	01/29/10	1534	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.30	0.341	1.14	mg/kg	1	MAR102/10/10	0133	944910		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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7686  
Sample ID: 245389004  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 22.9%

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	7.89	0.010	0.100	SU	1	EXF1	01/25/10	1531	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	81.6	300	ug/kg	1	AXC2	01/29/10	1538	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.56	0.389	1.30	mg/kg	1	MAR102	10/10/10	0202	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7688  
Sample ID: 245389005  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 21.1%

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	7.89	0.010	0.100	SU	1	EXF1	01/25/10	1534	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	86.2	317	ug/kg	1	AXC2	01/29/10	1539	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.49	0.380	1.27	mg/kg	1	MAR102/10/10	0231	944910		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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7684  
Sample ID: 245389006  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 12.8%

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	8.04	0.010	0.100	SU	1	EXF1	01/25/10	1537	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	75.0	276	ug/kg	1	AXC2	01/29/10	1540	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.56	0.344	1.15	mg/kg	1	MAR102	01/10/10	0357	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7687  
Sample ID: 245389007  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 26.7%

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	7.51	0.010	0.100	SU	1	EXF1	01/25/10	1538	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	156	87.5	322	ug/kg	1	AXC2	01/29/10	1541	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.399	1.33	mg/kg	1	MAR102	01/10/10	0426	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7681  
Sample ID: 245389008  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 22.5%

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 19.8C	H	7.35	0.010	0.100	SU	1	EXF1	01/25/10	1542	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	82.7	304	ug/kg	1	AXC2	01/29/10	1542	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.387	1.29	mg/kg	1	MAR102/10/10	0455	944910		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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7682  
Sample ID: 245389009  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 12.8%

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	8.08	0.010	0.100	SU	1	EXF1	01/25/10	1544	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	78.0	287	ug/kg	1	AXC2	01/29/10	1543	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N		1.41	0.344	1.15	mg/kg	1	MAR1	02/10/10	0524	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### The following Analytical Methods were performed

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

# GEL LABORATORIES LLC

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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: February 17, 2010

Client SDG: 10-1386

Client Sample ID: RE14-10-7685  
Sample ID: 245389010  
Matrix: R  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-10  
Collector: Client  
Moisture: 15.3%

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	7.05	0.010	0.100	SU	1	EXF1	01/25/10	1546	945107	1
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	131	73.0	268	ug/kg	1	AXC2	01/29/10	1544	944834	2
<b>Ion Chromatography</b>											
<i>EPA 300.0 Nitrate in Soil "Dry Weight Corrected"</i>											
Nitrate-N	U	ND	0.354	1.18	mg/kg	1	MAR1	02/10/10	0553	944910	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	02/09/10	1445	944902
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/28/10	1505	944833

### 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: February 17, 2010

Page 1 of 3

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

Contact: Ms. Joylene Valdez

Workorder: 245389

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Electrode Analysis</b>											
Batch	945107										
QC1202024169	245383001	DUP									
pH		H	6.29	H	6.21	SU	1.28	(0%-10%)	EXF1	01/25/10	15:12
QC1202024170	245389010	DUP									
pH		H	7.05	H	7.06	SU	0.142	(0%-10%)		01/25/10	15:48
QC1202024171	LCS										
pH	7.00				6.99	SU	99.9	(95%-105%)		01/25/10	15:03
<b>Flow Injection Analysis</b>											
Batch	944834										
QC1202023376	245385004	DUP									
Cyanide, Total		J	141	J	80.3	ug/kg	55.1 ^	(+/-285)	AXC2	01/29/10	15:17
QC1202023377	245385005	DUP									
Cyanide, Total		J	105	U	ND	ug/kg	200 ^			01/29/10	15:20
QC1202023382	LCS										
Cyanide, Total	67900				87800	ug/kg	129	(46%-145%)		01/29/10	15:14
QC1202023375	MB										
Cyanide, Total				U	250	ug/kg				01/29/10	15:13
QC1202023378	245385004	MS									
Cyanide, Total	5480	J	141		4450	ug/kg	78.6	(50%-130%)		01/29/10	15:18
QC1202023379	245385005	MS									
Cyanide, Total	5830	J	105		5510	ug/kg	92.7	(50%-130%)		01/29/10	15:21
QC1202023380	245385004	MSD									
Cyanide, Total	5700	J	141		4350	ug/kg	2.30	(0%-30%)		01/29/10	15:19
QC1202023381	245385005	MSD									
Cyanide, Total	5940	J	105		5040	ug/kg	8.96	(0%-30%)		01/29/10	15:26
<b>Ion Chromatography</b>											
Batch	944910										
QC1202023564	245389001	DUP									
Nitrate-N			1.35		1.36	mg/kg	0.679 ^	(+/-1.15)	MAR1	02/09/10	23:37
QC1202023565	245389011	DUP									
Nitrate-N			1.82		1.79	mg/kg	1.71 ^	(+/-1.34)		02/10/10	06:51
QC1202023570	LCS										
Nitrate-N	50.0				49.2	mg/kg	98.4	(90%-110%)		02/09/10	22:39
QC1202023563	MB										
Nitrate-N				U	1.00	mg/kg				02/09/10	22:10
QC1202023566	245389001	MS									
Nitrate-N	57.5		1.35		51.8	mg/kg	87.8 *	(90%-110%)		02/10/10	00:06
QC1202023567	245389011	MS									
Nitrate-N	67.0		1.82		63.3	mg/kg	91.8	(90%-110%)		02/10/10	07:20
QC1202023568	245389001	MSD									
Nitrate-N	57.5		1.35		51.8	mg/kg	0.0266	(0%-20%)		02/10/10	00:35
QC1202023569	245389011	MSD									
Nitrate-N	67.0		1.82		63.4	mg/kg	0.140	(0%-20%)		02/10/10	07:49

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### QC Summary

Workorder: 245389

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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
- 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: 245389

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Parmname	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: 17-FEB-2010 14:09

**GEL Laboratories LLC**

**Contract: LANL01004**

**SDG #: 10-1386**

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	29-JAN-2010 15:08:23	OM_1-29-2010_15-00-28	154	150	103	(90%-110%)	Yes
CCV	29-JAN-2010 15:22:41	OM_1-29-2010_15-00-28	106	100	106	(90%-110%)	Yes
CCV	29-JAN-2010 15:35:07	OM_1-29-2010_15-00-28	106	100	106	(90%-110%)	Yes
CCV	29-JAN-2010 15:45:45	OM_1-29-2010_15-00-28	106	100	106	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	29-JAN-2010 15:10:13	OM_1-29-2010_15-00-28	-1.88	5	Yes
CCB	29-JAN-2010 15:24:31	OM_1-29-2010_15-00-28	-1.63	5	Yes
CCB	29-JAN-2010 15:36:57	OM_1-29-2010_15-00-28	-1.56	5	Yes
CCB	29-JAN-2010 15:47:35	OM_1-29-2010_15-00-28	-1.69	5	Yes

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 17-FEB-2010 14:09

**GEL Laboratories LLC**

**Contract: LANL01004**

**SDG #: 10-1386**

**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
ICV	09-FEB-2010 15:26:00	100209	4.769	5	95.4	(90%-110%)	Yes
CCV	09-FEB-2010 21:12:00	100209	7.4404	7.5	99.2	(90%-110%)	Yes
CCV	10-FEB-2010 02:59:00	100209	4.9379	5	98.8	(90%-110%)	Yes
CCV	10-FEB-2010 08:17:00	100209	7.48	7.5	99.7	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	09-FEB-2010 15:54:00	100209	0	0.1	Yes
CCB	09-FEB-2010 21:41:00	100209	0	0.1	Yes
CCB	10-FEB-2010 03:28:00	100209	0	0.1	Yes
CCB	10-FEB-2010 08:46:00	100209	0	0.1	Yes

# Cyanide, Total

# Prep LogBook

Analyst: AXS5  
 Batch: 944833  
 Lab SOP: GIL-GC-E-067 REV# 13

Verified by: \_\_\_\_\_

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202023382	URF1200957-01	.25	g
MS	1202023378	URF1184831-02	.025	mL
MS	1202023379	URF1184831-02	.025	mL
MSD	1202023380	URF1184831-02	.025	mL
MSD	1202023381	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202023375		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.5 g	25 mL	50	SOIL
LCS	1202023382		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.25 g	25 mL	100	SOIL
SAMPLE	245243001		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245385004		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.54 g	25 mL	46.2963	SOIL
DUP	1202023376	245385004	SW846 9010B Prep	28-JAN-2010 15:05	>12	0.5 g	25 mL	50	SOIL
MS	1202023378	245385004	SW846 9010B Prep	28-JAN-2010 15:05	>12	0.52 g	25 mL	48.07692	SOIL
MSD	1202023380	245385004	SW846 9010B Prep	28-JAN-2010 15:05	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245385005		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1202023377	245385005	SW846 9010B Prep	28-JAN-2010 15:05	>12	0.53 g	25 mL	47.16981	SOIL
MS	1202023379	245385005	SW846 9010B Prep	28-JAN-2010 15:05	>12	0.54 g	25 mL	46.2963	SOIL
MSD	1202023381	245385005	SW846 9010B Prep	28-JAN-2010 15:05	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245385006		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245385007		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	245385008		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245385009		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.58 g	25 mL	43.10345	SOIL
SAMPLE	245385010		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	245385011		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245389001		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245389002		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245389003		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245389004		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	245389005		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245389006		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245389007		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245389008		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245389009		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245389010		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	245389011		SW846 9010B Prep	28-JAN-2010 15:05	>12	0.53 g	25 mL	47.16981	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
091211-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100128-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1260189-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/29/2010 15:01:14	OM_1-29-2010_15-00-28
150 ppb		1	axc2	1/29/2010 15:02:05	OM_1-29-2010_15-00-28
100 ppb		1	axc2	1/29/2010 15:02:58	OM_1-29-2010_15-00-28
50 ppb		1	axc2	1/29/2010 15:03:51	OM_1-29-2010_15-00-28
10 ppb		1	axc2	1/29/2010 15:04:44	OM_1-29-2010_15-00-28
CRDL 5.0 ppb		1	axc2	1/29/2010 15:05:38	OM_1-29-2010_15-00-28
ICAL-00		1	axc2	1/29/2010 15:06:32	OM_1-29-2010_15-00-28
ICV		1	axc2	1/29/2010 15:08:23	OM_1-29-2010_15-00-28
ICB		1	axc2	1/29/2010 15:10:13	OM_1-29-2010_15-00-28
CRDL		1	axc2	1/29/2010 15:12:03	OM_1-29-2010_15-00-28
1202023375	944834	1	axc2	1/29/2010 15:13:53	OM_1-29-2010_15-00-28
1202023382	944834	25	axc2	1/29/2010 15:14:46	OM_1-29-2010_15-00-28
245243001	944834	1	axc2	1/29/2010 15:15:39	OM_1-29-2010_15-00-28
245385004	944834	1	axc2	1/29/2010 15:16:33	OM_1-29-2010_15-00-28
1202023376	944834	1	axc2	1/29/2010 15:17:25	OM_1-29-2010_15-00-28
1202023378	944834	1	axc2	1/29/2010 15:18:18	OM_1-29-2010_15-00-28
1202023380	944834	1	axc2	1/29/2010 15:19:11	OM_1-29-2010_15-00-28
245385005	944834	1	axc2	1/29/2010 15:20:04	OM_1-29-2010_15-00-28
1202023377	944834	1	axc2	1/29/2010 15:20:56	OM_1-29-2010_15-00-28
1202023379	944834	1	axc2	1/29/2010 15:21:48	OM_1-29-2010_15-00-28
CCV		1	axc2	1/29/2010 15:22:41	OM_1-29-2010_15-00-28
CCB		1	axc2	1/29/2010 15:24:31	OM_1-29-2010_15-00-28
1202023381	944834	1	axc2	1/29/2010 15:26:20	OM_1-29-2010_15-00-28
245385006	944834	1	axc2	1/29/2010 15:27:12	OM_1-29-2010_15-00-28
245385007	944834	1	axc2	1/29/2010 15:28:03	OM_1-29-2010_15-00-28
245385008	944834	1	axc2	1/29/2010 15:28:55	OM_1-29-2010_15-00-28
245385009	944834	1	axc2	1/29/2010 15:29:47	OM_1-29-2010_15-00-28
245385010	944834	1	axc2	1/29/2010 15:30:41	OM_1-29-2010_15-00-28
245385011	944834	1	axc2	1/29/2010 15:31:35	OM_1-29-2010_15-00-28
245389001	944834	1	axc2	1/29/2010 15:32:27	OM_1-29-2010_15-00-28
245389002	944834	1	axc2	1/29/2010 15:33:21	OM_1-29-2010_15-00-28
245389003	944834	1	axc2	1/29/2010 15:34:14	OM_1-29-2010_15-00-28
CCV		1	axc2	1/29/2010 15:35:07	OM_1-29-2010_15-00-28
CCB		1	axc2	1/29/2010 15:36:57	OM_1-29-2010_15-00-28
245389004	944834	1	axc2	1/29/2010 15:38:46	OM_1-29-2010_15-00-28
245389005	944834	1	axc2	1/29/2010 15:39:39	OM_1-29-2010_15-00-28
245389006	944834	1	axc2	1/29/2010 15:40:31	OM_1-29-2010_15-00-28
245389007	944834	1	axc2	1/29/2010 15:41:24	OM_1-29-2010_15-00-28
245389008	944834	1	axc2	1/29/2010 15:42:17	OM_1-29-2010_15-00-28
245389009	944834	1	axc2	1/29/2010 15:43:09	OM_1-29-2010_15-00-28
245389010	944834	1	axc2	1/29/2010 15:44:01	OM_1-29-2010_15-00-28
245389011	944834	1	axc2	1/29/2010 15:44:53	OM_1-29-2010_15-00-28
CCV		1	axc2	1/29/2010 15:45:45	OM_1-29-2010_15-00-28
CCB		1	axc2	1/29/2010 15:47:35	OM_1-29-2010_15-00-28

Original Run Filename: OM\_1-29-2010\_15-00-28.OMN created 1/29/2010 15:00:28  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-29-2010\_15-00-28.OMN last modified 1/29/2010 15:48:40  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE					
			Conc. (ug/L)	Area (Vs)				
WCN100129-01	1	S1	200	7.98	1/29/2010@15:01:14			200 ppb
WCN100129-02	1	S2	150	6.11	1/29/2010@15:02:05			150 ppb
WCN100129-03	1	S3	100	4.14	1/29/2010@15:02:58			100 ppb
WCN100129-04	1	S4	50.0	2.16	1/29/2010@15:03:51			50 ppb
WCN100129-05	1	S5	10.0	0.498	1/29/2010@15:04:44			10 ppb
WCN100129-06	1	S6	5.00	0.278	1/29/2010@15:05:38			CRDL 5.0 ppb
WCN100129-08	1	S7	0.00	-0.00714	1/29/2010@15:06:32			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99975 > 0.99500					
Message			Pass					
Action			Continue					
WCN100129-07	1	S8	154	6.24	1/29/2010@15:08:23			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			2.9 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			2.9 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100129-08	1	S7	-1.88	0.0149	1/29/2010@15:10:13			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.88 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.88 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100129-06	1	S6	4.98	0.288	1/29/2010@15:12:03			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			4.98 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			4.98 > 2.50					
Message			Pass					
Action			None					
1202023375 944834 MB	1	1	-0.924	0.0531	1/29/2010@15:13:53			
1202023382 LCS	1	2	35.1	1.49	1/29/2010@15:14:46		25.00	
245243001	1	3	2.90	0.206	1/29/2010@15:15:39			
245385004	1	4	2.68	0.197	1/29/2010@15:16:33			
1202023376 DUP	1	5	1.41	0.146	1/29/2010@15:17:25			
1202023378 MS	1	6	81.2	3.33	1/29/2010@15:18:18			
1202023380 MSD	1	7	76.3	3.13	1/29/2010@15:19:11			
245385005	1	8	1.73	0.159	1/29/2010@15:20:04			
1202023377 DUP	1	9	1.28	0.141	1/29/2010@15:20:56			
1202023379 MS	1	10	94.5	3.86	1/29/2010@15:21:48			
WCN100129-03	1	S3	106	4.31	1/29/2010@15:22:41			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			5.9 < 10.0					
Message			CCV Passed					

		Action	Continue			
DQM Test: < - Percent Relative Difference						
		Result:	5.9 < 10.0			
		Message	CCV Passed			
		Action	Continue			
WCN100129-08	1	S7	-1.63	0.0251	1/29/2010@15:24:31	CCB
		Known Conc:	0.00			
DQM Test: > + Concentration Limit						
		Result:	-1.63 < 5.00			
		Message	CCB Passed			
		Action	Continue			
DQM Test: < - Concentration Limit						
		Result:	-1.63 > -5.00			
		Message	CCB Passed			
		Action	Continue			
1202023381  MSD	1	11	84.8	3.47	1/29/2010@15:26:20	
245385006	1	12	3.01	0.210	1/29/2010@15:27:12	
245385007	1	13	3.53	0.231	1/29/2010@15:28:03	
245385008	1	14	3.06	0.212	1/29/2010@15:28:55	
245385009	1	15	2.40	0.186	1/29/2010@15:29:47	
245385010	1	16	6.32	0.342	1/29/2010@15:30:41	
245385011	1	17	0.981	0.129	1/29/2010@15:31:35	
245389001	1	18	-0.0100	0.0895	1/29/2010@15:32:27	
245389002	1	19	1.53	0.151	1/29/2010@15:33:21	
245389003	1	20	0.853	0.124	1/29/2010@15:34:14	
WCN100129-03	1	S3	106	4.31	1/29/2010@15:35:07	CCV
		Known Conc:	100			
DQM Test: > + Percent Relative Difference						
		Result:	5.8 < 10.0			
		Message	CCV Passed			
		Action	Continue			
DQM Test: < - Percent Relative Difference						
		Result:	5.8 < 10.0			
		Message	CCV Passed			
		Action	Continue			
WCN100129-08	1	S7	-1.56	0.0278	1/29/2010@15:36:57	CCB
		Known Conc:	0.00			
DQM Test: > + Concentration Limit						
		Result:	-1.56 < 5.00			
		Message	CCB Passed			
		Action	Continue			
DQM Test: < - Concentration Limit						
		Result:	-1.56 > -5.00			
		Message	CCB Passed			
		Action	Continue			
245389004	1	21	0.104	0.0941	1/29/2010@15:38:46	
245389005	1	22	0.704	0.118	1/29/2010@15:39:39	
245389006	1	23	0.393	0.106	1/29/2010@15:40:31	
245389007	1	24	2.42	0.186	1/29/2010@15:41:24	
245389008	1	25	0.868	0.125	1/29/2010@15:42:17	
245389009	1	26	0.752	0.120	1/29/2010@15:43:09	
245389010	1	27	2.45	0.188	1/29/2010@15:44:01	
245389011	1	28	1.16	0.136	1/29/2010@15:44:53	
WCN100129-03	1	S3	106	4.31	1/29/2010@15:45:45	CCV
		Known Conc:	100			
DQM Test: > + Percent Relative Difference						
		Result:	5.9 < 10.0			
		Message	CCV Passed			
		Action	Continue			
DQM Test: < - Percent Relative Difference						
		Result:	5.9 < 10.0			
		Message	CCV Passed			
		Action	Continue			
WCN100129-08	1	S7	-1.69	0.0227	1/29/2010@15:47:35	CCB
		Known Conc:	0.00			
DQM Test: > + Concentration Limit						
		Result:	-1.69 < 5.00			
		Message	CCB Passed			



Action	Continue				
DQM Test: < - Concentration Limit					
Result:	-1.69 > -5.00				
Message	CCB Passed				
Action	Continue				

Analyte Properties Table for OM\_1-29-2010\_15-00-28.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

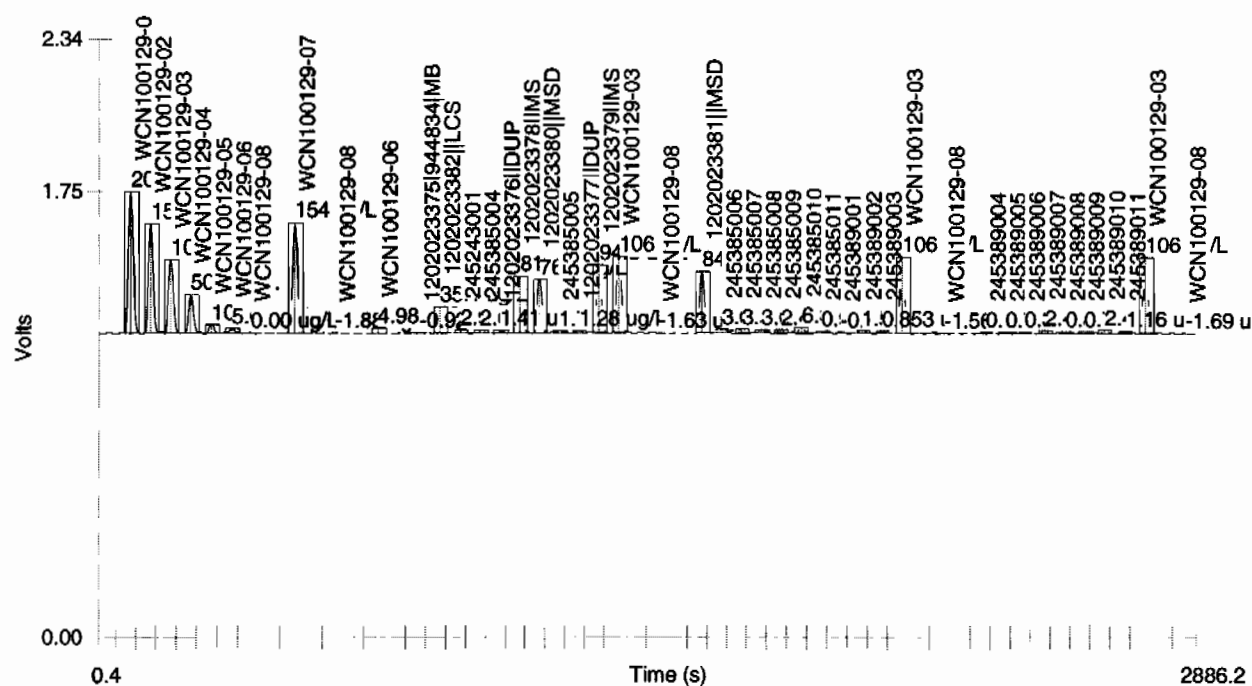
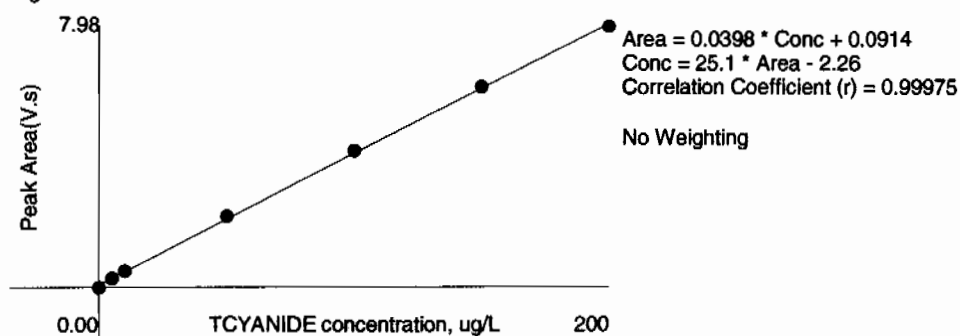


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	7.98	0.552	1.0	1/29/2010	15:02:16
2	150	1	6.11	0.425	-0.7	1/29/2010	15:03:09
3	100	1	4.14	0.288	-1.7	1/29/2010	15:04:01
4	50.0	1	2.16	0.149	-3.7	1/29/2010	15:04:54
5	10.0	1	0.498	0.0326	-1.7	1/29/2010	15:05:47
6	5.00	1	0.278	0.0171	4.3	1/29/2010	15:06:41
7	0.00	1	-0.00714	-0.00130		1/29/2010	15:07:35

Figure 1: TCYANIDE



# **Ion Chromatography**

# Prep LogBook

Analyst: MAR1  
 Batch: 944902  
 Lab SOP: GL-GC-E-086 REV# 17

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202023563		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10	.8	mL
LCS	1202023570		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10	.8	mL
SAMPLE	245389001		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10	.8	mL
DUP	1202023564	245389001	EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10	.8	mL
MS	1202023566	245389001	EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10	.8	mL
MSD	1202023568	245389001	EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10	.8	mL
SAMPLE	245389002		EPA 300.0 PREP	09-FEB-2010 14:45	4.07 g	40 mL	9.82801		
SAMPLE	245389003		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
SAMPLE	245389004		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
SAMPLE	245389005		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
SAMPLE	245389006		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
SAMPLE	245389007		EPA 300.0 PREP	09-FEB-2010 14:45	4.1 g	40 mL	9.7561		
SAMPLE	245389008		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
SAMPLE	245389009		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
SAMPLE	245389010		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
SAMPLE	245389011		EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
DUP	1202023565	245389011	EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
MS	1202023567	245389011	EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		
MSD	1202023569	245389011	EPA 300.0 PREP	09-FEB-2010 14:45	4 g	40 mL	10		

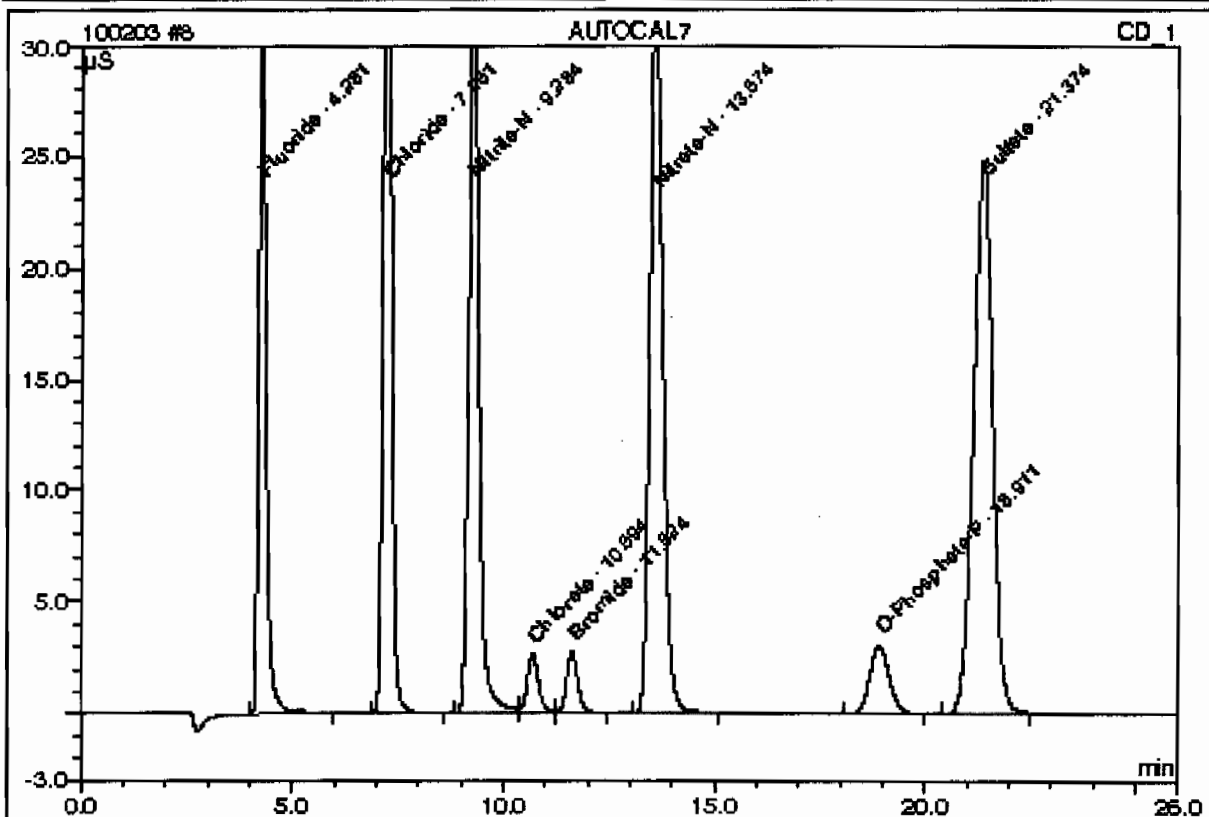
Comments:

This is runlog for Sequence 100216.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	02/03/10 14:51		1	100216	MAR1
ICAL-06	02/03/10 15:20		1	100216	MAR1
ICAL-05	02/03/10 15:49		1	100216	MAR1
ICAL-04	02/03/10 16:18		1	100216	MAR1
ICAL-03	02/03/10 16:47		1	100216	MAR1
ICAL-02	02/03/10 17:16		1	100216	MAR1
ICAL-01	02/03/10 17:45		1	100216	MAR1

**8 AUTOCAL7**

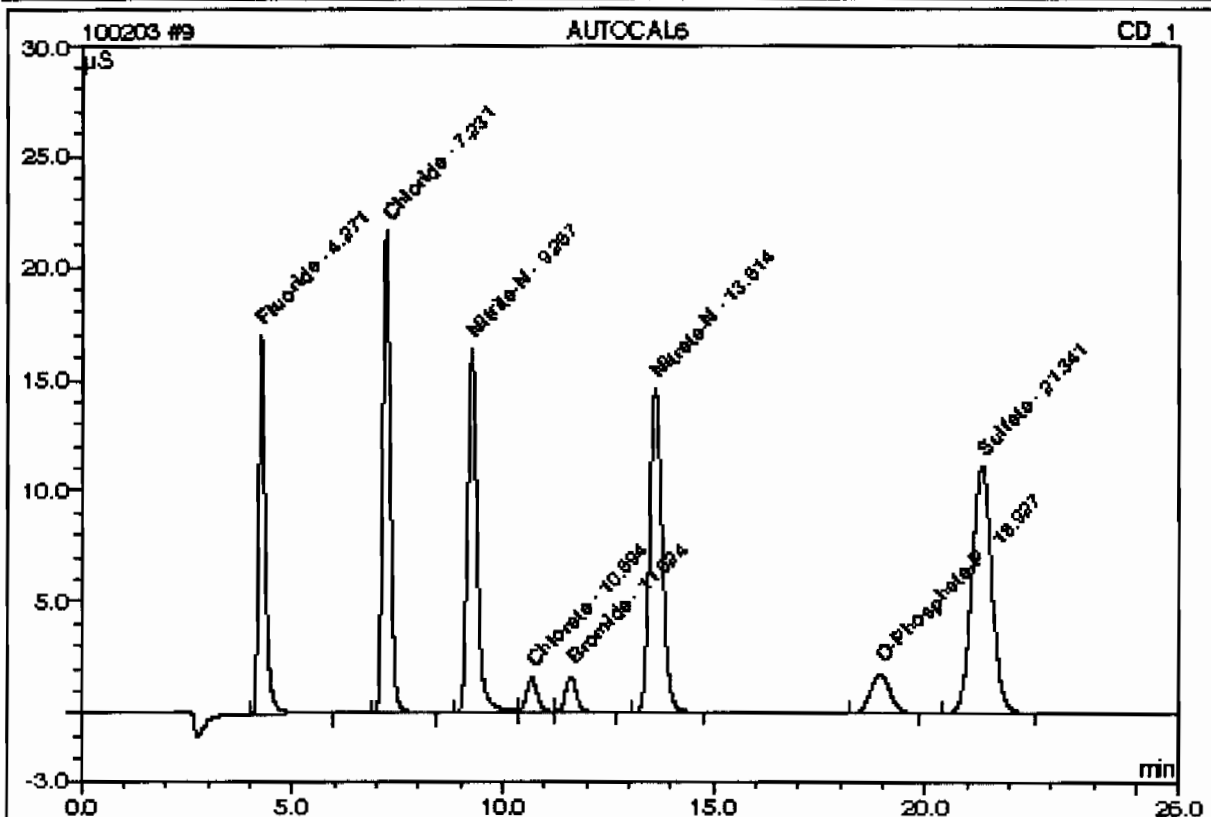
Sample Name:	AUTOCAL7	Injection Volume:	1.0
Vial Number:	2	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 14:51	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.28	Fluoride	10.0000	10.0789		6.36361	12.07
2	7.25	Chloride	20.0000	20.3251		9.51272	18.04
3	9.28	Nitrite-N	10.0000	10.0955		9.30956	17.66
4	10.89	Chlorate	5.0000	5.0882		0.81836	1.55
5	11.62	Bromide	5.0000	5.0072		0.83672	1.59
6	13.57	Nitrate-N	10.0000	10.1822		11.20457	21.25
7	18.91	O-Phosphate-P	5.0000	5.0928		1.61745	3.07
8	21.37	Sulfate	40.0000	40.6145		13.05755	24.77
Total:				106.4844	0.000	52.719	100.00

**9 AUTOCAL6**

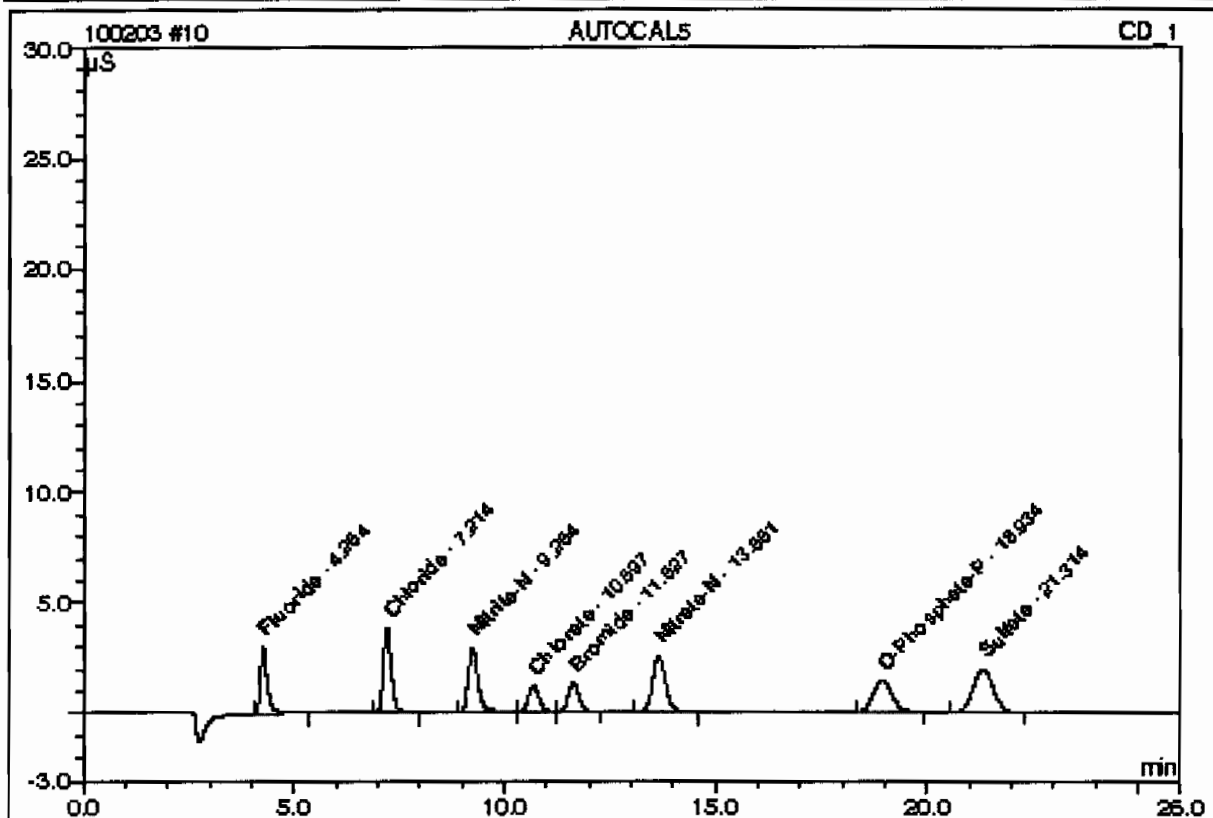
Sample Name:	AUTOCAL6	Injection Volume:	1.0
Vial Number:	3	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 15:20	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.27	Fluoride	5.0000	4.8505		3.04271	12.30
2	7.23	Chloride	10.0000	9.3656		4.33939	17.55
3	9.27	Nitrite-N	5.0000	4.8181		4.41022	17.83
4	10.89	Chlorate	3.0000	2.9971		0.47650	1.93
5	11.62	Bromide	3.0000	3.0679		0.51071	2.06
6	13.61	Nitrate-N	5.0000	4.6446		5.04710	20.41
7	18.93	O-Phosphate-P	3.0000	2.9374		0.91837	3.71
8	21.34	Sulfate	20.0000	18.8112		5.98714	24.21
Total:				51.4925	0.000	24.732	100.00

**10 AUTOCAL5**

Sample Name:	AUTOCAL5	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:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 15:49	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056

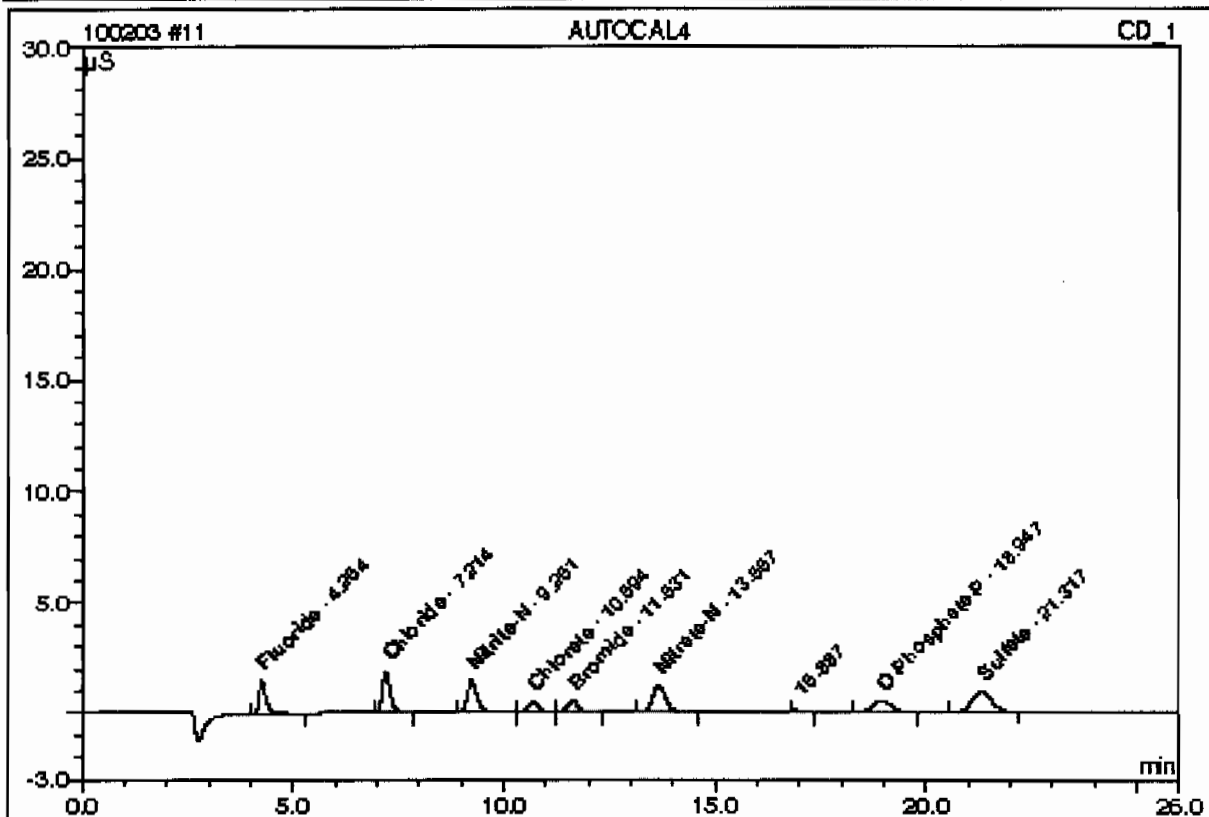


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area $\mu\text{S} \cdot \text{min}$	Rel. Area %
1	4.26	Fluoride	1.0000	0.9515		0.58618	9.92
2	7.21	Chloride	2.0000	1.8779		0.80490	14.10
3	9.25	Nitrite-N	1.0000	0.9432		0.81286	14.24
4	10.70	Chlorate	2.5000	2.3297		0.36803	6.45
5	11.83	Bromide	2.5000	2.4133		0.40066	7.02
6	13.65	Nitrate-N	1.0000	0.9296		0.91823	16.05
7	18.93	O-Phosphate-P	2.5000	2.4061		0.74604	13.07
8	21.31	Sulfate	4.0000	3.7213		1.09374	19.16
Total:				15.5726	0.000	5.709	100.00



**11 AUTOCAL4**

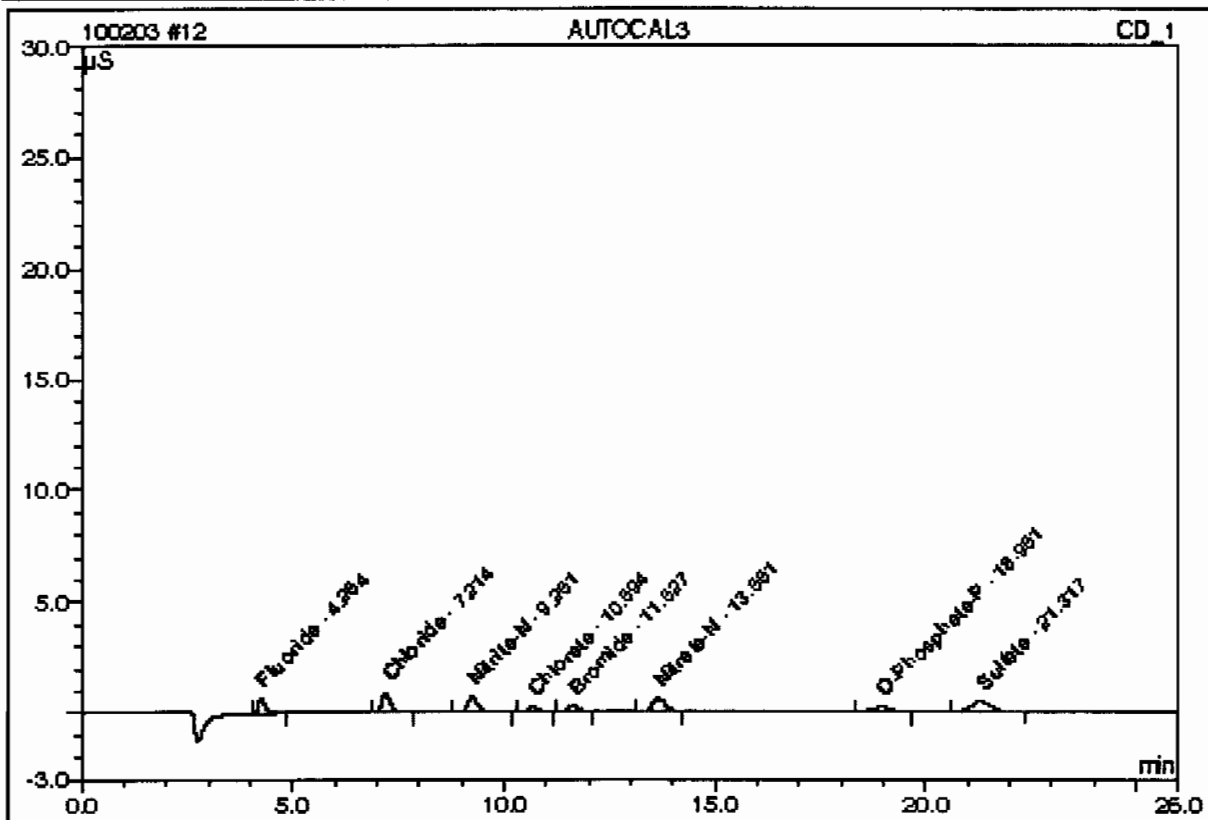
Sample Name:	AUTOCAL4	Injection Volume:	1.0
Vial Number:	5	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 16:18	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	0.5000	0.4971		0.27757	10.42
2	7.21	Chloride	1.0000	1.0089		0.39471	14.82
3	9.25	Nitrite-N	0.5000	0.4969		0.39851	14.97
4	10.89	Chlorate	1.0000	0.9855		0.14957	5.62
5	11.63	Bromide	1.0000	0.9805		0.15979	6.00
6	13.66	Nitrate-N	0.5000	0.5103		0.45001	16.90
8	18.95	O-Phosphate-P	1.0000	0.9640		0.27829	10.45
9	21.32	Sulfate	2.0000	1.9928		0.53323	20.03
Total:				7.4361	0.000	2.642	99.22

**12 AUTOCAL3**

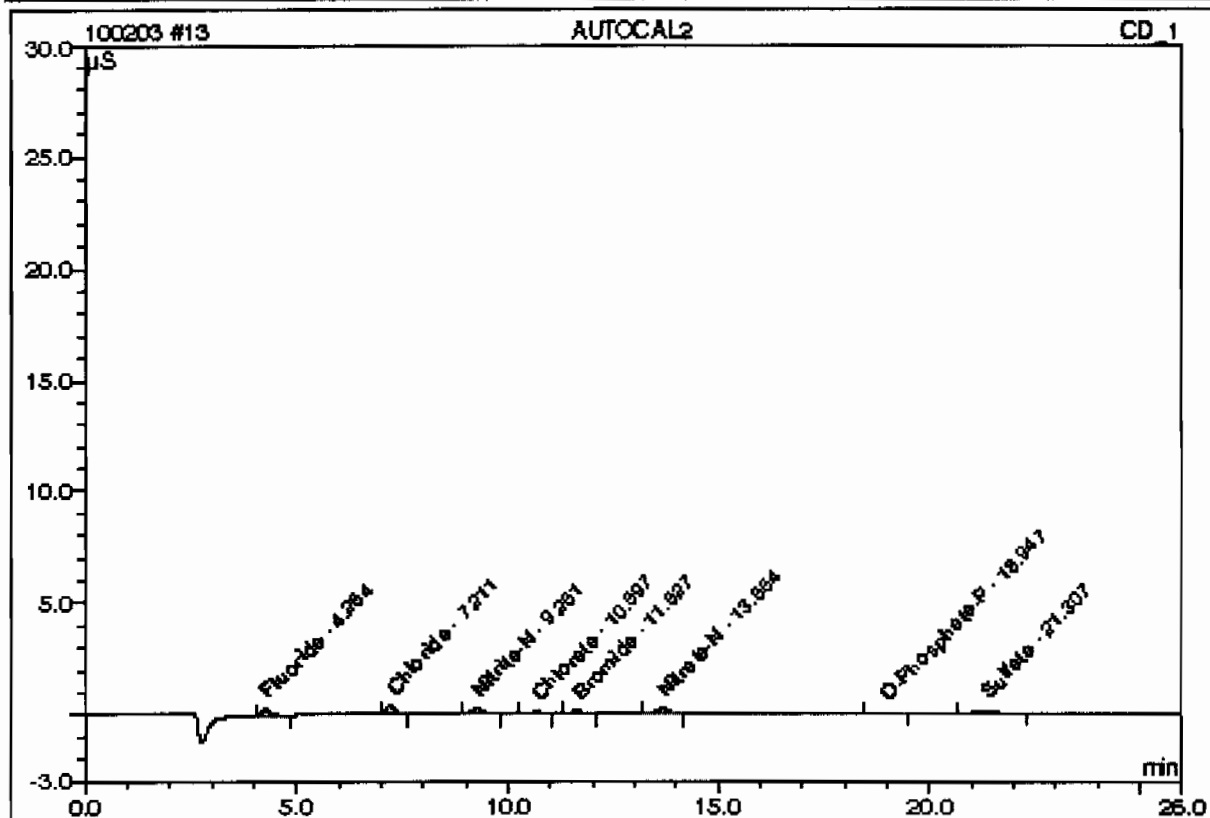
Sample Name:	AUTOCAL3	Injection Volume:	1.0
Vial Number:	6	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 16:47	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area uS*min	Rel. Area %
1	4.26	Fluoride	0.2500	0.2665		0.13108	10.19
2	7.21	Chloride	0.5000	0.5938		0.19877	15.45
3	9.25	Nitrite-N	0.2500	0.2798		0.19699	15.31
4	10.69	Chlorate	0.5000	0.5043		0.07135	5.55
5	11.63	Bromide	0.5000	0.4866		0.07676	5.97
6	13.66	Nitrate-N	0.2500	0.2967		0.21243	16.51
7	18.95	O-Phosphate-P	0.5000	0.4866		0.12344	9.60
8	21.32	Sulfate	1.0000	1.1986		0.27569	21.43
Total:				4.1128	0.000	1.287	100.00

**13 AUTOCAL2**

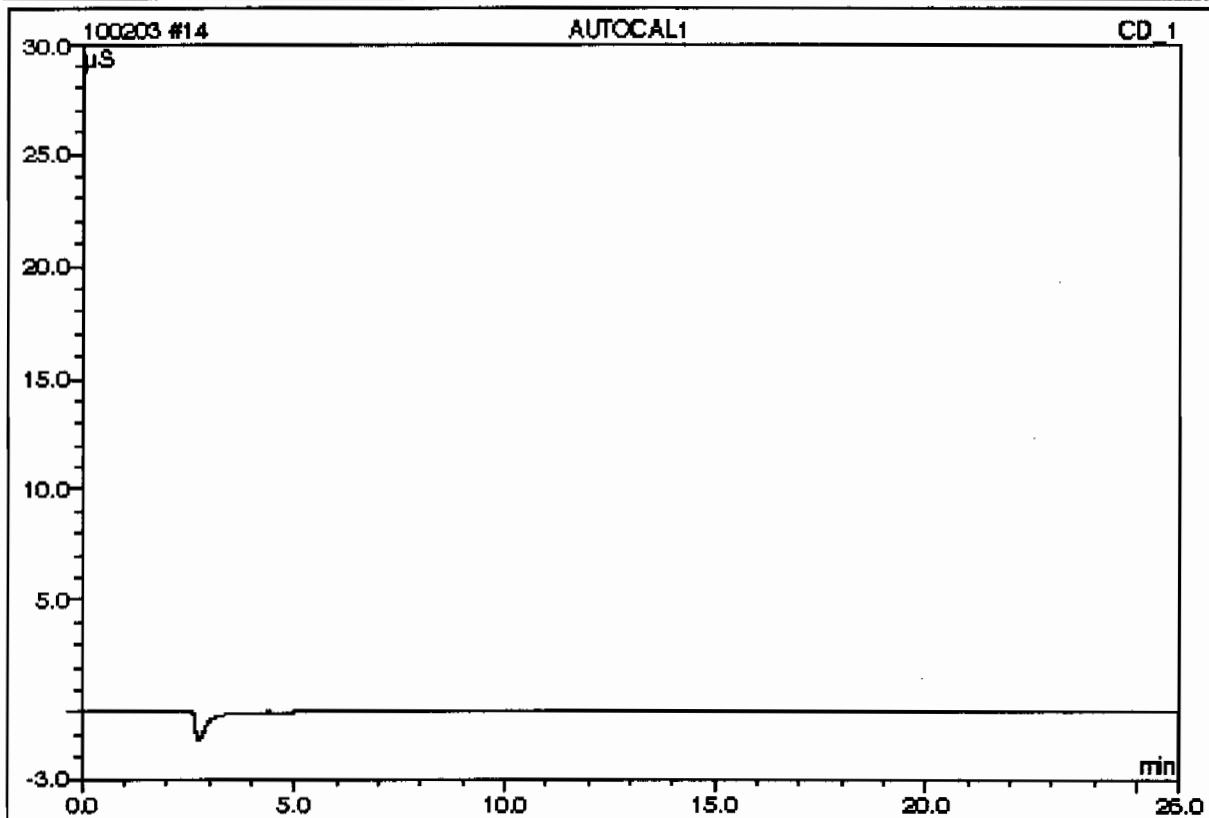
Sample Name:	AUTOCAL2	Injection Volume:	1.0
Vial Number:	7	Channel:	CD_1
Sample Type:	standard	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 17:16	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	0.1000	0.1453		0.05408	10.63
2	7.21	Chloride	0.2000	0.3561		0.08657	17.02
3	9.25	Nitrite-N	0.1000	0.1488		0.07532	14.81
4	10.70	Chlorate	0.2000	0.2300		0.02676	5.26
5	11.83	Bromide	0.2000	0.2145		0.03102	6.10
6	13.86	Nitrate-N	0.1000	0.1809		0.08368	16.46
7	18.95	O-Phosphate-P	0.2000	0.2072		0.03283	6.46
8	21.31	Sulfate	0.4000	0.7131		0.11824	23.25
Total:				2.1958	0.000	0.509	100.00

**14 AUTOCAL1**

Sample Name:	AUTOCAL1	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:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 17:45	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



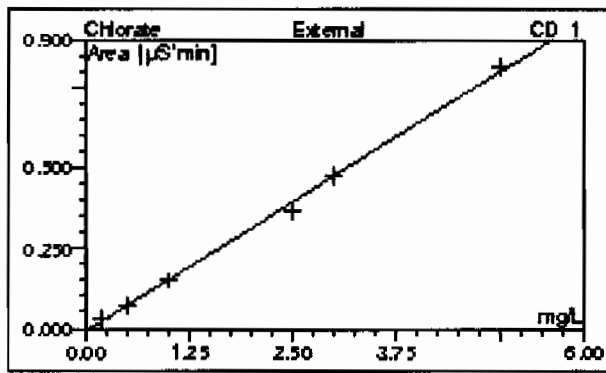
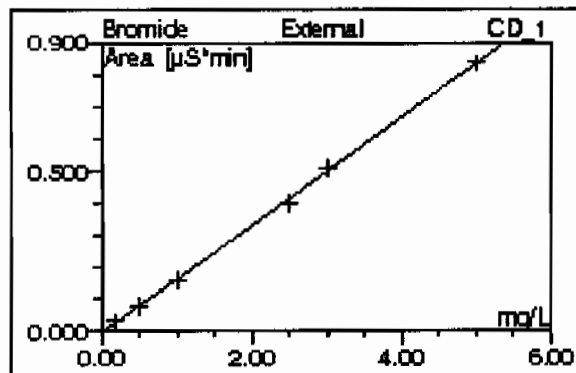
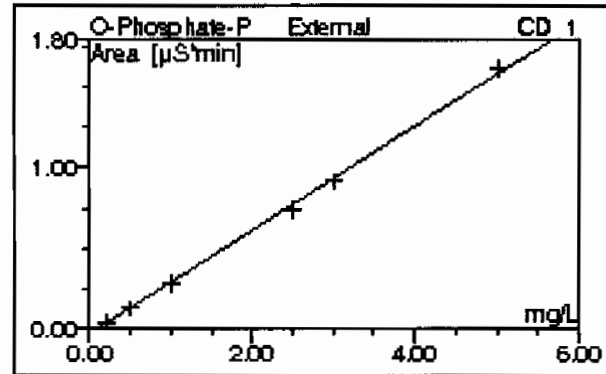
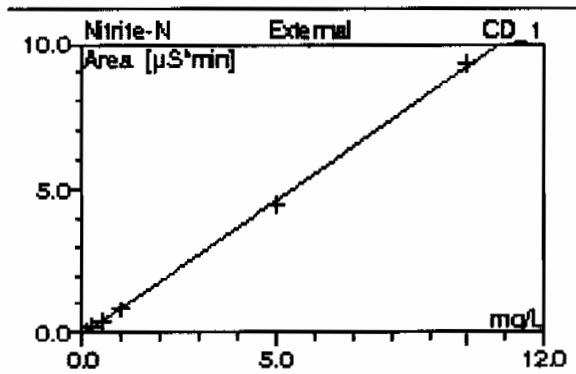
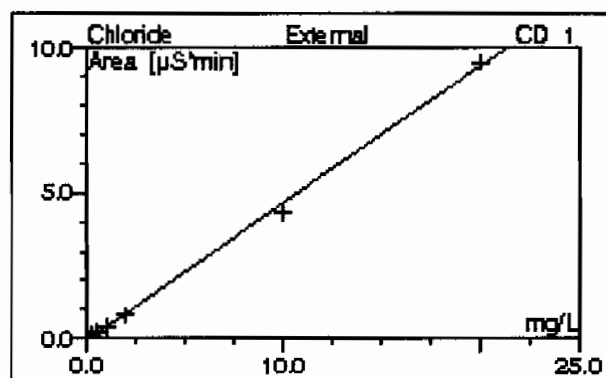
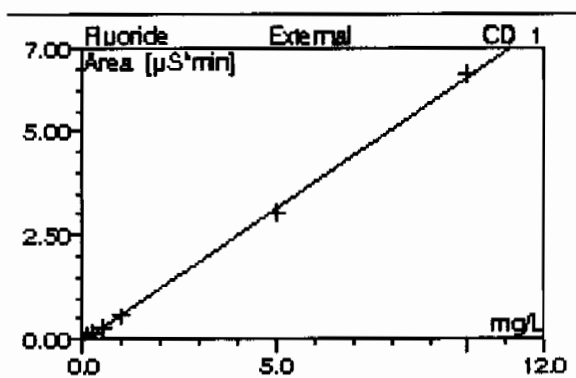
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	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.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

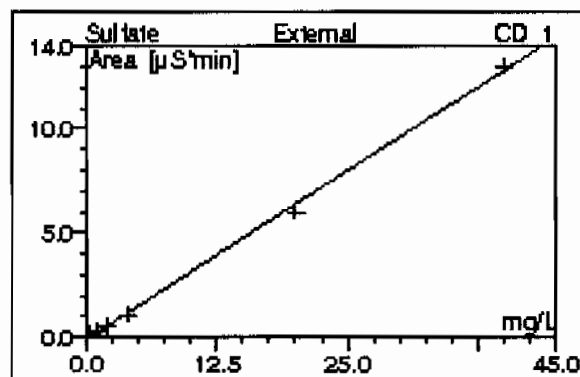
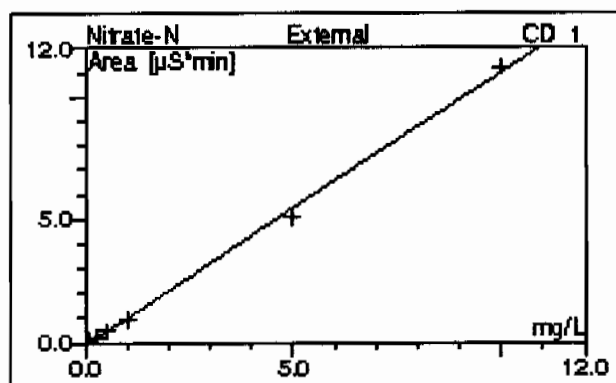
**14 AUTOCAL1**

Sample Name: AUTOCAL1  
Vial Number: 8  
Sample Type: standard  
Control Program: AS23  
Quantif. Method: 100203an  
Recording Time: 2/3/2010 17:45  
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 GC E086;300;9056

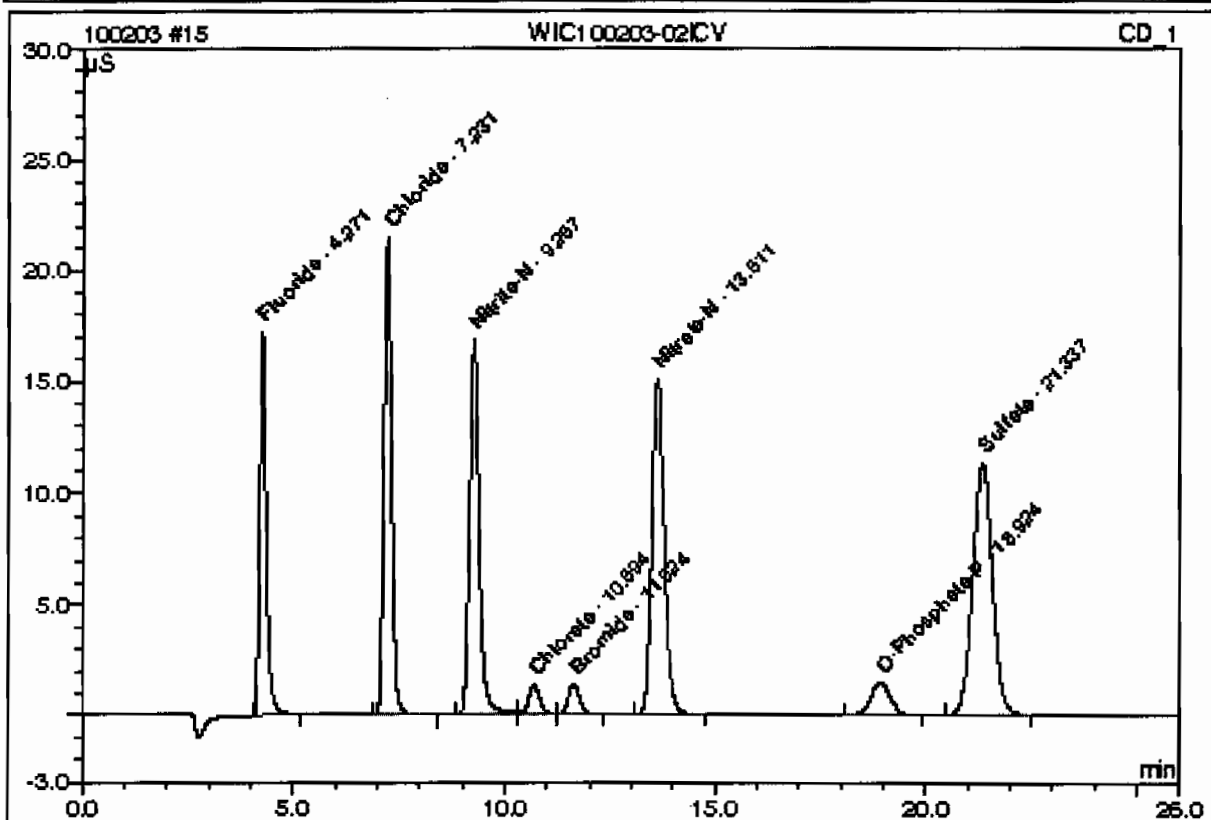




No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	OLO#	99.9581	-0.0382	0.6352	0.0000
n.a.	n.a.	Chloride	OLO#	99.8253	-0.0815	0.4720	0.0000
n.a.	n.a.	Nitrite-N	OLO#	99.9387	-0.0628	0.9284	0.0000
n.a.	n.a.	Chlorate	OLO#	99.7775	-0.0106	0.1825	0.0000
n.a.	n.a.	Bromide	OLO#	99.9232	-0.0050	0.1881	0.0000
n.a.	n.a.	Nitrate-N	OLO#	99.7828	-0.1175	1.1119	0.0000
n.a.	n.a.	O-Phosphate-P	OLO#	99.8689	-0.0344	0.3243	0.0000
n.a.	n.a.	Sulfate	OLO#	99.8425	-0.1130	0.3243	0.0000
Average:				99.8644	-0.0579	0.5158	0.0000

**15 WIC100203-02ICV**

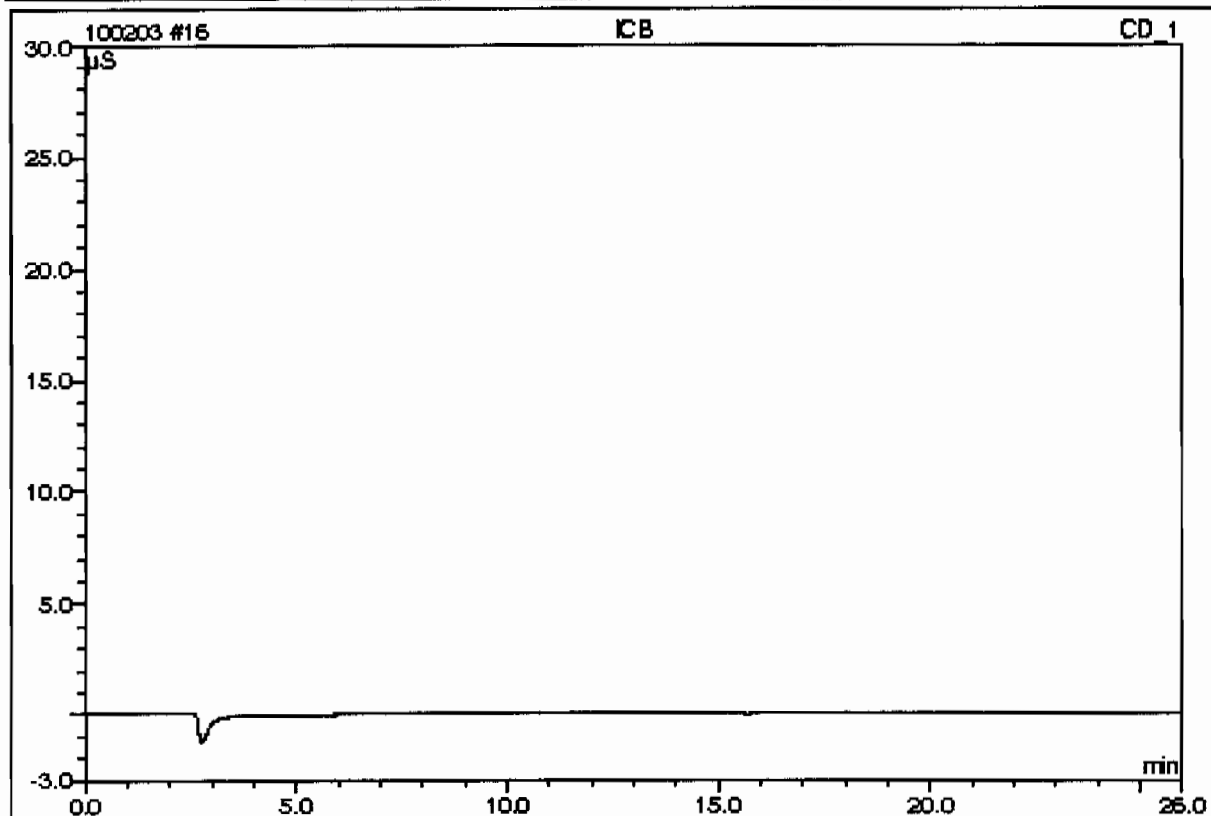
Sample Name:	WIC100203-02ICV	Injection Volume:	1.0
Vial Number:	9	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 18:14	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.27	Fluoride	n.a.	4.8343		3.03244	12.24
2	7.23	Chloride	n.a.	9.3469		4.33058	17.48
3	9.27	Nitrite-N	n.a.	4.9162		4.50127	18.17
4	10.69	Chlorate	n.a.	2.5483		0.40356	1.63
5	11.62	Bromide	n.a.	2.4935		0.41414	1.67
6	13.61	Nitrate-N	n.a.	4.7629		5.17862	20.90
7	18.92	O-Phosphate-P	n.a.	2.5894		0.80548	3.25
8	21.34	Sulfate	n.a.	19.1845		6.10818	24.66
Total:				50.8760	0.000	24.774	100.00

**16 ICB**

Sample Name:	ICB	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:	100203an	Sample Amount:	1.0000
Recording Time:	2/3/2010 18:43	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 %
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

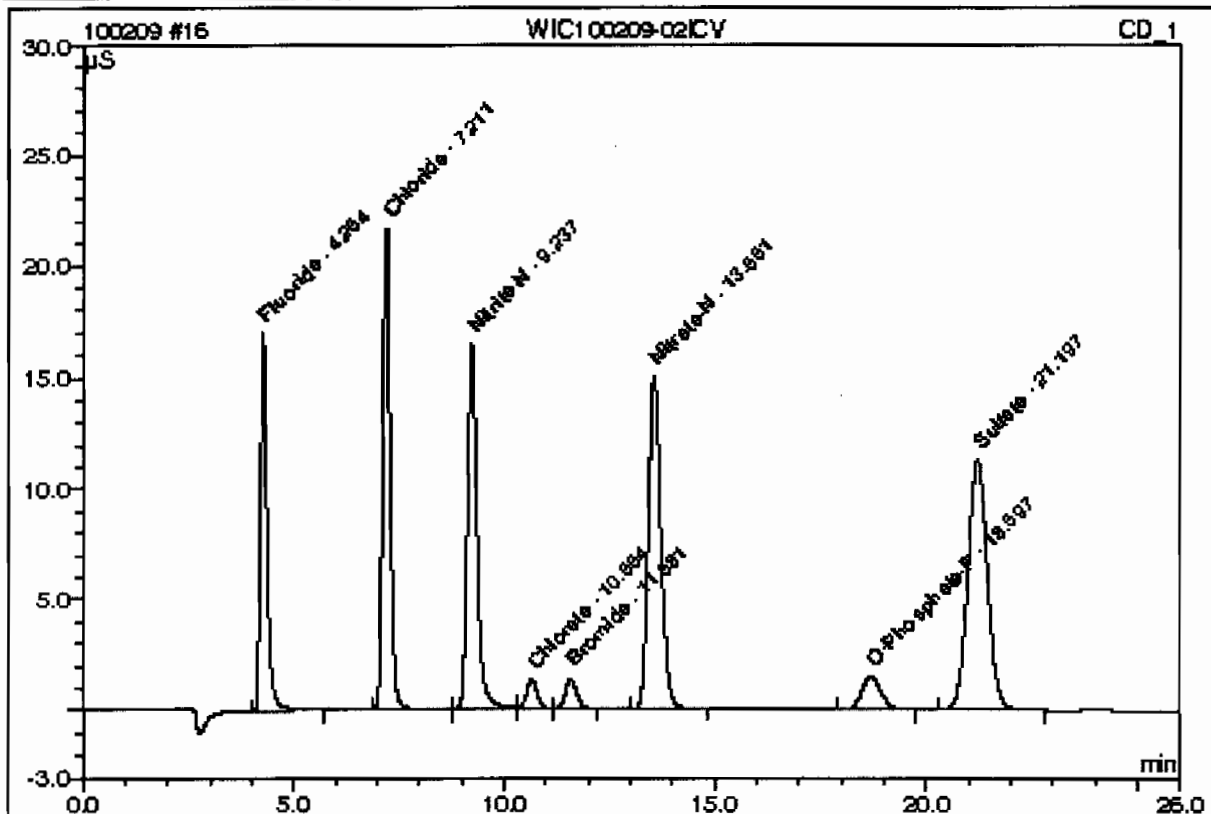


This is runlog for Sequence 100209.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	02/09/10 14:28		1	100209	MAR1
BLK	02/09/10 14:57		1	100209	MAR1
ICV	02/09/10 15:26		1	100209	MAR1
ICB	02/09/10 15:54		1	100209	MAR1
1202023536	02/09/10 16:23	944896	1	100209	MAR1
1202023540	02/09/10 16:52	944896	1	100209	MAR1
245383001	02/09/10 17:21	944896	1	100209	MAR1
245383002	02/09/10 17:50	944896	1	100209	MAR1
245383003	02/09/10 18:19	944896	1	100209	MAR1
245383004	02/09/10 18:48	944896	1	100209	MAR1
245383005	02/09/10 19:17	944896	1	100209	MAR1
1202023537	02/09/10 19:46	944896	1	100209	MAR1
1202023538	02/09/10 20:15	944896	1	100209	MAR1
1202023539	02/09/10 20:44	944896	1	100209	MAR1
CVH	02/09/10 21:12		1	100209	MAR1
CCB	02/09/10 21:41		1	100209	MAR1
1202023563	02/09/10 22:10	944910	1	100209	MAR1
1202023563	02/09/10 22:39	944910	1	100209	MAR1
245389001	02/09/10 23:08	944910	1	100209	MAR1
1202023564	02/09/10 23:37	944910	1	100209	MAR1

**16 WIC100209-02ICV**

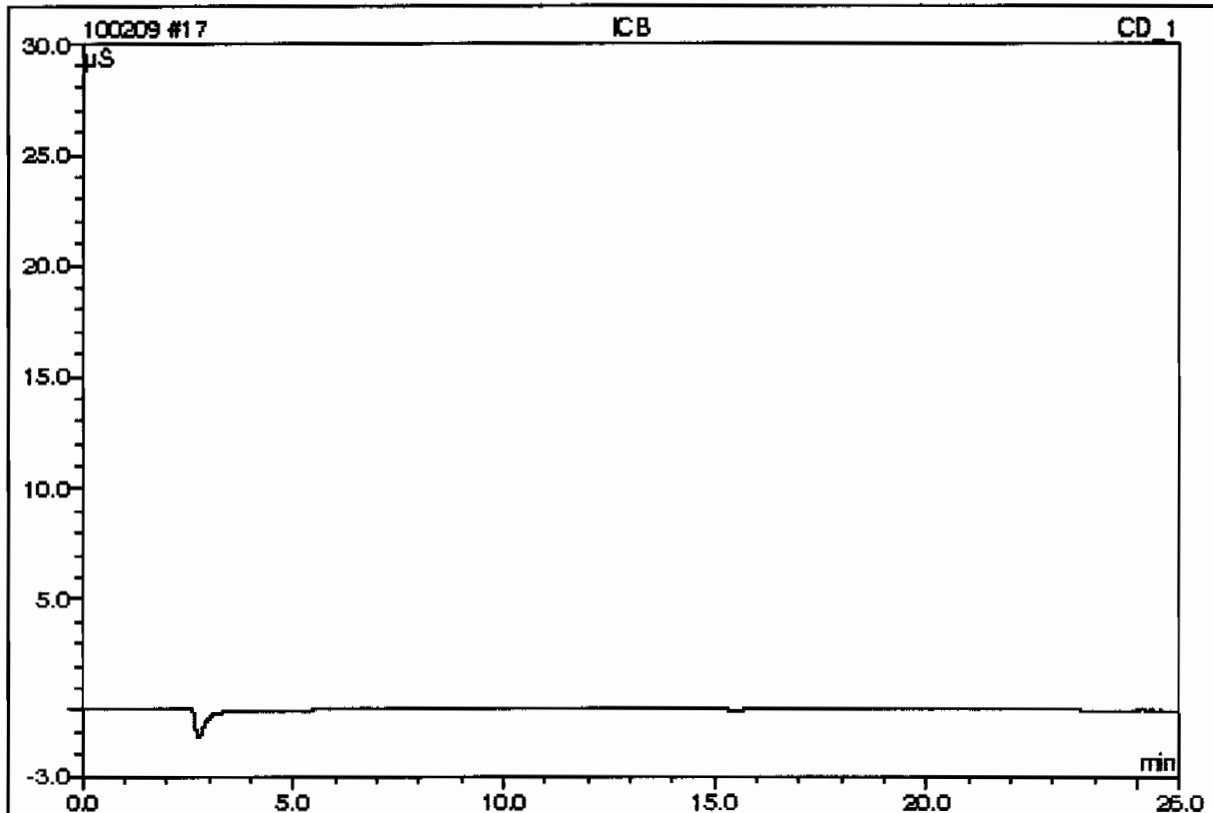
Sample Name:	WIC100209-02ICV	Injection Volume:	1.0
Vial Number:	3	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 15:26	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	4.8439		3.03853	12.29
2	7.21	Chloride	n.a.	9.4129		4.36175	17.65
3	9.24	Nitrite-N	n.a.	4.8293		4.42061	17.88
4	10.65	Chlorate	n.a.	2.4346		0.38508	1.56
5	11.58	Bromide	n.a.	2.4935		0.41413	1.68
6	13.55	Nitrate-N	n.a.	4.7690		5.18535	20.98
7	18.70	O-Phosphate-P	n.a.	2.5462		0.79146	3.20
8	21.20	Sulfate	n.a.	19.2284		6.12241	24.77
Total:				50.5578	0.000	24.719	100.00

**17 ICB**

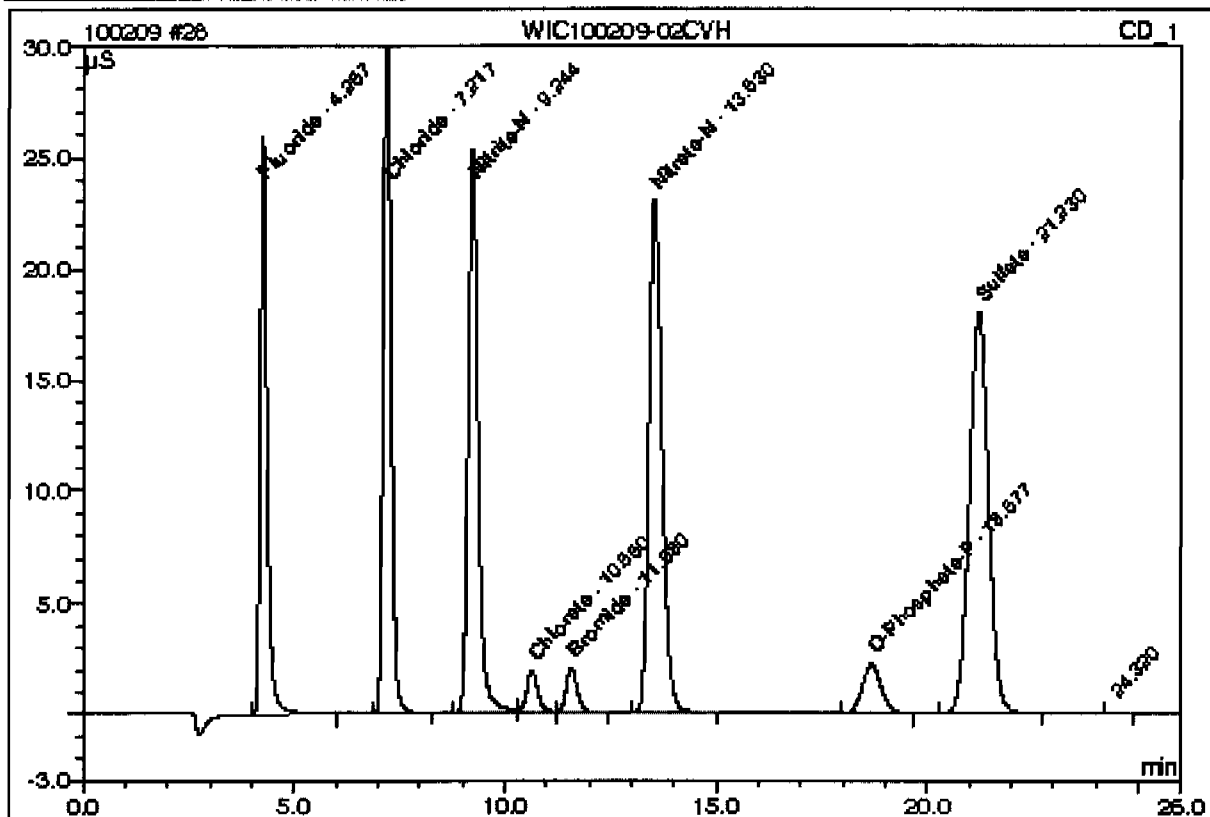
Sample Name:	ICB	Injection Volume:	1.0
Vial Number:	4	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 15:54	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



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.	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

**28 WIC100209-02CVH**

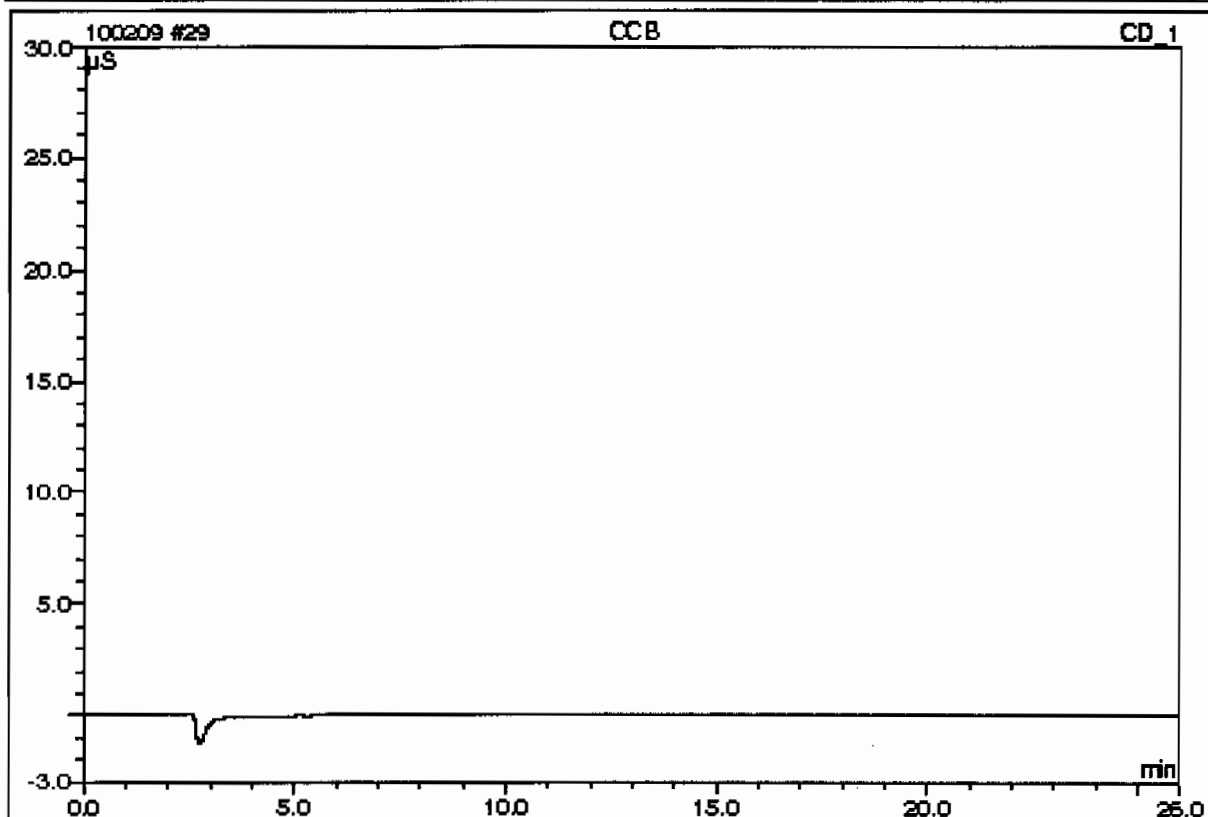
Sample Name:	WIC100209-02CVH	Injection Volume:	1.0
Vial Number:	15	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 21:12	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;8056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area $\mu\text{S} \cdot \text{min}$	Rel. Area %
1	4.27	Fluoride	n.a.	7.5314		4.74552	12.25
2	7.22	Chloride	n.a.	14.7985		6.90397	17.82
3	9.24	Nitrate-N	n.a.	7.4963		6.89656	17.80
4	10.65	Chlorate	n.a.	3.8370		0.61302	1.58
5	11.58	Bromide	n.a.	3.8030		0.63428	1.64
6	13.53	Nitrate-N	n.a.	7.4404		8.15584	21.05
7	18.68	O-Phosphate-P	n.a.	3.7495		1.18177	3.05
8	21.23	Sulfate	n.a.	29.9112		9.58665	24.75
Total:				78.5674	0.000	38.718	99.95

**29 CCB**

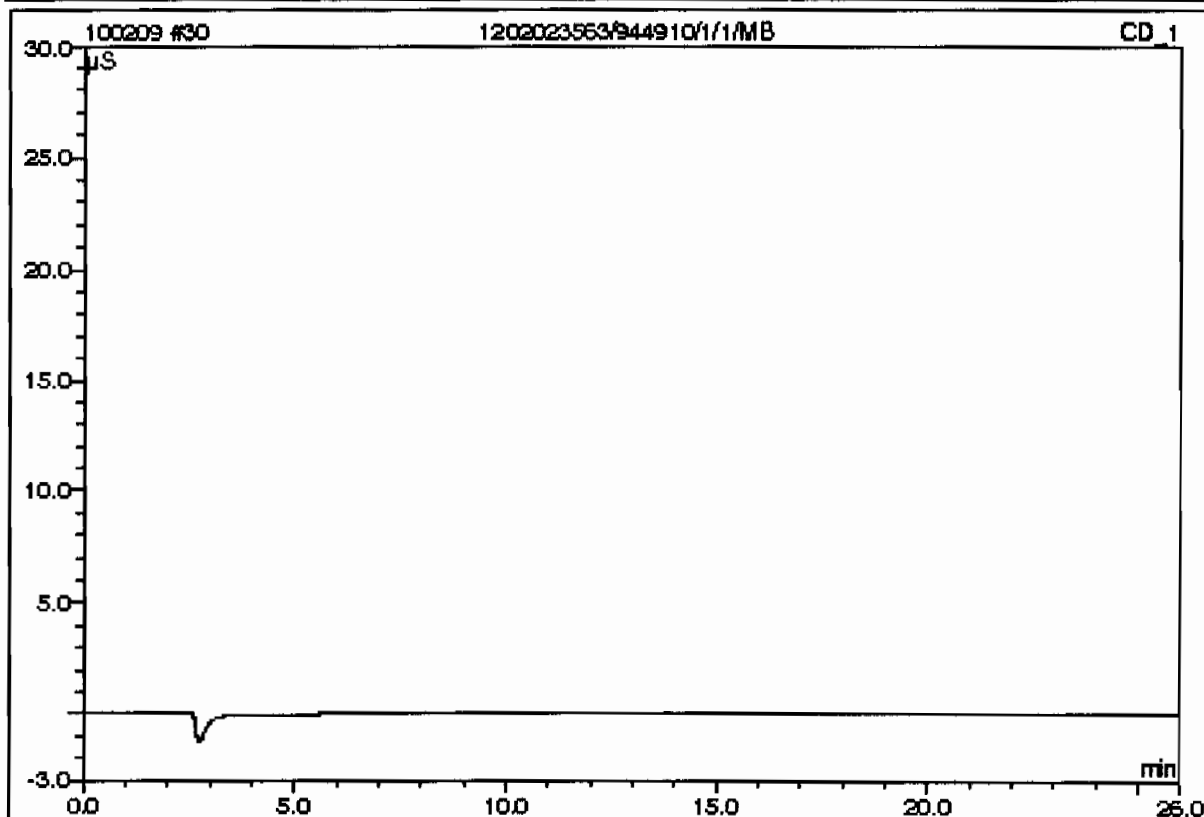
Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	16	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 21:41	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area uS*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.	Nitrile-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

**30 1202023563/944910/1/1/MB**

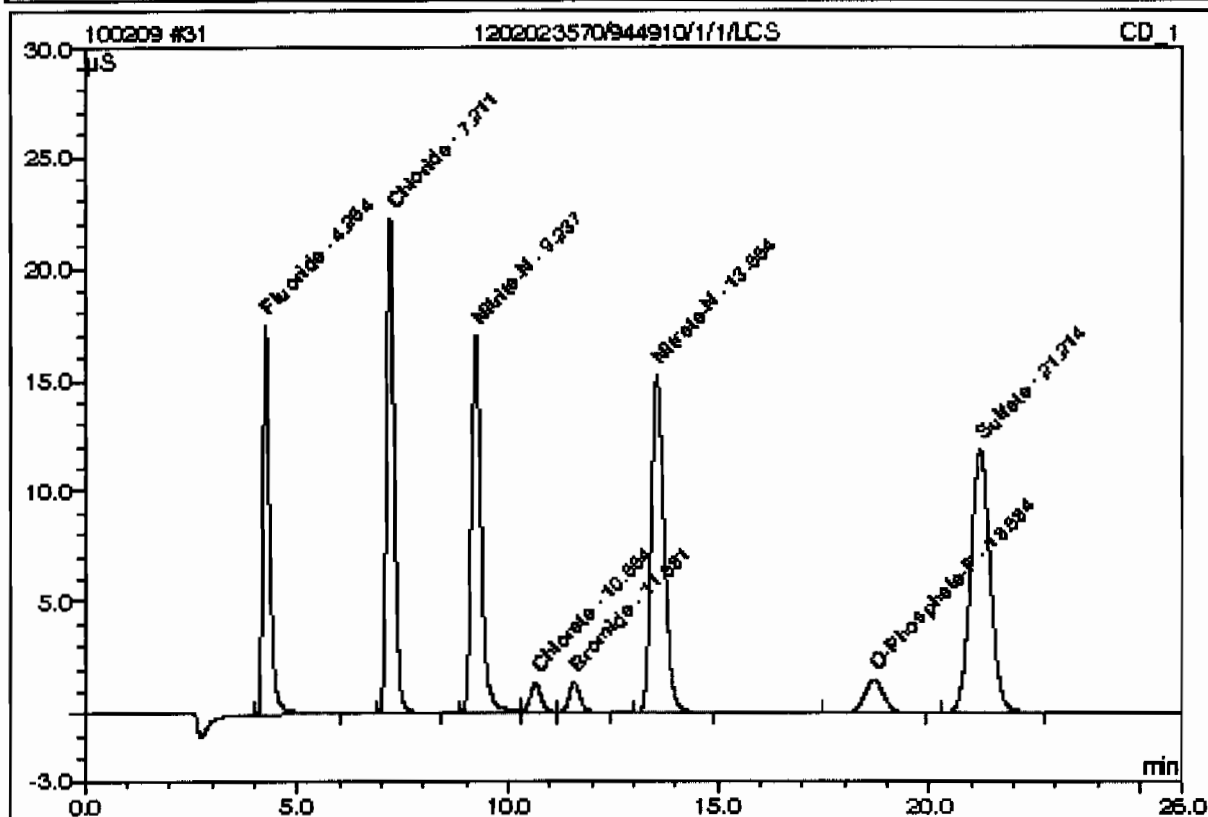
Sample Name:	1202023563/944910/1/1/MB	Injection Volume:	1.0
Vial Number:	17	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 22:10	Analyst:	MAR1
Run Time (min):	26.00	Column:	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.	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

**31 1202023570/944910/1/1/LCS**

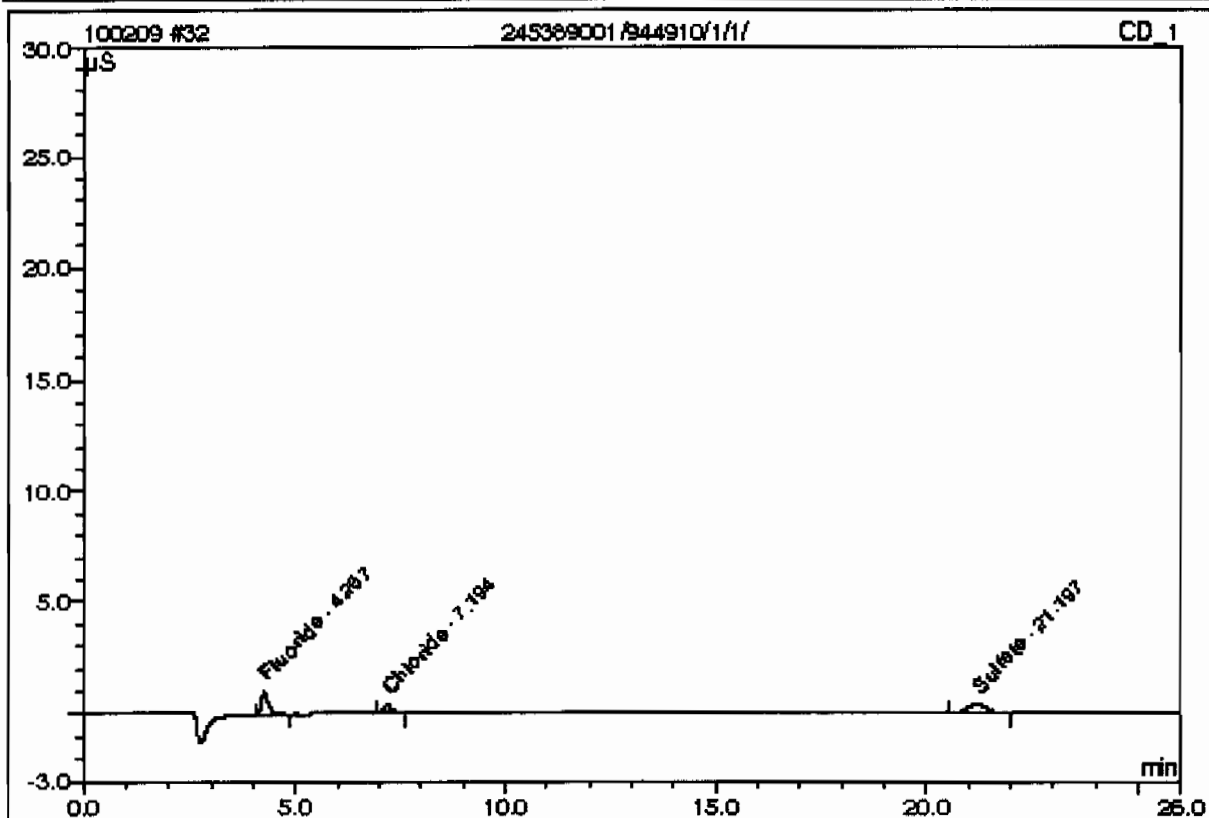
Sample Name:	1202023570/944910/1/1/LCS	Injection Volume:	1.0
Vial Number:	18	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 22:39	Analyst:	MAR1
Run Time (min):	26.00	Column:	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	4.26	Fluoride	n.a.	5.0833		3.19057	12.43
2	7.21	Chloride	n.a.	9.7719		4.53121	17.65
3	9.24	Nitrite-N	n.a.	5.0388		4.61507	17.98
4	10.65	Chlorate	n.a.	2.6033		0.41250	1.61
5	11.58	Bromide	n.a.	2.5568		0.42479	1.65
6	13.55	Nitrate-N	n.a.	4.9198		5.35312	20.85
7	18.68	O-Phosphate-P	n.a.	2.5349		0.78781	3.07
8	21.21	Sulfate	n.a.	19.9585		6.35918	24.77
Total:				52.4674	0.000	25.674	100.00

**32 245389001/944910/1/1/**

Sample Name:	245389001/944910/1/1/	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:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 23:08	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056

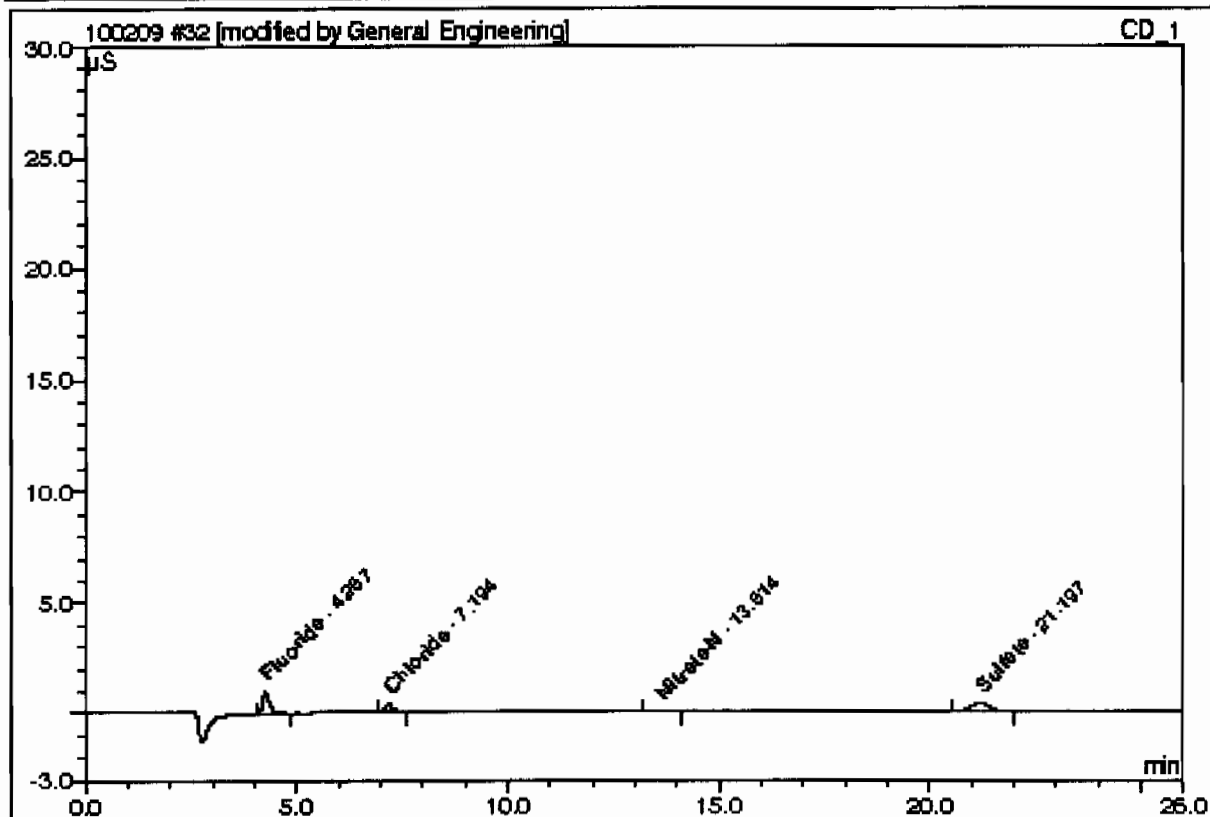


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.3610		0.19108	38.93
2	7.19	Chloride	n.a.	0.3441		0.08091	16.48
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	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	21.20	Sulfate	n.a.	1.0234		0.21886	44.59
Total:				1.7285	0.000	0.491	100.00



**32 245389001/944910/1/1/**

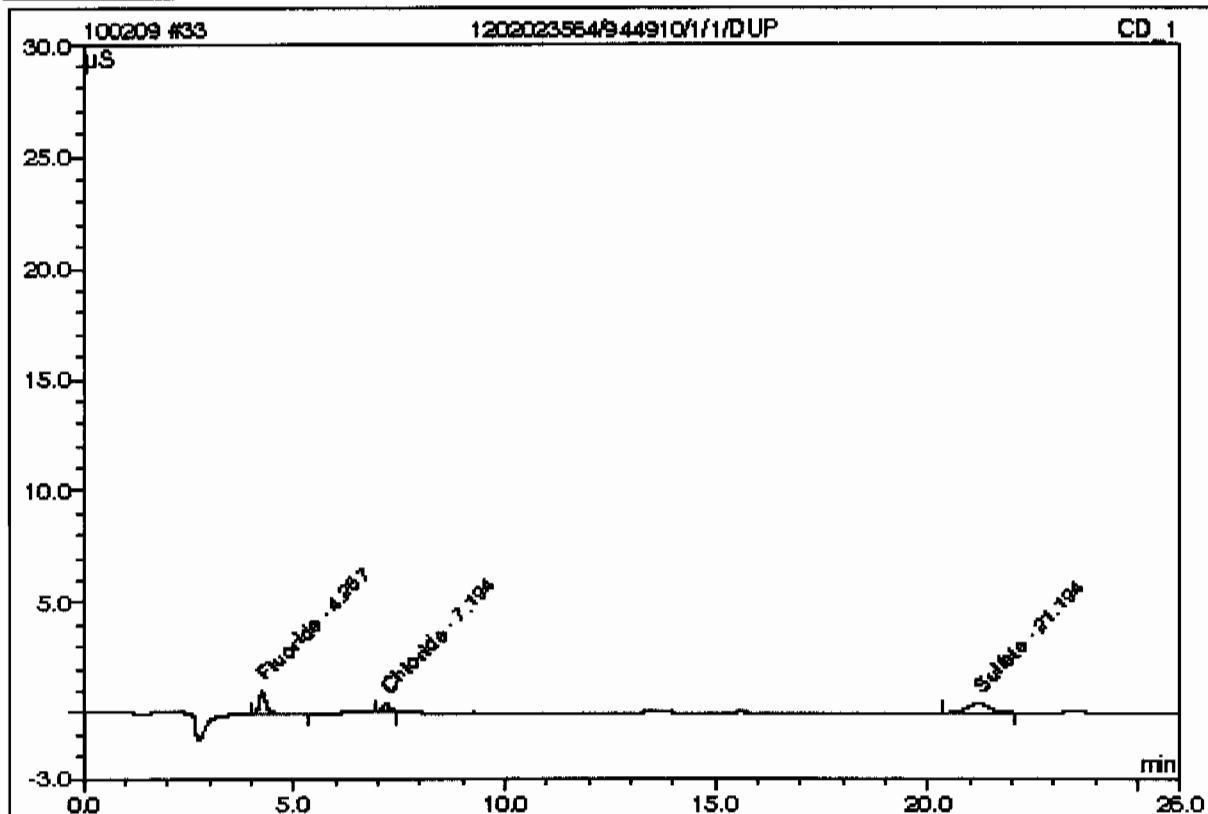
Sample Name:	245389001/944910/1/1/	Injection Volume:	1.0
Vial Number:	19	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 23:08	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.26	Fluoride	n.a.	0.3610		0.19108	37.92
2	7.19	Chloride	n.a.	0.3441		0.08091	16.06
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	13.61	Nitrate-N	n.a.	0.1174		0.01309	2.60
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.20	Sulfate	n.a.	1.0234		0.21886	43.43
Total:				1.8459	0.000	0.504	100.00

**33 1202023564/944910/1/1/DUP**

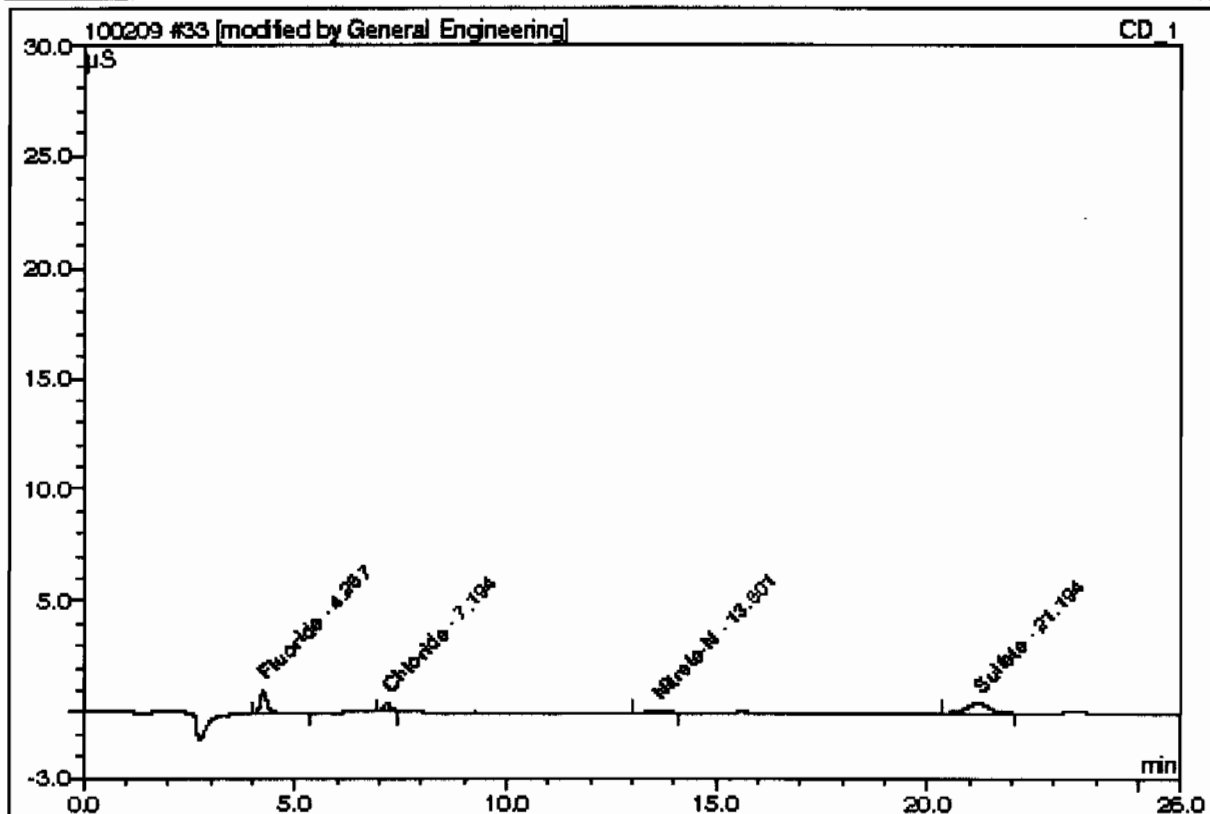
Sample Name:	1202023564/944910/1/1/DUP	Injection Volume:	1.0
Vial Number:	20	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 23:37	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area uS*min	Rel.Area %
1	4.26	Fluoride	n.a.	0.3852		0.20645	40.04
2	7.19	Chloride	n.a.	0.3292		0.07388	14.33
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	21.19	Sulfate	n.a.	1.0740		0.23527	45.63
Total:				1.7884	0.000	0.516	100.00

**33 1202023564/944910/1/1/DUP**

Sample Name:	1202023564/944910/1/1/DUP	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:	100203an	Sample Amount:	1.0000
Recording Time:	2/9/2010 23:37	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



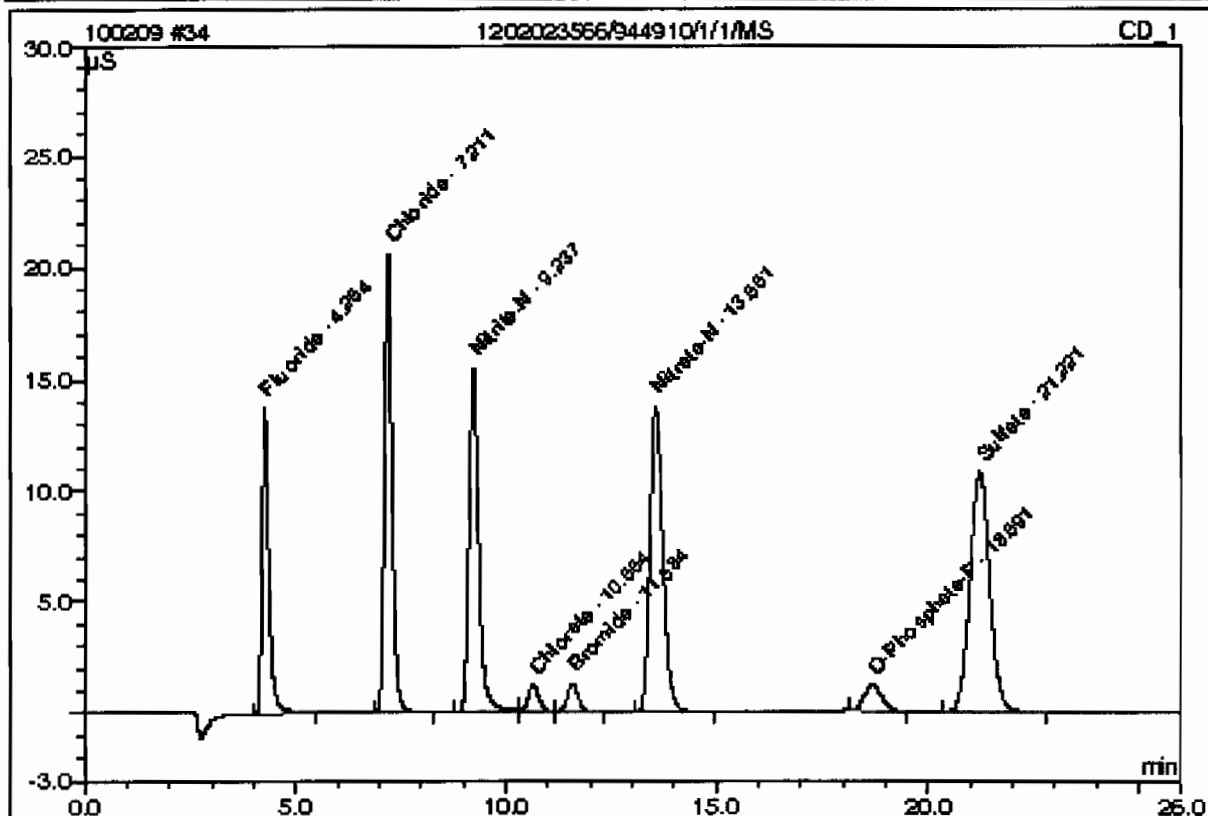
No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.3652		0.20645	38.98
2	7.19	Chloride	n.a.	0.3292		0.07388	13.95
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.60	Nitrate-N	n.a.	0.1182		0.01402	2.65
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.19	Sulfate	n.a.	1.0740		0.23527	44.42
Total:				1.9066	0.000	0.530	100.00

This is runlog for Sequence 100209.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
1202023566	02/10/10 00:06	944910	1	100209	MAR1
1202023568	02/10/10 00:35	944910	1	100209	MAR1
245389002	02/10/10 01:04	944910	1	100209	MAR1
245389003	02/10/10 01:33	944910	1	100209	MAR1
245389004	02/10/10 02:02	944910	1	100209	MAR1
245389005	02/10/10 02:31	944910	1	100209	MAR1
CCV	02/10/10 02:59		1	100209	MAR1
CCB	02/10/10 03:28		1	100209	MAR1
245389006	02/10/10 03:57	944910	1	100209	MAR1
245389007	02/10/10 04:26	944910	1	100209	MAR1
245389008	02/10/10 04:55	944910	1	100209	MAR1
245389009	02/10/10 05:24	944910	1	100209	MAR1
245389010	02/10/10 05:53	944910	1	100209	MAR1
245389011	02/10/10 06:22	944910	1	100209	MAR1
1202023565	02/10/10 06:51	944910	1	100209	MAR1
1202023567	02/10/10 07:20	944910	1	100209	MAR1
1202023569	02/10/10 07:49	944910	1	100209	MAR1
CVH	02/10/10 08:17		1	100209	MAR1
CCB	02/10/10 08:46		1	100209	MAR1

**34 1202023566/944910/1/1/MS**

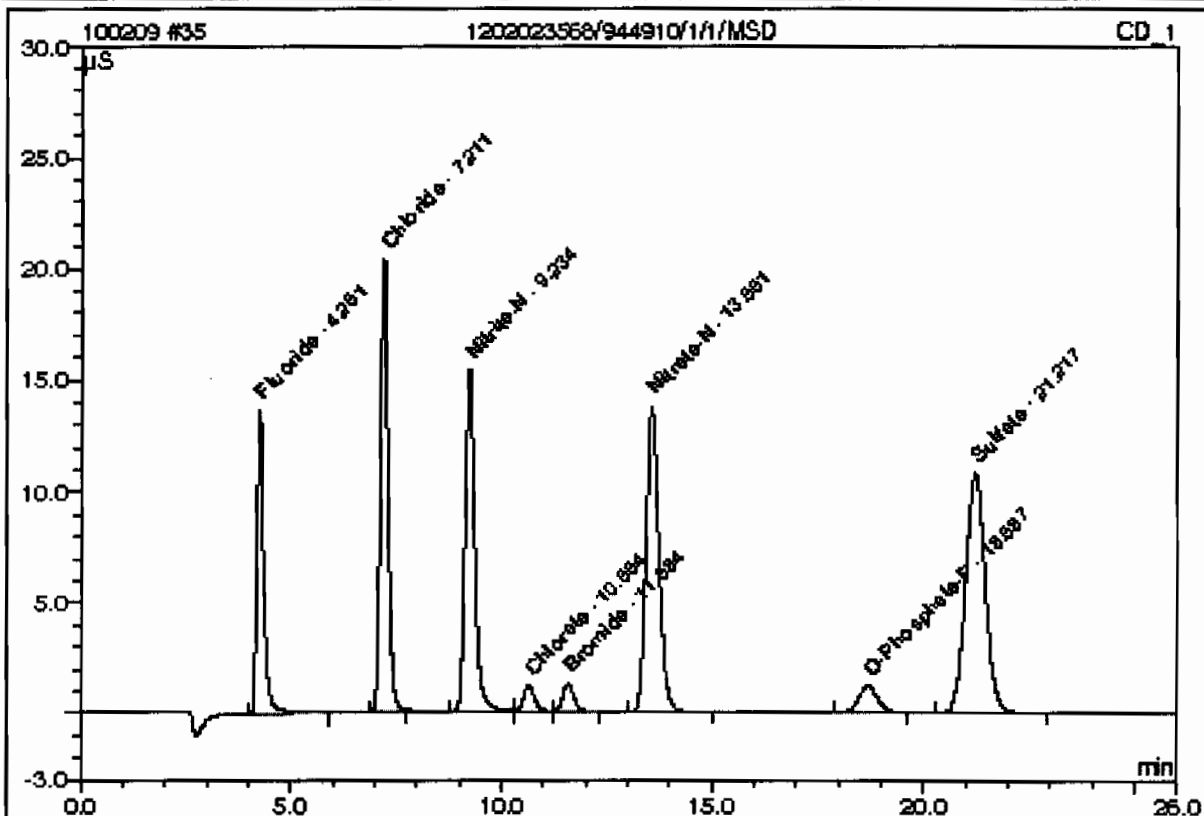
Sample Name:	1202023566/944910/1/1/MS	Injection Volume:	1.0
Vial Number:	21	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 0:06	Analyst:	MAR1
Run Time (min):	26.00	Column:	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	4.26	Fluoride	n.a.	3.9848		2.49286	10.84
2	7.21	Chloride	n.a.	9.0803		4.20472	18.28
3	9.24	Nitrite-N	n.a.	4.6010		4.20859	18.30
4	10.65	Chlorate	n.a.	2.4078		0.38072	1.66
5	11.58	Bromide	n.a.	2.4123		0.40050	1.74
6	13.56	Nitrate-N	n.a.	4.5085		4.89577	21.28
7	18.69	O-Phosphate-P	n.a.	1.8525		0.58647	2.46
8	21.22	Sulfate	n.a.	18.3977		5.85302	25.45
Total:				47.2448	0.000	23.003	100.00

**35 1202023568/944910/1/1/MSD**

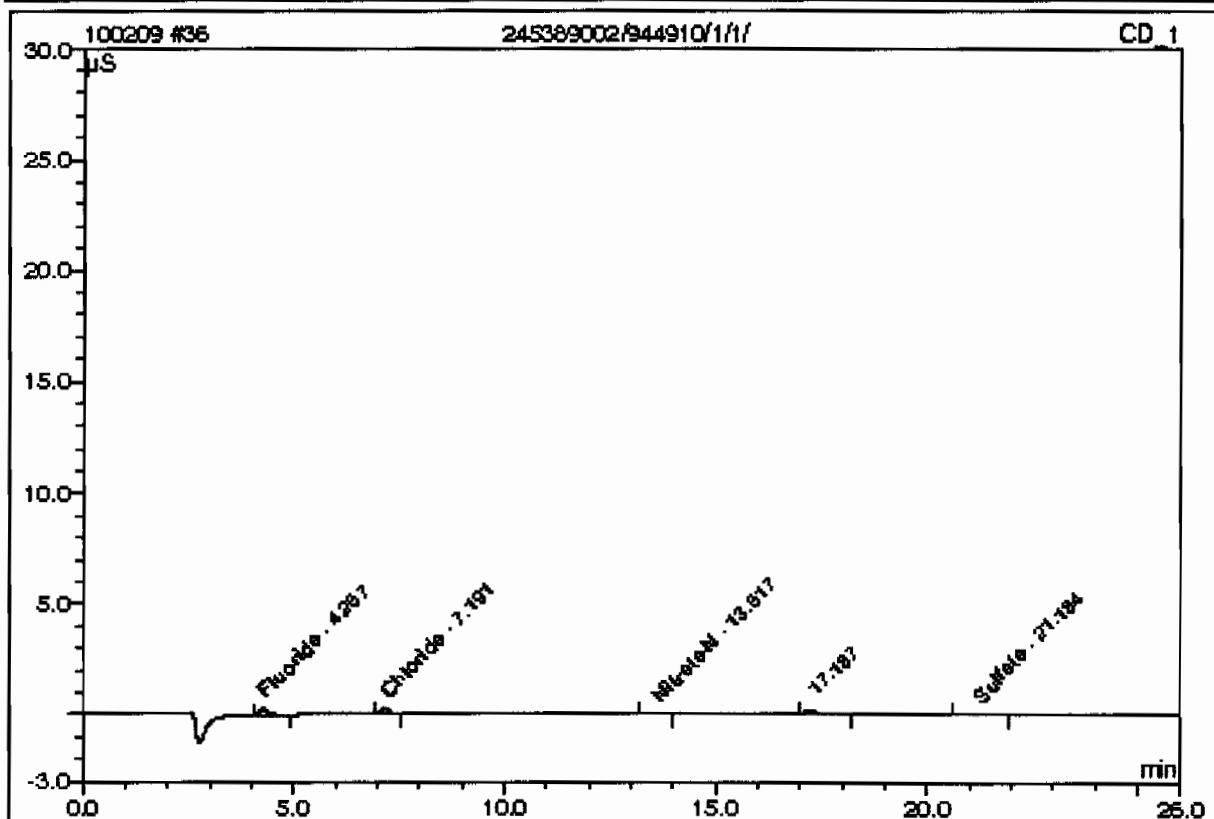
Sample Name:	1202023568/944910/1/1/MSD	Injection Volume:	1.0
Vial Number:	22	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 0:35	Analyst:	MAR1
Run Time (min):	26.00	Column:	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	4.26	Fluoride	n.a.	4.0200		2.51518	10.90
2	7.21	Chloride	n.a.	8.9954		4.16467	18.04
3	9.23	Nitrite-N	n.a.	4.6040		4.21138	18.24
4	10.65	Chlorate	n.a.	2.4039		0.38009	1.65
5	11.58	Bromide	n.a.	2.4634		0.40908	1.77
6	13.56	Nitrate-N	n.a.	4.5073		4.69440	21.20
7	18.69	O-Phosphate-P	n.a.	2.0579		0.63310	2.74
8	21.22	Sulfate	n.a.	18.4695		5.87633	25.46
Total:				47.5213	0.000	23.084	100.00

**36 245389002/944910/1/1/**

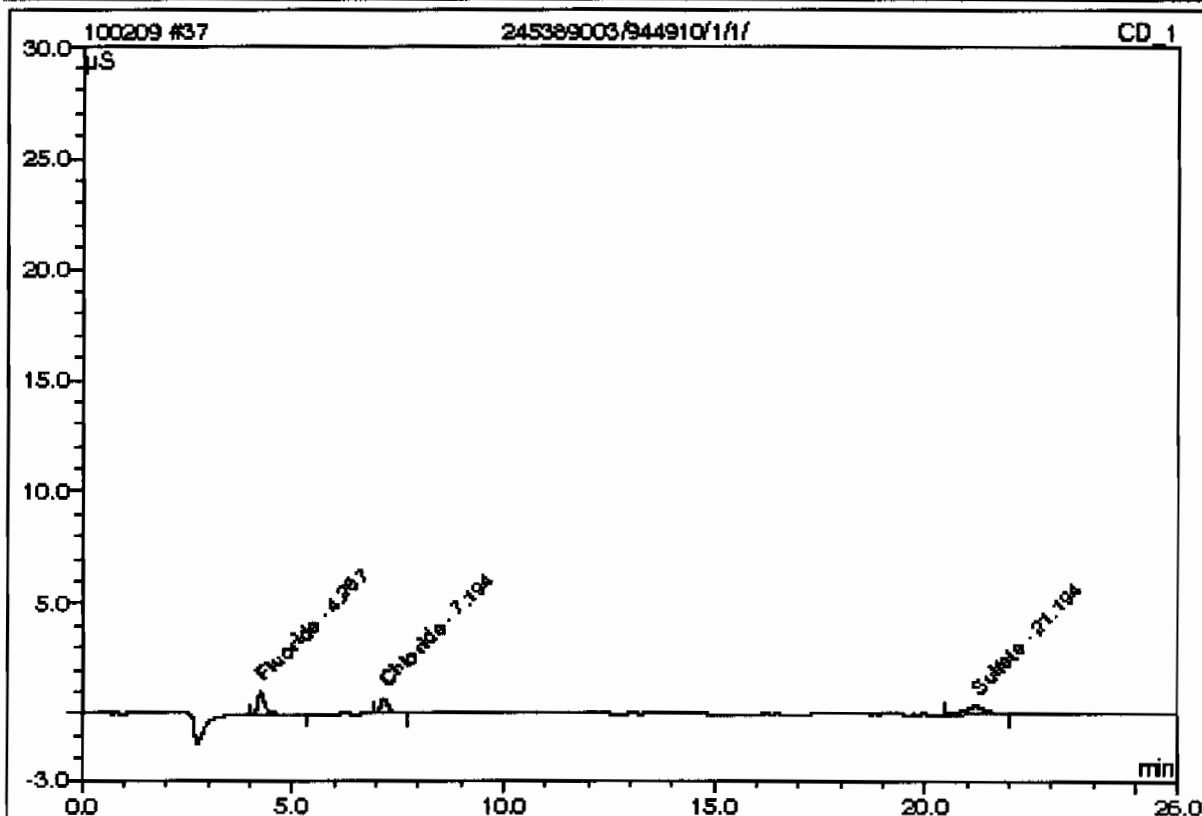
Sample Name:	245389002/944910/1/1/	Injection Volume:	1.0
Vial Number:	23	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 1:04	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.1546		0.06003	28.35
2	7.19	Chloride	n.a.	0.2838		0.05243	24.76
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	13.62	Nitrate-N	n.a.	0.1193		0.01523	7.19
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	21.18	Sulfate	n.a.	0.4297		0.02635	12.44
Total:				0.9875	0.000	0.154	72.75

**37 245389003/944910/1/1/**

Sample Name:	245389003/944910/1/1/	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:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 1:33	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056

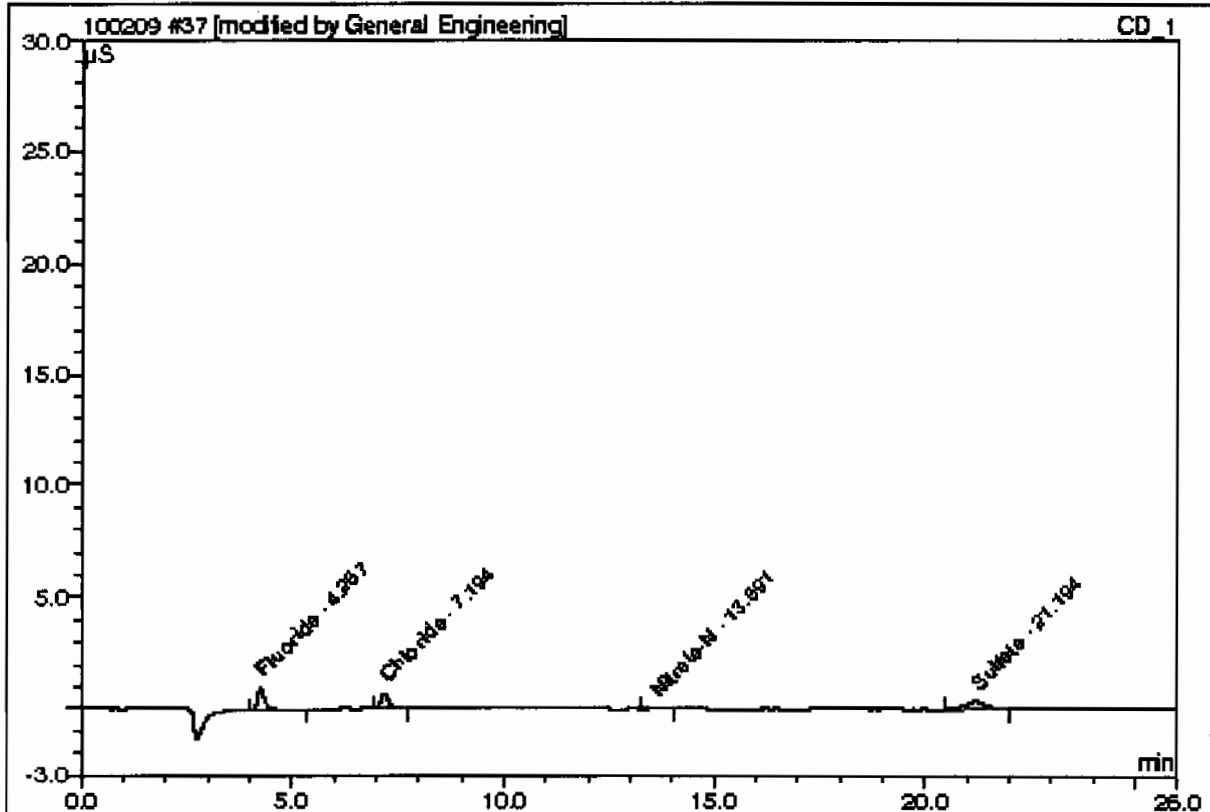


No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area $\mu\text{S} \cdot \text{min}$	Rel.Area %
1	4.26	Fluoride	n.a.	0.3761		0.20068	36.53
2	7.19	Chloride	n.a.	0.4840		0.14696	26.75
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	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	21.19	Sulfate	n.a.	0.9703		0.20166	36.71
Total:				1.8305	0.000	0.549	100.00



**37 245389003/944910/1/1/**

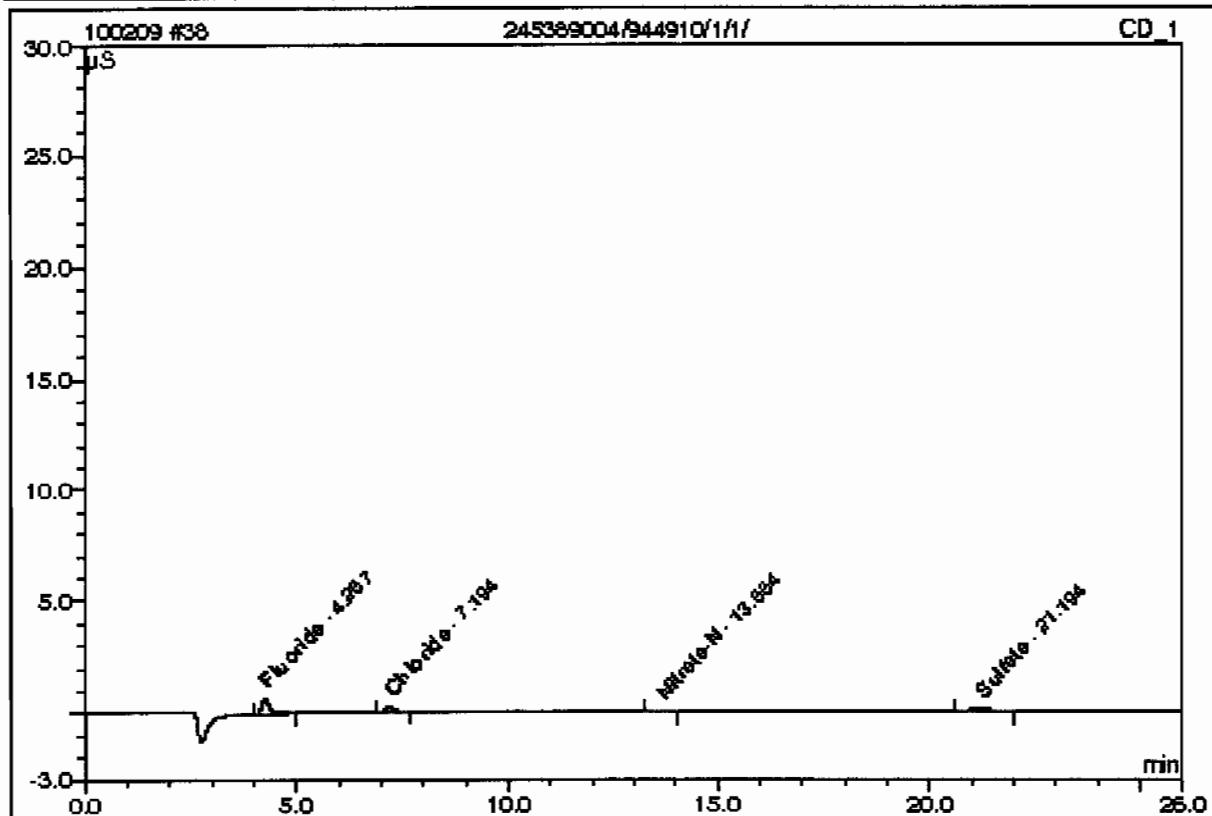
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Vial Number:	24	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 1:33	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.3761		0.20068	35.89
2	7.19	Chloride	n.a.	0.4840		0.14606	26.28
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	13.99	Nitrate-N	n.a.	0.1145		0.00990	1.77
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.19	Sulfate	n.a.	0.9703		0.20166	36.06
Total:				1.9450	0.000	0.559	100.00

**38 245389004/944910/1/1/**

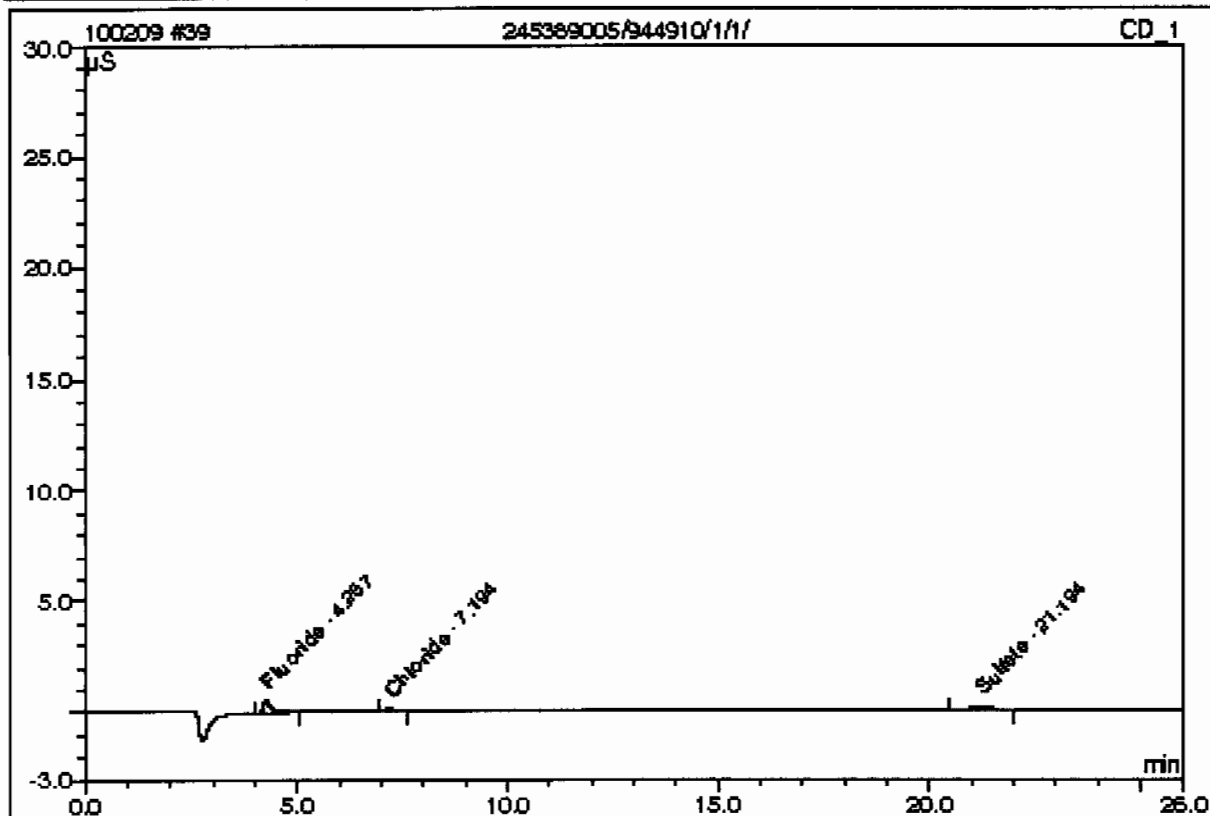
Sample Name:	245389004/944910/1/1/	Injection Volume:	1.0
Vial Number:	25	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 2:02	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.2769		0.13768	45.51
2	7.19	Chloride	n.a.	0.2991		0.05966	19.72
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	13.65	Nitrate-N	n.a.	0.1204		0.01638	5.41
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.19	Sulfate	n.a.	0.6223		0.08880	29.35
Total:				1.3187	0.000	0.303	100.00

**39 245389005/944910/1/1/**

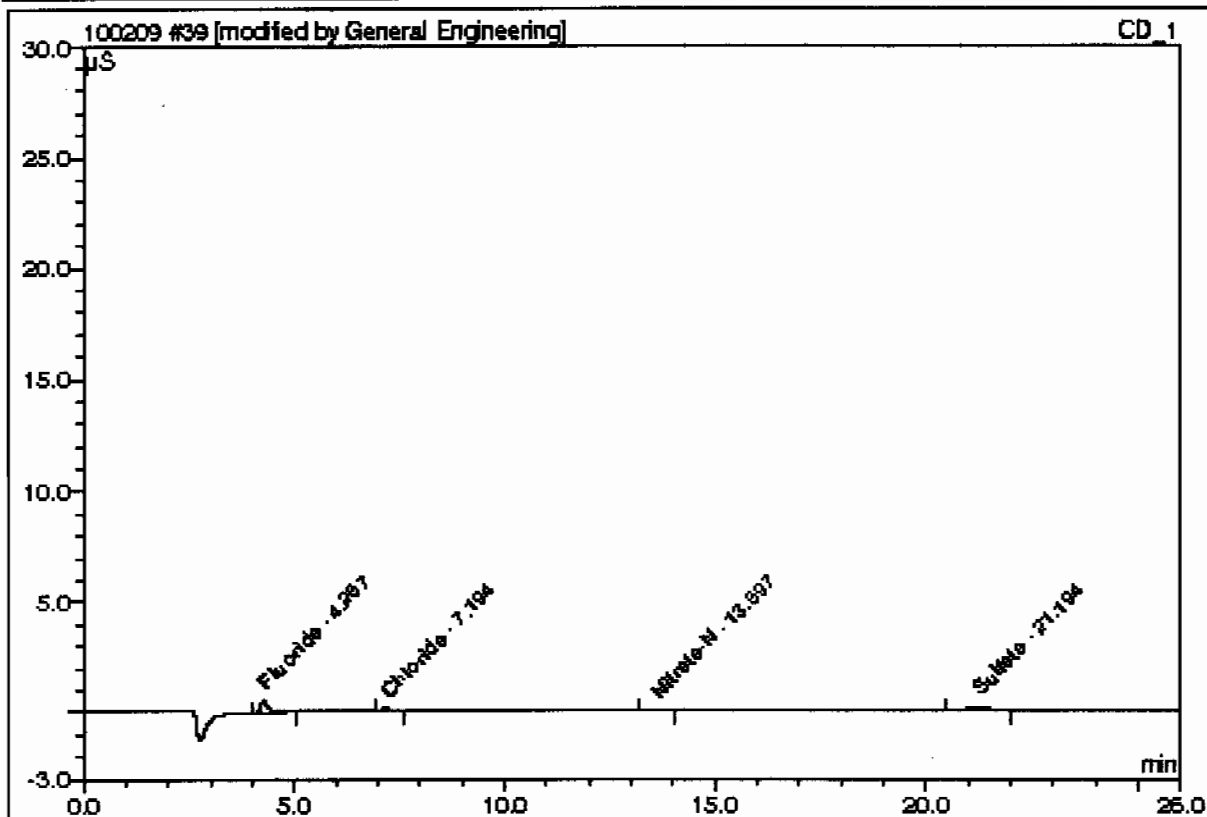
Sample Name:	245389005/944910/1/1/	Injection Volume:	1.0
Vial Number:	26	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 2:31	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC ED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area uS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.2415		0.11516	45.84
2	7.19	Chloride	n.a.	0.2266		0.02542	10.12
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	21.19	Sulfate	n.a.	0.6897		0.11065	44.04
Total:				1.1577	0.000	0.251	100.00

**39 245389005/944910/1/1/**

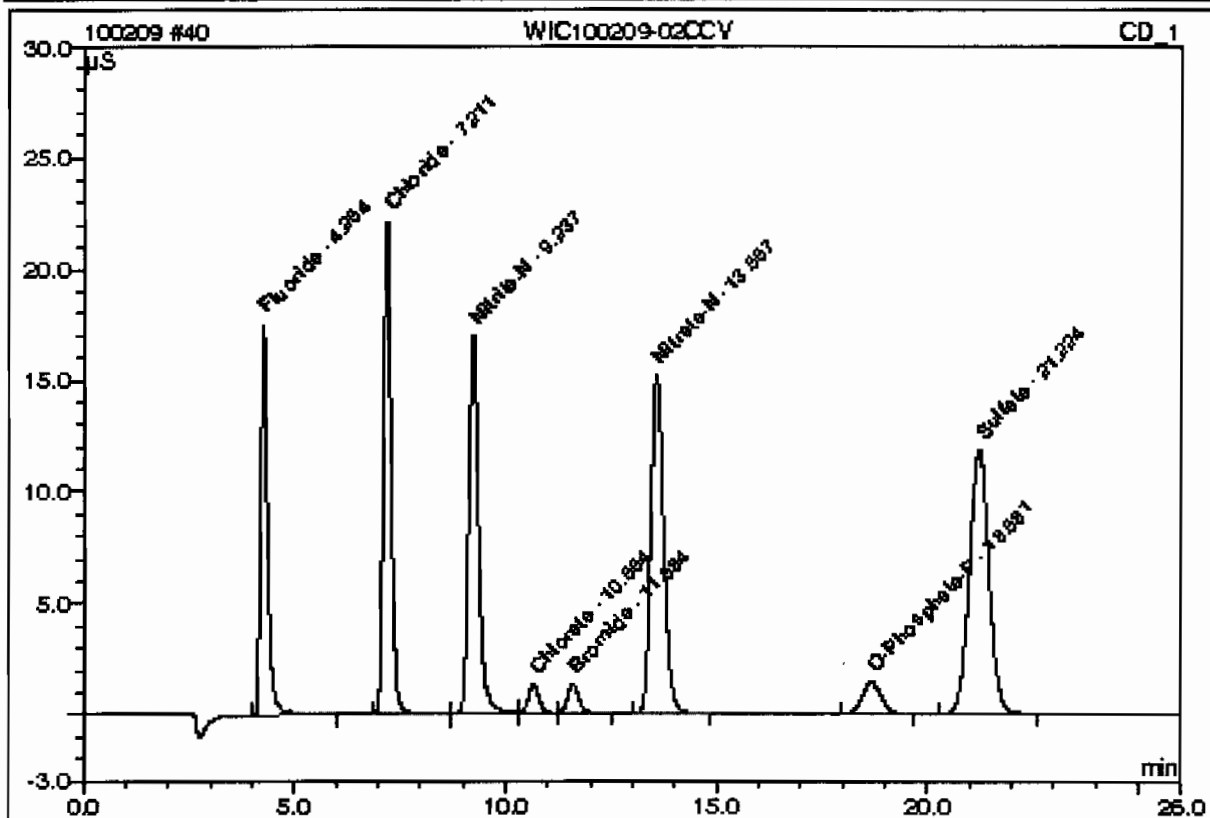
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Vial Number:	26	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 2:31	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area uS*min	Rel.Area %
1	4.26	Fluoride	n.a.	0.2415		0.11516	43.51
2	7.19	Chloride	n.a.	0.2266		0.02542	9.60
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	13.60	Nitrate-N	n.a.	0.1177		0.01345	5.08
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.19	Sulfate	n.a.	0.6897		0.11065	41.80
Total:				1.2754	0.000	0.265	100.00

**40 WIC100209-02CCV**

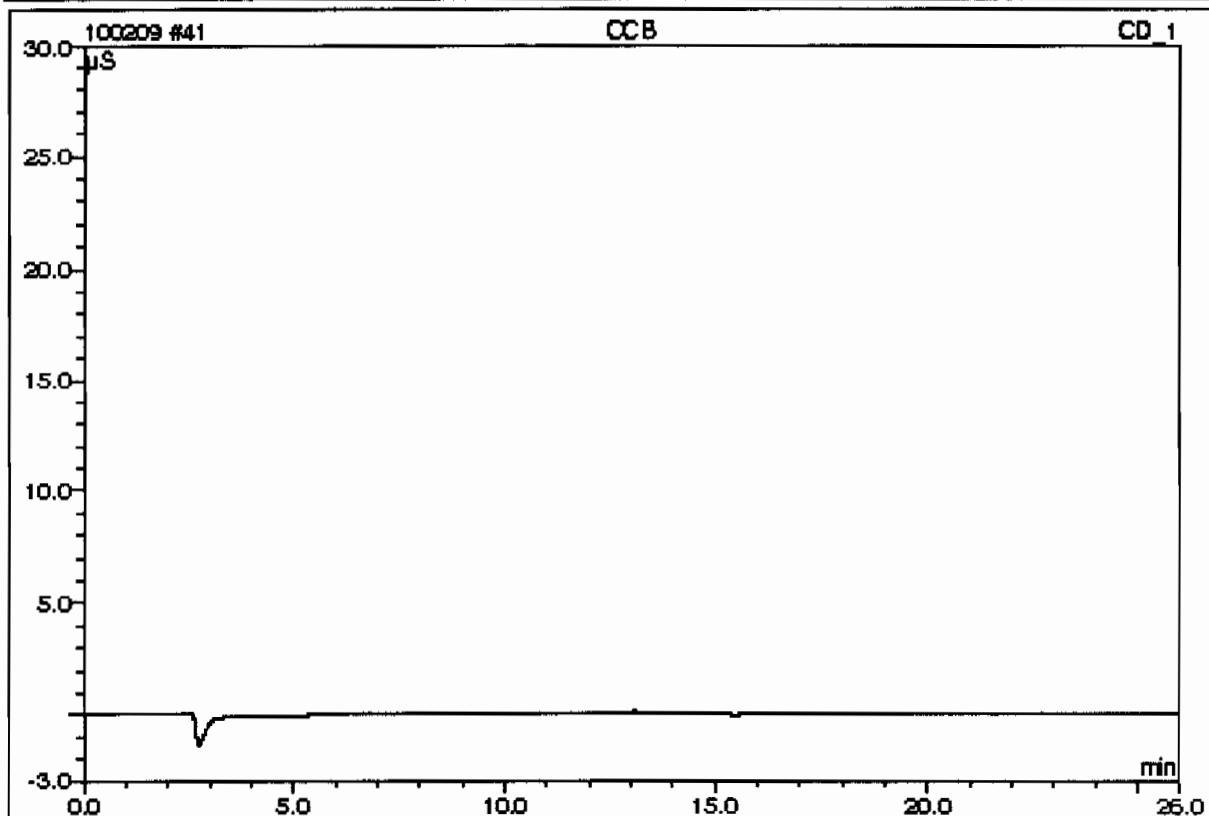
Sample Name:	WIC100209-02CCV	Injection Volume:	1.0
Vial Number:	27	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 2:59	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	5.1070		3.20561	12.46
2	7.21	Chloride	n.a.	9.7928		4.54106	17.65
3	9.24	Nitrite-N	n.a.	5.0596		4.63436	18.02
4	10.65	Chlorate	n.a.	2.5991		0.41181	1.60
5	11.58	Bromide	n.a.	2.5623		0.42571	1.66
6	13.56	Nitrate-N	n.a.	4.9379		5.37322	20.89
7	18.68	O-Phosphate-P	n.a.	2.4454		0.75878	2.95
8	21.22	Sulfate	n.a.	19.9943		6.37080	24.77
Total:				52.4984	0.000	25.721	100.00

**41 CCB**

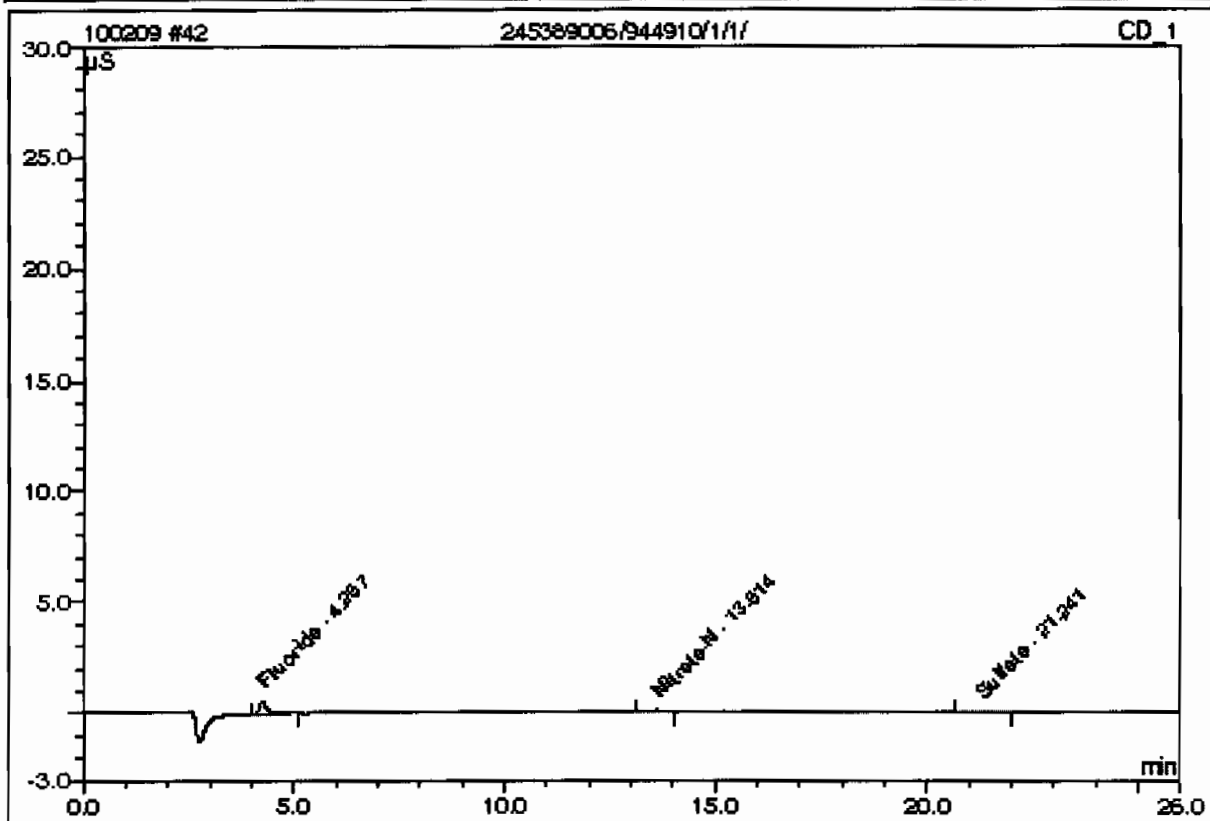
Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	28	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 3:28	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GC E086;300;9056



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

**42 245389006/944910/1/1/**

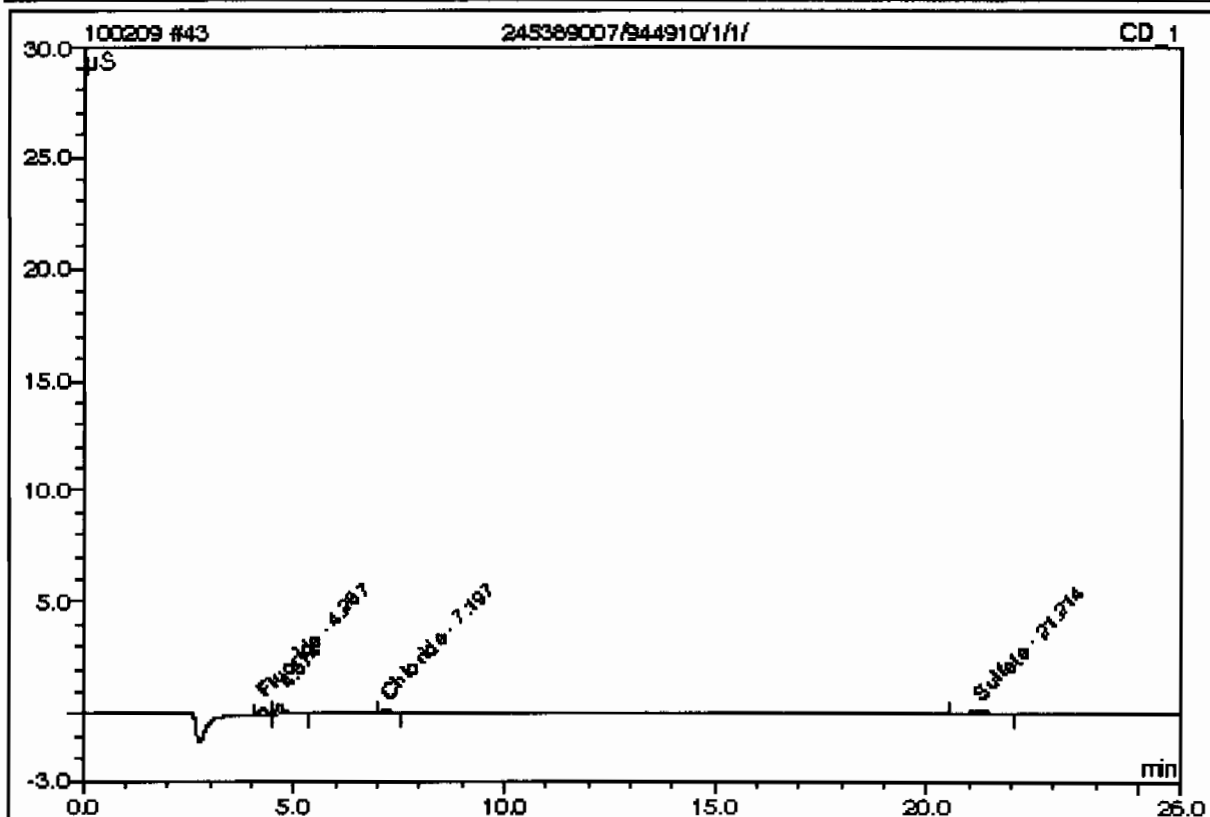
Sample Name:	245389006/944910/1/1/	Injection Volume:	1.0
Vial Number:	29	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 3:57	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.2694		0.13295	63.26
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.
2	13.61	Nitrate-N	n.a.	0.1356		0.03332	15.85
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	21.24	Sulfate	n.a.	0.4838		0.04389	20.88
Total:				0.8889	0.000	0.210	100.00

**43 245389007/944910/1/1/**

Sample Name:	245389007/944910/1/1/	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:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 4:26	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056

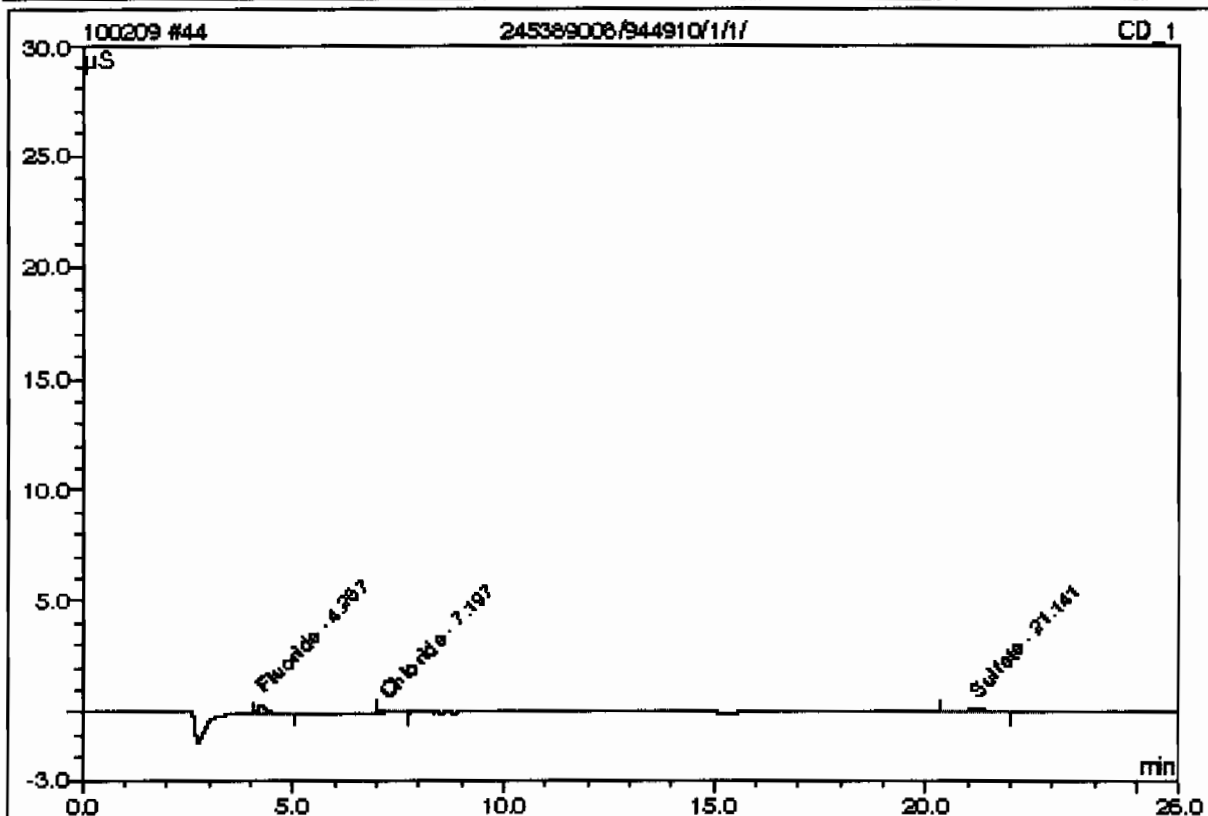


No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.1426		0.05235	19.45
3	7.20	Chloride	n.a.	0.2521		0.03749	13.93
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	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.
4	21.21	Sulfate	n.a.	0.5899		0.07829	29.09
Total:				0.9846	0.000	0.168	62.47



**44 245389008/944910/1/1/**

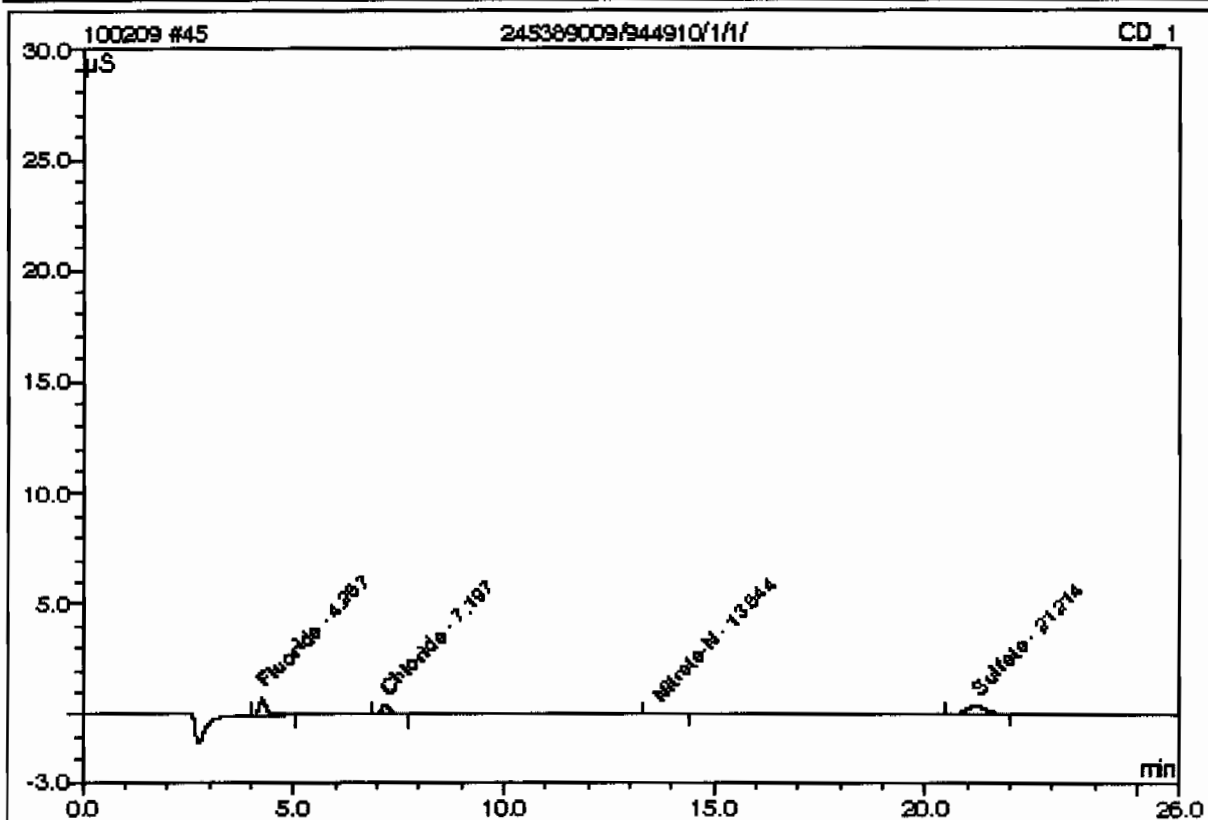
Sample Name:	245389008/944910/1/1/	Injection Volume:	1.0
Vial Number:	31	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 4:55	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.1839		0.07863	39.54
2	7.20	Chloride	n.a.	0.2233		0.02390	12.02
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.
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	21.14	Sulfate	n.a.	0.6455		0.09632	48.44
Total:				1.0528	0.000	0.199	100.00

**45 245389009/944910/1/1/**

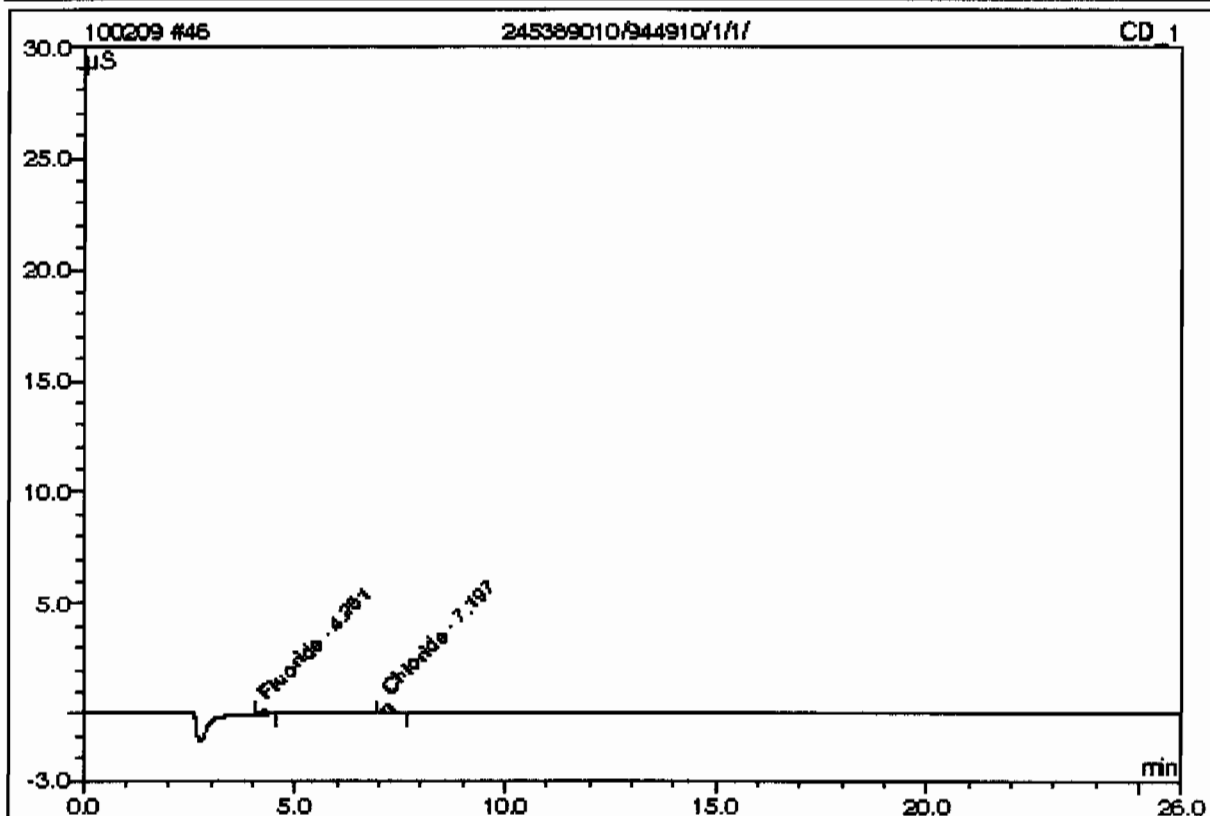
Sample Name:	245389009/944910/1/1/	Injection Volume:	1.0
Vial Number:	32	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 5:24	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.2895		0.14570	31.34
2	7.20	Chloride	n.a.	0.3481		0.08278	17.81
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	13.64	Nitrate-N	n.a.	0.1233		0.01966	4.23
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	21.21	Sulfate	n.a.	1.0170		0.21679	46.63
Total:				1.7779	0.000	0.465	100.00

**46 245389010/944910/1/1/**

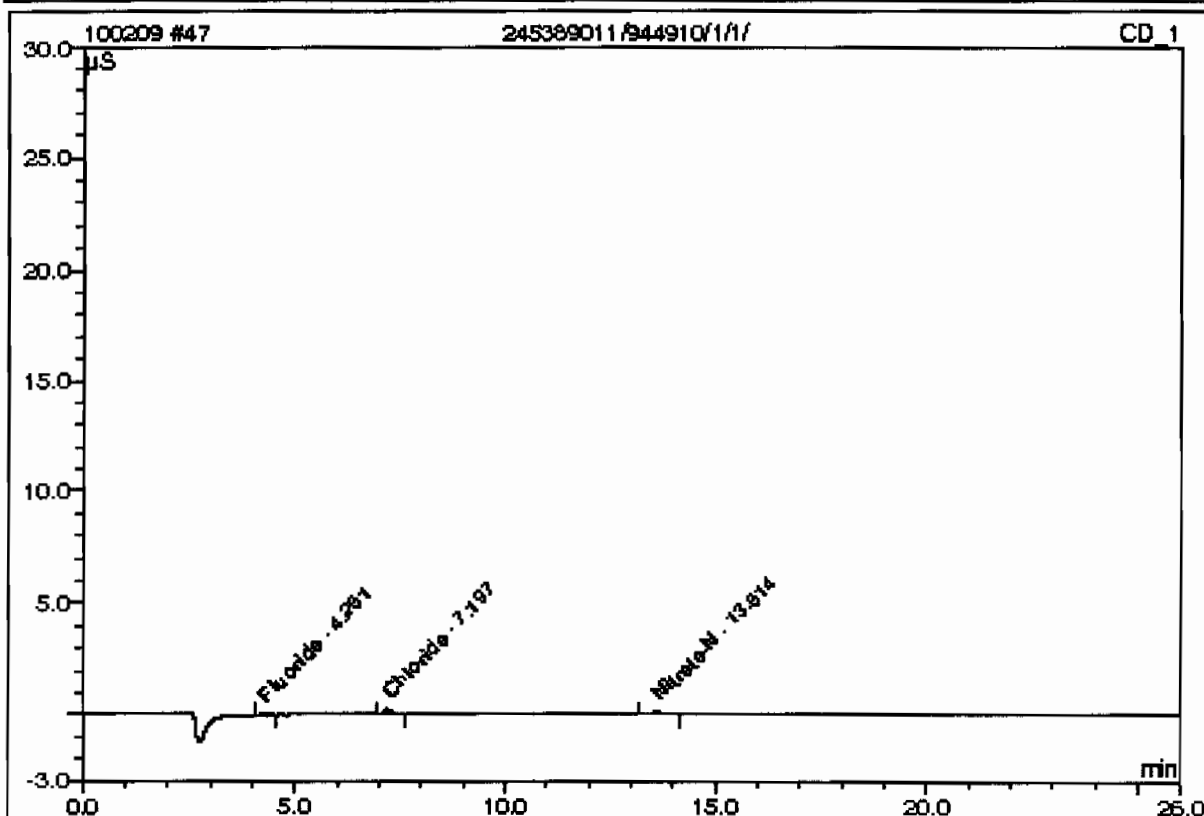
Sample Name:	245389010/944910/1/1/	Injection Volume:	1.0
Vial Number:	33	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 5:53	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel.Area %
1	4.26	Fluoride	n.a.	0.1027		0.02702	25.25
2	7.20	Chloride	n.a.	0.3421		0.07997	74.75
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:				0.4448	0.000	0.107	100.00

**47 245389011/944910/1/1/**

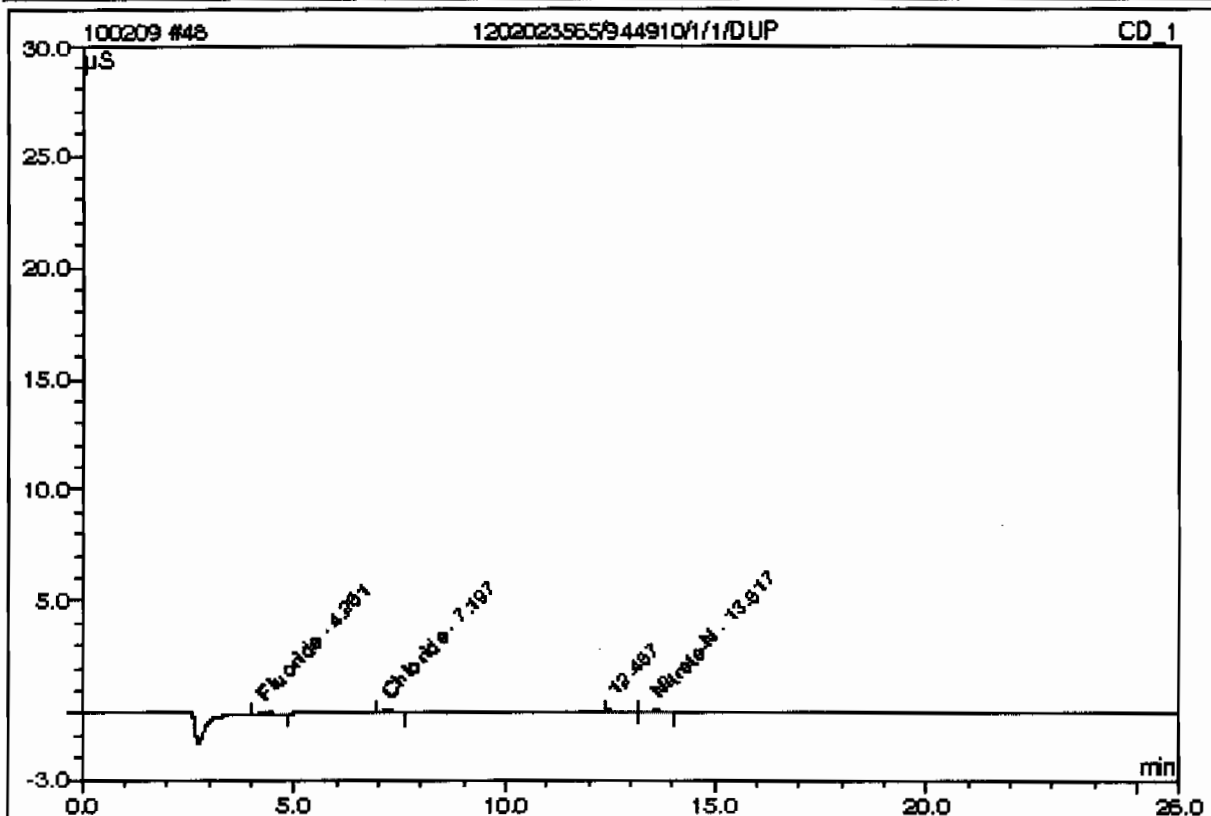
Sample Name:	245389011/944910/1/1/	Injection Volume:	1.0
Vial Number:	34	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 6:22	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCE086;300;9056



No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel. Area %
1	4.26	Fluoride	n.a.	0.0900		0.01895	18.92
2	7.20	Chloride	n.a.	0.2740		0.04783	47.77
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	13.61	Nitrate-N	n.a.	0.1356		0.03336	33.31
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:				0.4996	0.000	0.100	100.00

**48 1202023565/944910/1/1/DUP**

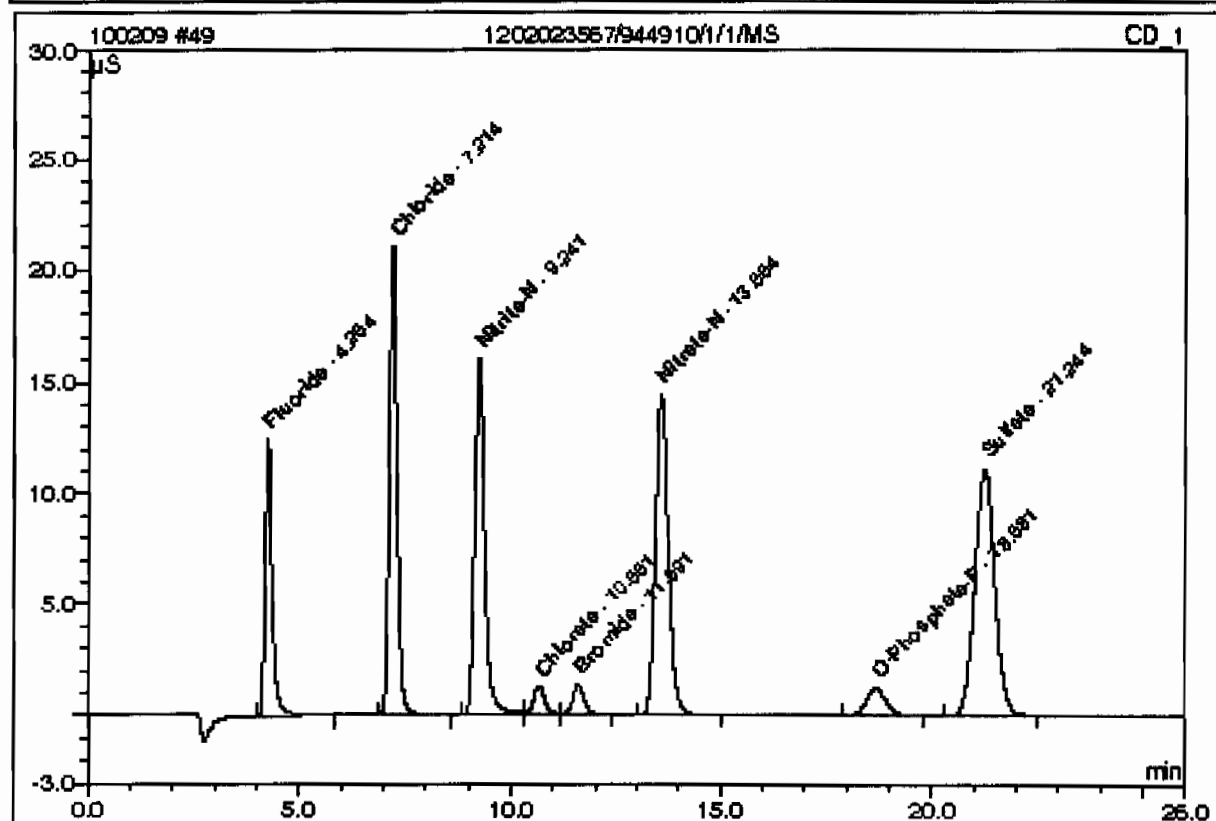
Sample Name:	1202023565/944910/1/1/DUP	Injection Volume:	1.0
Vial Number:	35	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 6:51	Analyst:	MAR1
Run Time (min):	26.00	Column:	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	4.26	Fluoride	n.a.	0.0985		0.02437	21.67
2	7.20	Chloride	n.a.	0.2574		0.03998	35.56
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.
4	13.62	Nitrate-N	n.a.	0.1333		0.03078	27.37
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:				0.4892	0.000	0.095	84.60

**49 1202023567/944910/1/1/MS**

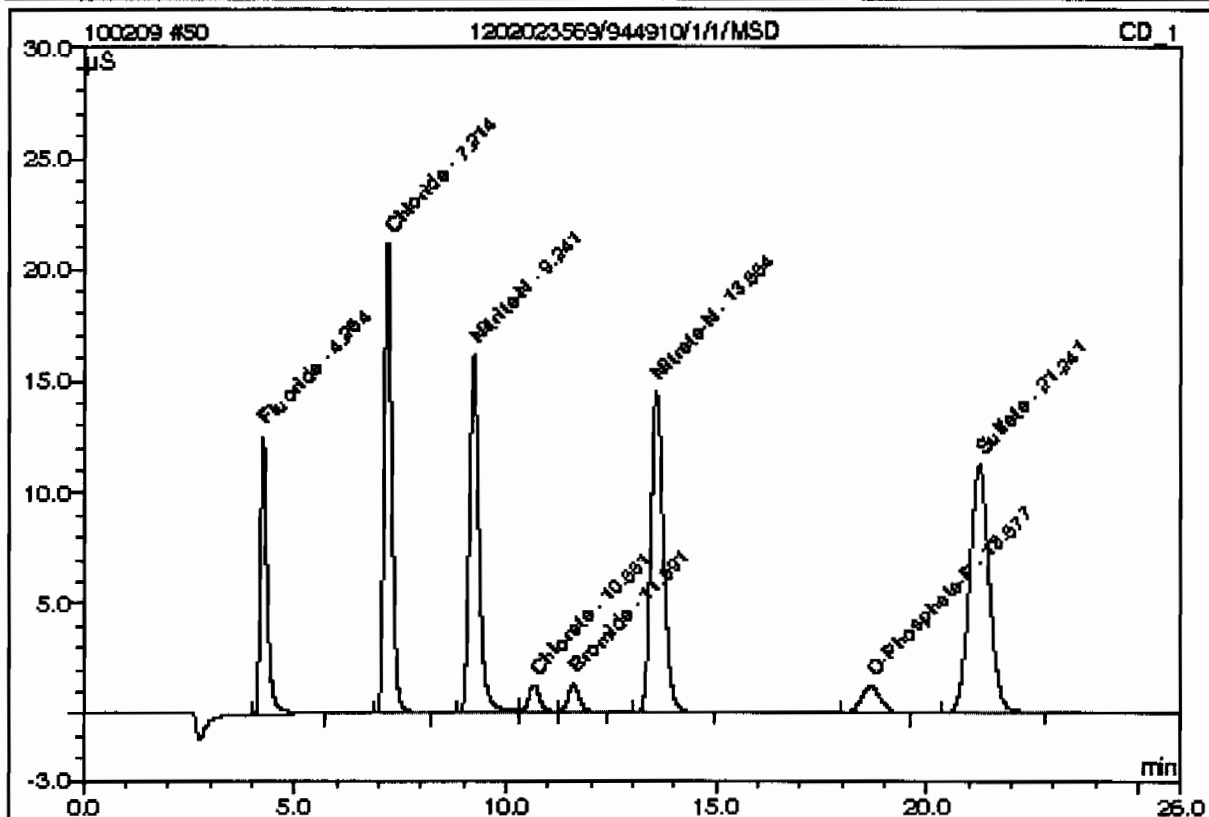
Sample Name:	1202023567/944910/1/1/MS	Injection Volume:	1.0
Vial Number:	36	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 7:20	Analyst:	MAR1
Run Time (min):	26.00	Column:	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	4.26	Fluoride	n.a.	3.6754		2.29634	9.72
2	7.21	Chloride	n.a.	9.3711		4.34200	18.38
3	9.24	Nitrite-N	n.a.	4.7741		4.36936	18.49
4	10.66	Chlorate	n.a.	2.4715		0.39107	1.66
5	11.59	Bromide	n.a.	2.5246		0.41937	1.77
6	13.56	Nitrate-N	n.a.	4.7252		5.13665	21.74
7	18.68	O-Phosphate-P	n.a.	2.1036		0.64793	2.74
8	21.24	Sulfate	n.a.	18.9302		6.02573	25.50
Total:				48.5757	0.000	23.628	100.00

**50 1202023569/944910/1/1/MSD**

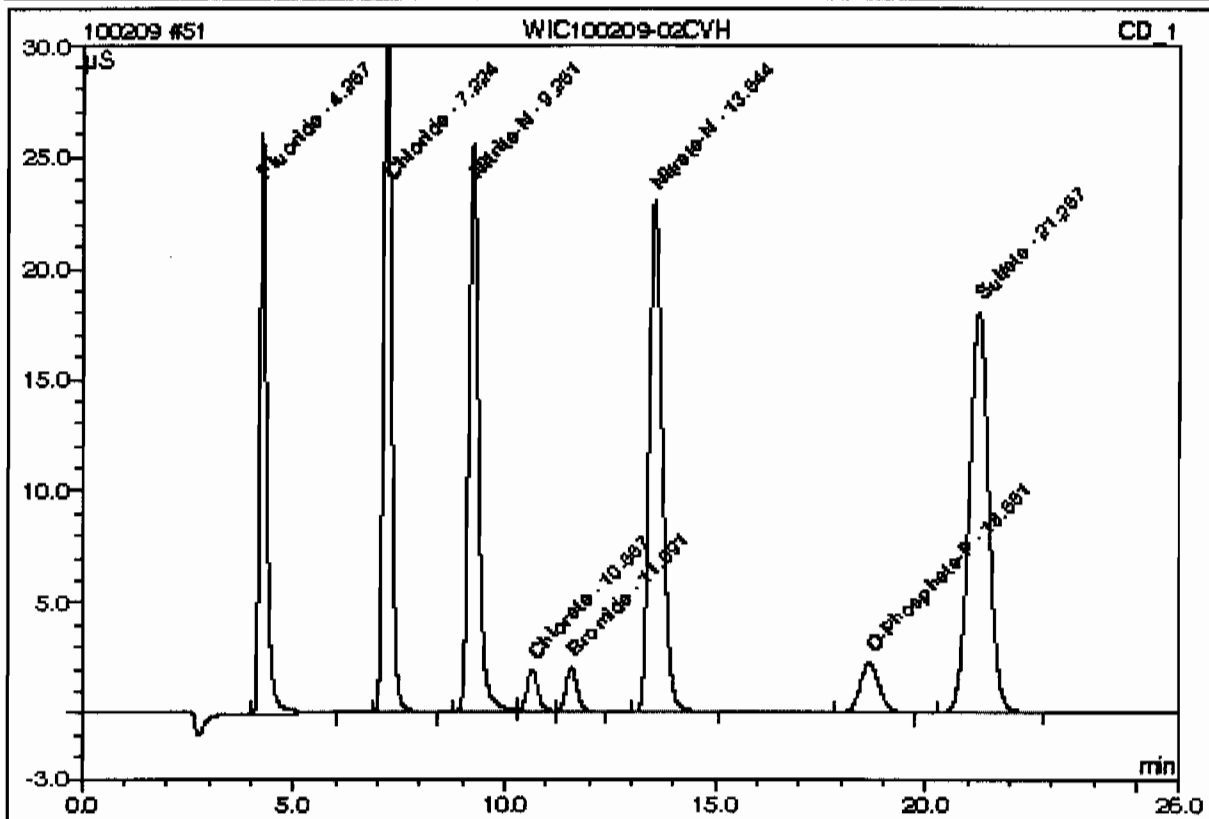
Sample Name:	1202023569/944910/1/1/MSD	Injection Volume:	1.0
Vial Number:	37	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 7:49	Analyst:	MAR1
Run Time (min):	26.00	Column:	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	4.26	Fluoride	n.a.	3.6786		2.29836	9.71
2	7.21	Chloride	n.a.	9.3461		4.33020	18.30
3	9.24	Nitrite-N	n.a.	4.7851		4.37958	18.51
4	10.66	Chlorate	n.a.	2.5470		0.40335	1.70
5	11.59	Bromide	n.a.	2.4822		0.41225	1.74
6	13.56	Nitrate-N	n.a.	4.7318		5.14401	21.74
7	18.66	O-Phosphate-P	n.a.	2.0690		0.63671	2.69
8	21.24	Sulfate	n.a.	19.0306		6.05828	25.60
Total:				48.8705	0.000	23.663	100.00

**51 WIC100209-02CVH**

Sample Name:	WIC100209-02CVH	Injection Volume:	1.0
Vial Number:	38	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 8:17	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS23-001528; GL GCED86;300;9056

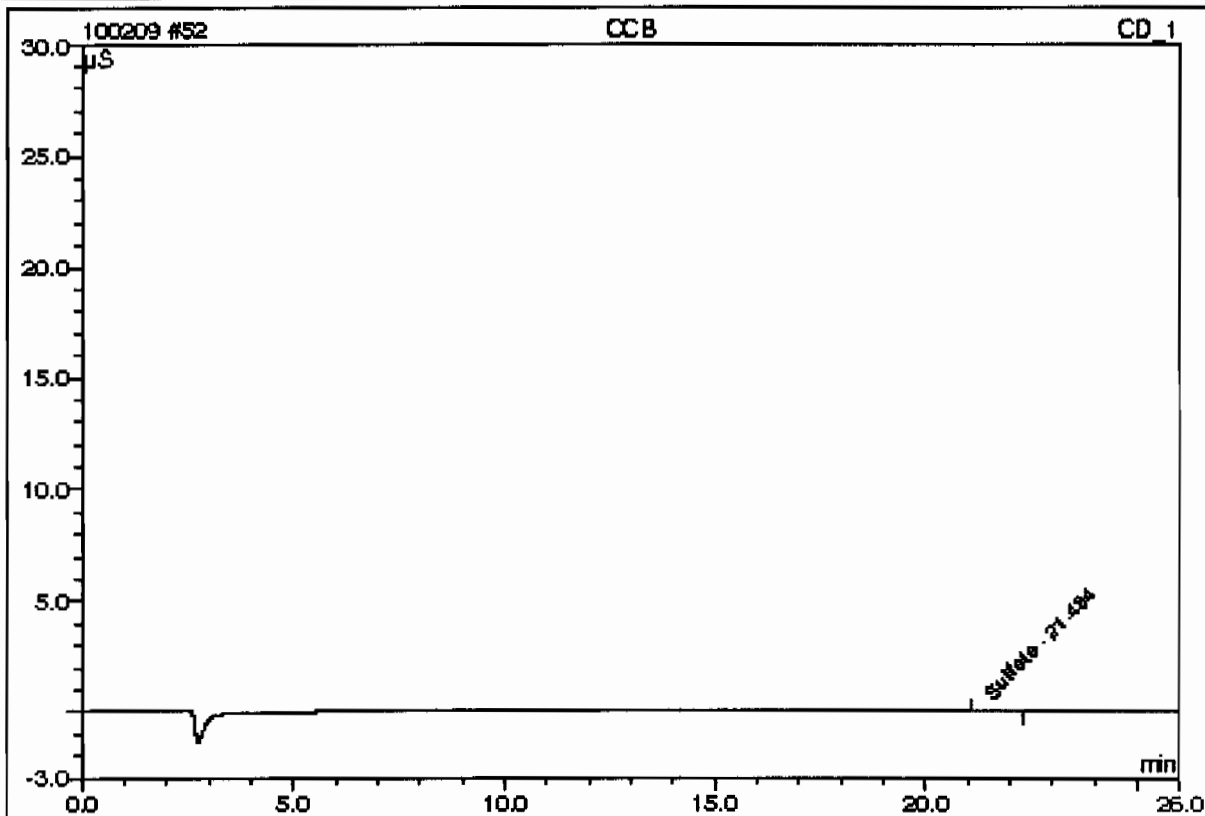


No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area μS*min	Rel.Area %
1	4.27	Fluoride	n.a.	7.5781		4.77517	12.28
2	7.22	Chloride	n.a.	14.8848		6.94468	17.82
3	9.25	Nitrate-N	n.a.	7.5614		6.95694	17.85
4	10.86	Chlorate	n.a.	3.8122		0.60898	1.56
5	11.59	Bromide	n.a.	3.8111		0.63564	1.63
6	13.54	Nitrate-N	n.a.	7.4800		8.19981	21.04
7	18.66	O-Phosphate-P	n.a.	3.7501		1.18198	3.03
8	21.26	Sulfate	n.a.	30.1415		9.66133	24.80
Total:				79.0191	0.000	38.965	100.00



**52 CCB**

Sample Name:	CCB	Injection Volume:	1.0
Vial Number:	39	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	100203an	Sample Amount:	1.0000
Recording Time:	2/10/2010 8:46	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 %
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.
1	21.48	Sulfate	n.a.	0.3982		0.01812	100.00
Total:				0.3982	0.000	0.018	100.00

**pH**

# pH / Corrosivity LogBook

Analyst: EXF1  
 Batch: 945107  
 Lab SOP: GL-GC-E-008 REV# 17  
 Description: pH  
 Method: SW/846 9045C/9045D

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Paramname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)	Description	
														Type	Serial Number
1202024171 LCS		Soil	15:00	15:05	25-JAN-10 15:03	pH	20	20	6.99	20.3°C	7	99.857		CCV	IMM091029-PH
1202024171 LCS		Soil	15:00	15:05	25-JAN-10 15:03	pH 2	20	20	6.99	20.4°C	7	99.857		LCS	IMM091221-01
245113008		Soil	15:00	15:05	25-JAN-10 15:06	pH	20	20	6.17	20.2°C					
245113008		Soil	15:00	15:05	25-JAN-10 15:06	pH 2	20	20	6.16	20.4°C					
245383001		Soil	15:00	15:05	25-JAN-10 15:10	pH	20	20	6.29	20.3°C					
245383001		Soil	15:00	15:05	25-JAN-10 15:10	pH 2	20	20	6.28	20.3°C					
1202024169 DUP	245383001	Soil	15:00	15:05	25-JAN-10 15:12	pH	20	20	6.21	20.3°C			1.28		
1202024169 DUP	245383001	Soil	15:00	15:05	25-JAN-10 15:12	pH 2	20	20	6.19	20.3°C			1.443		
245383002		Soil	15:00	15:05	25-JAN-10 15:13	pH	20	20	5.88	20.0°C					
245383002		Soil	15:00	15:05	25-JAN-10 15:13	pH 2	20	20	5.86	20.2°C					
CCV			15:00	15:05	25-JAN-10 15:16	pH	20	20	7.01	20.4°C	7	100.143			
CCV			15:00	15:05	25-JAN-10 15:16	pH 2	20	20	7.01	20.6°C	7	100.143			
245383003		Soil	15:00	15:05	25-JAN-10 15:17	pH	20	20	6.77	20.2°C					
245383003		Soil	15:00	15:05	25-JAN-10 15:17	pH 2	20	20	6.77	20.2°C					
245383004		Soil	15:00	15:05	25-JAN-10 15:19	pH	20	20	6.53	20.1°C					
245383004		Soil	15:00	15:05	25-JAN-10 15:19	pH 2	20	20	6.51	20.3°C					
245383005		Soil	15:00	15:05	25-JAN-10 15:20	pH	20	20	6.46	20.3°C					
245383005		Soil	15:00	15:05	25-JAN-10 15:20	pH 2	20	20	6.44	20.3°C					
245389001		Soil	15:00	15:05	25-JAN-10 15:24	pH	20	20	8.11	20.4°C					
245389001		Soil	15:00	15:05	25-JAN-10 15:24	pH 2	20	20	8.1	20.5°C					
245389002		Soil	15:00	15:05	25-JAN-10 15:26	pH	20	20	7.27	20.1°C					
245389002		Soil	15:00	15:05	25-JAN-10 15:26	pH 2	20	20	7.24	20.1°C					
CCV			15:00	15:05	25-JAN-10 15:28	pH	20	20	7	20.5°C	7	100			
CCV			15:00	15:05	25-JAN-10 15:28	pH 2	20	20	6.99	20.5°C	7	99.857			
245389003		Soil	15:00	15:05	25-JAN-10 15:30	pH	20	20	7.87	20.2°C					
245389003		Soil	15:00	15:05	25-JAN-10 15:30	pH 2	20	20	7.81	20.2°C					
245389004		Soil	15:00	15:05	25-JAN-10 15:31	pH	20	20	7.89	20.0°C					
245389004		Soil	15:00	15:05	25-JAN-10 15:31	pH 2	20	20	7.9	20.0°C					

# pH / Corrosivity LogBook

Analyst: EXF1  
 Batch: 945107  
 Lab SOP: GL-GC-E-008 REV# 17  
 Description: pH  
 Method: SW846 9045C/9045D

Type: CCV  
 Sample Id: 240  
 Serial Number: IMM091029-PH  
 Description: PH 7 BUFFER FOR PH  
 LCS  
 1202024171  
 IMM091221-01  
 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(%)
245389005		Soil	15:00	15:05	25-JAN-10 15:34	pH	20	20	7.89	20.0°C			
245389005		Soil	15:00	15:05	25-JAN-10 15:34	pH 2	20	20	7.86	20.0°C			
245389006		Soil	15:00	15:05	25-JAN-10 15:37	pH	20	20	8.04	19.9°C			
245389006		Soil	15:00	15:05	25-JAN-10 15:37	pH 2	20	20	8.03	19.9°C			
245389007		Soil	15:00	15:05	25-JAN-10 15:38	pH	20	20	7.51	19.9°C			
245389007		Soil	15:00	15:05	25-JAN-10 15:38	pH 2	20	20	7.51	19.9°C			
CCV			15:00	15:05	25-JAN-10 15:39	pH	20	20	6.98	20.5°C	7	99.714	
CCV			15:00	15:05	25-JAN-10 15:39	pH 2	20	20	6.97	20.5°C	7	99.571	
245389008		Soil	15:00	15:05	25-JAN-10 15:42	pH	20	20	7.35	19.8°C			
245389008		Soil	15:00	15:05	25-JAN-10 15:42	pH 2	20	20	7.34	19.9°C			
245389009		Soil	15:00	15:05	25-JAN-10 15:44	pH	20	20	8.08	19.9°C			
245389009		Soil	15:00	15:05	25-JAN-10 15:44	pH 2	20	20	8.09	20.1°C			
245389010		Soil	15:00	15:05	25-JAN-10 15:46	pH	20	20	7.05	19.8°C			
245389010		Soil	15:00	15:05	25-JAN-10 15:46	pH 2	20	20	7.05	19.8°C			
1202024170 DUP	245389010	Soil	15:00	15:05	25-JAN-10 15:48	pH	20	20	7.06	19.8°C			.142
1202024170 DUP	245389010	Soil	15:00	15:05	25-JAN-10 15:48	pH 2	20	20	7.06	19.8°C			.142
245389011		Soil	15:00	15:05	25-JAN-10 15:50	pH	20	20	6.63	19.4°C			
245389011		Soil	15:00	15:05	25-JAN-10 15:50	pH 2	20	20	6.64	19.8°C			
CCV			15:00	15:05	25-JAN-10 15:53	pH	20	20	6.98	20.2°C	7	99.714	
CCV			15:00	15:05	25-JAN-10 15:53	pH 2	20	20	6.97	20.4°C	7	99.571	

Comments:

Calibration Information:				Comments:			
Run Date:	25-JAN-10 14:59	Standard	Observed	Theoretical	C	%Recovery	
Instrument: PHX370 Analyst: EXF1	14:59 IMM100125-PH1	4.01	4	SU	20.4	100.25	
	14:59 IMM100125-PH-	7.01	7	SU	20.4	100.14	
	14:59 UPH100125-a	10	10	SU	20.4	100	
	14:59 UPH100125-02c-	2.03	2	SU	20.4	101.5	
	14:59 100125-a	12.03	12	SU	20.4	100.25	
	14:59 IMM100125-01a	6.99	7	SU	20.4	99.857	

GEL Laboratories LLC

Page#

# Miscellaneous

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 16-FEB-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> IC	<b>Test / Method:</b> EPA 300.0	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 944910	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 245389(10-1386)</b> <b>Application Issues:</b> Failed Recovery for MS/PS Failed Recovery for MSD/PSD			
<b>Specification and Requirements</b> <b>Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/MSD: QC 1202023566MS, QC 1202023568MSD		1. The MS and MSD recoveries fall outside of the GEL acceptance limits but within the client specified limits.	

**Originator's Name:**  
Mary Sherwood 16-FEB-10

**Data Validator/Group Leader:**  
Julia Hamilton 17-FEB-10

# **General Chemistry Analysis**

# Case Narrative



**General Chemistry Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1386-1**

**Method/Analysis Information**

<b>Product:</b>	<b>Cyanide, Total</b>		
<b>Analytical Batch:</b>	943824	<b>Method:</b>	SW9012A Cyanide and Total
<b>Prep Batch :</b>	943821	<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>
245390001	RE14-10-7693
1202020944	Method Blank (MB)
1202020948	Laboratory Control Sample (LCS)
1202023391	245378002(RE15-10-8078) Sample Duplicate (DUP)
1202023392	245378002(RE15-10-8078) Matrix Spike (MS)
1202023393	245378002(RE15-10-8078) Matrix Spike Duplicate (MSD)

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: 245378002 (RE15-10-8078).

**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. 1202023391 (RE15-10-8078).

**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:** 944815

**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:

<b>Sample ID</b>	<b>Client ID</b>
245390001	RE14-10-7693
1202023308	Method Blank (MB)
1202023309	245382001(RE15-10-8444) Sample Duplicate (DUP)
1202023311	245382001(RE15-10-8444) Post Spike (PS)
1202023313	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: 245382001 (RE15-10-8444).

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1202023311 (RE15-10-8444).

**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. 1202023309 (RE15-10-8444).

**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: 1202023309 (RE15-10-8444), 1202023311 (RE15-10-8444) and 245390001 (RE14-10-7693).

**Sample Re-analysis**

The following samples were re-analyzed due to LCS failure: 1202023308 (MB), 1202023309 (RE15-10-8444), 1202023311 (RE15-10-8444), 1202023313 (LCS) and 245390001 (RE14-10-7693).

**Miscellaneous Information****Data Exception (DER) Documentation**

The following DER was generated for this SDG: 783571 1202023311 (RE15-10-8444).

**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**

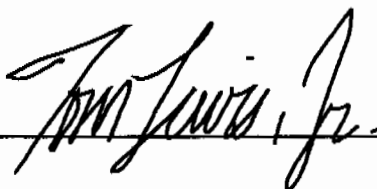
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**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: \_\_\_\_\_

17Feb10

# 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: 10-1386-1 GEL Work Order: 245390

**The Qualifiers in this report are defined as follows:**

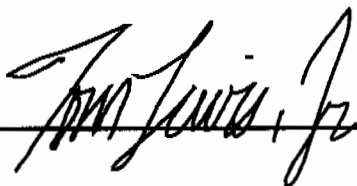
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

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 Lewis, Jr.", is written over a horizontal line.



# 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: February 4, 2010

Client SDG: 10-1386-1

Client Sample ID: RE14-10-7693  
Sample ID: 245390001  
Matrix: W  
Collect Date: 15-JAN-10 12:00  
Receive Date: 23-JAN-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	01/26/10	1124	943824	1
<b>Nutrient Analysis</b>											
<i>EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"</i>											
Nitrogen, Nitrate/Nitrite	U	ND	0.050	0.250	mg/L	5	AXH3	01/26/10	1454	944815	2

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1448	943821

### 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: February 4, 2010

Page 1 of 2

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

Contact: Ms. Joylene Valdez

Workorder: 245390

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Flow Injection Analysis</b>											
Batch	943824										
QC1202023391	245378002	DUP									
Cyanide, Total		U	ND	U	ND	ug/L	N/A		AXC2	01/26/10	11:18
QC1202020948	LCS										
Cyanide, Total	50.0				50.5	ug/L	101	(90%-110%)		01/26/10	10:54
QC1202020944	MB										
Cyanide, Total				U	5.00	ug/L				01/26/10	10:53
QC1202023392	245378002	MS									
Cyanide, Total	100	U	ND		104	ug/L	104	(60%-127%)		01/26/10	11:19
QC1202023393	245378002	MSD									
Cyanide, Total	100	U	ND		104	ug/L	0.00	104	(0%-20%)	01/26/10	11:20
<b>Nutrient Analysis</b>											
Batch	944815										
QC1202023309	245382001	DUP									
Nitrogen, Nitrate/Nitrite		U	ND	U	ND	mg/L	N/A		AXH3	01/26/10	14:18
QC1202023313	LCS										
Nitrogen, Nitrate/Nitrite	1.00				0.925	mg/L	92.5	(90%-110%)		01/26/10	14:12
QC1202023308	MB										
Nitrogen, Nitrate/Nitrite				U	0.050	mg/L				01/26/10	14:10
QC1202023311	245382001	PS									
Nitrogen, Nitrate/Nitrite	1.00	U	ND		0.837	mg/L	83.3 *	(90%-110%)		01/26/10	14:19

### 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: 245390

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Parmname	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: 04-FEB-2010 14:37

**GEL Laboratories LLC**

**Contract: LANL01004**

**SDG #: 10-1386-1**

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	26-JAN-2010 09:01:56	OM_1-26-2010_08-51-25	147	150	98	(90%-110%)	Yes
CCV	26-JAN-2010 10:50:05	OM_1-26-2010_09-58-45	102	100	102	(90%-110%)	Yes
CCV	26-JAN-2010 11:02:38	OM_1-26-2010_09-58-45	101	100	101	(90%-110%)	Yes
CCV	26-JAN-2010 11:15:08	OM_1-26-2010_09-58-45	102	100	102	(90%-110%)	Yes
CCV	26-JAN-2010 11:26:48	OM_1-26-2010_09-58-45	101	100	101	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	26-JAN-2010 09:03:46	OM_1-26-2010_08-51-25	-1.27	5	Yes
CCB	26-JAN-2010 10:51:54	OM_1-26-2010_09-58-45	-1.71	5	Yes
CCB	26-JAN-2010 11:04:28	OM_1-26-2010_09-58-45	-1.27	5	Yes
CCB	26-JAN-2010 11:16:58	OM_1-26-2010_09-58-45	-1.4	5	Yes
CCB	26-JAN-2010 11:28:38	OM_1-26-2010_09-58-45	-1.17	5	Yes

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 04-FEB-2010 14:37

**GEL Laboratories LLC**

**Contract: LANL01004**

**SDG #: 10-1386-1**

**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	26-JAN-2010 10:45:33	OM_1-26-2010_10-36-04	0.937	1	94	(90%-110%)	Yes
CCV	26-JAN-2010 14:06:12	OM_1-26-2010_14-05-09	0.976	1	98	(90%-110%)	Yes
CCV	26-JAN-2010 14:22:57	OM_1-26-2010_14-05-09	0.924	1	92	(90%-110%)	Yes
CCV	26-JAN-2010 14:39:43	OM_1-26-2010_14-05-09	0.924	1	92	(90%-110%)	Yes
CCV	26-JAN-2010 14:56:29	OM_1-26-2010_14-05-09	0.928	1	93	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	26-JAN-2010 10:47:55	OM_1-26-2010_10-36-04	-0.00048	0.05	Yes
CCB	26-JAN-2010 14:08:34	OM_1-26-2010_14-05-09	-0.00109	0.05	Yes
CCB	26-JAN-2010 14:25:19	OM_1-26-2010_14-05-09	0.00027	0.05	Yes
CCB	26-JAN-2010 14:42:05	OM_1-26-2010_14-05-09	0.00207	0.05	Yes
CCB	26-JAN-2010 14:58:50	OM_1-26-2010_14-05-09	-0.00112	0.05	Yes

# Cyanide, Total



# Prep LogBook

Analyst: AXS5  
 Batch: 943821  
 Lab SOP: GL-GC-E-067 REV# 13

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt	Final Volume	Prep Factor	Matrix	Type	Sample Id	Lot. Id	Spike Amount	Spike Units
MB	1202020944		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WASTE WATER	LCS	1202020948	URF1184831-02	.0125	mL
LCS	1202020948		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WASTE WATER	MS	1202020946	URF1184831-02	.025	mL
SAMPLE	245032001		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WASTE WATER	MS	1202023392	URF1184831-02	.025	mL
SAMPLE	245127001		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WASTE WATER	MSD	1202020947	URF1184831-02	.025	mL
SAMPLE	245130001		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WASTE WATER	MSD	1202023393	URF1184831-02	.025	mL
SAMPLE	245323003		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
DUP	1202020945	245323003	SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
MS	1202020946	245323003	SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
MSD	1202020947	245323003	SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245323014		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245323025		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245341001		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	STORM WATER					
SAMPLE	245341003		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	STORM WATER					
SAMPLE	245341005		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	STORM WATER					
SAMPLE	245341007		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	STORM WATER					
SAMPLE	245341009		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	STORM WATER					
SAMPLE	245341010		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	STORM WATER					
SAMPLE	245355007		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	STORM WATER					
SAMPLE	245362002		EPA 335.4	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245378002		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
DUP	1202023391	245378002	SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
MS	1202023392	245378002	SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
MSD	1202023393	245378002	SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245382001		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245386001		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245390001		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245392001		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					
SAMPLE	245392002		SW846 9010B Prep	25-JAN-2010 14:48	>12	25 mL	25 mL	1	WATER					

## Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
091211-C	25 mL	0.25N Sodium Hydroxide Solution	Samples 245323003, 1202020945, 1202020946, 1202020947, 245323014, and 245323025 were received with improper preservation. These samples were preserved with 50% NAOH which has an expiration date of 6/23/10 and a reference number that is 1246596-C.
WCN100125-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1238146-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/26/2010 8:54:47	OM_1-26-2010_08-51-25
150 ppb		1	axc2	1/26/2010 8:55:39	OM_1-26-2010_08-51-25
100 ppb		1	axc2	1/26/2010 8:56:31	OM_1-26-2010_08-51-25
50 ppb		1	axc2	1/26/2010 8:57:24	OM_1-26-2010_08-51-25
10 ppb		1	axc2	1/26/2010 8:58:18	OM_1-26-2010_08-51-25
CRDL 5.0 ppb		1	axc2	1/26/2010 8:59:11	OM_1-26-2010_08-51-25
ICAL-00		1	axc2	1/26/2010 9:00:05	OM_1-26-2010_08-51-25
ICV		1	axc2	1/26/2010 9:01:56	OM_1-26-2010_08-51-25
ICB		1	axc2	1/26/2010 9:03:46	OM_1-26-2010_08-51-25
CRDL		1	axc2	1/26/2010 9:05:36	OM_1-26-2010_08-51-25
1202022282	944401	1	axc2	1/26/2010 9:07:26	OM_1-26-2010_08-51-25
1202022289	944401	25	axc2	1/26/2010 9:08:19	OM_1-26-2010_08-51-25
245113001	944401	1	axc2	1/26/2010 9:09:13	OM_1-26-2010_08-51-25
245113002	944401	1	axc2	1/26/2010 9:10:06	OM_1-26-2010_08-51-25
245113003	944401	1	axc2	1/26/2010 9:10:59	OM_1-26-2010_08-51-25
245113004	944401	1	axc2	1/26/2010 9:11:51	OM_1-26-2010_08-51-25
245113005	944401	1	axc2	1/26/2010 9:12:44	OM_1-26-2010_08-51-25
245113006	944401	1	axc2	1/26/2010 9:13:37	OM_1-26-2010_08-51-25
245113007	944401	1	axc2	1/26/2010 9:14:29	OM_1-26-2010_08-51-25
245113009	944401	1	axc2	1/26/2010 9:15:22	OM_1-26-2010_08-51-25
CCV		1	axc2	1/26/2010 9:16:14	OM_1-26-2010_08-51-25
CCB		1	axc2	1/26/2010 9:18:04	OM_1-26-2010_08-51-25
245113010	944401	1	axc2	1/26/2010 9:19:52	OM_1-26-2010_08-51-25
245147008	944401	1	axc2	1/26/2010 9:20:45	OM_1-26-2010_08-51-25
1202022283	944401	1	axc2	1/26/2010 9:21:36	OM_1-26-2010_08-51-25
1202022285	944401	1	axc2	1/26/2010 9:22:28	OM_1-26-2010_08-51-25
1202022287	944401	1	axc2	1/26/2010 9:23:20	OM_1-26-2010_08-51-25
245147009	944401	1	axc2	1/26/2010 9:24:13	OM_1-26-2010_08-51-25
1202022284	944401	1	axc2	1/26/2010 9:25:07	OM_1-26-2010_08-51-25
1202022286	944401	1	axc2	1/26/2010 9:26:00	OM_1-26-2010_08-51-25
1202022288	944401	1	axc2	1/26/2010 9:26:53	OM_1-26-2010_08-51-25
245147010	944401	1	axc2	1/26/2010 9:27:47	OM_1-26-2010_08-51-25
CCV		1	axc2	1/26/2010 9:28:40	OM_1-26-2010_08-51-25
CCB		1	axc2	1/26/2010 9:30:29	OM_1-26-2010_08-51-25
245147011*	944401	1	axc2	1/26/2010 9:32:18	OM_1-26-2010_08-51-25
245147012*	944401	1	axc2	1/26/2010 9:33:11	OM_1-26-2010_08-51-25
245147013*	944401	1	axc2	1/26/2010 9:34:04	OM_1-26-2010_08-51-25
245147014*	944401	1	axc2	1/26/2010 9:34:56	OM_1-26-2010_08-51-25
245147015*	944401	1	axc2	1/26/2010 9:35:49	OM_1-26-2010_08-51-25
245147016*	944401	1	axc2	1/26/2010 9:36:41	OM_1-26-2010_08-51-25
245147017*	944401	1	axc2	1/26/2010 9:37:33	OM_1-26-2010_08-51-25
245147018*	944401	1	axc2	1/26/2010 9:38:26	OM_1-26-2010_08-51-25
1202022256*	944394	1	axc2	1/26/2010 9:39:18	OM_1-26-2010_08-51-25
1202022263*	944394	1	axc2	1/26/2010 9:40:09	OM_1-26-2010_08-51-25
CCV		1	axc2	1/26/2010 9:41:02	OM_1-26-2010_08-51-25
CCB		1	axc2	1/26/2010 9:42:53	OM_1-26-2010_08-51-25

Original Run Filename: OM\_1-26-2010\_08-51-25.OMN created 1/26/2010 08:51:25  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-26-2010\_08-51-25.OMN last modified 1/26/2010 09:43:57  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE Conc. (ug/L)	Area (Vs)				
WCN100126-01	1	S1	200	8.68	1/26/2010@08:54:47			200 ppb
WCN100126-02	1	S2	150	6.65	1/26/2010@08:55:39			150 ppb
WCN100126-03	1	S3	100	4.23	1/26/2010@08:56:31			100 ppb
WCN100126-04	1	S4	50.0	2.33	1/26/2010@08:57:24			50 ppb
WCN100126-05	1	S5	10.0	0.535	1/26/2010@08:58:18			10 ppb
WCN100126-06	1	S6	5.00	0.332	1/26/2010@08:59:11			CRDL 5.0 ppb
WCN100126-08	1	S7	0.00	0.0443	1/26/2010@09:00:05			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99965 > 0.99500					
Message			Pass					
Action			Continue					
WCN100126-07	1	S8	147	6.42	1/26/2010@09:01:56			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-1.9 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-1.9 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100126-08	1	S7	-1.27	0.0330	1/26/2010@09:03:46			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.27 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.27 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100126-06	1	S6	5.62	0.330	1/26/2010@09:05:36			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.62 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.62 > 2.50					
Message			Pass					
Action			None					
1202022282 944401 MB	1	1	-1.64	0.0171	1/26/2010@09:07:26			
1202022289 LCS	1	2	24.2	1.13	1/26/2010@09:08:19		25.00	
245113001	1	3	12.9	0.642	1/26/2010@09:09:13			
245113002	1	4	0.109	0.0924	1/26/2010@09:10:06			
245113003	1	5	-0.503	0.0660	1/26/2010@09:10:59			
245113004	1	6	-0.778	0.0541	1/26/2010@09:11:51			
245113005	1	7	0.853	0.124	1/26/2010@09:12:44			
245113006	1	8	-0.727	0.0563	1/26/2010@09:13:37			
245113007	1	9	0.715	0.118	1/26/2010@09:14:29			
245113009	1	10	0.323	0.102	1/26/2010@09:15:22			
WCN100126-03	1	S3	101	4.46	1/26/2010@09:16:14			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				
WCN100126-08	1	S7	-1.21	0.0353	1/26/2010@09:18:04		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				
245113010	1	11	0.237	0.0979	1/26/2010@09:19:52		
245147008	1	12	2.01	0.174	1/26/2010@09:20:45		
1202022283	1	13	0.898	0.126	1/26/2010@09:21:36		
1202022285	1	14	99.9	4.39	1/26/2010@09:22:28		
1202022287	1	15	99.4	4.37	1/26/2010@09:23:20		
245147009	1	16	1.79	0.165	1/26/2010@09:24:13		
1202022284	1	17	0.819	0.123	1/26/2010@09:25:07		
1202022286	1	18	97.2	4.28	1/26/2010@09:26:00		
1202022288	1	19	98.9	4.35	1/26/2010@09:26:53		
245147010	1	20	-0.567	0.0633	1/26/2010@09:27:47		
WCN100126-03	1	S3	103	4.50	1/26/2010@09:28:40		CCV
		Known Conc:	100				
		DQM Test: > + Percent Relative Difference					
		Result:	2.5 < 10.0				
		Message	CCV Passed				
		Action	Continue				
		DQM Test: < - Percent Relative Difference					
		Result:	2.5 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100126-08	1	S7	-1.63	0.0175	1/26/2010@09:30:29		CCB
		Known Conc:	0.00				
		DQM Test: > + Concentration Limit					
		Result:	-1.63 < 5.00				
		Message	CCB Passed				
		Action	Continue				
		DQM Test: < - Concentration Limit					
		Result:	-1.63 > -5.00				
		Message	CCB Passed				
		Action	Continue				
245147011	1	21	2.89	0.212	1/26/2010@09:32:18		
245147012	1	22	11.2	0.572	1/26/2010@09:33:11		
245147013	1	23	3.03	0.218	1/26/2010@09:34:04		
245147014	1	24	0.384	0.104	1/26/2010@09:34:56		
245147015	1	25	-0.655	0.0595	1/26/2010@09:35:49		
245147016	1	26	7.81	0.424	1/26/2010@09:36:41		
245147017	1	27	-0.657	0.0594	1/26/2010@09:37:33		
245147018	1	28	0.543	0.111	1/26/2010@09:38:26		
1202022256	1	29	-1.01	0.0440	1/26/2010@09:39:18		
1202022263	1	30	49.2	2.21	1/26/2010@09:40:09		
WCN100126-03	1	S3	103	4.54	1/26/2010@09:41:02		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				
WCN100126-08	1	S7	5.78	0.337	1/26/2010@09:42:53		CCB
		Known Conc:	0.00				
		DQM Test: > + Concentration Limit					

<b>Result:</b>	5.78 > 5.00					
<b>Message</b>	CCB Failed					
<b>Action</b>	Stop Run					
<b>DQM Test: &lt; - Concentration Limit</b>						
<b>Result:</b>	5.78 > -5.00					
<b>Message</b>	CCB Passed					
<b>Action</b>	Continue					

Analyte Properties Table for OM\_1-26-2010\_08-51-25.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

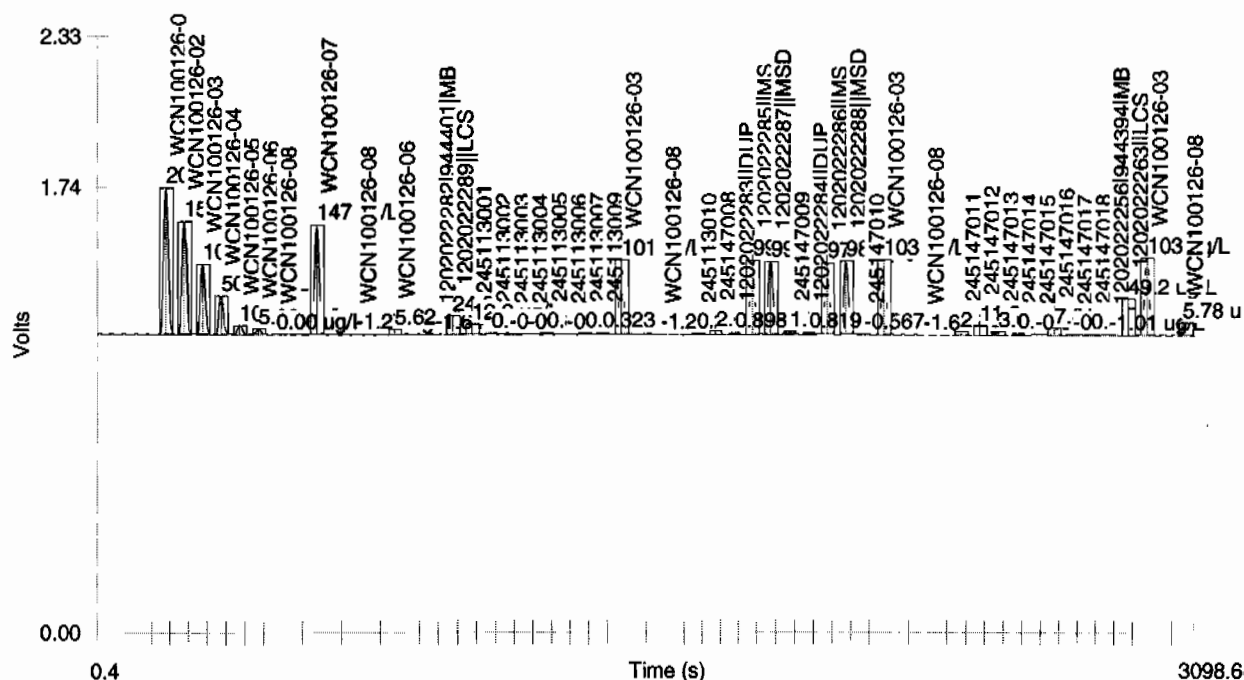
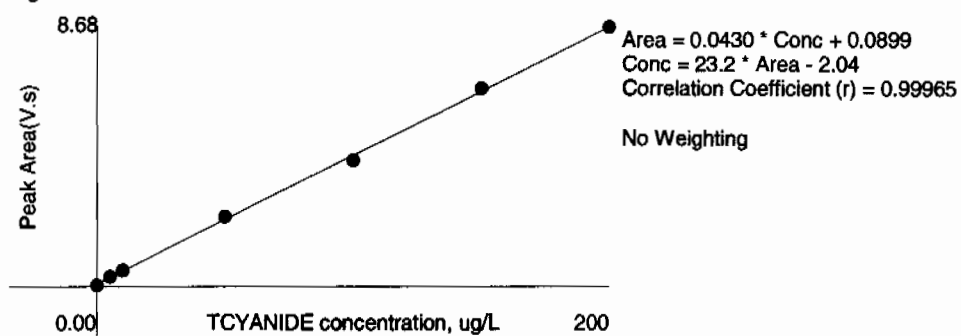


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.68	0.566	0.2	1/26/2010	08:55:50
2	150	1	6.65	0.437	-1.5	1/26/2010	08:56:42
3	100	1	4.23	0.275	3.8	1/26/2010	08:57:34
4	50.0	1	2.33	0.152	-3.8	1/26/2010	08:58:27
5	10.0	1	0.535	0.0337	-2.9	1/26/2010	08:59:21
6	5.00	1	0.332	0.0213	-8.8	1/26/2010	09:00:14
7	0.00	1	0.0443	8.65e-4		1/26/2010	09:01:08

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	1/26/2010 10:00:18	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:02:07	OM_1-26-2010_09-58-45
245147011	944401	1	axc2	1/26/2010 10:03:57	OM_1-26-2010_09-58-45
245147012	944401	1	axc2	1/26/2010 10:04:50	OM_1-26-2010_09-58-45
245147013	944401	1	axc2	1/26/2010 10:05:43	OM_1-26-2010_09-58-45
245147014	944401	1	axc2	1/26/2010 10:06:35	OM_1-26-2010_09-58-45
245147015	944401	1	axc2	1/26/2010 10:07:28	OM_1-26-2010_09-58-45
245147016	944401	1	axc2	1/26/2010 10:08:20	OM_1-26-2010_09-58-45
245147017	944401	1	axc2	1/26/2010 10:09:12	OM_1-26-2010_09-58-45
245147018	944401	1	axc2	1/26/2010 10:10:04	OM_1-26-2010_09-58-45
245147015	944401	1	axc2	1/26/2010 10:10:57	OM_1-26-2010_09-58-45
1202022256	944394	1	axc2	1/26/2010 10:11:49	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:12:41	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:14:31	OM_1-26-2010_09-58-45
245147017	944401	1	axc2	1/26/2010 10:16:19	OM_1-26-2010_09-58-45
1202022263	944394	1	axc2	1/26/2010 10:17:10	OM_1-26-2010_09-58-45
244447003	944394	1	axc2	1/26/2010 10:18:05	OM_1-26-2010_09-58-45
1202024087	944394	1	axc2	1/26/2010 10:18:58	OM_1-26-2010_09-58-45
1202024088	944394	1	axc2	1/26/2010 10:19:52	OM_1-26-2010_09-58-45
1202024089	944394	1	axc2	1/26/2010 10:20:45	OM_1-26-2010_09-58-45
245089001	944394	1	axc2	1/26/2010 10:21:39	OM_1-26-2010_09-58-45
245089002	944394	1	axc2	1/26/2010 10:22:32	OM_1-26-2010_09-58-45
245089003	944394	1	axc2	1/26/2010 10:23:25	OM_1-26-2010_09-58-45
245089004	944394	1	axc2	1/26/2010 10:24:18	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:25:10	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:27:00	OM_1-26-2010_09-58-45
245112001	944394	1	axc2	1/26/2010 10:28:48	OM_1-26-2010_09-58-45
245120001	944394	1	axc2	1/26/2010 10:29:41	OM_1-26-2010_09-58-45
245135001	944394	1	axc2	1/26/2010 10:30:34	OM_1-26-2010_09-58-45
245135002	944394	1	axc2	1/26/2010 10:31:26	OM_1-26-2010_09-58-45
245137001	944394	1	axc2	1/26/2010 10:32:18	OM_1-26-2010_09-58-45
1202022257	944394	1	axc2	1/26/2010 10:33:11	OM_1-26-2010_09-58-45
1202022259	944394	1	axc2	1/26/2010 10:34:02	OM_1-26-2010_09-58-45
1202022261	944394	1	axc2	1/26/2010 10:34:57	OM_1-26-2010_09-58-45
245137002	944394	1	axc2	1/26/2010 10:35:50	OM_1-26-2010_09-58-45
245137003	944394	1	axc2	1/26/2010 10:36:44	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:37:37	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:39:27	OM_1-26-2010_09-58-45
245142005	944394	1	axc2	1/26/2010 10:41:16	OM_1-26-2010_09-58-45
245175001	944394	1	axc2	1/26/2010 10:42:10	OM_1-26-2010_09-58-45
245175002	944394	1	axc2	1/26/2010 10:43:03	OM_1-26-2010_09-58-45
245175003	944394	1	axc2	1/26/2010 10:43:56	OM_1-26-2010_09-58-45
245185003	944394	1	axc2	1/26/2010 10:44:49	OM_1-26-2010_09-58-45
1202022258	944394	1	axc2	1/26/2010 10:45:43	OM_1-26-2010_09-58-45
1202022260	944394	1	axc2	1/26/2010 10:46:35	OM_1-26-2010_09-58-45
1202022262	944394	1	axc2	1/26/2010 10:47:27	OM_1-26-2010_09-58-45
245185014	944394	1	axc2	1/26/2010 10:48:20	OM_1-26-2010_09-58-45
245270001	944394	1	axc2	1/26/2010 10:49:12	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:50:05	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:51:54	OM_1-26-2010_09-58-45
1202020944	943824	1	axc2	1/26/2010 10:53:44	OM_1-26-2010_09-58-45
1202020948	943824	1	axc2	1/26/2010 10:54:36	OM_1-26-2010_09-58-45
245032001	943824	1	axc2	1/26/2010 10:55:30	OM_1-26-2010_09-58-45
245127001*	943824	1	axc2	1/26/2010 10:56:24	OM_1-26-2010_09-58-45
245130001	943824	1	axc2	1/26/2010 10:57:18	OM_1-26-2010_09-58-45
245323003	943824	1	axc2	1/26/2010 10:58:12	OM_1-26-2010_09-58-45
1202020945	943824	1	axc2	1/26/2010 10:59:06	OM_1-26-2010_09-58-45
1202020946	943824	1	axc2	1/26/2010 11:00:00	OM_1-26-2010_09-58-45



1202020947	943824	1	axc2	1/26/2010	11:00:53	OM_1-26-2010_09-58-45
245323014	943824	1	axc2	1/26/2010	11:01:46	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010	11:02:38	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010	11:04:28	OM_1-26-2010_09-58-45
245323025	943824	1	axc2	1/26/2010	11:06:17	OM_1-26-2010_09-58-45
245341001	943824	1	axc2	1/26/2010	11:07:10	OM_1-26-2010_09-58-45
245341003	943824	1	axc2	1/26/2010	11:08:03	OM_1-26-2010_09-58-45
245341005	943824	1	axc2	1/26/2010	11:08:55	OM_1-26-2010_09-58-45
245341007	943824	1	axc2	1/26/2010	11:09:48	OM_1-26-2010_09-58-45
245341009	943824	1	axc2	1/26/2010	11:10:40	OM_1-26-2010_09-58-45
245341010	943824	1	axc2	1/26/2010	11:11:32	OM_1-26-2010_09-58-45
245355007	943824	1	axc2	1/26/2010	11:12:27	OM_1-26-2010_09-58-45
245362002	943824	1	axc2	1/26/2010	11:13:21	OM_1-26-2010_09-58-45
245378002	943824	1	axc2	1/26/2010	11:14:16	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010	11:15:08	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010	11:16:58	OM_1-26-2010_09-58-45
1202023391	943824	1	axc2	1/26/2010	11:18:48	OM_1-26-2010_09-58-45
1202023392	943824	1	axc2	1/26/2010	11:19:41	OM_1-26-2010_09-58-45
1202023393	943824	1	axc2	1/26/2010	11:20:35	OM_1-26-2010_09-58-45
245382001	943824	1	axc2	1/26/2010	11:21:28	OM_1-26-2010_09-58-45
245386001	943824	1	axc2	1/26/2010	11:22:22	OM_1-26-2010_09-58-45
245127001	943824	1	axc2	1/26/2010	11:23:16	OM_1-26-2010_09-58-45
245390001	943824	1	axc2	1/26/2010	11:24:09	OM_1-26-2010_09-58-45
245392001	943824	1	axc2	1/26/2010	11:25:03	OM_1-26-2010_09-58-45
245392002	943824	1	axc2	1/26/2010	11:25:55	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010	11:26:48	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010	11:28:38	OM_1-26-2010_09-58-45

Original Run Filename: OM\_1-26-2010\_09-58-45.OMN created 1/26/2010 09:58:45  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-26-2010\_09-58-45.OMN last modified 1/26/2010 11:29:43  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE	Area (Vs)				
WCN100126-03	1	S3	102	4.46	1/26/2010@10:00:18			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			1.6 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			1.6 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100126-08	1	S7	2.83	0.210	1/26/2010@10:02:07			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			2.83 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			2.83 > -5.00					
Message			CCB Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
245147011 944401	1	21	2.96	0.215	1/26/2010@10:03:57			
245147012	1	22	11.6	0.586	1/26/2010@10:04:50			
245147013	1	23	3.64	0.245	1/26/2010@10:05:43			
245147014	1	24	0.385	0.104	1/26/2010@10:06:35			
245147015	1	25	2.58	0.199	1/26/2010@10:07:28			
245147016	1	26	8.00	0.432	1/26/2010@10:08:20			
245147017	1	27	3.47	0.237	1/26/2010@10:09:12			
245147018	1	28	1.87	0.168	1/26/2010@10:10:04			
245147015	1	25	0.130	0.0933	1/26/2010@10:10:57			
1202022256 944394 MB	1	29	-0.422	0.0695	1/26/2010@10:11:49			
WCN100126-03	1	S3	101	4.45	1/26/2010@10:12:41			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					
WCN100126-08	1	S7	-1.42	0.0263	1/26/2010@10:14:31			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.42 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.42 > -5.00					
Message			CCB Passed					
Action			Continue					
245147017 944401	1	27	-0.706	0.0572	1/26/2010@10:16:19			
1202022263 944394 LCS	1	30	49.7	2.23	1/26/2010@10:17:10			
244447003	1	31	-1.57	0.0199	1/26/2010@10:18:05			
1202024087 DUP	1	32	-1.41	0.0270	1/26/2010@10:18:58			
1202024088 MS	1	33	107	4.68	1/26/2010@10:19:52			
1202024089 MSD	1	34	104	4.55	1/26/2010@10:20:45			

245089001	1	35	-1.51	0.0226	1/26/2010@10:21:39		
245089002	1	36	-1.45	0.0252	1/26/2010@10:22:32		
245089003	1	37	-1.32	0.0307	1/26/2010@10:23:25		
245089004	1	38	-1.41	0.0271	1/26/2010@10:24:18		
WCN100126-03	1	S3	102	4.48	1/26/2010@10:25:10		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			2.0 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			2.0 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100126-08	1	S7	-1.45	0.0252	1/26/2010@10:27:00		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.45 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.45 > -5.00				
Message			CCB Passed				
Action			Continue				
245112001	1	39	-1.32	0.0309	1/26/2010@10:28:48		
245120001	1	40	-1.68	0.0151	1/26/2010@10:29:41		
245135001	1	41	-1.58	0.0196	1/26/2010@10:30:34		
245135002	1	42	-1.93	0.00472	1/26/2010@10:31:26		
245137001	1	43	-1.47	0.0245	1/26/2010@10:32:18		
1202022257  DUP	1	44	-1.40	0.0273	1/26/2010@10:33:11		
1202022259  MS	1	45	105	4.60	1/26/2010@10:34:02		
1202022261  MSD	1	46	102	4.48	1/26/2010@10:34:57		
245137002	1	47	-0.835	0.0517	1/26/2010@10:35:50		
245137003	1	48	-1.51	0.0224	1/26/2010@10:36:44		
WCN100126-03	1	S3	101	4.45	1/26/2010@10:37:37		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				
WCN100126-08	1	S7	-1.77	0.0114	1/26/2010@10:39:27		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.77 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.77 > -5.00				
Message			CCB Passed				
Action			Continue				
245142005	1	49	-0.822	0.0523	1/26/2010@10:41:16		
245175001	1	50	1.04	0.132	1/26/2010@10:42:10		
245175002	1	51	16.2	0.787	1/26/2010@10:43:03		
245175003	1	52	2.88	0.212	1/26/2010@10:43:56		
245185003	1	53	-7.41e-4	0.0876	1/26/2010@10:44:49		
1202022258  DUP	1	54	-1.09	0.0406	1/26/2010@10:45:43		
1202022260  MS	1	55	106	4.67	1/26/2010@10:46:35		
1202022262  MSD	1	56	105	4.62	1/26/2010@10:47:27		
245185014	1	57	-0.743	0.0557	1/26/2010@10:48:20		
245270001	1	58	8.01	0.433	1/26/2010@10:49:12		
WCN100126-03	1	S3	102	4.46	1/26/2010@10:50:05		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			1.6 < 10.0				

Message									
Action									
DQM Test: < - Percent Relative Difference									
Result: 1.6 < 10.0									
Message									
Action									
WCN100126-08	1	S7	-1.71	0.0141	1/26/2010@10:51:54				CCB
Known Conc: 0.00									
DQM Test: > + Concentration Limit									
Result: -1.71 < 5.00									
Message									
Action									
DQM Test: < - Concentration Limit									
Result: -1.71 > -5.00									
Message									
Action									
1202020944 943824 MB	1	59	-1.90	0.00597	1/26/2010@10:53:44				
1202020948 LCS	1	60	50.5	2.26	1/26/2010@10:54:36				
245032001	1	61	-0.813	0.0526	1/26/2010@10:55:30				
245127001	1	62	5.79	0.337	1/26/2010@10:56:24				
245130001	1	63	-1.19	0.0366	1/26/2010@10:57:18				
245323003	1	64	-1.30	0.0316	1/26/2010@10:58:12				
1202020945 DUP	1	65	-1.49	0.0236	1/26/2010@10:59:06				
1202020946 MS	1	66	107	4.70	1/26/2010@11:00:00				
1202020947 MSD	1	67	107	4.69	1/26/2010@11:00:53				
245323014	1	68	-1.45	0.0252	1/26/2010@11:01:46				
WCN100126-03	1	S3	101	4.46	1/26/2010@11:02:38				CCV
Known Conc: 100									
DQM Test: > + Percent Relative Difference									
Result: 1.5 < 10.0									
Message									
Action									
DQM Test: < - Percent Relative Difference									
Result: 1.5 < 10.0									
Message									
Action									
WCN100126-08	1	S7	-1.27	0.0331	1/26/2010@11:04:28				CCB
Known Conc: 0.00									
DQM Test: > + Concentration Limit									
Result: -1.27 < 5.00									
Message									
Action									
DQM Test: < - Concentration Limit									
Result: -1.27 > -5.00									
Message									
Action									
245323025	1	69	-1.07	0.0417	1/26/2010@11:06:17				
245341001	1	70	-0.612	0.0613	1/26/2010@11:07:10				
245341003	1	71	-1.34	0.0299	1/26/2010@11:08:03				
245341005	1	72	-1.33	0.0302	1/26/2010@11:08:55				
245341007	1	73	-1.74	0.0128	1/26/2010@11:09:48				
245341009	1	74	-1.57	0.0201	1/26/2010@11:10:40				
245341010	1	75	-1.09	0.0408	1/26/2010@11:11:32				
245355007	1	76	-0.933	0.0475	1/26/2010@11:12:27				
245362002	1	77	0.794	0.122	1/26/2010@11:13:21				
245378002	1	78	-0.745	0.0556	1/26/2010@11:14:16				
WCN100126-03	1	S3	102	4.47	1/26/2010@11:15:08				CCV
Known Conc: 100									
DQM Test: > + Percent Relative Difference									
Result: 1.8 < 10.0									
Message									
Action									
DQM Test: < - Percent Relative Difference									
Result: 1.8 < 10.0									
Message									
Action									
WCN100126-08	1	S7	-1.40	0.0274	1/26/2010@11:16:58				CCB
Known Conc: 0.00									

DQM Test: > + Concentration Limit						
Result:	-1.40 < 5.00					
Message	CCB Passed					
Action	Continue					
DQM Test: < - Concentration Limit						
Result:	-1.40 > -5.00					
Message	CCB Passed					
Action	Continue					
1202023391	DUP	1	79	-1.50	0.0229	1/26/2010@11:18:48
1202023392	MS	1	80	104	4.57	1/26/2010@11:19:41
1202023393	MSD	1	81	104	4.57	1/26/2010@11:20:35
245382001		1	82	-1.27	0.0331	1/26/2010@11:21:28
245386001		1	83	-2.03	2.70e-4	1/26/2010@11:22:22
245127001		1	62	-0.758	0.0550	1/26/2010@11:23:16
245390001		1	84	-1.68	0.0154	1/26/2010@11:24:09
245392001		1	85	-1.33	0.0306	1/26/2010@11:25:03
245392002		1	86	-1.86	0.00771	1/26/2010@11:25:55
WCN100126-03		1	S3	101	4.44	1/26/2010@11:26:48
Known Conc:			100			
DQM Test: > + Percent Relative Difference						
Result:	1.0 < 10.0					
Message	CCV Passed					
Action	Continue					
DQM Test: < - Percent Relative Difference						
Result:	1.0 < 10.0					
Message	CCV Passed					
Action	Continue					
WCN100126-08		1	S7	-1.17	0.0373	1/26/2010@11:28:38
Known Conc:			0.00			
DQM Test: > + Concentration Limit						
Result:	-1.17 < 5.00					
Message	CCB Passed					
Action	Continue					
DQM Test: < - Concentration Limit						
Result:	-1.17 > -5.00					
Message	CCB Passed					
Action	Continue					

Analyte Properties Table for OM\_1-26-2010\_09-58-45.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

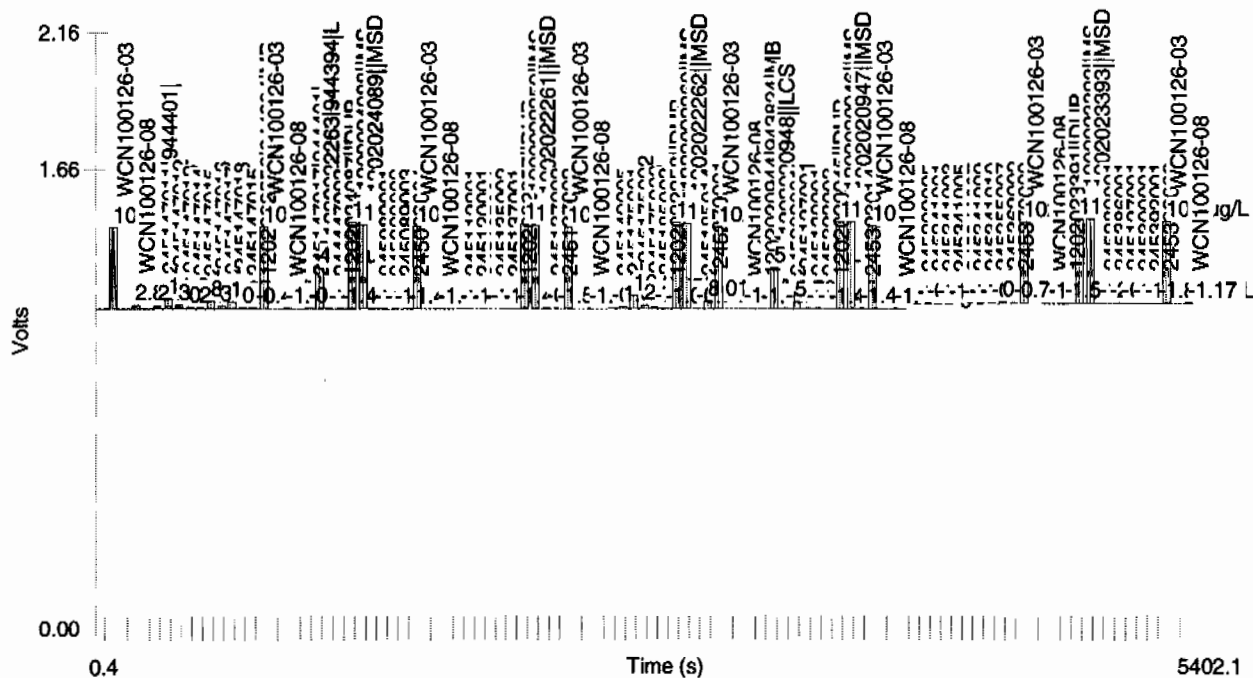
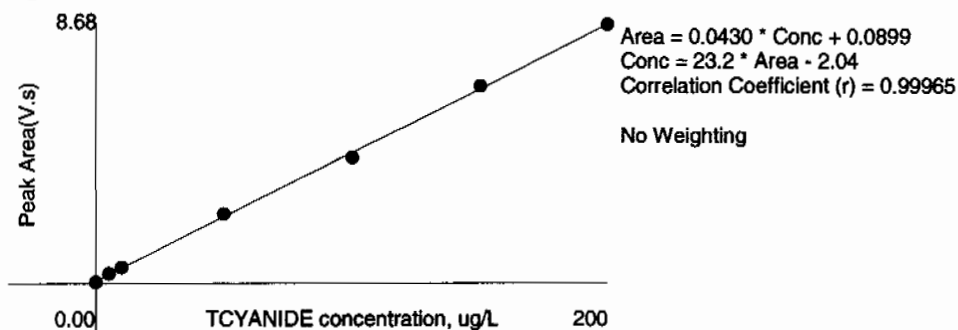


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.68	0.566	0.2	1/26/2010	08:55:50
2	150	1	6.65	0.437	-1.5	1/26/2010	08:56:42
3	100	1	4.23	0.275	3.8	1/26/2010	08:57:34
4	50.0	1	2.33	0.152	-3.8	1/26/2010	08:58:27
5	10.0	1	0.535	0.0337	-2.9	1/26/2010	08:59:21
6	5.00	1	0.332	0.0213	-8.8	1/26/2010	09:00:14
7	0.00	1	0.0443	8.65e-4		1/26/2010	09:01:08

Figure 1: TCYANIDE



# **Nitrate Nitrite by Cadmium Reduction**

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
1.5 PPM		1	axh3	1/26/2010 10:37:06	OM_1-26-2010_10-36-04
1.0 PPM		1	axh3	1/26/2010 10:38:18	OM_1-26-2010_10-36-04
0.5 ppm		1	axh3	1/26/2010 10:39:31	OM_1-26-2010_10-36-04
0.1 ppm		1	axh3	1/26/2010 10:40:44	OM_1-26-2010_10-36-04
0.05 ppm		1	axh3	1/26/2010 10:41:57	OM_1-26-2010_10-36-04
ICAL-00		1	axh3	1/26/2010 10:43:11	OM_1-26-2010_10-36-04
1.0 ppm ICV		1	axh3	1/26/2010 10:45:33	OM_1-26-2010_10-36-04
ICB		1	axh3	1/26/2010 10:47:55	OM_1-26-2010_10-36-04
Nitrate 1.0 ppm		1	axh3	1/26/2010 10:50:15	OM_1-26-2010_10-36-04
Nitrite 1.0 ppm		1	axh3	1/26/2010 10:52:35	OM_1-26-2010_10-36-04
1202020124	943485	1	axh3	1/26/2010 10:54:56	OM_1-26-2010_10-36-04
1202020127	943485	1	axh3	1/26/2010 10:56:09	OM_1-26-2010_10-36-04
245012002	943485	10	axh3	1/26/2010 10:57:22	OM_1-26-2010_10-36-04
1202023306	943485	10	axh3	1/26/2010 10:58:35	OM_1-26-2010_10-36-04
1202023307	943485	10	axh3	1/26/2010 10:59:48	OM_1-26-2010_10-36-04
245262004	943485	5	axh3	1/26/2010 11:01:00	OM_1-26-2010_10-36-04
245012006	943485	10	axh3	1/26/2010 11:02:13	OM_1-26-2010_10-36-04
245012009	943485	25	axh3	1/26/2010 11:03:25	OM_1-26-2010_10-36-04
245012012	943485	25	axh3	1/26/2010 11:04:38	OM_1-26-2010_10-36-04
245012015	943485	25	axh3	1/26/2010 11:05:50	OM_1-26-2010_10-36-04
1.0 ppm CCV		1	axh3	1/26/2010 11:07:02	OM_1-26-2010_10-36-04
CCB		1	axh3	1/26/2010 11:09:24	OM_1-26-2010_10-36-04
245110001	943485	5	axh3	1/26/2010 11:11:44	OM_1-26-2010_10-36-04
1202022183	943485	5	axh3	1/26/2010 11:12:56	OM_1-26-2010_10-36-04
1202022185	943485	5	axh3	1/26/2010 11:14:08	OM_1-26-2010_10-36-04
245256001	943485	10	axh3	1/26/2010 11:15:21	OM_1-26-2010_10-36-04
1202020125	943485	10	axh3	1/26/2010 11:16:34	OM_1-26-2010_10-36-04
1202020126	943485	10	axh3	1/26/2010 11:17:46	OM_1-26-2010_10-36-04
245154001	943485	5	axh3	1/26/2010 11:18:59	OM_1-26-2010_10-36-04
1202022182	943485	5	axh3	1/26/2010 11:20:12	OM_1-26-2010_10-36-04
1202022184	943485	5	axh3	1/26/2010 11:21:25	OM_1-26-2010_10-36-04
245032001	943485	5	axh3	1/26/2010 11:22:37	OM_1-26-2010_10-36-04
1.0 ppm CCV		1	axh3	1/26/2010 11:23:49	OM_1-26-2010_10-36-04
CCB		1	axh3	1/26/2010 11:26:11	OM_1-26-2010_10-36-04
245110002	943485	5	axh3	1/26/2010 11:28:31	OM_1-26-2010_10-36-04
245112001	943485	5	axh3	1/26/2010 11:29:42	OM_1-26-2010_10-36-04
245140001	943485	5	axh3	1/26/2010 11:30:56	OM_1-26-2010_10-36-04
245231001	943485	5	axh3	1/26/2010 11:32:08	OM_1-26-2010_10-36-04
245237001	943485	5	axh3	1/26/2010 11:33:21	OM_1-26-2010_10-36-04
245270001	943485	25	axh3	1/26/2010 11:34:33	OM_1-26-2010_10-36-04
245318006	943485	100	axh3	1/26/2010 11:35:44	OM_1-26-2010_10-36-04
245318009	943485	5	axh3	1/26/2010 11:36:57	OM_1-26-2010_10-36-04
245318010	943485	5	axh3	1/26/2010 11:38:08	OM_1-26-2010_10-36-04
245373001	943485	5	axh3	1/26/2010 11:39:19	OM_1-26-2010_10-36-04
1.0 ppm CCV		1	axh3	1/26/2010 11:40:31	OM_1-26-2010_10-36-04
CCB		1	axh3	1/26/2010 11:42:54	OM_1-26-2010_10-36-04



Original Run Filename: OM\_1-26-2010\_10-36-04.OMN created 1/26/2010 10:36:04  
 Original Run Author's Signature: [lachat]  
 Current Run Filename: OM\_1-26-2010\_10-36-04.OMN last modified 1/26/2010 11:44:35  
 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)				
WTR100126-26	1	S9	1.50	19.1	1/26/2010@10:37:06			1.5 PPM
WTR100126-25	1	S10	1.00	12.6	1/26/2010@10:38:18			1.0 PPM
WTR100126-24	1	S11	0.500	6.34	1/26/2010@10:39:31			0.5 ppm
WTR100126-23	1	S12	0.100	1.28	1/26/2010@10:40:44			0.1 ppm
WTR100126-21	1	S13	0.0500	0.656	1/26/2010@10:41:57			0.05 ppm
0.0ppm	1	S15	0.00	-0.0175	1/26/2010@10:43:11			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
Result:			0.99996 > 0.99500					
Message			Calibration Passed					
Action			Continue					
WTR100126-27 ICV	1	S16	0.937	11.9	1/26/2010@10:45:33			1.0 ppm ICV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.937 < 1.10					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.937 > 0.894					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
ICB	1	S15	-4.77e-4	-0.0161	1/26/2010@10:47:55			ICB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-4.77e-4 < 0.0500					
Message			ICB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-4.77e-4 > -0.0500					
Message			ICB Passed					
Action			Continue					
WTR100126-22	1	S1	0.932	11.8	1/26/2010@10:50:15			Nitrate 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.932 < 1.10					
Message			Nitrate Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.932 > 0.894					
Message			Nitrate Standard Passed					
Action			Continue					
WTR100126-28	1	S2	0.937	11.9	1/26/2010@10:52:35			Nitrite 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.937 < 1.10					
Message			Nitrite Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.937 > 0.894					
Message			Nitrite Standard Passed					
Action			Continue					
1202020124 943485 MB	1	1	0.00776	0.0885	1/26/2010@10:54:56			
1202020127 LCS	1	2	0.945	12.0	1/26/2010@10:56:09			
245012002	1	3	0.242	3.07	1/26/2010@10:57:22		10.00	
1202023306 DUP	1	4	0.238	3.01	1/26/2010@10:58:35		10.00	
1202023307 PS	1	5	1.21	15.3	1/26/2010@10:59:48		10.00	

245262004	1	25	0.0172	0.208	1/26/2010@11:01:00		
245012006	1	6	0.248	3.15	1/26/2010@11:02:13	10.00	
245012009	1	7	0.863	11.0	1/26/2010@11:03:25	25.00	
245012012	1	8	0.191	2.42	1/26/2010@11:04:38	25.00	
245012015	1	9	0.392	4.98	1/26/2010@11:05:50	25.00	
WTR100126-25 CCV	1	S10	1.00	12.8	1/26/2010@11:07:02		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				
CCB	1	S15	-9.91e-4	-0.0227	1/26/2010@11:09:24		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-9.91e-4 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-9.91e-4 > -0.0500				
Message			CCB Passed				
Action			Continue				
245110001	1	11	0.00797	0.0913	1/26/2010@11:11:44	5.00	
1202022183  DUP	1	12	0.00935	0.109	1/26/2010@11:12:56	5.00	
1202022185  PS	1	13	0.985	12.5	1/26/2010@11:14:08	5.00	
245256001	1	22	0.222	2.81	1/26/2010@11:15:21	10.00	
1202020125  DUP	1	23	0.217	2.75	1/26/2010@11:16:34	10.00	
1202020126  PS	1	24	1.18	15.0	1/26/2010@11:17:46	10.00	
245154001	1	17	0.637	8.08	1/26/2010@11:18:59	5.00	
1202022182  DUP	1	18	0.589	7.48	1/26/2010@11:20:12	5.00	
1202022184  PS	1	19	1.54	19.6	1/26/2010@11:21:25	5.00	
245032001	1	10	0.258	3.27	1/26/2010@11:22:37	5.00	
WTR100126-25 CCV	1	S10	0.986	12.5	1/26/2010@11:23:49		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:			0.986 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.986 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	-0.00176	-0.0324	1/26/2010@11:26:11		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-0.00176 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-0.00176 > -0.0500				
Message			CCB Passed				
Action			Continue				
245110002	1	14	0.00943	0.110	1/26/2010@11:28:31	5.00	
245112001	1	15	0.00535	0.0579	1/26/2010@11:29:42	5.00	
245140001	1	16	0.00743	0.0844	1/26/2010@11:30:56	5.00	
245231001	1	20	0.141	1.78	1/26/2010@11:32:08	5.00	
245237001	1	21	0.0951	1.20	1/26/2010@11:33:21	5.00	
245270001	1	26	0.543	6.89	1/26/2010@11:34:33	25.00	
245318006	1	27	0.481	6.10	1/26/2010@11:35:44	100.00	
245318009	1	28	0.0788	0.992	1/26/2010@11:36:57	5.00	
245318010	1	29	0.0748	0.941	1/26/2010@11:38:08	5.00	
245373001	1	30	0.00646	0.0721	1/26/2010@11:39:19	5.00	
WTR100126-25 CCV	1	S10	0.939	11.9	1/26/2010@11:40:31		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	-2.10e-4	-0.0127	1/26/2010@11:42:54		CCB
Known Conc:		0.00					
DQM Test: > + Concentration Limit							
Result:		-2.10e-4 < 0.0500					
Message		CCB Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		-2.10e-4 > -0.0500					
Message		CCB Passed					
Action		Continue					

Channel 1 (NO3 + NO2) : Current View

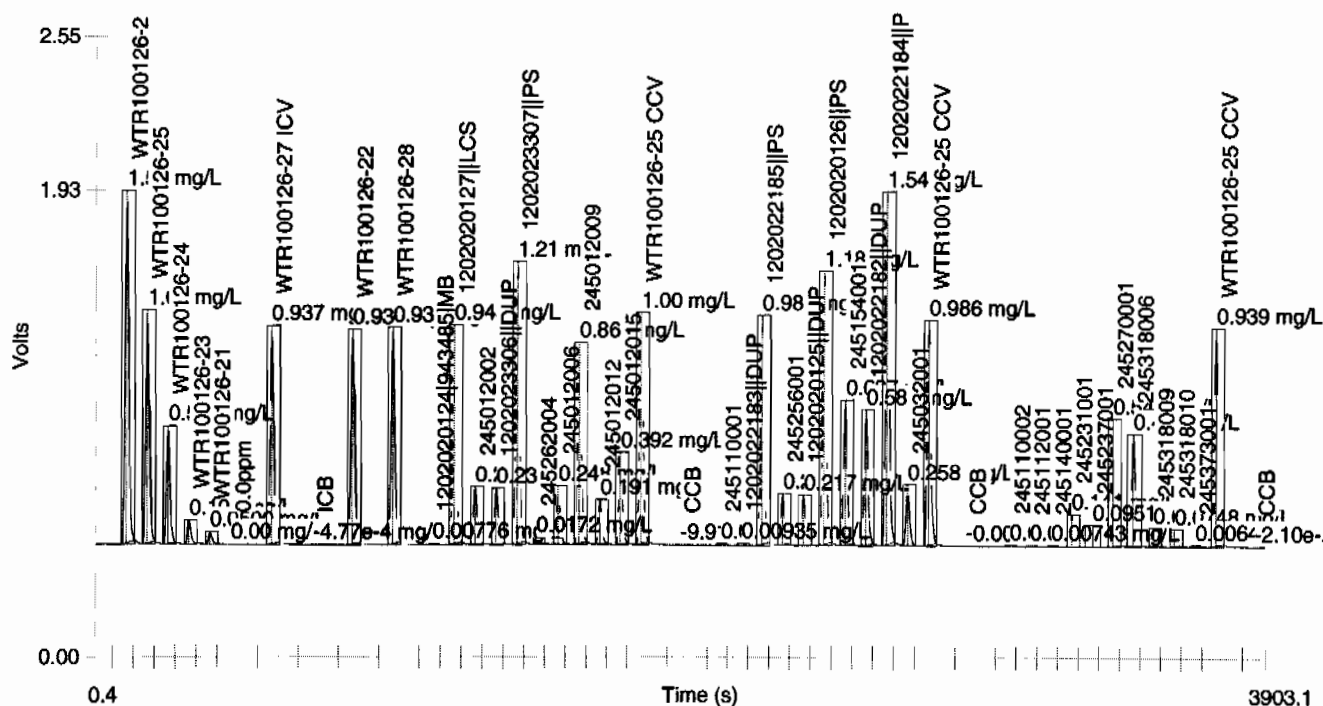
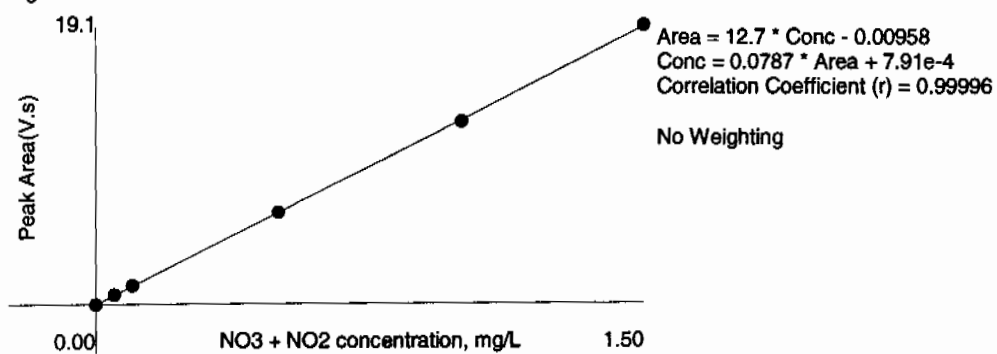


Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	19.1	1.45	-0.4	1/26/2010	10:38:26
2	1.00	1	12.6	0.952	0.9	1/26/2010	10:39:38
3	0.500	1	6.34	0.478	0.0	1/26/2010	10:40:50
4	0.100	1	1.28	0.0960	-1.7	1/26/2010	10:42:04
5	0.0500	1	0.656	0.0489	-4.9	1/26/2010	10:43:17
6	0.00	1	-0.0175	-1.92e-4		1/26/2010	10:44:31

Figure 1: NO3 + NO2



This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
1.0 ppm CCV		1	axh3	1/26/2010 14:06:12	OM_1-26-2010_14-05-09
CCB		1	axh3	1/26/2010 14:08:34	OM_1-26-2010_14-05-09
1202023308	944815	1	axh3	1/26/2010 14:10:55	OM_1-26-2010_14-05-09
1202023313	944815	1	axh3	1/26/2010 14:12:07	OM_1-26-2010_14-05-09
245337001	944815	5	axh3	1/26/2010 14:13:19	OM_1-26-2010_14-05-09
1202023310	944815	5	axh3	1/26/2010 14:14:32	OM_1-26-2010_14-05-09
1202023312	944815	5	axh3	1/26/2010 14:15:44	OM_1-26-2010_14-05-09
245382001	944815	5	axh3	1/26/2010 14:16:56	OM_1-26-2010_14-05-09
1202023309	944815	5	axh3	1/26/2010 14:18:08	OM_1-26-2010_14-05-09
1202023311	944815	5	axh3	1/26/2010 14:19:21	OM_1-26-2010_14-05-09
245337002	944815	5	axh3	1/26/2010 14:20:33	OM_1-26-2010_14-05-09
245337003	944815	5	axh3	1/26/2010 14:21:45	OM_1-26-2010_14-05-09
1.0 ppm CCV		1	axh3	1/26/2010 14:22:57	OM_1-26-2010_14-05-09
CCB		1	axh3	1/26/2010 14:25:19	OM_1-26-2010_14-05-09
245337001*	944815	5	axh3	1/26/2010 14:27:39	OM_1-26-2010_14-05-09
1202023310*	944815	5	axh3	1/26/2010 14:28:51	OM_1-26-2010_14-05-09
1202023312	944815	5	axh3	1/26/2010 14:30:03	OM_1-26-2010_14-05-09
245337004	944815	5	axh3	1/26/2010 14:31:14	OM_1-26-2010_14-05-09
245337005	944815	5	axh3	1/26/2010 14:32:26	OM_1-26-2010_14-05-09
245349001	944815	5	axh3	1/26/2010 14:33:39	OM_1-26-2010_14-05-09
245349002	944815	5	axh3	1/26/2010 14:34:53	OM_1-26-2010_14-05-09
245349003	944815	5	axh3	1/26/2010 14:36:06	OM_1-26-2010_14-05-09
245349004	944815	5	axh3	1/26/2010 14:37:19	OM_1-26-2010_14-05-09
245349005	944815	5	axh3	1/26/2010 14:38:31	OM_1-26-2010_14-05-09
1.0 ppm CCV		1	axh3	1/26/2010 14:39:43	OM_1-26-2010_14-05-09
CCB		1	axh3	1/26/2010 14:42:05	OM_1-26-2010_14-05-09
245349006	944815	5	axh3	1/26/2010 14:44:26	OM_1-26-2010_14-05-09
245349007	944815	5	axh3	1/26/2010 14:45:38	OM_1-26-2010_14-05-09
245349008	944815	5	axh3	1/26/2010 14:46:50	OM_1-26-2010_14-05-09
245349009	944815	5	axh3	1/26/2010 14:48:03	OM_1-26-2010_14-05-09
245349010	944815	5	axh3	1/26/2010 14:49:15	OM_1-26-2010_14-05-09
245349011	944815	5	axh3	1/26/2010 14:50:27	OM_1-26-2010_14-05-09
245349014	944815	5	axh3	1/26/2010 14:51:39	OM_1-26-2010_14-05-09
245349015	944815	5	axh3	1/26/2010 14:52:51	OM_1-26-2010_14-05-09
245390001	944815	5	axh3	1/26/2010 14:54:04	OM_1-26-2010_14-05-09
245337001	944815	5	axh3	1/26/2010 14:55:16	OM_1-26-2010_14-05-09
1.0 ppm CCV		1	axh3	1/26/2010 14:56:29	OM_1-26-2010_14-05-09
CCB		1	axh3	1/26/2010 14:58:50	OM_1-26-2010_14-05-09
1202023310	944815	5	axh3	1/26/2010 15:01:11	OM_1-26-2010_14-05-09
1.0 ppm CCV		1	axh3	1/26/2010 15:03:31	OM_1-26-2010_14-05-09
CCB		1	axh3	1/26/2010 15:05:54	OM_1-26-2010_14-05-09

Original Run Filename: OM\_1-26-2010\_14-05-09.OMN created 1/26/2010 14:05:09  
 Original Run Author's Signature: [lachat]  
 Current Run Filename: OM\_1-26-2010\_14-05-09.OMN last modified 1/26/2010 15:07:15  
 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)				
WTR100126-25 CCV	1	S10	0.976	12.4	1/26/2010@14:06:12			1.0 ppm CCV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.976 < 1.10					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.976 > 0.894					
Message			CCV Passed					
Action			Continue					
CCB	1	S15	-0.00109	-0.0240	1/26/2010@14:08:34			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.00109 < 0.0500					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.00109 > -0.0500					
Message			CCB Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
1202023308 944815 MB	1	37	0.00631	0.0701	1/26/2010@14:10:55			
1202023313 LCS	1	38	0.925	11.7	1/26/2010@14:12:07			
245337001	1	39	0.194	2.46	1/26/2010@14:13:19		5.00	
1202023310 DUP	1	40	0.188	2.38	1/26/2010@14:14:32		5.00	
1202023312 PS	1	41	0.979	12.4	1/26/2010@14:15:44		5.00	
245382001	1	59	0.00372	0.0372	1/26/2010@14:16:56		5.00	
1202023309 DUP	1	60	0.00607	0.0671	1/26/2010@14:18:08		5.00	
1202023311 PS	1	61	0.837	10.6	1/26/2010@14:19:21		5.00	
245337002	1	42	0.116	1.46	1/26/2010@14:20:33		5.00	
245337003	1	43	0.157	1.98	1/26/2010@14:21:45		5.00	
WTR100126-25 CCV	1	S10	0.924	11.7	1/26/2010@14:22:57			1.0 ppm CCV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.924 < 1.10					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.924 > 0.894					
Message			CCV Passed					
Action			Continue					
CCB	1	S15	2.69e-4	-0.00664	1/26/2010@14:25:19			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			2.69e-4 < 0.0500					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			2.69e-4 > -0.0500					
Message			CCB Passed					
Action			Continue					
245337001	1	39	0.128	1.62	1/26/2010@14:27:39		5.00	
1202023310 DUP	1	40	0.245	3.11	1/26/2010@14:28:51		5.00	
1202023312 PS	1	41	0.953	12.1	1/26/2010@14:30:03		5.00	
245337004	1	44	0.113	1.42	1/26/2010@14:31:14		5.00	
245337005	1	45	0.264	3.34	1/26/2010@14:32:26		5.00	

245349001	1	46	0.0232	0.285	1/26/2010@14:33:39	5.00	
245349002	1	47	0.0233	0.287	1/26/2010@14:34:53	5.00	
245349003	1	48	0.0200	0.244	1/26/2010@14:36:06	5.00	
245349004	1	49	0.0767	0.965	1/26/2010@14:37:19	5.00	
245349005	1	50	0.0542	0.678	1/26/2010@14:38:31	5.00	
WTR100126-25 CCV	1	S10	0.924	11.7	1/26/2010@14:39:43		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:			0.924 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.924 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	0.00207	0.0162	1/26/2010@14:42:05		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			0.00207 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.00207 > -0.0500				
Message			CCB Passed				
Action			Continue				
245349006	1	51	0.0104	0.122	1/26/2010@14:44:26	5.00	
245349007	1	52	0.0390	0.486	1/26/2010@14:45:38	5.00	
245349008	1	53	0.0115	0.135	1/26/2010@14:46:50	5.00	
245349009	1	54	0.0104	0.121	1/26/2010@14:48:03	5.00	
245349010	1	55	0.00794	0.0909	1/26/2010@14:49:15	5.00	
245349011	1	56	0.00673	0.0755	1/26/2010@14:50:27	5.00	
245349014	1	57	0.0158	0.191	1/26/2010@14:51:39	5.00	
245349015	1	58	0.00707	0.0798	1/26/2010@14:52:51	5.00	
245390001	1	62	0.00430	0.0446	1/26/2010@14:54:04	5.00	
245337001	1	39	0.102	1.29	1/26/2010@14:55:16	5.00	
WTR100126-25 CCV	1	S10	0.928	11.8	1/26/2010@14:56:29		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:			0.928 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.928 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	-0.00112	-0.0243	1/26/2010@14:58:50		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-0.00112 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-0.00112 > -0.0500				
Message			CCB Passed				
Action			Continue				
1202023310  DUP	1	40	0.0999	1.26	1/26/2010@15:01:11	5.00	
WTR100126-25 CCV	1	S10	0.918	11.7	1/26/2010@15:03:31		1.0 ppm CCV
Known Conc:			1.00				
DQM Test: > + Concentration Limit							
Result:			0.918 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.918 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	-4.24e-4	-0.0154	1/26/2010@15:05:54		CCB
Known Conc:			0.00				

DQM Test: > + Concentration Limit					
Result:	-4.24e-4 < 0.0500				
Message	CCB Passed				
Action	Continue				
DQM Test: < - Concentration Limit					
Result:	-4.24e-4 > -0.0500				
Message	CCB Passed				
Action	Continue				

Channel 1 (NO3 + NO2) : Current View

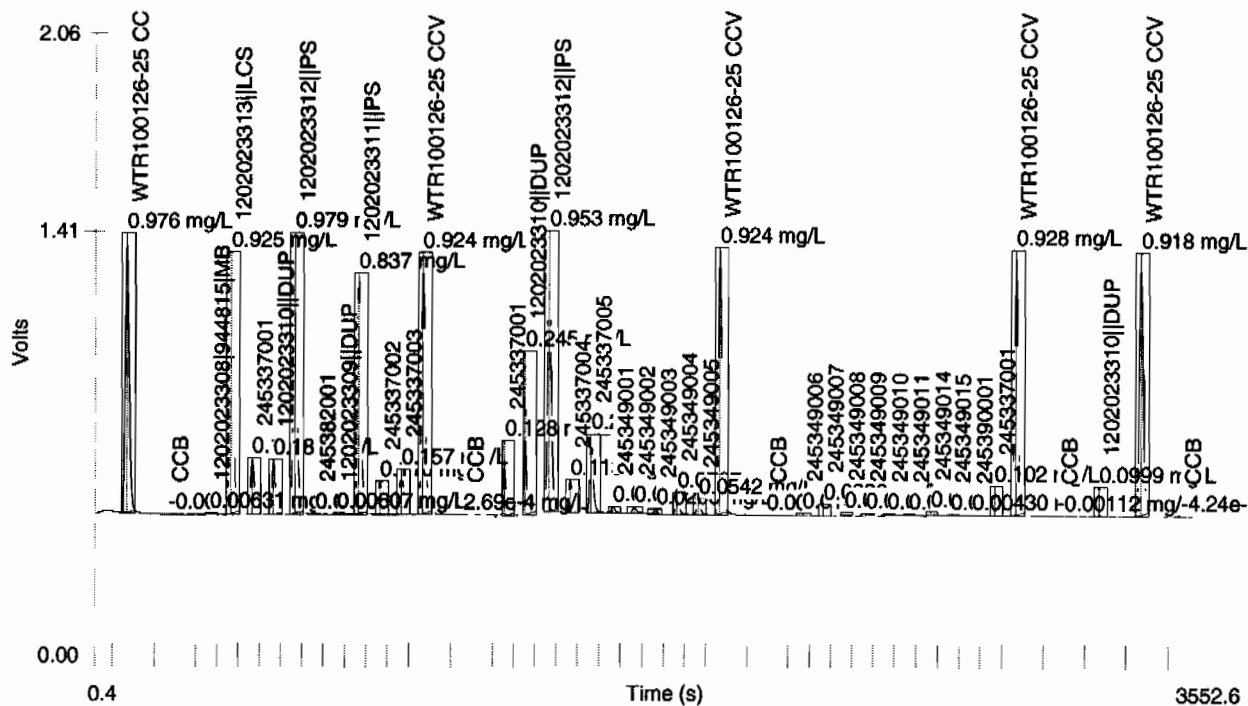
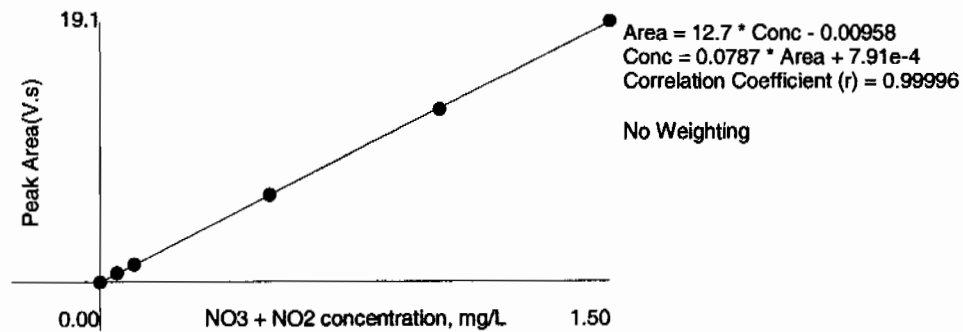


Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	19.1	1.45	-0.4	1/26/2010	10:38:26
2	1.00	1	12.6	0.952	0.9	1/26/2010	10:39:38
3	0.500	1	6.34	0.478	0.0	1/26/2010	10:40:50
4	0.100	1	1.28	0.0960	-1.7	1/26/2010	10:42:04
5	0.0500	1	0.656	0.0489	-4.9	1/26/2010	10:43:17
6	0.00	1	-0.0175	-1.92e-4		1/26/2010	10:44:31



Figure 1: NO3 + NO2



# Miscellaneous

### DATA EXCEPTION REPORT

<b>Mo. Day Yr.</b> 26-JAN-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> LACHAT Flow Injection Analyzer	<b>Test / Method:</b> EPA 353.2	<b>Matrix Type:</b> Liquid	<b>Client Code:</b> BECY, LANL, WSRB
<b>Batch ID:</b> 944815	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 245337,245349,245382(10-1381),245390(10-1386-1) <b>Application Issues:</b> Failed Recovery for MS/PS			
<b>Specification and Requirements</b>		<b>DER Disposition:</b>	
<b>Exception Description:</b>			
1. Failed Recovery for PS: QC 1202023312PS  2. Failed Recovery for PS: QC 1202023311PS		1. The QC set was reprepared and re-analyzed to verify that matrix interference caused unacceptable recoveries in the spike QC.  2. The spike recovery falls outside of the GEL acceptance limits but within the client specified limits.	

**Originator's Name:**

Aubrey Kingsbury 27-JAN-10

**Data Validator/Group Leader:**

Elzbieta Szulc 02-FEB-10