



Thursday, January 28, 2010

REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:6020						
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	
		1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	

SW-846:6850

Thursday, January 28, 2010

REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:9012A	SW-846:6850	1	RE15-10-7951	R	1/26/2010	
		1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	
		1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	

Thursday, January 28, 2010

REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:9012A		1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	

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Thursday, January 28, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1471

**LOS ALAMOS**

REQUEST NUMBER: 10-1471

**NATIONAL LABORATORY**

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/27/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

## LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7888	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7890	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7886	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7889	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7885	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7882	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7887	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7881	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7951	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7950	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7947	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7944	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7948	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7941	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7949	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7946	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7942	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7945	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7943	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7881

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		0908		SUB-MEDIA:		TUFF 1	
PRS ID: 15-008(b)		ok		SAMPLE TECH CODE:		HA	
LOCATION ID: 15-610710		↓		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 / NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES / <input checked="" type="checkbox"/> NO / NA			
BOREHOLE: YES / <input checked="" type="checkbox"/> NO / NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+CN	1 GAL POLY 1L RS 01-11-10	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Light brown silty sand - frozen - few rocks + pine needles

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-40 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE NEG.

Alpha  $\leq$  5 dpm  
Beta/Gamma  $\leq$  1990 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.9} \text{ ppm}$

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT)

TLMcFarland

RELINQUISHED BY (Printed Name) <i>Estevan Lujan</i> (Signature) <i>[Signature]</i>	Date/Time 1/27/10 09:18 AM	RECEIVED BY (Printed Name) <i>Shawn Sherwood</i> (Signature) <i>[Signature]</i>	Date/Time 1/27/10 0918
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7882

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		<u>01/26/2010</u>		MEDIA:		<u>QBT3</u>	
TIME COLLECTED (HH:MM)		<u>0955</u>		SUB-MEDIA:		<u>TUFF 1</u>	
PRS ID:	<u>15-008(b)</u>	<u>OK</u>		SAMPLE TECH CODE:		<u>HA</u>	
LOCATION ID:	<u>15-610710</u>	<u>↓</u>		FIELD QC TYPE:		<u>NA</u>	
LOCATION TYPE:	<u>GENERIC</u>	<u>↓</u>		FIELD PREP:		<u>NA</u>	
TOP DEPTH:	<u>0</u>	<u>1.0</u>		SAMPLE USAGE:		<u>INV</u>	
BOTTOM DEPTH:	<u>0</u>	<u>1.6</u>		SCREEN/PORT DESC:		<u>NA</u>	
FIELD MATRIX:	<u>R</u>	<u>R</u>		EXCAVATED: YES/NO/NA		<u>NO</u>	
COMPOSITE TYPE: <u>NA</u>		COMPOSITE TIME INTERVAL: <u>NA</u>		WATER FLOWING: YES/NO/NA		<u>NO</u>	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: <u>NA</u>		BOREHOLE DIRECTION: <u>NA</u>			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	<u>normal</u>	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	<u>Y</u>	
1	<u>↓</u>	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	<u>Y</u>	
1	<u>↓</u>	H3	500 ML POLY	Ice	<u>Y</u>	
1	<u>↓</u>	Met+U+CLO4+C N	<u>TOTAL POLY</u> <u>1L RS 01-11-10</u>	Ice	<u>Y</u>	
1	<u>↓</u>	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	<u>Y</u>	

SAMPLE DESC:

Grayish brown tuff  
12m 1/26/10

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-10 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha 38 dpm  
Beta 2010 dpm

PID Ambient 0.0  
Reading 3.0 ppm 0.6 RS 01-26-10

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TL McFarland

RELINQUISHED BY (Printed Name) <u>Estevan Lujan</u> (Signature) <u>[Signature]</u>	Date/Time <u>1/27/10</u> <u>09:17 AM</u>	RECEIVED BY (Printed Name) <u>Sherrin Sherwood</u> (Signature) <u>[Signature]</u>	Date/Time <u>1/27/10</u> <u>0917</u>
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7885

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	QBT3		A/H
TIME COLLECTED (HH:MM)		1128		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610712			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		
BOTTOM DEPTH:	0	0.4		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1L RS 01-11-10	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown frozen silty sand, pine cone, wire

SAMPLE COMMENTS: 7am 1/26/10

NA Pine cone and wire not placed in sample

LOCATION DESC:

8b-39 mesa top edge

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha  $\leq$  22 dpmBeta/Gamma  $\leq$  2260 dpmPID  $\frac{\text{Ambient Reading}}{2.6} = \frac{0.0}{2.6}$  ppm

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

R. Saunders

RELINQUISHED BY (Printed Name) Estevan Luján (Signature)	Date/Time 1/27/10 09:17 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 935
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7886

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/26/2010	MEDIA:	OBT3	ok
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	TUFF 1	↓
PRS ID:	15-008(b)	ok	SAMPLE TECH CODE:	HA	ok
LOCATION ID:	15-610712	↓	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	3.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	R	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+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	1 GAL POLY 1L 25 01-11-10	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Pinkish gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-39 mesa top edge

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  5 dpm  
Beta/Gamma  $\leq$  2130 dpm

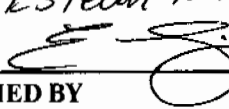
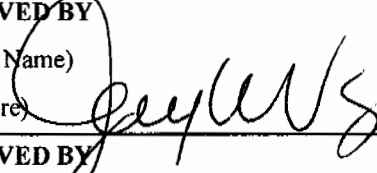
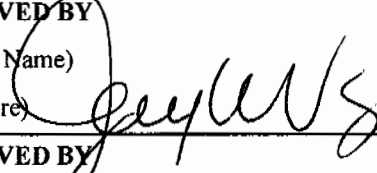
PID  $\frac{\text{Ambient Reading}}{3.5} = 0.2$  ppm

COLLECTED BY (PRINT)

T. McFarland

REVIEWED BY (PRINT)

R. Saunders

RELINQUISHED BY (Printed Name) Estevan Lucian (Signature) 	Date/Time 1/27/10 9:18 AM	RECEIVED BY (Printed Name)  (Signature) 	Date/Time 1/27/10 9:38
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7887

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA: QRT3		ALL H ALLN RS 01-26-10	
TIME COLLECTED (HH:MM)		1315		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610713	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	0.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	0.6		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+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+CN	1 GAL POLY IL RS 01-11-10	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: reddish brown silty clay

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-63 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE NEG

Alpha  $\leq$  27 dpm  
Beta/Gamma  $\leq$  1534 dpm

PID Ambient 0.0  
Reading 0.0 ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT)

TL McFarland

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 09:22 AM	RECEIVED BY (Printed Name) Sheri Sherwood (Signature)	Date/Time 1/27/10 0922
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7888

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA: QBT3		OK	
TIME COLLECTED (HH:MM)		1426		SUB-MEDIA: TUFF 1		↓	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610713	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	3.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	4.0		SCREEN/PORT DESC: NA			
FIELD MATRIX:	R	OK		EXCAVATED: YES/NO NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO NA			
BOREHOLE: YES/NO NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8082+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: pinkish grey tuff, some clay

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-63, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq 33$  dpm  
Beta/Gamma  $\leq 1928$  dpm

PID Ambient Reading 0.0 ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT)

TLMcFarland

RELINQUISHED BY (Printed Name) Esteven Lujan (Signature)	Date/Time 1/27/10 09:21 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 935
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7889

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	QBT3		Ailh
TIME COLLECTED (HH:MM)		1548		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610714	↓		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/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+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1L RS 01-11-10	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown silty sand, frozen

SAMPLE COMMENTS:

wire in bowl, not put in sample jar

LOCATION DESC:

8b-36, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha  $\leq$  33 dpm  
Beta/Gamma  $\leq$  3080 dpm

PID  $\frac{\text{Ambient Reading}}{0.3} = \frac{0.0}{0.3}$  ppm

COLLECTED BY (PRINT)

TL McFarlane

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 0855 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 9:35
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time



## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7890

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	QBT3		
TIME COLLECTED (HH:MM)		1603		SUB-MEDIA:	TUFF 1		OK
PRS ID:	15-008(b)			SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610714			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		
TOP DEPTH:	0	2.5		SAMPLE USAGE:	INV		
BOTTOM DEPTH:	0	3.5		SCREEN/PORT DESC:			
FIELD MATRIX:	R	R		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+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: pinkish grey tuff

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-36, mesatop

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  60 dpm  
Beta/Gamma  $\leq$  2640 dpm

PID  $\frac{\text{Ambient } 0.0}{\text{Reading } 0.7}$  ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 08:55 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 938
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7941

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	OBT3		A11h
TIME COLLECTED (HH:MM)		0833		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610740			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/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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Frozen brown silty clay

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-64, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha  $\leq$  22 dpmBeta/Gamma  $\leq$  1845 dpmPID  $\frac{\text{Ambient}}{\text{Reading}} \cdot \frac{5}{.8}$  ppm

COLLECTED BY (PRINT)

Th McFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) <i>Estevan Lujan</i> (Signature) <i>[Signature]</i>	Date/Time 1/27/10 09:18 AM	RECEIVED BY (Printed Name) <i>Sherri Newwood</i> (Signature) <i>[Signature]</i>	Date/Time 1/27/10 0918
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7942

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		0845		SUB-MEDIA:		TUFF 1	
PRS ID: 15-008(b)		ok		SAMPLE TECH CODE:		HA	
LOCATION ID: 15-610740		↓		FIELD QC TYPE:		NA	
LOCATION TYPE: GENERIC		↓		FIELD PREP:		NA	
TOP DEPTH: 0		3.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH: 0		73m 4.0		SCREEN/PORT DESC:		NA	
FIELD MATRIX: R		R		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-64 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  11 dpm  
Beta/Gamma  $\leq$  2130 dpm

PID  $\frac{\text{Ambient Reading}}{1.7} = 0.1$  ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature) <i>E. Lujan</i>	Date/Time 1/27/10 09:18 AM	RECEIVED BY (Printed Name) Sherry Sherwood (Signature) <i>Sherry Sherwood</i>	Date/Time 1/27/10 0918
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7943

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		0909		SUB-MEDIA:		TUFF 1	
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610741	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	0.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	1.0		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Regular	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	TOTAL POLY 1L RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray Tuff  
hit tuff at surface

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b- 42 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha = 16 dpm  
Beta/Gamma = 2270 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.1}{0.1}$  ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 9:18 AM	RECEIVED BY (Printed Name) Sherri Newwood (Signature)	Date/Time 1/27/10 0918
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7944

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	QBT3		ok
TIME COLLECTED (HH:MM)		0934		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610741	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	2.9		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	3.5		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA	NO/NA			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Regular	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	Y	
1	↓	Met+U+CLO4+C N	TGAL POLY 1L RS 01-11-10	Ice	Y	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Grey tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-42, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 27 dpm

Beta/Gamma = 2060 dpm

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

COLLECTED BY (PRINT)

TLMCFarley

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) Esteven Lujan (Signature)	Date/Time 1/27/10 9:19 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 935
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7945

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	OBT3		A11h
TIME COLLECTED (HH:MM)		1014		SUB-MEDIA:	TUFF.1		NA
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610742			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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1L RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Dark brown frozen silty sand, numerous rocks,  
few pine needles

SAMPLE COMMENTS:

NA

FR RE15-10-8081

LOCATION DESC:

8b-41 mesa top edge

FIELD SCREENING/MEASUREMENT RESULTS:

HE POSITIVE

Alpha = 16 dpm

Beta/Gamma = 1783 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.1}$  ppm

COLLECTED BY (PRINT)

Th McFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 09:21 AM	RECEIVED BY (Printed Name) Sherri Sherwood (Signature)	Date/Time 1/27/10 0921
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7946

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	QBT3		ok
TIME COLLECTED (HH:MM)		1047		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610742	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	2.5		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	3.5		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray, Tuff

FD: RE15-10-8059-73m 1/26/10

SAMPLE COMMENTS:

Tuff at 2 ft

LOCATION DESC:

8b-41 mesa top edge

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\pm$  16 dpm  
Beta/Gamma  $\pm$  2070 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.1}{8.3}$  ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 09:20 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 9:35
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7947

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		<u>01/26/2010</u>		MEDIA:		<u>OBT3</u>	
TIME COLLECTED (HH:MM)		<u>1029</u>		SUB-MEDIA:		<u>TUFF 1</u>	
PRS ID:	<u>15-008(b)</u>	<u>ok</u>		SAMPLE TECH CODE:		<u>HA</u>	
LOCATION ID:	<u>15-610743</u>	<u>↓</u>		FIELD QC TYPE:		<u>NA</u>	
LOCATION TYPE:	<u>GENERIC</u>	<u>↓</u>		FIELD PREP:		<u>NA</u>	
TOP DEPTH:	<u>0</u>	<u>0.0</u>		SAMPLE USAGE:		<u>INV</u>	
BOTTOM DEPTH:	<u>0</u>	<u>0.5</u>		SCREEN/PORT DESC:		<u>NA</u>	
FIELD MATRIX:	<u>R</u>	<u>S</u>		EXCAVATED: YES/NO/NA		<u>NO/NA</u>	
COMPOSITE TYPE: <u>NA</u>		COMPOSITE TIME INTERVAL: <u>NA</u>		WATER FLOWING: YES/NO/NA		<u>NO/NA</u>	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: <u>NA</u>		BOREHOLE DIRECTION: <u>NA</u>			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	<u>Regular</u>	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	<u>Y</u>	
1	<u>↓</u>	H3	500 ML POLY	Ice	<u>Y</u>	
1	<u>↓</u>	Met+U+CLO4+C N	<u>1 GAL POLY</u> <u>1L RS 01-11-10</u>	Ice	<u>Y</u>	
1	<u>↓</u>	NMED Explosives list	250 ML AMBER GLASS	Ice	<u>Y</u>	
1	<u>↓</u>	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	<u>Y</u>	

SAMPLE DESC: brown sandy silt, rocks, some roots, pine needles

FD: RE15-10-8058

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-43 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE NEG

Alpha = 16 dpmBeta/Gamma = 2300 dpmPID  $\frac{\text{Ambient}}{\text{Reading}} \frac{0.1}{1.5}$  ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcfarland

RELINQUISHED BY (Printed Name) <u>Estevan Lujan</u> (Signature) <u>[Signature]</u>	Date/Time <u>1/27/10</u> <u>09:20 am</u>	RECEIVED BY (Printed Name) <u>[Signature]</u> (Signature) <u>[Signature]</u>	Date/Time <u>1/27/10</u> <u>938</u>
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time



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

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7948

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	QBT3		ok
TIME COLLECTED (HH:MM)		1050		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610743	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	3.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	3.9		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	R		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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	TGAL POLY 1L RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brownish gray tuff, some roots

SAMPLE COMMENTS:

Tuff at 3'4"

LOCATION DESC:

8b-43 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  11 dpm  
Beta/Gamma  $\leq$  2050 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.1}{0.4}$  ppm

COLLECTED BY (PRINT)

JLMcFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature) <i>[Signature]</i>	Date/Time 1/27/10 09:20 AM	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) <i>[Signature]</i>	Date/Time 1/27/10 0920
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

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

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7949

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1243 1143		SUB-MEDIA:		TUFF 1	
PRS ID: 15-008(b)		ok		SAMPLE TECH CODE:		HA	
LOCATION ID: 15-610744		↓		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/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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL R3 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: dark brown frozen silty sand

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-38 mesa top edge

FIELD SCREENING/MEASUREMENT RESULTS:

HE NEG

Alpha  $\leq$  16 dpm  
Beta/Gamma  $\leq$  1700 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} \frac{0.1}{0.6}$  ppm

COLLECTED BY (PRINT)

R. Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 09:17 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 935
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7950

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		61/26/2010		MEDIA:	QBT3		A11h
TIME COLLECTED (HH:MM)		1211		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610744	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		↓
TOP DEPTH:	0	1.5		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	1.7		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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	y	
1	↓	H3	500 ML POLY	Ice	y	
1	↓	Met+U+CLO4+C N	1 GAL POLY 1 L RS 01-11-10	Ice	y	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	y	

SAMPLE DESC:

Brown clay, few tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC:

86-38 mesa top edge

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  22 dpm  
Beta/Gamma  $\leq$  1741 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.2}{0.3} \text{ ppm}$

COLLECTED BY (PRINT)

R. Saunders

REVIEWED BY (PRINT)

TL McFarland

RELINQUISHED BY (Printed Name) Estevan Lujan (Signature)	Date/Time 1/27/10 09:21 AM	RECEIVED BY (Printed Name) Sherri Greenwood (Signature)	Date/Time 1/27/10 0921
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7951

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/26/2010		MEDIA:	QBT3		ok
TIME COLLECTED (HH:MM)		1338		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-008(b)	ok		SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610745	↓		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	R		EXCAVATED: YES/NO/NA	NO/NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA	NO/NA		
BOREHOLE: YES/NO/NA	NO/NA			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Regular	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Gray moist Tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

8b-65 mesa Top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  5 dpm  
Beta/Gamma  $\leq$  2030 dpm

HE negative

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

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT) R Saunders

RELINQUISHED BY (Printed Name) Estevan Lujon (Signature)	Date/Time 1/27/10 09:17 AM	RECEIVED BY (Printed Name) (Signature)	Date/Time 1/27/10 9:38
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## Rad Screening Data Release Form

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

RE15-10-7890	RE15-10-7886	RE15-10-7948
" " 7889	" " 7885	" " 7947
" " 7956	" " 7882	" " 8058
" " 7953	" " 7881	" " 7950
" " 8060	" " 7941	
" " 7954	" " 7942	
" " 7955	" " 7943	
" " 7952	" " 7944	
" " 7951	" " 8059	
" " 7949	" " 7946	
" " 7948	" " 7945	

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

.....

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

RE15-10-8082


RE15-10-8081

Reason: *Field Rinse*

.....

Print Last Name Lujan

Signature



Date

1/27/10



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7881

ARS Sample ID: ARS2-10-00025-001

Sample Collection Date: 01/26/10 09:08

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 2 s	mnc	TPH	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	10.80	19.79	36.09	19.83		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	41.40	15.01	17.69	15.85		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.09	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	16.84	6.63	1.47	6.65		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	0.01	0.10	0.61		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.15	0.10	0.07	0.16		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.09	0.32	0.06	0.32		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.71	0.40	0.11	0.40		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.31	0.49	0.17	0.49		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.25	0.64	0.26	0.64		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	1.18	1.04	0.37	1.05		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	6.81	3.33	1.23	3.67		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.53	0.41	0.14	0.41		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 4.28

*Matthew J. Eden*  
Quality Assurance Review

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LELAP Certificate# 30658

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE13-10-7882

ARS Sample ID: ARS2-10-00025-002

Sample Collection Date: 01/26/10 09:55

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Result	Analysis Error +/- 1 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	20.74	22.37	31.78	22.51		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	24.54	13.50	18.25	13.83		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.15	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	29.87	11.33	2.43	11.37		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	15.90	0.16	15.90		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.34	0.23	0.12	0.23		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.29	0.27	0.10	0.27		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-182	0.25	0.38	0.22	0.38		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	2.17	0.81	0.21	0.82		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.77	0.94	0.42	0.95		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	0.60	0.88	0.28	0.88		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	5.43	4.41	1.96	4.58		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.49	0.46	0.18	0.46		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 1.35

*Matthew J. Edm*  
Quality Assurance Review

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LELAP Certificate# 30658

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00026

Request or PO Number:

Client Sample ID: RE15-10-7885

ARS Sample ID: ARS2-10-00026-001

Sample Collection Date: 01/26/10 11:28

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 12:07

Analysis Description	Analysis Results	Analysis Error +/- 1 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	50.37	33.86	36.09	34.41		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	59.79	17.49	17.69	18.96		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.00	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	14.79	5.82	1.29	5.84		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	8.44	0.09	8.44		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.01	0.02	0.06	0.02		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.90	0.34	0.03	0.34		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.00	44.62	0.10	44.62		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	0.92	0.44	0.18	0.44		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.06	0.60	0.23	0.61		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	-0.05	75.28	0.17	75.28		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	14.39	5.25	1.62	6.19		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.30	0.36	0.15	0.36		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
NOTES: % Moisture: 3.64										

*[Signature]*  
Quality Assurance Review

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133 State Road 4, White Rock, NM 87544

505-872-2770 FAX 505-872-9534

ARS Sample Delivery Group: AR52-10-00026

Request or PO Number:

Client Sample ID: RE15-10-7886

ARS Sample ID: AR52-10-00026-001

Sample Collection Date: 01/26/10 11:45

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 12:07

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MRC	TPH	Q-cf	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	43.80	30.16	31.78	30.63		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	35.55	15.20	18.25	15.81		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.14	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	32.04	11.03	2.17	11.07		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	14.20	0.14	14.20		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.00	0.00	0.10	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.01	0.04	0.09	0.04		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.41	0.47	0.17	0.47		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.63	0.67	0.24	0.68		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	0.16	221.15	0.50	221.15		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	-0.09	79.84	0.22	79.84		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	1.90	3.23	1.58	3.49		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.31	0.17	0.13	0.27		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.72

*Matthew J. Edm*  
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505-672-2770 FAX 505-672-9534

ARS sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7887

ARS Sample ID: ARS2-10-00025-003

Sample Collection Date: 01/26/10 13:15

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	47.69	31.52	30.56	32.05		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	44.45	37.21	19.68	18.05		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.09	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	17.74	6.61	1.40	6.63		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	9.14	0.09	9.14		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.33	0.17	0.07	0.17		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.06	0.10	0.06	0.10		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.27	0.34	0.23	0.34		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PS-212	1.15	0.43	0.13	0.43		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.08	0.61	0.29	0.61		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	0.66	0.63	0.17	0.63		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	1.44	2.42	1.13	2.45		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.02	0.09	0.06	0.09		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 3.57

*Matthew J. Edan*  
Quality Assurance Review

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LELAP Certificate# 30558

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00025

Client Sample ID: RE15-10-7888

Sample Collection Date: 01/26/10 14:26

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-10-00025-004

Date Received: 01/27/10 00:00

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 2 s	Min	Max	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	10.53	20.55	38.20	20.59		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	48.05	16.12	18.71	17.16		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.11	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	25.36	8.60	1.67	8.63		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PO-60	0.00	10.94	0.11	10.94		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.24	0.21	0.08	0.22		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.07	0.12	0.07	0.12		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.69	0.46	0.13	0.46		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PS-212	1.83	0.61	0.20	0.62		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.97	0.99	0.29	0.99		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	3.34	1.28	0.30	1.28		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	5.81	4.38	1.59	4.58		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.40	0.31	0.11	0.31		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.76

*Matthew J. Eden*  
Quality Assurance Review

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LELAP Certificate # 30658

NELAP Certificate # EB7558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00026

Request or PO Number:

Client Sample ID: RE15-10-7889

ARS Sample ID: ARS2-10-00026-003

Sample Collection Date: 01/26/10 15:48

Date Received: 01/27/10 09:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 12:07

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TBU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	42.86	30.96	30.56	30.52		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	107.24	22.75	19.68	26.26		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.08	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	19.09	6.99	1.26	6.61		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.05	0.10	0.08	0.10		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.00	0.00	0.06	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.18	0.16	0.05	0.16		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.25	0.35	0.15	0.36		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	0.82	0.33	0.09	0.33		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.52	0.65	0.22	0.65		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	1.03	0.62	0.13	0.63		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	18.73	4.32	1.19	6.10		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.18	0.20	0.08	0.20		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 5.10

*Matthew J. Edm*  
Quality Assurance Review

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NELAP Certificate # E87558



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ARS Sample Delivery Group: ARS2-10-00026

Request or PO Number:

Client Sample ID: RE15-10-7890

ARS Sample ID: ARS2-10-00026-004

Sample Collection Date: 01/26/10 16:03

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 12:07

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	47.28	32.73	38.10	33.23		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	44.01	16.44	18.71	17.34		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.08	0.15	0.12	0.15		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	23.26	8.99	1.96	9.01		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.02	0.05	0.13	0.05		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.03	0.09	0.09	0.09		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.09	0.14	0.08	0.14		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.00	13.32	0.15	13.32		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.04	0.55	0.22	0.55		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	2.11	0.90	0.34	0.91		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	1.01	0.72	0.20	0.73		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	8.91	3.98	1.42	4.47		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.33	0.41	0.16	0.41		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.99

*[Signature]*  
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NELAP Certificate # E97558



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ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7941

ARS Sample ID: ARS2-10-00025-005

Sample Collection Date: 01/26/10 08:33

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 1 s	MDL	TBU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	25.64	25.97	36.09	26.16		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	48.83	18.04	17.69	17.12		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.09	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	15.57	6.25	1.41	6.27		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	0.22	0.04	0.22		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.11	0.13	0.07	0.13		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.73	0.32	0.06	0.33		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
SU-152	0.25	0.28	0.11	0.28		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	0.93	0.35	0.08	0.35		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.04	0.51	0.27	0.51		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	1.92	1.09	0.31	1.09		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	7.27	3.27	1.20	3.67		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.34	0.29	0.11	0.29		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 3.46

  
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ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7942

ARS Sample ID: ARS2-10-00025-006

Sample Collection Date: 01/26/10 08:45

Date Received: 01/27/10 08:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MOC	YPO	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	39.18	28.78	31.78	29.17		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	49.69	18.59	18.25	17.67		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.11	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	21.85	8.14	1.72	8.17		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	11.26	0.11	11.26		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.00	36.94	0.06	36.94		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.01	0.05	0.07	0.05		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RU-152	1.04	0.58	0.13	0.58		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.25	0.47	0.13	0.48		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.84	0.87	0.30	0.87		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	1.73	0.67	0.17	0.88		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	2.67	3.65	1.68	3.70		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.13	0.21	0.10	0.21		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.80

  
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ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7943

ARS Sample ID: ARS2-10-00025-007

Sample Collection Date: 01/26/10 09:09

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 2 s	Mhc	TPH	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	33.20	26.91	30.56	27.22		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	34.66	15.86	19.68	16.42		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.12	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	0.13	10.71	5.46	10.71		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	12.83	0.13	12.83		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.10	0.13	0.09	0.13		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.01	10.79	0.08	10.79		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.24	0.30	0.15	0.30		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	2.25	0.63	0.11	0.64		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	2.61	1.10	0.34	1.11		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	2.01	1.04	0.36	1.04		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	1.46	3.12	1.49	3.14		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.01	0.11	0.10	0.11		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.61

*Matt J. Egan*  
Quality Assurance Review

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ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7944

ARS Sample ID: ARS2-10-00025-008

Sample Collection Date: 01/26/10 09:34

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 2 s	Min	Max	Unit	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	15.13	22.44	38.20	22.51		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	39.91	15.35	18.71	16.11		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.12	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	26.25	9.46	1.94	9.49		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	12.70	0.13	12.70		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.17	0.16	0.09	0.16		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.04	0.10	0.08	0.10		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.19	0.25	0.15	0.25		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.51	0.55	0.34	0.55		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.80	1.15	0.34	1.15		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	0.46	0.69	0.29	0.69		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	3.95	3.14	1.42	3.27		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.01	0.04	0.05	0.04		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.91

*Matthew J. Eden*  
Quality Assurance Review

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ARS Sample Delivery Group: ARS2-10-00025

Request or PQ Number:

Client Sample ID: RE15-10-7945

ARS Sample ID: ARS2-10-00025-009

Sample Collection Date: 01/26/10 10:14

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:33

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TDU	QMS	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	70.11	39.03	36.09	39.98		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	88.25	20.23	17.69	22.94		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.08	0.16	0.13	0.16		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	14.40	7.46	2.08	7.47		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	13.60	0.14	13.59		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.00	0.00	0.10	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.67	0.38	0.09	0.38		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.00	14.13	0.16	14.13		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.10	0.59	0.24	0.60		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.54	1.17	0.76	1.17		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	1.62	1.25	0.53	1.25		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	8.04	5.09	1.87	5.41		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.02	0.14	0.08	0.14		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 3.54

*Matthew J. Eddy*  
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ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7946

ARS Sample ID: ARS2-10-00025-010

Sample Collection Date: 01/26/10 10:47

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDc	YRU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	48.39	31.80	31.78	32.05		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	68.71	18.52	18.25	20.34		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.15	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	21.77	9.78	2.42	9.80		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	15.84	0.16	15.84		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.15	0.20	0.12	0.20		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	-0.01	20.73	0.10	20.73		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
BU-152	0.63	0.57	0.18	0.57		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.04	0.50	0.13	0.50		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	7.34	1.15	0.42	1.15		nCi/g	EPA 901.1M	1/27/2010	MF	N/A
U-235	1.84	1.08	0.25	1.08		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	4.03	4.80	1.98	4.89		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.62	0.53	0.19	0.53		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.70

*Matthew A. Eder*  
Quality Assurance Review

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ARS Sample Delivery Group: AR52-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7947

ARS Sample ID: AR52-10-00025-011

Sample Collection Date: 01/26/10 10:29

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDL	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	91.13	42.42	30.56	43.87		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	90.25	21.31	19.68	23.47		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.14	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	17.04	8.29	2.20	8.31		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	14.37	0.15	14.37		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.02	0.06	0.11	0.06		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.61	0.43	0.09	0.43		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.46	0.43	0.17	0.43		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	0.90	0.55	0.23	0.55		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.64	0.85	0.36	0.85		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	0.52	0.63	0.29	0.64		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	16.48	5.34	1.70	6.53		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.57	0.66	0.23	0.66		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 3.58

*[Signature]*  
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ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7948

ARS Sample ID: ARS2-10-00025-012

Sample Collection Date: 01/26/10 10:50

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDA	TDR	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	93.20	43.38	36.20	44.86		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	68.54	19.35	18.71	21.09		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.15	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	20.40	9.39	2.38	9.41		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	18.86	0.16	15.56		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.00	0.00	0.11	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.52	0.36	0.10	0.36		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.47	0.55	0.18	0.55		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.38	0.57	0.15	0.58		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-226	1.67	1.55	0.41	1.55		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	2.10	1.14	0.24	1.14		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	6.40	4.53	1.88	4.76		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.34	0.30	0.10	0.30		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 0.70

*Matthew J. Eddy*  
 Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658

NELAP Certificate # 287558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00026

Request of PO Number:

Client Sample ID: RE15-10-7949

ARS Sample ID: ARS2-10-00026-005

Sample Collection Date: 01/26/10 11:43

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 12:07

Analysis Description	Analysis Results	Analysis Error +/- %	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	55.31	35.23	36.09	38.87		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	64.55	18.00	17.69	19.66		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.11	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	15.70	6.88	1.67	6.89		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	10.92	0.11	10.92		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.30	0.23	0.08	0.23		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.33	0.24	0.07	0.24		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.48	0.42	0.13	0.42		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	0.77	0.40	0.14	0.40		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	0.98	0.59	0.29	0.59		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	-0.07	97.41	0.22	97.41		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	10.04	5.76	1.99	0.23		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.00	0.05	0.10	0.05		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 7.62

  
Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30658

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00025

Request or PO Number:

Client Sample ID: RE15-10-7950

ARS Sample ID: ARS2-10-00025-013

Sample Collection Date: 01/26/10 12:11

Date Received: 01/27/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/28/10 09:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDL	YDU	Quat	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	99.82	45.72	36.09	47.32		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	91.98	20.89	17.59	23.73		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.00	0.00	0.11	0.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	21.70	6.09	1.71	8.11		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.06	0.09	0.11	0.09		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.35	0.17	0.08	0.17		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	0.03	0.09	0.07	0.09		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.00	11.63	0.13	11.63		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	1.95	0.51	0.13	0.52		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-226	1.47	0.87	0.10	0.87		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	2.44	0.99	0.35	0.99		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	3.29	3.57	1.53	3.64		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.23	0.30	0.12	0.30		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 1.96

*M. J. Felt*  
Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30658

NELAP Certificate # EB7558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00026

Request or PU Number:

Client Sample ID: RE18-10-7951

ARS Sample ID: ARS2-10-00026-006

Sample Collection Date: 01/26/10 13:38

Date Received: 01/27/10 08:00

Sample Matrix: Soil/Bond

Report Date: 01/28/10 12:07

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	94.35	42.54	31.78	44.09		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
GROSS BETA	52.04	17.69	18.25	18.80		pCi/g	EPA 900.0M	1/28/2010	ME	N/A
NA-22	0.09	0.13	0.07	0.13		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
K-40	27.84	7.46	1.17	7.80		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CO-60	0.00	7.64	0.06	7.64		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-134	0.02	0.05	0.06	0.05		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
CS-137	-0.01	10.00	0.05	10.00		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
EU-152	0.04	0.47	0.09	0.48		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
PB-212	0.93	0.36	0.11	0.36		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
RA-228	1.64	0.64	0.20	0.69		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-235	2.18	0.86	0.29	0.87		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
U-238	1.41	1.89	0.90	1.92		pCi/g	EPA 901.1M	1/27/2010	ME	N/A
AM-241	0.25	0.29	0.11	0.29		pCi/g	EPA 901.1M	1/27/2010	ME	N/A

NOTES: % Moisture: 2.14

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658

NELAP Certificate # EB7558



**DATA VALIDATION COVER SHEET****5121-1**

Records Use only

**Data Validation Cover Sheet****Section I.**REQUEST NUMBER: 10-1471 VALIDATION DATE: 03/09/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Susan Ball 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 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):

None.


Reviewed by: Mary DonovanLevel: 1Date: 03/10/10VALIDATOR'S SIGNATURE: *Susan Ball*DATE: 03/09/10

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

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

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

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				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	31. The Interference Check Sample was not within $\pm 20\%$ of the known value.	UJ, PERC16a	J, PERC16a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7888

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797001

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 90.7

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	.551	2.21	1.23	ug/kg	J	1	16-FEB-10 21:34	per0216044a
	Perchlorate Isotope Ratio			3.36			1	16-FEB-10 21:34	per0216044a
14797-73-0	Perchlorate-101	.551	2.21	1.17	ug/kg	J	1	16-FEB-10 21:34	per0216044a
	Perchlorate-O(18)			5.94	ug/kg		1	16-FEB-10 21:34	per0216044a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7890  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797002  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 90.2

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	16-FEB-10 22:04	per0216047a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:04	per0216047a
14797-73-0	Perchlorate-101	.554	2.22	0.554	ug/kg	U	1	16-FEB-10 22:04	per0216047a
	Perchlorate-O(18)			5.52	ug/kg		1	16-FEB-10 22:04	per0216047a

<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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7886  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797003  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 93.5

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	0.535	ug/kg	U	1	16-FEB-10 22:44	per0216051a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:44	per0216051a
14797-73-0	Perchlorate-101	.535	2.14	0.535	ug/kg	U	1	16-FEB-10 22:44	per0216051a
	Perchlorate-O(18)			5.04	ug/kg		1	16-FEB-10 22:44	per0216051a

<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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7889  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797004  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 63

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 22:55	per0216052a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:55	per0216052a
14797-73-0	Perchlorate-101	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 22:55	per0216052a
	Perchlorate-O(18)			7.91	ug/kg		1	16-FEB-10 22:55	per0216052a

<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



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7885

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797005

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 67

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:05	per0216053a
	Perchlorate Isotope Ratio								
14797-73-0	Perchlorate-101	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:05	per0216053a
	Perchlorate-O(18)			7.68	ug/kg		1	16-FEB-10 23:05	per0216053a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7882  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797006  
 Date Filtered: 11-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	.571	2.29	0.571	ug/kg	U	1	16-FEB-10 23:15	per0216054a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:15	per0216054a
14797-73-0	Perchlorate-101	.571	2.29	0.587	ug/kg	J	1	16-FEB-10 23:15	per0216054a
	Perchlorate-O(18)			5.68	ug/kg		1	16-FEB-10 23:15	per0216054a

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

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

Form 1

P perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7887  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797007  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 67

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:25	per0216055a
	Perchlorate Isotope Ratio								
14797-73-0	Perchlorate-101	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:25	per0216055a
	Perchlorate-O(18)			7.42	ug/kg		1	16-FEB-10 23:25	per0216055a

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

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

Form I

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7881  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797008  
 Date Filtered: 11-FEB-10  
 Injection Volume (mL): 20  
 %Solids: 63

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 23:35	per0216056a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:35	per0216056a
14797-73-0	Perchlorate-101	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 23:35	per0216056a
	Perchlorate-O(18)			7.58	ug/kg		1	16-FEB-10 23:35	per0216056a

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

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7951

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797009

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 81

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.62	2.48	0.620	ug/kg	U	1	16-FEB-10 23:45	per0216057a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:45	per0216057a
14797-73-0	Perchlorate-101	.62	2.48	0.620	ug/kg	U	1	16-FEB-10 23:45	per0216057a
	Perchlorate-O(18)			5.95	ug/kg		1	16-FEB-10 23:45	per0216057a

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

\*Concentration =

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

Form 1

P perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7950  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797010  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.624	2.49	0.624	ug/kg	U	1	16-FEB-10 23:55	per0216058a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:55	per0216058a
14797-73-0	Perchlorate-101	.624	2.49	0.624	ug/kg	U	1	16-FEB-10 23:55	per0216058a
	Perchlorate-Q(18)			6.78	ug/kg		1	16-FEB-10 23:55	per0216058a

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

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

Form 1

P perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7947  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797011  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 64

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.784	3.14	0.784	ug/kg	U	1	17-FEB-10 00:05	per0216059a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:05	per0216059a
14797-73-0	Perchlorate-101	.784	3.14	0.784	ug/kg	U	1	17-FEB-10 00:05	per0216059a
	Perchlorate-O(18)			7.93	ug/kg		1	17-FEB-10 00:05	per0216059a

<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 %Solids

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7944

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797012

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 92.8

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	0.539	ug/kg	U	1	17-FEB-10 00:45	per0216063a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:45	per0216063a
14797-73-0	Perchlorate-101	.539	2.16	0.539	ug/kg	U	1	17-FEB-10 00:45	per0216063a
	Perchlorate-O(18)			5.54	ug/kg		1	17-FEB-10 00:45	per0216063a

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

\*Concentration =

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



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7948

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797013

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 92.1

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc.*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	17-FEB-10 00:56	per0216064a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:56	per0216064a
14797-73-0	Perchlorate-101	.543	2.17	0.543	ug/kg	U	1	17-FEB-10 00:56	per0216064a
	Perchlorate-O(18)			5.50	ug/kg		1	17-FEB-10 00:56	per0216064a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7941  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797014  
 Date Filtered: 11-FEB-10  
 Injection Volume (mL): 20  
 %Solids: 76

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.655	2.62	0.655	ug/kg	U	1	17-FEB-10 01:06	per0216065a
	Perchlorate Isotope Ratio								
14797-73-0	Perchlorate-101	.655	2.62	0.655	ug/kg	U	1	17-FEB-10 01:06	per0216065a
	Perchlorate-O(18)			6.57	ug/kg		1	17-FEB-10 01:06	per0216065a

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

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7949

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797015

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 59

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	.844	3.38	0.844	ug/kg	U	1	17-FEB-10 01:16	per0216066a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:16	per0216066a
14797-73-0	Perchlorate-101	.844	3.38	0.844	ug/kg	U	1	17-FEB-10 01:16	per0216066a
	Perchlorate-O(18)			8.52	ug/kg		1	17-FEB-10 01:16	per0216066a

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7946  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797016  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 91.8

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.545	2.18	0.545	ug/kg	U	1	17-FEB-10 01:26	per0216067a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:26	per0216067a
14797-73-0	Perchlorate-101	.545	2.18	0.545	ug/kg	U	1	17-FEB-10 01:26	per0216067a
	Perchlorate-O(18)			5.45	ug/kg		1	17-FEB-10 01:26	per0216067a

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

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

Form 1

Perchlorate Analysis Data Sheet

Client Sample No.

RE15-10-7942

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797017

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 89

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	.561	2.25	0.561	ug/kg	U	1	17-FEB-10 01:36	per0216068a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:36	per0216068a
14797-73-0	Perchlorate-101	.561	2.25	0.561	ug/kg	U	1	17-FEB-10 01:36	per0216068a
	Perchlorate-O(18)			5.61	ug/kg		1	17-FEB-10 01:36	per0216068a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7945

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797018

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 61

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.822	3.29	0.822	ug/kg	U	1	17-FEB-10 01:46	per0216069a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:46	per0216069a
14797-73-0	Perchlorate-101	.822	3.29	0.822	ug/kg	U	1	17-FEB-10 01:46	per0216069a
	Perchlorate-O(18)			7.89	ug/kg		1	17-FEB-10 01:46	per0216069a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7943

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797019

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 92.4

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.541	2.16	0.541	ug/kg	U	1	17-FEB-10 01:56	per0216070a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:56	per0216070a
14797-73-0	Perchlorate-101	.541	2.16	0.541	ug/kg	U	1	17-FEB-10 01:56	per0216070a
	Perchlorate-O(18)			5.16	ug/kg		1	17-FEB-10 01:56	per0216070a

<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

**DATA VALIDATION COVER SHEET****5118-1**

Records Use only

**Data Validation Cover Sheet****Section I.**REQUEST NUMBER: 10-1471 VALIDATION DATE: 03/09/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Susan Ball ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

**Section II. Completeness Check**


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

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


- In the MB, Pb, Sb, and Tl were detected. The Sb and Tl results for sample RE15-10-7888 and the Sb results for samples -7881, -7882, -7886, -7887, -7941 through -7946, -7950, and -7951 were detects  $\leq 5X$  the MB concentrations and, thus, were qualified U,14. The Sb result for sample -7889 and the Pb results for samples -7881, -7882, -7886, -7888, -7942, -7943, -7944, -7946, -7950, and -7951 were  $> 5X$  but  $\leq 50X$  the MB concentrations and, thus, were qualified J,14a. The remaining Pb results were  $> 50X$  the MB concentration and, thus, were not qualified based on professional judgment. The remaining associated Sb and Tl sample results were NDs or qualified NDs by detects in the ICB and/or CCB and, thus, were not qualified.
- In the ICBs and/or CCBs, Sb, Tl, and U were detected. The Sb result for sample -7889 and all the U sample results were detects  $> 5X$  the greatest blank concentration and, thus, were not qualified. The Tl result for sample -7888 and all remaining Sb sample results were detects  $\leq 5X$  the greatest blank concentration and, thus, were qualified U,14b. The remaining Tl sample results were NDs and, thus, were not qualified.
- In the FR blanks, (reported in RN 10-1474), samples -8081 and -8082, associated with all the soil samples, K, Na, Pb, and U were detected. The Na results for samples -7881, -7885, -7887, -7889, -7941, -7945, and -7947 through -7950, were  $\leq 5X$  the greatest FR blank concentration and, thus, were qualified U,14d. The remaining associated sample results were  $> 5X$  the greatest FR blank concentration and, thus, were not qualified.
- The MS %Rs for Ba and Ni were  $<$  the laboratory LAL but  $\geq 10\%$ . The associated sample results were detects and, thus, were qualified J-,16a. The MS %Rs for Mg and K were  $>$  the laboratory UAL. The associated sample results were detects and, thus, were qualified J+,16b. The MS %Rs for Al, Ca, and Fe were also  $>$  the laboratory UAL. However, the parent sample concentrations were  $> 4X$  the spike concentrations and, thus, the associated Al, Ca, and






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


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

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

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

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

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

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797001

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7888

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 90.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7810000	ug/Kg		7180	21100	21100	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-36-0	Antimony U,14	878	ug/Kg	J	349	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-38-2	Arsenic	2.52	mg/kg		0.218	1.09	1.09	2	MS	SKJ	02/12/10 23:33	100212-2	948067
7440-39-3	Barium J-,16a	118000	ug/Kg	N	106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-41-7	Beryllium	0.670	mg/kg		0.0218	0.109	0.109	2	MS	SKJ	02/17/10 15:31	100217-6	948067
7440-43-9	Cadmium	528	ug/Kg	U	106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-70-2	Calcium	4570000	ug/Kg		8450	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-47-3	Chromium	7420	ug/Kg		158	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-48-4	Cobalt	8400	ug/Kg		158	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-50-8	Copper	7270	ug/Kg		317	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-89-6	Iron	12500000	ug/Kg		8450	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-92-1	Lead J,14a	9040	ug/Kg		264	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-95-4	Magnesium J+,16b	1710000	ug/Kg	N	8980	31700	31700	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-96-5	Manganese	207000	ug/Kg	N	211	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-97-6	Mercury	36.2	ug/kg		3.97	11.7	11.7	1	AV	JXL1	02/16/10 12:24	021610S2-7	947668
7440-02-0	Nickel J-,16a	7.47	mg/kg	N	0.109	0.436	0.436	2	MS	SKJ	02/17/10 15:31	100217-6	948067
7440-09-7	Potassium J+,16b	1100000	ug/Kg	N	6760	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7782-49-2	Selenium	0.670	mg/kg	JN	0.545	1.09	1.09	2	MS	SKJ	02/12/10 23:33	100212-2	948067
7440-22-4	Silver	528	ug/Kg	U	106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-23-5	Sodium	392000	ug/Kg		7390	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-28-0	Thallium U,14	0.163	mg/kg	J	0.0654	0.218	0.218	2	MS	SKJ	02/12/10 23:33	100212-2	948067
7440-61-1	Uranium	0.534	mg/kg		0.0144	0.0436	0.0436	2	MS	SKJ	02/14/10 02:24	100213-3	948067
7440-62-2	Vanadium	15500	ug/Kg		106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-66-6	Zinc	35000	ug/Kg		349	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.567	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.522	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.506	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797002

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7890

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7060000	ug/Kg		6970	20500	20500	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-36-0	Antimony U,14b	1840	ug/Kg		338	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-38-2	Arsenic	1.66	mg/kg		0.206	1.03	1.03	2	MS	SKJ	02/13/10 00:16	100212-2	948067
7440-39-3	Barium J-,16a	80100	ug/Kg	N	102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-41-7	Beryllium	1.29	mg/kg		0.0206	0.103	0.103	2	MS	SKJ	02/17/10 14:42	100217-6	948067
7440-43-9	Cadmium	512	ug/Kg	U	102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-70-2	Calcium	1680000	ug/Kg		8200	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-47-3	Chromium	14800	ug/Kg		154	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-48-4	Cobalt	6970	ug/Kg		154	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-50-8	Copper	54600	ug/Kg		307	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-89-6	Iron	13000000	ug/Kg		8200	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-92-1	Lead	24500	ug/Kg		256	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-95-4	Magnesium J+,16b	1260000	ug/Kg	N	8710	30700	30700	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-96-5	Manganese	217000	ug/Kg	N	205	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-97-6	Mercury	37.5	ug/kg		4.28	12.6	12.6	1	AV	JXL1	02/16/10 12:34	021610S2-7	947668
7440-02-0	Nickel J-,16a	6.99	mg/kg	N	0.103	0.413	0.413	2	MS	SKJ	02/17/10 14:42	100217-6	948067
7440-09-7	Potassium J+,16b	794000	ug/Kg	N	6560	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7782-49-2	Selenium	0.573	mg/kg	JN	0.516	1.03	1.03	2	MS	SKJ	02/13/10 00:16	100212-2	948067
7440-22-4	Silver	512	ug/Kg	U	102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-23-5	Sodium	176000	ug/Kg		7170	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-28-0	Thallium	0.206	mg/kg	U	0.0619	0.206	0.206	2	MS	SKJ	02/13/10 00:16	100212-2	948067
7440-61-1	Uranium	17.1	mg/kg		0.0136	0.0413	0.0413	2	MS	SKJ	02/14/10 03:08	100213-3	948067
7440-62-2	Vanadium	12100	ug/Kg		102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-66-6	Zinc	51900	ug/Kg		338	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.528	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.541	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.537	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797003

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7886

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 93.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1960000	ug/Kg		7250	21300	21300	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-36-0	Antimony U,14	694	ug/Kg	J	352	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-38-2	Arsenic	0.774	mg/kg	J	0.205	1.03	1.03	2	MS	SKJ	02/13/10 00:23	100212-2	948067
7440-39-3	Barium J-,16a	25200	ug/Kg	N	107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-41-7	Beryllium	0.380	mg/kg		0.0205	0.103	0.103	2	MS	SKJ	02/17/10 14:44	100217-6	948067
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-70-2	Calcium	364000	ug/Kg		8520	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-47-3	Chromium	10100	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-48-4	Cobalt	14800	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-50-8	Copper	5920	ug/Kg		320	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-89-6	Iron	9470000	ug/Kg		8520	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-92-1	Lead J,14a	5130	ug/Kg		266	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-95-4	Magnesium J+,16b	219000	ug/Kg	N	9060	32000	32000	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-96-5	Manganese	262000	ug/Kg	N	213	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-97-6	Mercury	4.23	ug/kg	J	3.98	11.7	11.7	1	AV	JXL1	02/16/10 12:40	021610S2-7	947668
7440-02-0	Nickel J-,16a	3.98	mg/kg	N	0.103	0.411	0.411	2	MS	SKJ	02/17/10 14:44	100217-6	948067
7440-09-7	Potassium J+,16b	394000	ug/Kg	N	6820	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7782-49-2	Selenium	1.03	mg/kg	UN	0.513	1.03	1.03	2	MS	SKJ	02/13/10 00:23	100212-2	948067
7440-22-4	Silver	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-23-5	Sodium	199000	ug/Kg		7460	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-28-0	Thallium	0.205	mg/kg	U	0.0616	0.205	0.205	2	MS	SKJ	02/13/10 00:23	100212-2	948067
7440-61-1	Uranium	1.4	mg/kg		0.0136	0.0411	0.0411	2	MS	SKJ	02/14/10 03:14	100213-3	948067
7440-62-2	Vanadium	5390	ug/Kg		107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-66-6	Zinc	37100	ug/Kg		352	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.549	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.502	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.521	g	50	mL	02/08/10	FGA

SEB  
3/9/10



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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797004

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7889

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 63

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4760000	ug/Kg		10400	30700	30700	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-36-0	Antimony J,14a	5160	ug/Kg		507	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-38-2	Arsenic	1.51	mg/kg	J	0.318	1.59	1.59	2	MS	SKJ	02/13/10 00:29	100212-2	948067
7440-39-3	Barium J-,16a	58200	ug/Kg	N	154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-41-7	Beryllium	4.94	mg/kg		0.0318	0.159	0.159	2	MS	SKJ	02/17/10 14:46	100217-6	948067
7440-43-9	Cadmium	768	ug/Kg	U	154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-70-2	Calcium	1180000	ug/Kg		12300	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-47-3	Chromium	8140	ug/Kg		230	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-48-4	Cobalt	6400	ug/Kg		230	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-50-8	Copper	813000	ug/Kg		461	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-89-6	Iron	11500000	ug/Kg		12300	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-92-1	Lead	128000	ug/Kg		384	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-95-4	Magnesium J+,16b	885000	ug/Kg	N	13100	46100	46100	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-96-5	Manganese	226000	ug/Kg	N	307	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-97-6	Mercury	17.6	ug/kg	U	5.98	17.6	17.6	1	AV	JXL1	02/16/10 12:42	021610S2-7	947668
7440-02-0	Nickel J-,16a	5.46	mg/kg	N	0.159	0.635	0.635	2	MS	SKJ	02/17/10 14:46	100217-6	948067
7440-09-7	Potassium J+,16b	812000	ug/Kg	N	9830	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7782-49-2	Selenium	1.59	mg/kg	UN	0.794	1.59	1.59	2	MS	SKJ	02/13/10 00:29	100212-2	948067
7440-22-4	Silver	768	ug/Kg	U	154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-23-5	Sodium U,14d	77000	ug/Kg		10700	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-28-0	Thallium	0.318	mg/kg	U	0.0953	0.318	0.318	2	MS	SKJ	02/13/10 00:29	100212-2	948067
7440-61-1	Uranium	104	mg/kg		0.021	0.0635	0.0635	2	MS	SKJ	02/14/10 03:20	100213-3	948067
7440-62-2	Vanadium	16100	ug/Kg		154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-66-6	Zinc	57500	ug/Kg		507	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.543	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.518	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.501	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797005

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7885

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 67

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4690000	ug/Kg		9190	27000	27000	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-36-0	Antimony U,14b	1760	ug/Kg		446	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-38-2	Arsenic	2.03	mg/kg		0.286	1.43	1.43	2	MS	SKJ	02/13/10 00:35	100212-2	948067
7440-39-3	Barium J-,16a	61900	ug/Kg	N	135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-41-7	Beryllium	1.37	mg/kg		0.0286	0.143	0.143	2	MS	SKJ	02/17/10 14:48	100217-6	948067
7440-43-9	Cadmium	7980	ug/Kg		135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-70-2	Calcium	1370000	ug/Kg		10800	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-47-3	Chromium	6510	ug/Kg		203	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-48-4	Cobalt	10100	ug/Kg		203	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-50-8	Copper	118000	ug/Kg		405	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-89-6	Iron	10700000	ug/Kg		10800	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-92-1	Lead	43800	ug/Kg		338	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-95-4	Magnesium J+,16b	830000	ug/Kg	N	11500	40500	40500	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-96-5	Manganese	292000	ug/Kg	N	270	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-97-6	Mercury	12.3	ug/kg	J	5.57	16.4	16.4	1	AV	IXL1	02/16/10 12:44	02161052-7	947668
7440-02-0	Nickel J-,16a	5.31	mg/kg	N	0.143	0.572	0.572	2	MS	SKJ	02/17/10 14:48	100217-6	948067
7440-09-7	Potassium J+,16b	824000	ug/Kg	N	8650	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7782-49-2	Selenium	1.43	mg/kg	UN	0.716	1.43	1.43	2	MS	SKJ	02/13/10 00:35	100212-2	948067
7440-22-4	Silver	675	ug/Kg	U	135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-23-5	Sodium U,14d	106000	ug/Kg		9460	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-28-0	Thallium	0.286	mg/kg	U	0.0859	0.286	0.286	2	MS	SKJ	02/13/10 00:35	100212-2	948067
7440-61-1	Uranium	39.8	mg/kg		0.0189	0.0572	0.0572	2	MS	SKJ	02/14/10 03:26	100213-3	948067
7440-62-2	Vanadium	16300	ug/Kg		135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-66-6	Zinc	72400	ug/Kg		446	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.547	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.553	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.522	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797006

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7882

LEVEL: Low

DATE RECEIVED 29-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	2020000	ug/Kg		7620	22400	22400	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-36-0	Antimony U,14	968	ug/Kg	J	370	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-38-2	Arsenic	1.07	mg/kg	J	0.221	1.11	1.11	2	MS	SKJ	02/13/10 00:41	100212-2	948067
7440-39-3	Barium J-,16a	21000	ug/Kg	N	112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-41-7	Beryllium	0.248	mg/kg		0.0221	0.111	0.111	2	MS	SKJ	02/17/10 14:54	100217-6	948067
7440-43-9	Cadmium	560	ug/Kg	U	112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-70-2	Calcium	529000	ug/Kg		8960	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-47-3	Chromium	25700	ug/Kg		168	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-48-4	Cobalt	6650	ug/Kg		168	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-50-8	Copper	4870	ug/Kg		336	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-89-6	Iron	8730000	ug/Kg		8960	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-92-1	Lead J,14a	3420	ug/Kg		280	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-95-4	Magnesium J+,16b	373000	ug/Kg	N	9520	33600	33600	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-96-5	Manganese	192000	ug/Kg	N	224	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-97-6	Mercury	17.1	ug/kg		4.12	12.1	12.1	1	AV	JXL1	02/16/10 12:46	021610S2-7	947668
7440-02-0	Nickel J-,16a	3.85	mg/kg	N	0.111	0.443	0.443	2	MS	SKJ	02/17/10 14:54	100217-6	948067
7440-09-7	Potassium J+,16b	365000	ug/Kg	N	7170	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7782-49-2	Selenium	1.11	mg/kg	UN	0.554	1.11	1.11	2	MS	SKJ	02/13/10 00:41	100212-2	948067
7440-22-4	Silver	560	ug/Kg	U	112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-23-5	Sodium	156000	ug/Kg		7840	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-28-0	Thallium	0.221	mg/kg	U	0.0664	0.221	0.221	2	MS	SKJ	02/13/10 00:41	100212-2	948067
7440-61-1	Uranium	0.767	mg/kg		0.0146	0.0443	0.0443	2	MS	SKJ	02/14/10 03:32	100213-3	948067
7440-62-2	Vanadium	7350	ug/Kg		112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-66-6	Zinc	33200	ug/Kg		370	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.566	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.51	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.516	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797007

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7887

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 67

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	6770000	ug/Kg		9860	29000	29000	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-36-0	Antimony U,14	1090	ug/Kg	J	478	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-38-2	Arsenic	2.13	mg/kg		0.271	1.36	1.36	2	MS	SKJ	02/13/10 00:47	100212-2	948067
7440-39-3	Barium J-,16a	61200	ug/Kg	N	145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-41-7	Beryllium	0.753	mg/kg		0.0271	0.136	0.136	2	MS	SKJ	02/17/10 14:56	100217-6	948067
7440-43-9	Cadmium	725	ug/Kg	U	145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-70-2	Calcium	1420000	ug/Kg		11600	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-47-3	Chromium	15000	ug/Kg		217	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-48-4	Cobalt	8080	ug/Kg		217	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-50-8	Copper	11900	ug/Kg		435	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-89-6	Iron	13200000	ug/Kg		11600	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-92-1	Lead	17600	ug/Kg		362	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-95-4	Magnesium J+,16b	1420000	ug/Kg	N	12300	43500	43500	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-96-5	Manganese	230000	ug/Kg	N	290	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-97-6	Mercury	14.2	ug/kg	J	5.69	16.7	16.7	1	AV	JXL1	02/16/10 12:48	021610S2-7	947668
7440-02-0	Nickel J-,16a	6.73	mg/kg	N	0.136	0.542	0.542	2	MS	SKJ	02/17/10 14:56	100217-6	948067
7440-09-7	Potassium J+,16b	1220000	ug/Kg	N	9280	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7782-49-2	Selenium	1.36	mg/kg	UN	0.678	1.36	1.36	2	MS	SKJ	02/13/10 00:47	100212-2	948067
7440-22-4	Silver	725	ug/Kg	U	145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-23-5	Sodium U,14d	88400	ug/Kg		10100	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-28-0	Thallium	0.271	mg/kg	U	0.0813	0.271	0.271	2	MS	SKJ	02/13/10 00:47	100212-2	948067
7440-61-1	Uranium	2.54	mg/kg		0.0179	0.0542	0.0542	2	MS	SKJ	02/14/10 03:51	100213-3	948067
7440-62-2	Vanadium	25100	ug/Kg		145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-66-6	Zinc	31100	ug/Kg		478	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.535	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.515	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.551	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797008

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7881

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 63

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3450000	ug/Kg		9940	29200	29200	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-36-0	Antimony U,14	1250	ug/Kg	J	482	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-38-2	Arsenic	1.49	mg/kg	J	0.305	1.53	1.53	2	MS	SKJ	02/13/10 01:06	100212-2	948067
7440-39-3	Barium J-,16a	44600	ug/Kg	N	146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-41-7	Beryllium	2.82	mg/kg		0.0305	0.153	0.153	2	MS	SKJ	02/17/10 14:57	100217-6	948067
7440-43-9	Cadmium	731	ug/Kg	U	146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-70-2	Calcium	1400000	ug/Kg		11700	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-47-3	Chromium	13000	ug/Kg		219	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-48-4	Cobalt	2130	ug/Kg		219	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-50-8	Copper	16700	ug/Kg		438	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-89-6	Iron	9600000	ug/Kg		11700	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-92-1	Lead J,14a	15800	ug/Kg		365	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-95-4	Magnesium J+,16b	701000	ug/Kg	N	12400	43800	43800	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-96-5	Manganese	259000	ug/Kg	N	292	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-97-6	Mercury	20.9	ug/kg		6.25	18.4	18.4	1	AV	JXL1	02/16/10 12:50	021610S2-7	947668
7440-02-0	Nickel J-,16a	3.8	mg/kg	N	0.153	0.61	0.61	2	MS	SKJ	02/17/10 14:57	100217-6	948067
7440-09-7	Potassium J+,16b	706000	ug/Kg	N	9350	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7782-49-2	Selenium	1.53	mg/kg	UN	0.763	1.53	1.53	2	MS	SKJ	02/13/10 01:06	100212-2	948067
7440-22-4	Silver	731	ug/Kg	U	146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-23-5	Sodium U,14d	70900	ug/Kg		10200	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-28-0	Thallium	0.305	mg/kg	U	0.0915	0.305	0.305	2	MS	SKJ	02/13/10 01:06	100212-2	948067
7440-61-1	Uranium	29.5	mg/kg		0.0201	0.061	0.061	2	MS	SKJ	02/14/10 03:57	100213-3	948067
7440-62-2	Vanadium	12000	ug/Kg		146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-66-6	Zinc	51600	ug/Kg		482	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.519	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.544	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.521	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797009

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7951

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 81

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1940000	ug/Kg		7960	23400	23400	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-36-0	Antimony U,14	902	ug/Kg	J	386	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-38-2	Arsenic	1.7	mg/kg		0.233	1.17	1.17	2	MS	SKJ	02/13/10 01:12	100212-2	948067
7440-39-3	Barium J-,16a	36900	ug/Kg	N	117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-41-7	Beryllium	0.368	mg/kg		0.0233	0.117	0.117	2	MS	SKJ	02/17/10 14:59	100217-6	948067
7440-43-9	Cadmium	586	ug/Kg	U	117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-70-2	Calcium	532000	ug/Kg		9370	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-47-3	Chromium	4590	ug/Kg		176	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-48-4	Cobalt	11900	ug/Kg		176	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-50-8	Copper	5030	ug/Kg		351	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-89-6	Iron	8270000	ug/Kg		9370	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-92-1	Lead J,14a	6440	ug/Kg		293	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-95-4	Magnesium J+,16b	291000	ug/Kg	N	9950	35100	35100	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-96-5	Manganese	295000	ug/Kg	N	234	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-97-6	Mercury	14.1	ug/kg	U	4.81	14.1	14.1	1	AV	JXL1	02/16/10 12:51	021610S2-7	947668
7440-02-0	Nickel J-,16a	4.3	mg/kg	N	0.117	0.467	0.467	2	MS	SKJ	02/17/10 14:59	100217-6	948067
7440-09-7	Potassium J+,16b	629000	ug/Kg	N	7500	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7782-49-2	Selenium	1.17	mg/kg	UN	0.583	1.17	1.17	2	MS	SKJ	02/13/10 01:12	100212-2	948067
7440-22-4	Silver	586	ug/Kg	U	117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-23-5	Sodium	281000	ug/Kg		8200	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-28-0	Thallium	0.233	mg/kg	U	0.07	0.233	0.233	2	MS	SKJ	02/13/10 01:12	100212-2	948067
7440-61-1	Uranium	1.89	mg/kg		0.0154	0.0467	0.0467	2	MS	SKJ	02/14/10 04:03	100213-3	948067
7440-62-2	Vanadium	4120	ug/Kg		117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-66-6	Zinc	31700	ug/Kg		386	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.526	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.529	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.531	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797010

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7950

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8490000	ug/Kg		8410	24700	24700	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-36-0	Antimony U,14	759	ug/Kg	J	408	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-38-2	Arsenic	2.67	mg/kg		0.246	1.23	1.23	2	MS	SKJ	02/13/10 01:18	100212-2	948067
7440-39-3	Barium J-,16a	90200	ug/Kg	N	124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-41-7	Beryllium	1.22	mg/kg		0.0246	0.123	0.123	2	MS	SKJ	02/17/10 15:01	100217-6	948067
7440-43-9	Cadmium	619	ug/Kg	U	124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-70-2	Calcium	2710000	ug/Kg		9900	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-47-3	Chromium	12700	ug/Kg		186	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-48-4	Cobalt	5470	ug/Kg		186	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-50-8	Copper	13000	ug/Kg		371	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-89-6	Iron	12800000	ug/Kg		9900	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-92-1	Lead J,14a	11600	ug/Kg		309	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-95-4	Magnesium J+,16b	1780000	ug/Kg	N	10500	37100	37100	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-96-5	Manganese	179000	ug/Kg	N	247	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-97-6	Mercury	49.5	ug/kg		4.97	14.6	14.6	1	AV	JXLI	02/16/10 12:53	02161082-7	947668
7440-02-0	Nickel J-,16a	8.79	mg/kg	N	0.123	0.493	0.493	2	MS	SKJ	02/17/10 15:01	100217-6	948067
7440-09-7	Potassium J+,16b	1200000	ug/Kg	N	7920	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7782-49-2	Selenium	1.23	mg/kg	UN	0.616	1.23	1.23	2	MS	SKJ	02/13/10 01:18	100212-2	948067
7440-22-4	Silver	619	ug/Kg	U	124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-23-5	Sodium U,14d	74300	ug/Kg		8660	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-28-0	Thallium	0.246	mg/kg	U	0.0739	0.246	0.246	2	MS	SKJ	02/13/10 01:18	100212-2	948067
7440-61-1	Uranium	5.41	mg/kg		0.0163	0.0493	0.0493	2	MS	SKJ	02/14/10 04:09	100213-3	948067
7440-62-2	Vanadium	20100	ug/Kg		124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-66-6	Zinc	32800	ug/Kg		408	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.512	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.504	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.506	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797011

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7947

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 64

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7080000	ug/Kg		10500	30900	30900	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-36-0	Antimony U, I4b	3820	ug/Kg		509	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-38-2	Arsenic	2.83	mg/kg		0.31	1.55	1.55	2	MS	SKJ	02/13/10 01:24	100212-2	948067
7440-39-3	Barium J-, I6a	112000	ug/Kg	N	154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-41-7	Beryllium	3.22	mg/kg		0.031	0.155	0.155	2	MS	SKJ	02/17/10 15:07	100217-6	948067
7440-43-9	Cadmium	614	ug/Kg	J	154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-70-2	Calcium	3340000	ug/Kg		12300	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-47-3	Chromium	8800	ug/Kg		231	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-48-4	Cobalt	5660	ug/Kg		231	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-50-8	Copper	143000	ug/Kg		463	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-89-6	Iron	11000000	ug/Kg		12300	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-92-1	Lead	121000	ug/Kg		386	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-95-4	Magnesium J+, I6b	1500000	ug/Kg	N	13100	46300	46300	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-96-5	Manganese	393000	ug/Kg	N	309	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-97-6	Mercury	19.3	ug/kg		5.64	16.6	16.6	1	AV	JXL1	02/16/10 12:55	021610S2-7	947668
7440-02-0	Nickel J-, I6a	8.85	mg/kg	N	0.155	0.62	0.62	2	MS	SKJ	02/17/10 15:07	100217-6	948067
7440-09-7	Potassium J+, I6b	1500000	ug/Kg	N	9880	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7782-49-2	Selenium	1.55	mg/kg	UN	0.775	1.55	1.55	2	MS	SKJ	02/13/10 01:24	100212-2	948067
7440-22-4	Silver	771	ug/Kg	U	154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-23-5	Sodium U, I4d	54000	ug/Kg		10800	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-28-0	Thallium	0.310	mg/kg	U	0.0929	0.31	0.31	2	MS	SKJ	02/13/10 01:24	100212-2	948067
7440-61-1	Uranium	71.5	mg/kg		0.0204	0.062	0.062	2	MS	SKJ	02/14/10 04:15	100213-3	948067
7440-62-2	Vanadium	21400	ug/Kg		154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-66-6	Zinc	68700	ug/Kg		509	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.567	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.508	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.506	g	50	mL	02/08/10	FGA

SEB  
3/9/10



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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797012

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7944

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 92.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3540000	ug/Kg		7260	21300	21300	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-36-0	Antimony U,14	825	ug/Kg	J	352	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-38-2	Arsenic	1.35	mg/kg		0.211	1.05	1.05	2	MS	SKJ	02/13/10 01:30	100212-2	948067
7440-39-3	Barium J-,16a	59100	ug/Kg	N	107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-41-7	Beryllium	0.440	mg/kg		0.0211	0.105	0.105	2	MS	SKJ	02/17/10 15:09	100217-6	948067
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-70-2	Calcium	1190000	ug/Kg		8540	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-47-3	Chromium	25800	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-48-4	Cobalt	9430	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-50-8	Copper	6020	ug/Kg		320	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-89-6	Iron	9360000	ug/Kg		8540	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-92-1	Lead J,14a	4330	ug/Kg		267	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-95-4	Magnesium J+,16b	864000	ug/Kg	N	9070	32000	32000	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-96-5	Manganese	198000	ug/Kg	N	213	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-97-6	Mercury	29.9	ug/kg		4.38	12.9	12.9	1	AV	JXL1	02/16/10 12:57	021610S2-7	947668
7440-02-0	Nickel J-,16a	7.46	mg/kg	N	0.105	0.422	0.422	2	MS	SKJ	02/17/10 15:09	100217-6	948067
7440-09-7	Potassium J+,16b	602000	ug/Kg	N	6830	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7782-49-2	Selenium	1.05	mg/kg	UN	0.527	1.05	1.05	2	MS	SKJ	02/13/10 01:30	100212-2	948067
7440-22-4	Silver	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-23-5	Sodium	182000	ug/Kg		7470	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-28-0	Thallium	0.211	mg/kg	U	0.0633	0.211	0.211	2	MS	SKJ	02/13/10 01:30	100212-2	948067
7440-61-1	Uranium	0.533	mg/kg		0.0139	0.0422	0.0422	2	MS	SKJ	02/14/10 04:34	100213-3	948067
7440-62-2	Vanadium	8640	ug/Kg		107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-66-6	Zinc	42200	ug/Kg		352	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.502	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.505	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.511	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797013

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7948

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 92.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4800000	ug/Kg		7170	21100	21100	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-36-0	Antimony U,14b	1970	ug/Kg		348	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-38-2	Arsenic	1.65	mg/kg		0.201	1	1	2	MS	SKJ	02/13/10 01:37	100212-2	948067
7440-39-3	Barium J-,16a	67500	ug/Kg	N	105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-41-7	Beryllium	0.935	mg/kg		0.0201	0.1	0.1	2	MS	SKJ	02/17/10 15:11	100217-6	948067
7440-43-9	Cadmium	527	ug/Kg	U	105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-70-2	Calcium	1650000	ug/Kg		8430	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-47-3	Chromium	15300	ug/Kg		158	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-48-4	Cobalt	3610	ug/Kg		158	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-50-8	Copper	29400	ug/Kg		316	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-89-6	Iron	9520000	ug/Kg		8430	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-92-1	Lead	22600	ug/Kg		263	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-95-4	Magnesium J+,16b	974000	ug/Kg	N	8960	31600	31600	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-96-5	Manganese	267000	ug/Kg	N	211	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-97-6	Mercury	12.4	ug/kg		4.09	12	12	1	AV	JXL1	02/16/10 13:03	021610S2-7	947668
7440-02-0	Nickel J-,16a	5.45	mg/kg	N	0.1	0.401	0.401	2	MS	SKJ	02/17/10 15:11	100217-6	948067
7440-09-7	Potassium J+,16b	812000	ug/Kg	N	6740	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7782-49-2	Selenium	1	mg/kg	UN	0.502	1	1	2	MS	SKJ	02/13/10 01:37	100212-2	948067
7440-22-4	Silver	527	ug/Kg	U	105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-23-5	Sodium U,14d	58800	ug/Kg		7380	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-28-0	Thallium	0.201	mg/kg	U	0.0602	0.201	0.201	2	MS	SKJ	02/13/10 01:37	100212-2	948067
7440-61-1	Uranium	11.8	mg/kg		0.0132	0.0401	0.0401	2	MS	SKJ	02/14/10 04:40	100213-3	948067
7440-62-2	Vanadium	16200	ug/Kg		105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-66-6	Zinc	40100	ug/Kg		348	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.542	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.515	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.541	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797014

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7941

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 76

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4960000	ug/Kg		8720	25600	25600	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-36-0	Antimony U,14	893	ug/Kg	J	423	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-38-2	Arsenic	1.72	mg/kg		0.245	1.22	1.22	2	MS	SKJ	02/13/10 01:55	100212-2	948067
7440-39-3	Barium J-,16a	88400	ug/Kg	N	128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-41-7	Beryllium	1.04	mg/kg		0.0245	0.122	0.122	2	MS	SKJ	02/17/10 15:12	100217-6	948067
7440-43-9	Cadmium	134	ug/Kg	J	128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-70-2	Calcium	2010000	ug/Kg		10300	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-47-3	Chromium	6540	ug/Kg		192	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-48-4	Cobalt	3600	ug/Kg		192	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-50-8	Copper	16600	ug/Kg		385	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-89-6	Iron	8990000	ug/Kg		10300	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-92-1	Lead	24300	ug/Kg		320	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-95-4	Magnesium J+,16b	1160000	ug/Kg	N	10900	38500	38500	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-96-5	Manganese	260000	ug/Kg	N	256	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-97-6	Mercury	15.6	ug/kg	U	5.31	15.6	15.6	1	AV	JXL1	02/16/10 13:05	021610S2-7	947668
7440-02-0	Nickel J-,16a	4.8	mg/kg	N	0.122	0.49	0.49	2	MS	SKJ	02/17/10 15:12	100217-6	948067
7440-09-7	Potassium J+,16b	1230000	ug/Kg	N	8200	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7782-49-2	Selenium	1.22	mg/kg	UN	0.612	1.22	1.22	2	MS	SKJ	02/13/10 01:55	100212-2	948067
7440-22-4	Silver	641	ug/Kg	U	128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-23-5	Sodium U,14d	38400	ug/Kg		8970	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-28-0	Thallium	0.245	mg/kg	U	0.0735	0.245	0.245	2	MS	SKJ	02/13/10 01:55	100212-2	948067
7440-61-1	Uranium	26.5	mg/kg		0.0162	0.049	0.049	2	MS	SKJ	02/14/10 04:46	100213-3	948067
7440-62-2	Vanadium	17000	ug/Kg		128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-66-6	Zinc	32900	ug/Kg		423	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.503	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.511	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.535	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797015

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7949

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 59

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7470000	ug/Kg		11300	33100	33100	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-36-0	Antimony U,14b	2250	ug/Kg		546	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-38-2	Arsenic	2.46	mg/kg		0.307	1.54	1.54	2	MS	SKJ	02/13/10 02:01	100212-2	948067
7440-39-3	Barium J-,16a	108000	ug/Kg	N	165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-41-7	Beryllium	1.81	mg/kg		0.0307	0.154	0.154	2	MS	SKJ	02/17/10 15:18	100217-6	948067
7440-43-9	Cadmium	419	ug/Kg	J	165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-70-2	Calcium	2680000	ug/Kg		13200	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-47-3	Chromium	14500	ug/Kg		248	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-48-4	Cobalt	4650	ug/Kg		248	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-50-8	Copper	88600	ug/Kg		496	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-89-6	Iron	12100000	ug/Kg		13200	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-92-1	Lead	55200	ug/Kg		414	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-95-4	Magnesium J+,16b	1570000	ug/Kg	N	14100	49600	49600	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-96-5	Manganese	340000	ug/Kg	N	331	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-97-6	Mercury	14.5	ug/kg	J	6.87	20.2	20.2	1	AV	JXL1	02/16/10 13:07	021610S2-7	947668
7440-02-0	Nickel J-,16a	7.59	mg/kg	N	0.154	0.615	0.615	2	MS	SKJ	02/17/10 15:18	100217-6	948067
7440-09-7	Potassium J+,16b	1540000	ug/Kg	N	10600	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7782-49-2	Selenium	1.54	mg/kg	UN	0.769	1.54	1.54	2	MS	SKJ	02/13/10 02:01	100212-2	948067
7440-22-4	Silver	827	ug/Kg	U	165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-23-5	Sodium U,14d	59000	ug/Kg		11600	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-28-0	Thallium	0.307	mg/kg	U	0.0922	0.307	0.307	2	MS	SKJ	02/13/10 02:01	100212-2	948067
7440-61-1	Uranium	48.8	mg/kg		0.0203	0.0615	0.0615	2	MS	SKJ	02/14/10 04:52	100213-3	948067
7440-62-2	Vanadium	22800	ug/Kg		165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-66-6	Zinc	63600	ug/Kg		546	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.501	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.51	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.549	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797016

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7946

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 91.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2010000	ug/Kg		6940	20400	20400	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-36-0	Antimony U,14	420	ug/Kg	J	337	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-38-2	Arsenic	0.969	mg/kg	J	0.21	1.05	1.05	2	MS	SKJ	02/13/10 02:07	100212-2	948067
7440-39-3	Barium J-,16a	28800	ug/Kg	N	102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-41-7	Beryllium	0.322	mg/kg		0.021	0.105	0.105	2	MS	SKJ	02/17/10 15:20	100217-6	948067
7440-43-9	Cadmium	510	ug/Kg	U	102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-70-2	Calcium	756000	ug/Kg		8160	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-47-3	Chromium	15800	ug/Kg		153	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-48-4	Cobalt	17100	ug/Kg		153	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-50-8	Copper	5870	ug/Kg		306	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-89-6	Iron	9610000	ug/Kg		8160	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-92-1	Lead J,14a	3600	ug/Kg		255	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-95-4	Magnesium J+,16b	352000	ug/Kg	N	8670	30600	30600	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-96-5	Manganese	218000	ug/Kg	N	204	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-97-6	Mercury	10.8	ug/kg	J	4.29	12.6	12.6	1	AV	JXL1	02/16/10 13:09	02161052-7	947668
7440-02-0	Nickel J-,16a	4.71	mg/kg	N	0.105	0.421	0.421	2	MS	SKJ	02/17/10 15:20	100217-6	948067
7440-09-7	Potassium J+,16b	412000	ug/Kg	N	6530	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7782-49-2	Selenium	1.05	mg/kg	UN	0.526	1.05	1.05	2	MS	SKJ	02/13/10 02:07	100212-2	948067
7440-22-4	Silver	510	ug/Kg	U	102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-23-5	Sodium	164000	ug/Kg		7140	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-28-0	Thallium	0.210	mg/kg	U	0.0631	0.21	0.21	2	MS	SKJ	02/13/10 02:07	100212-2	948067
7440-61-1	Uranium	0.879	mg/kg		0.0139	0.0421	0.0421	2	MS	SKJ	02/15/10 14:26	100215-4	948067
7440-62-2	Vanadium	6570	ug/Kg		102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-66-6	Zinc	37600	ug/Kg		337	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.518	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.534	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.518	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797017

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7942

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4850000	ug/Kg		7350	21600	21600	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-36-0	Antimony U,14	578	ug/Kg	J	357	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-38-2	Arsenic	1.63	mg/kg		0.223	1.11	1.11	2	MS	SKJ	02/13/10 02:14	100212-2	948067
7440-39-3	Barium J-,16a	63400	ug/Kg	N	108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-41-7	Beryllium	0.591	mg/kg		0.0223	0.111	0.111	2	MS	SKJ	02/17/10 15:22	100217-6	948067
7440-43-9	Cadmium	541	ug/Kg	U	108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-70-2	Calcium	1350000	ug/Kg		8650	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-47-3	Chromium	8830	ug/Kg		162	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-48-4	Cobalt	4280	ug/Kg		162	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-50-8	Copper	4070	ug/Kg		324	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-89-6	Iron	7590000	ug/Kg		8650	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-92-1	Lead J,14a	5720	ug/Kg		270	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-95-4	Magnesium J+,16b	1030000	ug/Kg	N	9190	32400	32400	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-96-5	Manganese	188000	ug/Kg	N	216	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-97-6	Mercury	13.7	ug/kg		4.54	13.3	13.3	1	AV	JXL1	02/16/10 13:11	02161052-7	947668
7440-02-0	Nickel J-,16a	5.18	mg/kg	N	0.111	0.446	0.446	2	MS	SKJ	02/17/10 15:22	100217-6	948067
7440-09-7	Potassium J+,16b	771000	ug/Kg	N	6920	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7782-49-2	Selenium	1.11	mg/kg	UN	0.557	1.11	1.11	2	MS	SKJ	02/13/10 02:14	100212-2	948067
7440-22-4	Silver	541	ug/Kg	U	108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-23-5	Sodium	101000	ug/Kg		7570	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-28-0	Thallium	0.223	mg/kg	U	0.0668	0.223	0.223	2	MS	SKJ	02/13/10 02:14	100212-2	948067
7440-61-1	Uranium	0.956	mg/kg		0.0147	0.0446	0.0446	2	MS	SKJ	02/15/10 14:28	100215-4	948067
7440-62-2	Vanadium	9960	ug/Kg		108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-66-6	Zinc	17200	ug/Kg		357	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.505	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.519	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.504	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797018

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7945

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 61

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5240000	ug/Kg		10500	31000	31000	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-36-0	Antimony U,14	1500	ug/Kg	J	512	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-38-2	Arsenic	2.16	mg/kg		0.325	1.63	1.63	2	MS	SKJ	02/13/10 02:20	100212-2	948067
7440-39-3	Barium J-,16a	99400	ug/Kg	N	155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-41-7	Beryllium	1.67	mg/kg		0.0325	0.163	0.163	2	MS	SKJ	02/17/10 15:24	100217-6	948067
7440-43-9	Cadmium	258	ug/Kg	J	155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-70-2	Calcium	3360000	ug/Kg		12400	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-47-3	Chromium	9840	ug/Kg		233	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-48-4	Cobalt	5370	ug/Kg		233	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-50-8	Copper	37000	ug/Kg		465	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-89-6	Iron	7940000	ug/Kg		12400	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-92-1	Lead	26300	ug/Kg		388	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-95-4	Magnesium J+,16b	1090000	ug/Kg	N	13200	46500	46500	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-96-5	Manganese	365000	ug/Kg	N	310	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-97-6	Mercury	22	ug/kg		6.66	19.6	19.6	1	AV	JXL1	02/16/10 13:13	021610S2-7	947668
7440-02-0	Nickel J-,16a	6.13	mg/kg	N	0.163	0.651	0.651	2	MS	SKJ	02/17/10 15:24	100217-6	948067
7440-09-7	Potassium J+,16b	973000	ug/Kg	N	9920	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7782-49-2	Selenium	1.63	mg/kg	UN	0.813	1.63	1.63	2	MS	SKJ	02/13/10 02:20	100212-2	948067
7440-22-4	Silver	278	ug/Kg	J	155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-23-5	Sodium U,14d	76400	ug/Kg		10900	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-28-0	Thallium	0.325	mg/kg	U	0.0976	0.325	0.325	2	MS	SKJ	02/13/10 02:20	100212-2	948067
7440-61-1	Uranium	46.3	mg/kg		0.107	0.325	0.325	10	MS	SKJ	02/16/10 10:38	100216-5	948067
7440-62-2	Vanadium	11600	ug/Kg		155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-66-6	Zinc	47200	ug/Kg		512	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.503	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.53	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.505	g	50	mL	02/08/10	FGA

SEB  
3/9/10

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797019

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7943

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 92.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1320000	ug/Kg		7100	20900	20900	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-36-0	Antimony U,14	797	ug/Kg	J	345	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-38-2	Arsenic	0.839	mg/kg	J	0.21	1.05	1.05	2	MS	SKJ	02/13/10 02:26	100212-2	948067
7440-39-3	Barium J-,16a	17200	ug/Kg	N	104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-41-7	Beryllium	0.325	mg/kg		0.021	0.105	0.105	2	MS	SKJ	02/17/10 15:26	100217-6	948067
7440-43-9	Cadmium	522	ug/Kg	U	104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-70-2	Calcium	292000	ug/Kg		8350	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-47-3	Chromium	20000	ug/Kg		157	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-48-4	Cobalt	4120	ug/Kg		157	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-50-8	Copper	1730	ug/Kg		313	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-89-6	Iron	6350000	ug/Kg		8350	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-92-1	Lead J,14a	2480	ug/Kg		261	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-95-4	Magnesium J+,16b	197000	ug/Kg	N	8870	31300	31300	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-96-5	Manganese	201000	ug/Kg	N	209	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-97-6	Mercury	16.5	ug/kg		4.17	12.3	12.3	1	AV	JXL1	02/16/10 13:15	021610S2-7	947668
7440-02-0	Nickel J-,16a	5.71	mg/kg	N	0.105	0.42	0.42	2	MS	SKJ	02/17/10 15:26	100217-6	948067
7440-09-7	Potassium J+,16b	355000	ug/Kg	N	6680	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7782-49-2	Selenium	1.05	mg/kg	UN	0.525	1.05	1.05	2	MS	SKJ	02/13/10 02:26	100212-2	948067
7440-22-4	Silver	522	ug/Kg	U	104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-23-5	Sodium	196000	ug/Kg		7310	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-28-0	Thallium	0.210	mg/kg	U	0.063	0.21	0.21	2	MS	SKJ	02/13/10 02:26	100212-2	948067
7440-61-1	Uranium	0.638	mg/kg		0.0139	0.042	0.042	2	MS	SKJ	02/15/10 14:33	100215-4	948067
7440-62-2	Vanadium	2590	ug/Kg		104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-66-6	Zinc	24300	ug/Kg		345	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.529	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.518	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.515	g	50	mL	02/08/10	FGA

SEB  
3/9/10



**DATA VALIDATION COVER SHEET**

5120-1

**Data Validation Cover Sheet**

Records Use only

**Section I.**REQUEST NUMBER: 10-1471 VALIDATION DATE: 03/09/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Susan Ball ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

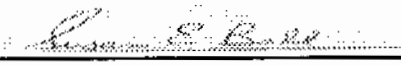
- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> TPH-GRO                                     | <input type="checkbox"/> HIGH EXPLOSIVES | <input type="checkbox"/> DIOXIN FURANS          | <input type="checkbox"/> LCMSMS PERCHLORATES |
| <input type="checkbox"/> TPH-DRO                                     | <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): <u>total cyanide only</u> |  |   |  |


**Section II. Completeness Check**

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


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

1. It should be noted that the parent QC samples for one total cyanide batch were from other LANL RNs. No sample results were qualified.


Reviewed by: Mary DonovanLevel: IDate: 03/10/10VALIDATOR'S SIGNATURE: DATE: 03/09/10

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

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

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

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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

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

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

## GEL LABORATORIES LLC

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

### Certificate of Analysis

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7888  
Sample ID: 245797001  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 9.32%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	69.4	255	ug/kg	1	AXC2	02/08/10	1355	947315	1

#### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

#### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

## 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 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7890  
Sample ID: 245797002  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 9.81%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	73.9	272	ug/kg	1	AXC2	02/08/10	1356	947315	1

#### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

#### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

# 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 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7886  
Sample ID: 245797003  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 6.53%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	68.6	252	ug/kg	1	AXC2	02/08/10	1357	947315	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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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 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7889  
Sample ID: 245797004  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 37.1%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	108	398	ug/kg	1	AXC2	02/08/10	1358	947315	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	



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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7885  
Sample ID: 245797005  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 33.1%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	J	154	94.1	346	ug/kg	1	AXC2	02/08/10	1359	947315	1

#### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

#### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7882  
Sample ID: 245797006  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 12.5%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Flow Injection Analysis</b>										
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>										
Cyanide, Total	U	ND	77.7	286	ug/kg	1	AXC2 02/08/10 1359	947315	1	

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7887  
Sample ID: 245797007  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 33%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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#### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	87.5	322	ug/kg	1	AXC2	02/08/10	1520	947318	1
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#### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

#### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7881  
Sample ID: 245797008  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 37.1%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	J	298	106	390	ug/kg	1	AXC2	02/08/10	1524	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7951  
Sample ID: 245797009  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 19.3%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	78.0	287	ug/kg	1	AXC2	02/08/10	1527	947318	1

#### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

#### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7950  
Sample ID: 245797010  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 19.8%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	78.5	289	ug/kg	1	AXC2	02/08/10	1528	947318	1

#### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

#### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7947  
Sample ID: 245797011  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 36.2%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	J	122	105	384	ug/kg	1	AXC2	02/08/10	1533	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANLER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7944  
Sample ID: 245797012  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 7.21%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	73.3	269	ug/kg	1	AXC2	02/08/10	1534	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	



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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7948  
Sample ID: 245797013  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 7.88%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	71.0	261	ug/kg	1	AXC2	02/08/10	1534	947318	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7941  
Sample ID: 245797014  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 23.7%

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 "Dry Weight Corrected"</i>											
Cyanide, Total		324	82.5	303	ug/kg	1	AXC2	02/08/10	1535	947318	1

#### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

#### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7949  
Sample ID: 245797015  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 40.8%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	115	422	ug/kg	1	AXC2	02/08/10	1536	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7946  
Sample ID: 245797016  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 8.2%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	71.2	262	ug/kg	1	AXC2	02/08/10	1537	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7942  
Sample ID: 245797017  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 10.9%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	70.7	260	ug/kg	1	AXC2	02/08/10	1538	947318	1

#### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

#### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7945  
Sample ID: 245797018  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 39.1%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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#### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	234	103	380	ug/kg	1	AXC2	02/08/10	1539	947318	1
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#### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

#### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7943  
Sample ID: 245797019  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 7.55%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	65.7	241	ug/kg	1	AXC2	02/08/10	1540	947318	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Thursday, January 28, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1471

LOS ALAMOS

REQUEST NUMBER: 10-1471

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/27/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245797 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7888	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7890	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7886	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7889	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7885	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7882	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7887	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7881	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7951	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7950	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7947	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7944	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7948	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7941	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7949	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7946	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7942	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7945	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7943	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature



Thursday, January 28, 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: 10-1471  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples  
according to the schedule indicated:

**SHIP DATE: 1/28/2010**

**TURNAROUND/REPORT DUE: 2/27/2010**

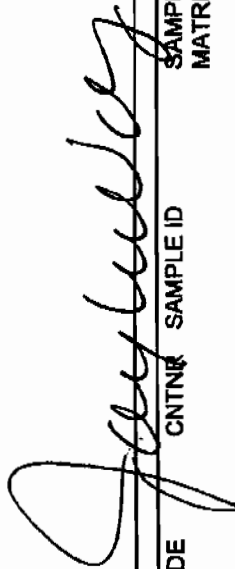
**TURNAROUND REQ'D: 30 Days**

**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
	SW-846:6020	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	

Thursday, January 28, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846-8020	1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	
	SW-846-8850	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	

Thursday, January 28, 2010

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REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	RE15-10-7951	R	1/26/2010	
	SW-846:7471A	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	
	SW-846:9012A	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	

Thursday, January 28, 2010

REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:3012A	1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	

Final Page of REQUEST NUMBER 10-1471



February 04, 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 Order: 245797  
SDG: 10-1471

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 29, 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: 10-1471  
Enclosures

**Los Alamos National Laboratory (72733-001-09)**  
**LANL ER Project**  
**Work Order #: 245797**  
**SDG: 10-1471**

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# Case Narrative



**Case Narrative for  
Los Alamos National Laboratory (72733-001-09)  
LANL ER Project  
Workorder #: 245797  
SDG # : 10-1471**

**February 04, 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 29, 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. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

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

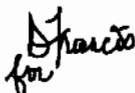
<u>Laboratory ID</u>	<u>Client ID</u>
245797001	RE15-10-7888
245797002	RE15-10-7890
245797003	RE15-10-7886
245797004	RE15-10-7889
245797005	RE15-10-7885
245797006	RE15-10-7882
245797007	RE15-10-7887
245797008	RE15-10-7881
245797009	RE15-10-7951
245797010	RE15-10-7950
245797011	RE15-10-7947
245797012	RE15-10-7944
245797013	RE15-10-7948
245797014	RE15-10-7941
245797015	RE15-10-7949
245797016	RE15-10-7946
245797017	RE15-10-7942
245797018	RE15-10-7945
245797019	RE15-10-7943

### **Case Narrative**

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

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

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



Valerie Davis

Project Manager

**List of current GEL Certifications as of 04 February 2010**

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

# **Chain of Custody and Supporting Documentation**

Thursday, January 28, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1471

LOS ALAMOS

REQUEST NUMBER: 10-1471

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/27/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245797 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7888	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7890	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7886	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7889	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7885	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7882	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7887	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7881	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7951	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7950	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7947	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7944	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7948	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7941	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7949	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7946	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7942	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7945	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7943	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Thursday, January 28, 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: 1/28/2010**

**TURNAROUND/REPORT DUE: 2/27/2010**

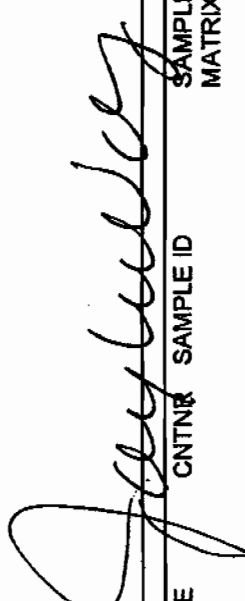
**TURNAROUND REQ'D: 30 Days**

**RAD SCREENING: Yes, Below Background**

**LAB REQUEST COMMENTS:**

LANL ER SMO CONTACT:

Signature:



These Samples are on:  
LANL Request Number: 10-1471  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846-6020	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	

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REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	
	SW-846:6850	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	

Thursday, January 28, 2010

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REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8850	1	RE15-10-7951	R	1/26/2010	
	SW-846:7471A	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	
		1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	
	SW-846:9012A	1	RE15-10-7881	R	1/26/2010	
		1	RE15-10-7882	R	1/26/2010	
		1	RE15-10-7885	R	1/26/2010	
		1	RE15-10-7886	R	1/26/2010	
		1	RE15-10-7887	R	1/26/2010	
		1	RE15-10-7888	R	1/26/2010	
		1	RE15-10-7889	R	1/26/2010	
		1	RE15-10-7890	R	1/26/2010	



Thursday, January 28, 2010

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REQUEST NUMBER: 10-1471

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE15-10-7941	R	1/26/2010	
		1	RE15-10-7942	R	1/26/2010	
		1	RE15-10-7943	R	1/26/2010	
		1	RE15-10-7944	R	1/26/2010	
		1	RE15-10-7945	R	1/26/2010	
		1	RE15-10-7946	R	1/26/2010	
		1	RE15-10-7947	R	1/26/2010	
		1	RE15-10-7948	R	1/26/2010	
		1	RE15-10-7949	R	1/26/2010	
		1	RE15-10-7950	R	1/26/2010	
		1	RE15-10-7951	R	1/26/2010	

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Client: LANL			SDG/ARCO/Work Order: 10-1471		
Received By: Patricia Dover-Dent			Date Received: January 29, 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) 1-6    10-12C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken    damaged container    leaking container    other (describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?			X	Sample ID's affected: 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 7419 11C		7209 7849 7522 6C			
7209 7849 7500 5C		7209 7849 7533 1C			
7209 7849 7452 2C		7209 7849 7544 1C			
7209 7849 7474 1C		7209 7849 7420 10C			
7209 7849 7441 4C		7209 7849 7496 2C			
7209 7849 7463 3C		7209 7849 7485 3C			
7209 7849 7430 10C		7209 7849 7408 12C			
7209 7849 7511 6C					

PM (or PMA) review: Initials  
Page 11 of 926

Date \_\_\_\_\_

2	1	10
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ORIGIN ID: SAFA (505) 665-8968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
T800 BLDG 1237 CPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 28JAN10  
ACTWGT: 60.8 LB MON  
CNO: 0014176/CAFE2440

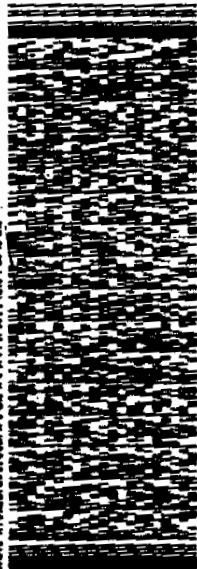
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171  
REF: 69010AMR2A0515BYDO

FedEx  
Express



FRI - 29JAN A1  
PRIORITY OVERNIGHT

MPS# 7209 7849 7419  
Matr# 7209 7849 7393 (9281)

29407  
SC-US  
CHS

XX CHSA



ORIGIN ID: SAFA (505) 865-9058

JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
T800 BLDG 1237 CPU 03

LOS ALAMOS, NM 87545  
UNITED STATES US

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171  
REF: 69010AMR1A015ACMKO

FedEx  
Express



FRI - 29JAN A1  
PRIORITY OVERNIGHT

1 of 2  
TRK# 7209 7849 7500  
Matr# 7209 7849 7500

29407  
SC-US  
CHS

XX CHSA



SHIP DATE: 26 JAN 80  
ACTWT: 53.0 LB 7.00N  
CRD: 0014176/CRFE2449

ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1600 BLDG 1237 DPU 03

BILL SENDER

LOS ALAMOS, NM 87545  
UNITED STATES US

VALERIE DAVIS

GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 566-8171  
REF: 68010AMR1A015AGMKO

FedEx  
EXPRESS



FRI - 29 JAN A1  
PRIORITY OVERNIGHT

2 of 2  
MPS# 7209 7849 7474

Matr# 7209 7849 7463 0201

29407  
SC-US  
CHS

XX CHSA



SHIP DATE: 26 JAN 80  
ACTWT: 47.0 LB 7.00N  
CRD: 0014175/CRFE2449

ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1600 BLDG 1237 DPU 03

BILL SENDER

LOS ALAMOS, NM 87545  
UNITED STATES US

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 566-8171  
REF: 68010AMR3A0529E00

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FRI - 29 JAN A1  
PRIORITY OVERNIGHT

TRKH 7209 7849 7452  
0201

29407  
SC-US  
CHS

XX CHSA



ORIGIN ID: SAFA (505) 665-9958  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1800 BLDG 1237 DPU 03  
LOS ALAMOS NM 87545  
UNITED STATES US

SHIP DATE: 28 JAN 10  
ACTWGT: 51.8 LB MAN  
CRD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS

GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 655-8171  
REF: 68010AMR1A015AGNKO

1800 BLDG 1237 DPU 03

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Express



FRI - 29 JAN A1  
PRIORITY OVERNIGHT

1 of 2  
TRKH 7209 7849 7463  
MM MASTER MM

29407  
SC-US  
CHS

XX CHSA



ORIGIN ID: SAFA (505) 665-9958  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1800 BLDG 1237 DPU 03  
LOS ALAMOS NM 87545  
UNITED STATES US

SHIP DATE: 28 JAN 10  
ACTWGT: 53.0 LB MAN  
CRD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 655-8171  
REF: 68010AMR3A05529E00

1800 BLDG 1237 DPU 03

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FRI - 29 JAN A1  
PRIORITY OVERNIGHT

2 of 2  
MPS# 7209 7849 7441  
MM MASTER MM

29407  
SC-US  
CHS

XX CHSA



ORIGIN ID: SARA (805) 885-8968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1800 BLDG 1237 DPU 03  
LOS ALAMOS, NM 87645  
UNITED STATES US

SHIP DATE: 26 JAN 10  
ACTWGT: 52.0 LB MM  
CRD: 0014178/CAFE2449

BILL SENDER

VALERIE DAVIS

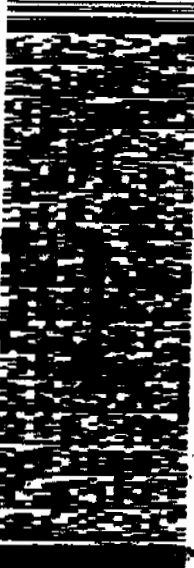
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 856-8171  
REF: 680100NR308529E00

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FRI - 29 JAN A1  
PRIORITY OVERNIGHT

1 of 2  
7209 7849 7430

29407  
SC-US  
CHS

XX CHSA



Part # 156148-434 NRITV30400

ORIGIN ID: SARA (805) 885-8968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1800 BLDG 1237 DPU 03  
LOS ALAMOS, NM 87645  
UNITED STATES US

SHIP DATE: 26 JAN 10  
ACTWGT: 52.0 LB MM  
CRD: 0014178/CAFE2449

BILL SENDER

VALERIE DAVIS

GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 856-8171  
REF: 680100NR100150GK00

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FRI - 29 JAN A1  
PRIORITY OVERNIGHT

2 of 2  
7209 7849 7511

Matr# 7209 7849 7500 8201

29407  
SC-US  
CHS

XX CHSA



Part # 156148-434 NRITV30400



RT  
238

ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB.  
TRASH BLDG 1237 DPU 03

SHIP DATE: 28JAN10  
ACTWGT: 86.0 LB MAN  
CAD: 0014176/CAFE2449

**BILL SENDER**

LOS ALAMOS, NM 87545  
UNITED STATES US

o VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

**CHARLESTON SC 29407**

(043) 556-8171

REF: 880100ORDW81503500

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

**EXP. 1**



**FRI - 29 JAN '61**  
**PRIORITY OVERNIGHT**

TRK# 16201 7209 7849 7533

1020 TRK#

# CHC XX

29407  
SC-US  
CHS



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**B**  
7544  
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ORIGIN ID: 34FA (505) 665-5008  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB.  
TAGS BLDG 1237 DPW 03

LOS ANGELES, NM 97545  
UNITED STATES

## MEMBERS TRIP

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(1043), 864-0171

REF: 6B010AX49A08650000

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**EX-100**



**FRI - 29 JAN A1**  
**PRIORITY OVERNIGHT**

TRK# 7209 7849 7544  
0201

**TRK#** **0201**

29407-SC-US CHS

# CHS XX



REF ID: A66666



ORIGIN ID: SFA (505) 665-9968  
JOYLENE VAL DEZ  
LOS ANGELES INTL LAR  
7400 BLDS 1237 DPU 83  
SHIP DATE: 28JAN10  
ACTWGT: 54.0 LB MEN  
CDD: 0014178/CAFE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 666-0171  
REF: 890100WR108150GHWK0

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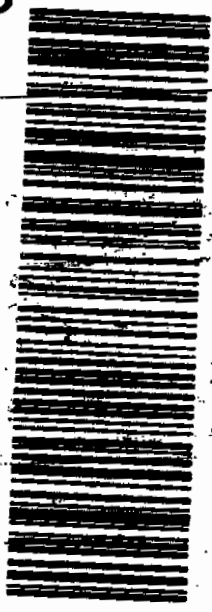


2 of 2  
FRI - 29JAN A1  
PRIORITY OVERNIGHT

TRKH 7209 7849 7406  
0201  
Mat-N 7209 7849 7405 0201

29407  
SC-US  
CHS

XX CHSA



Part # 156148-434 NRT V3 04-00

ORIGIN ID: SFA (505) 665-9968  
JOYLENE VAL DEZ  
LOS ANGELES INTL LAR  
7400 BLDS 1237 DPU 83  
SHIP DATE: 28JAN10  
ACTWGT: 51.0 LB MEN  
CDD: 0014178/CAFE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 666-0171  
REF: 890100WR2005150YD0

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FRI - 29JAN A1  
PRIORITY OVERNIGHT

TRKH 7209 7849 7420  
0201

29407  
SC-US  
CHS

XX CHSA



Part # 156148-434 NRT V3 04-00

ORIGIN ID: S0FA (505) 245-9958  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1080 BLDG 1237 OFU 83  
LOS ALAMOS NM 87545  
UNITED STATES US

SHIP DATE: 29JAN10  
ACTMGT: 16 8 LB MKN  
CRD: 8014178/CAFE2449  
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 866-8171  
REF: 680100YR1A015AGMCO

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FRI - 29JAN A1  
PRIORITY OVERNIGHT

1 of 2  
TRKH 7209 7849 7485  
NEW MASTER NM

29407  
SC-US  
CHS

XX CHSA



ORIGIN ID: S0FA (505) 245-9958  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1080 BLDG 1237 OFU 83  
LOS ALAMOS NM 87545  
UNITED STATES US

SHIP DATE: 29JAN10  
ACTMGT: 16 8 LB MKN  
CRD: 8014178/CAFE2449  
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 866-8171  
REF: 680100YR1A015AGMCO

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FRI - 29JAN A1  
PRIORITY OVERNIGHT

2 of 3  
TRKH 7209 7849 7485  
NEW MASTER NM

29407  
SC-US  
CHS

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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 10-1471**

**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:** 947246

**Prep Batch Number:** 947245

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245797001	RE15-10-7888
245797002	RE15-10-7890
245797003	RE15-10-7886
245797004	RE15-10-7889
245797005	RE15-10-7885
245797006	RE15-10-7882
245797007	RE15-10-7887
245797008	RE15-10-7881
245797009	RE15-10-7951
245797010	RE15-10-7950
245797011	RE15-10-7947
245797012	RE15-10-7944
245797013	RE15-10-7948
245797014	RE15-10-7941

10-1471-PERLCMS

Page 1 of 5

245797015	RE15-10-7949
245797016	RE15-10-7946
245797017	RE15-10-7942
245797018	RE15-10-7945
245797019	RE15-10-7943
1202029081	Interference Check Sample (ICS)
1202029077	Method Blank (MB)
1202029078	Laboratory Control Sample (LCS)
1202029079	245797001(RE15-10-7888) Matrix Spike (MS)
1202029080	245797001(RE15-10-7888) Matrix Spike Duplicate (MSD)

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

##### **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.

10-1471-PERLCMS

Page 2 of 5

**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 245797001 (RE15-10-7888) 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.

**Retention Time**

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

**Technical Information****Holding Time Specifications**

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

**Preparation/Analytical Method Verification**

All procedures were performed as stated in the SOP.

**Sample Dilutions**

The samples in this SDG did not require dilutions.

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

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



### **Miscellaneous Information**

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

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

#### **Manual Integrations**

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

#### **Method Comments**

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

#### **Additional Comments**

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

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

#### **Perchlorate Isotope Ratio**

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

### **System Configuration**

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

### **Chromatographic Columns**

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

Dionex: IonPac AG-16 2 x 50 mm.

**Certification Statement**

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

**Review Validation:**

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

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

Reviewer: Herbert H. Mauer Date: 02/20/10

# SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7888  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797001  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 90.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	1.23	ug/kg	J	1	16-FEB-10 21:34	per0216044a
	Perchlorate Isotope Ratio			3.36			1	16-FEB-10 21:34	per0216044a
14797-73-0	Perchlorate-101	.551	2.21	1.17	ug/kg	J	1	16-FEB-10 21:34	per0216044a
	Perchlorate-O(18)			5.94	ug/kg		1	16-FEB-10 21:34	per0216044a

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

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7890

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797002

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 20.2

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	.554	2.22	0.554	ug/kg	U	1	16-FEB-10 22:04	per0216047a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:04	per0216047a
14797-73-0	Perchlorate-101	.554	2.22	0.554	ug/kg	U	1	16-FEB-10 22:04	per0216047a
	Perchlorate-O(18)			5.52	ug/kg		1	16-FEB-10 22:04	per0216047a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7886  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797003  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 93.5

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	.535	2.14	0.535	ug/kg	U	1	16-FEB-10 22:44	per0216051a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:44	per0216051a
14797-73-0	Perchlorate-101	.535	2.14	0.535	ug/kg	U	1	16-FEB-10 22:44	per0216051a
	Perchlorate-O(18)			5.04	ug/kg		1	16-FEB-10 22:44	per0216051a

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

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7889

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797004

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 63

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 22:55	per0216052a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:55	per0216052a
14797-73-0	Perchlorate-101	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 22:55	per0216052a
	Perchlorate-O(18)			7.91	ug/kg		1	16-FEB-10 22:55	per0216052a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846.6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7885  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797005  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 67

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	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:05	per0216053a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:05	per0216053a
14797-73-0	Perchlorate-101	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:05	per0216053a
	Perchlorate-O(18)			7.68	ug/kg		1	16-FEB-10 23:05	per0216053a

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

\*Concentration =

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



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7882

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797006

Date Filtered: 11-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	.571	2.29	0.571	ug/kg	U	1	16-FEB-10 23:15	per0216054a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:15	per0216054a
14797-73-0	Perchlorate-101	.571	2.29	0.587	ug/kg	J	1	16-FEB-10 23:15	per0216054a
	Perchlorate-O(18)			5.68	ug/kg		1	16-FEB-10 23:15	per0216054a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7887

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797007

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 67

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:25	per0216055a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:25	per0216055a
14797-73-0	Perchlorate-101	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:25	per0216055a
	Perchlorate-O(18)			7.42	ug/kg		1	16-FEB-10 23:25	per0216055a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0

Client Sample No. RE15-10-7881  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797008  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 63

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 23:35	per0216056a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:35	per0216056a
14797-73-0	Perchlorate-101	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 23:35	per0216056a
	Perchlorate-O(18)			7.58	ug/kg		1	16-FEB-10 23:35	per0216056a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7951  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797009  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 81

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.62	2.48	0.620	ug/kg	U	1	16-FEB-10 23:45	per0216057a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:45	per0216057a
14797-73-0	Perchlorate-101	.62	2.48	0.620	ug/kg	U	1	16-FEB-10 23:45	per0216057a
	Perchlorate-O(18)			5.95	ug/kg		1	16-FEB-10 23:45	per0216057a

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

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7950  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797010  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.624	2.49	0.624	ug/kg	U	1	16-FEB-10 23:55	per0216058a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:55	per0216058a
14797-73-0	Perchlorate-101	.624	2.49	0.624	ug/kg	U	1	16-FEB-10 23:55	per0216058a
	Perchlorate-O(18)			6.78	ug/kg		1	16-FEB-10 23:55	per0216058a

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

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7947  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797011  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 64

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.784	3.14	0.784	ug/kg	U	1	17-FEB-10 00:05	per0216059a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:05	per0216059a
14797-73-0	Perchlorate-101	.784	3.14	0.784	ug/kg	U	1	17-FEB-10 00:05	per0216059a
	Perchlorate-O(18)			7.93	ug/kg		1	17-FEB-10 00:05	per0216059a

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

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7944  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797012  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 92.8

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	0.539	ug/kg	U	1	17-FEB-10 00:45	per0216063a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:45	per0216063a
14797-73-0	Perchlorate-101	.539	2.16	0.539	ug/kg	U	1	17-FEB-10 00:45	per0216063a
	Perchlorate-O(18)			5.54	ug/kg		1	17-FEB-10 00:45	per0216063a

<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: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7948

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797013

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 92.1

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	17-FEB-10 00:56	per0216064a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:56	per0216064a
14797-73-0	Perchlorate-101	.543	2.17	0.543	ug/kg	U	1	17-FEB-10 00:56	per0216064a
	Perchlorate-O(18)			5.50	ug/kg		1	17-FEB-10 00:56	per0216064a

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

\*Concentration =

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



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7941  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797014  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 76

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.655	2.62	0.655	ug/kg	U	1	17-FEB-10 01:06	per0216065a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:06	per0216065a
14797-73-0	Perchlorate-101	.655	2.62	0.655	ug/kg	U	1	17-FEB-10 01:06	per0216065a
	Perchlorate-O(18)			6.57	ug/kg		1	17-FEB-10 01:06	per0216065a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7949  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797015  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 59

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.844	3.38	0.844	ug/kg	U	1	17-FEB-10 01:16	per0216066a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:16	per0216066a
14797-73-0	Perchlorate-101	.844	3.38	0.844	ug/kg	U	1	17-FEB-10 01:16	per0216066a
	Perchlorate-O(18)			8.52	ug/kg		1	17-FEB-10 01:16	per0216066a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7946  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797016  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 91.8

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.545	2.18	0.545	ug/kg	U	1	17-FEB-10 01:26	per0216067a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:26	per0216067a
14797-73-0	Perchlorate-101	.545	2.18	0.545	ug/kg	U	1	17-FEB-10 01:26	per0216067a
	Perchlorate-O(18)			5.45	ug/kg		1	17-FEB-10 01:26	per0216067a

<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: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7942

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797017

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 82

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.25	0.561	ug/kg	U	1	17-FEB-10 01:36	per0216068a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:36	per0216068a
14797-73-0	Perchlorate-101	.561	2.25	0.561	ug/kg	U	1	17-FEB-10 01:36	per0216068a
	Perchlorate-O(18)			5.61	ug/kg		1	17-FEB-10 01:36	per0216068a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 247245  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7945  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797018  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20

%Solids: 61

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	.822	3.29	0.822	ug/kg	U	1	17-FEB-10 01:46	per0216069a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:46	per0216069a
14797-73-0	Perchlorate-101	.822	3.29	0.822	ug/kg	U	1	17-FEB-10 01:46	per0216069a
	Perchlorate-O(18)			7.89	ug/kg		1	17-FEB-10 01:46	per0216069a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7943

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797019

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

% Solids: 92.4

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.541	2.16	0.541	ug/kg	U	1	17-FEB-10 01:56	per0216070a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:56	per0216070a
14797-73-0	Perchlorate-101	.541	2.16	0.541	ug/kg	U	1	17-FEB-10 01:56	per0216070a
	Perchlorate-O(18)			5.16	ug/kg		1	17-FEB-10 01:56	per0216070a

<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): 10-1471

Extract Batch Code: 947245

Date Filtered: 11-FEB-10

Matrix: SOIL

Sample ID: 1202029078

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	1.97	ug/kg	98.3		70 - 130
Perchlorate Isotope Ratio		3.36				-
Perchlorate-101	2.00	1.88	ug/kg	94.0		70 - 130
Perchlorate-O(18)		4.81	ug/kg			-

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



Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1471

Extract Batch Code: 947245

Date Filtered: 11-FEB-10

Matrix: SOIL

Sample ID: 1202029081

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.07	ug/kg	103		70 - 130
Perchlorate Isotope Ratio		3.39				
Perchlorate-101	2.00	1.96	ug/kg	98		70 - 130
Perchlorate-O(18)		4.92	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: Charfers W. Wilson

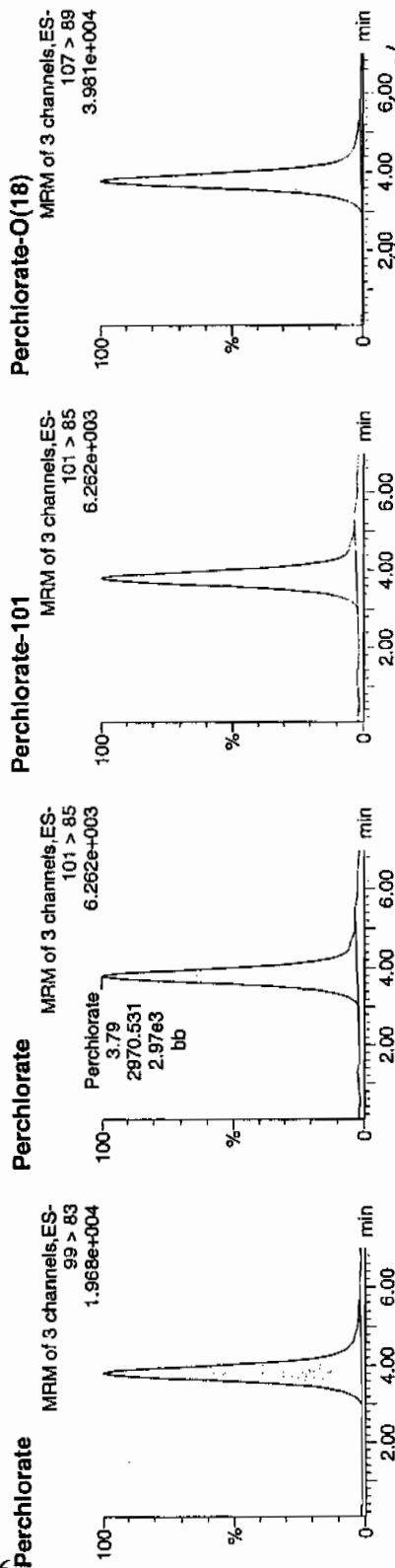
Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Sample Name: per0216042a  
Date: 16-Feb-2010  
Time: 21:13:43  
ID: 1202029081  
Vial: 2:1,C

6.22  
02-17-10

1.966e+004 | 947246 | 50220 | 7.5 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202029081	Perchlorate	99 > 83	3.81	10058.170	10058.170	bb			0.2066	103.28	3.28	582.804	3.39
1202029081	Perchlorate-101	101 > 85	3.79	2970.531	2970.531	bb			0.1960	98.00	-2.00	515.988	
1202029081	Perchlorate-O(18)	107 > 89	3.79	19841.975	19841.975	bb			0.4919	98.38	-1.62	2249.3...	

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1471

Extract Batch Code: 947245

Date Extracted: 11-FEB-10

GEL MS/PS ID: 1202029079

Client ID: RE15-10-7888

GEL MSD/PSD ID: 1202029080

QC Type: MS

Compound <sup>^</sup>	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	2.21	1.23	ug/kg	3.51	104		3.46	101		1.4		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.2			3.37			0			-
Perchlorate-101	2.21	1.17	ug/kg	3.53	107		3.3	96.5		6.64		30	75 - 125
Perchlorate-O(18)	0	5.94	ug/kg	5.83			5.86			.467			-

<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 Laboratories

GEL Job No.(SDG): 10-1471

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	16-FEB-10	per0216001a	IPB001
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216001a	IPB001
Perchlorate	0.00	0	NA	16-FEB-10	per0216002a	IPB001
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216002a	IPB001

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time

Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per021610a.mdb 17 Feb 2010 09:42:10

Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per021610a.cdb 17 Feb 2010 11:03:29

Name: per0216001a

Date: 16-Feb-2010

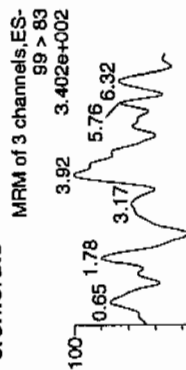
Time: 14:21:05

ID: IPB001

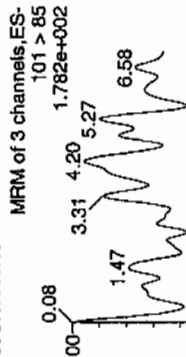
Vial: 1:1,A

02-17-10

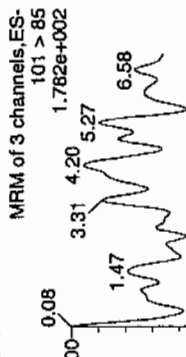
## Perchlorate



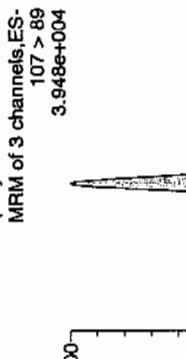
## Perchlorate



## Perchlorate-101



## Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	3.82	22244.045	22244.045	bb			0.5515	110.29	✓ 10.29	534.867	

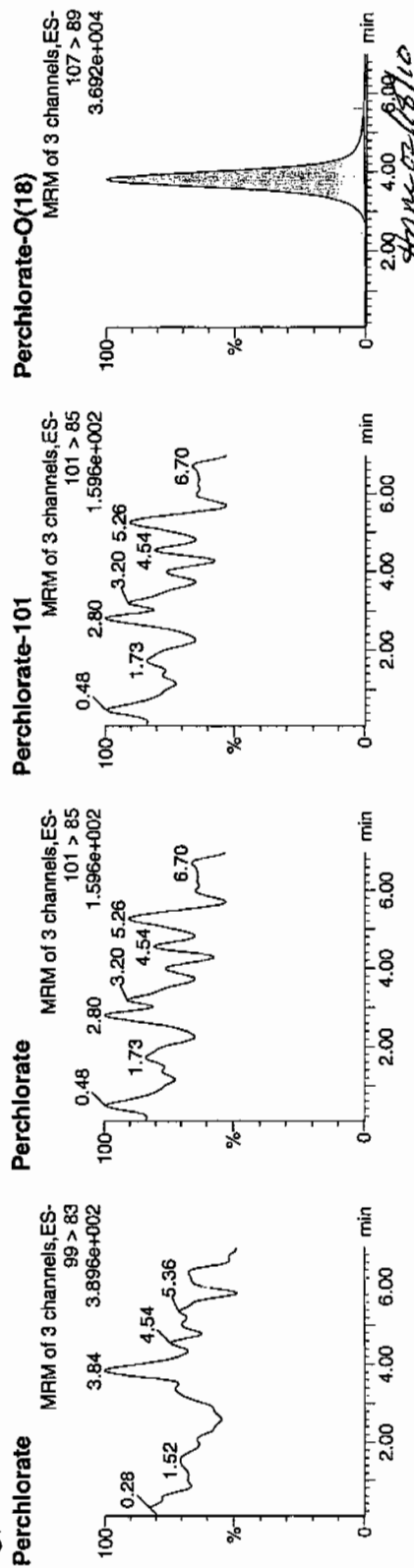
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216002a  
Date: 16-Feb-2010  
Time: 14:31:15  
IS: IPB001  
Vial: 1:1,A

02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	3.81	20630.770	20630.770	bb			0.5115	102.29	2.29	947.702	

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1471

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	16-FEB-10	per0216008a	IPB002
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216008a	IPB002
Perchlorate	0.00	0	NA	16-FEB-10	per0216010a	IPB003
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216010a	IPB003
Perchlorate	0.00	0	NA	16-FEB-10	per0216023a	IPB004
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216023a	IPB004
Perchlorate	0.00	0	NA	16-FEB-10	per0216036a	IPB005
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216036a	IPB005
Perchlorate	0.00	0	NA	16-FEB-10	per0216039a	IPB006
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216039a	IPB006
Perchlorate	0.00	0	NA	16-FEB-10	per0216049a	IPB007
Perchlorate-101	0.00	0	NA	16-FEB-10	per0216049a	IPB007
Perchlorate	0.00	0	NA	17-FEB-10	per0216061a	IPB008

Form 4

Perchlorate Continuing Calibration Blank

GEL Job No.(SDG): 10-1471

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	17-FEB-10	per0216061a	IPB008
Perchlorate	0.00	0	NA	17-FEB-10	per0216072a	IPB009
Perchlorate-101	0.00	0	NA	17-FEB-10	per0216072a	IPB009



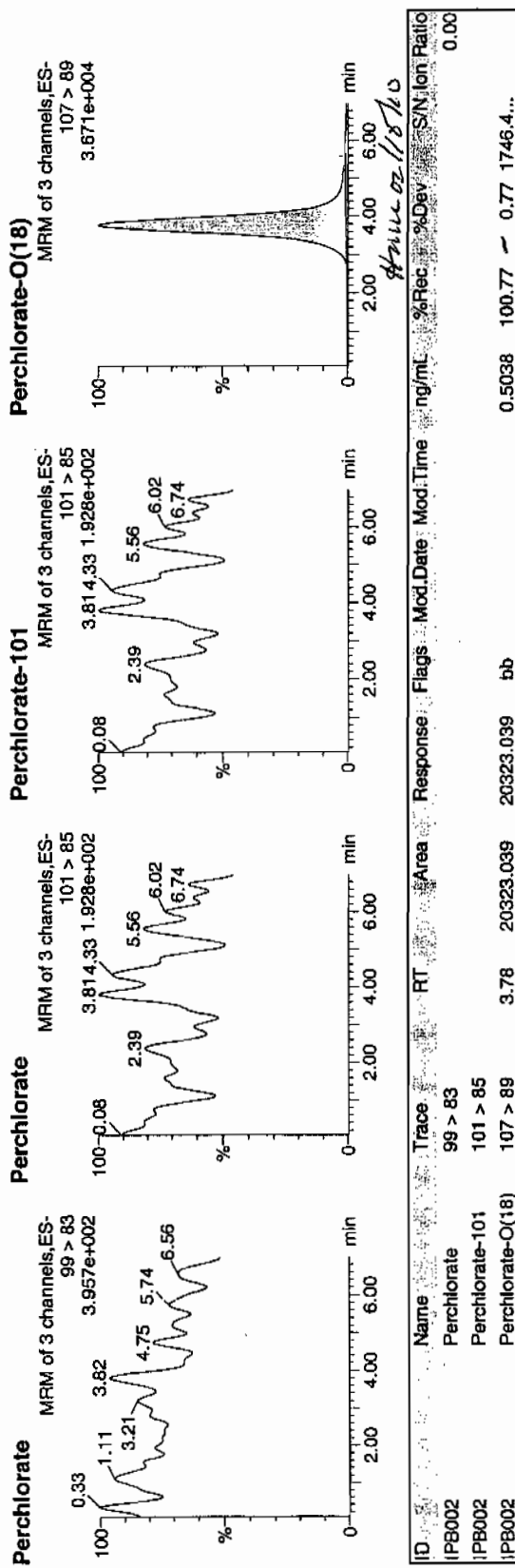
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216008a  
Date: 16-Feb-2010  
Time: 15:31:21  
ID: IPB002  
Vol: 1:1,A

03-17-10



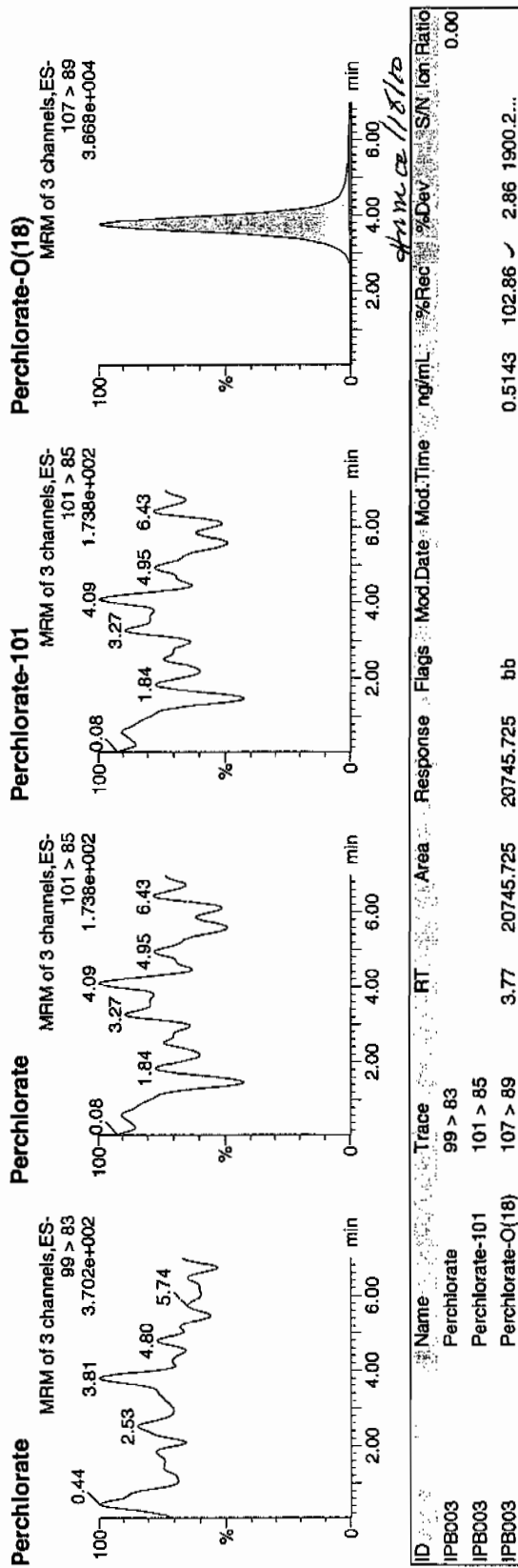
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216010a  
Date: 16-Feb-2010  
Time: 15:51:26  
ID: IPB003  
Vial: 1:1,A

02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	3.77	20745.725	20745.725	bb			0.5143	102.86	✓	2.86	1900.2...

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216023a

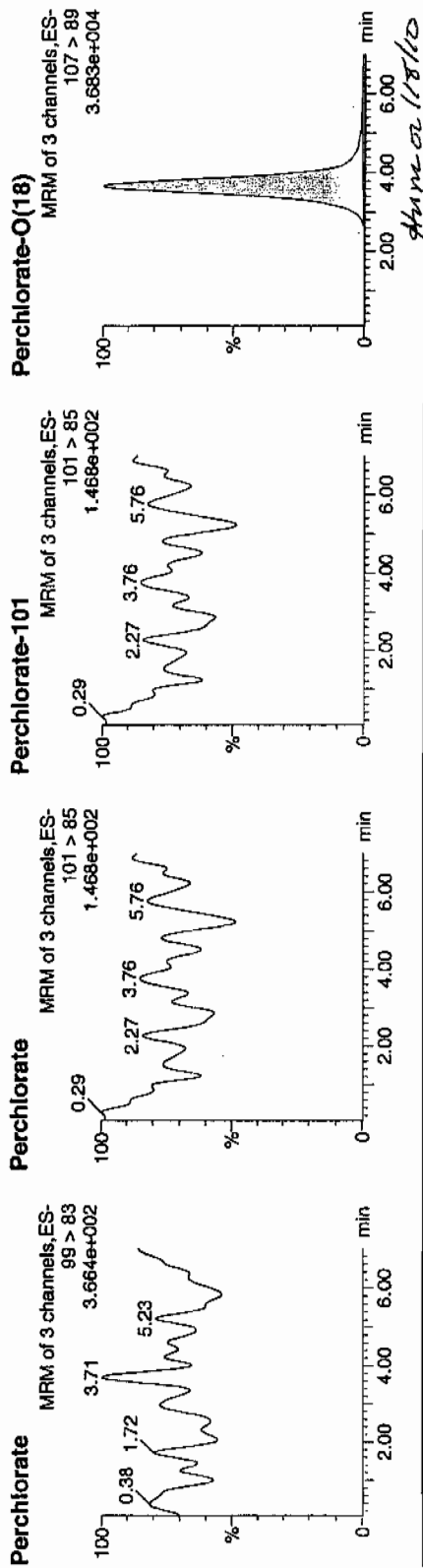
Date: 16-Feb-2010

Time: 18:01:56

ID: IPB004

Vial: 1:1,A

02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	TSN	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-Q(18)	107 > 89	3.67	19909.254	19909.254	bb			0.4936	98.72	-1.28	1302.6...	

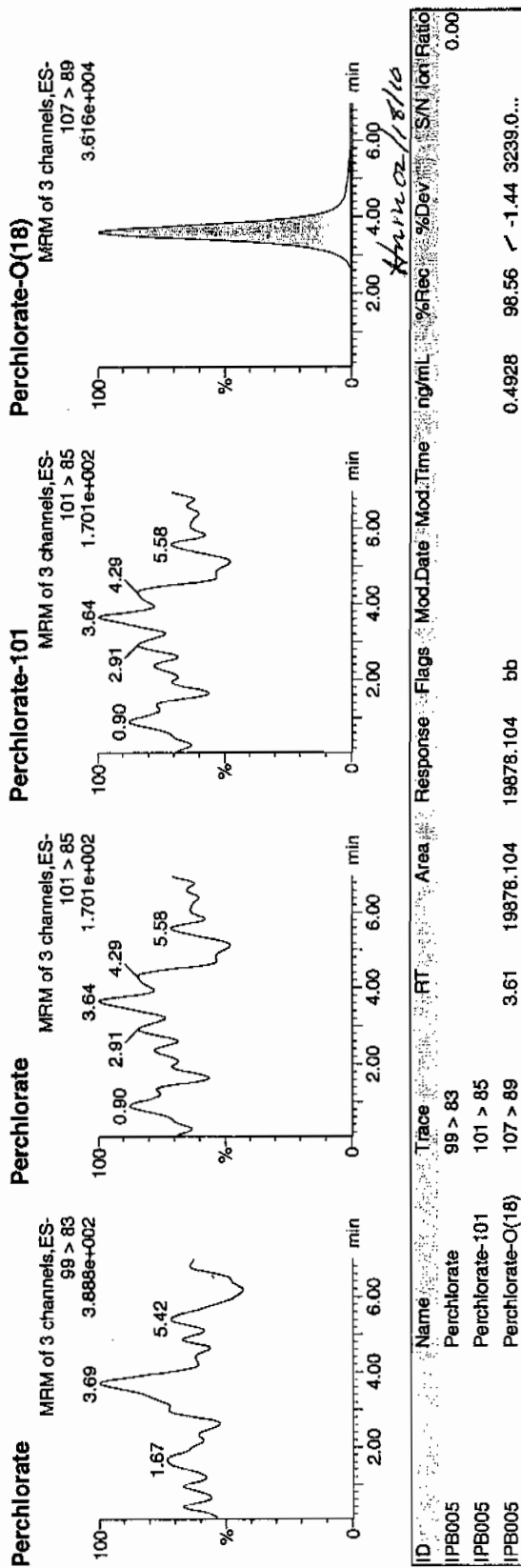
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216036a  
Date: 16-Feb-2010  
Time: 20:12:53  
ID: IPB005  
Vial: 1:1,A

02-17-10



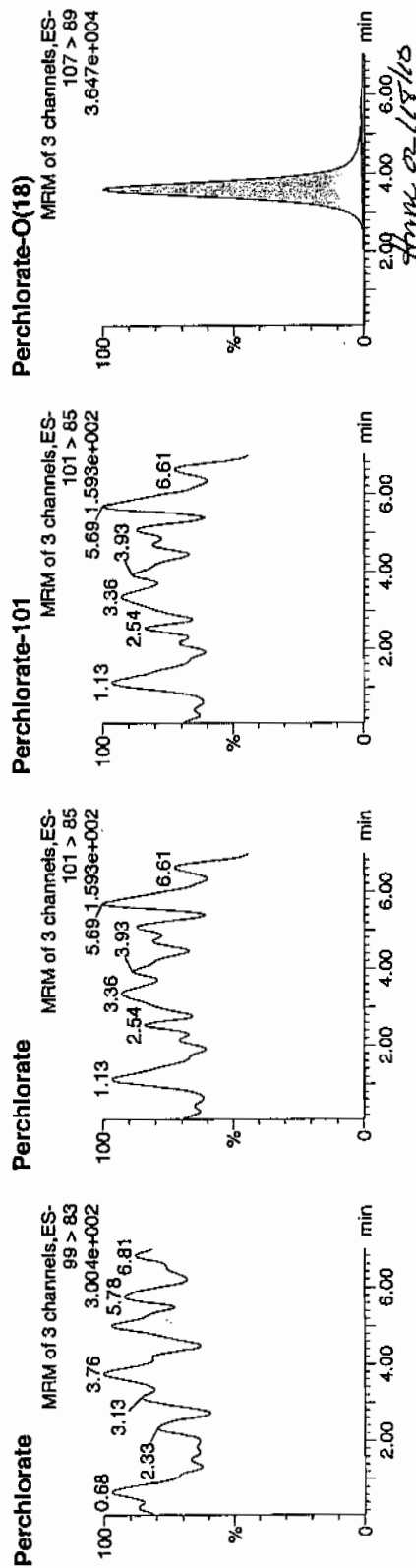
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216039a  
Date: 16-Feb-2010  
Time: 20:43:11  
ID: IPB006  
Val: 1:1A

02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83											0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	3.62	19785.953	19785.953	bb			0.4905	98.11	-1.89	3518.4...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charters W. Wilson

Page 49 of 109

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time

Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

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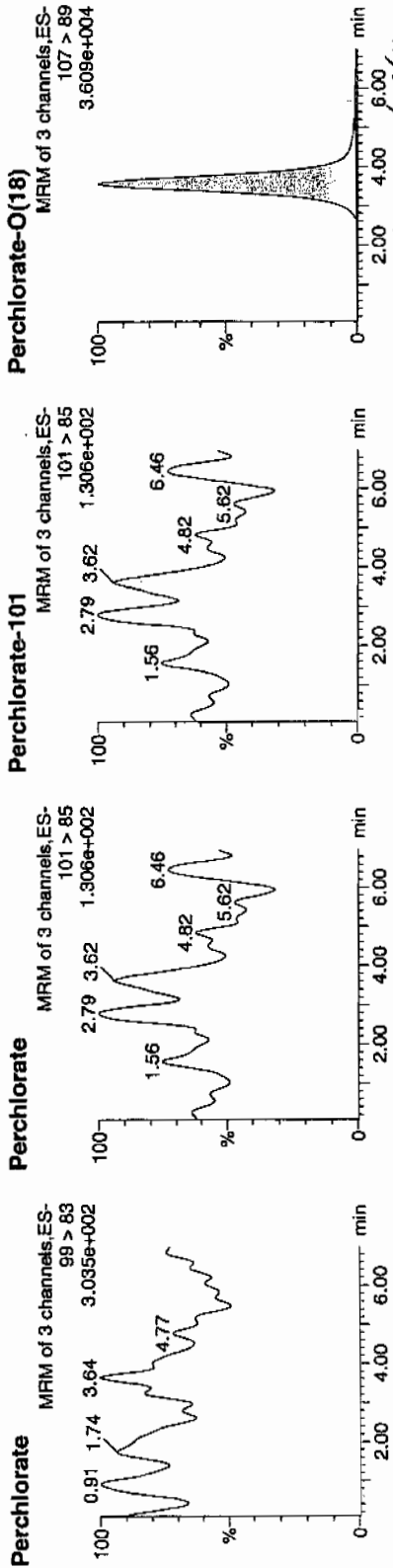
Date: 16-Feb-2010

Time: 22:24:49

ID: IPB007

Qual: 1:1,A

02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	On Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	3.58	19511.553	19511.553	bb			0.4837	96.74	-3.26	2577.0...	

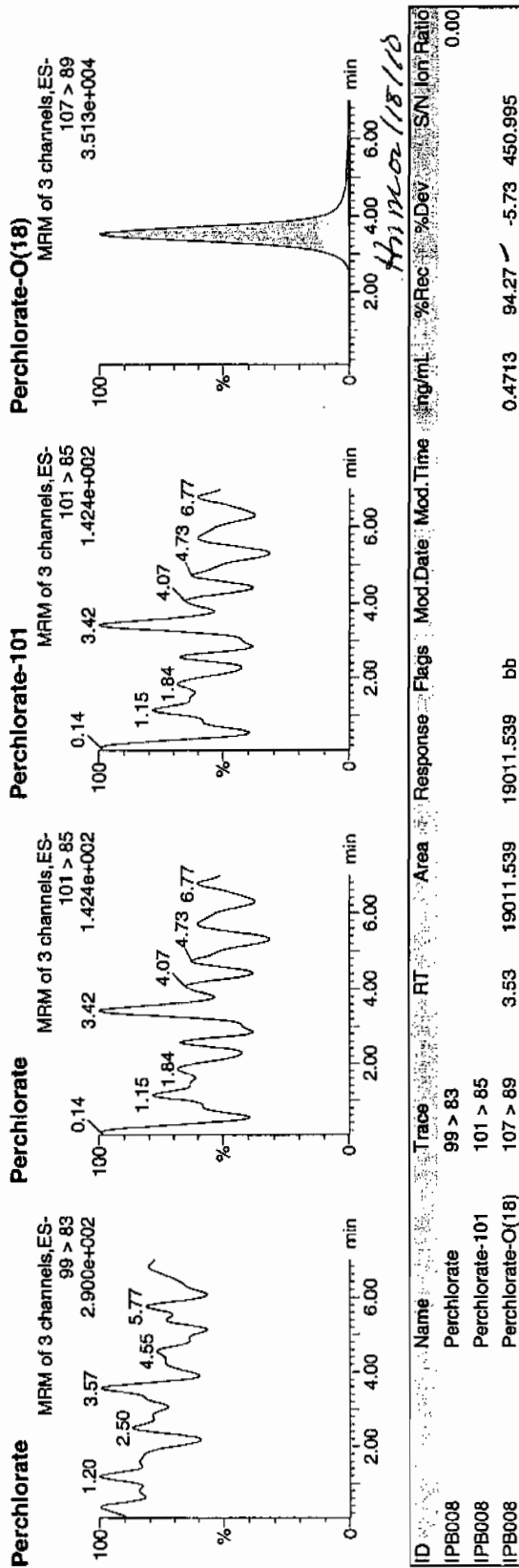
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216061a  
Date: 17-Feb-2010  
Time: 00:25:47  
ID: IPB008  
Vial: 1:1,A

02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	SN	Ion Ratio
IPB008	Perchlorate	99 > 83											
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	3.53	19011.539	19011.539	bb			0.4713	94.27	-5.73	450.995	0.00

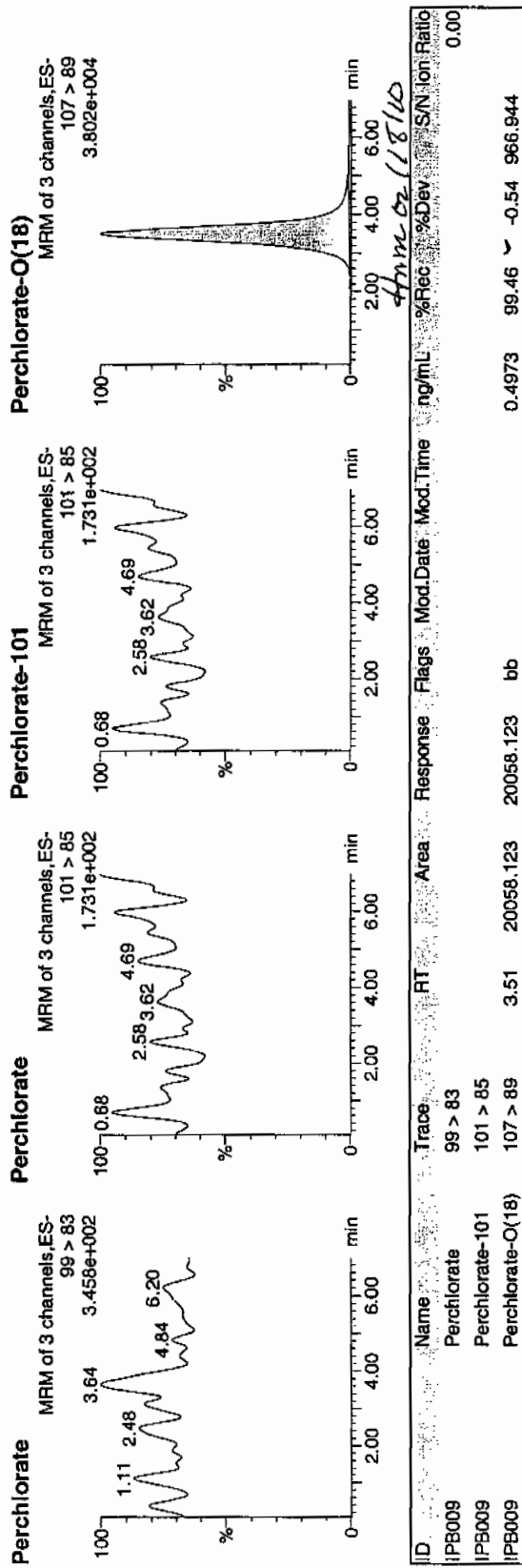
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216072a  
Date: 17-Feb-2010  
Time: 02:16:48  
ID: IPB009  
Vial: 1:1,A

02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB009	Perchlorate	99 > 83											0.00
IPB009	Perchlorate-101	101 > 85											
IPB009	Perchlorate-O(18)	107 > 89	3.51	20058.123	20058.123	bb			0.4973	99.46	-0.54	966.944	



Nairb.ref

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

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

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

Calibration Report - MS1 Static

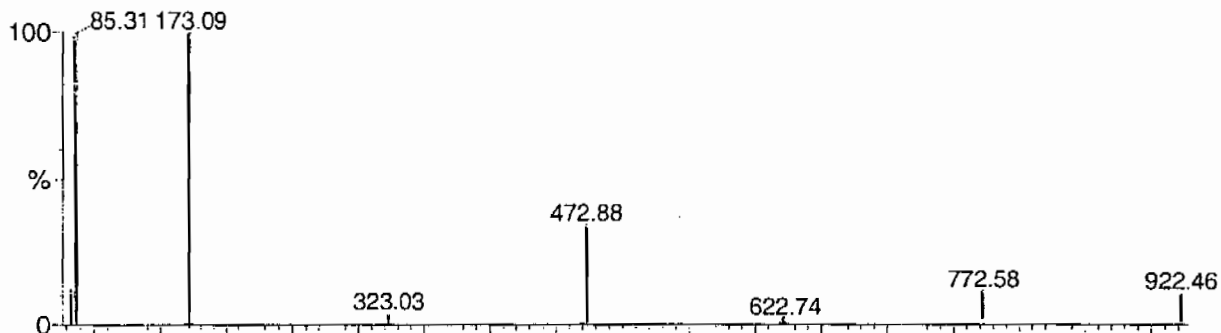
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

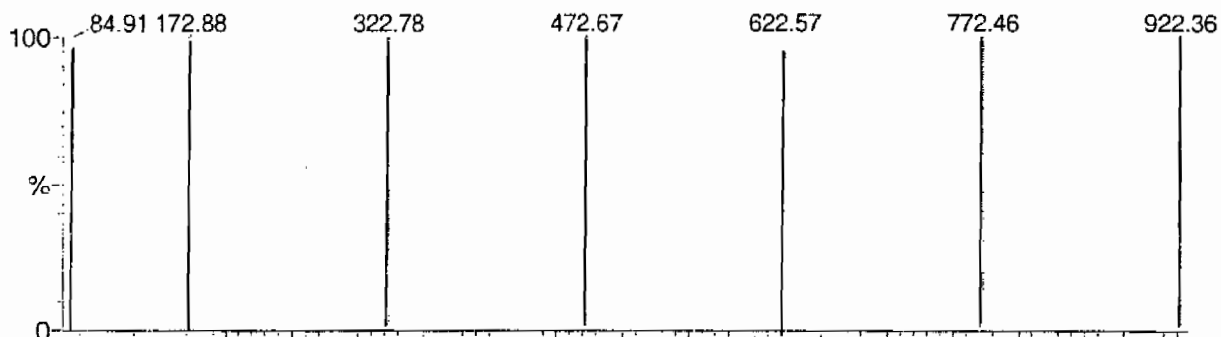
POINTS HIGHLIGHTED BY CURV 01-07-03

Data file: STATMS1 - Uncalibrated

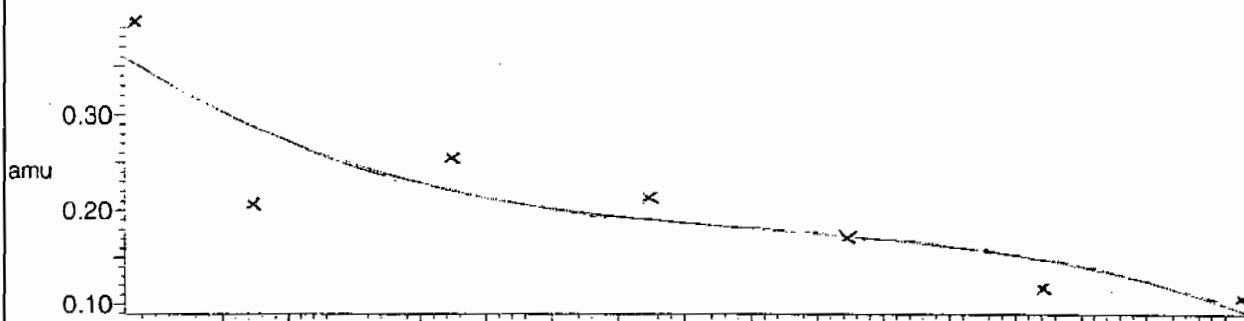
7 matches of 7 tested references



Reference file: Nairb

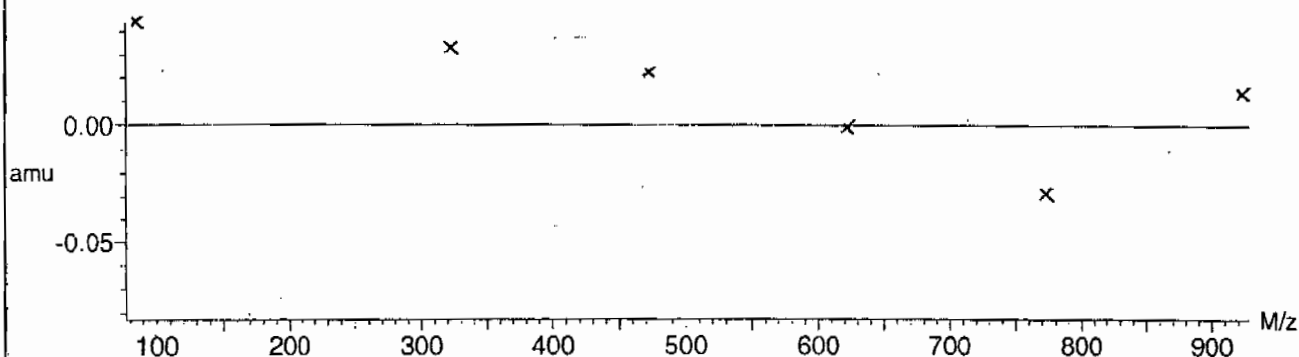


Mass difference (Raw - Ref mass)



Residuals

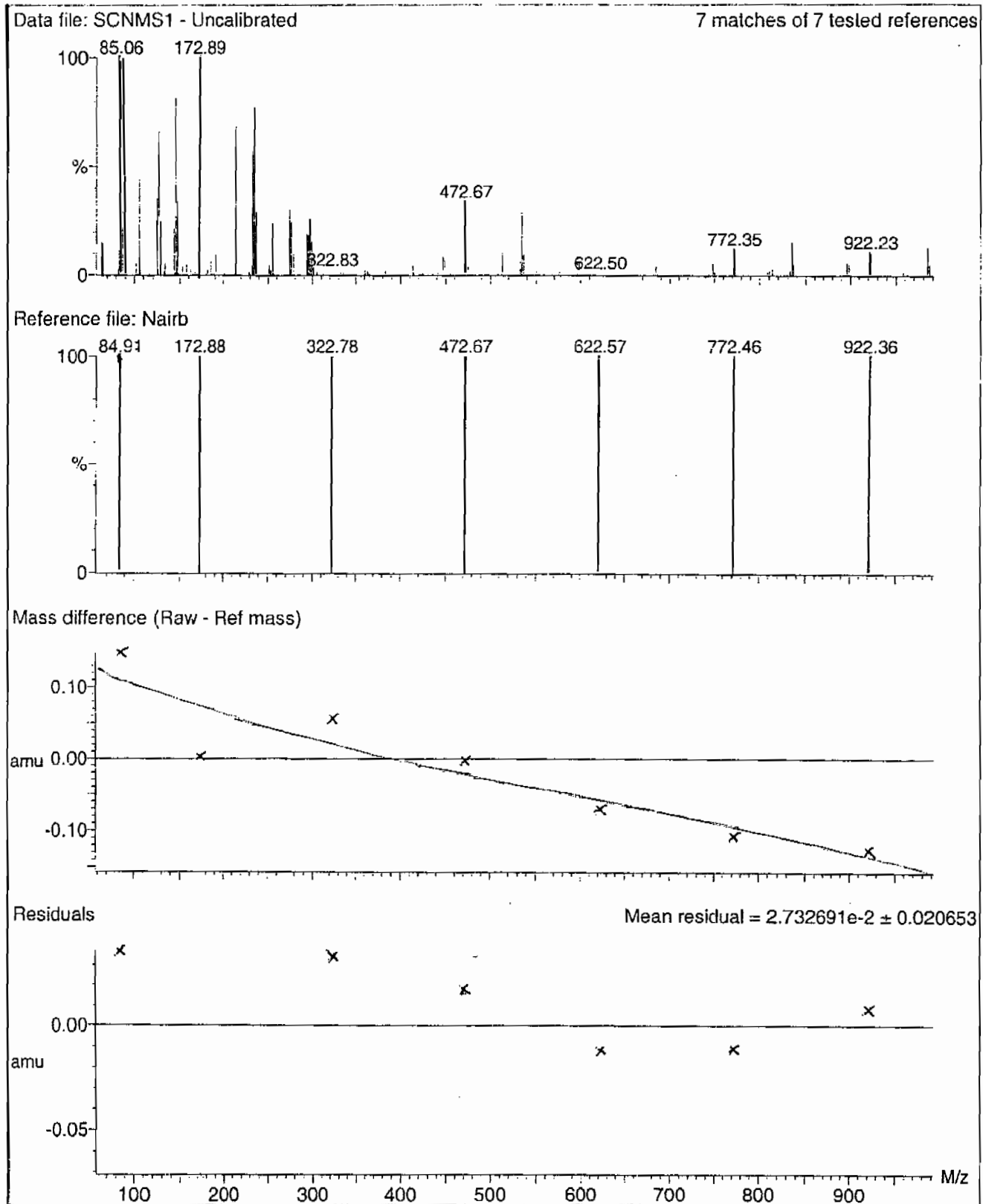
Mean residual =  $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:20:09 2008



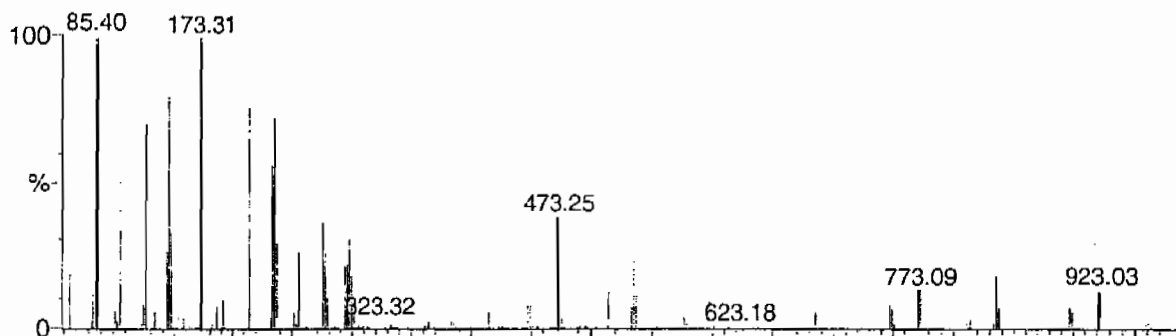
Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

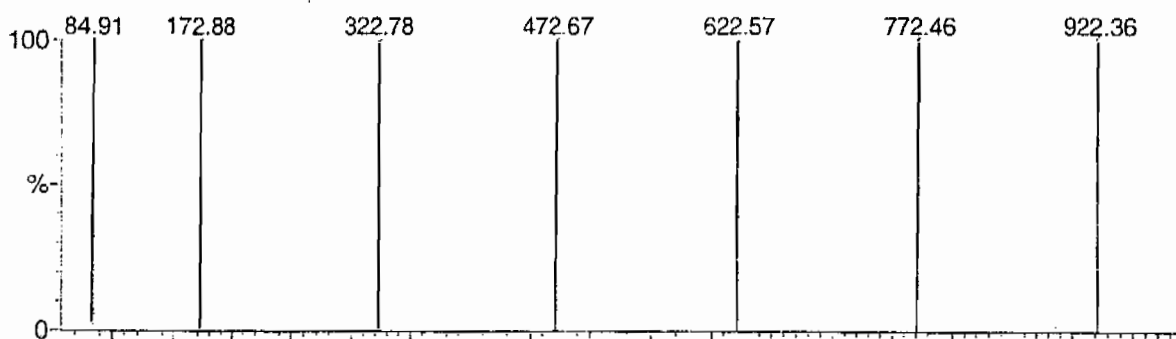
Printed: Tue Jan 08 12:21:04 2008

Data file: FASTMS1 - Uncalibrated

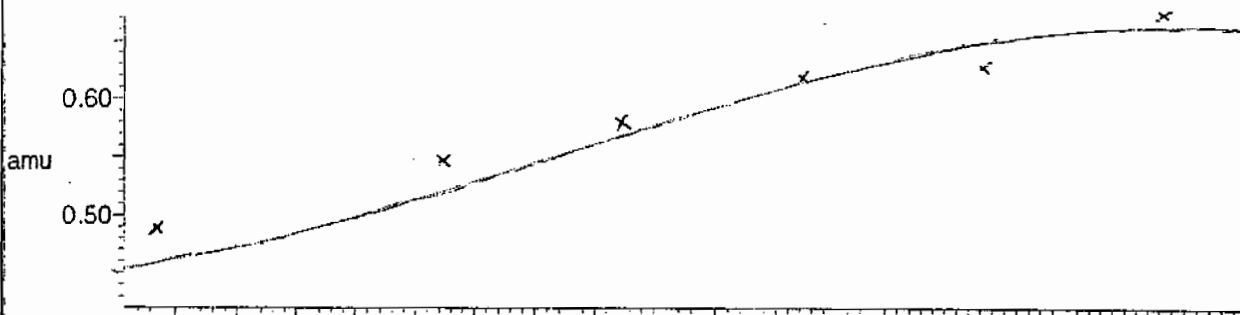
7 matches of 7 tested references



Reference file: Nairb

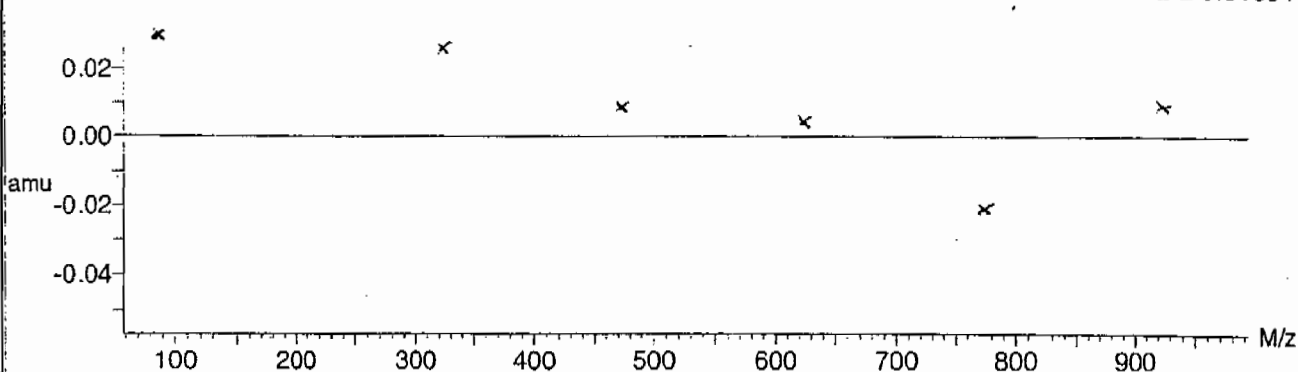


Mass difference (Raw - Ref mass)



Residuals

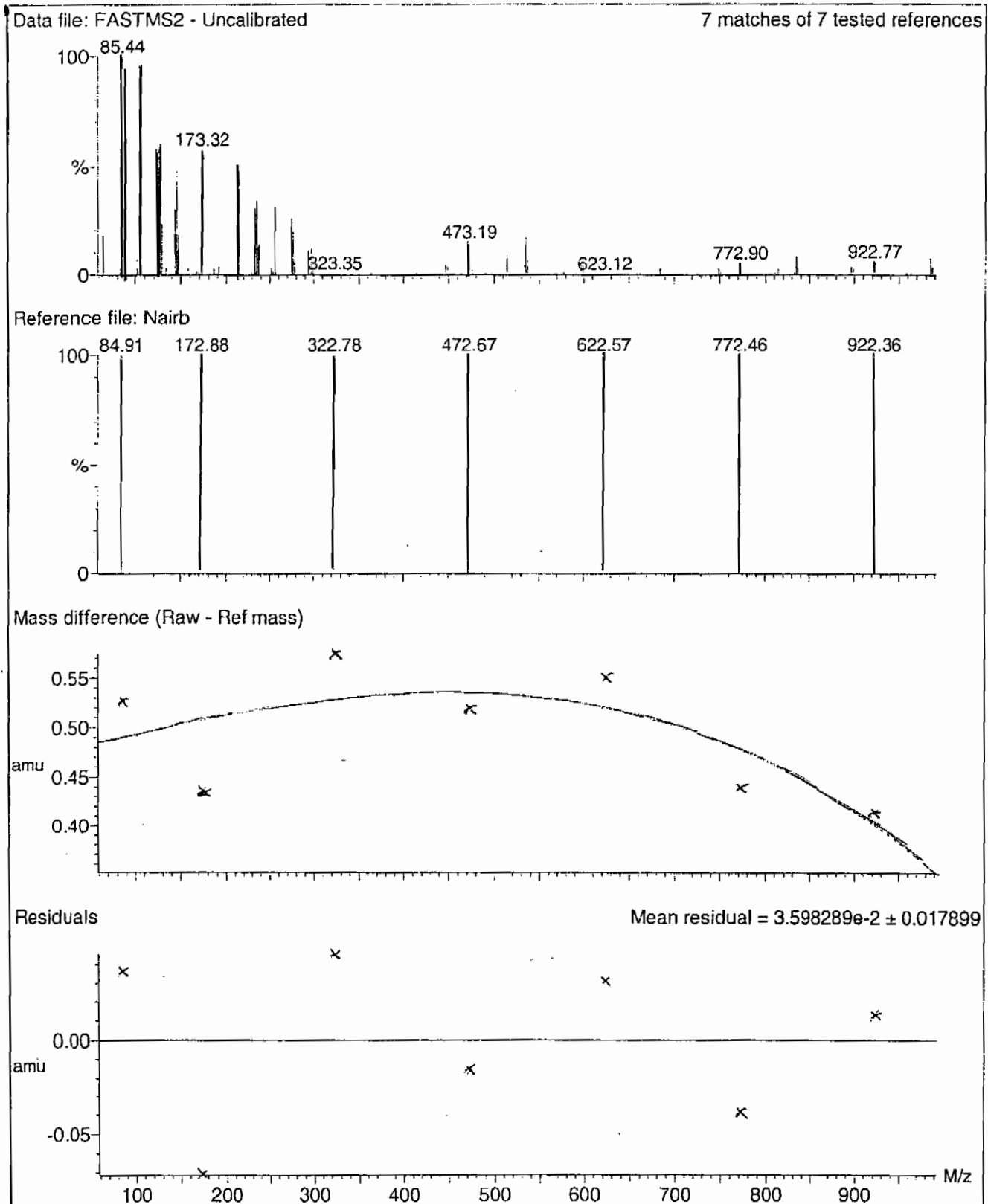
Mean residual =  $2.224580 \times 10^{-2} \pm 0.016544$



Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

Printed: Tue Jan 08 12:23:51 2008



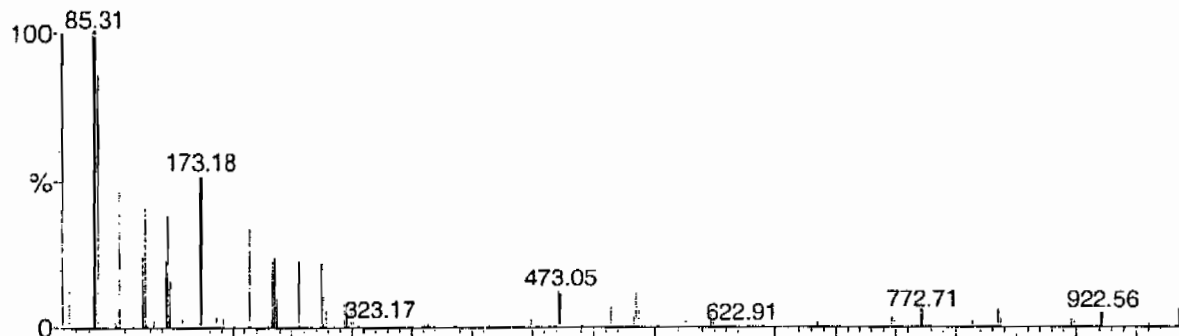
Calibration Report - MS2 Scanning

Page 1 of 1

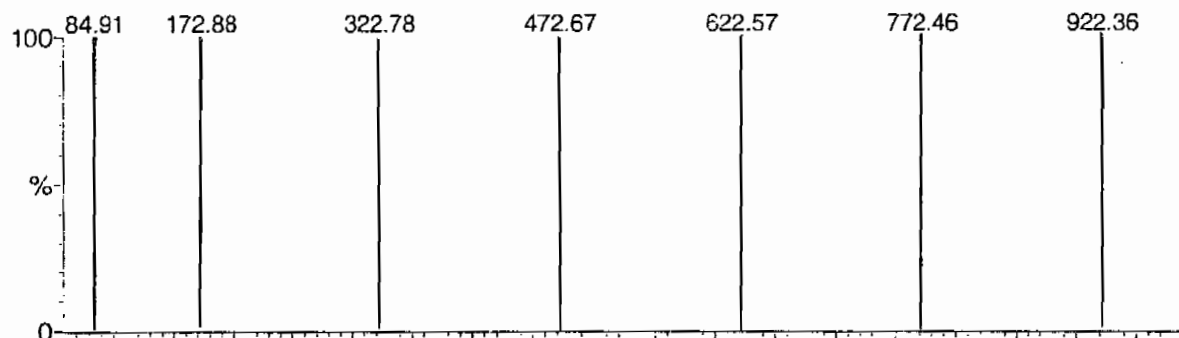
Printed: Tue Jan 08 12:22:56 2008

Data file: SCNMS2 - Uncalibrated

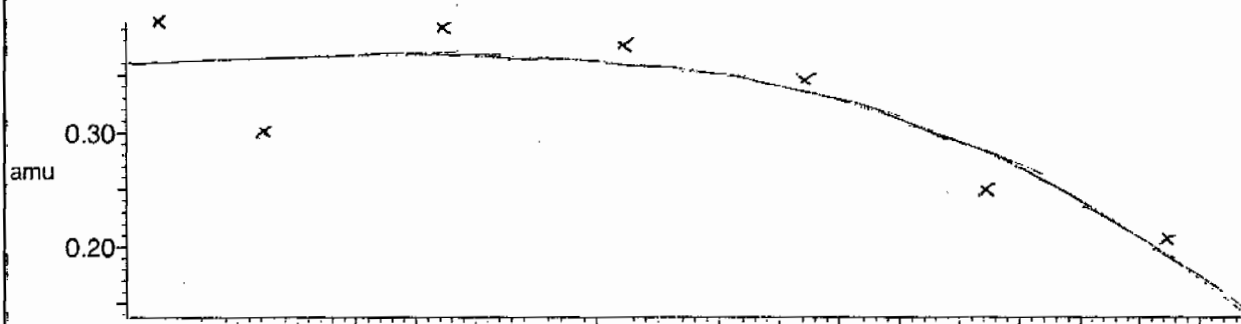
7 matches of 7 tested references



Reference file: Nairb

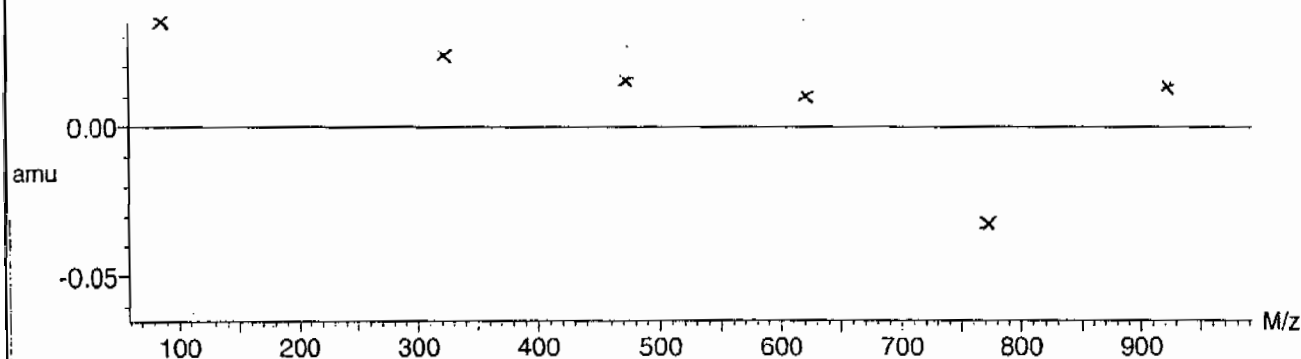


Mass difference (Raw - Ref mass)



Residuals

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



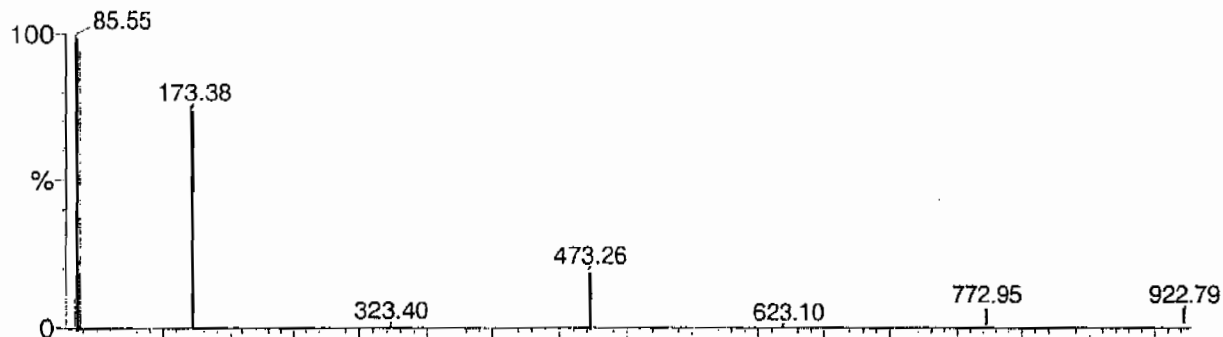
Calibration Report - MS2 Static

Page 1 of 1

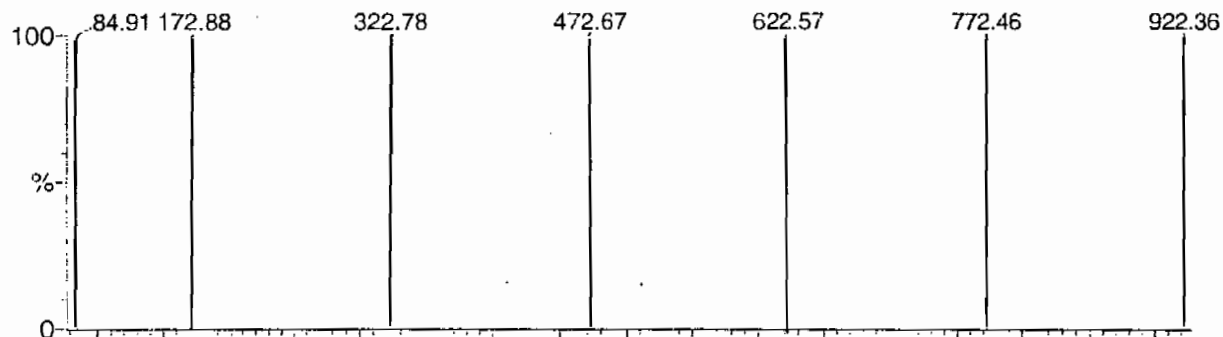
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

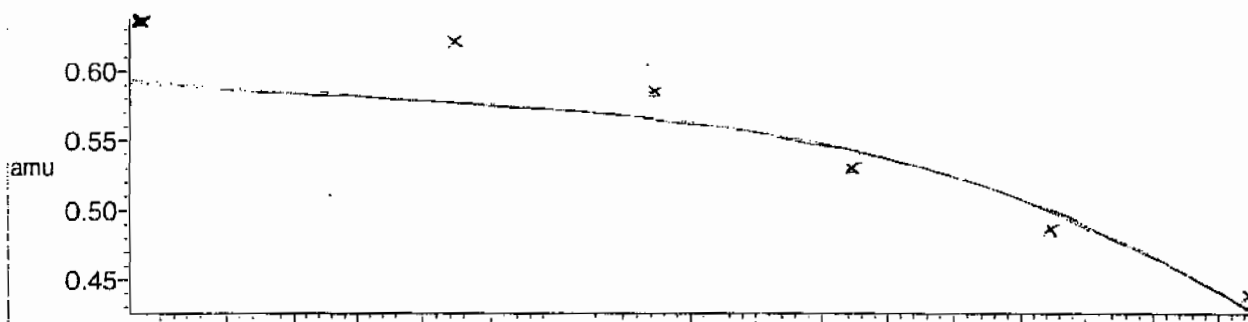
7 matches of 7 tested references



Reference file: Nairb

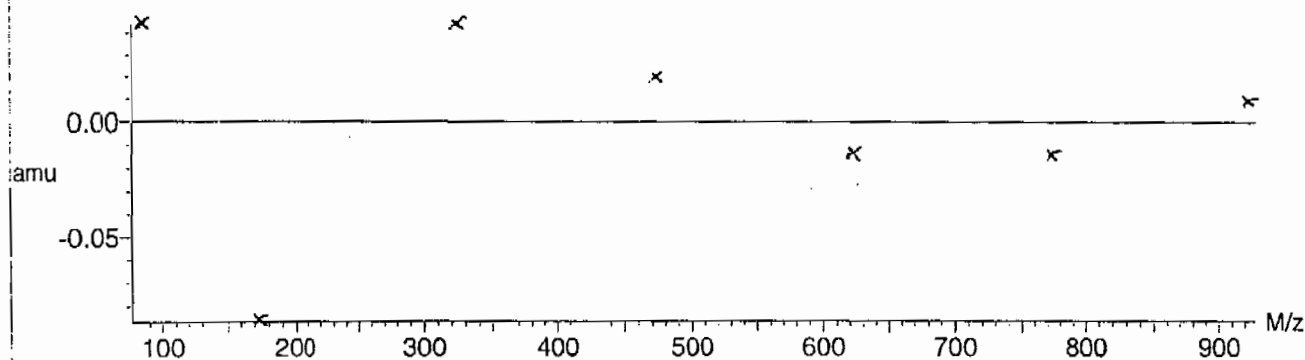


Mass difference (Raw - Ref mass)



Residuals

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



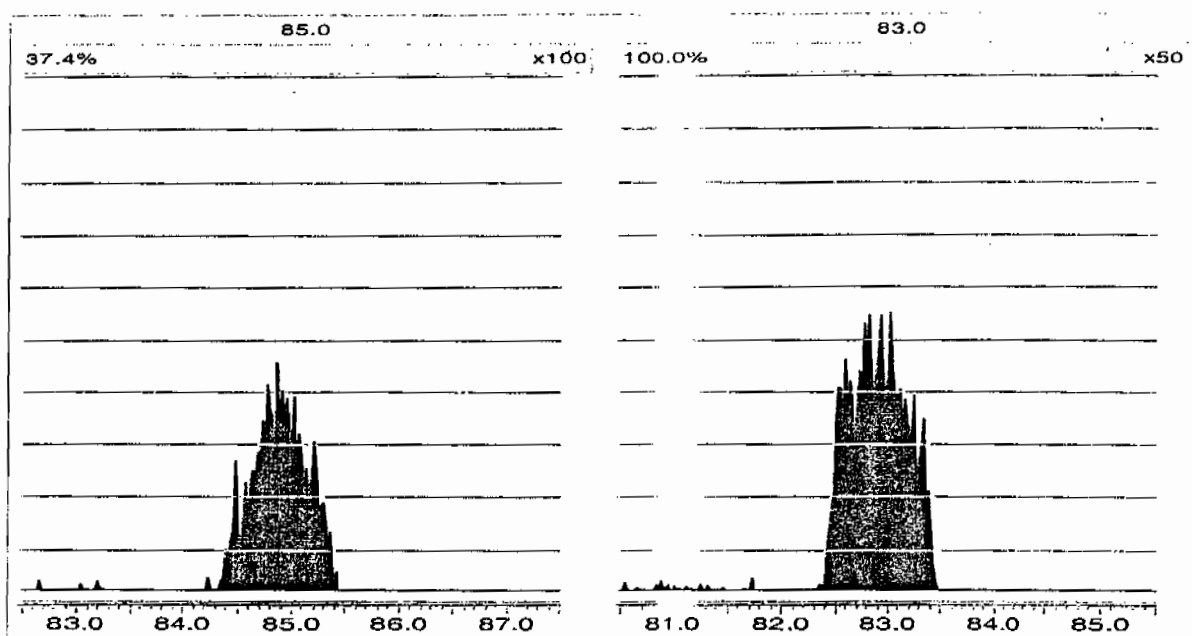
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

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

Printed: Tuesday, February 16, 2010 10:54:24 Eastern Standard Time





Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1471

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	per0216006a	16-FEB-10	19812.8				
Lower Area Limit			9906.4				
Upper Area Limit			39625.6				
1202029077	per0216040a	16-FEB-10 20:53	17725.3	3.62	3.64427	1.007	
1202029078	per0216041a	16-FEB-10 21:03	19414	3.62	3.64428	1.007	
1202029081	per0216042a	16-FEB-10 21:13	19842	3.79	3.80585	1.004	
245797001	per0216044a	16-FEB-10 21:34	21735.6	3.57	3.58223	1.003	
1202029079	per0216045a	16-FEB-10 21:44	21328.1	3.56	3.56975	1.003	
1202029080	per0216046a	16-FEB-10 21:54	21427.9	3.56	3.56977	1.003	
245797002	per0216047a	16-FEB-10 22:04	20079.4	3.58	3.5822	1.001	
245797003	per0216051a	16-FEB-10 22:44	19000.8	3.57	3.58222	1.003	

# Perchlorate RT And Area Summary

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Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1471

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	per0216006a	16-FEB-10	19812.8				
Lower Area Limit			9906.4				
Upper Area Limit			39625.6				
245797004	per0216052a	16-FEB-10 22:55	20061.7	3.57	3.60702	1.01	
245797005	per0216053a	16-FEB-10 23:05	20724.2	3.56	3.59453	1.01	
245797006	per0216054a	16-FEB-10 23:15	20034.2	3.54	3.55728	1.005	
245797007	per0216055a	16-FEB-10 23:25	20046.3	3.63	3.64428	1.004	
245797008	per0216056a	16-FEB-10 23:35	19222.7	3.54	3.55727	1.005	
245797009	per0216057a	16-FEB-10 23:45	19355.3	3.53	3.54498	1.004	
245797010	per0216058a	16-FEB-10 23:55	21919.3	3.53	3.55727	1.008	
245797011	per0216059a	17-FEB-10 00:05	20394.9	3.53	3.54495	1.004	

Perchlorate RT And Area Summary

GEL Job No.(SDG): 10-1471

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS

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

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0216006a	16-FEB-10	19812.8				
Lower Area Limit			9906.4				
Upper Area Limit			39625.6				
245797012	per0216063a	17-FEB-10 00:45	20736.2	3.51	3.53247	1.006	
245797013	per0216064a	17-FEB-10 00:56	20454.3	3.53	3.54495	1.004	
245797014	per0216065a	17-FEB-10 01:06	20218.6	3.52	3.5325	1.004	
245797015	per0216066a	17-FEB-10 01:16	20365.6	3.52	3.53247	1.004	
245797016	per0216067a	17-FEB-10 01:26	20181.6	3.52	3.54493	1.007	
245797017	per0216068a	17-FEB-10 01:36	20163.2	3.51	3.49525	.996	
245797018	per0216069a	17-FEB-10 01:46	19356.6	3.51	3.48275	.992	
245797019	per0216070a	17-FEB-10 01:56	19231.4	3.52	3.53248	1.004	

# SAMPLE DATA

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7888

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797001

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 90.7

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	1.23	ug/kg	J	1	16-FEB-10 21:34	per0216044a
	Perchlorate Isotope Ratio			3.36			1	16-FEB-10 21:34	per0216044a
14797-73-0	Perchlorate-101	.551	2.21	1.17	ug/kg	J	1	16-FEB-10 21:34	per0216044a
	Perchlorate-O(18)			5.94	ug/kg		1	16-FEB-10 21:34	per0216044a

<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 %Solids  
Aliquot

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216044a

Date: 16-Feb-2010

Time: 21:34:01

ID: 245797001

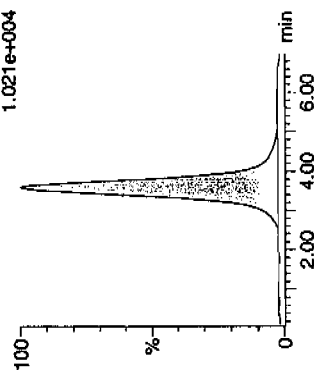
Vial: 2:1,E

02-17-10

15220 | 947246 | 5020 | 11

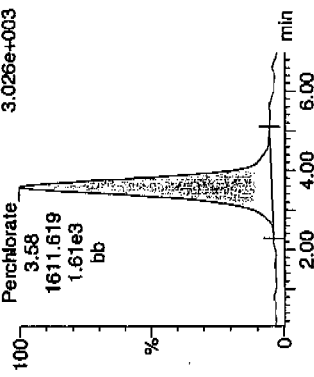
**Perchlorate**

MRM of 3 channels, ES-  
99 > 83  
1.021e+004



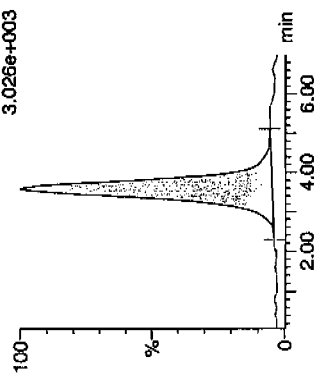
**Perchlorate**

MRM of 3 channels, ES-  
101 > 85  
3.026e+003



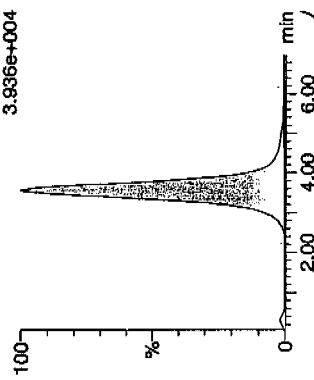
**Perchlorate-101**

MRM of 3 channels, ES-  
101 > 85  
3.026e+003



**Perchlorate-O(18)**

MRM of 3 channels, ES-  
107 > 89  
3.936e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245797001	Perchlorate	99 > 83	3.58	5412.156	5412.156	bb			0.1111			413.708	3.36
245797001	Perchlorate-101	101 > 85	3.58	1611.619	1611.619	bb			0.1063			390.153	
245797001	Perchlorate-O(18)	107 > 89	3.57	21735.551	21735.551	bb			0.5389	107.77	7.77	1673.7...	

$$\frac{5412.156}{48644.1} \times 100 = 1.12$$

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7890

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797002

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 90.2

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	16-FEB-10 22:04	per0216047a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:04	per0216047a
14797-73-0	Perchlorate-101	.554	2.22	0.554	ug/kg	U	1	16-FEB-10 22:04	per0216047a
	Perchlorate-O(18)			5.52	ug/kg		1	16-FEB-10 22:04	per0216047a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216047a

Date: 16-Feb-2010

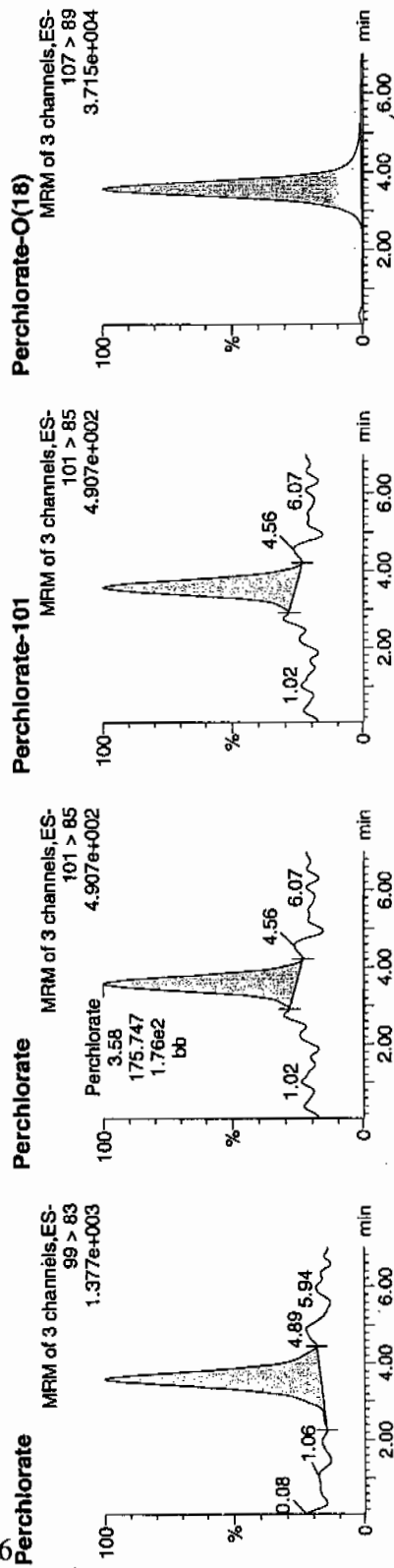
Time: 22:04:22

ID: 245797002

Vial: 2:2,B

620  
02-17-10

16726-1947246 | 3020 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245797002	Perchlorate	99 > 83	3.58	638.003	638.003	bb			0.0131			48.249	3.63
245797002	Perchlorate-101	101 > 85	3.58	175.747	175.747	bb			0.0116			24.733	
245797002	Perchlorate-O(18)	107 > 89	3.58	20079.361	20079.361	bb			0.4978	99.56	-0.44	3104.6...	

Handwritten note: 4.56, 6.07, 3.63



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7886

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797003

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 93.5

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	.535	2.14	0.535	ug/kg	U	1	16-FEB-10 22:44	per0216051a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:44	per0216051a
14797-73-0	Perchlorate-101	.535	2.14	0.535	ug/kg	U	1	16-FEB-10 22:44	per0216051a
	Perchlorate-O(18)			5.04	ug/kg		1	16-FEB-10 22:44	per0216051a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216051a

Date: 16-Feb-2010

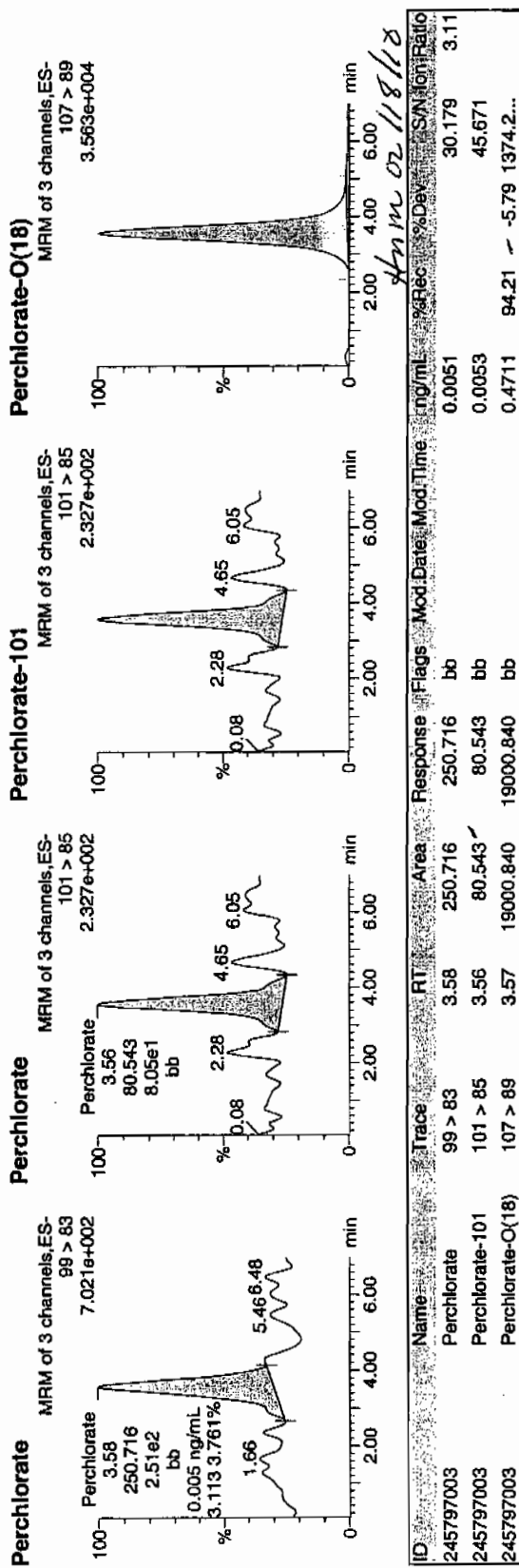
Time: 22:44:54

ID: 245797003

Vial: 2:2,C

02-17-10

16051a | 947246 | 2020 | 11



Form I

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7889

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797004

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 63

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 22:55	per0216052a
	Perchlorate Isotope Ratio						1	16-FEB-10 22:55	per0216052a
14797-73-0	Perchlorate-101	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 22:55	per0216052a
	Perchlorate-O(18)			7.91	ug/kg		1	16-FEB-10 22:55	per0216052a

^ 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

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

Page 52 of 109

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216052a

Date: 16-Feb-2010

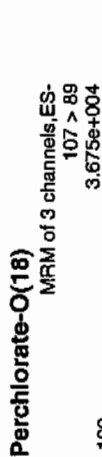
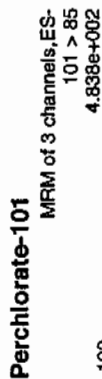
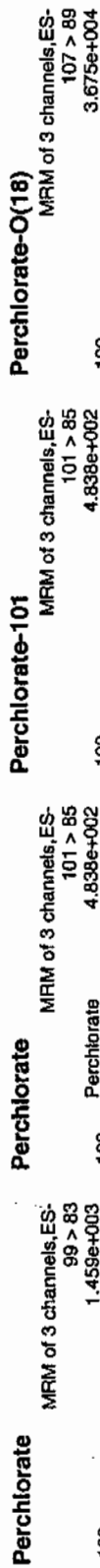
Time: 22:55:07

ID: 245797004

Val: 2:2,D

22-17-10

157001947246150020111



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion.Ratio
245797004	Perchlorate	99 > 83	3.61	690.268	690.268	bb			0.0142			28.360	2.82
245797004	Perchlorate-101	101 > 85	3.58	245.087	245.087	bb			0.0162			6.227	
245797004	Perchlorate-Q(18)	107 > 89	3.57	20061.699	20061.699	bb			0.4974	99.47	-0.53	2082.4...	

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7885

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797005

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 67

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:05	per0216053a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:05	per0216053a
14797-73-0	Perchlorate-101	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:05	per0216053a
	Perchlorate-O(18)			7.68	ug/kg		1	16-FEB-10 23:05	per0216053a

<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\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216053a

Date: 16-Feb-2010

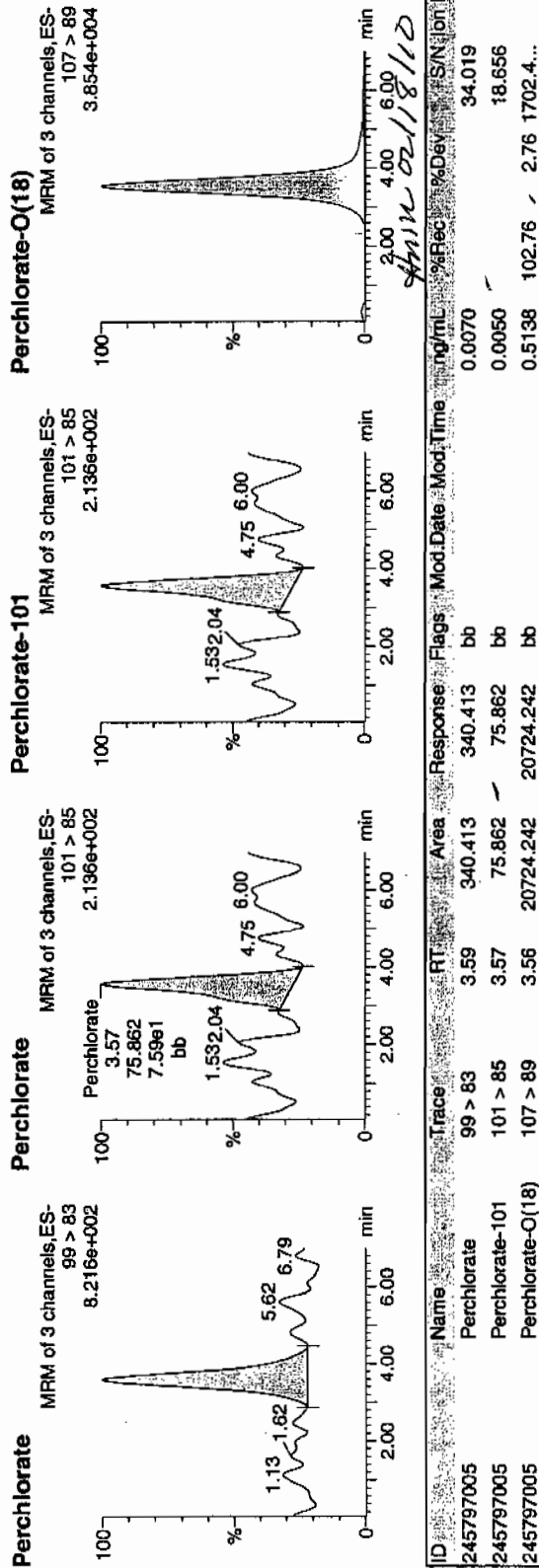
Time: 23:05:08

ID: 245797005

Val: 2:2,E

02-17-10

16722-1947246 | 2020 | 11



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7882

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797006

Date Filtered: 11-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	.571	2.29	0.571	ug/kg	U	1	16-FEB-10 23:15	per0216054a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:15	per0216054a
14797-73-0	Perchlorate-101	.571	2.29	0.587	ug/kg	J	1	16-FEB-10 23:15	per0216054a
	Perchlorate-O(18)			5.68	ug/kg		1	16-FEB-10 23:15	per0216054a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Sample Name: per0216054a

Date: 16-Feb-2010

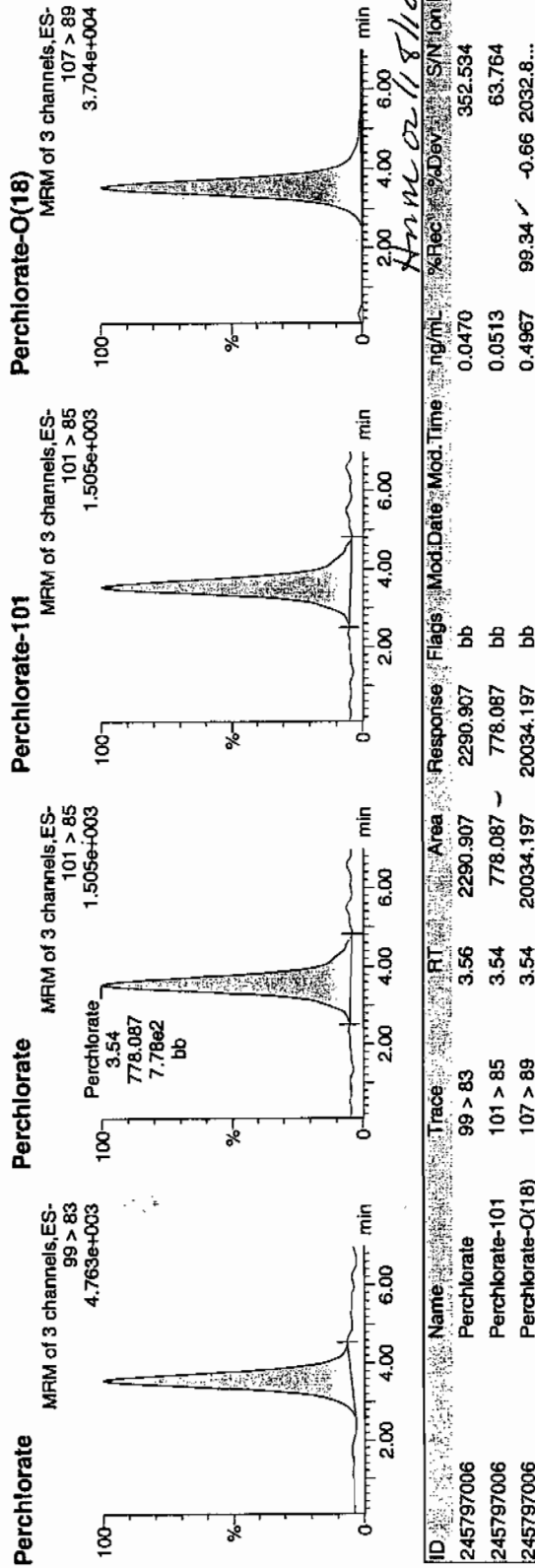
Time: 23:15:10

ID: 245797006

Lot: 2-2,F

02-17-10

15720 | 947246 | 3070 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245797006	Perchlorate	99 > 83	3.56	2290.907	2290.907	bb			0.0470			352.534	2.94
245797006	Perchlorate-101	101 > 85	3.54	778.087	778.087	bb			0.0513			63.764	
245797006	Perchlorate-O(18)	107 > 89	3.54	20034.197	20034.197	bb			0.4967	99.34	-0.66	2032.8...	



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7887

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797007

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 67

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	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:25	per0216055a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:25	per0216055a
14797-73-0	Perchlorate-101	.747	2.99	0.747	ug/kg	U	1	16-FEB-10 23:25	per0216055a
	Perchlorate-O(18)			7.42	ug/kg		1	16-FEB-10 23:25	per0216055a

<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 <sup>1</sup>  
Aliquot %Solids

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216055a

Date: 16-Feb-2010

Time: 23:25:10

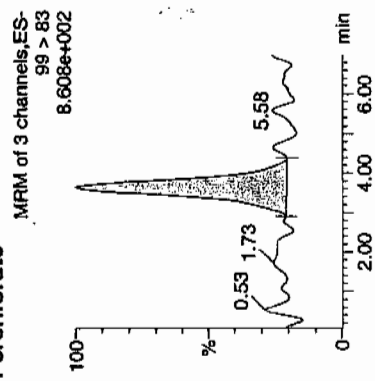
ID: 245797007

Val: 2:3,A

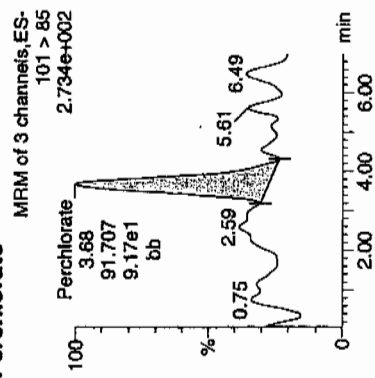
WWD  
 02-17-10

LTN-1947246 | 5020 | 11

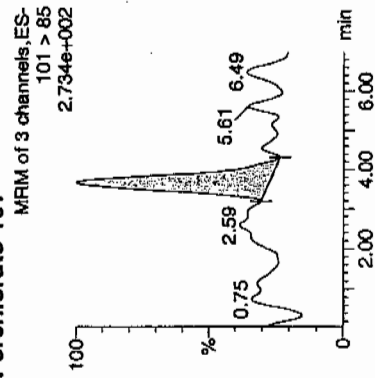
## Perchlorate



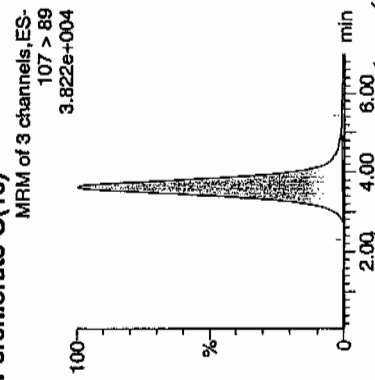
## Perchlorate



## Perchlorate-101



## Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
245797007	Perchlorate	99 > 83	3.64	348.561	348.561	bb			0.0072			37.824	3.80
245797007	Perchlorate-101	101 > 85	3.68	91.707	91.707	bb			0.0061			35.291	
245797007	Perchlorate-O(18)	107 > 89	3.63	20046.281	20046.281	bb			0.4370	99.40	-0.60	1659.7...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7881

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797008

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 63

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	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 23:35	per0216056a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:35	per0216056a
14797-73-0	Perchlorate-101	.795	3.18	0.795	ug/kg	U	1	16-FEB-10 23:35	per0216056a
	Perchlorate-O(18)			7.58	ug/kg		1	16-FEB-10 23:35	per0216056a

<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\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216056a

Date: 16-Feb-2010

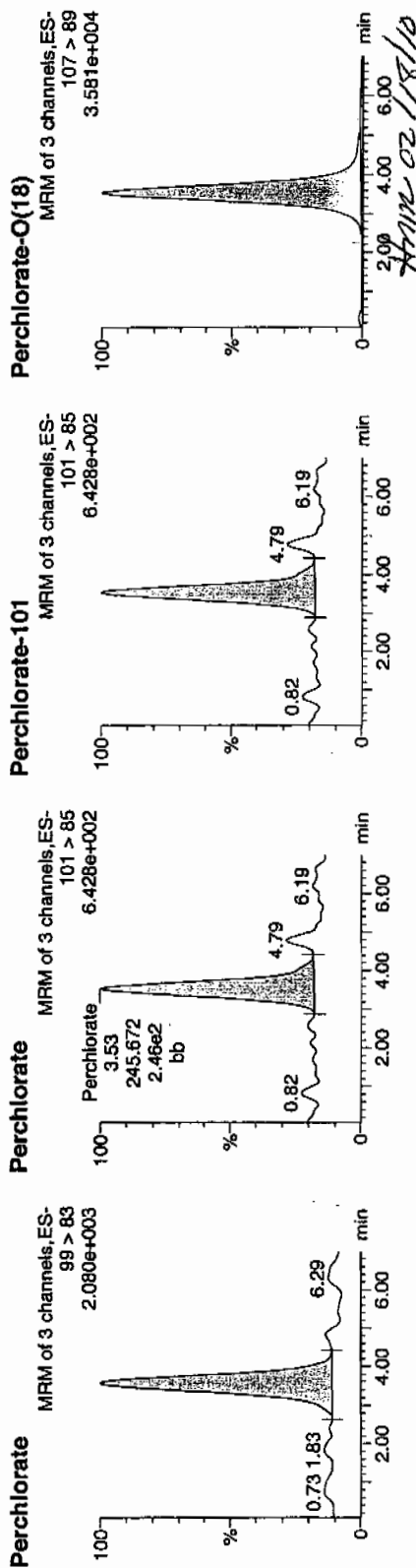
Time: 23:35:13

ID: 245797008

Vial: 2:3,B

1947246 | 5020 | 1 | 1

602  
02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
245797008	Perchlorate	99 > 83	3.56	968.040	968.040	bb			0.0199			95.150	3.94
245797008	Perchlorate-101	101 > 85	3.53	245.672	245.672	bb			0.0162			45.877	
245797008	Perchlorate-O(18)	107 > 89	3.54	19222.746	19222.746	bb			0.4766	95.31	-4.69	3501.4...	

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60.0500

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7951

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797009

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 81

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	.62	2.48	0.620	ug/kg	U	1	16-FEB-10 23:45	per0216057a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:45	per0216057a
14797-73-0	Perchlorate-101	.62	2.48	0.620	ug/kg	U	1	16-FEB-10 23:45	per0216057a
	Perchlorate-O(18)			5.95	ug/kg		1	16-FEB-10 23:45	per0216057a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7950

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797010

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.624	2.49	0.624	ug/kg	U	1	16-FEB-10 23:55	per0216058a
	Perchlorate Isotope Ratio						1	16-FEB-10 23:55	per0216058a
14797-73-0	Perchlorate-101	.624	2.49	0.624	ug/kg	U	1	16-FEB-10 23:55	per0216058a
	Perchlorate-O(18)			6.78	ug/kg		1	16-FEB-10 23:55	per0216058a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216058a

Date: 16-Feb-2010

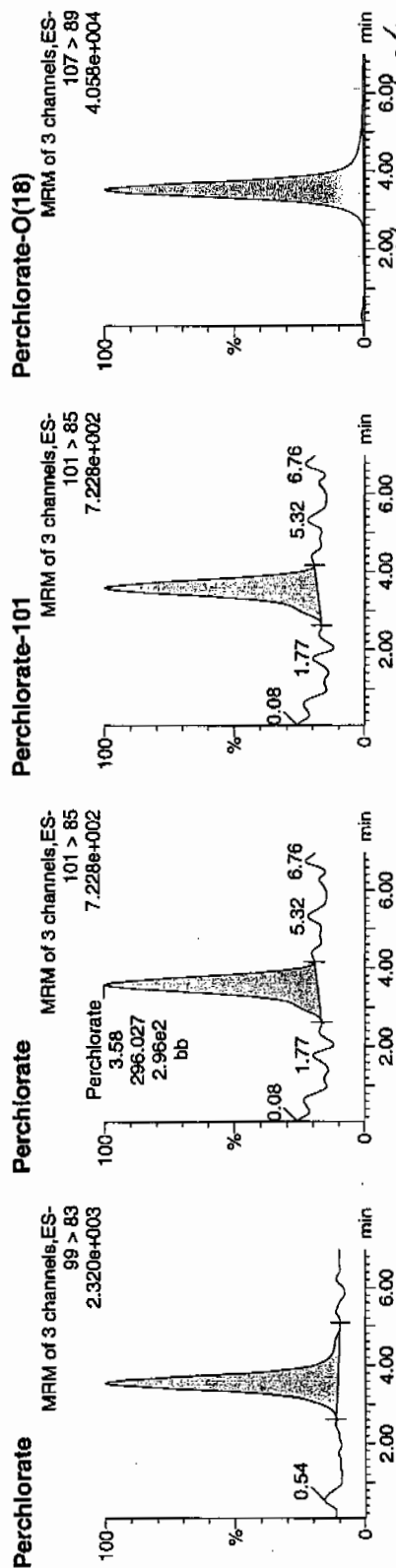
Time: 23:55:19

ID: 245797010

Vial: 2:3,D

02-17-10

1947246 | 5070 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	IS/N	Ratio
245797010	Perchlorate	99 > 83	3.56	1067.280	1067.280	bb			0.0219			69.747	3.61
245797010	Perchlorate-101	101 > 85	3.58	296.027	296.027	bb			0.0195			62.290	
245797010	Perchlorate-O(18)	107 > 89	3.53	21919.289	21919.289	bb			0.5434	108.68	8.68	3587.8...	



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7947  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797011  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 64

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	.784	3.14	0.784	ug/kg	U	1	17-FEB-10 00:05	per0216059a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:05	per0216059a
14797-73-0	Perchlorate-101	.784	3.14	0.784	ug/kg	U	1	17-FEB-10 00:05	per0216059a
	Perchlorate-O(18)			7.93	ug/kg		1	17-FEB-10 00:05	per0216059a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216059a

Date: 17-Feb-2010

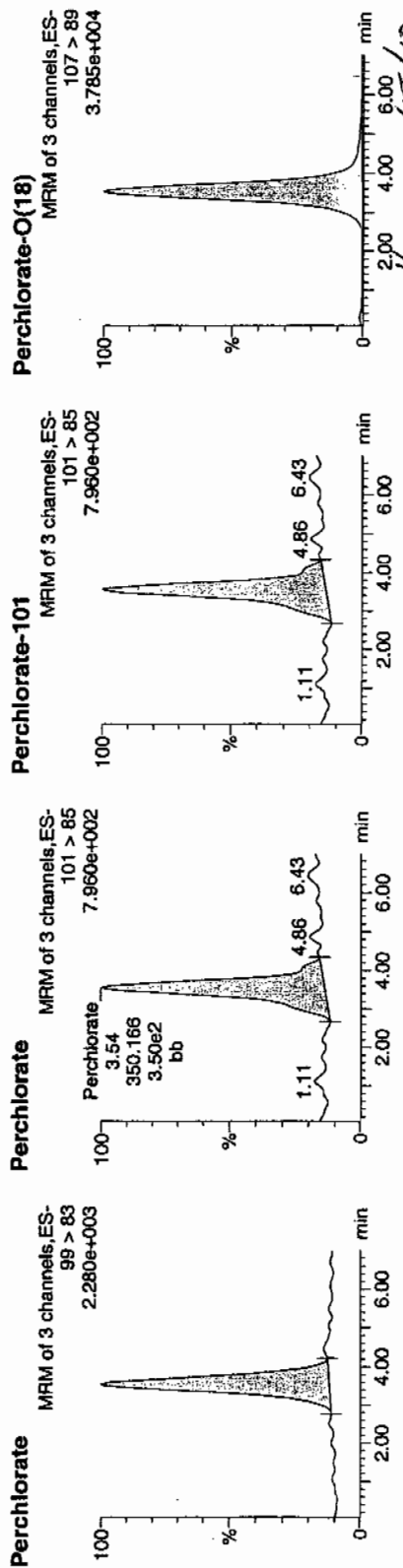
Time: 00:05:21

ID: 245797011

Vial: 2:3,E

622  
02-17-10

16700 | 947246 | 800511



ID	Name	Trace	RT	Area	Response	Flags	Mod	Date	Mod	Time	ng/ml	%Rec	%Dev	SN	Ion	Ratio
245797011	Perchlorate	99 > 83	3.54	982.526	982.526	bb					0.0202			178.541		2.81
245797011	Perchlorate-101	101 > 85	3.54	350.166	350.166	bb					0.0231			83.266		
245797011	Perchlorate-O(18)	107 > 89	3.53	20394.861	20394.861	bb					0.5056	101.12	1.12	2636.2...		

Form 1

Perchlorate Analysis Data Sheet

Client Sample No.

RE15-10-7944

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247245

Extraction Type: Solid Prep

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797012

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 92.8

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	.539	2.16	0.539	ug/kg	U	1	17-FEB-10 00:45	per0216063a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:45	per0216063a
14797-73-0	Perchlorate-101	.539	2.16	0.539	ug/kg	U	1	17-FEB-10 00:45	per0216063a
	Perchlorate-O(18)			5.54	ug/kg		1	17-FEB-10 00:45	per0216063a

<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

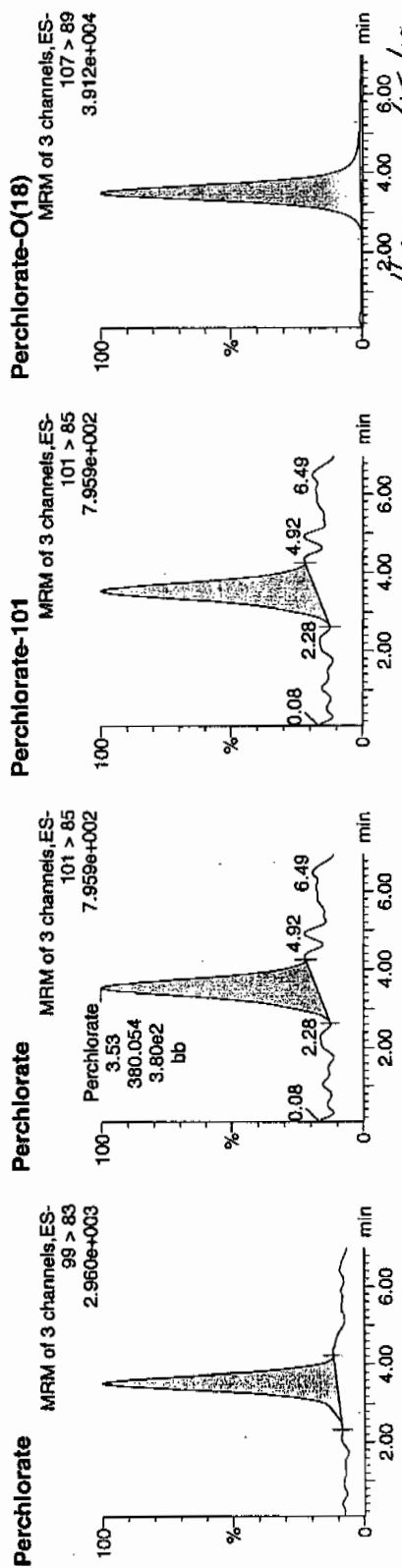
Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216063a  
Date: 17-Feb-2010  
Time: 00:45:52  
ID: 245797012  
Vial: 2:3,F

22-17-10

15726 | 5020 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245797012	Perchlorate	99 > 83	3.53	1318.116	1318.116	bb			0.0271			207.168	3.47
245797012	Perchlorate-101	101 > 85	3.53	380.054	380.054	bb			0.0251			72.727	
245797012	Perchlorate-O(18)	107 > 89	3.51	20736.189	20736.189	bb			0.5141	102.82	-	2.82	1730.4...

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7948

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797013

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 92.1

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	17-FEB-10 00:56	per0216064a
	Perchlorate Isotope Ratio						1	17-FEB-10 00:56	per0216064a
14797-73-0	Perchlorate-101	.543	2.17	0.543	ug/kg	U	1	17-FEB-10 00:56	per0216064a
	Perchlorate-O(18)			5.50	ug/kg		1	17-FEB-10 00:56	per0216064a

<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

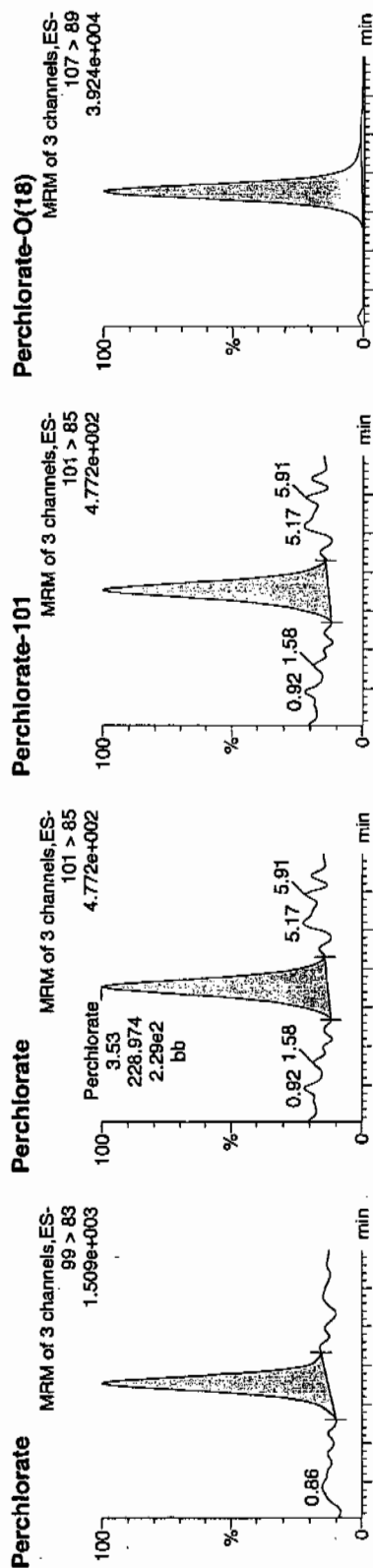
Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216064a  
Date: 17-Feb-2010  
Time: 00:56:05  
ID: 245797013  
Vial: 2:4,A

622  
02-17-10

15220 | 947246 | 3020 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	S/N	Ion Ratio
245797013	Perchlorate	99 > 83	3.54	669.955	669.955	bb			0.0138			76.141	2.93
245797013	Perchlorate-101	101 > 85	3.53	228.974	228.974	bb			0.0151			64.441	
245797013	Perchlorate-O(18)	107 > 89	3.53	20454.295	20454.295	bb			0.5071	101.42	1.42	2421.3...	

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7941  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 245797014  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 76

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.655	2.62	0.655	ug/kg	U	1	17-FEB-10 01:06	per0216065a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:06	per0216065a
14797-73-0	Perchlorate-101	.655	2.62	0.655	ug/kg	U	1	17-FEB-10 01:06	per0216065a
	Perchlorate-O(18)			6.57	ug/kg		1	17-FEB-10 01:06	per0216065a

<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\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216065a

Date: 17-Feb-2010

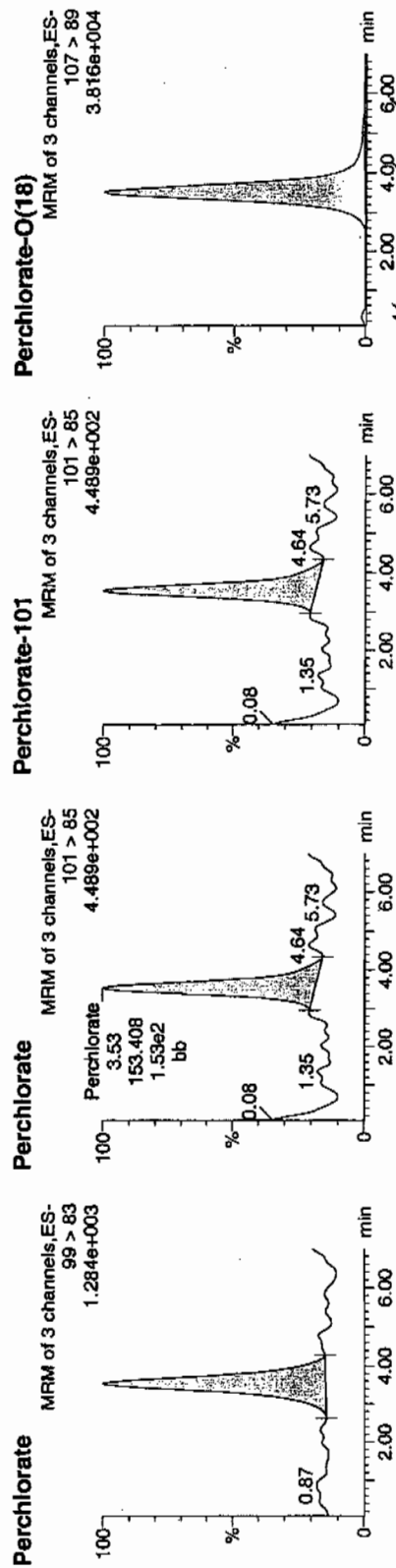
Time: 01:06:08

ID: 245797014

Vial: 2:4,B

02-17-10

16226 | 947246 | 5020 | 1.1



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	S/N	Ion Ratio
245797014	Perchlorate	99 > 83	3.53	550.878	550.878	bb			0.0113	41.078	3.59		
245797014	Perchlorate-101	101 > 85	3.53	153.408	153.408	bb			0.0101	21.658			
245797014	Perchlorate-O(18)	107 > 89	3.52	20218.555	20218.555	bb			0.5013	100.25	0.25	2757.6...	



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7949

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797015

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 59

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	.844	3.38	0.844	ug/kg	U	1	17-FEB-10 01:16	per0216066a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:16	per0216066a
14797-73-0	Perchlorate-101	.844	3.38	0.844	ug/kg	U	1	17-FEB-10 01:16	per0216066a
	Perchlorate-O(18)			8.52	ug/kg		1	17-FEB-10 01:16	per0216066a

<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

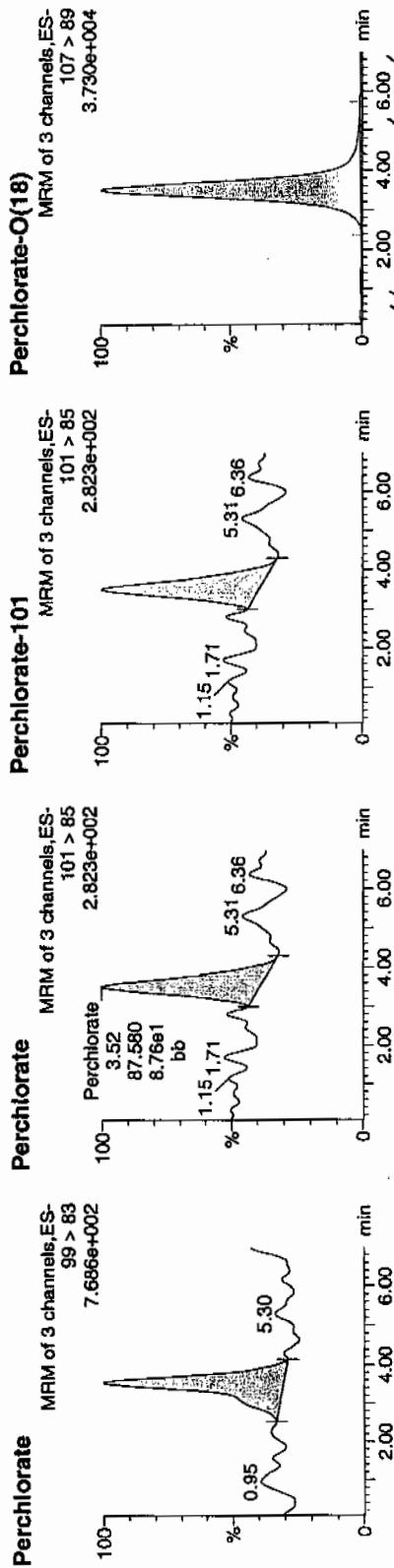
Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216066a  
Date: 17-Feb-2010  
Time: 01:16:11  
ID: 245797015  
Vial: 2:4,C

62-17-10

1947246 | 5075 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
245797015	Perchlorate	99 > 83	3.53	275.935	275.935	bb			0.0057			29.365	3.15
245797015	Perchlorate-101	101 > 85	3.52	87.580	87.580	bb			0.0058			27.483	
245797015	Perchlorate-O(18)	107 > 89	3.52	20365.555	20365.555	bb			0.5049	100.98	0.98	2692.3...	

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7946

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797016

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 21.8

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	.545	2.18	0.545	ug/kg	U	1	17-FEB-10 01:26	per0216067a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:26	per0216067a
14797-73-0	Perchlorate-101	.545	2.18	0.545	ug/kg	U	1	17-FEB-10 01:26	per0216067a
	Perchlorate-O(18)			5.45	ug/kg		1	17-FEB-10 01:26	per0216067a

<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

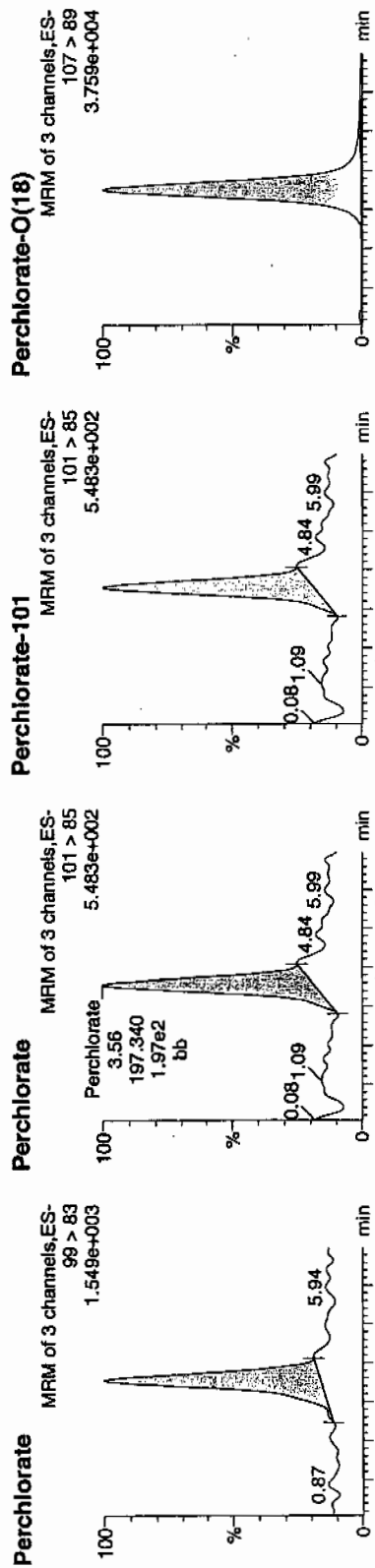
Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216067a  
Date: 17-Feb-2010  
Time: 01:26:13  
ID: 245797016  
Vial: 2:4,D

02.17.10

17200 | 947246 | 30025 | 11



ID	Name	Trace	FT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
245797016	Perchlorate	99 > 83	3.54	619.970	619.970	bb			0.0127			48.202	3.14
245797016	Perchlorate-101	101 > 85	3.56	197.340	197.340	bb			0.0130			61.745	
245797016	Perchlorate-O(18)	107 > 89	3.52	20181.604	20181.604	bb			0.5003	100.07		0.07	1453.1...

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7942

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797017

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.25	0.561	ug/kg	U	1	17-FEB-10 01:36	per0216068a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:36	per0216068a
14797-73-0	Perchlorate-101	.561	2.25	0.561	ug/kg	U	1	17-FEB-10 01:36	per0216068a
	Perchlorate-O(18)			5.61	ug/kg		1	17-FEB-10 01:36	per0216068a

<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\per021610a.qtd

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216068a

Date: 17-Feb-2010

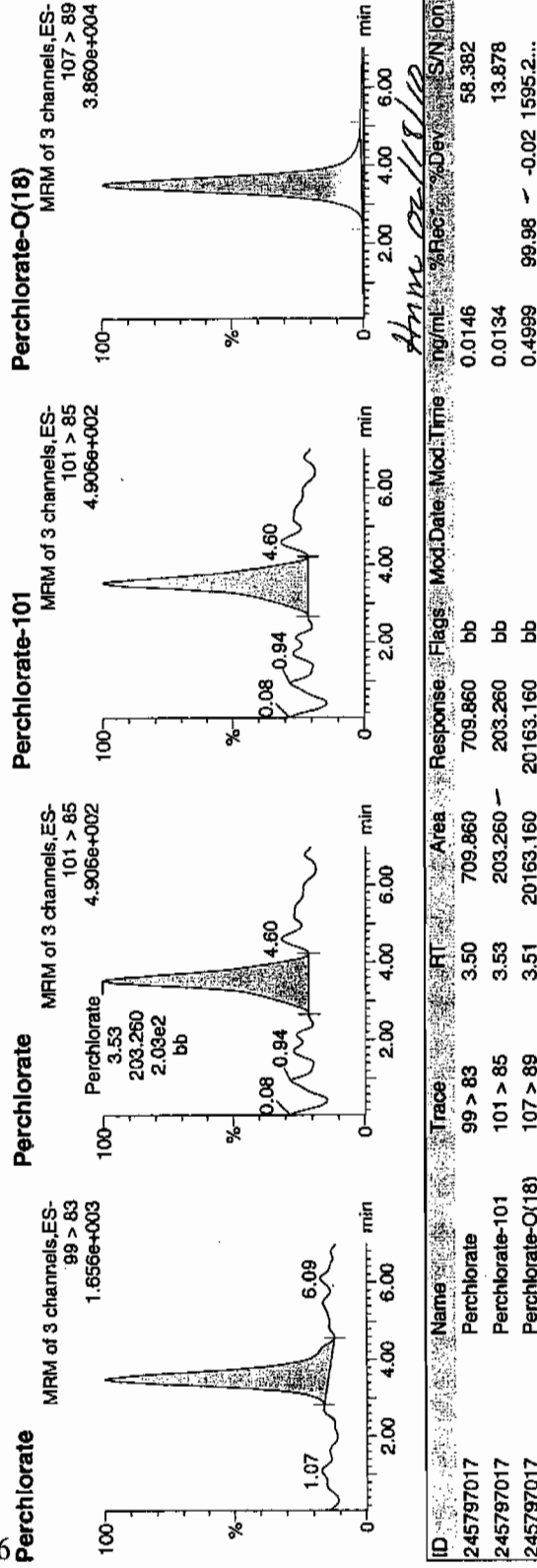
Time: 01:36:16

ID: 245797017

Val: 2:4,E

02-17-10

15726-1947246 | 5020 | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod	Date	Mod	Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245797017	Perchlorate	99 > 83	3.50	709.860	709.860	bb					0.0146	0.0134	0.4999	58.382	3.49
245797017	Perchlorate-101	101 > 85	3.53	203.260	203.260	bb					0.0134	0.0134	0.4999	13.878	
245797017	Perchlorate-O(18)	107 > 89	3.51	20163.160	20163.160	bb					0.4999	99.98	-0.02	1595.2...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7945

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797018

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 61

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.822	3.29	0.822	ug/kg	U	1	17-FEB-10 01:46	per0216069a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:46	per0216069a
14797-73-0	Perchlorate-101	.822	3.29	0.822	ug/kg	U	1	17-FEB-10 01:46	per0216069a
	Perchlorate-O(18)			7.89	ug/kg		1	17-FEB-10 01:46	per0216069a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charliers W. Wilson

Page 69 of 109

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216069a

Date: 17-Feb-2010

Time: 01:46:17

ID: 245797018

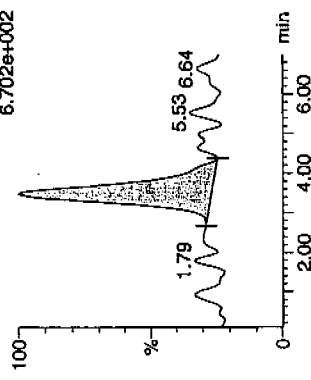
Vial: 2:4,F

02-17-10

1947246 | 5020 | 11

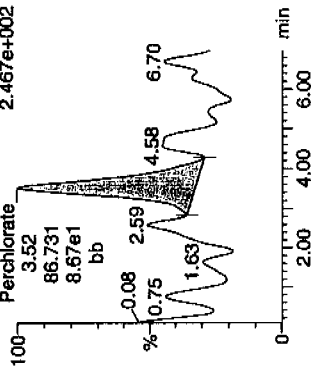
Perchlorate

MRM of 3 channels ES-  
99 > 83  
6.702e+002



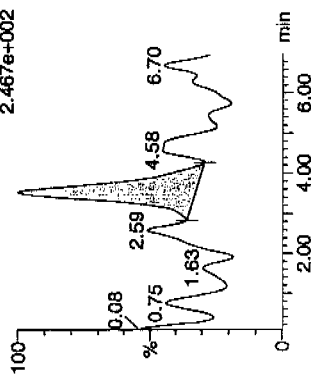
Perchlorate

MRM of 3 channels ES-  
101 > 85  
2.467e+002



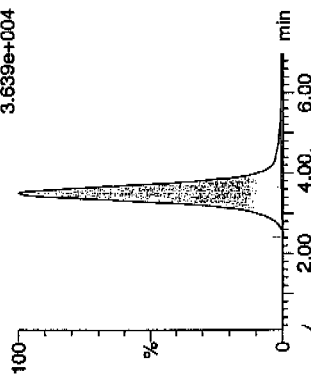
Perchlorate-101

MRM of 3 channels ES-  
101 > 85  
2.467e+002



Perchlorate-O(18)

MRM of 3 channels ES-  
107 > 89  
3.639e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245797018	Perchlorate	99 > 83	3.48	282.298	282.298	bb			0.0058			42.407	3.25
245797018	Perchlorate-101	101 > 85	3.52	86.731	86.731	bb			0.0057			21.713	
245797018	Perchlorate-O(18)	107 > 89	3.51	19356.590	19356.590	bb			0.4799	95.98	-4.02	4329.9...	



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7943

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 245797019

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 92.4

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.541	2.16	0.541	ug/kg	U	1	17-FEB-10 01:56	per0216070a
	Perchlorate Isotope Ratio						1	17-FEB-10 01:56	per0216070a
14797-73-0	Perchlorate-101	.541	2.16	0.541	ug/kg	U	1	17-FEB-10 01:56	per0216070a
	Perchlorate-O(18)			5.16	ug/kg		1	17-FEB-10 01:56	per0216070a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time

Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216070a

Date: 17-Feb-2010

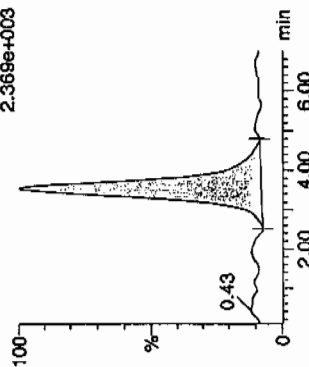
Time: 01:56:19

ID: 245797019

Vial: 2:5.A

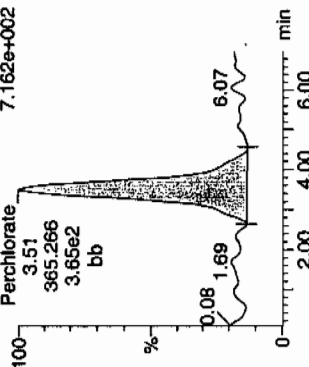
## Perchlorate

MRM of 3 channels, ES-  
99 > 83  
2.368e+003



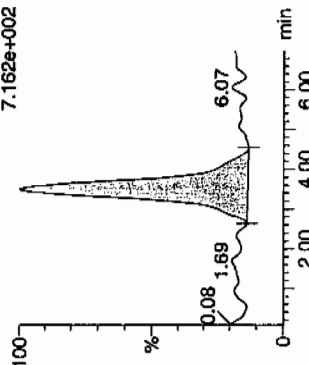
## Perchlorate

MRM of 3 channels, ES-  
101 > 85  
7.162e+002



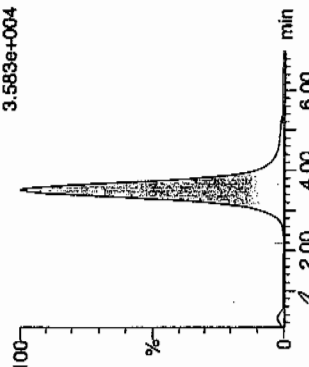
## Perchlorate-101

MRM of 3 channels, ES-  
101 > 85  
7.162e+002



## Perchlorate-O(18)

MRM of 3 channels, ES-  
107 > 89  
3.583e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245797019	Perchlorate	99 > 83	3.53	1201.622	1201.622	bb			0.0247			146.802	3.29
245797019	Perchlorate-101	101 > 85	3.51	365.266	365.266	bb			0.0241			65.199	
245797019	Perchlorate-O(18)	107 > 89	3.52	19231.395	19231.395	bb			0.4768	95.36	-4.64	1134.8...	

# STANDARDS - DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1471

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 16-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: 48694.12

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1471

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 16-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: 15156.32

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\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time

Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per021610a.mdb 17 Feb 2010 09:42:10

Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per021610a.cdb 17 Feb 2010 11:03:29

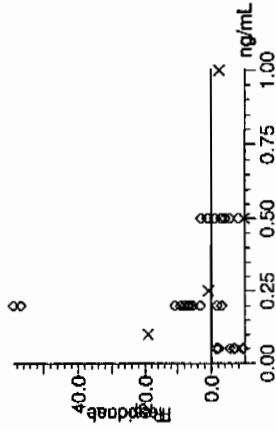
Compound name: Perchlorate

Response Factor: 48694.1

R<sup>2</sup> SD: 5598.16, % Relative SD: 11.4966

Response type: External Std, Area

Curve type: RF



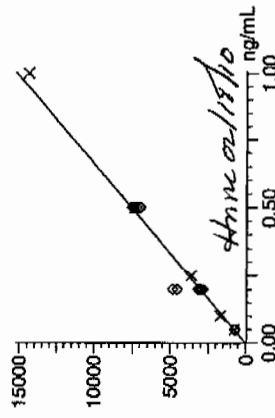
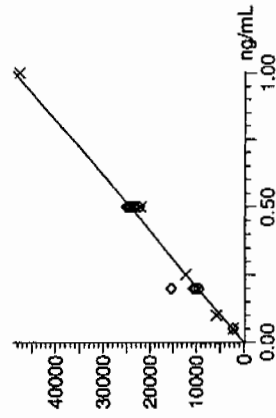
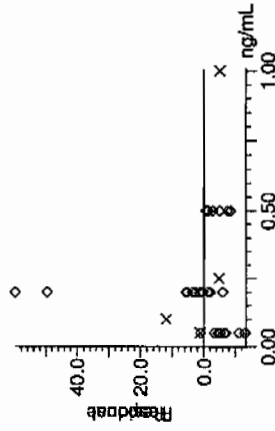
Compound name: Perchlorate-101

Response Factor: 15156.3

R<sup>2</sup> SD: 1083.64, % Relative SD: 7.14976

Response type: External Std, Area

Curve type: RF



02-17-10

4/11/10

Quantify Calibration Report MassLynx 4.0 SP4

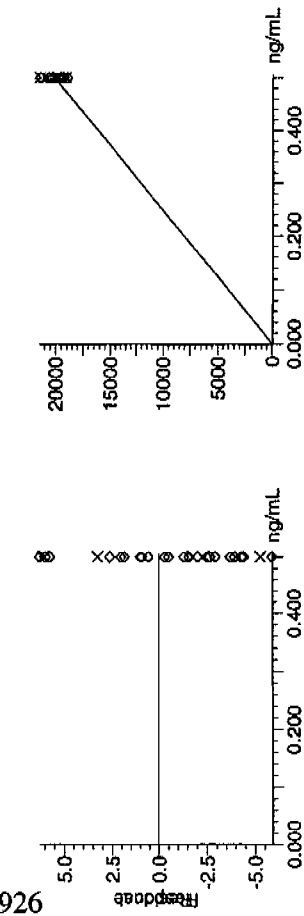
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time

Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Compound name: Perchlorate-O(18)  
 Response Factor: 40336  
 RF SD: 1845.58, % Relative SD: 4.57552  
 Response type: External Std, Area  
 Curve type: RF ✓



Form 3

Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1471

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.52	103	16-FEB-10 15:41	per0216009a
Perchlorate Isotope Ratio		3.32		16-FEB-10 15:41	per0216009a
Perchlorate-101	.5	.5	99.57	16-FEB-10 15:41	per0216009a



**Quantify Sample Report** MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216009a

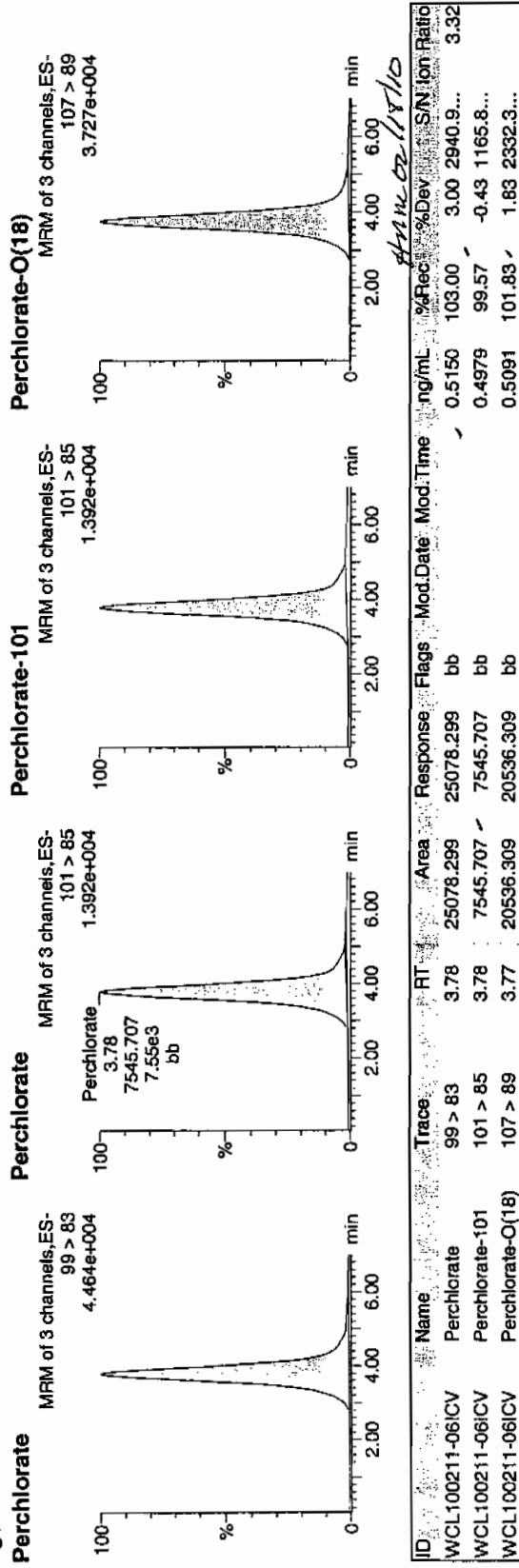
Date: 16-Feb-2010

Time: 15:41:24

ID: WCL100211-06ICV

Vol: 1:2.A

*Pure*  
*02-17-10*



Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1471

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.95	16-FEB-10 17:51	per0216022a
Perchlorate Isotope Ratio		3.26		16-FEB-10 17:51	per0216022a
Perchlorate-101	.5	.49	97.38	16-FEB-10 17:51	per0216022a
Perchlorate	.5	.49	97.01	16-FEB-10 20:02	per0216035a
Perchlorate Isotope Ratio		3.21		16-FEB-10 20:02	per0216035a
Perchlorate-101	.5	.49	97.09	16-FEB-10 20:02	per0216035a
Perchlorate	.5	.47	94.55	16-FEB-10 22:14	per0216048a
Perchlorate Isotope Ratio		3.2		16-FEB-10 22:14	per0216048a
Perchlorate-101	.5	.47	94.94	16-FEB-10 22:14	per0216048a
Perchlorate	.5	.46	92.07	17-FEB-10 00:15	per0216060a
Perchlorate Isotope Ratio		3.23		17-FEB-10 00:15	per0216060a
Perchlorate-101	.5	.46	91.51	17-FEB-10 00:15	per0216060a
Perchlorate	.5	.51	101.24	17-FEB-10 02:06	per0216071a

Form 3

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1471

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		3.28		17-FEB-10 02:06	per0216071a
Perchlorate-101	.5	.5	99.06	17-FEB-10 02:06	per0216071a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216022a

Date: 16-Feb-2010

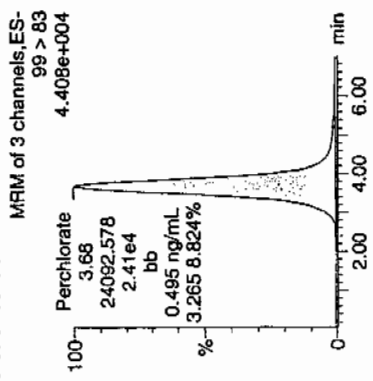
Time: 17:51:54

ID: WCL100211-06CCV

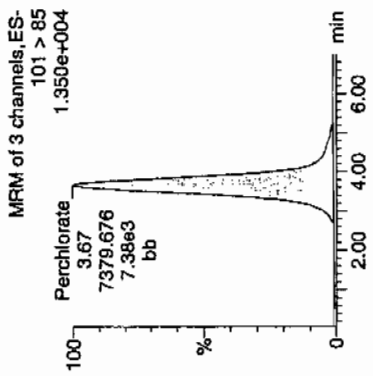
Vial: 1:2,A

Per  
and  
02-17-10

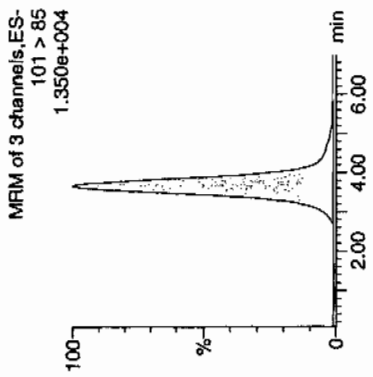
**Perchlorate**



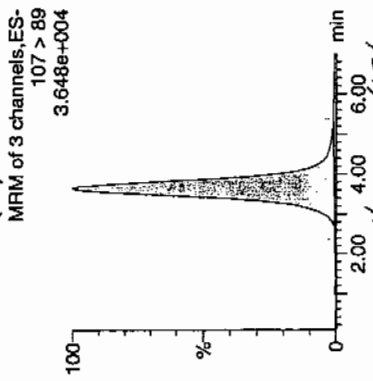
**Perchlorate**



**Perchlorate-101**



**Perchlorate-O(18)**



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-06CCV	Perchlorate	99 > 83	3.68	24092.578	24092.578	bb			0.4948	98.95	-1.05	3788.8...	3.26
WCL100211-06CCV	Perchlorate-101	101 > 85	3.67	7379.676	7379.676	bb			0.4869	97.38	-2.62	718.968	
WCL100211-06CCV	Perchlorate-O(18)	107 > 89	3.66	19578.602	19578.602	bb			0.4854	97.08	-2.92	1969.2...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216035a

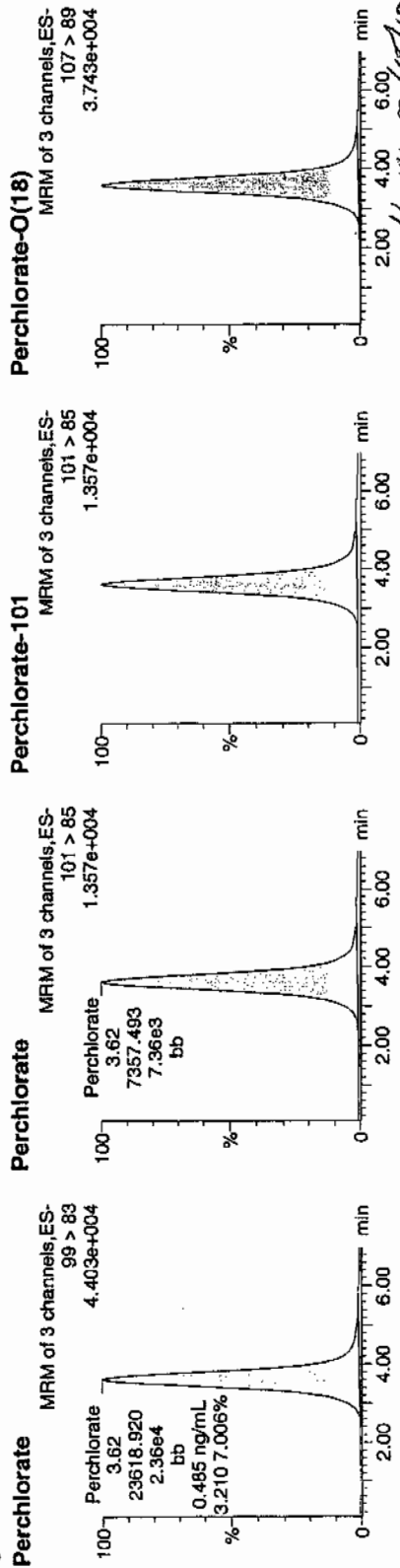
Date: 16-Feb-2010

Time: 20:02:43

ID: WCL100211-06CCV

Gal: 1:2.A

*Per  
and  
02-17-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-06CCV	Perchlorate	99 > 83	3.62	23618.920	23618.920	bb			0.4850	97.01	-2.99	958.546	3.21
WCL100211-06CCV	Perchlorate-101	101 > 85	3.62	7357.493	7357.493	bb			0.4854	97.09	-2.91	253.594	
WCL100211-06CCV	Perchlorate-O(18)	107 > 89	3.59	20062.182	20062.182	bb			0.4974	99.48	-0.52	3370.6...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216048a

Date: 16-Feb-2010

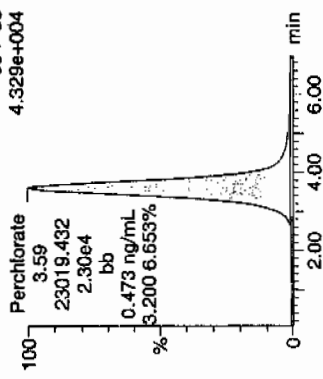
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ID: WCL100211-06CCV

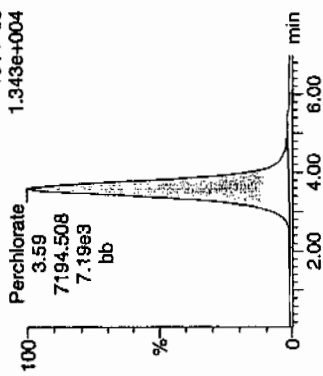
Val: 1:2A

*Per*  
*and*  
*02-17-10*

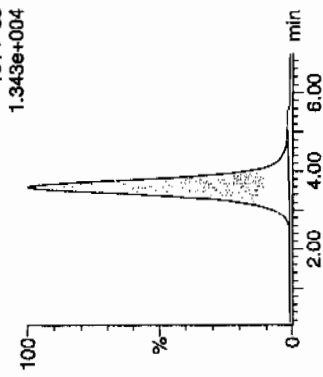
**Perchlorate**  
MRM of 3 channels, ES-  
99 > 83  
4.329e+004



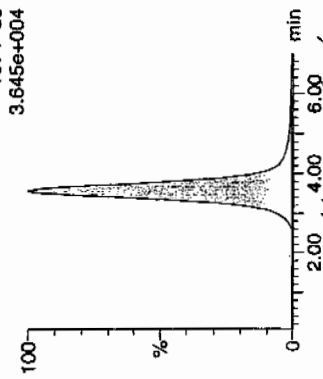
**Perchlorate**  
MRM of 3 channels, ES-  
101 > 85  
1.343e+004



**Perchlorate-101**  
MRM of 3 channels, ES-  
101 > 85  
1.343e+004



**Perchlorate-O(18)**  
MRM of 3 channels, ES-  
107 > 89  
3.645e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-06CCV	Perchlorate	99 > 83	3.59	23019.432	23019.432	bb			0.4727	94.55	-5.45	1319.1...	3.20
WCL100211-06CCV	Perchlorate-101	101 > 85	3.59	7194.508	7194.508	bb			0.4747	94.94	-5.06	264.715	
WCL100211-06CCV	Perchlorate-O(18)	107 > 89	3.58	19580.137	19580.137	bb			0.4854	97.09	-2.91	2127.0...	

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216060a

Date: 17-Feb-2010

Time: 00:15:22

ID: WCL100211-06CCV

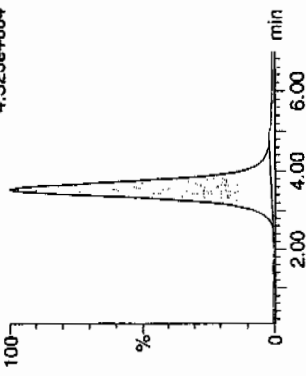
Val: 1:2,A

Pure  
 6.00  
 02-17-10

## Perchlorate

MRM of 3 channels, ES-

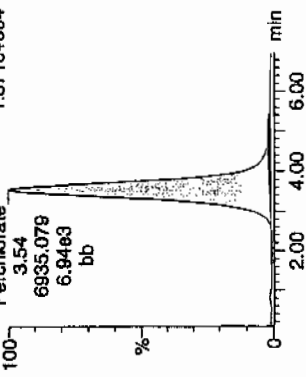
99 > 83  
 4.323e+004



## Perchlorate

MRM of 3 channels, ES-

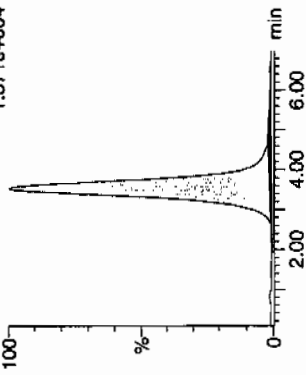
101 > 85  
 1.371e+004



## Perchlorate-101

MRM of 3 channels, ES-

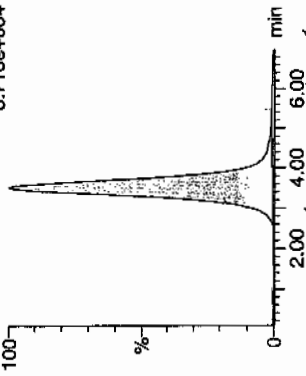
101 > 85  
 1.371e+004



## Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89  
 3.716e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-06CCV	Perchlorate	99 > 83	3.53	22417.438	22417.438	bb			0.4604	92.07	-7.93	1571.5...	3.23
WCL100211-06CCV	Perchlorate-101	101 > 85	3.54	6935.079	6935.079	bb			0.4576	91.51	-8.49	311.468	
WCL100211-06CCV	Perchlorate-O(18)	107 > 89	3.52	19667.754	19667.754	bb			0.4876	97.52	-2.48	2349.4...	

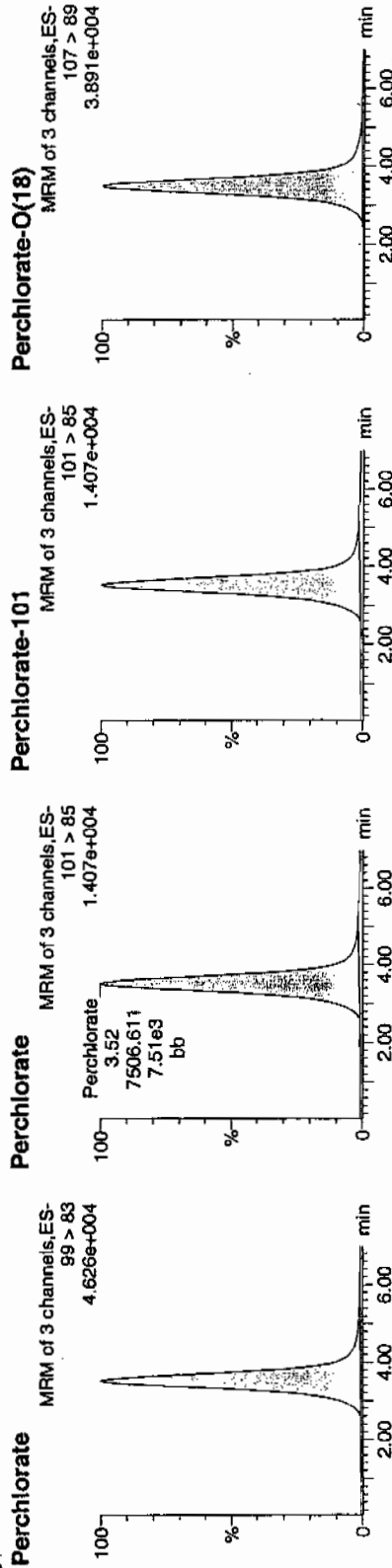
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\P perchlorate.PRO\per021610a.qid

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216071a  
Date: 17-Feb-2010  
Time: 02:06:24  
ID: WCL100211-06CCV  
Vial: 1:2,A

Run  
02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-06CCV	Perchlorate	99 > 83	3.52	24649.779	24649.779	bb			0.5062	101.24	1.24	2662.3...	3.28
WCL100211-06CCV	Perchlorate-101	101 > 85	3.52	7506.611	7506.611	bb			0.4953	99.06	-0.94	475.783	
WCL100211-06CCV	Perchlorate-O(18)	107 > 89	3.50	20576.664	20576.664	bb			0.5101	102.03	2.03	2075.3...	



Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1471

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	97.89	16-FEB-10 16:01	per0216011a
Perchlorate Isotope Ratio		3.38		16-FEB-10 16:01	per0216011a
Perchlorate-101	.05	.05	93.02	16-FEB-10 16:01	per0216011a
Perchlorate	.05	.05	93.36	16-FEB-10 18:11	per0216024a
Perchlorate Isotope Ratio		3.38		16-FEB-10 18:11	per0216024a
Perchlorate-101	.05	.04	88.83	16-FEB-10 18:11	per0216024a
Perchlorate	.05	.05	92.94	16-FEB-10 20:23	per0216037a
Perchlorate Isotope Ratio		3.09		16-FEB-10 20:23	per0216037a
Perchlorate-101	.05	.05	96.65	16-FEB-10 20:23	per0216037a
Perchlorate	.05	.05	98.66	16-FEB-10 22:34	per0216050a
Perchlorate Isotope Ratio		3.65		16-FEB-10 22:34	per0216050a

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1471

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate-101	.05	.04	86.88	16-FEB-10 22:34	per0216050a
Perchlorate	.05	.05	93.1	17-FEB-10 00:35	per0216062a
Perchlorate Isotope Ratio		3.16		17-FEB-10 00:35	per0216062a
Perchlorate-101	.05	.05	94.68	17-FEB-10 00:35	per0216062a
Perchlorate	.05	.05	93.57	17-FEB-10 02:26	per0216073a
Perchlorate Isotope Ratio		3.17		17-FEB-10 02:26	per0216073a
Perchlorate-101	.05	.05	94.79	17-FEB-10 02:26	per0216073a

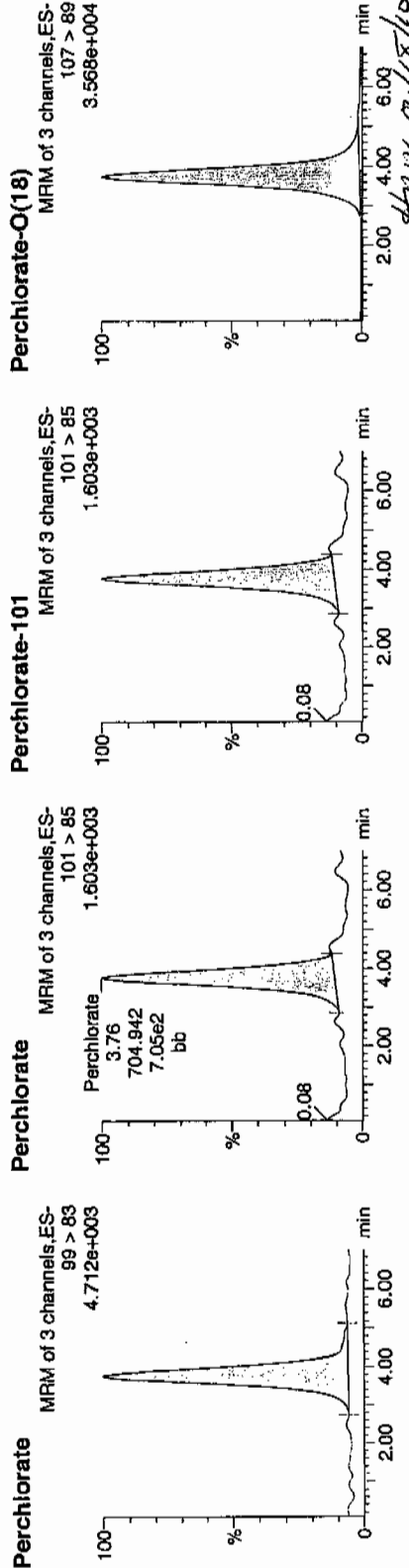
**Quantify Sample Report MassLynx 4.0 SP4**  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216011a  
Date: 16-Feb-2010  
Time: 16:01:28  
ID: WCL100211-07CRI  
Val: 1:2,B

*Per  
CWO  
02/17-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-07CRI	Perchlorate	99 > 83	3.77	2383.393	2383.393	bb			0.0489	97.89	-2.11	187.352	3.38
WCL100211-07CRI	Perchlorate-101	101 > 85	3.76	704.942 ✓	704.942	bb			0.0465	93.02	-6.98	30.019	
WCL100211-07CRI	Perchlorate-O(18)	107 > 89	3.76	19370.289	19370.289	bb			0.4802	96.04	-3.96	849.260	

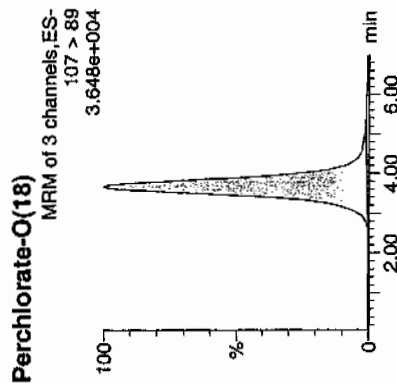
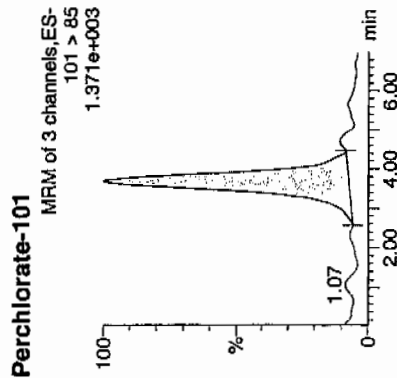
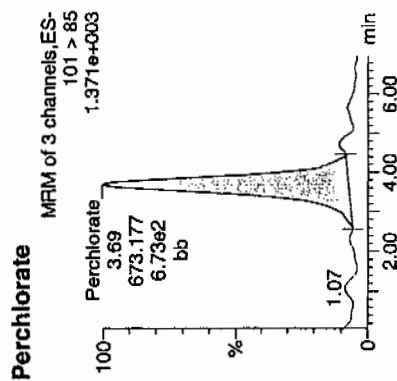
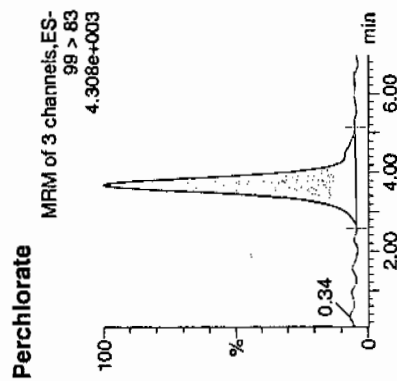
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216024a  
Date: 16-Feb-2010  
Time: 18:11:59  
ID: WCL100211-07CRI  
Vial: 1:2,B

*Pass*  
*02-17-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-07CRI	Perchlorate	99 > 83	3.68	2272.925	2272.925	bb			0.0467	93.36	-6.64	241.554	3.38
WCL100211-07CRI	Perchlorate-101	101 > 85	3.69	673.177	673.177	bb			0.0444	88.83	-11.17	256.925	
WCL100211-07CRI	Perchlorate-O(18)	107 > 89	3.67	19278.473	19278.473	bb			0.4779	95.59	-4.41	2546.5...	

# Quantity Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
 Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216037a

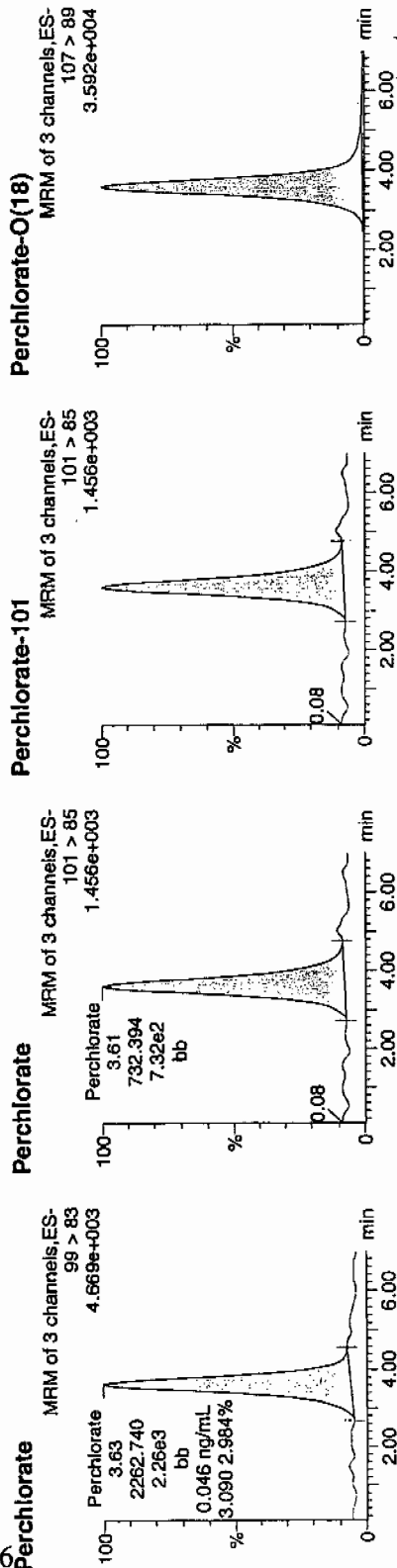
Date: 16-Feb-2010

Time: 20:23:04

ID: WCL100211-07CRI

Cal: 1:2,B

Pass  
 02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-07CRI	Perchlorate	99 > 83	3.63	2262.740	2262.740	bb			0.0465	92.94	-7.06	178.571	3.09
WCL100211-07CRI	Perchlorate-101	101 > 85	3.61	732.394	732.394	bb			0.0483	96.65	-3.35	252.373	
WCL100211-07CRI	Perchlorate-O(18)	107 > 89	3.61	19380.582	19380.582	bb			0.4805	96.10	-3.90	1524.6...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Manual

Page Name: per0216050a

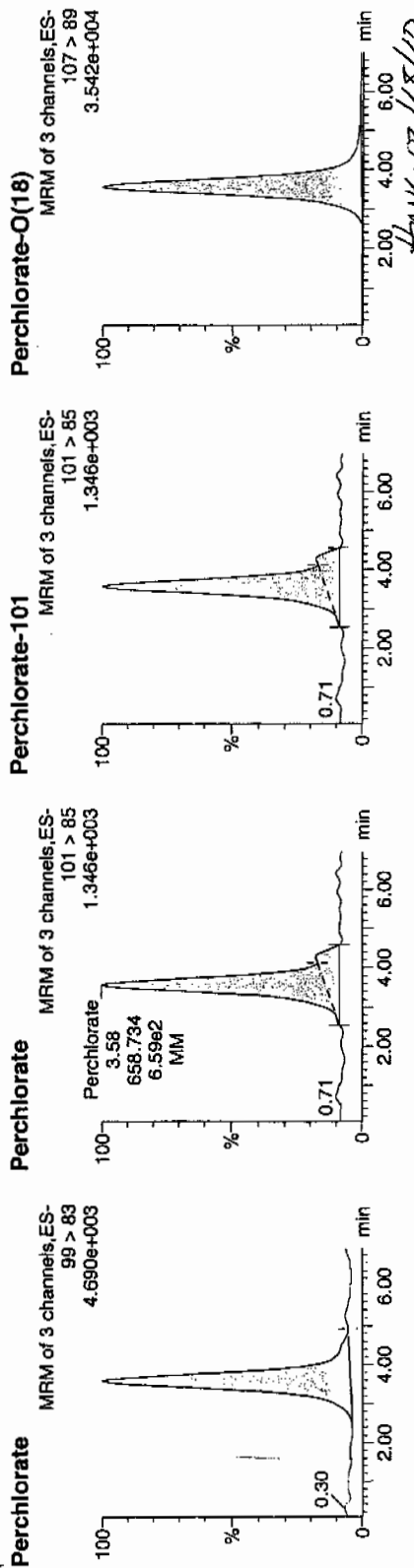
Date: 16-Feb-2010

Time: 22:34:52

ID: WCL100211-07CRI

Vial: 1:2,B

Page 135 of 926



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100211-07CRI	Perchlorate	99 > 83	3.59	2402.146	2402.146	bb	17-Feb-10	11:08:35	0.0493	98.66	-1.34	198.764	3.65
WCL100211-07CRI	Perchlorate-101	101 > 85	3.58	658.410	658.410	MM	17-Feb-10	11:09:37	0.0434	86.88	-13.12	11.199	
WCL100211-07CRI	Perchlorate-O(18)	107 > 89	3.58	18982.666	18982.666	bb			0.4706	94.12	-5.88	2154.2...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Sample Name: per0216062a

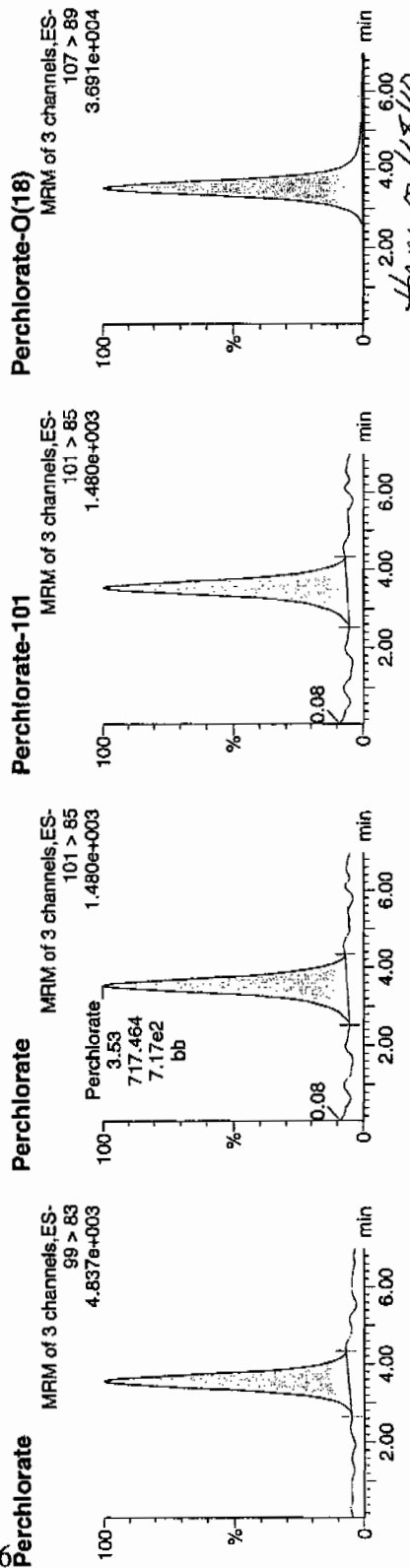
Date: 17-Feb-2010

Time: 00:35:50

ID: WCL100211-07CRI

Vial: 1:2,B

Per  
02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	S/N	Ion Ratio
WCL100211-07CRI	Perchlorate	99 > 83	3.56	2266.666	2266.666	bb			0.0465	93.10	-6.90	332.053	3.16
WCL100211-07CRI	Perchlorate-101	101 > 85	3.53	717.464	717.464	bb			0.0473	94.68	-5.32	154.139	
WCL100211-07CRI	Perchlorate-O(18)	107 > 89	3.54	19631.152	19631.152	bb			0.4867	97.34	-2.66	3049.6...	

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

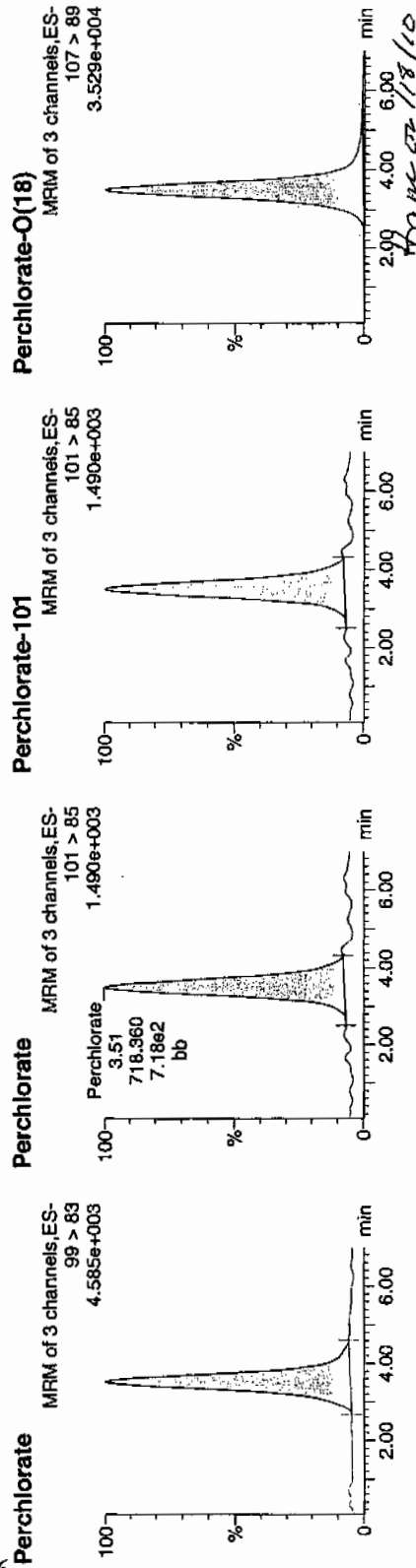
Page 73 of 109

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Page Name: per0216073a  
Date: 17-Feb-2010  
Time: 02:26:59  
ID: WCL100211-07CRI  
Vial: 1:2,B

per  
02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	SN	Ion Ratio
WCL100211-07CRI	Perchlorate	99 > 83	3.53	2278.118	2278.118	bb			0.0468	93.57	-6.43	217.447	3.17
WCL100211-07CRI	Perchlorate-101	101 > 85	3.51	718.360	718.360	bb			0.0474	94.79	-5.21	17.933	
WCL100211-07CRI	Perchlorate-O(18)	107 > 89	3.51	18979.275	18979.275	bb			0.4705	94.11	-5.89	1263.3...	



# QUALITY CONTROL

Form 1

Perchlorate Analysis Data Sheet

Client Sample No.

MB

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Date Received: 11-FEB-10

Method: EPA 6850 Modified

GEL Job No (SDG): 10-1471

Matrix: SOIL

GEL Sample ID: 1202029077

Extraction Batch ID: 947245

Date Filtered: 11-FEB-10

Extraction Type: Solid Prep

Injection Volume (uL): 20

%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	0.500	ug/kg	U	1	16-FEB-10 20:53	per0216040a
	Perchlorate Isotope Ratio						1	16-FEB-10 20:53	per0216040a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	16-FEB-10 20:53	per0216040a
	Perchlorate-O(18)			4.39	ug/kg		1	16-FEB-10 20:53	per0216040a

<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

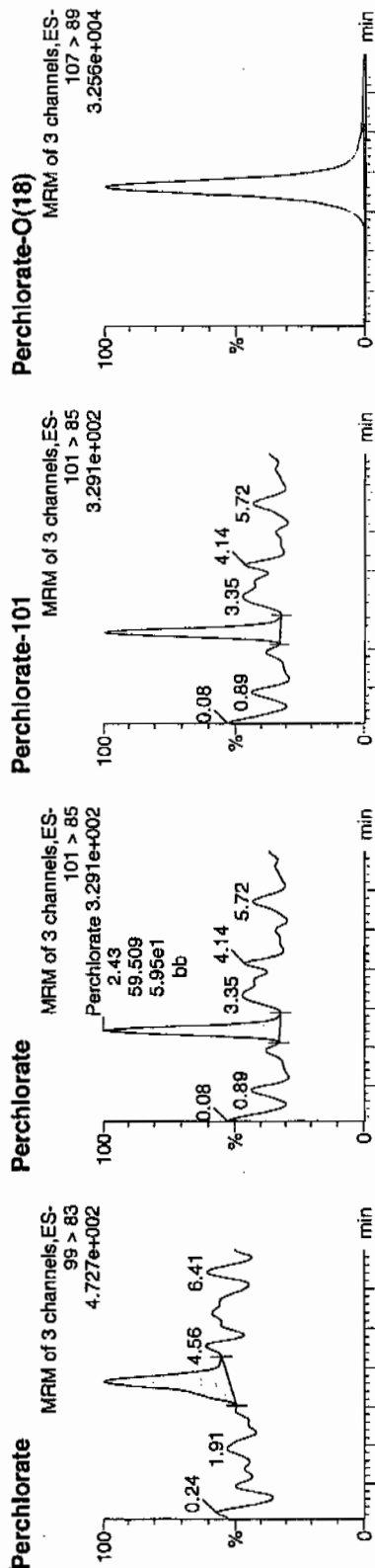
Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Page 140 of 926

Name: per0216040a  
Date: 16-Feb-2010  
Time: 20:53:21  
ID: 1202029077  
Vial: 2:1,A

1522-1947240 | 3000 | 103 | 1 | 02-17-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202029077	Perchlorate	99 > 83	3.64	96.871	96.871	bb			0.0020			16.212	1.63
1202029077	Perchlorate-101	101 > 85	2.43	59.509	59.509	bb			0.0039			30.255	
1202029077	Perchlorate-O(18)	107 > 89	3.62	17725.297	17725.297	bb			0.4394	87.89	-12.11	911.629	

6000  
200500

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 947245

Extraction Type: Solid Prep

Client Sample No.

LCS

Date Received: 11-FEB-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 1202029078

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%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	1.97	ug/kg	J	1	16-FEB-10 21:03	per0216041a
	Perchlorate Isotope Ratio			3.36			1	16-FEB-10 21:03	per0216041a
14797-73-0	Perchlorate-101	.5	2	1.88	ug/kg	J	1	16-FEB-10 21:03	per0216041a
	Perchlorate-O(18)			4.81	ug/kg		1	16-FEB-10 21:03	per0216041a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

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

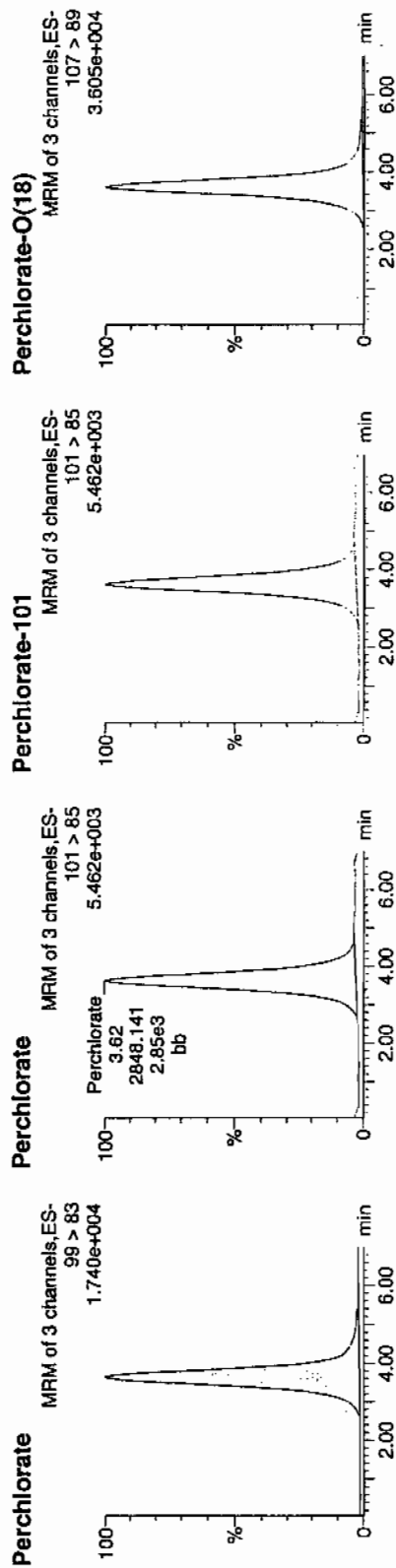
Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216041a  
Date: 16-Feb-2010  
Time: 21:03:34  
ID: 1202029078  
Vial: 2:1,B

62-12-10

947246 | 5020 | 65 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202029078	Perchlorate	99 > 83	3.64	9578.012	9578.012	bb			0.1967	98.35	-1.65	1447.4...	3.36
1202029078	Perchlorate-101	101 > 85	3.62	2848.141	2848.141	bb			0.1879	93.96	-6.04	551.365	
1202029078	Perchlorate-O(18)	107 > 89	3.62	19413.965	19413.965	bb			0.4813	96.26	-3.74	2410.8...	

9578.012  
486441 = 0.1967  
Hmw 18/10

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 947245  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-788MS  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1471  
 GEL Sample ID: 1202029079  
 Date Filtered: 11-FEB-10  
 Injection Volume (uL): 20  
 % Solids: 90.7

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	.551	2.21	3.51	ug/kg		1	16-FEB-10 21:44	per0216045a
	Perchlorate Isotope Ratio			3.2			1	16-FEB-10 21:44	per0216045a
14797-73-0	Perchlorate-101	.551	2.21	3.53	ug/kg		1	16-FEB-10 21:44	per0216045a
	Perchlorate-O(18)			5.83	ug/kg		1	16-FEB-10 21:44	per0216045a

<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

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The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216045a

Date: 16-Feb-2010

Time: 21:44:02

ID: 1202029079

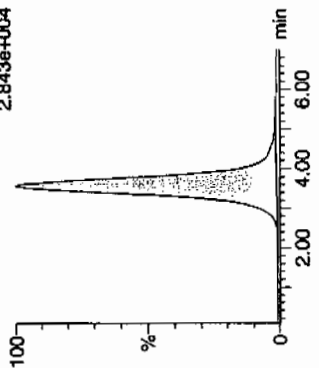
Vial: 2:1,F

603  
02-17-10

15720-1947240 | 50220 | ms | 11

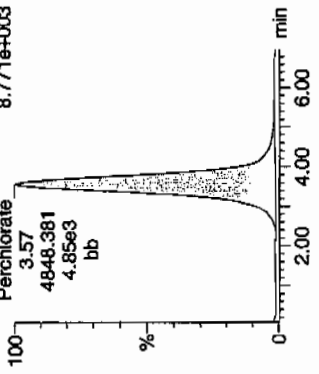
Perchlorate

MRM of 3 channels, ES-  
99 > 83  
2.843e+004



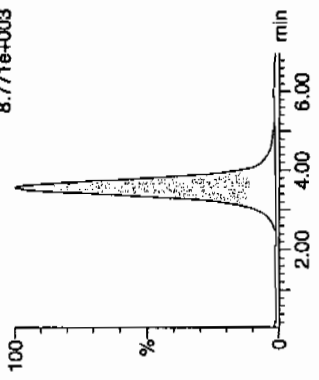
Perchlorate

MRM of 3 channels, ES-  
101 > 85  
8.771e+003



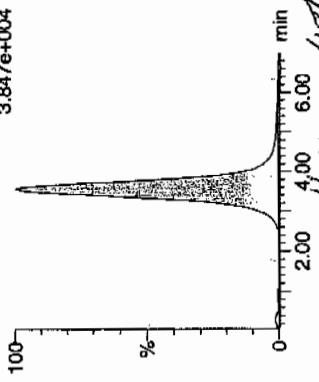
Perchlorate-101

MRM of 3 channels, ES-  
101 > 85  
8.771e+003



Perchlorate-O(18)

MRM of 3 channels, ES-  
107 > 89  
3.847e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
1202029079	Perchlorate	99 > 83	3.57	15492.290	15492.290	bb			0.3182	159.08	59.08	469.711	3.20
1202029079	Perchlorate-101	101 > 85	3.57	4848.381	4848.381	bb			0.3199	159.95	59.95	276.401	
1202029079	Perchlorate-O(18)	107 > 89	3.56	21328.137	21328.137	bb			0.5288	106.75	5.75	1743.2...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 247245

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-788MSD

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1471

GEL Sample ID: 1202029080

Date Filtered: 11-FEB-10

Injection Volume (uL): 20

%Solids: 90.7

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	3.46	ug/kg		1	16-FEB-10 21:54	per0216046a
	Perchlorate Isotope Ratio			3.37			1	16-FEB-10 21:54	per0216046a
14797-73-0	Perchlorate-101	.551	2.21	3.30	ug/kg		1	16-FEB-10 21:54	per0216046a
	Perchlorate-O(18)			5.86	ug/kg		1	16-FEB-10 21:54	per0216046a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot



# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per021610a.qld

Last Altered: Wednesday, February 17, 2010 11:09:37 AM Eastern Standard Time  
Printed: Wednesday, February 17, 2010 11:11:37 AM Eastern Standard Time

Name: per0216046a

Date: 16-Feb-2010

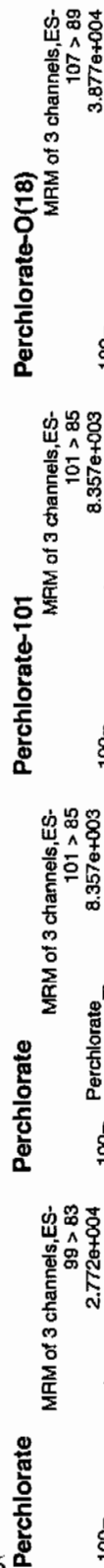
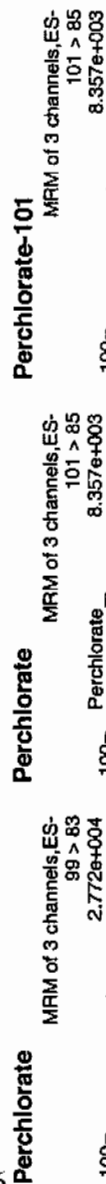
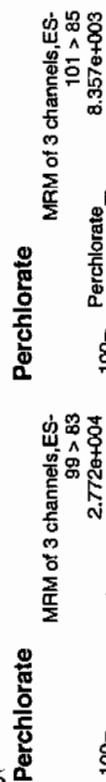
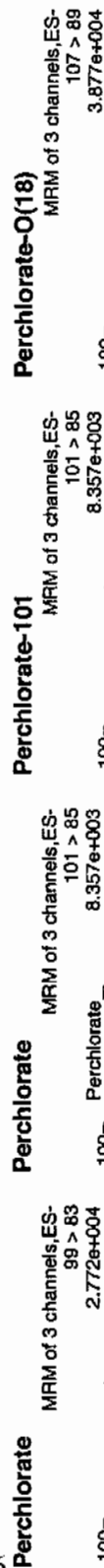
Time: 21:54:11

ID: 1202029080

Vial: 2:2,A

6000  
02-17-10

1202029080 | 947246 | 3070 | MSO | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
1202029080	Perchlorate	99 > 83	3.57	15276.593	15276.593	bb			0.3137	156.86	56.86	780.115	3.37
1202029080	Perchlorate-101	101 > 85	3.57	4536.746	4536.746	bb			0.2993	149.66	49.66	2501.6...	
1202029080	Perchlorate-O(18)	107 > 89	3.56	21427.912	21427.912	bb			0.5312	106.25	6.25	897.071	

# 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: 947245 Verified by: \_\_\_\_\_ Lab SOP: GL-OA-E-067 REV# 6  
 Analyst: Charles Wilson Instrument: MicroMass Quattro Ultima  
 Method: SW846 6850 Modified

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202029077 MB	11-FEB-2010 18:13:00	2	20	10
1202029078 LCS	11-FEB-2010 18:13:00	2	20	10
245797001	11-FEB-2010 18:13:00	2	20	10
245797001	11-FEB-2010 18:13:00	2	20	10
1202029079 MS (245797001)	11-FEB-2010 18:13:00	2	20	10
1202029080 MSD (245797001)	11-FEB-2010 18:13:00	2	20	10
245797002	11-FEB-2010 18:13:00	2	20	10
245797003	11-FEB-2010 18:13:00	2	20	10
245797004	11-FEB-2010 18:13:00	2	20	10
245797005	11-FEB-2010 18:13:00	2	20	10
245797006	11-FEB-2010 18:13:00	2	20	10
245797007	11-FEB-2010 18:13:00	2	20	10
245797008	11-FEB-2010 18:13:00	2	20	10
245797009	11-FEB-2010 18:13:00	2	20	10
245797010	11-FEB-2010 18:13:00	2	20	10
245797011	11-FEB-2010 18:13:00	2	20	10
245797012	11-FEB-2010 18:13:00	2	20	10
245797013	11-FEB-2010 18:13:00	2	20	10
245797014	11-FEB-2010 18:13:00	2	20	10
245797015	11-FEB-2010 18:13:00	2	20	10
245797016	11-FEB-2010 18:13:00	2	20	10
245797017	11-FEB-2010 18:13:00	2	20	10
245797018	11-FEB-2010 18:14:00	2	20	10
245797019	11-FEB-2010 18:14:00	2	20	10
1202029081 ICS	11-FEB-2010 18:14:00	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
ICS	1202029081	10 ug/L ICV/CCV Second Source	UCL100126-02.2	.4	mL	Desalting cartridges used: B101/0211609 (IC-Bal0) & B10000311609 (IC-H10)
LCS	1202029078	10 ug/L ICV/CCV Second Source	UCL100126-02.2	.4	mL	
MS	1202029079	10 ug/L ICV/CCV Second Source	UCL100126-02.2	.4	mL	
MSD	1202029080	10 ug/L ICV/CCV Second Source	UCL100126-02.2	.4	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCM SMS#2

Date: 02/16/10  
 Extr. Injection Volume: 20uL  
 Sequence Number: per021610a  
 Initial Calibration Date: 02/16/10

Method: EPA 6850-Modified  
 Int. Std.: UCL100122-01  
 Mobile Phase Lot#: 1269535, 1261217  
 Standard-Samp Reagent Lot#: 1261217

Reviewed BY: *ghm*  
 Date: 02/18/10  
 SOP: GL-OA-E-067 Rev.6  
 Alt Check Std. ID: WCL100211-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
per0216001a	IPB001	CWW	2/16/2010 14:21			1		USE	B
per0216002a	IPB001	CWW	2/16/2010 14:31			1		USE	B
per0216003a	WCLICAL-01	CWW	2/16/2010 14:41			1		USE	I
per0216004a	WCLICAL-02	CWW	2/16/2010 14:51			1		USE	I
per0216005a	WCLICAL-03	CWW	2/16/2010 15:01			1		USE	I
per0216006a	WCLICAL-04	CWW	2/16/2010 15:11			1		USE	I
per0216007a	WCLICAL-05	CWW	2/16/2010 15:21			1		USE	I
per0216008a	IPB002	CWW	2/16/2010 15:31			1		USE	B
per0216009a	WCLICV	CWW	2/16/2010 15:41			1		USE	C
per0216010a	IPB003	CWW	2/16/2010 15:51			1		USE	B
per0216011a	WCLCRI	CWW	2/16/2010 16:01			1		USE	C
per0216012a	1202029072	CWW	2/16/2010 16:11	947243	10-1460	1	LANL	USE	S
per0216013a	1202029073	CWW	2/16/2010 16:21	947243	10-1460	1	LANL	USE	S
per0216014a	1202029076	CWW	2/16/2010 16:31	947243	10-1460	1	LANL	USE	S
per0216015a	245783001	CWW	2/16/2010 16:41	947243	10-1460	1	LANL	USE	S
per0216016a	1202029074	CWW	2/16/2010 16:51	947243	10-1460	1	LANL	USE	S
per0216017a	1202029075	CWW	2/16/2010 17:01	947243	10-1460	1	LANL	USE	S
per0216018a	245783002	CWW	2/16/2010 17:11	947243	10-1460	1	LANL	USE	S
per0216019a	245783003	CWW	2/16/2010 17:21	947243	10-1460	1	LANL	USE	S
per0216020a	245783004	CWW	2/16/2010 17:31	947243	10-1460	1	LANL	USE	S
per0216021a	245783005	CWW	2/16/2010 17:41	947243	10-1460	1	LANL	USE	S
per0216022a	WCLCCV	CWW	2/16/2010 17:51			1		USE	C
per0216023a	IPB004	CWW	2/16/2010 18:01			1		USE	B
per0216024a	WCLCRI	CWW	2/16/2010 18:11			1		USE	C
per0216025a	245783006	CWW	2/16/2010 18:22	947243	10-1460	1	LANL	USE	S
per0216026a	245783007	CWW	2/16/2010 18:32	947243	10-1460	1	LANL	USE	S
per0216027a	245783008	CWW	2/16/2010 18:42	947243	10-1460	1	LANL	USE	S
per0216028a	245783009	CWW	2/16/2010 18:52	947243	10-1460	1	LANL	USE	S
per0216029a	245783010	CWW	2/16/2010 19:02	947243	10-1460	1	LANL	USE	S

per0216030a	245783011	CWW	2/16/2010 19:12	947243	10-1460	1	LANL	USE	S
per0216031a	245783012	CWW	2/16/2010 19:22	947243	10-1460	1	LANL	USE	S
per0216032a	245783013	CWW	2/16/2010 19:32	947243	10-1460	1	LANL	USE	S
per0216033a	245783014	CWW	2/16/2010 19:42	947243	10-1460	1	LANL	USE	S
per0216034a	245783015	CWW	2/16/2010 19:52	947243	10-1460	1	LANL	USE	S
per0216035a	WCLCCV	CWW	2/16/2010 20:02			1		USE	C
per0216036a	IPB005	CWW	2/16/2010 20:12			1		USE	B
per0216037a	WCLCRI	CWW	2/16/2010 20:23			1		USE	C
per0216038a	245783016	CWW	2/16/2010 20:33	947243	10-1460	1	LANL	USE	S
per0216039a	IPB006	CWW	2/16/2010 20:43			1		USE	B
per0216040a	1202029077	CWW	2/16/2010 20:53	947246	VARIOUS	1	LANL	USE	S
per0216041a	1202029078	CWW	2/16/2010 21:03	947246	VARIOUS	1	LANL	USE	S
per0216042a	1202029081	CWW	2/16/2010 21:13	947246	VARIOUS	1	LANL	USE	S
per0216043a	245786001	CWW	2/16/2010 21:23	947246	10-1462	1	LANL	USE	S
per0216044a	245797001	CWW	2/16/2010 21:34	947246	10-1471	1	LANL	USE	S
per0216045a	1202029079	CWW	2/16/2010 21:44	947246	10-1471	1	LANL	USE	S
per0216046a	1202029080	CWW	2/16/2010 21:54	947246	10-1471	1	LANL	USE	S
per0216047a	245797002	CWW	2/16/2010 22:04	947246	10-1471	1	LANL	USE	S
per0216048a	WCLCCV	CWW	2/16/2010 22:14			1		USE	C
per0216049a	IPB007	CWW	2/16/2010 22:24			1		USE	B
per0216050a	WCLCRI	CWW	2/16/2010 22:34			1		USE	C
per0216051a	245797003	CWW	2/16/2010 22:44	947246	10-1471	1	LANL	USE	S
per0216052a	245797004	CWW	2/16/2010 22:55	947246	10-1471	1	LANL	USE	S
per0216053a	245797005	CWW	2/16/2010 23:05	947246	10-1471	1	LANL	USE	S
per0216054a	245797006	CWW	2/16/2010 23:15	947246	10-1471	1	LANL	USE	S
per0216055a	245797007	CWW	2/16/2010 23:25	947246	10-1471	1	LANL	USE	S
per0216056a	245797008	CWW	2/16/2010 23:35	947246	10-1471	1	LANL	USE	S
per0216057a	245797009	CWW	2/16/2010 23:45	947246	10-1471	1	LANL	USE	S
per0216058a	245797010	CWW	2/16/2010 23:55	947246	10-1471	1	LANL	USE	S
per0216059a	245797011	CWW	2/17/2010 0:05	947246	10-1471	1	LANL	USE	S
per0216060a	WCLCCV	CWW	2/17/2010 0:15			1		USE	C
per0216061a	IPB008	CWW	2/17/2010 0:25			1		USE	B
per0216062a	WCLCRI	CWW	2/17/2010 0:35			1		USE	C
per0216063a	245797012	CWW	2/17/2010 0:45	947246	10-1471	1	LANL	USE	S
per0216064a	245797013	CWW	2/17/2010 0:56	947246	10-1471	1	LANL	USE	S
per0216065a	245797014	CWW	2/17/2010 1:06	947246	10-1471	1	LANL	USE	S
per0216066a	245797015	CWW	2/17/2010 1:16	947246	10-1471	1	LANL	USE	S

per0216067a	245797016	CWW	2/17/2010 1:26	947246	10-1471	1	LANL	USE	S
per0216068a	245797017	CWW	2/17/2010 1:36	947246	10-1471	1	LANL	USE	S
per0216069a	245797018	CWW	2/17/2010 1:46	947246	10-1471	1	LANL	USE	S
per0216070a	245797019	CWW	2/17/2010 1:56	947246	10-1471	1	LANL	USE	S
per0216071a	WCLCCV	CWW	2/17/2010 2:06			1		USE	C
per0216072a	IPB009	CWW	2/17/2010 2:16			1		USE	B
per0216073a	WCLCRI	CWW	2/17/2010 2:26			1		USE	C
per0216074a	1202035609	CWW	2/17/2010 2:37	950042	VARIOUS	1	LANL	USE	S
per0216075a	1202035610	CWW	2/17/2010 2:47	950042	VARIOUS	1	LANL	USE	S
per0216076a	1202035613	CWW	2/17/2010 2:57	950042	VARIOUS	1	LANL	USE	S
per0216077a	246264001	CWW	2/17/2010 3:07	950042	10-1573-1	1	LANL	USE	S
per0216078a	246269001	CWW	2/17/2010 3:17	950042	10-1548-1	1	LANL	USE	S
per0216079a	246278001	CWW	2/17/2010 3:27	950042	10-1551	1	LANL	USE	S
per0216080a	246282001	CWW	2/17/2010 3:37	950042	10-1576	1	LANL	USE	S
per0216081a	WCLCCV	CWW	2/17/2010 3:47			1		USE	C
per0216082a	IPB010	CWW	2/17/2010 3:58			1		USE	B
per0216083a	WCLCRI	CWW	2/17/2010 4:08			1		USE	C
per0216084a	246292001	CWW	2/17/2010 4:18	950042	10-1554-1	1	LANL	USE	S
per0216085a	1202035611	CWW	2/17/2010 4:28	950042	10-1554-1	1	LANL	USE	S
per0216086a	1202035612	CWW	2/17/2010 4:38	950042	10-1554-1	1	LANL	USE	S
per0216087a	246292002	CWW	2/17/2010 4:49	950042	10-1554-1	1	LANL	USE	S
per0216088a	246293002	CWW	2/17/2010 4:59	950042	10-1591	1	LANL	USE	S
per0216089a	246293004	CWW	2/17/2010 5:09	950042	10-1591	1	LANL	USE	S
per0216090a	246299001	CWW	2/17/2010 5:19	950042	10-1557	1	LANL	USE	S
per0216091a	246306001	CWW	2/17/2010 5:29	950042	10-1559-1	1	LANL	USE	S
per0216092a	WCLCCV	CWW	2/17/2010 5:39			1		USE	C
per0216093a	IPB011	CWW	2/17/2010 5:49			1		USE	B
per0216094a	WCLCRI	CWW	2/17/2010 5:59			1		USE	C
per0216095a	246313001	CWW	2/17/2010 6:09	950042	10-1561-1	1	LANL	USE	S
per0216096a	246323001	CWW	2/17/2010 6:20	950042	10-1565-1	1	LANL	USE	S
per0216097a	246334001	CWW	2/17/2010 6:30	950042	10-1568	1	LANL	USE	S
per0216098a	246436001	CWW	2/17/2010 6:40	950042	10-1621	1	LANL	USE	S
per0216099a	246448001	CWW	2/17/2010 6:50	950042	10-1627-1	1	LANL	USE	S
per0216100a	246451001	CWW	2/17/2010 7:00	950042	10-1629	1	LANL	USE	S
per0216101a	246455001	CWW	2/17/2010 7:10	950042	10-1631	1	LANL	USE	S
per0216102a	246459001	CWW	2/17/2010 7:20	950042	10-1633	1	LANL	USE	S
per0216103a	WCLCCV	CWW	2/17/2010 7:30			1		USE	C

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USE USE

GEL GEL GEL GEL

— — — — —

SCREEN  
SCREEN  
SCREEN  
SCREEN

2/17/2010 7:40  
2/17/2010 7:50  
2/17/2010 8:00  
2/17/2010 8:11  
2/17/2010 8:21  
2/17/2010 8:31

CWW  
CWW  
CWW  
CWW  
CWW  
CWW

IPB012  
WCLCRI  
1267890 Supp  
1261217 H2O  
UCL100210-01  
UCL100210-02.1

per0216104a  
per0216105a  
per0216106a  
per0216107a  
per0216108a  
per0216109a

## 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 10-1471**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245797001	RE15-10-7888
245797002	RE15-10-7890
245797003	RE15-10-7886
245797004	RE15-10-7889
245797005	RE15-10-7885
245797006	RE15-10-7882
245797007	RE15-10-7887
245797008	RE15-10-7881
245797009	RE15-10-7951
245797010	RE15-10-7950
245797011	RE15-10-7947
245797012	RE15-10-7944
245797013	RE15-10-7948
245797014	RE15-10-7941
245797015	RE15-10-7949
245797016	RE15-10-7946
245797017	RE15-10-7942
245797018	RE15-10-7945
245797019	RE15-10-7943
1202030953	Method Blank (MB) ICP

1202030958	Laboratory Control Sample (LCS)
1202030955	245797001(RE15-10-7888L) Serial Dilution (SD)
1202030954	245797001(RE15-10-7888D) Sample Duplicate (DUP)
1202030956	245797001(RE15-10-7888S) Matrix Spike (MS)
1202030957	245797001(RE15-10-7888SD) Matrix Spike Duplicate (MSD)
1202030959	Method Blank (MB) <b>ICP-MS</b>
1202030964	Laboratory Control Sample (LCS)
1202030961	245797001(RE15-10-7888L) Serial Dilution (SD)
1202030960	245797001(RE15-10-7888D) Sample Duplicate (DUP)
1202030962	245797001(RE15-10-7888S) Matrix Spike (MS)
1202030963	245797001(RE15-10-7888SD) Matrix Spike Duplicate (MSD)
1202030035	Method Blank (MB) <b>CVAA</b>
1202030036	Laboratory Control Sample (LCS)
1202030039	245797001(RE15-10-7888L) Serial Dilution (SD)
1202030037	245797001(RE15-10-7888D) Sample Duplicate (DUP)
1202030038	245797001(RE15-10-7888S) Matrix Spike (MS)
1202030040	245797001(RE15-10-7888SD) Matrix Spike Duplicate (MSD)

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

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

<b>Analytical Batch:</b>	948065, 948067 and 947668
<b>Prep Batch :</b>	948064, 948066 and 947667
<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 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-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

### **Calibration Information**

#### **Instrument Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

#### **CRDL Requirements**

All CRDL standard(s) met the referenced advisory control limits with the exceptions of mercury and antimony, which recovered outside of the advisory limits of 70-130%.

#### **ICSA/ICSAB Statement**

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

#### **Continuing Calibration Blank (CCB) Requirements**

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

**Continuing Calibration Verification (CCV) Requirements**

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

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

The MBs analyzed with this SDG met the acceptance criteria.

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

**Quality Control (QC) Sample Statement**

The following sample was selected as the quality control (QC) sample for this SDG: 245797001.

**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 barium, magnesium, potassium, nickel and selenium, as indicated by the "N" qualifiers.

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

The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of magnesium, manganese, potassium, nickel 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 sample 245797018 required a dilution for uranium in order to bring over range concentrations within 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: 792395 and 792646. 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: Kirsten Larson Date: 2/25/10



# **Sample Data Summary**

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797001

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7888

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 90.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7810000	ug/Kg		7180	21100	21100	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-36-0	Antimony	878	ug/Kg	J	349	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-38-2	Arsenic	2.52	mg/kg		0.218	1.09	1.09	2	MS	SKJ	02/12/10 23:33	100212-2	948067
7440-39-3	Barium	118000	ug/Kg	N	106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-41-7	Beryllium	0.670	mg/kg		0.0218	0.109	0.109	2	MS	SKJ	02/17/10 15:31	100217-6	948067
7440-43-9	Cadmium	528	ug/Kg	U	106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-70-2	Calcium	4570000	ug/Kg		8450	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-47-3	Chromium	7420	ug/Kg		158	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-48-4	Cobalt	8400	ug/Kg		158	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-50-8	Copper	7270	ug/Kg		317	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-89-6	Iron	12500000	ug/Kg		8450	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-92-1	Lead	9040	ug/Kg		264	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-95-4	Magnesium	1710000	ug/Kg	N	8980	31700	31700	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-96-5	Manganese	207000	ug/Kg	N	211	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065
7439-97-6	Mercury	36.2	ug/kg		3.97	11.7	11.7	1	AV	JXL1	02/16/10 12:24	021610S2-7	947668
7440-02-0	Nickel	7.47	mg/kg	N	0.109	0.436	0.436	2	MS	SKJ	02/17/10 15:31	100217-6	948067
7440-09-7	Potassium	1100000	ug/Kg	N	6760	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7782-49-2	Selenium	0.670	mg/kg	JN	0.545	1.09	1.09	2	MS	SKJ	02/12/10 23:33	100212-2	948067
7440-22-4	Silver	528	ug/Kg	U	106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-23-5	Sodium	392000	ug/Kg		7390	26400	26400	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-28-0	Thallium	0.163	mg/kg	J	0.0654	0.218	0.218	2	MS	SKJ	02/12/10 23:33	100212-2	948067
7440-61-1	Uranium	0.534	mg/kg		0.0144	0.0436	0.0436	2	MS	SKJ	02/14/10 02:24	100213-3	948067
7440-62-2	Vanadium	15500	ug/Kg		106	528	528	1	P	HSC	02/17/10 11:48	021710-1	948065
7440-66-6	Zinc	35000	ug/Kg		349	1060	1060	1	P	HSC	02/17/10 11:48	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.567	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.522	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.506	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797002

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7890

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7060000	ug/Kg		6970	20500	20500	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-36-0	Antimony	1840	ug/Kg		338	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-38-2	Arsenic	1.66	mg/kg		0.206	1.03	1.03	2	MS	SKJ	02/13/10 00:16	100212-2	948067
7440-39-3	Barium	80100	ug/Kg	N	102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-41-7	Beryllium	1.29	mg/kg		0.0206	0.103	0.103	2	MS	SKJ	02/17/10 14:42	100217-6	948067
7440-43-9	Cadmium	512	ug/Kg	U	102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-70-2	Calcium	1680000	ug/Kg		8200	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-47-3	Chromium	14800	ug/Kg		154	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-48-4	Cobalt	6970	ug/Kg		154	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-50-8	Copper	54600	ug/Kg		307	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-89-6	Iron	13000000	ug/Kg		8200	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-92-1	Lead	24500	ug/Kg		256	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-95-4	Magnesium	1260000	ug/Kg	N	8710	30700	30700	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-96-5	Manganese	217000	ug/Kg	N	205	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065
7439-97-6	Mercury	37.5	ug/kg		4.28	12.6	12.6	1	AV	JXL1	02/16/10 12:34	021610S2-7	947668
7440-02-0	Nickel	6.99	mg/kg	N	0.103	0.413	0.413	2	MS	SKJ	02/17/10 14:42	100217-6	948067
7440-09-7	Potassium	794000	ug/Kg	N	6560	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7782-49-2	Selenium	0.573	mg/kg	JN	0.516	1.03	1.03	2	MS	SKJ	02/13/10 00:16	100212-2	948067
7440-22-4	Silver	512	ug/Kg	U	102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-23-5	Sodium	176000	ug/Kg		7170	25600	25600	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-28-0	Thallium	0.206	mg/kg	U	0.0619	0.206	0.206	2	MS	SKJ	02/13/10 00:16	100212-2	948067
7440-61-1	Uranium	17.1	mg/kg		0.0136	0.0413	0.0413	2	MS	SKJ	02/14/10 03:08	100213-3	948067
7440-62-2	Vanadium	12100	ug/Kg		102	512	512	1	P	HSC	02/17/10 13:59	021710-1	948065
7440-66-6	Zinc	51900	ug/Kg		338	1020	1020	1	P	HSC	02/17/10 13:59	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.528	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.541	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.537	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797003

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7886

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 93.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1960000	ug/Kg		7250	21300	21300	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-36-0	Antimony	694	ug/Kg	J	352	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-38-2	Arsenic	0.774	mg/kg	J	0.205	1.03	1.03	2	MS	SKJ	02/13/10 00:23	100212-2	948067
7440-39-3	Barium	25200	ug/Kg	N	107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-41-7	Beryllium	0.380	mg/kg		0.0205	0.103	0.103	2	MS	SKJ	02/17/10 14:44	100217-6	948067
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-70-2	Calcium	364000	ug/Kg		8520	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-47-3	Chromium	10100	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-48-4	Cobalt	14800	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-50-8	Copper	5920	ug/Kg		320	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-89-6	Iron	9470000	ug/Kg		8520	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-92-1	Lead	5130	ug/Kg		266	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-95-4	Magnesium	219000	ug/Kg	N	9060	32000	32000	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-96-5	Manganese	262000	ug/Kg	N	213	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065
7439-97-6	Mercury	4.23	ug/kg	J	3.98	11.7	11.7	1	AV	JXL1	02/16/10 12:40	021610S2-7	947668
7440-02-0	Nickel	3.98	mg/kg	N	0.103	0.411	0.411	2	MS	SKJ	02/17/10 14:44	100217-6	948067
7440-09-7	Potassium	394000	ug/Kg	N	6820	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7782-49-2	Selenium	1.03	mg/kg	UN	0.513	1.03	1.03	2	MS	SKJ	02/13/10 00:23	100212-2	948067
7440-22-4	Silver	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-23-5	Sodium	199000	ug/Kg		7460	26600	26600	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-28-0	Thallium	0.205	mg/kg	U	0.0616	0.205	0.205	2	MS	SKJ	02/13/10 00:23	100212-2	948067
7440-61-1	Uranium	1.4	mg/kg		0.0136	0.0411	0.0411	2	MS	SKJ	02/14/10 03:14	100213-3	948067
7440-62-2	Vanadium	5390	ug/Kg		107	533	533	1	P	HSC	02/17/10 14:03	021710-1	948065
7440-66-6	Zinc	37100	ug/Kg		352	1070	1070	1	P	HSC	02/17/10 14:03	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.549	g	30	ml.	02/15/10	TXB3
948065	948064	SW846 3050B	0.502	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.521	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797004

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7889

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 63

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4760000	ug/Kg		10400	30700	30700	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-36-0	Antimony	5160	ug/Kg		507	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-38-2	Arsenic	1.51	mg/kg	J	0.318	1.59	1.59	2	MS	SKJ	02/13/10 00:29	100212-2	948067
7440-39-3	Barium	58200	ug/Kg	N	154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-41-7	Beryllium	4.94	mg/kg		0.0318	0.159	0.159	2	MS	SKJ	02/17/10 14:46	100217-6	948067
7440-43-9	Cadmium	768	ug/Kg	U	154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-70-2	Calcium	1180000	ug/Kg		12300	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-47-3	Chromium	8140	ug/Kg		230	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-48-4	Cobalt	6400	ug/Kg		230	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-50-8	Copper	813000	ug/Kg		461	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-89-6	Iron	11500000	ug/Kg		12300	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-92-1	Lead	128000	ug/Kg		384	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-95-4	Magnesium	885000	ug/Kg	N	13100	46100	46100	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-96-5	Manganese	226000	ug/Kg	N	307	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065
7439-97-6	Mercury	17.6	ug/kg	U	5.98	17.6	17.6	1	AV	JXL1	02/16/10 12:42	021610S2-7	947668
7440-02-0	Nickel	5.46	mg/kg	N	0.159	0.635	0.635	2	MS	SKJ	02/17/10 14:46	100217-6	948067
7440-09-7	Potassium	812000	ug/Kg	N	9830	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7782-49-2	Selenium	1.59	mg/kg	UN	0.794	1.59	1.59	2	MS	SKJ	02/13/10 00:29	100212-2	948067
7440-22-4	Silver	768	ug/Kg	U	154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-23-5	Sodium	77000	ug/Kg		10700	38400	38400	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-28-0	Thallium	0.318	mg/kg	U	0.0953	0.318	0.318	2	MS	SKJ	02/13/10 00:29	100212-2	948067
7440-61-1	Uranium	104	mg/kg		0.021	0.0635	0.0635	2	MS	SKJ	02/14/10 03:20	100213-3	948067
7440-62-2	Vanadium	16100	ug/Kg		154	768	768	1	P	HSC	02/17/10 14:06	021710-1	948065
7440-66-6	Zinc	57500	ug/Kg		507	1540	1540	1	P	HSC	02/17/10 14:06	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.543	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.518	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.501	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797005

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7885

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 67

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4690000	ug/Kg		9190	27000	27000	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-36-0	Antimony	1760	ug/Kg		446	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-38-2	Arsenic	2.03	mg/kg		0.286	1.43	1.43	2	MS	SKJ	02/13/10 00:35	100212-2	948067
7440-39-3	Barium	61900	ug/Kg	N	135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-41-7	Beryllium	1.37	mg/kg		0.0286	0.143	0.143	2	MS	SKJ	02/17/10 14:48	100217-6	948067
7440-43-9	Cadmium	7980	ug/Kg		135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-70-2	Calcium	1370000	ug/Kg		10800	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-47-3	Chromium	6510	ug/Kg		203	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-48-4	Cobalt	10100	ug/Kg		203	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-50-8	Copper	118000	ug/Kg		405	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-89-6	Iron	10700000	ug/Kg		10800	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-92-1	Lead	43800	ug/Kg		338	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-95-4	Magnesium	830000	ug/Kg	N	11500	40500	40500	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-96-5	Manganese	292000	ug/Kg	N	270	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065
7439-97-6	Mercury	12.3	ug/kg	J	5.57	16.4	16.4	1	AV	JXL1	02/16/10 12:44	021610S2-7	947668
7440-02-0	Nickel	5.31	mg/kg	N	0.143	0.572	0.572	2	MS	SKJ	02/17/10 14:48	100217-6	948067
7440-09-7	Potassium	824000	ug/Kg	N	8650	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7782-49-2	Selenium	1.43	mg/kg	UN	0.716	1.43	1.43	2	MS	SKJ	02/13/10 00:35	100212-2	948067
7440-22-4	Silver	675	ug/Kg	U	135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-23-5	Sodium	106000	ug/Kg		9460	33800	33800	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-28-0	Thallium	0.286	mg/kg	U	0.0859	0.286	0.286	2	MS	SKJ	02/13/10 00:35	100212-2	948067
7440-61-1	Uranium	39.8	mg/kg		0.0189	0.0572	0.0572	2	MS	SKJ	02/14/10 03:26	100213-3	948067
7440-62-2	Vanadium	16300	ug/Kg		135	675	675	1	P	HSC	02/17/10 14:10	021710-1	948065
7440-66-6	Zinc	72400	ug/Kg		446	1350	1350	1	P	HSC	02/17/10 14:10	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.547	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.553	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.522	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797006

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7882

LEVEL: Low

DATE RECEIVED 29-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	2020000	ug/Kg		7620	22400	22400	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-36-0	Antimony	968	ug/Kg	J	370	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-38-2	Arsenic	1.07	mg/kg	J	0.221	1.11	1.11	2	MS	SKJ	02/13/10 00:41	100212-2	948067
7440-39-3	Barium	21000	ug/Kg	N	112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-41-7	Beryllium	0.248	mg/kg		0.0221	0.111	0.111	2	MS	SKJ	02/17/10 14:54	100217-6	948067
7440-43-9	Cadmium	560	ug/Kg	U	112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-70-2	Calcium	529000	ug/Kg		8960	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-47-3	Chromium	25700	ug/Kg		168	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-48-4	Cobalt	6650	ug/Kg		168	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-50-8	Copper	4870	ug/Kg		336	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-89-6	Iron	8730000	ug/Kg		8960	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-92-1	Lead	3420	ug/Kg		280	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-95-4	Magnesium	373000	ug/Kg	N	9520	33600	33600	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-96-5	Manganese	192000	ug/Kg	N	224	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065
7439-97-6	Mercury	17.1	ug/kg		4.12	12.1	12.1	1	AV	JXL1	02/16/10 12:46	021610S2-7	947668
7440-02-0	Nickel	3.85	mg/kg	N	0.111	0.443	0.443	2	MS	SKJ	02/17/10 14:54	100217-6	948067
7440-09-7	Potassium	365000	ug/Kg	N	7170	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7782-49-2	Selenium	1.11	mg/kg	UN	0.554	1.11	1.11	2	MS	SKJ	02/13/10 00:41	100212-2	948067
7440-22-4	Silver	560	ug/Kg	U	112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-23-5	Sodium	156000	ug/Kg		7840	28000	28000	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-28-0	Thallium	0.221	mg/kg	U	0.0664	0.221	0.221	2	MS	SKJ	02/13/10 00:41	100212-2	948067
7440-61-1	Uranium	0.767	mg/kg		0.0146	0.0443	0.0443	2	MS	SKJ	02/14/10 03:32	100213-3	948067
7440-62-2	Vanadium	7350	ug/Kg		112	560	560	1	P	HSC	02/17/10 14:13	021710-1	948065
7440-66-6	Zinc	33200	ug/Kg		370	1120	1120	1	P	HSC	02/17/10 14:13	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.566	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.51	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.516	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797007

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7887

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 67

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	6770000	ug/Kg		9860	29000	29000	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-36-0	Antimony	1090	ug/Kg	J	478	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-38-2	Arsenic	2.13	mg/kg		0.271	1.36	1.36	2	MS	SKJ	02/13/10 00:47	100212-2	948067
7440-39-3	Barium	61200	ug/Kg	N	145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-41-7	Beryllium	0.753	mg/kg		0.0271	0.136	0.136	2	MS	SKJ	02/17/10 14:56	100217-6	948067
7440-43-9	Cadmium	725	ug/Kg	U	145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-70-2	Calcium	1420000	ug/Kg		11600	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-47-3	Chromium	15000	ug/Kg		217	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-48-4	Cobalt	8080	ug/Kg		217	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-50-8	Copper	11900	ug/Kg		435	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-89-6	Iron	13200000	ug/Kg		11600	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-92-1	Lead	17600	ug/Kg		362	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-95-4	Magnesium	1420000	ug/Kg	N	12300	43500	43500	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-96-5	Manganese	230000	ug/Kg	N	290	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065
7439-97-6	Mercury	14.2	ug/kg	J	5.69	16.7	16.7	1	AV	JXL1	02/16/10 12:48	021610S2-7	947668
7440-02-0	Nickel	6.73	mg/kg	N	0.136	0.542	0.542	2	MS	SKJ	02/17/10 14:56	100217-6	948067
7440-09-7	Potassium	1220000	ug/Kg	N	9280	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7782-49-2	Selenium	1.36	mg/kg	UN	0.678	1.36	1.36	2	MS	SKJ	02/13/10 00:47	100212-2	948067
7440-22-4	Silver	725	ug/Kg	U	145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-23-5	Sodium	88400	ug/Kg		10100	36200	36200	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-28-0	Thallium	0.271	mg/kg	U	0.0813	0.271	0.271	2	MS	SKJ	02/13/10 00:47	100212-2	948067
7440-61-1	Uranium	2.54	mg/kg		0.0179	0.0542	0.0542	2	MS	SKJ	02/14/10 03:51	100213-3	948067
7440-62-2	Vanadium	25100	ug/Kg		145	725	725	1	P	HSC	02/17/10 14:17	021710-1	948065
7440-66-6	Zinc	31100	ug/Kg		478	1450	1450	1	P	HSC	02/17/10 14:17	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.535	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.515	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.551	g	50	mL	02/08/10	FGA



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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797008

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7881

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 63

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3450000	ug/Kg		9940	29200	29200	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-36-0	Antimony	1250	ug/Kg	J	482	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-38-2	Arsenic	1.49	mg/kg	J	0.305	1.53	1.53	2	MS	SKJ	02/13/10 01:06	100212-2	948067
7440-39-3	Barium	44600	ug/Kg	N	146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-41-7	Beryllium	2.82	mg/kg		0.0305	0.153	0.153	2	MS	SKJ	02/17/10 14:57	100217-6	948067
7440-43-9	Cadmium	731	ug/Kg	U	146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-70-2	Calcium	1400000	ug/Kg		11700	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-47-3	Chromium	13000	ug/Kg		219	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-48-4	Cobalt	2130	ug/Kg		219	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-50-8	Copper	16700	ug/Kg		438	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-89-6	Iron	9600000	ug/Kg		11700	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-92-1	Lead	15800	ug/Kg		365	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-95-4	Magnesium	701000	ug/Kg	N	12400	43800	43800	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-96-5	Manganese	259000	ug/Kg	N	292	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065
7439-97-6	Mercury	20.9	ug/kg		6.25	18.4	18.4	1	AV	JXL1	02/16/10 12:50	021610S2-7	947668
7440-02-0	Nickel	3.8	mg/kg	N	0.153	0.61	0.61	2	MS	SKJ	02/17/10 14:57	100217-6	948067
7440-09-7	Potassium	706000	ug/Kg	N	9350	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7782-49-2	Selenium	1.53	mg/kg	UN	0.763	1.53	1.53	2	MS	SKJ	02/13/10 01:06	100212-2	948067
7440-22-4	Silver	731	ug/Kg	U	146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-23-5	Sodium	70900	ug/Kg		10200	36500	36500	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-28-0	Thallium	0.305	mg/kg	U	0.0915	0.305	0.305	2	MS	SKJ	02/13/10 01:06	100212-2	948067
7440-61-1	Uranium	29.5	mg/kg		0.0201	0.061	0.061	2	MS	SKJ	02/14/10 03:57	100213-3	948067
7440-62-2	Vanadium	12000	ug/Kg		146	731	731	1	P	HSC	02/17/10 14:20	021710-1	948065
7440-66-6	Zinc	51600	ug/Kg		482	1460	1460	1	P	HSC	02/17/10 14:20	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.519	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.544	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.521	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797009

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7951

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 81

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1940000	ug/Kg		7960	23400	23400	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-36-0	Antimony	902	ug/Kg	J	386	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-38-2	Arsenic	1.7	mg/kg		0.233	1.17	1.17	2	MS	SKJ	02/13/10 01:12	100212-2	948067
7440-39-3	Barium	36900	ug/Kg	N	117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-41-7	Beryllium	0.368	mg/kg		0.0233	0.117	0.117	2	MS	SKJ	02/17/10 14:59	100217-6	948067
7440-43-9	Cadmium	586	ug/Kg	U	117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-70-2	Calcium	532000	ug/Kg		9370	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-47-3	Chromium	4590	ug/Kg		176	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-48-4	Cobalt	11900	ug/Kg		176	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-50-8	Copper	5030	ug/Kg		351	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-89-6	Iron	8270000	ug/Kg		9370	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-92-1	Lead	6440	ug/Kg		293	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-95-4	Magnesium	291000	ug/Kg	N	9950	35100	35100	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-96-5	Manganese	295000	ug/Kg	N	234	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065
7439-97-6	Mercury	14.1	ug/kg	U	4.81	14.1	14.1	1	AV	JXL1	02/16/10 12:51	021610S2-7	947668
7440-02-0	Nickel	4.3	mg/kg	N	0.117	0.467	0.467	2	MS	SKJ	02/17/10 14:59	100217-6	948067
7440-09-7	Potassium	629000	ug/Kg	N	7500	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7782-49-2	Selenium	1.17	mg/kg	UN	0.583	1.17	1.17	2	MS	SKJ	02/13/10 01:12	100212-2	948067
7440-22-4	Silver	586	ug/Kg	U	117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-23-5	Sodium	281000	ug/Kg		8200	29300	29300	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-28-0	Thallium	0.233	mg/kg	U	0.07	0.233	0.233	2	MS	SKJ	02/13/10 01:12	100212-2	948067
7440-61-1	Uranium	1.89	mg/kg		0.0154	0.0467	0.0467	2	MS	SKJ	02/14/10 04:03	100213-3	948067
7440-62-2	Vanadium	4120	ug/Kg		117	586	586	1	P	HSC	02/17/10 14:24	021710-1	948065
7440-66-6	Zinc	31700	ug/Kg		386	1170	1170	1	P	HSC	02/17/10 14:24	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.526	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.529	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.531	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797010

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7950

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8490000	ug/Kg		8410	24700	24700	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-36-0	Antimony	759	ug/Kg	J	408	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-38-2	Arsenic	2.67	mg/kg		0.246	1.23	1.23	2	MS	SKJ	02/13/10 01:18	100212-2	948067
7440-39-3	Barium	90200	ug/Kg	N	124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-41-7	Beryllium	1.22	mg/kg		0.0246	0.123	0.123	2	MS	SKJ	02/17/10 15:01	100217-6	948067
7440-43-9	Cadmium	619	ug/Kg	U	124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-70-2	Calcium	2710000	ug/Kg		9900	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-47-3	Chromium	12700	ug/Kg		186	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-48-4	Cobalt	5470	ug/Kg		186	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-50-8	Copper	13000	ug/Kg		371	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-89-6	Iron	12800000	ug/Kg		9900	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-92-1	Lead	11600	ug/Kg		309	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-95-4	Magnesium	1780000	ug/Kg	N	10500	37100	37100	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-96-5	Manganese	179000	ug/Kg	N	247	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065
7439-97-6	Mercury	49.5	ug/kg		4.97	14.6	14.6	1	AV	JXL1	02/16/10 12:53	021610S2-7	947668
7440-02-0	Nickel	8.79	mg/kg	N	0.123	0.493	0.493	2	MS	SKJ	02/17/10 15:01	100217-6	948067
7440-09-7	Potassium	1200000	ug/Kg	N	7920	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7782-49-2	Selenium	1.23	mg/kg	UN	0.616	1.23	1.23	2	MS	SKJ	02/13/10 01:18	100212-2	948067
7440-22-4	Silver	619	ug/Kg	U	124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-23-5	Sodium	74300	ug/Kg		8660	30900	30900	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-28-0	Thallium	0.246	mg/kg	U	0.0739	0.246	0.246	2	MS	SKJ	02/13/10 01:18	100212-2	948067
7440-61-1	Uranium	5.41	mg/kg		0.0163	0.0493	0.0493	2	MS	SKJ	02/14/10 04:09	100213-3	948067
7440-62-2	Vanadium	20100	ug/Kg		124	619	619	1	P	HSC	02/17/10 14:27	021710-1	948065
7440-66-6	Zinc	32800	ug/Kg		408	1240	1240	1	P	HSC	02/17/10 14:27	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.512	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.504	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.506	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797011

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7947

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 64

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	Df	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7080000	ug/Kg		10500	30900	30900	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-36-0	Antimony	3820	ug/Kg		509	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-38-2	Arsenic	2.83	mg/kg		0.31	1.55	1.55	2	MS	SKJ	02/13/10 01:24	100212-2	948067
7440-39-3	Barium	112000	ug/Kg	N	154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-41-7	Beryllium	3.22	mg/kg		0.031	0.155	0.155	2	MS	SKJ	02/17/10 15:07	100217-6	948067
7440-43-9	Cadmium	614	ug/Kg	J	154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-70-2	Calcium	3340000	ug/Kg		12300	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-47-3	Chromium	8800	ug/Kg		231	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-48-4	Cobalt	5660	ug/Kg		231	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-50-8	Copper	143000	ug/Kg		463	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-89-6	Iron	11000000	ug/Kg		12300	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-92-1	Lead	121000	ug/Kg		386	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-95-4	Magnesium	1500000	ug/Kg	N	13100	46300	46300	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-96-5	Manganese	393000	ug/Kg	N	309	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065
7439-97-6	Mercury	19.3	ug/kg		5.64	16.6	16.6	1	AV	JXL1	02/16/10 12:55	021610S2-7	947668
7440-02-0	Nickel	8.85	mg/kg	N	0.155	0.62	0.62	2	MS	SKJ	02/17/10 15:07	100217-6	948067
7440-09-7	Potassium	1500000	ug/Kg	N	9880	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7782-49-2	Selenium	1.55	mg/kg	UN	0.775	1.55	1.55	2	MS	SKJ	02/13/10 01:24	100212-2	948067
7440-22-4	Silver	771	ug/Kg	U	154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-23-5	Sodium	54000	ug/Kg		10800	38600	38600	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-28-0	Thallium	0.310	mg/kg	U	0.0929	0.31	0.31	2	MS	SKJ	02/13/10 01:24	100212-2	948067
7440-61-1	Uranium	71.5	mg/kg		0.0204	0.062	0.062	2	MS	SKJ	02/14/10 04:15	100213-3	948067
7440-62-2	Vanadium	21400	ug/Kg		154	771	771	1	P	HSC	02/17/10 14:38	021710-1	948065
7440-66-6	Zinc	68700	ug/Kg		509	1540	1540	1	P	HSC	02/17/10 14:38	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.567	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.508	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.506	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797012

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7944

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 92.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3540000	ug/Kg		7260	21300	21300	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-36-0	Antimony	825	ug/Kg	J	352	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-38-2	Arsenic	1.35	mg/kg		0.211	1.05	1.05	2	MS	SKJ	02/13/10 01:30	100212-2	948067
7440-39-3	Barium	59100	ug/Kg	N	107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-41-7	Beryllium	0.440	mg/kg		0.0211	0.105	0.105	2	MS	SKJ	02/17/10 15:09	100217-6	948067
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-70-2	Calcium	1190000	ug/Kg		8540	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-47-3	Chromium	25800	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-48-4	Cobalt	9430	ug/Kg		160	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-50-8	Copper	6020	ug/Kg		320	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-89-6	Iron	9360000	ug/Kg		8540	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-92-1	Lead	4330	ug/Kg		267	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-95-4	Magnesium	864000	ug/Kg	N	9070	32000	32000	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-96-5	Manganese	198000	ug/Kg	N	213	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065
7439-97-6	Mercury	29.9	ug/kg		4.38	12.9	12.9	1	AV	JXL1	02/16/10 12:57	021610S2-7	947668
7440-02-0	Nickel	7.46	mg/kg	N	0.105	0.422	0.422	2	MS	SKJ	02/17/10 15:09	100217-6	948067
7440-09-7	Potassium	602000	ug/Kg	N	6830	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7782-49-2	Selenium	1.05	mg/kg	UN	0.527	1.05	1.05	2	MS	SKJ	02/13/10 01:30	100212-2	948067
7440-22-4	Silver	533	ug/Kg	U	107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-23-5	Sodium	182000	ug/Kg		7470	26700	26700	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-28-0	Thallium	0.211	mg/kg	U	0.0633	0.211	0.211	2	MS	SKJ	02/13/10 01:30	100212-2	948067
7440-61-1	Uranium	0.533	mg/kg		0.0139	0.0422	0.0422	2	MS	SKJ	02/14/10 04:34	100213-3	948067
7440-62-2	Vanadium	8640	ug/Kg		107	533	533	1	P	HSC	02/17/10 14:42	021710-1	948065
7440-66-6	Zinc	42200	ug/Kg		352	1070	1070	1	P	HSC	02/17/10 14:42	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.502	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.505	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.511	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797013

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7948

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 92.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4800000	ug/Kg		7170	21100	21100	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-36-0	Antimony	1970	ug/Kg		348	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-38-2	Arsenic	1.65	mg/kg		0.201	1	1	2	MS	SKJ	02/13/10 01:37	100212-2	948067
7440-39-3	Barium	67500	ug/Kg	N	105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-41-7	Beryllium	0.935	mg/kg		0.0201	0.1	0.1	2	MS	SKJ	02/17/10 15:11	100217-6	948067
7440-43-9	Cadmium	527	ug/Kg	U	105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-70-2	Calcium	1650000	ug/Kg		8430	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-47-3	Chromium	15300	ug/Kg		158	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-48-4	Cobalt	3610	ug/Kg		158	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-50-8	Copper	29400	ug/Kg		316	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-89-6	Iron	9520000	ug/Kg		8430	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-92-1	Lead	22600	ug/Kg		263	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-95-4	Magnesium	974000	ug/Kg	N	8960	31600	31600	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-96-5	Manganese	267000	ug/Kg	N	211	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065
7439-97-6	Mercury	12.4	ug/kg		4.09	12	12	1	AV	JXL1	02/16/10 13:03	021610S2-7	947668
7440-02-0	Nickel	5.45	mg/kg	N	0.1	0.401	0.401	2	MS	SKJ	02/17/10 15:11	100217-6	948067
7440-09-7	Potassium	812000	ug/Kg	N	6740	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7782-49-2	Selenium	1	mg/kg	UN	0.502	1	1	2	MS	SKJ	02/13/10 01:37	100212-2	948067
7440-22-4	Silver	527	ug/Kg	U	105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-23-5	Sodium	58800	ug/Kg		7380	26300	26300	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-28-0	Thallium	0.201	mg/kg	U	0.0602	0.201	0.201	2	MS	SKJ	02/13/10 01:37	100212-2	948067
7440-61-1	Uranium	11.8	mg/kg		0.0132	0.0401	0.0401	2	MS	SKJ	02/14/10 04:40	100213-3	948067
7440-62-2	Vanadium	16200	ug/Kg		105	527	527	1	P	HSC	02/17/10 14:45	021710-1	948065
7440-66-6	Zinc	40100	ug/Kg		348	1050	1050	1	P	HSC	02/17/10 14:45	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.542	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.515	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.541	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797014

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7941

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 76

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Rnn Date	Analytical Rnn	Analytical Batch
7429-90-5	Aluminum	4960000	ug/Kg		8720	25600	25600	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-36-0	Antimony	893	ug/Kg	J	423	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-38-2	Arsenic	1.72	mg/kg		0.245	1.22	1.22	2	MS	SKJ	02/13/10 01:55	100212-2	948067
7440-39-3	Barium	88400	ug/Kg	N	128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-41-7	Beryllium	1.04	mg/kg		0.0245	0.122	0.122	2	MS	SKJ	02/17/10 15:12	100217-6	948067
7440-43-9	Cadmium	134	ug/Kg	J	128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-70-2	Calcium	2010000	ug/Kg		10300	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-47-3	Chromium	6540	ug/Kg		192	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-48-4	Cobalt	3600	ug/Kg		192	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-50-8	Copper	16600	ug/Kg		385	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-89-6	Iron	8990000	ug/Kg		10300	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-92-1	Lead	24300	ug/Kg		320	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-95-4	Magnesium	1160000	ug/Kg	N	10900	38500	38500	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-96-5	Manganese	260000	ug/Kg	N	256	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065
7439-97-6	Mercury	15.6	ug/kg	U	5.31	15.6	15.6	1	AV	JXLJ	02/16/10 13:05	021610S2-7	947668
7440-02-0	Nickel	4.8	mg/kg	N	0.122	0.49	0.49	2	MS	SKJ	02/17/10 15:12	100217-6	948067
7440-09-7	Potassium	1230000	ug/Kg	N	8200	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7782-49-2	Selenium	1.22	mg/kg	UN	0.612	1.22	1.22	2	MS	SKJ	02/13/10 01:55	100212-2	948067
7440-22-4	Silver	641	ug/Kg	U	128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-23-5	Sodium	38400	ug/Kg		8970	32000	32000	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-28-0	Thallium	0.245	mg/kg	U	0.0735	0.245	0.245	2	MS	SKJ	02/13/10 01:55	100212-2	948067
7440-61-1	Uranium	26.5	mg/kg		0.0162	0.049	0.049	2	MS	SKJ	02/14/10 04:46	100213-3	948067
7440-62-2	Vanadium	17000	ug/Kg		128	641	641	1	P	HSC	02/17/10 14:49	021710-1	948065
7440-66-6	Zinc	32900	ug/Kg		423	1280	1280	1	P	HSC	02/17/10 14:49	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.503	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.511	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.535	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797015

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7949

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 59

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7470000	ug/Kg		11300	33100	33100	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-36-0	Antimony	2250	ug/Kg		546	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-38-2	Arsenic	2.46	mg/kg		0.307	1.54	1.54	2	MS	SKJ	02/13/10 02:01	100212-2	948067
7440-39-3	Barium	108000	ug/Kg	N	165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-41-7	Beryllium	1.81	mg/kg		0.0307	0.154	0.154	2	MS	SKJ	02/17/10 15:18	100217-6	948067
7440-43-9	Cadmium	419	ug/Kg	J	165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-70-2	Calcium	2680000	ug/Kg		13200	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-47-3	Chromium	14500	ug/Kg		248	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-48-4	Cobalt	4650	ug/Kg		248	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-50-8	Copper	88600	ug/Kg		496	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-89-6	Iron	12100000	ug/Kg		13200	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-92-1	Lead	55200	ug/Kg		414	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-95-4	Magnesium	1570000	ug/Kg	N	14100	49600	49600	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-96-5	Manganese	340000	ug/Kg	N	331	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065
7439-97-6	Mercury	14.5	ug/kg	J	6.87	20.2	20.2	1	AV	JXL1	02/16/10 13:07	021610S2-7	947668
7440-02-0	Nickel	7.59	mg/kg	N	0.154	0.615	0.615	2	MS	SKJ	02/17/10 15:18	100217-6	948067
7440-09-7	Potassium	1540000	ug/Kg	N	10600	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7782-49-2	Selenium	1.54	mg/kg	UN	0.769	1.54	1.54	2	MS	SKJ	02/13/10 02:01	100212-2	948067
7440-22-4	Silver	827	ug/Kg	U	165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-23-5	Sodium	59000	ug/Kg		11600	41400	41400	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-28-0	Thallium	0.307	mg/kg	U	0.0922	0.307	0.307	2	MS	SKJ	02/13/10 02:01	100212-2	948067
7440-61-1	Uranium	48.8	mg/kg		0.0203	0.0615	0.0615	2	MS	SKJ	02/14/10 04:52	100213-3	948067
7440-62-2	Vanadium	22800	ug/Kg		165	827	827	1	P	HSC	02/17/10 14:52	021710-1	948065
7440-66-6	Zinc	63600	ug/Kg		546	1650	1650	1	P	HSC	02/17/10 14:52	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.501	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.51	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.549	g	50	mL	02/08/10	FGA



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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797016

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7946

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 91.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2010000	ug/Kg		6940	20400	20400	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-36-0	Antimony	420	ug/Kg	J	337	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-38-2	Arsenic	0.969	mg/kg	J	0.21	1.05	1.05	2	MS	SKJ	02/13/10 02:07	100212-2	948067
7440-39-3	Barium	28800	ug/Kg	N	102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-41-7	Beryllium	0.322	mg/kg		0.021	0.105	0.105	2	MS	SKJ	02/17/10 15:20	100217-6	948067
7440-43-9	Cadmium	510	ug/Kg	U	102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-70-2	Calcium	756000	ug/Kg		8160	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-47-3	Chromium	15800	ug/Kg		153	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-48-4	Cobalt	17100	ug/Kg		153	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-50-8	Copper	5870	ug/Kg		306	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-89-6	Iron	9610000	ug/Kg		8160	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-92-1	Lead	3600	ug/Kg		255	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-95-4	Magnesium	352000	ug/Kg	N	8670	30600	30600	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-96-5	Manganese	218000	ug/Kg	N	204	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065
7439-97-6	Mercury	10.8	ug/kg	J	4.29	12.6	12.6	1	AV	JXL	02/16/10 13:09	021610S2-7	947668
7440-02-0	Nickel	4.71	mg/kg	N	0.105	0.421	0.421	2	MS	SKJ	02/17/10 15:20	100217-6	948067
7440-09-7	Potassium	412000	ug/Kg	N	6530	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7782-49-2	Selenium	1.05	mg/kg	UN	0.526	1.05	1.05	2	MS	SKJ	02/13/10 02:07	100212-2	948067
7440-22-4	Silver	510	ug/Kg	U	102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-23-5	Sodium	164000	ug/Kg		7140	25500	25500	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-28-0	Thallium	0.210	mg/kg	U	0.0631	0.21	0.21	2	MS	SKJ	02/13/10 02:07	100212-2	948067
7440-61-1	Uranium	0.879	mg/kg		0.0139	0.0421	0.0421	2	MS	SKJ	02/15/10 14:26	100215-4	948067
7440-62-2	Vanadium	6570	ug/Kg		102	510	510	1	P	HSC	02/17/10 14:56	021710-1	948065
7440-66-6	Zinc	37600	ug/Kg		337	1020	1020	1	P	HSC	02/17/10 14:56	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.518	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.534	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.518	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797017

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7942

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4850000	ug/Kg		7350	21600	21600	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-36-0	Antimony	578	ug/Kg	J	357	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-38-2	Arsenic	1.63	mg/kg		0.223	1.11	1.11	2	MS	SKJ	02/13/10 02:14	100212-2	948067
7440-39-3	Barium	63400	ug/Kg	N	108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-41-7	Beryllium	0.591	mg/kg		0.0223	0.111	0.111	2	MS	SKJ	02/17/10 15:22	100217-6	948067
7440-43-9	Cadmium	541	ug/Kg	U	108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-70-2	Calcium	1350000	ug/Kg		8650	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-47-3	Chromium	8830	ug/Kg		162	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-48-4	Cobalt	4280	ug/Kg		162	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-50-8	Copper	4070	ug/Kg		324	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-89-6	Iron	7590000	ug/Kg		8650	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-92-1	Lead	5720	ug/Kg		270	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-95-4	Magnesium	1030000	ug/Kg	N	9190	32400	32400	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-96-5	Manganese	188000	ug/Kg	N	216	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065
7439-97-6	Mercury	13.7	ug/kg		4.54	13.3	13.3	1	AV	JXL1	02/16/10 13:11	021610S2-7	947668
7440-02-0	Nickel	5.18	mg/kg	N	0.111	0.446	0.446	2	MS	SKJ	02/17/10 15:22	100217-6	948067
7440-09-7	Potassium	771000	ug/Kg	N	6920	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7782-49-2	Selenium	1.11	mg/kg	UN	0.557	1.11	1.11	2	MS	SKJ	02/13/10 02:14	100212-2	948067
7440-22-4	Silver	541	ug/Kg	U	108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-23-5	Sodium	101000	ug/Kg		7570	27000	27000	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-28-0	Thallium	0.223	mg/kg	U	0.0668	0.223	0.223	2	MS	SKJ	02/13/10 02:14	100212-2	948067
7440-61-1	Uranium	0.956	mg/kg		0.0147	0.0446	0.0446	2	MS	SKJ	02/15/10 14:28	100215-4	948067
7440-62-2	Vanadium	9960	ug/Kg		108	541	541	1	P	HSC	02/17/10 14:59	021710-1	948065
7440-66-6	Zinc	17200	ug/Kg		357	1080	1080	1	P	HSC	02/17/10 14:59	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.505	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.519	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.504	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797018

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7945

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 61

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5240000	ug/Kg		10500	31000	31000	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-36-0	Antimony	1500	ug/Kg	J	512	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-38-2	Arsenic	2.16	mg/kg		0.325	1.63	1.63	2	MS	SKJ	02/13/10 02:20	100212-2	948067
7440-39-3	Barium	99400	ug/Kg	N	155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-41-7	Beryllium	1.67	mg/kg		0.0325	0.163	0.163	2	MS	SKJ	02/17/10 15:24	100217-6	948067
7440-43-9	Cadmium	258	ug/Kg	J	155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-70-2	Calcium	3360000	ug/Kg		12400	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-47-3	Chromium	9840	ug/Kg		233	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-48-4	Cobalt	5370	ug/Kg		233	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-50-8	Copper	37000	ug/Kg		465	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-89-6	Iron	7940000	ug/Kg		12400	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-92-1	Lead	26300	ug/Kg		388	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-95-4	Magnesium	1090000	ug/Kg	N	13200	46500	46500	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-96-5	Manganese	363000	ug/Kg	N	310	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065
7439-97-6	Mercury	22	ug/kg		6.66	19.6	19.6	1	AV	JXL1	02/16/10 13:13	021610S2-7	947668
7440-02-0	Nickel	6.13	mg/kg	N	0.163	0.651	0.651	2	MS	SKJ	02/17/10 15:24	100217-6	948067
7440-09-7	Potassium	973000	ug/Kg	N	9920	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7782-49-2	Selenium	1.63	mg/kg	UN	0.813	1.63	1.63	2	MS	SKJ	02/13/10 02:20	100212-2	948067
7440-22-4	Silver	278	ug/Kg	J	155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-23-5	Sodium	76400	ug/Kg		10900	38800	38800	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-28-0	Thallium	0.325	mg/kg	U	0.0976	0.325	0.325	2	MS	SKJ	02/13/10 02:20	100212-2	948067
7440-61-1	Uranium	46.3	mg/kg		0.107	0.325	0.325	10	MS	SKJ	02/16/10 10:38	100216-5	948067
7440-62-2	Vanadium	11600	ug/Kg		155	775	775	1	P	HSC	02/17/10 15:03	021710-1	948065
7440-66-6	Zinc	47200	ug/Kg		512	1550	1550	1	P	HSC	02/17/10 15:03	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.503	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.53	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.505	g	50	mL	02/08/10	FGA

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

SDG No: 10-1471

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245797019

BASIS: Dry Weight

DATE COLLECTED 26-JAN-10

CLIENT ID: RE15-10-7943

LEVEL: Low

DATE RECEIVED 29-JAN-10

MATRIX: SOIL

%SOLIDS: 92.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1320000	ug/Kg		7100	20900	20900	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-36-0	Antimony	797	ug/Kg	J	345	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-38-2	Arsenic	0.839	mg/kg	J	0.21	1.05	1.05	2	MS	SKJ	02/13/10 02:26	100212-2	948067
7440-39-3	Barium	17200	ug/Kg	N	104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-41-7	Beryllium	0.325	mg/kg		0.021	0.105	0.105	2	MS	SKJ	02/17/10 15:26	100217-6	948067
7440-43-9	Cadmium	522	ug/Kg	U	104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-70-2	Calcium	292000	ug/Kg		8350	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-47-3	Chromium	20000	ug/Kg		157	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-48-4	Cobalt	4120	ug/Kg		157	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-50-8	Copper	1730	ug/Kg		313	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-89-6	Iron	6350000	ug/Kg		8350	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-92-1	Lead	2480	ug/Kg		261	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-95-4	Magnesium	197000	ug/Kg	N	8870	31300	31300	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-96-5	Manganese	201000	ug/Kg	N	209	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065
7439-97-6	Mercury	16.5	ug/kg		4.17	12.3	12.3	1	AV	JXL1	02/16/10 13:15	021610S2-7	947668
7440-02-0	Nickel	5.71	mg/kg	N	0.105	0.42	0.42	2	MS	SKJ	02/17/10 15:26	100217-6	948067
7440-09-7	Potassium	355000	ug/Kg	N	6680	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7782-49-2	Selenium	1.05	mg/kg	UN	0.525	1.05	1.05	2	MS	SKJ	02/13/10 02:26	100212-2	948067
7440-22-4	Silver	522	ug/Kg	U	104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-23-5	Sodium	196000	ug/Kg		7310	26100	26100	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-28-0	Thallium	0.210	mg/kg	U	0.063	0.21	0.21	2	MS	SKJ	02/13/10 02:26	100212-2	948067
7440-61-1	Uranium	0.638	mg/kg		0.0139	0.042	0.042	2	MS	SKJ	02/15/10 14:33	100215-4	948067
7440-62-2	Vanadium	2590	ug/Kg		104	522	522	1	P	HSC	02/17/10 15:06	021710-1	948065
7440-66-6	Zinc	24300	ug/Kg		345	1040	1040	1	P	HSC	02/17/10 15:06	021710-1	948065

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
947668	947667	SW846 7471A Prep	0.529	g	30	mL	02/15/10	TXB3
948065	948064	SW846 3050B	0.518	g	50	mL	02/08/10	FGA
948067	948066	SW846 3050B	0.515	g	50	mL	02/08/10	FGA

# **Quality Control Summary**

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,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										
	Arsenic	47.8	ug/L	50	ug/L	95.6	90.0 – 110.0	MS	12-FEB-10 22:20	100212-2
	Selenium	47.3	ug/L	50	ug/L	94.5	90.0 – 110.0	MS	12-FEB-10 22:20	100212-2
	Thallium	47.8	ug/L	50	ug/L	95.5	90.0 – 110.0	MS	12-FEB-10 22:20	100212-2
	Uranium	53.7	ug/L	50	ug/L	107.3	90.0 – 110.0	MS	14-FEB-10 00:58	100213-3
	Uranium	52.4	ug/L	50	ug/L	104.8	90.0 – 110.0	MS	15-FEB-10 14:06	100215-4
	Uranium	52.4	ug/L	50	ug/L	104.8	90.0 – 110.0	MS	16-FEB-10 10:23	100216-5
	Mercury	5.1	ug/L	5	ug/L	102.1	90.0 – 110.0	AV	16-FEB-10 10:31	021610S2-7
	Aluminum	5130	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Antimony	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Barium	511	ug/L	500	ug/L	102.1	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Cadmium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Calcium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Chromium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Copper	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Iron	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Lead	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Manganese	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Potassium	2520	ug/L	2500	ug/L	100.8	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Silver	263	ug/L	250	ug/L	105.2	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Sodium	2520	ug/L	2500	ug/L	100.7	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Vanadium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Zinc	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	17-FEB-10 10:30	021710-1
	Beryllium	47.9	ug/L	50	ug/L	95.7	90.0 – 110.0	MS	17-FEB-10 14:13	100217-6
	Nickel	49.5	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	17-FEB-10 14:13	100217-6
CCV01										
	Arsenic	48.6	ug/L	50	ug/L	97.1	90.0 – 110.0	MS	12-FEB-10 22:50	100212-2
	Selenium	48	ug/L	50	ug/L	95.9	90.0 – 110.0	MS	12-FEB-10 22:50	100212-2
	Thallium	47.9	ug/L	50	ug/L	95.7	90.0 – 110.0	MS	12-FEB-10 22:50	100212-2

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,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>
	Uranium	49.7	ug/L	50	ug/L	99.4	90.0 – 110.0	MS	14-FEB-10 01:29	100213-3
	Uranium	52.8	ug/L	50	ug/L	105.5	90.0 – 110.0	MS	15-FEB-10 14:17	100215-4
	Uranium	51.5	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	16-FEB-10 10:32	100216-5
	Mercury	4.8	ug/L	5	ug/L	96.1	80.0 – 120.0	AV	16-FEB-10 10:37	021610S2-7
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Antimony	526	ug/L	500	ug/L	105.1	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Barium	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Cadmium	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Calcium	5340	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Chromium	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Cobalt	523	ug/L	500	ug/L	104.7	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Copper	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Iron	5440	ug/L	5000	ug/L	108.8	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Lead	525	ug/L	500	ug/L	105.1	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Magnesium	5510	ug/L	5000	ug/L	110.1	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Manganese	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Potassium	5480	ug/L	5000	ug/L	109.7	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Silver	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Sodium	10800	ug/L	10000	ug/L	108	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Vanadium	523	ug/L	500	ug/L	104.7	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Zinc	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	17-FEB-10 10:52	021710-1
	Beryllium	46.4	ug/L	50	ug/L	92.8	90.0 – 110.0	MS	17-FEB-10 14:22	100217-6
	Nickel	48.7	ug/L	50	ug/L	97.4	90.0 – 110.0	MS	17-FEB-10 14:22	100217-6
CCV02	Arsenic	48.4	ug/L	50	ug/L	96.8	90.0 – 110.0	MS	12-FEB-10 23:09	100212-2
	Selenium	47.4	ug/L	50	ug/L	94.8	90.0 – 110.0	MS	12-FEB-10 23:09	100212-2
	Thallium	49.3	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	12-FEB-10 23:09	100212-2
	Uranium	50.4	ug/L	50	ug/L	100.9	90.0 – 110.0	MS	14-FEB-10 01:47	100213-3
	Uranium	53.3	ug/L	50	ug/L	106.7	90.0 – 110.0	MS	15-FEB-10 14:35	100215-4
	Uranium	51.5	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	16-FEB-10 10:40	100216-5

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,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>
	Mercury	4.78	ug/L	5	ug/L	95.5	80.0 – 120.0	AV	16-FEB-10 11:01	021610S2-7
	Aluminum	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Antimony	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Barium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Cadmium	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Chromium	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Cobalt	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Copper	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Iron	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Lead	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Manganese	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Potassium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Silver	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Sodium	10400	ug/L	10000	ug/L	103.8	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Vanadium	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Zinc	505	ug/L	500	ug/L	101	90.0 – 110.0	P	17-FEB-10 11:07	021710-1
	Beryllium	47	ug/L	50	ug/L	93.9	90.0 – 110.0	MS	17-FEB-10 14:39	100217-6
	Nickel	47.9	ug/L	50	ug/L	95.8	90.0 – 110.0	MS	17-FEB-10 14:39	100217-6
CCV03	Arsenic	48.9	ug/L	50	ug/L	97.9	90.0 – 110.0	MS	13-FEB-10 00:04	100212-2
	Selenium	46.3	ug/L	50	ug/L	92.6	90.0 – 110.0	MS	13-FEB-10 00:04	100212-2
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 – 110.0	MS	13-FEB-10 00:04	100212-2
	Uranium	48.9	ug/L	50	ug/L	97.8	90.0 – 110.0	MS	14-FEB-10 02:12	100213-3
	Mercury	4.9	ug/L	5	ug/L	98.1	80.0 – 120.0	AV	16-FEB-10 11:25	021610S2-7
	Aluminum	5020	ug/L	5000	ug/L	100.4	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Cadmium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	17-FEB-10 11:34	021710-1



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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	4950	ug/L	5000	ug/L	99	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Cobalt	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Copper	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Lead	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Magnesium	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Manganese	505	ug/L	500	ug/L	101	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Potassium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Sodium	10200	ug/L	10000	ug/L	101.5	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Zinc	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	17-FEB-10 11:34	021710-1
	Beryllium	51.4	ug/L	50	ug/L	102.7	90.0 – 110.0	MS	17-FEB-10 14:50	100217-6
	Nickel	49.3	ug/L	50	ug/L	98.6	90.0 – 110.0	MS	17-FEB-10 14:50	100217-6
CCV04	Arsenic	48.4	ug/L	50	ug/L	96.8	90.0 – 110.0	MS	13-FEB-10 00:53	100212-2
	Selenium	48.3	ug/L	50	ug/L	96.6	90.0 – 110.0	MS	13-FEB-10 00:53	100212-2
	Thallium	49.6	ug/L	50	ug/L	99.2	90.0 – 110.0	MS	13-FEB-10 00:53	100212-2
	Uranium	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	14-FEB-10 02:55	100213-3
	Mercury	4.95	ug/L	5	ug/L	99	80.0 – 120.0	AV	16-FEB-10 11:48	021610S2-7
	Aluminum	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Antimony	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Barium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Cadmium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Calcium	4840	ug/L	5000	ug/L	96.8	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Cobalt	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Iron	4950	ug/L	5000	ug/L	99	90.0 – 110.0	P	17-FEB-10 12:06	021710-1

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,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>
	Lead	495	ug/L	500	ug/L	99	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Magnesium	4950	ug/L	5000	ug/L	99	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Manganese	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Potassium	4930	ug/L	5000	ug/L	98.5	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Silver	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Sodium	9820	ug/L	10000	ug/L	98.2	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Vanadium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Zinc	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	17-FEB-10 12:06	021710-1
	Beryllium	51.5	ug/L	50	ug/L	102.9	90.0 – 110.0	MS	17-FEB-10 15:03	100217-6
	Nickel	48	ug/L	50	ug/L	96	90.0 – 110.0	MS	17-FEB-10 15:03	100217-6
CCV05										
	Arsenic	48.2	ug/L	50	ug/L	96.4	90.0 – 110.0	MS	13-FEB-10 01:43	100212-2
	Selenium	48	ug/L	50	ug/L	96	90.0 – 110.0	MS	13-FEB-10 01:43	100212-2
	Thallium	48.8	ug/L	50	ug/L	97.7	90.0 – 110.0	MS	13-FEB-10 01:43	100212-2
	Uranium	52.4	ug/L	50	ug/L	104.8	90.0 – 110.0	MS	14-FEB-10 03:38	100213-3
	Mercury	4.92	ug/L	5	ug/L	98.3	80.0 – 120.0	AV	16-FEB-10 12:12	021610S2-7
	Aluminum	5500	ug/L	5000	ug/L	110	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Antimony	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Barium	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Cadmium	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Calcium	5380	ug/L	5000	ug/L	107.6	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Chromium	517	ug/L	500	ug/L	103.3	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Cobalt	525	ug/L	500	ug/L	105	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Copper	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Iron	5520	ug/L	5000	ug/L	110.4	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Lead	523	ug/L	500	ug/L	104.7	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Magnesium	5540	ug/L	5000	ug/L	110.8	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Manganese	531	ug/L	500	ug/L	106.2	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Potassium	5460	ug/L	5000	ug/L	109.2	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Silver	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	17-FEB-10 12:45	021710-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10900	ug/L	10000	ug/L	109.4	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Vanadium	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Zinc	520	ug/L	500	ug/L	104	90.0 – 110.0	P	17-FEB-10 12:45	021710-1
	Beryllium	49.6	ug/L	50	ug/L	99.2	90.0 – 110.0	MS	17-FEB-10 15:14	100217-6
	Nickel	48.6	ug/L	50	ug/L	97.2	90.0 – 110.0	MS	17-FEB-10 15:14	100217-6
CCV06	Arsenic	48.3	ug/L	50	ug/L	96.6	90.0 – 110.0	MS	13-FEB-10 02:32	100212-2
	Selenium	48.7	ug/L	50	ug/L	97.4	90.0 – 110.0	MS	13-FEB-10 02:32	100212-2
	Thallium	49.6	ug/L	50	ug/L	99.2	90.0 – 110.0	MS	13-FEB-10 02:32	100212-2
	Uranium	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	14-FEB-10 04:21	100213-3
	Mercury	4.83	ug/L	5	ug/L	96.5	80.0 – 120.0	AV	16-FEB-10 12:36	021610S2-7
	Aluminum	4910	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Antimony	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Barium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Cadmium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Calcium	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Chromium	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Cobalt	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Copper	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Iron	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Lead	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Magnesium	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Potassium	4940	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Silver	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Sodium	9830	ug/L	10000	ug/L	98.3	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Vanadium	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Zinc	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	17-FEB-10 13:27	021710-1
	Beryllium	51.7	ug/L	50	ug/L	103.3	90.0 – 110.0	MS	17-FEB-10 15:28	100217-6
	Nickel	48.7	ug/L	50	ug/L	97.3	90.0 – 110.0	MS	17-FEB-10 15:28	100217-6

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,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>
CCV07										
	Uranium	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	14-FEB-10 04:59	100213-3
	Mercury	4.82	ug/L	5	ug/L	96.5	80.0 – 120.0	AV	16-FEB-10 12:59	021610S2-7
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Antimony	483	ug/L	500	ug/L	96.7	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Barium	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Cadmium	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Calcium	4830	ug/L	5000	ug/L	96.6	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Chromium	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Cobalt	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Copper	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Iron	4830	ug/L	5000	ug/L	96.5	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Lead	482	ug/L	500	ug/L	96.5	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Magnesium	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Manganese	490	ug/L	500	ug/L	98	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Potassium	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Silver	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Sodium	9770	ug/L	10000	ug/L	97.7	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Vanadium	487	ug/L	500	ug/L	97.3	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Zinc	483	ug/L	500	ug/L	96.7	90.0 – 110.0	P	17-FEB-10 13:52	021710-1
	Beryllium	48.9	ug/L	50	ug/L	97.7	90.0 – 110.0	MS	17-FEB-10 15:41	100217-6
	Nickel	47.4	ug/L	50	ug/L	94.9	90.0 – 110.0	MS	17-FEB-10 15:41	100217-6
CCV08										
	Mercury	4.85	ug/L	5	ug/L	97	80.0 – 120.0	AV	16-FEB-10 13:17	021610S2-7
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Antimony	484	ug/L	500	ug/L	96.9	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Barium	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Cadmium	484	ug/L	500	ug/L	96.9	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Calcium	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Chromium	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Cobalt	490	ug/L	500	ug/L	98	90.0 – 110.0	P	17-FEB-10 14:31	021710-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,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>
	Copper	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Iron	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Lead	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Magnesium	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Manganese	495	ug/L	500	ug/L	99	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Potassium	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Silver	489	ug/L	500	ug/L	97.7	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Sodium	9860	ug/L	10000	ug/L	98.6	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Vanadium	489	ug/L	500	ug/L	97.7	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
	Zinc	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	17-FEB-10 14:31	021710-1
CCV09	Aluminum	4840	ug/L	5000	ug/L	96.8	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Antimony	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Barium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Calcium	4820	ug/L	5000	ug/L	96.3	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Chromium	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Cobalt	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Copper	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Lead	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Magnesium	4960	ug/L	5000	ug/L	99.2	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Manganese	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Potassium	4900	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Silver	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Sodium	9800	ug/L	10000	ug/L	98.1	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	17-FEB-10 15:10	021710-1
	Zinc	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	17-FEB-10 15:10	021710-1

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS4,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										
	Thallium	1.15	ug/L	1	ug/L	115	70.0 – 130.0	MS	12-FEB-10 22:32	100212-2
	Arsenic	5.42	ug/L	5	ug/L	108.3	70.0 – 130.0	MS	12-FEB-10 22:32	100212-2
	Selenium	5.98	ug/L	5	ug/L	119.6	70.0 – 130.0	MS	12-FEB-10 22:32	100212-2
	Uranium	.231	ug/L	.2	ug/L	115.5	70.0 – 130.0	MS	14-FEB-10 01:11	100213-3
	Uranium	.225	ug/L	.2	ug/L	112.5	70.0 – 130.0	MS	15-FEB-10 14:11	100215-4
	Uranium	.221	ug/L	.2	ug/L	110.5	70.0 – 130.0	MS	16-FEB-10 10:26	100216-5
	Mercury	.267	ug/L	.2	ug/L	133.5	70.0 – 130.0	AV	16-FEB-10 10:35	021610S2-7
	Nickel	2.1	ug/L	2	ug/L	105.1	70.0 – 130.0	MS	17-FEB-10 14:16	100217-6
	Beryllium	.504	ug/L	.5	ug/L	100.8	70.0 – 130.0	MS	17-FEB-10 14:16	100217-6
PQL01										
	Cobalt	4.55	ug/L	5	ug/L	91	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Copper	10.1	ug/L	10	ug/L	100.7	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Vanadium	5	ug/L	5	ug/L	100	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Iron	97.5	ug/L	100	ug/L	97.5	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Magnesium	272	ug/L	300	ug/L	90.6	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Potassium	116	ug/L	150	ug/L	77.5	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Sodium	293	ug/L	300	ug/L	97.8	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Barium	4.87	ug/L	5	ug/L	97.4	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Chromium	4.64	ug/L	5	ug/L	92.8	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Cadmium	4.93	ug/L	5	ug/L	98.6	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Antimony	14.2	ug/L	10	ug/L	142.2	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Silver	5.04	ug/L	5	ug/L	100.7	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Manganese	10.2	ug/L	10	ug/L	102.4	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Lead	9.49	ug/L	10	ug/L	94.9	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Aluminum	212	ug/L	200	ug/L	105.8	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Zinc	9.08	ug/L	10	ug/L	90.8	70.0 – 130.0	P	17-FEB-10 10:37	021710-1
	Calcium	194	ug/L	200	ug/L	96.9	70.0 – 130.0	P	17-FEB-10 10:37	021710-1

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

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>ICB01</b>										
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	12-FEB-10 22:26	100212-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	12-FEB-10 22:26	100212-2
	Thallium	0.531	+/-1	J	0.3	1.0	SOL	MS	12-FEB-10 22:26	100212-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 01:04	100213-3
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	15-FEB-10 14:09	100215-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	16-FEB-10 10:25	100216-5
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	16-FEB-10 10:33	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 10:34	021710-1
	Antimony	4.52	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 10:34	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:34	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:34	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 10:34	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 10:34	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 10:34	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 10:34	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 10:34	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 10:34	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 10:34	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 10:34	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 10:34	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:34	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 10:34	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:34	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 10:34	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 14:14	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 14:14	100217-6
<b>CCB01</b>										
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	12-FEB-10 22:56	100212-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	12-FEB-10 22:56	100212-2
	Thallium	0.428	+/-1	J	0.3	1.0	SOL	MS	12-FEB-10 22:56	100212-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 01:35	100213-3

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

SDG No.: 10-1471

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>
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	15-FEB-10 14:20	100215-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	16-FEB-10 10:33	100216-5
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	16-FEB-10 10:39	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 10:56	021710-1
	Antimony	6.71	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 10:56	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:56	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:56	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 10:56	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 10:56	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 10:56	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 10:56	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 10:56	021710-1
	Lead	5.68	+/-10	J	2.5	10.0	SOL	P	17-FEB-10 10:56	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 10:56	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 10:56	021710-1
	Potassium	94.28	+/-250	J	64.0	250	SOL	P	17-FEB-10 10:56	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:56	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 10:56	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 10:56	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 10:56	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 14:24	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 14:24	100217-6
<b>CCB02</b>	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	12-FEB-10 23:15	100212-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	12-FEB-10 23:15	100212-2
	Thallium	0.761	+/-1	J	0.3	1.0	SOL	MS	12-FEB-10 23:15	100212-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 01:54	100213-3
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	15-FEB-10 14:37	100215-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	16-FEB-10 10:42	100216-5
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	16-FEB-10 11:03	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 11:11	021710-1



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

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Antimony	4.21	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 11:11	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:11	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:11	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 11:11	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 11:11	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 11:11	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 11:11	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 11:11	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 11:11	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 11:11	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 11:11	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 11:11	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:11	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 11:11	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:11	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 11:11	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 14:41	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 14:41	100217-6
<b>CCB03</b>	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	13-FEB-10 00:10	100212-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	13-FEB-10 00:10	100212-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	13-FEB-10 00:10	100212-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 02:18	100213-3
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	16-FEB-10 11:27	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 11:38	021710-1
	Antimony	6.99	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 11:38	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:38	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:38	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 11:38	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 11:38	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 11:38	021710-1

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

SDG No.: 10-1471

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>
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 11:38	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 11:38	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 11:38	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 11:38	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 11:38	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 11:38	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:38	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 11:38	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 11:38	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 11:38	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 14:52	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 14:52	100217-6
<b>CCB04</b>	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	13-FEB-10 01:00	100212-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	13-FEB-10 01:00	100212-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	13-FEB-10 01:00	100212-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 03:01	100213-3
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	16-FEB-10 11:50	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 12:09	021710-1
	Antimony	4.24	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 12:09	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:09	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:09	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 12:09	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 12:09	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 12:09	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 12:09	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 12:09	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 12:09	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 12:09	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 12:09	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 12:09	021710-1

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

SDG No.: 10-1471

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>
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:09	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 12:09	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:09	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 12:09	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 15:05	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 15:05	100217-6
<b>CCB05</b>	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	13-FEB-10 01:49	100212-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	13-FEB-10 01:49	100212-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	13-FEB-10 01:49	100212-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 03:44	100213-3
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	16-FEB-10 12:14	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 12:48	021710-1
	Antimony	4.07	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 12:48	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:48	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:48	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 12:48	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 12:48	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 12:48	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 12:48	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 12:48	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 12:48	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 12:48	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 12:48	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 12:48	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:48	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 12:48	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 12:48	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 12:48	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 15:16	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 15:16	100217-6

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

SDG No.: 10-1471

Contract: LANL01004

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<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>CCB06</b>										
	Arsenic	-1.17	+/-5	J	1.0	5.0	SOL	MS	13-FEB-10 02:38	100212-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	13-FEB-10 02:38	100212-2
	Thallium	-0.343	+/-1	J	0.3	1.0	SOL	MS	13-FEB-10 02:38	100212-2
	Uranium	0.171	+/-2	J	0.066	0.2	SOL	MS	14-FEB-10 04:28	100213-3
	Mercury	-0.071	+/-2	J	0.068	0.2	SOL	AV	16-FEB-10 12:38	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 13:31	021710-1
	Antimony	7.01	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 13:31	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:31	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:31	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 13:31	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 13:31	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 13:31	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 13:31	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 13:31	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 13:31	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 13:31	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 13:31	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 13:31	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:31	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 13:31	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:31	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 13:31	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 15:29	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 15:29	100217-6
<b>CCB07</b>										
	Uranium	0.195	+/-2	J	0.066	0.2	SOL	MS	14-FEB-10 05:05	100213-3
	Mercury	-0.107	+/-2	J	0.068	0.2	SOL	AV	16-FEB-10 13:01	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 13:56	021710-1
	Antimony	5.22	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 13:56	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:56	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:56	021710-1

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

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 13:56	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 13:56	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 13:56	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 13:56	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 13:56	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 13:56	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 13:56	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 13:56	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 13:56	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:56	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 13:56	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 13:56	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 13:56	021710-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	17-FEB-10 15:43	100217-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	17-FEB-10 15:43	100217-6
<b>CCB08</b>	Mercury	-0.115	+/-2	J	0.068	0.2	SOL	AV	16-FEB-10 13:19	021610S2-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 14:35	021710-1
	Antimony	5.61	+/-10	J	3.3	10.0	SOL	P	17-FEB-10 14:35	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 14:35	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 14:35	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 14:35	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 14:35	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 14:35	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 14:35	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 14:35	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 14:35	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 14:35	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 14:35	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 14:35	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 14:35	021710-1

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

SDG No.: 10-1471

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>
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 14:35	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 14:35	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 14:35	021710-1
CCB09	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	17-FEB-10 15:13	021710-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 15:13	021710-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 15:13	021710-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 15:13	021710-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 15:13	021710-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 15:13	021710-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	17-FEB-10 15:13	021710-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	17-FEB-10 15:13	021710-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	17-FEB-10 15:13	021710-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	17-FEB-10 15:13	021710-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	17-FEB-10 15:13	021710-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	17-FEB-10 15:13	021710-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	17-FEB-10 15:13	021710-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 15:13	021710-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	17-FEB-10 15:13	021710-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	17-FEB-10 15:13	021710-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	17-FEB-10 15:13	021710-1

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

**SDG NO.** 10-1471  
**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>
1202030035	Mercury	-5.8	ug/kg	+/-11.7	J	AV	3.98	11.7
1202030953	Barium	91.6	ug/Kg	+/-458	U	P	91.6	458
	Cadmium	91.6	ug/Kg	+/-458	U	P	91.6	458
	Calcium	7330	ug/Kg	+/-22900	U	P	7330	22900
	Chromium	137	ug/Kg	+/-458	U	P	137	458
	Cobalt	137	ug/Kg	+/-458	U	P	137	458
	Copper	275	ug/Kg	+/-916	U	P	275	916
	Iron	7330	ug/Kg	+/-22900	U	P	7330	22900
	Lead	330	ug/Kg	+/-916	J	P	229	916
	Magnesium	7780	ug/Kg	+/-27500	U	P	7780	27500
	Antimony	328	ug/Kg	+/-916	J	P	302	916
	Aluminum	6230	ug/Kg	+/-18300	U	P	6230	18300
	Manganese	183	ug/Kg	+/-916	U	P	183	916
	Potassium	5860	ug/Kg	+/-22900	U	P	5860	22900
	Silver	91.6	ug/Kg	+/-458	U	P	91.6	458
	Sodium	6410	ug/Kg	+/-22900	U	P	6410	22900
	Vanadium	91.6	ug/Kg	+/-458	U	P	91.6	458
	Zinc	302	ug/Kg	+/-916	U	P	302	916
1202030959	Arsenic	0.193	mg/kg	+/-0.965	U	MS	0.193	0.965
	Beryllium	0.0193	mg/kg	+/-0.0965	U	MS	0.0193	0.0965
	Nickel	0.0965	mg/kg	+/-0.386	U	MS	0.0965	0.386
	Selenium	0.483	mg/kg	+/-0.965	U	MS	0.483	0.965
	Thallium	0.104	mg/kg	+/-0.193	J	MS	0.0579	0.193
	Uranium	0.0127	mg/kg	+/-0.0386	U	MS	0.0127	0.0386

## METALS

-4-

## Interference Check Sample

SDG No: 10-1471

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	504000	ug/L	500000	ug/L	101	80.0 – 120.0	17-FEB-10 10:40	021710-1
	Antimony	-5.45	ug/L					17-FEB-10 10:40	021710-1
	Barium	8.07	ug/L					17-FEB-10 10:40	021710-1
	Cadmium	-6.66	ug/L					17-FEB-10 10:40	021710-1
	Calcium	479000	ug/L	500000	ug/L	95.9	80.0 – 120.0	17-FEB-10 10:40	021710-1
	Chromium	-0.683	ug/L					17-FEB-10 10:40	021710-1
	Cobalt	2.76	ug/L					17-FEB-10 10:40	021710-1
	Copper	-1.56	ug/L					17-FEB-10 10:40	021710-1
	Iron	188000	ug/L	200000	ug/L	94.2	80.0 – 120.0	17-FEB-10 10:40	021710-1
	Lead	9.31	ug/L					17-FEB-10 10:40	021710-1
	Magnesium	484000	ug/L	500000	ug/L	96.9	80.0 – 120.0	17-FEB-10 10:40	021710-1
	Manganese	7.5	ug/L					17-FEB-10 10:40	021710-1
	Potassium	-24.7	ug/L					17-FEB-10 10:40	021710-1
	Silver	-7.68	ug/L					17-FEB-10 10:40	021710-1
	Sodium	21.1	ug/L					17-FEB-10 10:40	021710-1
	Vanadium	-0.761	ug/L					17-FEB-10 10:40	021710-1
	Zinc	-9.36	ug/L					17-FEB-10 10:40	021710-1
<b>ICSAB01</b>									
	Aluminum	507000	ug/L	500000	ug/L	101	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Antimony	496	ug/L	500	ug/L	99.1	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Barium	496	ug/L	500	ug/L	99.2	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Cadmium	452	ug/L	500	ug/L	90.5	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Calcium	482000	ug/L	500000	ug/L	96.4	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Chromium	478	ug/L	500	ug/L	95.6	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Cobalt	430	ug/L	500	ug/L	86.1	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Copper	528	ug/L	500	ug/L	106	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Iron	188000	ug/L	200000	ug/L	94.2	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Lead	477	ug/L	500	ug/L	95.5	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Magnesium	487000	ug/L	500000	ug/L	97.5	80.0 – 120.0	17-FEB-10 10:43	021710-1



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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

ICS:

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (% R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	476	ug/L	500	ug/L	95.3	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Potassium	5080	ug/L	5000	ug/L	102	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Silver	250	ug/L	250	ug/L	99.8	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Sodium	5120	ug/L	5000	ug/L	102	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Vanadium	507	ug/L	500	ug/L	101	80.0 – 120.0	17-FEB-10 10:43	021710-1
	Zinc	459	ug/L	500	ug/L	91.8	80.0 – 120.0	17-FEB-10 10:43	021710-1

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

SDG No: 10-1471

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>
<b>ICSA01</b>									
	Arsenic	0.415	ug/L					12-FEB-10 22:38	100212-2
	Selenium	0.719	ug/L					12-FEB-10 22:38	100212-2
	Thallium	0.046	ug/L					12-FEB-10 22:38	100212-2
<b>ICSAB01</b>									
	Arsenic	20.1	ug/L	20	ug/L	100	80.0 – 120.0	12-FEB-10 22:44	100212-2
	Selenium	19.3	ug/L	20	ug/L	96.7	80.0 – 120.0	12-FEB-10 22:44	100212-2
	Thallium	17.1	ug/L	20	ug/L	85.3	80.0 – 120.0	12-FEB-10 22:44	100212-2

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

SDG No: 10-1471

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	-0.016	ug/L					14-FEB-10 01:17	100213-3
ICSAB01	Uranium	18.4	ug/L	20	ug/L	91.8	80.0 - 120.0	14-FEB-10 01:23	100213-3

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

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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	-0.004	ug/L					15-FEB-10 14:13	100215-4
ICSAB01	Uranium	20.3	ug/L	20	ug/L	102	80.0 - 120.0	15-FEB-10 14:15	100215-4

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

SDG No: 10-1471

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

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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	-0.014	ug/L					16-FEB-10 10:28	100216-5
ICSAB01	Uranium	20.9	ug/L	20	ug/L	104	80.0 - 120.0	16-FEB-10 10:30	100216-5

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

SDG No: 10-1471

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	Beryllium	0.029	ug/L					17-FEB-10 14:18	100217-6
	Nickel	4.48	ug/L					17-FEB-10 14:18	100217-6
ICSAB01	Beryllium	16.4	ug/L	20	ug/L	82.1	80.0 - 120.0	17-FEB-10 14:20	100217-6
	Nickel	22.2	ug/L	23.31	ug/L	95.4	80.0 - 120.0	17-FEB-10 14:20	100217-6

## METALS

-5a-

## Matrix Spike Summary

**SDG NO.** 10-1471 **Client ID** RE15-10-7888S**Contract:** LANL01004 **Level:** Low**Matrix:** SOIL **% Solids:** 90.7**Sample ID:** 245797001 **Spike ID:** 1202030038

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/kg	75-125	175		36.2		128	109		AV

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1471 Client ID RE15-10-7888SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90.7

Sample ID: 245797001 Spike ID: 1202030040

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/kg	75-125	157		36.2		116	105		AV



## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1471 Client ID RE15-10-7888S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90.7

Sample ID: 245797001 Spike ID: 1202030956

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		12300000		7810000		516000	871	N/A	P
Antimony	ug/Kg	75-125	43700		878	J	51600	83		P
Barium	ug/Kg	75-125	145000		118000		51600	52.1	N	P
Cadmium	ug/Kg	75-125	49400		106	U	51600	95.7		P
Calcium	ug/Kg		5770000		4570000		516000	232	N/A	P
Chromium	ug/Kg	75-125	60900		7420		51600	104		P
Cobalt	ug/Kg	75-125	55500		8400		51600	91.1		P
Copper	ug/Kg	75-125	65600		7270		51600	113		P
Iron	ug/Kg		14900000		12500000		516000	460	N/A	P
Lead	ug/Kg	75-125	58700		9040		51600	96.2		P
Magnesium	ug/Kg	75-125	2600000		1710000		516000	173	N	P
Manganese	ug/Kg		254000		207000		51600	91.2	N/A	P
Potassium	ug/Kg	75-125	1860000		1100000		516000	146	N	P
Silver	ug/Kg	75-125	51400		106	U	51600	99.5		P
Sodium	ug/Kg	75-125	888000		392000		516000	96.1		P
Vanadium	ug/Kg	75-125	67600		15500		51600	101		P
Zinc	ug/Kg	75-125	90800		35000		51600	108		P

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1471 Client ID RE15-10-7888SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90.7

Sample ID: 245797001 Spike ID: 1202030957

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		13900000		7810000		522000	1160	N/A	P
Antimony	ug/Kg	75-125	43600		878	J	52200	81.8		P
Barium	ug/Kg	75-125	159000		118000		52200	77.9		P
Cadmium	ug/Kg	75-125	51500		106	U	52200	98.7		P
Calcium	ug/Kg		6090000		4570000		522000	291	N/A	P
Chromium	ug/Kg	75-125	62800		7420		52200	106		P
Cobalt	ug/Kg	75-125	59700		8400		52200	98.3		P
Copper	ug/Kg	75-125	64500		7270		52200	110		P
Iron	ug/Kg		15600000		12500000		522000	594	N/A	P
Lead	ug/Kg	75-125	62300		9040		52200	102		P
Magnesium	ug/Kg	75-125	2910000		1710000		522000	229	N	P
Manganese	ug/Kg	75-125	307000		207000		52200	193	N	P
Potassium	ug/Kg	75-125	2030000		1100000		522000	178	N	P
Silver	ug/Kg	75-125	53600		106	U	52200	103		P
Sodium	ug/Kg	75-125	969000		392000		522000	111		P
Vanadium	ug/Kg	75-125	71400		15500		52200	107		P
Zinc	ug/Kg	75-125	92200		35000		52200	109		P

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1471 Client ID RE15-10-7888S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90.7

Sample ID: 245797001 Spike ID: 1202030962

<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>
Arsenic	mg/kg	75-125	9.29		2.52		8.63	78.5		MS
Beryllium	mg/kg	75-125	4.93		0.67		5.4	78.9		MS
Nickel	mg/kg	75-125	11.3		7.47		5.4	70.4	N	MS
Selenium	mg/kg	75-125	2.28		0.67	J	2.16	74.7	N	MS
Thallium	mg/kg	75-125	9.09		0.163	J	10.8	82.7		MS
Uranium	mg/kg	75-125	5.26		0.534		5.4	87.6		MS

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1471 Client ID: RE15-10-7888SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 90.7

Sample ID: 245797001 Spike ID: 1202030963

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	8.99		2.52		8.4	77		MS
Beryllium	mg/kg	75-125	4.91		0.67		5.25	80.8		MS
Nickel	mg/kg	75-125	10.7		7.47		5.25	61.8	N	MS
Selenium	mg/kg	75-125	2.19		0.67	J	2.1	72.6	N	MS
Thallium	mg/kg	75-125	9.19		0.163	J	10.5	85.9		MS
Uranium	mg/kg	75-125	5.24		0.534		5.25	89.7		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7888D

Sample ID: 245797001

Duplicate ID: 1202030037

Percent Solids for Dup: 90.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-13.2	36.2		41.2		13		AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7888SD

Sample ID: 1202030038

Duplicate ID: 1202030040

Percent Solids for Dup: 90.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	175		157		10.9		AV

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

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7888D

Sample ID: 245797001

Duplicate ID: 1202030954

Percent Solids for Dup: 90.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	7810000		7770000		.506		P
Antimony	ug/Kg	+/-1070	878 J		1090		21.6		P
Barium	ug/Kg	+/-20%	118000		101000		15.2		P
Cadmium	ug/Kg		106 U		107 U				P
Calcium	ug/Kg	+/-20%	4570000		5470000		17.9		P
Chromium	ug/Kg	+/-20%	7420		8010		7.69		P
Cobalt	ug/Kg	+/-20%	8400		9820		15.6		P
Copper	ug/Kg	+/-20%	7270		7360		1.19		P
Iron	ug/Kg	+/-20%	12500000		13500000		7.9		P
Lead	ug/Kg	+/-20%	9040		8520		6.01		P
Magnesium	ug/Kg	+/-20%	1710000		1770000		3.42		P
Manganese	ug/Kg	+/-20%	207000		227000		9.33		P
Potassium	ug/Kg	+/-20%	1100000		1100000		.0674		P
Silver	ug/Kg		106 U		107 U				P
Sodium	ug/Kg	+/-20%	392000		398000		1.66		P
Vanadium	ug/Kg	+/-20%	15500		15100		2.74		P
Zinc	ug/Kg	+/-20%	35000		38200		8.83		P

Metals  
-6-  
Duplicate Sample Summary

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7888SD

Sample ID: 1202030956

Duplicate ID: 1202030957

Percent Solids for Dup: 90.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	12300000		13900000		11.9		P
Antimony	ug/Kg	+/-20	43700		43600		.335		P
Barium	ug/Kg	+/-20	145000		159000		9.06		P
Cadmium	ug/Kg	+/-20	49400		51500		4.22		P
Calcium	ug/Kg	+/-20	5770000		6090000		5.45		P
Chromium	ug/Kg	+/-20	60900		62800		2.94		P
Cobalt	ug/Kg	+/-20	55500		59700		7.4		P
Copper	ug/Kg	+/-20	65600		64500		1.61		P
Iron	ug/Kg	+/-20	14900000		15600000		4.77		P
Lead	ug/Kg	+/-20	58700		62300		5.93		P
Magnesium	ug/Kg	+/-20	2600000		2910000		11		P
Manganese	ug/Kg	+/-20	254000		307000		19.2		P
Potassium	ug/Kg	+/-20	1860000		2030000		9.14		P
Silver	ug/Kg	+/-20	51400		53600		4.23		P
Sodium	ug/Kg	+/-20	888000		969000		8.79		P
Vanadium	ug/Kg	+/-20	67600		71400		5.46		P
Zinc	ug/Kg	+/-20	90800		92200		1.53		P



## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7888D

Sample ID: 245797001

Duplicate ID: 1202030960

Percent Solids for Dup: 90.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-1.08	2.52		2.32		8.09		MS
Beryllium	mg/kg	+/-20%	0.67		0.716		6.69		MS
Nickel	mg/kg	+/-20%	7.47		7.34		1.85		MS
Selenium	mg/kg	+/-1.08	0.67 J		0.705 J		5.07		MS
Thallium	mg/kg		0.163 J		0.0647 U		200		MS
Uranium	mg/kg	+/-20%	0.534		0.511		4.26		MS

Metals  
-6-  
Duplicate Sample Summary

SDG No.: 10-1471

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7888SD

Sample ID: 1202030962

Duplicate ID: 1202030963

Percent Solids for Dup: 90.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	9.29		8.99		3.29		MS
Beryllium	mg/kg	+/-20	4.93		4.91		.293		MS
Nickel	mg/kg	+/-20	11.3		10.7		5.02		MS
Selenium	mg/kg	+/-20	2.28		2.19		3.9		MS
Thallium	mg/kg	+/-20	9.09		9.19		1.11		MS
Uranium	mg/kg	+/-20	5.26		5.24		.306		MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1471

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>
1202030036	Mercury	ug/kg	5150	5430		105	71.6-128.3	AV

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1471

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>
1202030958								
	Aluminum	ug/Kg	10500000	7990000		76.1	56-144	P
	Antimony	ug/Kg	173000	131000		75.5	71-130	P
	Barium	ug/Kg	198000	186000		94.2	80-120	P
	Cadmium	ug/Kg	60700	55400		91.2	81-120	P
	Calcium	ug/Kg	9870000	8990000		91.1	83-117	P
	Chromium	ug/Kg	236000	228000		96.7	80-120	P
	Cobalt	ug/Kg	91200	87700		96.1	81-120	P
	Copper	ug/Kg	174000	170000		97.7	81-118	P
	Iron	ug/Kg	18000000	17200000		95.5	51-149	P
	Lead	ug/Kg	86000	77500		90.1	79-121	P
	Magnesium	ug/Kg	4000000	3620000		90.6	79-122	P
	Manganese	ug/Kg	558000	516000		92.4	81-119	P
	Potassium	ug/Kg	4300000	3770000		87.7	74-127	P
	Silver	ug/Kg	30100	28900		96.1	66-134	P
	Sodium	ug/Kg	1020000	942000		92.4	74-127	P
	Vanadium	ug/Kg	115000	116000		101	79-121	P
	Zinc	ug/Kg	594000	548000		92.2	80-121	P

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1471

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>
1202030964								
	Arsenic	mg/kg	104	102		98.3	78-123	MS
	Beryllium	mg/kg	77.6	67.4		86.9	84-116	MS
	Nickel	mg/kg	134	129		96.3	78-123	MS
	Selenium	mg/kg	286	269		93.9	77-123	MS
	Thallium	mg/kg	121	118		97.8	78-122	MS
	Uranium	mg/kg	2.13	1.68		79	73-127	MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1471

Client ID RE15-10-7888L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 245797001

Serial Dilution ID: 1202030039

<u>Analyte</u>	<u>Initial Value ug/L</u>	<u>C</u>	<u>Serial Value ug/L</u>	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Mercury	.62		.34	U	100			AV

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1471 Client ID RE15-10-7888L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 245797001 Serial Dilution ID: 1202030955

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	73900		78500		6.22		10	P
Antimony	8.31	J	16.5	U	100			P
Barium	1120		1150		2.68		10	P
Cadmium	1	U	5	U				P
Calcium	43300		45700		5.43		10	P
Chromium	70.2		73		3.99			P
Cobalt	79.5		78		1.89		10	P
Copper	68.8		69		.291			P
Iron	118000		128000		8.05		10	P
Lead	85.6		90		5.14			P
Magnesium	16200		17300		6.48		10	P
Manganese	1960		2000		2.04		10	P
Potassium	10400		11100		6.25		10	P
Silver	1	U	5	U				P
Sodium	3710		3940		6.2		10	P
Vanadium	146		151		3.42		10	P
Zinc	332		338		1.66		10	P

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1471

Client ID RE15-10-7888L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 245797001

Serial Dilution ID: 1202030961

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	11.6		7.35	J	36.6			MS
Beryllium	3.07		3.27		6.35			MS
Nickel	34.3		38.4		11.8			MS
Selenium	3.07	J	12.5	U	100			MS
Thallium	.747	J	1.5	U	100			MS
Uranium	2.45		2.65		7.96			MS



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

SDG No: 10-1471

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>
<b>Batch Number 948064</b>							
1202030953	MB for batch 948064	MB	S	08-FEB-10	.546g	50mL	
1202030958	LCS for batch 948064	LCS	S	08-FEB-10	.521g	50mL	
1202030956	RE15-10-7888S	MS	S	08-FEB-10	.534g	50mL	
1202030957	RE15-10-7888SD	MSD	S	08-FEB-10	.528g	50mL	
1202030954	RE15-10-7888D	DUP	S	08-FEB-10	.515g	50mL	
245797001	RE15-10-7888	SAMPLE	S	08-FEB-10	.522g	50mL	
245797002	RE15-10-7890	SAMPLE	S	08-FEB-10	.541g	50mL	
245797003	RE15-10-7886	SAMPLE	S	08-FEB-10	.502g	50mL	
245797004	RE15-10-7889	SAMPLE	S	08-FEB-10	.518g	50mL	
245797005	RE15-10-7885	SAMPLE	S	08-FEB-10	.553g	50mL	
245797006	RE15-10-7882	SAMPLE	S	08-FEB-10	.51g	50mL	
245797007	RE15-10-7887	SAMPLE	S	08-FEB-10	.515g	50mL	
245797008	RE15-10-7881	SAMPLE	S	08-FEB-10	.544g	50mL	
245797009	RE15-10-7951	SAMPLE	S	08-FEB-10	.529g	50mL	
245797010	RE15-10-7950	SAMPLE	S	08-FEB-10	.504g	50mL	
245797011	RE15-10-7947	SAMPLE	S	08-FEB-10	.508g	50mL	
245797012	RE15-10-7944	SAMPLE	S	08-FEB-10	.505g	50mL	
245797013	RE15-10-7948	SAMPLE	S	08-FEB-10	.515g	50mL	
245797014	RE15-10-7941	SAMPLE	S	08-FEB-10	.511g	50mL	

SW846

METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1471

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>
245797015	RE15-10-7949	SAMPLE	S	08-FEB-10	.51g	50mL	
245797016	RE15-10-7946	SAMPLE	S	08-FEB-10	.534g	50mL	
245797017	RE15-10-7942	SAMPLE	S	08-FEB-10	.519g	50mL	
245797018	RE15-10-7945	SAMPLE	S	08-FEB-10	.53g	50mL	
245797019	RE15-10-7943	SAMPLE	S	08-FEB-10	.518g	50mL	

SW846

METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1471

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 948066							
1202030959	MB for batch 948066	MB	S	08-FEB-10	.518g	50mL	
1202030964	LCS for batch 948066	LCS	S	08-FEB-10	.512g	50mL	
1202030962	RE15-10-7888S	MS	S	08-FEB-10	.511g	50mL	
1202030963	RE15-10-7888SD	MSD	S	08-FEB-10	.525g	50mL	
1202030960	RE15-10-7888D	DUP	S	08-FEB-10	.511g	50mL	
245797001	RE15-10-7888	SAMPLE	S	08-FEB-10	.506g	50mL	
245797002	RE15-10-7890	SAMPLE	S	08-FEB-10	.537g	50mL	
245797003	RE15-10-7886	SAMPLE	S	08-FEB-10	.521g	50mL	
245797004	RE15-10-7889	SAMPLE	S	08-FEB-10	.501g	50mL	
245797005	RE15-10-7885	SAMPLE	S	08-FEB-10	.522g	50mL	
245797006	RE15-10-7882	SAMPLE	S	08-FEB-10	.516g	50mL	
245797007	RE15-10-7887	SAMPLE	S	08-FEB-10	.551g	50mL	
245797008	RE15-10-7881	SAMPLE	S	08-FEB-10	.521g	50mL	
245797009	RE15-10-7951	SAMPLE	S	08-FEB-10	.531g	50mL	
245797010	RE15-10-7950	SAMPLE	S	08-FEB-10	.506g	50mL	
245797011	RE15-10-7947	SAMPLE	S	08-FEB-10	.506g	50mL	
245797012	RE15-10-7944	SAMPLE	S	08-FEB-10	.511g	50mL	
245797013	RE15-10-7948	SAMPLE	S	08-FEB-10	.541g	50mL	
245797014	RE15-10-7941	SAMPLE	S	08-FEB-10	.535g	50mL	

SW846

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

SDG No: 10-1471

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>
245797015	RE15-10-7949	SAMPLE	S	08-FEB-10	.549g	50mL	
245797016	RE15-10-7946	SAMPLE	S	08-FEB-10	.518g	50mL	
245797017	RE15-10-7942	SAMPLE	S	08-FEB-10	.504g	50mL	
245797018	RE15-10-7945	SAMPLE	S	08-FEB-10	.505g	50mL	
245797019	RE15-10-7943	SAMPLE	S	08-FEB-10	.515g	50mL	

SW846

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

SDG No: 10-1471

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 947667							
1202030035	MB for batch 947667	MB	S	15-FEB-10	.513g	30mL	
1202030036	LCS for batch 947667	LCS	S	15-FEB-10	.2g	30mL	
1202030038	RE15-10-7888S	MS	S	15-FEB-10	.516g	30mL	
1202030040	RE15-10-7888SD	MSD	S	15-FEB-10	.572g	30mL	
1202030037	RE15-10-7888D	DUP	S	15-FEB-10	.5g	30mL	
245797001	RE15-10-7888	SAMPLE	S	15-FEB-10	.567g	30mL	
245797002	RE15-10-7890	SAMPLE	S	15-FEB-10	.528g	30mL	
245797003	RE15-10-7886	SAMPLE	S	15-FEB-10	.549g	30mL	
245797004	RE15-10-7889	SAMPLE	S	15-FEB-10	.543g	30mL	
245797005	RE15-10-7885	SAMPLE	S	15-FEB-10	.547g	30mL	
245797006	RE15-10-7882	SAMPLE	S	15-FEB-10	.566g	30mL	
245797007	RE15-10-7887	SAMPLE	S	15-FEB-10	.535g	30mL	
245797008	RE15-10-7881	SAMPLE	S	15-FEB-10	.519g	30mL	
245797009	RE15-10-7951	SAMPLE	S	15-FEB-10	.526g	30mL	
245797010	RE15-10-7950	SAMPLE	S	15-FEB-10	.512g	30mL	
245797011	RE15-10-7947	SAMPLE	S	15-FEB-10	.567g	30mL	
245797012	RE15-10-7944	SAMPLE	S	15-FEB-10	.502g	30mL	
245797013	RE15-10-7948	SAMPLE	S	15-FEB-10	.542g	30mL	
245797014	RE15-10-7941	SAMPLE	S	15-FEB-10	.503g	30mL	

SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1471

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>
245797015	RE15-10-7949	SAMPLE	S	15-FEB-10	.501g	30mL	
245797016	RE15-10-7946	SAMPLE	S	15-FEB-10	.518g	30mL	
245797017	RE15-10-7942	SAMPLE	S	15-FEB-10	.505g	30mL	
245797018	RE15-10-7945	SAMPLE	S	15-FEB-10	.503g	30mL	
245797019	RE15-10-7943	SAMPLE	S	15-FEB-10	.529g	30mL	

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SW846

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: MER536

Start Date: 16-FEB-10

Client Sdg: 10-1471

Method: AV

Data File: 021610S2-7

End Date: 16-FEB-10

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	10:19															X									
S0.2	1	10:21															X									
S0.5	1	10:23															X									
S2.0	1	10:25															X									
S5.0	1	10:27															X									
S10	1	10:29															X									
ICV01	1	10:31															X									
ICB01	1	10:33															X									
CRDL01	1	10:35															X									
CCV01	1	10:37															X									
CCB01	1	10:39															X									
ZZZZZZ	1	10:41																								
ZZZZZZ	10	10:43																								
ZZZZZZ	1	10:45																								
ZZZZZZ	1	10:47																								
ZZZZZZ	1	10:49																								
ZZZZZZ	1	10:51																								
ZZZZZZ	5	10:53																								
ZZZZZZ	1	10:55																								
ZZZZZZ	1	10:57																								
ZZZZZZ	1	10:59																								
CCV02	1	11:01															X									
CCB02	1	11:03															X									
ZZZZZZ	1	11:05																								
ZZZZZZ	1	11:07																								
ZZZZZZ	1	11:09																								
ZZZZZZ	1	11:11																								
ZZZZZZ	1	11:13																								
ZZZZZZ	1	11:15																								
ZZZZZZ	1	11:17																								
ZZZZZZ	1	11:19																								
ZZZZZZ	1	11:21																								
ZZZZZZ	1	11:23																								
CCV03	1	11:25															X									
CCB03	1	11:27															X									
ZZZZZZ	1	11:29																								
ZZZZZZ	10	11:31																								
ZZZZZZ	1	11:33																								
ZZZZZZ	1	11:35																								
ZZZZZZ	1	11:37																								

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

Samp No.	D/F	Run Time
ZZZZZZ	1	11:39
ZZZZZZ	5	11:41
ZZZZZZ	1	11:42
ZZZZZZ	1	11:44
ZZZZZZ	1	11:46
CCV04	1	11:48
CCB04	1	11:50
ZZZZZZ	1	11:52
ZZZZZZ	1	11:54
ZZZZZZ	1	11:56
ZZZZZZ	1	11:58
ZZZZZZ	1	12:00
ZZZZZZ	1	12:02
ZZZZZZ	1	12:04
ZZZZZZ	1	12:06
ZZZZZZ	1	12:08
ZZZZZZ	1	12:10
CCV05	1	12:12
CCB05	1	12:14
ZZZZZZ	1	12:16
ZZZZZZ	1	12:18
1202030035	1	12:20
1202030036	10	12:22
245797001	1	12:24
1202030037	1	12:26
1202030038	1	12:28
1202030040	1	12:30
1202030039	5	12:32
245797002	1	12:34
CCV06	1	12:36
CCB06	1	12:38
245797003	1	12:40
245797004	1	12:42
245797005	1	12:44
245797006	1	12:46
245797007	1	12:48
245797008	1	12:50
245797009	1	12:51
245797010	1	12:53
245797011	1	12:55



**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
245797012	1	12:57															X									
CCV07	1	12:59															X									
CCB07	1	13:01															X									
245797013	1	13:03															X									
245797014	1	13:05															X									
245797015	1	13:07															X									
245797016	1	13:09															X									
245797017	1	13:11															X									
245797018	1	13:13															X									
245797019	1	13:15															X									
CCV08	1	13:17															X									
CCB08	1	13:19															X									

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

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 12-FEB-10

End Date: 13-FEB-10

Client Sdg: 10-1471

Method MS

Data File: 100212-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Ti	U	V	Zn
S0.0	1	22:01			X															X			X			
S10	1	22:07			X															X			X			
S100	1	22:13			X															X			X			
ICV01	1	22:20			X															X			X			
ICB01	1	22:26			X															X			X			
CRDL01	1	22:32			X															X			X			
ICSA01	1	22:38			X															X			X			
ICSAB01	1	22:44			X															X			X			
CCV01	1	22:50			X															X			X			
CCB01	1	22:56			X															X			X			
LR01	1	23:03			X															X			X			
CCV02	1	23:09			X															X			X			
CCB02	1	23:15			X															X			X			
1202030959	2	23:21			X															X			X			
1202030964	40	23:27			X															X			X			
245797001	2	23:33			X															X			X			
1202030960	2	23:39			X															X			X			
1202030962	2	23:46			X															X			X			
1202030963	2	23:52			X															X			X			
1202030961	10	23:58			X															X			X			
CCV03	1	00:04			X															X			X			
CCB03	1	00:10			X															X			X			
245797002	2	00:16			X															X			X			
245797003	2	00:23			X															X			X			
245797004	2	00:29			X															X			X			
245797005	2	00:35			X															X			X			
245797006	2	00:41			X															X			X			
245797007	2	00:47			X															X			X			
CCV04	1	00:53			X															X			X			
CCB04	1	01:00			X															X			X			
245797008	2	01:06			X															X			X			
245797009	2	01:12			X															X			X			
245797010	2	01:18			X															X			X			
245797011	2	01:24			X															X			X			
245797012	2	01:30			X															X			X			
245797013	2	01:37			X															X			X			
CCV05	1	01:43			X															X			X			
CCB05	1	01:49			X															X			X			
245797014	2	01:55			X															X			X			
245797015	2	02:01			X															X			X			

Samp No.	D/F	Run Time												X		X		
245797016	2	02:07		X										X		X		
245797017	2	02:14		X										X		X		
245797018	2	02:20		X										X		X		
245797019	2	02:26		X										X		X		
CCV06	1	02:32		X										X		X		
CCB06	1	02:38		X										X		X		

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

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 14-FEB-10

Client Sdg: 10-1471

Method MS

Data File: 100213-3

End Date: 14-FEB-10

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	00:40																						X		
S10	1	00:46																						X		
S100	1	00:52																						X		
ICV01	1	00:58																						X		
ICB01	1	01:04																						X		
CRDL01	1	01:11																						X		
ICSA01	1	01:17																						X		
ICSAB01	1	01:23																						X		
CCV01	1	01:29																						X		
CCB01	1	01:35																						X		
LR01	1	01:41																						X		
CCV02	1	01:47																						X		
CCB02	1	01:54																						X		
1202030959	2	02:00																						X		
1202030964	40	02:06																						X		
CCV03	1	02:12																						X		
CCB03	1	02:18																						X		
245797001	2	02:24																						X		
1202030960	2	02:31																						X		
1202030962	2	02:37																						X		
1202030963	2	02:43																						X		
1202030961	10	02:49																						X		
CCV04	1	02:55																						X		
CCB04	1	03:01																						X		
245797002	2	03:08																						X		
245797003	2	03:14																						X		
245797004	2	03:20																						X		
245797005	2	03:26																						X		
245797006	2	03:32																						X		
CCV05	1	03:38																						X		
CCB05	1	03:44																						X		
245797007	2	03:51																						X		
245797008	2	03:57																						X		
245797009	2	04:03																						X		
245797010	2	04:09																						X		
245797011	2	04:15																						X		
CCV06	1	04:21																						X		
CCB06	1	04:28																						X		
245797012	2	04:34																						X		
245797013	2	04:40																						X		

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

Samp No.	D/F	Run Time
245797014	2	04:46
245797015	2	04:52
CCV07	1	04:59
CCB07	1	05:05

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

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 15-FEB-10

End Date: 15-FEB-10

Client Sdg: 10-1471

Method MS

Data File: 100215-4

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	14:00																						X		
S10	1	14:02																						X		
S100	1	14:04																						X		
ICV01	1	14:06																						X		
ICB01	1	14:09																						X		
CRDL01	1	14:11																						X		
ICSA01	1	14:13																						X		
ICSAB01	1	14:15																						X		
CCV01	1	14:17																						X		
CCB01	1	14:20																						X		
ZZZZZZ	2	14:22																								
ZZZZZZ	40	14:24																								
245797016	2	14:26																						X		
245797017	2	14:28																						X		
ZZZZZZ	2	14:31																								
245797019	2	14:33																						X		
CCV02	1	14:35																						X		
CCB02	1	14:37																						X		

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

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 16-FEB-10

End Date: 16-FEB-10

Client Sdg: 10-1471

Method MS

Data File: 100216-5

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	10:18																						X		
S10	1	10:20																						X		
S100	1	10:21																						X		
ICV01	1	10:23																						X		
ICB01	1	10:25																						X		
CRDL01	1	10:26																						X		
ICSA01	1	10:28																						X		
ICSAB01	1	10:30																						X		
CCV01	1	10:32																						X		
CCB01	1	10:33																						X		
ZZZZZZ	2	10:35																								
ZZZZZZ	40	10:37																								
245797018	10	10:38																						X		
CCV02	1	10:40																						X		
CCB02	1	10:42																						X		

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 17-FEB-10

End Date: 17-FEB-10

Client Sdg: 10-1471

Method MS

Data File: 100217-6

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	14:07					X											X								
S10	1	14:09					X											X								
S100	1	14:11					X											X								
ICV01	1	14:13					X											X								
ICB01	1	14:14					X											X								
CRDL01	1	14:16					X											X								
ICSA01	1	14:18					X											X								
ICSAB01	1	14:20					X											X								
CCV01	1	14:22					X											X								
CCB01	1	14:24					X											X								
1202030959	2	14:26					X											X								
1202030964	40	14:27					X											X								
ZZZZZZ	2	14:29																								
ZZZZZZ	2	14:31																								
ZZZZZZ	2	14:33																								
ZZZZZZ	2	14:35																								
ZZZZZZ	10	14:37																								
CCV02	1	14:39					X											X								
CCB02	1	14:41					X											X								
245797002	2	14:42					X											X								
245797003	2	14:44					X											X								
245797004	2	14:46					X											X								
245797005	2	14:48					X											X								
CCV03	1	14:50					X											X								
CCB03	1	14:52					X											X								
245797006	2	14:54					X											X								
245797007	2	14:56					X											X								
245797008	2	14:57					X											X								
245797009	2	14:59					X											X								
245797010	2	15:01					X											X								
CCV04	1	15:03					X											X								
CCB04	1	15:05					X											X								
245797011	2	15:07					X											X								
245797012	2	15:09					X											X								
245797013	2	15:11					X											X								
245797014	2	15:12					X											X								
CCV05	1	15:14					X											X								
CCB05	1	15:16					X											X								
245797015	2	15:18					X											X								
245797016	2	15:20					X											X								



Samp No.	D/F	Run Time
245797017	2	15:22
245797018	2	15:24
245797019	2	15:26
CCV06	1	15:28
CCB06	1	15:29
245797001	2	15:31
1202030960	2	15:33
1202030962	2	15:35
1202030963	2	15:37
1202030961	10	15:39
CCV07	1	15:41
CCB07	1	15:43

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

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 17-FEB-10

Client Sdg: 10-1471

Method P

Data File: 021710-1

End Date: 17-FEB-10

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	10:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	10:18		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	10:21	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	10:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	10:28	X					X					X		X							X				
ICV01	1	10:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	10:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	10:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	10:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	10:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV01	1	10:52	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	10:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	11:00																								
ZZZZZZ	1	11:04																								
CCV02	1	11:07	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	11:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV03	1	11:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	11:38	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202030953	1	11:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202030958	1	11:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245797001	1	11:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202030954	1	11:52	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202030956	1	11:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202030957	1	11:59	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202030955	5	12:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV04	1	12:06	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	12:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	12:13																								
ZZZZZZ	1	12:16																								
ZZZZZZ	1	12:20																								
ZZZZZZ	1	12:23																								
ZZZZZZ	1	12:27																								
ZZZZZZ	1	12:30																								
ZZZZZZ	1	12:34																								
ZZZZZZ	1	12:37																								
ZZZZZZ	1	12:41																								
CCV05	1	12:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB05	1	12:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

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# Standards

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1471

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength (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.** 10-1471

**Contract:** LANL01004

**Lab Code:** GEL

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

	<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. 10-1471

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<u>Analyte</u>	<u>Wavelength</u>	<u>MDL</u>	<u>RDL</u>
		<u>(nm)</u>	<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

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

Lab Code: GEL

GEL Job No: 10-1471

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: 10-1471

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: **10-1471**Contract: LANL01004Instrument: OPTIMA1Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	20.5430
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3320
Arsenic	188.979	-0.05800	0.00000	0.00000	0.00000	1.97700
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.13300	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-0.90500
Copper	324.752	-0.13900	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.03800	-2.87600	0.00000	0.00000	0.00000
Magnesium	279.077	1.07300	0.00000	0.00000	0.00000	-16.8110
Manganese	257.61	-0.13900	0.00000	0.04000	0.00000	0.00000
Molybdenum	202.031	-0.03800	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	-0.01300	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.81200	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.88200	0.00000	0.28200	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	-0.06300	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.03900	0.00000	0.00000	-4.11700	0.00000
Tin	189.927	-0.09200	0.00000	-0.19600	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.07900	0.00000	0.00000
Uranium	409.014	0.13900	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.05300	0.00000	0.00000	0.00000	-7.71400
Zinc	213.857	0.14460	0.00000	0.02030	0.00000	0.00000

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

Lab Code: GELGEL Job No: **10-1471**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: 10-1471

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Sulfur	Thallium	Tin	Titanium	Uranium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.38100	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	2.08700	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.04000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	-14.8110	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-8.68900	-1.22400
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	-1.03900
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

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

Lab Code: GEL

GEL Job No: 10-1471

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000
Antimony	206.836	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000
Barium	233.527	-1.80500	0.00000
Beryllium	313.107	0.00000	0.00000
Boron	249.677	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000
Chromium	267.716	-0.63000	0.00000
Cobalt	228.616	0.00000	0.00000
Copper	324.752	0.00000	0.00000
Iron	238.204	0.00000	0.00000
Lead	220.353	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000
Manganese	257.61	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000
Nickel	231.604	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000
Selenium	196.026	0.00000	0.00000
Silicon	251.611	0.00000	0.00000
Silver	328.068	-6.59800	0.00000
Sulfur	181.975	0.00000	0.00000
Thallium	190.801	0.00000	0.00000
Tin	189.927	0.00000	0.00000
Titanium	334.94	0.00000	0.00000
Uranium	409.014	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000
Zinc	213.857	0.00000	0.00000

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

SDG NO. 10-1471

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

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

SDG NO. 10-1471

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>
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
Aluminum	20	500000	ug/L	01-FEB-10

# Raw Data



=====  
Analysis Begun

Start Time: 2/17/2010 10:15:17

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\021710B.SIF

Batch ID:

Results Data Set: 021710

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

## Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 2/17/2010 07:57:13

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: 8

Sample ID: S0

Date Collected: 2/17/2010 10:15:19

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	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	58002.7	58002.7	99.9 %	10:15:52
1	Al 396.153Radial†	-25.9	-26.0	[0.00] µg/L	10:15:52
1	Ca 317.933Radial†	199.4	199.5	[0.00] µg/L	10:16:12
1	Fe 238.204 Radial†	17.4	17.4	[0.00] µg/L	10:16:12

1	K 766.490 Radial†	211.1	211.2	[0.00]	µg/L	10:15:52
1	Mg 279.077 IEC†	13.3	13.3	[0.00]	µg/L	10:16:12
1	Na 589.592 Radial†	596.3	596.7	[0.00]	µg/L	10:15:52
1	Sr 421.552†	61.9	62.0	[0.00]	µg/L	10:15:52
1	Sc 361.383	2054122.2	2054122.2	100.48	%	10:17:10
1	Y 371.029	1411313.0	1411313.0	100.45	%	10:17:10
1	Ag 328.068†	-520.0	-517.6	[0.00]	µg/L	10:17:15
1	As 188.979†	-1.0	-1.0	[0.00]	µg/L	10:17:36
1	B 249.677†	304.8	303.3	[0.00]	µg/L	10:17:36
1	Ba 233.527†	-18.1	-18.0	[0.00]	µg/L	10:17:36
1	Be 313.107†	-3001.9	-2987.7	[0.00]	µg/L	10:17:15
1	Cd 226.502†	-142.2	-141.5	[0.00]	µg/L	10:17:36
1	Co 228.616†	-3.3	-3.3	[0.00]	µg/L	10:17:36
1	Cr 267.716†	-48.2	-47.9	[0.00]	µg/L	10:17:15
1	Cu 324.752†	2526.5	2514.5	[0.00]	µg/L	10:17:15
1	Mn 257.610†	-225.5	-224.4	[0.00]	µg/L	10:17:36
1	Mo 202.031†	-4.6	-4.6	[0.00]	µg/L	10:17:36
1	Ni 231.604†	311.3	309.8	[0.00]	µg/L	10:17:36
1	P 214.914†	24.9	24.8	[0.00]	µg/L	10:17:36
1	Pb 220.353†	97.7	97.2	[0.00]	µg/L	10:17:36
1	S 181.975 Axial†	13.5	13.5	[0.00]	µg/L	10:17:36
1	Sb 206.836†	19.1	19.0	[0.00]	µg/L	10:17:36
1	Se 196.026†	20.7	20.6	[0.00]	µg/L	10:17:36
1	SiO2†	1333.2	1326.8	[0.00]	µg/L	10:17:15
1	Si 251.611†	308.7	307.3	[0.00]	µg/L	10:17:36
1	Sn 189.927†	4.2	4.2	[0.00]	µg/L	10:17:36
1	Ti 334.940†	138.1	137.5	[0.00]	µg/L	10:17:15
1	Tl 190.801†	-22.4	-22.3	[0.00]	µg/L	10:17:36
1	U 409.014†	-29.4	-29.3	[0.00]	µg/L	10:17:15
1	V 292.402†	-4.3	-4.3	[0.00]	µg/L	10:17:15
1	Zn 213.857†	515.3	512.8	[0.00]	µg/L	10:17:36
2	Sc RADIAL	58114.3	58114.3	100	%	10:16:17
2	Al 396.153Radial†	-20.7	-20.6	[0.00]	µg/L	10:16:17
2	Ca 317.933Radial†	193.9	193.7	[0.00]	µg/L	10:16:37
2	Fe 238.204 Radial†	16.8	16.8	[0.00]	µg/L	10:16:37
2	K 766.490 Radial†	179.7	179.5	[0.00]	µg/L	10:16:17
2	Mg 279.077 IEC†	13.5	13.5	[0.00]	µg/L	10:16:37
2	Na 589.592 Radial†	548.6	547.9	[0.00]	µg/L	10:16:17
2	Sr 421.552†	31.2	31.1	[0.00]	µg/L	10:16:17
2	Sc 361.383	2038625.4	2038625.4	99.718	%	10:17:41
2	Y 371.029	1401348.0	1401348.0	99.742	%	10:17:41
2	Ag 328.068†	-537.7	-539.2	[0.00]	µg/L	10:17:47
2	As 188.979†	5.1	5.1	[0.00]	µg/L	10:18:07
2	B 249.677†	286.3	287.1	[0.00]	µg/L	10:18:07
2	Ba 233.527†	-19.0	-19.1	[0.00]	µg/L	10:18:07
2	Be 313.107†	-3019.7	-3028.3	[0.00]	µg/L	10:17:47
2	Cd 226.502†	-136.6	-137.0	[0.00]	µg/L	10:18:07
2	Co 228.616†	-7.9	-7.9	[0.00]	µg/L	10:18:07
2	Cr 267.716†	-29.7	-29.8	[0.00]	µg/L	10:17:47
2	Cu 324.752†	2573.9	2581.2	[0.00]	µg/L	10:17:47
2	Mn 257.610†	-247.4	-248.1	[0.00]	µg/L	10:18:07
2	Mo 202.031†	-8.5	-8.6	[0.00]	µg/L	10:18:07
2	Ni 231.604†	297.5	298.4	[0.00]	µg/L	10:18:07
2	P 214.914†	21.9	22.0	[0.00]	µg/L	10:18:07
2	Pb 220.353†	98.0	98.2	[0.00]	µg/L	10:18:07
2	S 181.975 Axial†	13.6	13.7	[0.00]	µg/L	10:18:07
2	Sb 206.836†	20.3	20.4	[0.00]	µg/L	10:18:07
2	Se 196.026†	15.6	15.6	[0.00]	µg/L	10:18:07
2	SiO2†	1341.3	1345.1	[0.00]	µg/L	10:17:47
2	Si 251.611†	309.4	310.3	[0.00]	µg/L	10:18:07
2	Sn 189.927†	3.5	3.6	[0.00]	µg/L	10:18:07
2	Ti 334.940†	121.8	122.1	[0.00]	µg/L	10:17:47
2	Tl 190.801†	-21.6	-21.6	[0.00]	µg/L	10:18:07
2	U 409.014†	-35.7	-35.8	[0.00]	µg/L	10:17:47
2	V 292.402†	-69.7	-69.9	[0.00]	µg/L	10:17:47
2	Zn 213.857†	519.8	521.3	[0.00]	µg/L	10:18:07
3	Sc RADIAL	57997.3	57997.3	99.9	%	10:16:42
3	Al 396.153Radial†	-22.1	-22.1	[0.00]	µg/L	10:16:42
3	Ca 317.933Radial†	193.0	193.1	[0.00]	µg/L	10:17:02
3	Fe 238.204 Radial†	17.5	17.5	[0.00]	µg/L	10:17:02
3	K 766.490 Radial†	139.9	140.0	[0.00]	µg/L	10:16:42

3	Mg 279.077 IEC†	13.5	13.5	[0.00]	µg/L	10:17:02
3	Na 589.592 Radial†	553.5	553.9	[0.00]	µg/L	10:16:42
3	Sr 421.552†	6.9	6.9	[0.00]	µg/L	10:16:42
3	Sc 361.383	2040450.1	2040450.1	99.807	%	10:18:13
3	Y 371.029	1402277.9	1402277.9	99.808	%	10:18:13
3	Ag 328.068†	-513.2	-514.2	[0.00]	µg/L	10:18:18
3	As 188.979†	0.3	0.3	[0.00]	µg/L	10:18:38
3	B 249.677†	299.3	299.8	[0.00]	µg/L	10:18:38
3	Ba 233.527†	-16.8	-16.8	[0.00]	µg/L	10:18:38
3	Be 313.107†	-2881.1	-2886.7	[0.00]	µg/L	10:18:18
3	Cd 226.502†	-135.2	-135.4	[0.00]	µg/L	10:18:38
3	Co 228.616†	-3.8	-3.8	[0.00]	µg/L	10:18:38
3	Cr 267.716†	-18.8	-18.8	[0.00]	µg/L	10:18:18
3	Cu 324.752†	2512.1	2517.0	[0.00]	µg/L	10:18:18
3	Mn 257.610†	-236.8	-237.2	[0.00]	µg/L	10:18:38
3	Mo 202.031†	-7.5	-7.5	[0.00]	µg/L	10:18:38
3	Ni 231.604†	311.5	312.1	[0.00]	µg/L	10:18:38
3	P 214.914†	17.9	18.0	[0.00]	µg/L	10:18:38
3	Pb 220.353†	85.0	85.1	[0.00]	µg/L	10:18:38
3	S 181.975 Axial†	14.2	14.3	[0.00]	µg/L	10:18:38
3	Sb 206.836†	21.1	21.1	[0.00]	µg/L	10:18:38
3	Se 196.026†	11.3	11.3	[0.00]	µg/L	10:18:38
3	SiO2†	1358.9	1361.5	[0.00]	µg/L	10:18:18
3	Si 251.611†	325.2	325.9	[0.00]	µg/L	10:18:38
3	Sn 189.927†	1.5	1.5	[0.00]	µg/L	10:18:38
3	Ti 334.940†	131.9	132.2	[0.00]	µg/L	10:18:18
3	Tl 190.801†	-24.8	-24.9	[0.00]	µg/L	10:18:38
3	U 409.014†	-65.9	-66.0	[0.00]	µg/L	10:18:18
3	V 292.402†	-21.9	-22.0	[0.00]	µg/L	10:18:18
3	Zn 213.857†	521.4	522.4	[0.00]	µg/L	10:18:38

## Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2044399.2	8469.64	0.41%	100.00	%
Sc RADIAL	58038.1	66.04	0.11%	100	%
Y 371.029	1404979.6	5504.53	0.39%	100.00	%
Ag 328.068†	-523.7	13.55	2.59%	[0.00]	µg/L
Al 396.153Radial†	-22.9	2.75	12.03%	[0.00]	µg/L
As 188.979†	1.5	3.21	216.11%	[0.00]	µg/L
B 249.677†	296.7	8.55	2.88%	[0.00]	µg/L
Ba 233.527†	-18.0	1.15	6.40%	[0.00]	µg/L
Be 313.107†	-2967.6	72.90	2.46%	[0.00]	µg/L
Ca 317.933Radial†	195.4	3.54	1.81%	[0.00]	µg/L
Cd 226.502†	-138.0	3.16	2.29%	[0.00]	µg/L
Co 228.616†	-5.0	2.55	50.91%	[0.00]	µg/L
Cr 267.716†	-32.2	14.69	45.61%	[0.00]	µg/L
Cu 324.752†	2537.6	37.82	1.49%	[0.00]	µg/L
Fe 238.204 Radial†	17.3	0.39	2.27%	[0.00]	µg/L
K 766.490 Radial†	176.9	35.69	20.18%	[0.00]	µg/L
Mg 279.077 IEC†	13.4	0.12	0.93%	[0.00]	µg/L
Mn 257.610†	-236.6	11.86	5.01%	[0.00]	µg/L
Mo 202.031†	-6.9	2.07	30.16%	[0.00]	µg/L
Na 589.592 Radial†	566.1	26.59	4.70%	[0.00]	µg/L
Ni 231.604†	306.8	7.38	2.40%	[0.00]	µg/L
P 214.914†	21.6	3.41	15.83%	[0.00]	µg/L
Pb 220.353†	93.5	7.29	7.79%	[0.00]	µg/L
S 181.975 Axial†	13.8	0.41	2.98%	[0.00]	µg/L
Sb 206.836†	20.2	1.09	5.42%	[0.00]	µg/L
Se 196.026†	15.9	4.63	29.18%	[0.00]	µg/L
SiO2†	1344.5	17.36	1.29%	[0.00]	µg/L
Si 251.611†	314.5	9.99	3.18%	[0.00]	µg/L
Sn 189.927†	3.1	1.38	44.70%	[0.00]	µg/L
Sr 421.552†	33.3	27.60	82.84%	[0.00]	µg/L
Ti 334.940†	130.6	7.79	5.97%	[0.00]	µg/L
Tl 190.801†	-22.9	1.70	7.42%	[0.00]	µg/L
U 409.014†	-43.7	19.58	44.80%	[0.00]	µg/L
V 292.402†	-32.1	33.95	105.90%	[0.00]	µg/L
Zn 213.857†	518.9	5.23	1.01%	[0.00]	µg/L

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

Autosampler Location: 2  
 Date Collected: 2/17/2010 10:18:46  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	59509.8	59509.8	103 %	10:19:20
1	K 766.490 Radial†	1621.7	1404.7	[1000] µg/L	10:19:20
1	Sr 421.552†	9948.3	9668.9	[100] µg/L	10:19:20
1	Sc 361.383	2040697.3	2040697.3	99.819 %	10:19:39
1	Y 371.029	1402155.3	1402155.3	99.799 %	10:19:39
1	Ag 328.068†	12495.4	13041.7	[100] µg/L	10:19:44
1	As 188.979†	49.0	47.6	[100] µg/L	10:20:04
1	B 249.677†	2590.6	2298.5	[100] µg/L	10:19:44
1	Ba 233.527†	3972.7	3997.9	[100] µg/L	10:19:44
1	Be 313.107†	154633.0	157881.1	[100] µg/L	10:19:39
1	Cd 226.502†	3723.1	3867.8	[100] µg/L	10:19:44
1	Co 228.616†	2086.8	2095.6	[100] µg/L	10:20:04
1	Cr 267.716†	4842.6	4883.5	[100] µg/L	10:19:44
1	Cu 324.752†	17648.9	15143.3	[100] µg/L	10:19:44
1	Mn 257.610†	30527.0	30818.9	[100] µg/L	10:19:44
1	Mo 202.031†	996.4	1005.0	[100] µg/L	10:20:04
1	Ni 231.604†	2277.9	1975.2	[100] µg/L	10:19:44
1	P 214.914†	268.2	247.1	[500] µg/L	10:20:04
1	Pb 220.353†	486.0	393.4	[100] µg/L	10:20:04
1	S 181.975 Axial†	66.2	52.5	[200] µg/L	10:20:04
1	Sb 206.836†	145.3	125.4	[100] µg/L	10:20:04
1	Se 196.026†	89.0	73.3	[100] µg/L	10:20:04
1	SiO2†	6474.4	5141.6	[1069.5] µg/L	10:19:44
1	Si 251.611†	6512.7	6210.0	[500] µg/L	10:19:44
1	Sn 189.927†	232.7	230.0	[100] µg/L	10:20:04
1	Ti 334.940†	42646.0	42592.7	[100] µg/L	10:19:44
1	Tl 190.801†	46.3	69.3	[100] µg/L	10:20:04
1	U 409.014†	1207.0	1252.9	[100] µg/L	10:19:44
1	V 292.402†	9876.7	9926.6	[100] µg/L	10:19:44
1	Zn 213.857†	4679.9	4169.5	[100] µg/L	10:19:44
2	Sc RADIAL	58704.1	58704.1	101 %	10:19:25
2	K 766.490 Radial†	1632.6	1437.2	[1000] µg/L	10:19:25
2	Sr 421.552†	10033.5	9886.4	[100] µg/L	10:19:25
2	Sc 361.383	2076953.1	2076953.1	101.59 %	10:20:10
2	Y 371.029	1427221.9	1427221.9	101.58 %	10:20:10
2	Ag 328.068†	12242.7	12574.4	[100] µg/L	10:20:16
2	As 188.979†	55.8	53.5	[100] µg/L	10:20:36
2	B 249.677†	2560.5	2223.6	[100] µg/L	10:20:16
2	Ba 233.527†	3894.6	3851.5	[100] µg/L	10:20:16
2	Be 313.107†	154540.1	155085.4	[100] µg/L	10:20:10
2	Cd 226.502†	3655.9	3736.5	[100] µg/L	10:20:16
2	Co 228.616†	2071.8	2044.3	[100] µg/L	10:20:36
2	Cr 267.716†	4737.1	4695.0	[100] µg/L	10:20:16
2	Cu 324.752†	17397.7	14587.4	[100] µg/L	10:20:16
2	Mn 257.610†	29995.1	29761.5	[100] µg/L	10:20:16
2	Mo 202.031†	990.4	981.7	[100] µg/L	10:20:36
2	Ni 231.604†	2237.7	1895.9	[100] µg/L	10:20:16
2	P 214.914†	266.0	240.2	[500] µg/L	10:20:36
2	Pb 220.353†	491.5	390.3	[100] µg/L	10:20:36
2	S 181.975 Axial†	62.8	48.0	[200] µg/L	10:20:36
2	Sb 206.836†	128.4	106.2	[100] µg/L	10:20:36
2	Se 196.026†	82.1	65.0	[100] µg/L	10:20:36
2	SiO2†	6352.3	4908.3	[1069.5] µg/L	10:20:16
2	Si 251.611†	6394.9	5980.2	[500] µg/L	10:20:16
2	Sn 189.927†	234.3	227.6	[100] µg/L	10:20:36
2	Ti 334.940†	41947.5	41159.4	[100] µg/L	10:20:16
2	Tl 190.801†	51.3	73.4	[100] µg/L	10:20:36
2	U 409.014†	1145.9	1171.7	[100] µg/L	10:20:16
2	V 292.402†	9713.5	9593.3	[100] µg/L	10:20:16

2	Zn 213.857†	4604.5	4013.5	[100] µg/L	10:20:16
3	Sc RADIAL	58755.0	58755.0	101 %	10:19:31
3	K 766.490 Radial†	1607.6	1411.2	[1000] µg/L	10:19:31
3	Sr 421.552†	10017.8	9862.3	[100] µg/L	10:19:31
3	Sc 361.383	2056767.7	2056767.7	100.60 %	10:20:42
3	Y 371.029	1413366.4	1413366.4	100.60 %	10:20:42
3	Ag 328.068†	12242.8	12692.8	[100] µg/L	10:20:47
3	As 188.979†	56.6	54.8	[100] µg/L	10:21:07
3	B 249.677†	2570.0	2257.8	[100] µg/L	10:20:47
3	Ba 233.527†	3857.0	3851.8	[100] µg/L	10:20:47
3	Be 313.107†	154103.8	156144.6	[100] µg/L	10:20:42
3	Cd 226.502†	3634.2	3750.3	[100] µg/L	10:20:47
3	Co 228.616†	2065.4	2058.0	[100] µg/L	10:21:07
3	Cr 267.716†	4720.0	4723.8	[100] µg/L	10:20:47
3	Cu 324.752†	17388.3	14746.2	[100] µg/L	10:20:47
3	Mn 257.610†	29906.0	29962.8	[100] µg/L	10:20:47
3	Mo 202.031†	985.7	986.6	[100] µg/L	10:21:07
3	Ni 231.604†	2233.4	1913.2	[100] µg/L	10:20:47
3	P 214.914†	261.1	238.0	[500] µg/L	10:21:07
3	Pb 220.353†	497.9	401.4	[100] µg/L	10:21:07
3	S 181.975 Axial†	63.8	49.6	[200] µg/L	10:21:07
3	Sb 206.836†	125.6	104.7	[100] µg/L	10:21:07
3	Se 196.026†	87.3	70.9	[100] µg/L	10:21:07
3	SiO2†	6325.6	4943.1	[1069.5] µg/L	10:20:47
3	Si 251.611†	6394.5	6041.6	[500] µg/L	10:20:47
3	Sn 189.927†	231.7	227.2	[100] µg/L	10:21:07
3	Ti 334.940†	41849.4	41467.1	[100] µg/L	10:20:47
3	Tl 190.801†	52.9	75.5	[100] µg/L	10:21:07
3	U 409.014†	1069.6	1106.9	[100] µg/L	10:20:47
3	V 292.402†	9681.9	9655.7	[100] µg/L	10:20:47
3	Zn 213.857†	4589.7	4043.3	[100] µg/L	10:20:47

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Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	2058139.4	18166.76	0.88%	100.67 %
Sc RADIAL	58989.6	451.24	0.76%	102 %
Y 371.029	1414247.8	12556.53	0.89%	100.66 %
Ag 328.068†	12769.6	242.95	1.90%	[100] µg/L
As 188.979†	52.0	3.80	7.32%	[100] µg/L
B 249.677†	2260.0	37.51	1.66%	[100] µg/L
Ba 233.527†	3900.4	84.46	2.17%	[100] µg/L
Be 313.107†	156370.4	1411.46	0.90%	[100] µg/L
Cd 226.502†	3784.9	72.15	1.91%	[100] µg/L
Co 228.616†	2065.9	26.55	1.29%	[100] µg/L
Cr 267.716†	4767.5	101.55	2.13%	[100] µg/L
Cu 324.752†	14825.6	286.33	1.93%	[100] µg/L
K 766.490 Radial†	1417.7	17.21	1.21%	[1000] µg/L
Mn 257.610†	30181.1	561.49	1.86%	[100] µg/L
Mo 202.031†	991.1	12.29	1.24%	[100] µg/L
Ni 231.604†	1928.1	41.73	2.16%	[100] µg/L
P 214.914†	241.8	4.75	1.96%	[500] µg/L
Pb 220.353†	395.0	5.74	1.45%	[100] µg/L
S 181.975 Axial†	50.1	2.28	4.55%	[200] µg/L
Sb 206.836†	112.1	11.55	10.30%	[100] µg/L
Se 196.026†	69.7	4.26	6.10%	[100] µg/L
SiO2†	4997.7	125.89	2.52%	[1069.5] µg/L
Si 251.611†	6077.3	119.02	1.96%	[500] µg/L
Sn 189.927†	228.3	1.55	0.68%	[100] µg/L
Sr 421.552†	9805.9	119.17	1.22%	[100] µg/L
Ti 334.940†	41739.8	754.56	1.81%	[100] µg/L
Tl 190.801†	72.8	3.15	4.33%	[100] µg/L
U 409.014†	1177.1	73.13	6.21%	[100] µg/L
V 292.402†	9725.2	177.22	1.82%	[100] µg/L
Zn 213.857†	4075.5	82.84	2.03%	[100] µg/L

Sequence No.: 3

Sample ID: S0.5

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 3

Date Collected: 2/17/2010 10:21:15

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	58283.1	58283.1	100 %	10:21:47
1	Al 396.153Radial†	6880.9	6874.8	[5000] µg/L	10:21:47
1	Ca 317.933Radial†	5613.9	5394.9	[5000] µg/L	10:22:07
1	K 766.490 Radial†	7417.4	7209.3	[5000] µg/L	10:21:47
1	Mg 279.077 IEC†	559.2	543.5	[5000] µg/L	10:22:07
1	Sr 421.552†	50205.9	49961.5	[500] µg/L	10:21:47
1	Sc 361.383	2048460.9	2048460.9	100.20 %	10:23:07
1	Y 371.029	1404287.1	1404287.1	99.951 %	10:23:07
1	Ag 328.068†	63451.4	63849.2	[500] µg/L	10:23:12
1	As 188.979†	262.9	260.9	[500] µg/L	10:23:32
1	B 249.677†	11845.7	11525.4	[500] µg/L	10:23:12
1	Ba 233.527†	19663.8	19642.8	[500] µg/L	10:23:12
1	Be 313.107†	792457.9	793854.1	[500] µg/L	10:23:07
1	Cd 226.502†	18728.2	18829.1	[500] µg/L	10:23:12
1	Co 228.616†	10525.4	10509.6	[500] µg/L	10:23:12
1	Cr 267.716†	23916.8	23901.5	[500] µg/L	10:23:12
1	Cu 324.752†	76071.3	73382.9	[500] µg/L	10:23:12
1	Mn 257.610†	151712.5	151648.3	[500] µg/L	10:23:07
1	Mo 202.031†	5015.2	5012.1	[500] µg/L	10:23:32
1	Ni 231.604†	9865.5	9539.2	[500] µg/L	10:23:12
1	P 214.914†	1239.0	1215.0	[2500] µg/L	10:23:32
1	Pb 220.353†	2081.4	1983.7	[500] µg/L	10:23:32
1	S 181.975 Axial†	251.9	237.6	[1000] µg/L	10:23:32
1	Sb 206.836†	557.5	536.2	[500] µg/L	10:23:32
1	Se 196.026†	349.1	332.6	[500] µg/L	10:23:32
1	SiO2†	27018.4	25620.4	[5347.5] µg/L	10:23:12
1	Si 251.611†	31555.1	31178.0	[2500] µg/L	10:23:12
1	Sn 189.927†	1169.3	1163.9	[500] µg/L	10:23:32
1	Ti 334.940†	215086.1	214529.0	[500] µg/L	10:23:07
1	Tl 190.801†	343.4	365.7	[500] µg/L	10:23:32
1	U 409.014†	5855.1	5887.2	[500] µg/L	10:23:12
1	V 292.402†	49030.0	48964.9	[500] µg/L	10:23:12
1	Zn 213.857†	20879.6	20319.3	[500] µg/L	10:23:12
2	Sc RADIAL	58417.1	58417.1	101 %	10:22:12
2	Al 396.153Radial†	6862.1	6840.5	[5000] µg/L	10:22:12
2	Ca 317.933Radial†	5563.3	5331.8	[5000] µg/L	10:22:32
2	K 766.490 Radial†	7411.5	7186.6	[5000] µg/L	10:22:12
2	Mg 279.077 IEC†	556.1	539.1	[5000] µg/L	10:22:32
2	Sr 421.552†	50024.4	49666.5	[500] µg/L	10:22:12
2	Sc 361.383	2076877.6	2076877.6	101.59 %	10:23:39
2	Y 371.029	1422828.8	1422828.8	101.27 %	10:23:39
2	Ag 328.068†	63276.5	62810.6	[500] µg/L	10:23:44
2	As 188.979†	268.9	263.2	[500] µg/L	10:24:05
2	B 249.677†	11797.1	11315.8	[500] µg/L	10:23:44
2	Ba 233.527†	19599.1	19310.6	[500] µg/L	10:23:44
2	Be 313.107†	779491.7	770269.5	[500] µg/L	10:23:39
2	Cd 226.502†	18673.6	18519.5	[500] µg/L	10:23:44
2	Co 228.616†	10501.9	10342.7	[500] µg/L	10:23:44
2	Cr 267.716†	23750.0	23410.8	[500] µg/L	10:23:44
2	Cu 324.752†	75684.8	71963.6	[500] µg/L	10:23:44
2	Mn 257.610†	149242.9	147145.6	[500] µg/L	10:23:39
2	Mo 202.031†	4928.5	4858.3	[500] µg/L	10:24:05
2	Ni 231.604†	9825.2	9364.8	[500] µg/L	10:23:44
2	P 214.914†	1215.3	1174.7	[2500] µg/L	10:24:05
2	Pb 220.353†	2039.7	1914.2	[500] µg/L	10:24:05
2	S 181.975 Axial†	248.1	230.4	[1000] µg/L	10:24:05
2	Sb 206.836†	538.4	509.8	[500] µg/L	10:24:05
2	Se 196.026†	347.2	325.9	[500] µg/L	10:24:05
2	SiO2†	27011.5	25244.6	[5347.5] µg/L	10:23:44

2	Si 251.611†	31580.8	30772.4	[2500] µg/L	10:23:44
2	Sn 189.927†	1139.6	1118.7	[500] µg/L	10:24:05
2	Ti 334.940†	211578.3	208139.0	[500] µg/L	10:23:39
2	Tl 190.801†	340.7	358.3	[500] µg/L	10:24:05
2	U 409.014†	5692.7	5647.3	[500] µg/L	10:23:44
2	V 292.402†	48820.5	48089.2	[500] µg/L	10:23:44
2	Zn 213.857†	20869.1	20023.9	[500] µg/L	10:23:44
3	Sc RADIAL	58628.3	58628.3	101 %	10:22:38
3	Al 396.153Radial†	6815.8	6770.1	[5000] µg/L	10:22:38
3	Ca 317.933Radial†	5537.0	5285.8	[5000] µg/L	10:22:58
3	K 766.490 Radial†	7396.3	7144.9	[5000] µg/L	10:22:38
3	Mg 279.077 IEC†	554.7	535.7	[5000] µg/L	10:22:58
3	Sr 421.552†	49827.6	49292.7	[500] µg/L	10:22:38
3	Sc 361.383	2073851.6	2073851.6	101.44 %	10:24:11
3	Y 371.029	1422228.6	1422228.6	101.23 %	10:24:11
3	Ag 328.068†	60212.6	59881.1	[500] µg/L	10:24:17
3	As 188.979†	230.3	225.5	[500] µg/L	10:24:37
3	B 249.677†	11162.2	10706.9	[500] µg/L	10:24:17
3	Ba 233.527†	18192.9	17952.5	[500] µg/L	10:24:17
3	Be 313.107†	745436.6	737817.6	[500] µg/L	10:24:11
3	Cd 226.502†	17245.8	17138.9	[500] µg/L	10:24:17
3	Co 228.616†	9634.5	9502.7	[500] µg/L	10:24:17
3	Cr 267.716†	21379.8	21108.4	[500] µg/L	10:24:17
3	Cu 324.752†	70200.1	66665.5	[500] µg/L	10:24:17
3	Mn 257.610†	142907.1	141114.2	[500] µg/L	10:24:11
3	Mo 202.031†	4222.3	4169.2	[500] µg/L	10:24:37
3	Ni 231.604†	9035.7	8600.6	[500] µg/L	10:24:17
3	P 214.914†	1066.7	1030.0	[2500] µg/L	10:24:37
3	Pb 220.353†	1808.3	1689.1	[500] µg/L	10:24:37
3	S 181.975 Axial†	225.6	208.6	[1000] µg/L	10:24:37
3	Sb 206.836†	483.0	456.0	[500] µg/L	10:24:37
3	Se 196.026†	320.9	300.5	[500] µg/L	10:24:37
3	SiO2†	25406.4	23701.1	[5347.5] µg/L	10:24:17
3	Si 251.611†	29563.4	28829.1	[2500] µg/L	10:24:17
3	Sn 189.927†	959.1	942.4	[500] µg/L	10:24:37
3	Ti 334.940†	201413.6	198422.6	[500] µg/L	10:24:11
3	Tl 190.801†	304.4	323.0	[500] µg/L	10:24:37
3	U 409.014†	5311.8	5280.1	[500] µg/L	10:24:17
3	V 292.402†	44651.9	44049.8	[500] µg/L	10:24:17
3	Zn 213.857†	19216.4	18424.6	[500] µg/L	10:24:17

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	2066396.7	15606.40	0.76%	101.08 %
Sc RADIAL	58442.8	174.04	0.30%	101 %
Y 371.029	1416448.1	10536.06	0.74%	100.82 %
Ag 328.068†	62180.3	2057.79	3.31%	[500] µg/L
Al 396.153Radial†	6828.5	53.39	0.78%	[5000] µg/L
As 188.979†	249.9	21.13	8.46%	[500] µg/L
B 249.677†	11182.7	425.18	3.80%	[500] µg/L
Ba 233.527†	18968.6	895.54	4.72%	[500] µg/L
Be 313.107†	767313.7	28134.97	3.67%	[500] µg/L
Ca 317.933Radial†	5337.5	54.78	1.03%	[5000] µg/L
Cd 226.502†	18162.5	899.88	4.95%	[500] µg/L
Co 228.616†	10118.3	539.65	5.33%	[500] µg/L
Cr 267.716†	22806.9	1491.27	6.54%	[500] µg/L
Cu 324.752†	70670.7	3540.41	5.01%	[500] µg/L
K 766.490 Radial†	7180.3	32.64	0.45%	[5000] µg/L
Mg 279.077 IEC†	539.4	3.88	0.72%	[5000] µg/L
Mn 257.610†	146636.0	5285.52	3.60%	[500] µg/L
Mo 202.031†	4679.9	448.91	9.59%	[500] µg/L
Ni 231.604†	9168.2	499.25	5.45%	[500] µg/L
P 214.914†	1139.9	97.28	8.53%	[2500] µg/L
Pb 220.353†	1862.3	154.02	8.27%	[500] µg/L
S 181.975 Axial†	225.5	15.12	6.70%	[1000] µg/L
Sb 206.836†	500.7	40.90	8.17%	[500] µg/L
Se 196.026†	319.6	16.95	5.30%	[500] µg/L
SiO2†	24855.4	1017.09	4.09%	[5347.5] µg/L
Si 251.611†	30259.9	1255.58	4.15%	[2500] µg/L

Sn 189.927†	1075.0	117.05	10.89%	[500] µg/L
Sr 421.552†	49640.2	335.18	0.68%	[500] µg/L
Ti 334.940†	207030.2	8110.27	3.92%	[500] µg/L
Tl 190.801†	349.0	22.80	6.53%	[500] µg/L
U 409.014†	5604.9	305.78	5.46%	[500] µg/L
V 292.402†	47034.6	2621.74	5.57%	[500] µg/L
Zn 213.857†	19589.3	1019.38	5.20%	[500] µg/L



Sequence No.: 4

Sample ID: SCAL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 4

Date Collected: 2/17/2010 10:24:45

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	59267.8	59267.8	102 %		10:25:17
1	Al 396.153Radial†	13910.6	13644.9	[10000] µg/L		10:25:17
1	Ca 317.933Radial†	11079.8	10654.4	[10000] µg/L		10:25:37
1	Fe 238.204 Radial†	1212.8	1170.3	[10000] µg/L		10:25:37
1	K 766.490 Radial†	14645.0	14164.2	[10000] µg/L		10:25:17
1	Mg 279.077 IEC†	1117.0	1080.4	[10000] µg/L		10:25:37
1	Na 589.592 Radial†	32062.8	30831.4	[10000] µg/L		10:25:17
1	Sr 421.552†	100905.5	98778.5	[1000] µg/L		10:25:17
1	Sc 361.383	2062511.0	2062511.0	100.89 %		10:26:37
1	Y 371.029	1412970.4	1412970.4	100.57 %		10:26:37
1	Ag 328.068†	129747.7	129132.0	[1000] µg/L		10:26:42
1	As 188.979†	539.3	533.1	[1000] µg/L		10:27:02
1	B 249.677†	23869.2	23362.9	[1000] µg/L		10:26:42
1	Ba 233.527†	39859.0	39527.0	[1000] µg/L		10:26:42
1	Be 313.107†	1585799.3	1574841.2	[1000] µg/L		10:26:37
1	Cd 226.502†	37757.6	37564.0	[1000] µg/L		10:26:42
1	Co 228.616†	21178.0	20997.1	[1000] µg/L		10:26:42
1	Cr 267.716†	48482.9	48089.4	[1000] µg/L		10:26:42
1	Cu 324.752†	152437.8	148561.7	[1000] µg/L		10:26:42
1	Mn 257.610†	302386.1	299967.3	[1000] µg/L		10:26:42
1	Mo 202.031†	10194.9	10112.2	[1000] µg/L		10:27:02
1	Ni 231.604†	19533.9	19055.5	[1000] µg/L		10:26:42
1	P 214.914†	2502.9	2459.4	[5000] µg/L		10:27:02
1	Pb 220.353†	4111.8	3982.2	[1000] µg/L		10:27:02
1	S 181.975 Axial†	496.8	478.6	[2000] µg/L		10:27:02
1	Sb 206.836†	1108.2	1078.3	[1000] µg/L		10:27:02
1	Se 196.026†	695.4	673.4	[1000] µg/L		10:27:02
1	SiO2†	53030.1	51219.9	[10695] µg/L		10:26:42
1	Si 251.611†	63226.3	62356.6	[5000] µg/L		10:26:42
1	Sn 189.927†	2374.1	2350.1	[1000] µg/L		10:27:02
1	Ti 334.940†	431442.7	427523.4	[1000] µg/L		10:26:37
1	Tl 190.801†	723.6	740.2	[1000] µg/L		10:27:02
1	U 409.014†	11741.2	11681.8	[1000] µg/L		10:26:42
1	V 292.402†	99889.1	99044.0	[1000] µg/L		10:26:42
1	Zn 213.857†	41351.2	40469.3	[1000] µg/L		10:26:42
2	Sc RADIAL	59471.6	59471.6	102 %		10:25:43
2	Al 396.153Radial†	13928.2	13615.3	[10000] µg/L		10:25:43
2	Ca 317.933Radial†	11093.4	10630.6	[10000] µg/L		10:26:03
2	Fe 238.204 Radial†	1214.3	1167.8	[10000] µg/L		10:26:03
2	K 766.490 Radial†	14733.8	14201.8	[10000] µg/L		10:25:43
2	Mg 279.077 IEC†	1119.5	1079.1	[10000] µg/L		10:26:03
2	Na 589.592 Radial†	32171.9	30830.3	[10000] µg/L		10:25:43
2	Sr 421.552†	101130.2	98659.2	[1000] µg/L		10:25:43
2	Sc 361.383	2050806.2	2050806.2	100.31 %		10:27:09
2	Y 371.029	1403943.4	1403943.4	99.926 %		10:27:09
2	Ag 328.068†	129836.3	129954.3	[1000] µg/L		10:27:15
2	As 188.979†	544.7	541.5	[1000] µg/L		10:27:35
2	B 249.677†	23878.4	23507.0	[1000] µg/L		10:27:15
2	Ba 233.527†	39815.1	39708.7	[1000] µg/L		10:27:15
2	Be 313.107†	1582580.6	1580604.0	[1000] µg/L		10:27:09
2	Cd 226.502†	37705.4	37725.5	[1000] µg/L		10:27:15
2	Co 228.616†	21160.6	21099.6	[1000] µg/L		10:27:15
2	Cr 267.716†	48433.8	48314.7	[1000] µg/L		10:27:15
2	Cu 324.752†	152463.8	149449.9	[1000] µg/L		10:27:15
2	Mn 257.610†	301652.0	300946.2	[1000] µg/L		10:27:15
2	Mo 202.031†	10135.2	10110.4	[1000] µg/L		10:27:35
2	Ni 231.604†	19470.9	19103.3	[1000] µg/L		10:27:15
2	P 214.914†	2484.8	2455.5	[5000] µg/L		10:27:35
2	Pb 220.353†	4084.4	3978.1	[1000] µg/L		10:27:35

2	S 181.975 Axial†	490.9	475.6	[2000]	µg/L	10:27:35
2	Sb 206.836†	1105.6	1082.0	[1000]	µg/L	10:27:35
2	Se 196.026†	691.5	673.4	[1000]	µg/L	10:27:35
2	SiO2†	53141.7	51631.2	[10695]	µg/L	10:27:15
2	Si 251.611†	63378.9	62866.4	[5000]	µg/L	10:27:15
2	Sn 189.927†	2349.6	2339.1	[1000]	µg/L	10:27:35
2	Ti 334.940†	430889.4	429412.7	[1000]	µg/L	10:27:09
2	Tl 190.801†	723.4	744.1	[1000]	µg/L	10:27:35
2	U 409.014†	11776.7	11783.6	[1000]	µg/L	10:27:15
2	V 292.402†	99938.3	99658.2	[1000]	µg/L	10:27:15
2	Zn 213.857†	41410.7	40762.4	[1000]	µg/L	10:27:15
3	Sc RADIAL	59188.2	59188.2	102	%	10:26:08
3	Al 396.153Radial†	13888.5	13641.5	[10000]	µg/L	10:26:08
3	Ca 317.933Radial†	11051.6	10641.5	[10000]	µg/L	10:26:28
3	Fe 238.204 Radial†	1210.8	1170.0	[10000]	µg/L	10:26:28
3	K 766.490 Radial†	14635.0	14173.7	[10000]	µg/L	10:26:08
3	Mg 279.077 IEC†	1111.3	1076.3	[10000]	µg/L	10:26:28
3	Na 589.592 Radial†	32106.7	30916.7	[10000]	µg/L	10:26:08
3	Sr 421.552†	100981.4	98985.9	[1000]	µg/L	10:26:08
3	Sc 361.383	2058933.1	2058933.1	100.71	%	10:27:41
3	Y 371.029	1408920.5	1408920.5	100.28	%	10:27:41
3	Ag 328.068†	127186.8	126812.7	[1000]	µg/L	10:27:47
3	As 188.979†	504.5	499.4	[1000]	µg/L	10:28:07
3	B 249.677†	23214.7	22754.1	[1000]	µg/L	10:27:47
3	Ba 233.527†	38444.3	38190.9	[1000]	µg/L	10:27:47
3	Be 313.107†	1561347.4	1553293.5	[1000]	µg/L	10:27:41
3	Cd 226.502†	36396.8	36277.8	[1000]	µg/L	10:27:47
3	Co 228.616†	20300.1	20161.8	[1000]	µg/L	10:27:47
3	Cr 267.716†	46035.6	45742.8	[1000]	µg/L	10:27:47
3	Cu 324.752†	146728.2	143154.9	[1000]	µg/L	10:27:47
3	Mn 257.610†	289808.4	287999.3	[1000]	µg/L	10:27:47
3	Mo 202.031†	9251.1	9192.6	[1000]	µg/L	10:28:07
3	Ni 231.604†	18737.0	18298.0	[1000]	µg/L	10:27:47
3	P 214.914†	2301.2	2263.4	[5000]	µg/L	10:28:07
3	Pb 220.353†	3821.4	3700.9	[1000]	µg/L	10:28:07
3	S 181.975 Axial†	463.3	446.2	[2000]	µg/L	10:28:07
3	Sb 206.836†	1033.1	1005.6	[1000]	µg/L	10:28:07
3	Se 196.026†	654.2	633.7	[1000]	µg/L	10:28:07
3	SiO2†	51800.4	50090.2	[10695]	µg/L	10:27:47
3	Si 251.611†	61767.5	61017.0	[5000]	µg/L	10:27:47
3	Sn 189.927†	2132.7	2114.5	[1000]	µg/L	10:28:07
3	Ti 334.940†	424496.5	421369.4	[1000]	µg/L	10:27:41
3	Tl 190.801†	678.4	696.6	[1000]	µg/L	10:28:07
3	U 409.014†	11262.8	11227.0	[1000]	µg/L	10:27:47
3	V 292.402†	95746.5	95102.7	[1000]	µg/L	10:27:47
3	Zn 213.857†	39802.2	39002.3	[1000]	µg/L	10:27:47

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Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	2057416.8	5997.94	0.29%	100.64 %
Sc RADIAL	59309.2	146.19	0.25%	102 %
Y 371.029	1408611.4	4521.47	0.32%	100.26 %
Ag 328.068†	128633.0	1629.18	1.27%	[1000] µg/L
Al 396.153Radial†	13633.9	16.17	0.12%	[10000] µg/L
As 188.979†	524.7	22.26	4.24%	[1000] µg/L
B 249.677†	23208.0	399.64	1.72%	[1000] µg/L
Ba 233.527†	39142.2	828.85	2.12%	[1000] µg/L
Be 313.107†	1569579.6	14395.43	0.92%	[1000] µg/L
Ca 317.933Radial†	10642.2	11.93	0.11%	[10000] µg/L
Cd 226.502†	37189.1	793.35	2.13%	[1000] µg/L
Co 228.616†	20752.8	514.40	2.48%	[1000] µg/L
Cr 267.716†	47382.3	1424.30	3.01%	[1000] µg/L
Cu 324.752†	147055.5	3407.06	2.32%	[1000] µg/L
Fe 238.204 Radial†	1169.4	1.42	0.12%	[10000] µg/L
K 766.490 Radial†	14179.9	19.53	0.14%	[10000] µg/L
Mg 279.077 IEC†	1078.6	2.10	0.19%	[10000] µg/L
Mn 257.610†	296304.3	7208.96	2.43%	[1000] µg/L
Mo 202.031†	9805.1	530.41	5.41%	[1000] µg/L
Na 589.592 Radial†	30859.5	49.54	0.16%	[10000] µg/L

Ni 231.604†	18818.9	451.80	2.40%	[1000]	µg/L
P 214.914†	2392.7	112.04	4.68%	[5000]	µg/L
Pb 220.353†	3887.1	161.25	4.15%	[1000]	µg/L
S 181.975 Axial†	466.8	17.92	3.84%	[2000]	µg/L
Sb 206.836†	1055.3	43.06	4.08%	[1000]	µg/L
Se 196.026†	660.2	22.91	3.47%	[1000]	µg/L
SiO2†	50980.4	797.91	1.57%	[10695]	µg/L
Si 251.611†	62080.0	955.21	1.54%	[5000]	µg/L
Sn 189.927†	2267.9	132.97	5.86%	[1000]	µg/L
Sr 421.552†	98807.9	165.34	0.17%	[1000]	µg/L
Ti 334.940†	426101.8	4205.88	0.99%	[1000]	µg/L
Tl 190.801†	726.9	26.38	3.63%	[1000]	µg/L
U 409.014†	11564.1	296.35	2.56%	[1000]	µg/L
V 292.402†	97934.9	2471.93	2.52%	[1000]	µg/L
Zn 213.857†	40078.0	943.02	2.35%	[1000]	µg/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 2/17/2010 10:28:15

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Sc RADIAL	59363.3	59363.3	102 %		10:28:47
1	Al 396.153Radial†	69428.6	67901.6	[50000] µg/L		10:28:47
1	Ca 317.933Radial†	55395.7	53963.7	[50000] µg/L		10:28:47
1	Fe 238.204 Radial†	2397.5	2326.7	[20000] µg/L		10:29:07
1	Mg 279.077 IEC†	5430.4	5295.8	[50000] µg/L		10:29:07
1	Na 589.592 Radial†	63437.4	61455.1	[20000] µg/L		10:28:47
1	Sc 361.383	2066101.6	2066101.6	101.06 %		10:30:07
1	Y 371.029	1405745.1	1405745.1	100.05 %		10:30:07
2	Sc RADIAL	59307.2	59307.2	102 %		10:29:12
2	Al 396.153Radial†	69526.3	68061.5	[50000] µg/L		10:29:12
2	Ca 317.933Radial†	55469.5	54087.1	[50000] µg/L		10:29:12
2	Fe 238.204 Radial†	2394.3	2325.8	[20000] µg/L		10:29:32
2	Mg 279.077 IEC†	5440.4	5310.6	[50000] µg/L		10:29:32
2	Na 589.592 Radial†	63590.7	61663.8	[20000] µg/L		10:29:12
2	Sc 361.383	2058820.7	2058820.7	100.71 %		10:30:14
2	Y 371.029	1401600.3	1401600.3	99.759 %		10:30:14
3	Sc RADIAL	59174.3	59174.3	102 %		10:29:37
3	Al 396.153Radial†	69359.8	68050.9	[50000] µg/L		10:29:37
3	Ca 317.933Radial†	55267.8	54011.2	[50000] µg/L		10:29:37
3	Fe 238.204 Radial†	2386.2	2323.2	[20000] µg/L		10:29:58
3	Mg 279.077 IEC†	5436.1	5318.3	[50000] µg/L		10:29:58
3	Na 589.592 Radial†	63404.0	61620.5	[20000] µg/L		10:29:37
3	Sc 361.383	2059295.6	2059295.6	100.73 %		10:30:22
3	Y 371.029	1401510.0	1401510.0	99.753 %		10:30:22

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib. Units
Sc 361.383	2061406.0	4073.48	0.20%	100.83 %	
Sc RADIAL	59281.6	97.09	0.16%	102 %	
Y 371.029	1402951.8	2419.49	0.17%	99.856 %	
Al 396.153Radial†	68004.7	89.43	0.13%	[50000] µg/L	
Ca 317.933Radial†	54020.6	62.25	0.12%	[50000] µg/L	
Fe 238.204 Radial†	2325.2	1.85	0.08%	[20000] µg/L	
Mg 279.077 IEC†	5308.2	11.47	0.22%	[50000] µg/L	
Na 589.592 Radial†	61579.8	110.15	0.18%	[20000] µg/L	

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	127.8	0.00000	0.999911	
Al 396.153Radial	3	Lin Thru 0	0.0	1.360	0.00000	1.000000	
As 188.979	3	Lin Thru 0	0.0	0.5197	0.00000	0.999818	
B 249.677	3	Lin Thru 0	0.0	23.04	0.00000	0.999892	
Ba 233.527	3	Lin Thru 0	0.0	38.90	0.00000	0.999924	
Be 313.107	3	Lin Thru 0	0.0	1563	0.00000	0.999960	
Ca 317.933Radial	3	Lin Thru 0	0.0	1.080	0.00000	0.999995	
Cd 226.502	3	Lin Thru 0	0.0	37.02	0.00000	0.999955	
Co 228.616	3	Lin Thru 0	0.0	20.65	0.00000	0.999950	
Cr 267.716	3	Lin Thru 0	0.0	47.03	0.00000	0.999887	
Cu 324.752	3	Lin Thru 0	0.0	145.9	0.00000	0.999877	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1164	0.00000	0.999997	
K 766.490 Radial	3	Lin Thru 0	0.0	1.422	0.00000	0.999987	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.1062	0.00000	0.999994	
Mn 257.610	3	Lin Thru 0	0.0	295.7	0.00000	0.999990	
Mo 202.031	3	Lin Thru 0	0.0	9.718	0.00000	0.999832	
Na 589.592 Radia	2	Lin Thru 0	0.0	3.080	0.00000	1.000000	

Ni 231.604	3	Lin Thru 0	0.0	18.73	0.00000	0.999944
P 214.914	3	Lin Thru 0	0.0	0.4741	0.00000	0.999818
Pb 220.353	3	Lin Thru 0	0.0	3.855	0.00000	0.999857
S 181.975 Axial	3	Lin Thru 0	0.0	0.2320	0.00000	0.999884
Sb 206.836	3	Lin Thru 0	0.0	1.045	0.00000	0.999767
Se 196.026	3	Lin Thru 0	0.0	0.6563	0.00000	0.999904
SiO2	3	Lin Thru 0	0.0	4.742	0.00000	0.999949
Si 251.611	3	Lin Thru 0	0.0	12.35	0.00000	0.999948
Sn 189.927	3	Lin Thru 0	0.0	2.245	0.00000	0.999780
Sr 421.552	3	Lin Thru 0	0.0	98.90	0.00000	0.999998
Ti 334.940	3	Lin Thru 0	0.0	423.6	0.00000	0.999935
Tl 190.801	3	Lin Thru 0	0.0	0.7212	0.00000	0.999872
U 409.014	3	Lin Thru 0	0.0	11.50	0.00000	0.999922
V 292.402	3	Lin Thru 0	0.0	97.16	0.00000	0.999874
Zn 213.857	3	Lin Thru 0	0.0	39.90	0.00000	0.999958

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 2/17/2010 10:30:30

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	58310.2	58310.2	100 %			10:31:03
1	Al 396.153Radial†	7015.5	7005.7	5138.7 µg/L		5138.7 ppb	10:31:03
1	Ca 317.933Radial†	5639.2	5417.5	5017.7 µg/L		5017.7 ppb	10:31:23
1	Fe 238.204 Radial†	625.0	604.8	5206.9 µg/L		5206.9 ppb	10:31:23
1	K 766.490 Radial†	3766.2	3571.8	2512.6 µg/L		2512.6 ppb	10:31:03
1	Mg 279.077 IEC†	579.7	563.5	5307.9 µg/L		5307.9 ppb	10:31:23
1	Na 589.592 Radial†	8388.4	7783.1	2526.7 µg/L		2526.7 ppb	10:31:03
1	Sr 421.552†	52946.7	52666.3	532.54 µg/L		532.54 ppb	10:31:03
1	Sc 361.383	2068953.4	2068953.4	101.20 %			10:32:22
1	Y 371.029	1416550.5	1416550.5	100.82 %			10:32:22
1	Ag 328.068†	33383.4	33510.8	266.01 µg/L		266.01 ppb	10:32:28
1	As 188.979†	272.9	268.2	514.99 µg/L		514.99 ppb	10:32:48
1	B 249.677†	12554.9	12109.2	523.75 µg/L		523.75 ppb	10:32:28
1	Ba 233.527†	20389.6	20165.6	519.30 µg/L		519.30 ppb	10:32:28
1	Be 313.107†	422034.1	419993.0	268.58 µg/L		268.58 ppb	10:32:22
1	Cd 226.502†	19011.9	18924.2	511.08 µg/L		511.08 ppb	10:32:28
1	Co 228.616†	10906.2	10781.8	521.57 µg/L		521.57 ppb	10:32:28
1	Cr 267.716†	23828.5	23578.0	501.63 µg/L		501.63 ppb	10:32:28
1	Cu 324.752†	78807.4	75334.5	516.96 µg/L		516.96 ppb	10:32:28
1	Mn 257.610†	158452.9	156809.0	530.69 µg/L		530.69 ppb	10:32:22
1	Mo 202.031†	5508.7	5450.2	561.06 µg/L		561.06 ppb	10:32:48
1	Ni 231.604†	10079.8	9653.4	514.93 µg/L		514.93 ppb	10:32:28
1	P 214.914†	1283.6	1246.7	2580.8 µg/L		2580.8 ppb	10:32:48
1	Pb 220.353†	2108.3	1989.7	516.40 µg/L		516.40 ppb	10:32:48
1	S 181.975 Axial†	626.0	604.7	2606.8 µg/L		2606.8 ppb	10:32:48
1	Sb 206.836†	572.0	545.0	524.57 µg/L		524.57 ppb	10:32:48
1	Se 196.026†	1743.6	1707.1	2609.0 µg/L		2609.0 ppb	10:32:48
1	SiO2†	51406.7	49452.1	10428 µg/L		10428 ppb	10:32:28
1	Si 251.611†	61063.3	60024.1	4859.5 µg/L		4859.5 ppb	10:32:28
1	Sn 189.927†	1291.8	1273.3	567.33 µg/L		567.33 ppb	10:32:48
1	Ti 334.940†	218666.8	215941.1	509.38 µg/L		509.38 ppb	10:32:22
1	Tl 190.801†	375.9	394.4	552.98 µg/L		552.98 ppb	10:32:48
1	U 409.014†	5803.7	5778.5	501.65 µg/L		501.65 ppb	10:32:28
1	V 292.402†	50936.2	50363.7	524.96 µg/L		524.96 ppb	10:32:28
1	Zn 213.857†	21737.8	20961.0	521.62 µg/L		521.62 ppb	10:32:28
2	Sc RADIAL	58590.0	58590.0	101 %			10:31:28
2	Al 396.153Radial†	7019.9	6976.6	5117.3 µg/L		5117.3 ppb	10:31:28
2	Ca 317.933Radial†	5644.1	5395.5	4997.3 µg/L		4997.3 ppb	10:31:48
2	Fe 238.204 Radial†	622.5	599.4	5160.8 µg/L		5160.8 ppb	10:31:48
2	K 766.490 Radial†	3794.0	3581.4	2519.3 µg/L		2519.3 ppb	10:31:28
2	Mg 279.077 IEC†	587.0	568.1	5350.6 µg/L		5350.6 ppb	10:31:48
2	Na 589.592 Radial†	8396.4	7751.2	2516.3 µg/L		2516.3 ppb	10:31:28
2	Sr 421.552†	53106.5	52572.9	531.60 µg/L		531.60 ppb	10:31:28
2	Sc 361.383	2061531.9	2061531.9	100.84 %			10:32:55
2	Y 371.029	1411686.2	1411686.2	100.48 %			10:32:55
2	Ag 328.068†	33290.5	33537.5	266.23 µg/L		266.23 ppb	10:33:00
2	As 188.979†	263.7	260.0	499.22 µg/L		499.22 ppb	10:33:20
2	B 249.677†	12555.7	12154.6	525.75 µg/L		525.75 ppb	10:33:00
2	Ba 233.527†	20369.2	20217.9	520.66 µg/L		520.66 ppb	10:33:00
2	Be 313.107†	421665.4	421128.7	269.31 µg/L		269.31 ppb	10:32:55
2	Cd 226.502†	19058.0	19037.6	514.15 µg/L		514.15 ppb	10:33:00
2	Co 228.616†	10912.2	10826.6	523.74 µg/L		523.74 ppb	10:33:00
2	Cr 267.716†	23873.4	23707.2	504.37 µg/L		504.37 ppb	10:33:00
2	Cu 324.752†	78864.6	75671.6	519.26 µg/L		519.26 ppb	10:33:00
2	Mn 257.610†	158126.5	157048.9	531.50 µg/L		531.50 ppb	10:32:55
2	Mo 202.031†	5503.3	5464.4	562.52 µg/L		562.52 ppb	10:33:20
2	Ni 231.604†	10093.4	9702.7	517.56 µg/L		517.56 ppb	10:33:00
2	P 214.914†	1282.4	1250.1	2587.7 µg/L		2587.7 ppb	10:33:20
2	Pb 220.353†	2104.3	1993.3	517.32 µg/L		517.32 ppb	10:33:20

2	S 181.975 Axial†	616.8	597.9	2577.3 µg/L	2577.3 ppb	10:33:20
2	Sb 206.836†	569.4	544.5	524.03 µg/L	524.03 ppb	10:33:20
2	Se 196.026†	1756.6	1726.1	2637.8 µg/L	2637.8 ppb	10:33:20
2	SiO2†	51397.6	49625.9	10464 µg/L	10464 ppb	10:33:00
2	Si 251.611†	61008.9	60187.4	4872.7 µg/L	4872.7 ppb	10:33:00
2	Sn 189.927†	1279.6	1265.9	564.00 µg/L	564.00 ppb	10:33:20
2	Ti 334.940†	218538.9	216592.1	510.92 µg/L	510.92 ppb	10:32:55
2	Tl 190.801†	373.8	393.6	551.91 µg/L	551.91 ppb	10:33:20
2	U 409.014†	5829.8	5825.1	505.71 µg/L	505.71 ppb	10:33:00
2	V 292.402†	51087.0	50694.4	528.38 µg/L	528.38 ppb	10:33:00
2	Zn 213.857†	21764.1	21064.4	524.19 µg/L	524.19 ppb	10:33:00
3	Sc RADIAL	58896.1	58896.1	101 %		10:31:53
3	Al 396.153Radial†	7066.0	6985.9	5125.7 µg/L	5125.7 ppb	10:31:53
3	Ca 317.933Radial†	5655.4	5377.6	4980.8 µg/L	4980.8 ppb	10:32:13
3	Fe 238.204 Radial†	621.9	595.6	5126.9 µg/L	5126.9 ppb	10:32:13
3	K 766.490 Radial†	3829.7	3597.0	2530.3 µg/L	2530.3 ppb	10:31:53
3	Mg 279.077 IEC†	578.0	556.1	5237.2 µg/L	5237.2 ppb	10:32:13
3	Na 589.592 Radial†	8417.3	7728.5	2508.9 µg/L	2508.9 ppb	10:31:53
3	Sr 421.552†	53398.1	52586.8	531.74 µg/L	531.74 ppb	10:31:53
3	Sc 361.383	2058202.6	2058202.6	100.68 %		10:33:27
3	Y 371.029	1409322.2	1409322.2	100.31 %		10:33:27
3	Ag 328.068†	32087.7	32396.1	257.06 µg/L	257.06 ppb	10:33:32
3	As 188.979†	237.2	234.2	449.65 µg/L	449.65 ppb	10:33:53
3	B 249.677†	12033.6	11656.1	504.07 µg/L	504.07 ppb	10:33:32
3	Ba 233.527†	19208.4	19097.5	491.79 µg/L	491.79 ppb	10:33:32
3	Be 313.107†	402656.1	402923.2	257.67 µg/L	257.67 ppb	10:33:27
3	Cd 226.502†	17911.9	17929.7	484.19 µg/L	484.19 ppb	10:33:32
3	Co 228.616†	10144.8	10081.7	487.65 µg/L	487.65 ppb	10:33:32
3	Cr 267.716†	21890.1	21775.5	463.28 µg/L	463.28 ppb	10:33:32
3	Cu 324.752†	73988.9	70955.1	486.93 µg/L	486.93 ppb	10:33:32
3	Mn 257.610†	151502.5	150723.0	510.11 µg/L	510.11 ppb	10:33:27
3	Mo 202.031†	4738.2	4713.3	485.22 µg/L	485.22 ppb	10:33:53
3	Ni 231.604†	9423.0	9053.1	482.91 µg/L	482.91 ppb	10:33:32
3	P 214.914†	1125.9	1096.8	2266.5 µg/L	2266.5 ppb	10:33:53
3	Pb 220.353†	1888.2	1782.0	462.40 µg/L	462.40 ppb	10:33:53
3	S 181.975 Axial†	556.1	538.6	2321.6 µg/L	2321.6 ppb	10:33:53
3	Sb 206.836†	507.0	483.5	464.83 µg/L	464.83 ppb	10:33:53
3	Se 196.026†	1590.9	1564.4	2391.4 µg/L	2391.4 ppb	10:33:53
3	SiO2†	49027.8	47354.5	9985.2 µg/L	9985.2 ppb	10:33:32
3	Si 251.611†	58143.9	57439.5	4650.2 µg/L	4650.2 ppb	10:33:32
3	Sn 189.927†	1095.7	1085.3	483.54 µg/L	483.54 ppb	10:33:53
3	Ti 334.940†	208403.8	206875.5	487.99 µg/L	487.99 ppb	10:33:27
3	Tl 190.801†	347.8	368.4	516.78 µg/L	516.78 ppb	10:33:53
3	U 409.014†	5387.3	5394.8	468.29 µg/L	468.29 ppb	10:33:32
3	V 292.402†	47412.6	47126.7	490.93 µg/L	490.93 ppb	10:33:32
3	Zn 213.857†	20390.3	19734.7	491.09 µg/L	491.09 ppb	10:33:32

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Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2062896.0	100.90 %	0.269			0.27%
Sc RADIAL	58598.8	101 %	0.5			0.50%
Y 371.029	1412519.7	100.54 %	0.262			0.26%
Ag 328.068†	33148.2	263.10 µg/L	5.234	263.10 ppb	5.234	1.99%
QC value within limits for Ag 328.068 Recovery = 105.24%						
Al 396.153Radial†	6989.4	5127.2 µg/L	10.78	5127.2 ppb	10.78	0.21%
QC value within limits for Al 396.153Radial Recovery = 102.54%						
As 188.979†	254.1	487.96 µg/L	34.098	487.96 ppb	34.098	6.99%
QC value within limits for As 188.979 Recovery = 97.59%						
B 249.677†	11973.3	517.86 µg/L	11.984	517.86 ppb	11.984	2.31%
QC value within limits for B 249.677 Recovery = 103.57%						
Ba 233.527†	19827.0	510.58 µg/L	16.290	510.58 ppb	16.290	3.19%
QC value within limits for Ba 233.527 Recovery = 102.12%						
Be 313.107†	414681.6	265.19 µg/L	6.522	265.19 ppb	6.522	2.46%
QC value within limits for Be 313.107 Recovery = 106.08%						
Ca 317.933Radial†	5396.9	4998.6 µg/L	18.48	4998.6 ppb	18.48	0.37%
QC value within limits for Ca 317.933Radial Recovery = 99.97%						
Cd 226.502†	18630.5	503.14 µg/L	16.480	503.14 ppb	16.480	3.28%
QC value within limits for Cd 226.502 Recovery = 100.63%						
Co 228.616†	10563.4	510.99 µg/L	20.241	510.99 ppb	20.241	3.96%

QC value within limits for Co 228.616 Recovery = 102.20%							
Cr 267.716†	23020.2	489.76 µg/L	22.972	489.76 ppb	22.972	4.69%	
QC value within limits for Cr 267.716 Recovery = 97.95%							
Cu 324.752†	73987.1	507.72 µg/L	18.034	507.72 ppb	18.034	3.55%	
QC value within limits for Cu 324.752 Recovery = 101.54%							
Fe 238.204 Radial†	599.9	5164.9 µg/L	40.14	5164.9 ppb	40.14	0.78%	
QC value within limits for Fe 238.204 Radial Recovery = 103.30%							
K 766.490 Radial†	3583.4	2520.7 µg/L	8.96	2520.7 ppb	8.96	0.36%	
QC value within limits for K 766.490 Radial Recovery = 100.83%							
Mg 279.077 IEC†	562.6	5298.6 µg/L	57.31	5298.6 ppb	57.31	1.08%	
QC value within limits for Mg 279.077 IEC Recovery = 105.97%							
Mn 257.610†	154860.3	524.10 µg/L	12.124	524.10 ppb	12.124	2.31%	
QC value within limits for Mn 257.610 Recovery = 104.82%							
Mo 202.031†	5209.3	536.27 µg/L	44.211	536.27 ppb	44.211	8.24%	
QC value within limits for Mo 202.031 Recovery = 107.25%							
Na 589.592 Radial†	7754.3	2517.3 µg/L	8.91	2517.3 ppb	8.91	0.35%	
QC value within limits for Na 589.592 Radial Recovery = 100.69%							
Ni 231.604†	9469.8	505.14 µg/L	19.291	505.14 ppb	19.291	3.82%	
QC value within limits for Ni 231.604 Recovery = 101.03%							
P 214.914†	1197.9	2478.3 µg/L	183.53	2478.3 ppb	183.53	7.41%	
QC value within limits for P 214.914 Recovery = 99.13%							
Pb 220.353†	1921.7	498.70 µg/L	31.448	498.70 ppb	31.448	6.31%	
QC value within limits for Pb 220.353 Recovery = 99.74%							
S 181.975 Axial†	580.4	2501.9 µg/L	156.84	2501.9 ppb	156.84	6.27%	
QC value within limits for S 181.975 Axial Recovery = 100.08%							
Sb 206.836†	524.3	504.47 µg/L	34.336	504.47 ppb	34.336	6.81%	
QC value within limits for Sb 206.836 Recovery = 100.89%							
Se 196.026†	1665.9	2546.1 µg/L	134.73	2546.1 ppb	134.73	5.29%	
QC value within limits for Se 196.026 Recovery = 101.84%							
SiO2†	48810.9	10292 µg/L	266.6	10292 ppb	266.6	2.59%	
QC value within limits for SiO2 Recovery = 96.23%							
Si 251.611†	59217.0	4794.1 µg/L	124.80	4794.1 ppb	124.80	2.60%	
QC value within limits for Si 251.611 Recovery = 95.88%							
Sn 189.927†	1208.2	538.29 µg/L	47.442	538.29 ppb	47.442	8.81%	
QC value within limits for Sn 189.927 Recovery = 107.66%							
Sr 421.552†	52608.7	531.96 µg/L	0.510	531.96 ppb	0.510	0.10%	
QC value within limits for Sr 421.552 Recovery = 106.39%							
Ti 334.940†	213136.2	502.76 µg/L	12.817	502.76 ppb	12.817	2.55%	
QC value within limits for Ti 334.940 Recovery = 100.55%							
Tl 190.801†	385.5	540.56 µg/L	20.598	540.56 ppb	20.598	3.81%	
QC value within limits for Tl 190.801 Recovery = 108.11%							
U 409.014†	5666.1	491.88 µg/L	20.534	491.88 ppb	20.534	4.17%	
QC value within limits for U 409.014 Recovery = 98.38%							
V 292.402†	49395.0	514.76 µg/L	20.707	514.76 ppb	20.707	4.02%	
QC value within limits for V 292.402 Recovery = 102.95%							
Zn 213.857†	20586.7	512.30 µg/L	18.417	512.30 ppb	18.417	3.59%	
QC value within limits for Zn 213.857 Recovery = 102.46%							
All analyte(s) passed QC.							



Sequence No.: 7

Sample ID: ICB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 10

Date Collected: 2/17/2010 10:34:01

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	58305.5	58305.5	100 %		10:34:33
1	Al 396.153Radial†	-1.2	21.7	15.913 µg/L	15.913 ppb	10:34:33
1	Ca 317.933Radial†	190.4	-5.9	-5.4509 µg/L	-5.4509 ppb	10:34:53
1	Fe 238.204 Radial†	17.2	-0.2	-1.5191 µg/L	-1.5191 ppb	10:34:53
1	K 766.490 Radial†	158.8	-18.8	-13.231 µg/L	-13.231 ppb	10:34:33
1	Mg 279.077 IEC†	9.3	-4.2	-39.326 µg/L	-39.326 ppb	10:34:53
1	Na 589.592 Radial†	517.5	-51.1	-16.579 µg/L	-16.579 ppb	10:34:33
1	Sr 421.552†	49.6	16.1	0.1626 µg/L	0.1626 ppb	10:34:33
1	Sc 361.383	2068187.3	2068187.3	101.16 %		10:35:52
1	Y 371.029	1422164.5	1422164.5	101.22 %		10:35:52
1	Ag 328.068†	-513.1	16.5	0.1321 µg/L	0.1321 ppb	10:35:57
1	As 188.979†	-2.0	-3.5	-6.7329 µg/L	-6.7329 ppb	10:36:17
1	B 249.677†	340.3	39.6	1.7227 µg/L	1.7227 ppb	10:36:17
1	Ba 233.527†	-20.0	-1.8	-0.0447 µg/L	-0.0447 ppb	10:36:17
1	Be 313.107†	-2816.4	183.6	0.1174 µg/L	0.1174 ppb	10:35:57
1	Cd 226.502†	-139.3	0.3	0.0082 µg/L	0.0082 ppb	10:36:17
1	Co 228.616†	-1.6	3.5	0.1674 µg/L	0.1674 ppb	10:36:17
1	Cr 267.716†	62.0	93.5	1.9877 µg/L	1.9877 ppb	10:36:17
1	Cu 324.752†	2548.6	-18.3	-0.1255 µg/L	-0.1255 ppb	10:35:57
1	Mn 257.610†	-165.5	73.0	0.2481 µg/L	0.2481 ppb	10:36:17
1	Mo 202.031†	-4.0	2.9	0.3033 µg/L	0.3033 ppb	10:36:17
1	Ni 231.604†	318.6	8.2	0.4377 µg/L	0.4377 ppb	10:36:17
1	P 214.914†	28.1	6.2	13.143 µg/L	13.143 ppb	10:36:17
1	Pb 220.353†	96.4	1.8	0.4717 µg/L	0.4717 ppb	10:36:17
1	S 181.975 Axial†	16.9	2.9	12.325 µg/L	12.325 ppb	10:36:17
1	Sb 206.836†	24.8	4.4	4.1914 µg/L	4.1914 ppb	10:36:17
1	Se 196.026†	15.7	-0.3	-0.4447 µg/L	-0.4447 ppb	10:36:17
1	SiO2†	1360.0	-0.2	-0.0365 µg/L	-0.0365 ppb	10:35:57
1	Si 251.611†	542.3	221.6	17.939 µg/L	17.939 ppb	10:36:17
1	Sn 189.927†	8.5	5.3	2.3711 µg/L	2.3711 ppb	10:36:17
1	Ti 334.940†	224.5	91.3	0.2186 µg/L	0.2186 ppb	10:35:57
1	Tl 190.801†	-18.1	5.0	6.9714 µg/L	6.9714 ppb	10:36:17
1	U 409.014†	-70.6	-26.0	-2.2654 µg/L	-2.2654 ppb	10:35:57
1	V 292.402†	16.6	48.5	0.5031 µg/L	0.5031 ppb	10:35:57
1	Zn 213.857†	517.8	-7.0	-0.1743 µg/L	-0.1743 ppb	10:36:17
2	Sc RADIAL	57988.4	57988.4	99.9 %		10:34:58
2	Al 396.153Radial†	-1.1	21.8	16.018 µg/L	16.018 ppb	10:34:58
2	Ca 317.933Radial†	197.2	1.9	1.7597 µg/L	1.7597 ppb	10:35:19
2	Fe 238.204 Radial†	17.4	0.2	1.2901 µg/L	1.2901 ppb	10:35:19
2	K 766.490 Radial†	218.6	41.9	29.478 µg/L	29.478 ppb	10:34:58
2	Mg 279.077 IEC†	11.8	-1.6	-15.197 µg/L	-15.197 ppb	10:35:19
2	Na 589.592 Radial†	577.3	11.6	3.7726 µg/L	3.7726 ppb	10:34:58
2	Sr 421.552†	19.2	-14.1	-0.1429 µg/L	-0.1429 ppb	10:34:58
2	Sc 361.383	2022417.1	2022417.1	98.925 %		10:36:23
2	Y 371.029	1389416.6	1389416.6	98.892 %		10:36:23
2	Ag 328.068†	-508.1	10.0	0.0793 µg/L	0.0793 ppb	10:36:28
2	As 188.979†	1.1	-0.3	-0.6551 µg/L	-0.6551 ppb	10:36:48
2	B 249.677†	334.1	41.0	1.7787 µg/L	1.7787 ppb	10:36:48
2	Ba 233.527†	-19.4	-1.6	-0.0413 µg/L	-0.0413 ppb	10:36:48
2	Be 313.107†	-2786.8	150.4	0.0963 µg/L	0.0963 ppb	10:36:28
2	Cd 226.502†	-136.1	0.4	0.0102 µg/L	0.0102 ppb	10:36:48
2	Co 228.616†	-12.3	-7.4	-0.3595 µg/L	-0.3595 ppb	10:36:48
2	Cr 267.716†	-29.4	2.5	0.0522 µg/L	0.0522 ppb	10:36:48
2	Cu 324.752†	2564.5	54.8	0.3755 µg/L	0.3755 ppb	10:36:28
2	Mn 257.610†	-224.1	10.1	0.0348 µg/L	0.0348 ppb	10:36:48
2	Mo 202.031†	0.1	6.9	0.7152 µg/L	0.7152 ppb	10:36:48
2	Ni 231.604†	304.3	0.8	0.0425 µg/L	0.0425 ppb	10:36:48
2	P 214.914†	27.1	5.8	12.271 µg/L	12.271 ppb	10:36:48
2	Pb 220.353†	98.7	6.3	1.6312 µg/L	1.6312 ppb	10:36:48

2	S 181.975 Axial†	16.4	2.7	11.818 µg/L	11.818 ppb	10:36:48
2	Sb 206.836†	22.7	2.8	2.6477 µg/L	2.6477 ppb	10:36:48
2	Se 196.026†	18.9	3.3	4.9998 µg/L	4.9998 ppb	10:36:48
2	SiO2†	1332.3	2.3	0.4919 µg/L	0.4919 ppb	10:36:28
2	Si 251.611†	311.4	0.3	0.0211 µg/L	0.0211 ppb	10:36:48
2	Sn 189.927†	-0.9	-3.9	-1.7610 µg/L	-1.7610 ppb	10:36:48
2	Ti 334.940†	102.4	-27.1	-0.0628 µg/L	-0.0628 ppb	10:36:28
2	Tl 190.801†	-27.6	-4.9	-6.7947 µg/L	-6.7947 ppb	10:36:48
2	U 409.014†	0.7	44.4	3.8630 µg/L	3.8630 ppb	10:36:28
2	V 292.402†	-19.3	12.6	0.1392 µg/L	0.1392 ppb	10:36:28
2	Zn 213.857†	504.5	-8.9	-0.2227 µg/L	-0.2227 ppb	10:36:48
3	Sc RADIAL	58145.4	58145.4	100 %		10:35:24
3	Al 396.153Radial†	-22.6	0.4	0.2553 µg/L	0.2553 ppb	10:35:24
3	Ca 317.933Radial†	194.6	-1.2	-1.0866 µg/L	-1.0866 ppb	10:35:44
3	Fe 238.204 Radial†	15.1	-2.2	-19.009 µg/L	-19.009 ppb	10:35:44
3	K 766.490 Radial†	162.7	-14.5	-10.183 µg/L	-10.183 ppb	10:35:24
3	Mg 279.077 IEC†	9.0	-4.4	-41.728 µg/L	-41.728 ppb	10:35:44
3	Na 589.592 Radial†	556.9	-10.3	-3.3479 µg/L	-3.3479 ppb	10:35:24
3	Sr 421.552†	47.6	14.2	0.1431 µg/L	0.1431 ppb	10:35:24
3	Sc 361.383	2056357.9	2056357.9	100.58 %		10:36:54
3	Y 371.029	1413912.7	1413912.7	100.64 %		10:36:54
3	Ag 328.068†	-545.4	-18.5	-0.1456 µg/L	-0.1456 ppb	10:36:59
3	As 188.979†	-1.6	-3.1	-5.9917 µg/L	-5.9917 ppb	10:37:19
3	B 249.677†	332.8	34.1	1.4916 µg/L	1.4916 ppb	10:37:19
3	Ba 233.527†	-24.9	-6.8	-0.1738 µg/L	-0.1738 ppb	10:37:19
3	Be 313.107†	-2941.4	43.3	0.0277 µg/L	0.0277 ppb	10:36:59
3	Cd 226.502†	-142.8	-4.0	-0.1071 µg/L	-0.1071 ppb	10:37:19
3	Co 228.616†	-5.7	-0.7	-0.0319 µg/L	-0.0319 ppb	10:37:19
3	Cr 267.716†	-29.5	2.9	0.0609 µg/L	0.0609 ppb	10:37:19
3	Cu 324.752†	2540.3	-12.0	-0.0849 µg/L	-0.0849 ppb	10:36:59
3	Mn 257.610†	-230.9	7.1	0.0231 µg/L	0.0231 ppb	10:37:19
3	Mo 202.031†	3.8	10.7	1.0993 µg/L	1.0993 ppb	10:37:19
3	Ni 231.604†	298.5	-10.0	-0.5333 µg/L	-0.5333 ppb	10:37:19
3	P 214.914†	22.6	0.9	1.8581 µg/L	1.8581 ppb	10:37:19
3	Pb 220.353†	88.9	-5.1	-1.3099 µg/L	-1.3099 ppb	10:37:19
3	S 181.975 Axial†	19.4	5.5	23.815 µg/L	23.815 ppb	10:37:19
3	Sb 206.836†	27.3	7.0	6.7181 µg/L	6.7181 ppb	10:37:19
3	Se 196.026†	13.2	-2.8	-4.2501 µg/L	-4.2501 ppb	10:37:19
3	SiO2†	1362.0	9.5	2.0121 µg/L	2.0121 ppb	10:36:59
3	Si 251.611†	331.9	15.5	1.2532 µg/L	1.2532 ppb	10:37:19
3	Sn 189.927†	-1.6	-4.7	-2.0970 µg/L	-2.0970 ppb	10:37:19
3	Ti 334.940†	162.2	30.7	0.0756 µg/L	0.0756 ppb	10:36:59
3	Tl 190.801†	-27.6	-4.5	-6.2316 µg/L	-6.2316 ppb	10:37:19
3	U 409.014†	-127.9	-83.5	-7.2581 µg/L	-7.2581 ppb	10:36:59
3	V 292.402†	-22.7	9.5	0.0963 µg/L	0.0963 ppb	10:36:59
3	Zn 213.857†	513.4	-8.4	-0.2045 µg/L	-0.2045 ppb	10:37:19

## Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2048987.4	100.22 %	1.162			1.16%
Sc RADIAL	58146.4	100 %	0.3			0.27%
Y 371.029	1408497.9	100.25 %	1.212			1.21%
Ag 328.068†	2.6	0.0219 µg/L	0.14747	0.0219 ppb	0.14747	673.69%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	14.6	10.729 µg/L	9.0703	10.729 ppb	9.0703	84.54%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.3	-4.4599 µg/L	3.31586	-4.4599 ppb	3.31586	74.35%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	38.2	1.6643 µg/L	0.15215	1.6643 ppb	0.15215	9.14%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-3.4	-0.0866 µg/L	0.07553	-0.0866 ppb	0.07553	87.19%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	125.7	0.0804 µg/L	0.04691	0.0804 ppb	0.04691	58.32%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-1.7	-1.5926 µg/L	3.63183	-1.5926 ppb	3.63183	228.05%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-1.1	-0.0296 µg/L	0.06714	-0.0296 ppb	0.06714	227.09%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.6	-0.0747 µg/L	0.26603	-0.0747 ppb	0.26603	356.23%

QC value within limits	for Co 228.616	Recovery = Not calculated			
Cr 267.716†	32.9	0.7003 µg/L	1.11498	0.7003 ppb	1.11498 159.22%
QC value within limits	for Cr 267.716	Recovery = Not calculated			
Cu 324.752†	8.2	0.0550 µg/L	0.27829	0.0550 ppb	0.27829 505.64%
QC value within limits	for Cu 324.752	Recovery = Not calculated			
Fe 238.204 Radial†	-0.7	-6.4127 µg/L	10.99877	-6.4127 ppb	10.99877 171.52%
QC value within limits	for Fe 238.204 Radial	Recovery = Not calculated			
K 766.490 Radial†	2.9	2.0213 µg/L	23.82679	2.0213 ppb	23.82679 >999.9%
QC value within limits	for K 766.490 Radial	Recovery = Not calculated			
Mg 279.077 IEC†	-3.4	-32.084 µg/L	14.6736	-32.084 ppb	14.6736 45.74%
QC value within limits	for Mg 279.077 IEC	Recovery = Not calculated			
Mn 257.610†	30.0	0.1020 µg/L	0.12667	0.1020 ppb	0.12667 124.19%
QC value within limits	for Mn 257.610	Recovery = Not calculated			
Mo 202.031†	6.9	0.7059 µg/L	0.39804	0.7059 ppb	0.39804 56.38%
QC value within limits	for Mo 202.031	Recovery = Not calculated			
Na 589.592 Radial†	-16.6	-5.3846 µg/L	10.32738	-5.3846 ppb	10.32738 191.79%
QC value within limits	for Na 589.592 Radial	Recovery = Not calculated			
Ni 231.604†	-0.3	-0.0177 µg/L	0.48828	-0.0177 ppb	0.48828 >999.9%
QC value within limits	for Ni 231.604	Recovery = Not calculated			
P 214.914†	4.3	9.0906 µg/L	6.27865	9.0906 ppb	6.27865 69.07%
QC value within limits	for P 214.914	Recovery = Not calculated			
Pb 220.353†	1.0	0.2643 µg/L	1.48146	0.2643 ppb	1.48146 560.42%
QC value within limits	for Pb 220.353	Recovery = Not calculated			
S 181.975 Axial†	3.7	15.986 µg/L	6.7851	15.986 ppb	6.7851 42.44%
QC value within limits	for S 181.975 Axial	Recovery = Not calculated			
Sb 206.836†	4.7	4.5190 µg/L	2.05492	4.5190 ppb	2.05492 45.47%
QC value within limits	for Sb 206.836	Recovery = Not calculated			
Se 196.026†	0.1	0.1017 µg/L	4.64912	0.1017 ppb	4.64912 >999.9%
QC value within limits	for Se 196.026	Recovery = Not calculated			
SiO2†	3.9	0.8225 µg/L	1.06355	0.8225 ppb	1.06355 129.31%
QC value within limits	for SiO2	Recovery = Not calculated			
Si 251.611†	79.1	6.4044 µg/L	10.00812	6.4044 ppb	10.00812 156.27%
QC value within limits	for Si 251.611	Recovery = Not calculated			
Sn 189.927†	-1.1	-0.4957 µg/L	2.48831	-0.4957 ppb	2.48831 502.03%
QC value within limits	for Sn 189.927	Recovery = Not calculated			
Sr 421.552†	5.4	0.0543 µg/L	0.17105	0.0543 ppb	0.17105 315.22%
QC value within limits	for Sr 421.552	Recovery = Not calculated			
Ti 334.940†	31.6	0.0771 µg/L	0.14069	0.0771 ppb	0.14069 182.40%
QC value within limits	for Ti 334.940	Recovery = Not calculated			
Tl 190.801†	-1.5	-2.0183 µg/L	7.79039	-2.0183 ppb	7.79039 385.99%
QC value within limits	for Tl 190.801	Recovery = Not calculated			
U 409.014†	-21.7	-1.8868 µg/L	5.57023	-1.8868 ppb	5.57023 295.22%
QC value within limits	for U 409.014	Recovery = Not calculated			
V 292.402†	23.5	0.2462 µg/L	0.22354	0.2462 ppb	0.22354 90.79%
QC value within limits	for V 292.402	Recovery = Not calculated			
Zn 213.857†	-8.1	-0.2005 µg/L	0.02444	-0.2005 ppb	0.02444 12.19%
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: 2/17/2010 10:37:27  
 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	58902.6	58902.6	101 %		10:37:59
1	Al 396.153Radial†	258.4	277.5	203.80 µg/L	203.80 ppb	10:37:59
1	Ca 317.933Radial†	407.7	206.3	191.06 µg/L	191.06 ppb	10:38:19
1	Fe 238.204 Radial†	28.9	11.2	96.460 µg/L	96.460 ppb	10:38:19
1	K 766.490 Radial†	327.6	145.9	102.63 µg/L	102.63 ppb	10:37:59
1	Mg 279.077 IEC†	43.6	29.5	277.60 µg/L	277.60 ppb	10:38:19
1	Na 589.592 Radial†	1497.0	908.9	295.07 µg/L	295.07 ppb	10:37:59
1	Sr 421.552†	530.0	488.9	4.9439 µg/L	4.9439 ppb	10:37:59
1	Sc 361.383	2057465.3	2057465.3	100.64 %		10:39:17
1	Y 371.029	1415363.1	1415363.1	100.74 %		10:39:17
1	Ag 328.068†	117.9	640.8	5.0523 µg/L	5.0523 ppb	10:39:23
1	As 188.979†	14.4	12.8	24.612 µg/L	24.612 ppb	10:39:43
1	B 249.677†	1453.6	1147.6	49.778 µg/L	49.778 ppb	10:39:23
1	Ba 233.527†	177.7	194.6	5.0107 µg/L	5.0107 ppb	10:39:43
1	Be 313.107†	4888.3	7824.8	5.0057 µg/L	5.0057 ppb	10:39:23
1	Cd 226.502†	55.7	193.3	5.2155 µg/L	5.2155 ppb	10:39:43
1	Co 228.616†	91.7	96.1	4.6540 µg/L	4.6540 ppb	10:39:43
1	Cr 267.716†	212.5	243.3	5.1763 µg/L	5.1763 ppb	10:39:23
1	Cu 324.752†	4068.8	1505.4	10.329 µg/L	10.329 ppb	10:39:23
1	Mn 257.610†	2864.4	3082.8	10.425 µg/L	10.425 ppb	10:39:23
1	Mo 202.031†	95.1	101.3	10.432 µg/L	10.432 ppb	10:39:43
1	Ni 231.604†	392.4	83.2	4.4374 µg/L	4.4374 ppb	10:39:43
1	P 214.914†	95.2	73.0	152.96 µg/L	152.96 ppb	10:39:43
1	Pb 220.353†	126.5	32.2	8.3064 µg/L	8.3064 ppb	10:39:43
1	S 181.975 Axial†	43.0	28.9	124.67 µg/L	124.67 ppb	10:39:43
1	Sb 206.836†	41.7	21.2	20.423 µg/L	20.423 ppb	10:39:43
1	Se 196.026†	37.7	21.6	32.890 µg/L	32.890 ppb	10:39:43
1	SiO2†	2396.9	1037.2	218.70 µg/L	218.70 ppb	10:39:23
1	Si 251.611†	1537.7	1213.5	98.243 µg/L	98.243 ppb	10:39:43
1	Sn 189.927†	24.2	21.0	9.3785 µg/L	9.3785 ppb	10:39:43
1	Ti 334.940†	2259.9	2115.0	4.9735 µg/L	4.9735 ppb	10:39:23
1	Tl 190.801†	-9.4	13.6	19.024 µg/L	19.024 ppb	10:39:43
1	U 409.014†	580.8	620.8	53.976 µg/L	53.976 ppb	10:39:23
1	V 292.402†	428.6	457.9	4.8725 µg/L	4.8725 ppb	10:39:23
1	Zn 213.857†	908.6	384.0	9.5651 µg/L	9.5651 ppb	10:39:43
2	Sc RADIAL	58368.9	58368.9	101 %		10:38:24
2	Al 396.153Radial†	276.1	297.4	218.42 µg/L	218.42 ppb	10:38:24
2	Ca 317.933Radial†	410.4	212.7	196.98 µg/L	196.98 ppb	10:38:44
2	Fe 238.204 Radial†	29.3	11.8	101.80 µg/L	101.80 ppb	10:38:44
2	K 766.490 Radial†	384.2	205.2	144.32 µg/L	144.32 ppb	10:38:24
2	Mg 279.077 IEC†	42.0	28.4	266.91 µg/L	266.91 ppb	10:38:44
2	Na 589.592 Radial†	1483.2	908.7	294.98 µg/L	294.98 ppb	10:38:24
2	Sr 421.552†	510.6	474.4	4.7969 µg/L	4.7969 ppb	10:38:24
2	Sc 361.383	2057257.9	2057257.9	100.63 %		10:39:49
2	Y 371.029	1414157.8	1414157.8	100.65 %		10:39:49
2	Ag 328.068†	114.1	637.1	5.0272 µg/L	5.0272 ppb	10:39:54
2	As 188.979†	14.0	12.5	23.949 µg/L	23.949 ppb	10:40:14
2	B 249.677†	1447.1	1141.3	49.499 µg/L	49.499 ppb	10:39:54
2	Ba 233.527†	181.9	198.8	5.1195 µg/L	5.1195 ppb	10:40:14
2	Be 313.107†	4772.6	7710.4	4.9324 µg/L	4.9324 ppb	10:39:54
2	Cd 226.502†	46.2	183.8	4.9586 µg/L	4.9586 ppb	10:40:14
2	Co 228.616†	87.9	92.3	4.4695 µg/L	4.4695 ppb	10:40:14
2	Cr 267.716†	172.6	203.7	4.3341 µg/L	4.3341 ppb	10:39:54
2	Cu 324.752†	4016.2	1453.5	9.9743 µg/L	9.9743 ppb	10:39:54
2	Mn 257.610†	2842.3	3061.1	10.353 µg/L	10.353 ppb	10:39:54
2	Mo 202.031†	89.9	96.2	9.9085 µg/L	9.9085 ppb	10:40:14
2	Ni 231.604†	392.9	83.7	4.4655 µg/L	4.4655 ppb	10:40:14
2	P 214.914†	101.3	79.1	165.87 µg/L	165.87 ppb	10:40:14
2	Pb 220.353†	136.6	42.3	10.928 µg/L	10.928 ppb	10:40:14

2	S 181.975 Axial†	38.0	23.9	103.18 µg/L	103.18 ppb	10:40:14
2	Sb 206.836†	33.6	13.2	12.756 µg/L	12.756 ppb	10:40:14
2	Se 196.026†	32.4	16.3	24.857 µg/L	24.857 ppb	10:40:14
2	SiO2†	2408.0	1048.4	221.07 µg/L	221.07 ppb	10:39:54
2	Si 251.611†	1528.6	1204.6	97.522 µg/L	97.522 ppb	10:40:14
2	Sn 189.927†	21.5	18.3	8.1656 µg/L	8.1656 ppb	10:40:14
2	Ti 334.940†	2299.5	2154.5	5.0678 µg/L	5.0678 ppb	10:39:54
2	Tl 190.801†	-10.3	12.7	17.829 µg/L	17.829 ppb	10:40:14
2	U 409.014†	585.8	625.9	54.419 µg/L	54.419 ppb	10:39:54
2	V 292.402†	489.3	518.3	5.4897 µg/L	5.4897 ppb	10:39:54
2	Zn 213.857†	899.9	375.4	9.3521 µg/L	9.3521 ppb	10:40:14
3	Sc RADIAL	58446.5	58446.5	101 %		10:38:49
3	Al 396.153Radial†	268.2	289.3	212.47 µg/L	212.47 ppb	10:38:49
3	Ca 317.933Radial†	407.1	208.8	193.43 µg/L	193.43 ppb	10:39:10
3	Fe 238.204 Radial†	28.4	10.9	94.108 µg/L	94.108 ppb	10:39:10
3	K 766.490 Radial†	324.0	144.9	101.94 µg/L	101.94 ppb	10:38:49
3	Mg 279.077 IEC†	42.5	28.8	270.64 µg/L	270.64 ppb	10:39:10
3	Na 589.592 Radial†	1470.2	893.7	290.14 µg/L	290.14 ppb	10:38:49
3	Sr 421.552†	548.8	511.7	5.1738 µg/L	5.1738 ppb	10:38:49
3	Sc 361.383	2057650.6	2057650.6	100.65 %		10:40:20
3	Y 371.029	1414230.1	1414230.1	100.66 %		10:40:20
3	Ag 328.068†	115.2	638.1	5.0293 µg/L	5.0293 ppb	10:40:25
3	As 188.979†	16.7	15.1	29.038 µg/L	29.038 ppb	10:40:45
3	B 249.677†	1411.2	1105.3	47.941 µg/L	47.941 ppb	10:40:25
3	Ba 233.527†	157.0	173.9	4.4790 µg/L	4.4790 ppb	10:40:45
3	Be 313.107†	4457.0	7395.9	4.7313 µg/L	4.7313 ppb	10:40:25
3	Cd 226.502†	33.4	171.1	4.6151 µg/L	4.6151 ppb	10:40:45
3	Co 228.616†	89.2	93.6	4.5309 µg/L	4.5309 ppb	10:40:45
3	Cr 267.716†	176.0	207.1	4.4053 µg/L	4.4053 ppb	10:40:25
3	Cu 324.752†	4005.2	1441.9	9.8935 µg/L	9.8935 ppb	10:40:25
3	Mn 257.610†	2715.8	2934.9	9.9252 µg/L	9.9252 ppb	10:40:25
3	Mo 202.031†	75.1	81.4	8.3844 µg/L	8.3844 ppb	10:40:45
3	Ni 231.604†	387.7	78.5	4.1863 µg/L	4.1863 ppb	10:40:45
3	P 214.914†	99.5	77.3	162.06 µg/L	162.06 ppb	10:40:45
3	Pb 220.353†	130.1	35.7	9.2405 µg/L	9.2405 ppb	10:40:45
3	S 181.975 Axial†	36.0	21.9	94.530 µg/L	94.530 ppb	10:40:45
3	Sb 206.836†	30.2	9.8	9.4679 µg/L	9.4679 ppb	10:40:45
3	Se 196.026†	27.4	11.4	17.289 µg/L	17.289 ppb	10:40:45
3	SiO2†	2338.7	979.2	206.47 µg/L	206.47 ppb	10:40:25
3	Si 251.611†	1457.2	1133.3	91.752 µg/L	91.752 ppb	10:40:45
3	Sn 189.927†	23.9	20.7	9.2334 µg/L	9.2334 ppb	10:40:45
3	Ti 334.940†	2164.5	2020.0	4.7499 µg/L	4.7499 ppb	10:40:25
3	Tl 190.801†	-10.7	12.3	17.194 µg/L	17.194 ppb	10:40:45
3	U 409.014†	459.8	500.5	43.516 µg/L	43.516 ppb	10:40:25
3	V 292.402†	407.8	437.3	4.6316 µg/L	4.6316 ppb	10:40:25
3	Zn 213.857†	859.1	334.7	8.3327 µg/L	8.3327 ppb	10:40:45

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Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2057458.0	100.64 %	0.010			0.01%
Sc RADIAL	58572.6	101 %	0.5			0.49%
Y 371.029	1414583.7	100.68 %	0.048			0.05%
Ag 328.068†	638.7	5.0363 µg/L	0.01390	5.0363 ppb	0.01390	0.28%
QC value within limits for Ag 328.068 Recovery = 100.73%						
Al 396.153Radial†	288.1	211.57 µg/L	7.351	211.57 ppb	7.351	3.47%
QC value within limits for Al 396.153Radial Recovery = 105.78%						
As 188.979†	13.5	25.866 µg/L	2.7669	25.866 ppb	2.7669	10.70%
QC value within limits for As 188.979 Recovery = 86.22%						
B 249.677†	1131.4	49.072 µg/L	0.9897	49.072 ppb	0.9897	2.02%
QC value within limits for B 249.677 Recovery = 98.14%						
Ba 233.527†	189.1	4.8697 µg/L	0.34271	4.8697 ppb	0.34271	7.04%
QC value within limits for Ba 233.527 Recovery = 97.39%						
Be 313.107†	7643.7	4.8898 µg/L	0.14209	4.8898 ppb	0.14209	2.91%
QC value within limits for Be 313.107 Recovery = 97.80%						
Ca 317.933Radial†	209.3	193.82 µg/L	2.980	193.82 ppb	2.980	1.54%
QC value within limits for Ca 317.933Radial Recovery = 96.91%						
Cd 226.502†	182.8	4.9297 µg/L	0.30122	4.9297 ppb	0.30122	6.11%
QC value within limits for Cd 226.502 Recovery = 98.59%						
Co 228.616†	94.0	4.5515 µg/L	0.09395	4.5515 ppb	0.09395	2.06%

QC value within limits for Co 228.616 Recovery = 91.03%							
Cr 267.716†	218.0	4.6385 µg/L	0.46707	4.6385 ppb	0.46707	10.07%	
QC value within limits for Cr 267.716 Recovery = 92.77%							
Cu 324.752†	1466.9	10.066 µg/L	0.2317	10.066 ppb	0.2317	2.30%	
QC value within limits for Cu 324.752 Recovery = 100.66%							
Fe 238.204 Radial†	11.3	97.457 µg/L	3.9432	97.457 ppb	3.9432	4.05%	
QC value within limits for Fe 238.204 Radial Recovery = 97.46%							
K 766.490 Radial†	165.3	116.30 µg/L	24.273	116.30 ppb	24.273	20.87%	
QC value within limits for K 766.490 Radial Recovery = 77.53%							
Mg 279.077 IEC†	28.9	271.72 µg/L	5.426	271.72 ppb	5.426	2.00%	
QC value within limits for Mg 279.077 IEC Recovery = 90.57%							
Mn 257.610†	3026.2	10.235 µg/L	0.2704	10.235 ppb	0.2704	2.64%	
QC value within limits for Mn 257.610 Recovery = 102.35%							
Mo 202.031†	93.0	9.5748 µg/L	1.06355	9.5748 ppb	1.06355	11.11%	
QC value within limits for Mo 202.031 Recovery = 95.75%							
Na 589.592 Radial†	903.8	293.40 µg/L	2.823	293.40 ppb	2.823	0.96%	
QC value within limits for Na 589.592 Radial Recovery = 97.80%							
Ni 231.604†	81.8	4.3630 µg/L	0.15369	4.3630 ppb	0.15369	3.52%	
QC value within limits for Ni 231.604 Recovery = 87.26%							
P 214.914†	76.4	160.30 µg/L	6.635	160.30 ppb	6.635	4.14%	
QC value within limits for P 214.914 Recovery = 106.87%							
Pb 220.353†	36.7	9.4915 µg/L	1.32849	9.4915 ppb	1.32849	14.00%	
QC value within limits for Pb 220.353 Recovery = 94.92%							
S 181.975 Axial†	24.9	107.46 µg/L	15.521	107.46 ppb	15.521	14.44%	
QC value within limits for S 181.975 Axial Recovery = 107.46%							
Sb 206.836†	14.8	14.216 µg/L	5.6214	14.216 ppb	5.6214	39.54%	
QC value greater than the upper limit for Sb 206.836 Recovery = 142.16%							
Se 196.026†	16.4	25.012 µg/L	7.8015	25.012 ppb	7.8015	31.19%	
QC value within limits for Se 196.026 Recovery = 83.37%							
SiO2†	1021.6	215.41 µg/L	7.834	215.41 ppb	7.834	3.64%	
QC value within limits for SiO2 Recovery = 101.13%							
Si 251.611†	1183.8	95.839 µg/L	3.5580	95.839 ppb	3.5580	3.71%	
QC value within limits for Si 251.611 Recovery = 95.84%							
Sn 189.927†	20.0	8.9258 µg/L	0.66236	8.9258 ppb	0.66236	7.42%	
QC value within limits for Sn 189.927 Recovery = 89.26%							
Sr 421.552†	491.7	4.9715 µg/L	0.18996	4.9715 ppb	0.18996	3.82%	
QC value within limits for Sr 421.552 Recovery = 99.43%							
Ti 334.940†	2096.5	4.9304 µg/L	0.16329	4.9304 ppb	0.16329	3.31%	
QC value within limits for Ti 334.940 Recovery = 98.61%							
Tl 190.801†	12.9	18.016 µg/L	0.9291	18.016 ppb	0.9291	5.16%	
QC value within limits for Tl 190.801 Recovery = 90.08%							
U 409.014†	582.4	50.637 µg/L	6.1711	50.637 ppb	6.1711	12.19%	
QC value within limits for U 409.014 Recovery = 101.27%							
V 292.402†	471.2	4.9979 µg/L	0.44258	4.9979 ppb	0.44258	8.86%	
QC value within limits for V 292.402 Recovery = 99.96%							
Zn 213.857†	364.7	9.0833 µg/L	0.65871	9.0833 ppb	0.65871	7.25%	
QC value within limits for Zn 213.857 Recovery = 90.83%							
QC Failed. Continue with analysis.							

Sequence No.: 9  
 Sample ID: ICSA  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 103  
 Date Collected: 2/17/2010 10:40:53  
 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	57425.0	57425.0	98.9 %		10:41:32
1	Al 396.153Radial†	676352.0	683596.3	502540 µg/L	502540 ppb	10:41:27
1	Ca 317.933Radial†	511036.9	516297.8	478200 µg/L	478200 ppb	10:41:27
1	Fe 238.204 Radial†	21651.7	21865.6	187850 µg/L	187850 ppb	10:41:32
1	K 766.490 Radial†	98.8	-77.1	-54.209 µg/L	-54.209 ppb	10:41:32
1	Mg 279.077 IEC†	50809.8	51338.9	483010 µg/L	483010 ppb	10:41:32
1	Na 589.592 Radial†	608.9	49.2	15.980 µg/L	15.980 ppb	10:41:32
1	Sr 421.552†	358.1	328.6	3.3230 µg/L	3.3230 ppb	10:41:32
1	Sc 361.383	1931476.9	1931476.9	94.477 %		10:42:01
1	Y 371.029	1316286.0	1316286.0	93.687 %		10:42:01
1	Ag 328.068†	-2803.2	-2443.5	-7.4439 µg/L	-7.4439 ppb	10:42:07
1	As 188.979†	-11.6	-13.8	-40.513 µg/L	-40.513 ppb	10:42:27
1	B 249.677†	794.3	544.0	-74.407 µg/L	-74.407 ppb	10:42:07
1	Ba 233.527†	292.4	327.5	8.3763 µg/L	8.3763 ppb	10:42:27
1	Be 313.107†	-3535.5	-774.6	-0.5062 µg/L	-0.5062 ppb	10:42:07
1	Cd 226.502†	382.0	542.3	-6.5862 µg/L	-6.5862 ppb	10:42:27
1	Co 228.616†	42.7	50.2	2.3657 µg/L	2.3657 ppb	10:42:27
1	Cr 267.716†	-37.5	-7.4	-0.1732 µg/L	-0.1732 ppb	10:42:27
1	Cu 324.752†	-1387.6	-4006.3	-1.3420 µg/L	-1.3420 ppb	10:42:07
1	Mn 257.610†	399.3	659.3	7.8851 µg/L	7.8851 ppb	10:42:07
1	Mo 202.031†	-94.0	-92.6	-2.3948 µg/L	-2.3948 ppb	10:42:27
1	Ni 231.604†	155.7	-142.0	-5.1437 µg/L	-5.1437 ppb	10:42:27
1	P 214.914†	87.5	71.1	144.55 µg/L	144.55 ppb	10:42:27
1	Pb 220.353†	43.4	-47.6	8.1887 µg/L	8.1887 ppb	10:42:27
1	S 181.975 Axial†	28.9	16.7	72.133 µg/L	72.133 ppb	10:42:27
1	Sb 206.836†	54.5	37.5	-5.8422 µg/L	-5.8422 ppb	10:42:27
1	Se 196.026†	17.4	2.5	-45.952 µg/L	-45.952 ppb	10:42:27
1	SiO2†	1168.0	-108.2	-22.821 µg/L	-22.821 ppb	10:42:27
1	Si 251.611†	436.4	147.5	11.939 µg/L	11.939 ppb	10:42:27
1	Sn 189.927†	-66.9	-73.9	1.6683 µg/L	1.6683 ppb	10:42:27
1	Ti 334.940†	11116.6	11635.9	-3.0561 µg/L	-3.0561 ppb	10:42:07
1	Tl 190.801†	-31.3	-10.1	6.3314 µg/L	6.3314 ppb	10:42:27
1	U 409.014†	-116.2	-79.3	-62.184 µg/L	-62.184 ppb	10:42:07
1	V 292.402†	-2199.7	-2296.3	-1.6040 µg/L	-1.6040 ppb	10:42:07
1	Zn 213.857†	1510.8	1080.3	-9.1725 µg/L	-9.1725 ppb	10:42:27
2	Sc RADIAL	57407.1	57407.1	98.9 %		10:41:43
2	Al 396.153Radial†	677388.5	684856.7	503470 µg/L	503470 ppb	10:41:38
2	Ca 317.933Radial†	512424.4	517861.2	479650 µg/L	479650 ppb	10:41:38
2	Fe 238.204 Radial†	21661.9	21882.7	188000 µg/L	188000 ppb	10:41:43
2	K 766.490 Radial†	145.7	-29.6	-20.818 µg/L	-20.818 ppb	10:41:43
2	Mg 279.077 IEC†	50834.9	51380.2	483400 µg/L	483400 ppb	10:41:43
2	Na 589.592 Radial†	623.0	63.7	20.673 µg/L	20.673 ppb	10:41:43
2	Sr 421.552†	402.2	373.3	3.7748 µg/L	3.7748 ppb	10:41:43
2	Sc 361.383	1917452.5	1917452.5	93.791 %		10:42:33
2	Y 371.029	1307994.1	1307994.1	93.097 %		10:42:33
2	Ag 328.068†	-2813.8	-2476.4	-7.6879 µg/L	-7.6879 ppb	10:42:38
2	As 188.979†	-15.8	-18.4	-49.334 µg/L	-49.334 ppb	10:42:59
2	B 249.677†	786.6	541.9	-74.574 µg/L	-74.574 ppb	10:42:38
2	Ba 233.527†	271.3	307.2	7.8552 µg/L	7.8552 ppb	10:42:59
2	Be 313.107†	-3411.7	-670.0	-0.4392 µg/L	-0.4392 ppb	10:42:38
2	Cd 226.502†	389.4	553.1	-6.3110 µg/L	-6.3110 ppb	10:42:59
2	Co 228.616†	49.1	57.3	2.7106 µg/L	2.7106 ppb	10:42:59
2	Cr 267.716†	-75.6	-48.4	-1.0443 µg/L	-1.0443 ppb	10:42:59
2	Cu 324.752†	-1417.4	-4048.8	-1.6123 µg/L	-1.6123 ppb	10:42:38
2	Mn 257.610†	280.9	536.1	7.4728 µg/L	7.4728 ppb	10:42:38
2	Mo 202.031†	-100.3	-100.1	-3.1582 µg/L	-3.1582 ppb	10:42:59
2	Ni 231.604†	162.5	-133.5	-4.6872 µg/L	-4.6872 ppb	10:42:59
2	P 214.914†	79.7	63.4	128.58 µg/L	128.58 ppb	10:42:59
2	Pb 220.353†	45.4	-45.1	8.8680 µg/L	8.8680 ppb	10:42:59

2	S 181.975 Axial†	28.8	16.9	72.770 µg/L	72.770 ppb	10:42:59
2	Sb 206.836†	50.5	33.7	-9.6573 µg/L	-9.6573 ppb	10:42:59
2	Se 196.026†	30.3	16.4	-25.123 µg/L	-25.123 ppb	10:42:59
2	SiO2†	1149.0	-119.4	-25.180 µg/L	-25.180 ppb	10:42:59
2	Si 251.611†	430.9	144.9	11.732 µg/L	11.732 ppb	10:42:59
2	Sn 189.927†	-53.9	-60.5	7.6511 µg/L	7.6511 ppb	10:42:59
2	Ti 334.940†	10966.2	11561.6	-3.2391 µg/L	-3.2391 ppb	10:42:38
2	Tl 190.801†	-28.0	-7.0	10.690 µg/L	10.690 ppb	10:42:59
2	U 409.014†	-23.4	18.8	-53.756 µg/L	-53.756 ppb	10:42:38
2	V 292.402†	-2120.3	-2228.6	-0.8894 µg/L	-0.8894 ppb	10:42:38
2	Zn 213.857†	1505.1	1085.9	-9.0629 µg/L	-9.0629 ppb	10:42:59
3	Sc RADIAL	57243.5	57243.5	98.6 %		10:41:54
3	Al 396.153Radial†	677572.9	687000.9	505050 µg/L	505050 ppb	10:41:48
3	Ca 317.933Radial†	511925.9	518836.4	480550 µg/L	480550 ppb	10:41:48
3	Fe 238.204 Radial†	21770.4	22055.3	189480 µg/L	189480 ppb	10:41:54
3	K 766.490 Radial†	175.7	1.2	0.8638 µg/L	0.8638 ppb	10:41:54
3	Mg 279.077 IEC†	51000.3	51694.8	486360 µg/L	486360 ppb	10:41:54
3	Na 589.592 Radial†	639.6	82.3	26.719 µg/L	26.719 ppb	10:41:54
3	Sr 421.552†	396.4	368.6	3.7272 µg/L	3.7272 ppb	10:41:54
3	Sc 361.383	1939712.2	1939712.2	94.879 %		10:43:04
3	Y 371.029	1324036.6	1324036.6	94.239 %		10:43:04
3	Ag 328.068†	-2885.7	-2517.8	-7.9121 µg/L	-7.9121 ppb	10:43:10
3	As 188.979†	-10.0	-12.1	-37.186 µg/L	-37.186 ppb	10:43:30
3	B 249.677†	830.8	578.8	-73.746 µg/L	-73.746 ppb	10:43:10
3	Ba 233.527†	279.2	312.3	7.9875 µg/L	7.9875 ppb	10:43:30
3	Be 313.107†	-3649.4	-878.8	-0.5727 µg/L	-0.5727 ppb	10:43:10
3	Cd 226.502†	373.2	531.3	-7.0682 µg/L	-7.0682 ppb	10:43:30
3	Co 228.616†	59.1	67.3	3.1905 µg/L	3.1905 ppb	10:43:30
3	Cr 267.716†	-67.0	-38.4	-0.8299 µg/L	-0.8299 ppb	10:43:30
3	Cu 324.752†	-1480.0	-4097.4	-1.7397 µg/L	-1.7397 ppb	10:43:10
3	Mn 257.610†	168.1	413.8	7.1378 µg/L	7.1378 ppb	10:43:10
3	Mo 202.031†	-106.5	-105.4	-3.6434 µg/L	-3.6434 ppb	10:43:30
3	Ni 231.604†	142.3	-156.8	-5.9114 µg/L	-5.9114 ppb	10:43:30
3	P 214.914†	110.7	95.1	194.67 µg/L	194.67 ppb	10:43:30
3	Pb 220.353†	53.1	-37.5	10.867 µg/L	10.867 ppb	10:43:30
3	S 181.975 Axial†	27.2	14.8	63.951 µg/L	63.951 ppb	10:43:30
3	Sb 206.836†	59.9	43.0	-0.8414 µg/L	-0.8414 ppb	10:43:30
3	Se 196.026†	33.9	19.9	-18.648 µg/L	-18.648 ppb	10:43:30
3	SiO2†	1137.3	-145.8	-30.747 µg/L	-30.747 ppb	10:43:30
3	Si 251.611†	439.5	148.7	12.038 µg/L	12.038 ppb	10:43:30
3	Sn 189.927†	-68.9	-75.7	1.0804 µg/L	1.0804 ppb	10:43:30
3	Ti 334.940†	11060.2	11526.5	-3.5414 µg/L	-3.5414 ppb	10:43:10
3	Tl 190.801†	-34.1	-13.0	2.5280 µg/L	2.5280 ppb	10:43:30
3	U 409.014†	-74.3	-34.6	-58.663 µg/L	-58.663 ppb	10:43:10
3	V 292.402†	-2058.8	-2137.8	0.2110 µg/L	0.2110 ppb	10:43:10
3	Zn 213.857†	1502.2	1064.4	-9.8321 µg/L	-9.8321 ppb	10:43:30

## Mean Data: ICSEA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1929547.2	94.382 %	0.5505			0.58%
Sc RADIAL	57358.5	98.8 %	0.17			0.17%
Y 371.029	1316105.6	93.674 %	0.5710			0.61%
Ag 328.068†	-2479.2	-7.6813 µg/L	0.23420	-7.6813 ppb	0.23420	3.05%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	685151.3	503690 µg/L	1265.4	503690 ppb	1265.4	0.25%
QC value within limits for Al 396.153Radial Recovery = 100.74%						
As 188.979†	-14.7	-42.344 µg/L	6.2777	-42.344 ppb	6.2777	14.83%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	554.9	-74.242 µg/L	0.4382	-74.242 ppb	0.4382	0.59%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	315.7	8.0730 µg/L	0.27085	8.0730 ppb	0.27085	3.36%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-774.5	-0.5060 µg/L	0.06679	-0.5060 ppb	0.06679	13.20%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	517665.1	479460 µg/L	1186.1	479460 ppb	1186.1	0.25%
QC value within limits for Ca 317.933Radial Recovery = 95.89%						
Cd 226.502†	542.3	-6.6551 µg/L	0.38325	-6.6551 ppb	0.38325	5.76%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	58.3	2.7556 µg/L	0.41428	2.7556 ppb	0.41428	15.03%



QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	-31.4	-0.6825 µg/L	0.45390	-0.6825 ppb	0.45390	66.51%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-4050.8	-1.5647 µg/L	0.20306	-1.5647 ppb	0.20306	12.98%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	21934.5	188450 µg/L	901.4	188450 ppb	901.4	0.48%
QC value within limits for Fe 238.204 Radial Recovery = 94.22%							
K	766.490 Radial†	-35.1	-24.721 µg/L	27.7434	-24.721 ppb	27.7434	112.23%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	51471.3	484250 µg/L	1831.2	484250 ppb	1831.2	0.38%
QC value within limits for Mg 279.077 IEC Recovery = 96.85%							
Mn	257.610†	536.4	7.4986 µg/L	0.37432	7.4986 ppb	0.37432	4.99%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	-99.4	-3.0655 µg/L	0.62943	-3.0655 ppb	0.62943	20.53%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	65.1	21.124 µg/L	5.3839	21.124 ppb	5.3839	25.49%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-144.1	-5.2474 µg/L	0.61869	-5.2474 ppb	0.61869	11.79%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	76.5	155.93 µg/L	34.485	155.93 ppb	34.485	22.12%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-43.4	9.3078 µg/L	1.39202	9.3078 ppb	1.39202	14.96%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	16.1	69.618 µg/L	4.9179	69.618 ppb	4.9179	7.06%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	38.1	-5.4470 µg/L	4.42121	-5.4470 ppb	4.42121	81.17%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	13.0	-29.908 µg/L	14.2669	-29.908 ppb	14.2669	47.70%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-124.5	-26.249 µg/L	4.0699	-26.249 ppb	4.0699	15.50%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	147.0	11.903 µg/L	0.1561	11.903 ppb	0.1561	1.31%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	-70.0	3.4666 µg/L	3.63582	3.4666 ppb	3.63582	104.88%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	356.8	3.6083 µg/L	0.24825	3.6083 ppb	0.24825	6.88%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	11574.7	-3.2789 µg/L	0.24509	-3.2789 ppb	0.24509	7.47%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-10.0	6.5163 µg/L	4.08393	6.5163 ppb	4.08393	62.67%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-31.7	-58.201 µg/L	4.2328	-58.201 ppb	4.2328	7.27%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-2220.9	-0.7608 µg/L	0.91432	-0.7608 ppb	0.91432	120.18%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	1076.8	-9.3558 µg/L	0.41612	-9.3558 ppb	0.41612	4.45%
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: 2/17/2010 10:43:38  
 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	56926.8	56926.8	98.1 %		10:44:16
1	Al 396.153Radial†	675073.7	688274.8	505970 µg/L	505970 ppb	10:44:10
1	Ca 317.933Radial†	508615.7	518349.0	480100 µg/L	480100 ppb	10:44:10
1	Fe 238.204 Radial†	21608.2	22012.7	189130 µg/L	189130 ppb	10:44:16
1	K 766.490 Radial†	7273.8	7239.0	5092.2 µg/L	5092.2 ppb	10:44:16
1	Mg 279.077 IEC†	50852.2	51831.5	487650 µg/L	487650 ppb	10:44:16
1	Na 589.592 Radial†	16038.2	15785.1	5124.4 µg/L	5124.4 ppb	10:44:16
1	Sr 421.552†	49298.0	50227.0	507.88 µg/L	507.88 ppb	10:44:16
1	Sc 361.383	1900991.5	1900991.5	92.985 %		10:44:45
1	Y 371.029	1298738.5	1298738.5	92.438 %		10:44:45
1	Ag 328.068†	27654.4	30264.3	251.97 µg/L	251.97 ppb	10:44:51
1	As 188.979†	237.6	254.1	473.95 µg/L	473.95 ppb	10:45:11
1	B 249.677†	11864.7	12463.0	443.12 µg/L	443.12 ppb	10:44:51
1	Ba 233.527†	18100.9	19484.4	501.73 µg/L	501.73 ppb	10:44:51
1	Be 313.107†	349754.7	379107.2	242.41 µg/L	242.41 ppb	10:44:45
1	Cd 226.502†	16421.3	17798.0	459.79 µg/L	459.79 ppb	10:44:51
1	Co 228.616†	8321.6	8954.4	432.98 µg/L	432.98 ppb	10:45:11
1	Cr 267.716†	21095.2	22718.8	483.34 µg/L	483.34 ppb	10:44:51
1	Cu 324.752†	71159.2	73989.8	533.31 µg/L	533.31 ppb	10:44:51
1	Mn 257.610†	130763.7	140864.9	481.94 µg/L	481.94 ppb	10:44:51
1	Mo 202.031†	4398.3	4736.9	494.65 µg/L	494.65 ppb	10:45:11
1	Ni 231.604†	7695.6	7969.4	427.50 µg/L	427.50 ppb	10:45:11
1	P 214.914†	1221.5	1292.0	2670.8 µg/L	2670.8 ppb	10:45:11
1	Pb 220.353†	1720.7	1757.0	476.42 µg/L	476.42 ppb	10:45:11
1	S 181.975 Axial†	597.9	629.1	2712.1 µg/L	2712.1 ppb	10:45:11
1	Sb 206.836†	544.4	565.3	501.60 µg/L	501.60 ppb	10:45:11
1	Se 196.026†	1483.3	1579.3	2355.2 µg/L	2355.2 ppb	10:45:11
1	SiO2†	49051.2	51407.1	10840 µg/L	10840 ppb	10:44:51
1	Si 251.611†	58854.2	62979.6	5098.7 µg/L	5098.7 ppb	10:44:51
1	Sn 189.927†	988.4	1059.9	507.17 µg/L	507.17 ppb	10:45:11
1	Ti 334.940†	206985.0	222469.0	494.27 µg/L	494.27 ppb	10:44:51
1	Tl 190.801†	268.0	311.1	457.48 µg/L	457.48 ppb	10:45:11
1	U 409.014†	5152.5	5584.9	430.26 µg/L	430.26 ppb	10:44:51
1	V 292.402†	43788.2	47123.6	512.63 µg/L	512.63 ppb	10:44:51
1	Zn 213.857†	19213.9	20144.5	465.47 µg/L	465.47 ppb	10:44:51
2	Sc RADIAL	56512.1	56512.1	97.4 %		10:44:26
2	Al 396.153Radial†	676438.6	694727.1	510720 µg/L	510720 ppb	10:44:21
2	Ca 317.933Radial†	511119.0	524725.0	486000 µg/L	486000 ppb	10:44:21
2	Fe 238.204 Radial†	21440.1	22001.8	189030 µg/L	189030 ppb	10:44:26
2	K 766.490 Radial†	7250.2	7269.1	5113.4 µg/L	5113.4 ppb	10:44:26
2	Mg 279.077 IEC†	50625.5	51979.1	489040 µg/L	489040 ppb	10:44:26
2	Na 589.592 Radial†	15903.7	15767.0	5118.5 µg/L	5118.5 ppb	10:44:26
2	Sr 421.552†	48964.0	50252.8	508.14 µg/L	508.14 ppb	10:44:26
2	Sc 361.383	1914770.3	1914770.3	93.659 %		10:45:17
2	Y 371.029	1307757.2	1307757.2	93.080 %		10:45:17
2	Ag 328.068†	27554.5	29943.6	249.41 µg/L	249.41 ppb	10:45:23
2	As 188.979†	238.1	252.7	471.05 µg/L	471.05 ppb	10:45:43
2	B 249.677†	11840.4	12345.3	438.04 µg/L	438.04 ppb	10:45:23
2	Ba 233.527†	17967.6	19202.0	494.46 µg/L	494.46 ppb	10:45:23
2	Be 313.107†	346254.8	372663.6	238.29 µg/L	238.29 ppb	10:45:17
2	Cd 226.502†	16227.1	17463.6	450.76 µg/L	450.76 ppb	10:45:23
2	Co 228.616†	8347.8	8917.9	431.23 µg/L	431.23 ppb	10:45:43
2	Cr 267.716†	20971.6	22423.6	477.06 µg/L	477.06 ppb	10:45:23
2	Cu 324.752†	70923.2	73187.1	527.79 µg/L	527.79 ppb	10:45:23
2	Mn 257.610†	130309.3	139367.8	476.81 µg/L	476.81 ppb	10:45:23
2	Mo 202.031†	4414.3	4720.0	492.90 µg/L	492.90 ppb	10:45:43
2	Ni 231.604†	7715.0	7930.5	425.43 µg/L	425.43 ppb	10:45:43
2	P 214.914†	1235.4	1297.5	2684.2 µg/L	2684.2 ppb	10:45:43
2	Pb 220.353†	1742.6	1767.1	479.31 µg/L	479.31 ppb	10:45:43

2	S 181.975 Axial†	598.6	625.3	2695.7 µg/L	2695.7 ppb	10:45:43
2	Sb 206.836†	535.9	552.0	488.45 µg/L	488.45 ppb	10:45:43
2	Se 196.026†	1498.4	1584.0	2359.1 µg/L	2359.1 ppb	10:45:43
2	SiO2†	48737.2	50692.2	10689 µg/L	10689 ppb	10:45:23
2	Si 251.611†	58505.3	62151.6	5031.7 µg/L	5031.7 ppb	10:45:23
2	Sn 189.927†	991.6	1055.6	505.42 µg/L	505.42 ppb	10:45:43
2	Ti 334.940†	205876.2	219683.3	487.68 µg/L	487.68 ppb	10:45:23
2	Tl 190.801†	265.7	306.6	450.95 µg/L	450.95 ppb	10:45:43
2	U 409.014†	5142.6	5534.4	425.53 µg/L	425.53 ppb	10:45:23
2	V 292.402†	43572.8	46554.8	506.74 µg/L	506.74 ppb	10:45:23
2	Zn 213.857†	19075.6	19848.2	457.99 µg/L	457.99 ppb	10:45:23
3	Sc RADIAL	57144.8	57144.8	98.5 %		10:44:37
3	Al 396.153Radial†	675789.7	686377.0	504580 µg/L	504580 ppb	10:44:32
3	Ca 317.933Radial†	509817.2	517591.6	479400 µg/L	479400 ppb	10:44:32
3	Fe 238.204 Radial†	21478.5	21797.0	187270 µg/L	187270 ppb	10:44:37
3	K 766.490 Radial†	7209.1	7144.9	5026.1 µg/L	5026.1 ppb	10:44:37
3	Mg 279.077 IEC†	50805.4	51586.2	485350 µg/L	485350 ppb	10:44:37
3	Na 589.592 Radial†	16096.9	15782.4	5123.5 µg/L	5123.5 ppb	10:44:37
3	Sr 421.552†	49199.0	49934.8	504.92 µg/L	504.92 ppb	10:44:37
3	Sc 361.383	1930435.2	1930435.2	94.426 %		10:45:49
3	Y 371.029	1317669.2	1317669.2	93.786 %		10:45:49
3	Ag 328.068†	27542.5	29692.1	247.30 µg/L	247.30 ppb	10:45:54
3	As 188.979†	230.5	242.6	451.81 µg/L	451.81 ppb	10:46:15
3	B 249.677†	11822.2	12223.3	433.66 µg/L	433.66 ppb	10:45:54
3	Ba 233.527†	18001.4	19082.1	491.37 µg/L	491.37 ppb	10:45:54
3	Be 313.107†	347345.9	370819.2	237.11 µg/L	237.11 ppb	10:45:49
3	Cd 226.502†	16201.5	17295.9	446.42 µg/L	446.42 ppb	10:45:54
3	Co 228.616†	8333.7	8830.7	427.00 µg/L	427.00 ppb	10:46:15
3	Cr 267.716†	20960.4	22230.0	472.94 µg/L	472.94 ppb	10:45:54
3	Cu 324.752†	70662.9	72296.9	521.45 µg/L	521.45 ppb	10:45:54
3	Mn 257.610†	129688.7	137581.5	470.69 µg/L	470.69 ppb	10:45:54
3	Mo 202.031†	4381.4	4647.0	485.32 µg/L	485.32 ppb	10:46:15
3	Ni 231.604†	7686.9	7833.9	420.25 µg/L	420.25 ppb	10:46:15
3	P 214.914†	1223.7	1274.4	2635.7 µg/L	2635.7 ppb	10:46:15
3	Pb 220.353†	1747.9	1757.5	476.56 µg/L	476.56 ppb	10:46:15
3	S 181.975 Axial†	595.0	616.3	2656.8 µg/L	2656.8 ppb	10:46:15
3	Sb 206.836†	548.0	560.2	496.73 µg/L	496.73 ppb	10:46:15
3	Se 196.026†	1486.5	1558.4	2320.5 µg/L	2320.5 ppb	10:46:15
3	SiO2†	48673.9	50202.9	10586 µg/L	10586 ppb	10:45:54
3	Si 251.611†	58304.0	61431.5	4973.4 µg/L	4973.4 ppb	10:45:54
3	Sn 189.927†	968.6	1022.6	490.51 µg/L	490.51 ppb	10:46:15
3	Ti 334.940†	206008.6	218039.8	483.99 µg/L	483.99 ppb	10:45:54
3	Tl 190.801†	277.6	317.0	465.14 µg/L	465.14 ppb	10:46:15
3	U 409.014†	5029.7	5370.3	411.89 µg/L	411.89 ppb	10:45:54
3	V 292.402†	43435.4	46031.7	501.06 µg/L	501.06 ppb	10:45:54
3	Zn 213.857†	19073.6	19680.8	454.12 µg/L	454.12 ppb	10:45:54

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1915399.0	93.690 %	0.7206			0.77%
Sc RADIAL	56861.2	98.0 %	0.55			0.57%
Y 371.029	1308055.0	93.101 %	0.6739			0.72%
Ag 328.068†	29966.7	249.56 µg/L	2.338	249.56 ppb	2.338	0.94%
QC value within limits for Ag 328.068 Recovery = 99.82%						
Al 396.153Radial†	689793.0	507090 µg/L	3217.8	507090 ppb	3217.8	0.63%
QC value within limits for Al 396.153Radial Recovery = 101.42%						
As 188.979†	249.8	465.60 µg/L	12.036	465.60 ppb	12.036	2.58%
QC value within limits for As 188.979 Recovery = 93.12%						
B 249.677†	12343.9	438.27 µg/L	4.732	438.27 ppb	4.732	1.08%
QC value within limits for B 249.677 Recovery = 87.65%						
Ba 233.527†	19256.2	495.86 µg/L	5.320	495.86 ppb	5.320	1.07%
QC value within limits for Ba 233.527 Recovery = 99.17%						
Be 313.107†	374196.7	239.27 µg/L	2.783	239.27 ppb	2.783	1.16%
QC value within limits for Be 313.107 Recovery = 95.71%						
Ca 317.933Radial†	520221.9	481830 µg/L	3629.1	481830 ppb	3629.1	0.75%
QC value within limits for Ca 317.933Radial Recovery = 96.37%						
Cd 226.502†	17519.2	452.32 µg/L	6.816	452.32 ppb	6.816	1.51%
QC value within limits for Cd 226.502 Recovery = 90.46%						
Co 228.616†	8901.0	430.40 µg/L	3.071	430.40 ppb	3.071	0.71%

QC value within limits for Co 228.616 Recovery = 86.08%							
Cr	267.716†	22457.5	477.78 µg/L	5.238	477.78 ppb	5.238	1.10%
QC value within limits for Cr 267.716 Recovery = 95.56%							
Cu	324.752†	73157.9	527.51 µg/L	5.934	527.51 ppb	5.934	1.12%
QC value within limits for Cu 324.752 Recovery = 105.50%							
Fe	238.204 Radial†	21937.2	188480 µg/L	1043.9	188480 ppb	1043.9	0.55%
QC value within limits for Fe 238.204 Radial Recovery = 94.24%							
K	766.490 Radial†	7217.7	5077.2 µg/L	45.57	5077.2 ppb	45.57	0.90%
QC value within limits for K 766.490 Radial Recovery = 101.54%							
Mg	279.077 IEC†	51798.9	487350 µg/L	1866.9	487350 ppb	1866.9	0.38%
QC value within limits for Mg 279.077 IEC Recovery = 97.47%							
Mn	257.610†	139271.4	476.48 µg/L	5.635	476.48 ppb	5.635	1.18%
QC value within limits for Mn 257.610 Recovery = 95.30%							
Mo	202.031†	4701.3	490.95 µg/L	4.959	490.95 ppb	4.959	1.01%
QC value within limits for Mo 202.031 Recovery = 98.19%							
Na	589.592 Radial†	15778.2	5122.2 µg/L	3.17	5122.2 ppb	3.17	0.06%
QC value within limits for Na 589.592 Radial Recovery = 102.44%							
Ni	231.604†	7911.3	424.39 µg/L	3.734	424.39 ppb	3.734	0.88%
QC value within limits for Ni 231.604 Recovery = 84.88%							
P	214.914†	1288.0	2663.6 µg/L	25.05	2663.6 ppb	25.05	0.94%
QC value within limits for P 214.914 Recovery = 106.54%							
Pb	220.353†	1760.5	477.43 µg/L	1.628	477.43 ppb	1.628	0.34%
QC value within limits for Pb 220.353 Recovery = 95.49%							
S	181.975 Axial†	623.6	2688.2 µg/L	28.42	2688.2 ppb	28.42	1.06%
QC value within limits for S 181.975 Axial Recovery = 107.53%							
Sb	206.836†	559.2	495.59 µg/L	6.650	495.59 ppb	6.650	1.34%
QC value within limits for Sb 206.836 Recovery = 99.12%							
Se	196.026†	1573.9	2345.0 µg/L	21.25	2345.0 ppb	21.25	0.91%
QC value within limits for Se 196.026 Recovery = 93.80%							
SiO2†		50767.4	10705 µg/L	127.7	10705 ppb	127.7	1.19%
QC value within limits for SiO2 Recovery = 100.09%							
Si	251.611†	62187.6	5034.6 µg/L	62.71	5034.6 ppb	62.71	1.25%
QC value within limits for Si 251.611 Recovery = 100.69%							
Sn	189.927†	1046.1	501.03 µg/L	9.156	501.03 ppb	9.156	1.83%
QC value within limits for Sn 189.927 Recovery = 100.21%							
Sr	421.552†	50138.2	506.98 µg/L	1.786	506.98 ppb	1.786	0.35%
QC value within limits for Sr 421.552 Recovery = 101.40%							
Ti	334.940†	220064.0	488.65 µg/L	5.210	488.65 ppb	5.210	1.07%
QC value within limits for Ti 334.940 Recovery = 97.73%							
Tl	190.801†	311.6	457.86 µg/L	7.105	457.86 ppb	7.105	1.55%
QC value within limits for Tl 190.801 Recovery = 91.57%							
U	409.014†	5496.5	422.56 µg/L	9.535	422.56 ppb	9.535	2.26%
QC value within limits for U 409.014 Recovery = 84.51%							
V	292.402†	46570.0	506.81 µg/L	5.786	506.81 ppb	5.786	1.14%
QC value within limits for V 292.402 Recovery = 101.36%							
Zn	213.857†	19891.2	459.20 µg/L	5.771	459.20 ppb	5.771	1.26%
QC value within limits for Zn 213.857 Recovery = 91.84%							

All analyte(s) passed QC.

Sequence No.: 11

Sample ID: LR1

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 105

Date Collected: 2/17/2010 10:46:24

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	56720.2	56720.2	97.7 %		10:47:02
1	Al 396.153Radial†	663273.2	678707.3	498950 µg/L	498950 ppb	10:46:57
1	Ca 317.933Radial†	503969.9	515484.3	477440 µg/L	477440 ppb	10:46:57
1	Fe 238.204 Radial†	51643.8	52826.4	453850 µg/L	453850 ppb	10:47:02
1	K 766.490 Radial†	69.6	-105.7	-74.350 µg/L	-74.350 ppb	10:47:02
1	Mg 279.077 IEC†	49571.7	50710.0	476800 µg/L	476800 ppb	10:47:02
1	Na 589.592 Radial†	1467493.1	1501024.3	487290 µg/L	487290 ppb	10:46:57
1	Sr 421.552†	520.2	498.9	5.0449 µg/L	5.0449 ppb	10:47:02
1	Sc 361.383	1904851.8	1904851.8	93.174 %		10:47:32
1	Y 371.029	1290874.2	1290874.2	91.878 %		10:47:32
1	Ag 328.068†	-4971.9	-4812.5	-9.5175 µg/L	-9.5175 ppb	10:47:38
1	As 188.979†	-25.0	-28.3	-52.913 µg/L	-52.913 ppb	10:47:58
1	B 249.677†	1434.4	1242.8	-182.86 µg/L	-182.86 ppb	10:47:38
1	Ba 233.527†	583.7	644.5	16.444 µg/L	16.444 ppb	10:47:58
1	Be 313.107†	-10943.0	-8777.1	-5.6321 µg/L	-5.6321 ppb	10:47:38
1	Cd 226.502†	1086.5	1304.1	-16.074 µg/L	-16.074 ppb	10:47:38
1	Co 228.616†	184.0	202.5	9.7011 µg/L	9.7011 ppb	10:47:58
1	Cr 267.716†	109.4	149.6	3.1378 µg/L	3.1378 ppb	10:47:58
1	Cu 324.752†	-8700.8	-11875.7	-18.294 µg/L	-18.294 ppb	10:47:38
1	Mn 257.610†	-6687.7	-6941.0	17.800 µg/L	17.800 ppb	10:47:32
1	Mo 202.031†	-210.3	-218.9	-5.2786 µg/L	-5.2786 ppb	10:47:58
1	Ni 231.604†	58.0	-244.5	-7.1673 µg/L	-7.1673 ppb	10:47:58
1	P 214.914†	297.1	297.3	410.54 µg/L	410.54 ppb	10:47:58
1	Pb 220.353†	156.1	74.0	15.640 µg/L	15.640 ppb	10:47:58
1	S 181.975 Axial†	32.3	20.8	89.879 µg/L	89.879 ppb	10:47:58
1	Sb 206.836†	61.6	46.0	2.0447 µg/L	2.0447 ppb	10:47:58
1	Se 196.026†	-130.3	-155.7	445.57 µg/L	445.57 ppb	10:47:58
1	SiO2†	1092.2	-172.3	-36.337 µg/L	-36.337 ppb	10:47:58
1	Si 251.611†	-283.0	-618.2	-50.049 µg/L	-50.049 ppb	10:47:58
1	Sn 189.927†	-43.9	-50.2	-16.858 µg/L	-16.858 ppb	10:47:58
1	Ti 334.940†	15767.8	16792.4	9.5711 µg/L	9.5711 ppb	10:47:38
1	Tl 190.801†	-55.9	-37.0	22.672 µg/L	22.672 ppb	10:47:58
1	U 409.014†	142409.7	152886.2	13207 µg/L	13207 ppb	10:47:38
1	V 292.402†	-6161.5	-6580.8	-0.6601 µg/L	-0.6601 ppb	10:47:38
1	Zn 213.857†	2798.3	2484.5	13.828 µg/L	13.828 ppb	10:47:58
2	Sc RADIAL	56896.7	56896.7	98.0 %		10:47:13
2	Al 396.153Radial†	662951.2	676272.9	497160 µg/L	497160 ppb	10:47:08
2	Ca 317.933Radial†	502442.7	512326.2	474520 µg/L	474520 ppb	10:47:08
2	Fe 238.204 Radial†	51625.7	52644.1	452280 µg/L	452280 ppb	10:47:13
2	K 766.490 Radial†	123.1	-51.3	-36.080 µg/L	-36.080 ppb	10:47:13
2	Mg 279.077 IEC†	49597.9	50579.4	475580 µg/L	475580 ppb	10:47:13
2	Na 589.592 Radial†	1467785.5	1496663.1	485870 µg/L	485870 ppb	10:47:08
2	Sr 421.552†	539.4	516.9	5.2264 µg/L	5.2264 ppb	10:47:13
2	Sc 361.383	1912061.2	1912061.2	93.527 %		10:48:04
2	Y 371.029	1295662.5	1295662.5	92.219 %		10:48:04
2	Ag 328.068†	-5057.9	-4884.3	-10.165 µg/L	-10.165 ppb	10:48:10
2	As 188.979†	-30.1	-33.6	-63.087 µg/L	-63.087 ppb	10:48:30
2	B 249.677†	1421.1	1222.7	-182.92 µg/L	-182.92 ppb	10:48:10
2	Ba 233.527†	581.7	639.9	16.330 µg/L	16.330 ppb	10:48:30
2	Be 313.107†	-10813.4	-8594.3	-5.5147 µg/L	-5.5147 ppb	10:48:10
2	Cd 226.502†	1083.2	1296.1	-16.111 µg/L	-16.111 ppb	10:48:10
2	Co 228.616†	171.8	188.7	9.0381 µg/L	9.0381 ppb	10:48:30
2	Cr 267.716†	95.7	134.5	2.8186 µg/L	2.8186 ppb	10:48:30
2	Cu 324.752†	-8706.4	-11846.6	-18.313 µg/L	-18.313 ppb	10:48:10
2	Mn 257.610†	-6787.3	-7020.5	17.373 µg/L	17.373 ppb	10:48:04
2	Mo 202.031†	-200.8	-207.8	-4.1990 µg/L	-4.1990 ppb	10:48:30
2	Ni 231.604†	80.6	-220.6	-5.9124 µg/L	-5.9124 ppb	10:48:30
2	P 214.914†	294.2	293.0	402.26 µg/L	402.26 ppb	10:48:30
2	Pb 220.353†	171.3	89.7	19.778 µg/L	19.778 ppb	10:48:30

2	S 181.975 Axial†	25.6	13.5	58.313 µg/L	58.313 ppb	10:48:30
2	Sb 206.836†	40.7	23.3	-19.323 µg/L	-19.323 ppb	10:48:30
2	Se 196.026†	-126.3	-150.9	450.44 µg/L	450.44 ppb	10:48:30
2	SiO2†	1080.3	-189.4	-39.938 µg/L	-39.938 ppb	10:48:30
2	Si 251.611†	-301.1	-636.4	-51.522 µg/L	-51.522 ppb	10:48:30
2	Sn 189.927†	-41.2	-47.1	-15.441 µg/L	-15.441 ppb	10:48:30
2	Ti 334.940†	15378.7	16312.5	8.4887 µg/L	8.4887 ppb	10:48:10
2	Tl 190.801†	-51.7	-32.3	28.937 µg/L	28.937 ppb	10:48:30
2	U 409.014†	141697.0	151547.9	13091 µg/L	13091 ppb	10:48:10
2	V 292.402†	-6006.0	-6389.6	1.0099 µg/L	1.0099 ppb	10:48:10
2	Zn 213.857†	2776.5	2449.8	13.098 µg/L	13.098 ppb	10:48:30
3	Sc RADIAL	56787.9	56787.9	97.8 %		10:47:24
3	Al 396.153Radial†	657912.3	672419.4	494330 µg/L	494330 ppb	10:47:19
3	Ca 317.933Radial†	498163.4	508935.2	471380 µg/L	471380 ppb	10:47:19
3	Fe 238.204 Radial†	51475.9	52591.9	451830 µg/L	451830 ppb	10:47:24
3	K 766.490 Radial†	152.8	-20.7	-14.587 µg/L	-14.587 ppb	10:47:24
3	Mg 279.077 IEC†	49551.7	50629.2	476050 µg/L	476050 ppb	10:47:24
3	Na 589.592 Radial†	1456884.9	1488392.7	483180 µg/L	483180 ppb	10:47:19
3	Sr 421.552†	531.6	509.9	5.1564 µg/L	5.1564 ppb	10:47:24
3	Sc 361.383	1904969.6	1904969.6	93.180 %		10:48:36
3	Y 371.029	1291515.8	1291515.8	91.924 %		10:48:36
3	Ag 328.068†	-5101.2	-4950.9	-10.730 µg/L	-10.730 ppb	10:48:42
3	As 188.979†	-19.7	-22.6	-41.826 µg/L	-41.826 ppb	10:49:02
3	B 249.677†	1454.2	1263.9	-180.90 µg/L	-180.90 ppb	10:48:42
3	Ba 233.527†	568.5	628.1	16.023 µg/L	16.023 ppb	10:49:02
3	Be 313.107†	-10832.7	-8658.0	-5.5553 µg/L	-5.5553 ppb	10:48:42
3	Cd 226.502†	1100.7	1319.2	-15.436 µg/L	-15.436 ppb	10:48:42
3	Co 228.616†	200.8	220.5	10.577 µg/L	10.577 ppb	10:49:02
3	Cr 267.716†	81.8	120.0	2.5078 µg/L	2.5078 ppb	10:49:02
3	Cu 324.752†	-8724.7	-11900.8	-18.746 µg/L	-18.746 ppb	10:48:42
3	Mn 257.610†	-6637.6	-6886.9	17.746 µg/L	17.746 ppb	10:48:36
3	Mo 202.031†	-202.8	-210.7	-4.5175 µg/L	-4.5175 ppb	10:49:02
3	Ni 231.604†	70.6	-231.0	-6.4756 µg/L	-6.4756 ppb	10:49:02
3	P 214.914†	292.4	292.2	400.09 µg/L	400.09 ppb	10:49:02
3	Pb 220.353†	172.3	91.3	19.978 µg/L	19.978 ppb	10:49:02
3	S 181.975 Axial†	38.6	27.6	119.06 µg/L	119.06 ppb	10:49:02
3	Sb 206.836†	57.4	41.4	-1.7742 µg/L	-1.7742 ppb	10:49:02
3	Se 196.026†	-124.2	-149.2	452.33 µg/L	452.33 ppb	10:49:02
3	SiO2†	1091.1	-173.5	-36.594 µg/L	-36.594 ppb	10:49:02
3	Si 251.611†	-276.7	-611.5	-49.504 µg/L	-49.504 ppb	10:49:02
3	Sn 189.927†	-44.6	-51.0	-17.045 µg/L	-17.045 ppb	10:49:02
3	Ti 334.940†	15201.6	16183.7	8.0973 µg/L	8.0973 ppb	10:48:42
3	Tl 190.801†	-50.0	-30.7	31.353 µg/L	31.353 ppb	10:49:02
3	U 409.014†	142183.8	152634.3	13186 µg/L	13186 ppb	10:48:42
3	V 292.402†	-6188.5	-6609.4	-1.2092 µg/L	-1.2092 ppb	10:48:42
3	Zn 213.857†	2788.0	2473.2	13.683 µg/L	13.683 ppb	10:49:02

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1907294.2	93.294 %	0.2020			0.22%
Sc RADIAL	56801.6	97.9 %	0.15			0.16%
Y 371.029	1292684.2	92.007 %	0.1850			0.20%
Ag 328.068†	-4882.6	-10.137 µg/L	0.6066	-10.137 ppb	0.6066	5.98%
Al 396.153Radial†	675799.8	496810 µg/L	2330.8	496810 ppb	2330.8	0.47%
QC value within limits for Al 396.153Radial Recovery = 99.36%						
As 188.979†	-28.2	-52.609 µg/L	10.6341	-52.609 ppb	10.6341	20.21%
B 249.677†	1243.1	-182.23 µg/L	1.152	-182.23 ppb	1.152	0.63%
Ba 233.527†	637.5	16.266 µg/L	0.2175	16.266 ppb	0.2175	1.34%
Be 313.107†	-8676.5	-5.5674 µg/L	0.05964	-5.5674 ppb	0.05964	1.07%
Ca 317.933Radial†	512248.6	474450 µg/L	3033.6	474450 ppb	3033.6	0.64%
QC value within limits for Ca 317.933Radial Recovery = 94.89%						
Cd 226.502†	1306.5	-15.874 µg/L	0.3795	-15.874 ppb	0.3795	2.39%
Co 228.616†	203.9	9.7722 µg/L	0.77214	9.7722 ppb	0.77214	7.90%
Cr 267.716†	134.7	2.8214 µg/L	0.31502	2.8214 ppb	0.31502	11.17%
Cu 324.752†	-11874.4	-18.451 µg/L	0.2558	-18.451 ppb	0.2558	1.39%
Fe 238.204 Radial†	52687.5	452650 µg/L	1058.0	452650 ppb	1058.0	0.23%
QC value within limits for Fe 238.204 Radial Recovery = 90.53%						
K 766.490 Radial†	-59.2	-41.672 µg/L	30.2716	-41.672 ppb	30.2716	72.64%
Mg 279.077 IEC†	50639.5	476140 µg/L	619.6	476140 ppb	619.6	0.13%

QC value within limits for Mg 279.077 IEC Recovery = 95.23%							
Mn 257.610†	-6949.4	17.640 µg/L	0.2329	17.640 ppb	0.2329	1.32%	
Mo 202.031†	-212.5	-4.6651 µg/L	0.55472	-4.6651 ppb	0.55472	11.89%	
Na 589.592 Radial†	1495360.0	485450 µg/L	2082.8	485450 ppb	2082.8	0.43%	
QC value within limits for Na 589.592 Radial Recovery = 97.09%							
Ni 231.604†	-232.0	-6.5185 µg/L	0.62855	-6.5185 ppb	0.62855	9.64%	
P 214.914†	294.2	404.29 µg/L	5.516	404.29 ppb	5.516	1.36%	
Pb 220.353†	85.0	18.465 µg/L	2.4483	18.465 ppb	2.4483	13.26%	
S 181.975 Axial†	20.7	89.083 µg/L	30.3800	89.083 ppb	30.3800	34.10%	
Sb 206.836†	36.9	-6.3509 µg/L	11.39545	-6.3509 ppb	11.39545	179.43%	
Se 196.026†	-151.9	449.45 µg/L	3.486	449.45 ppb	3.486	0.78%	
SiO2†	-178.4	-37.623 µg/L	2.0090	-37.623 ppb	2.0090	5.34%	
Si 251.611†	-622.0	-50.358 µg/L	1.0438	-50.358 ppb	1.0438	2.07%	
Sn 189.927†	-49.4	-16.448 µg/L	0.8775	-16.448 ppb	0.8775	5.33%	
Sr 421.552†	508.6	5.1426 µg/L	0.09154	5.1426 ppb	0.09154	1.78%	
Ti 334.940†	16429.5	8.7190 µg/L	0.76341	8.7190 ppb	0.76341	8.76%	
Tl 190.801†	-33.3	27.654 µg/L	4.4804	27.654 ppb	4.4804	16.20%	
U 409.014†	152356.1	13162 µg/L	61.8	13162 ppb	61.8	0.47%	
QC value less than the lower limit for U 409.014 Recovery = 87.74%							
V 292.402†	-6526.6	-0.2865 µg/L	1.15579	-0.2865 ppb	1.15579	403.47%	
Zn 213.857†	2469.2	13.536 µg/L	0.3862	13.536 ppb	0.3862	2.85%	
QC Failed. Continue with analysis.							

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 2/17/2010 10:49:10

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	58318.7	58318.7	100 %		10:49:51
1	Al 396.153Radial†	450.2	470.9	140.97 µg/L	140.97 ppb	10:49:51
1	Ca 317.933Radial†	336.6	139.5	129.23 µg/L	129.23 ppb	10:50:11
1	Fe 238.204 Radial†	9.3	-8.0	133.58 µg/L	133.58 ppb	10:50:11
1	K 766.490 Radial†	429422.7	427179.4	300500 µg/L	300500 ppb	10:49:46
1	Mg 279.077 IEC†	5.1	-8.3	89.680 µg/L	89.680 ppb	10:50:11
1	Na 589.592 Radial†	1408.0	835.0	271.08 µg/L	271.08 ppb	10:49:51
1	Sr 421.552†	985505.7	980730.2	9916.8 µg/L	9916.8 ppb	10:49:46
1	Sc 361.383	2016964.9	2016964.9	98.658 %		10:51:35
1	Y 371.029	1372586.8	1372586.8	97.694 %		10:51:35
1	Ag 328.068†	-7267.4	-6842.5	13.028 µg/L	13.028 ppb	10:51:40
1	As 188.979†	5036.9	5103.9	9801.3 µg/L	9801.3 ppb	10:51:40
1	B 249.677†	112807.8	114045.4	4989.6 µg/L	4989.6 ppb	10:51:35
1	Ba 233.527†	563648.2	571332.8	14705 µg/L	14705 ppb	10:51:35
1	Be 313.107†	4482941.4	4546884.9	2906.0 µg/L	2906.0 ppb	10:51:25
1	Cd 226.502†	351641.5	356562.4	9640.5 µg/L	9640.5 ppb	10:51:35
1	Co 228.616†	194029.8	196674.0	9512.5 µg/L	9512.5 ppb	10:51:35
1	Cr 267.716†	1125436.3	1140776.4	24261 µg/L	24261 ppb	10:51:35
1	Cu 324.752†	2926204.8	2963468.8	20307 µg/L	20307 ppb	10:51:35
1	Mn 257.610†	2801230.1	2839568.4	9601.4 µg/L	9601.4 ppb	10:51:35
1	Mo 202.031†	95772.8	97082.3	9990.4 µg/L	9990.4 ppb	10:51:35
1	Ni 231.604†	179126.0	181255.7	9667.6 µg/L	9667.6 ppb	10:51:35
1	P 214.914†	7225.1	7301.8	13412 µg/L	13412 ppb	10:51:40
1	Pb 220.353†	95091.9	96291.8	24971 µg/L	24971 ppb	10:51:35
1	S 181.975 Axial†	12114.2	12265.2	52873 µg/L	52873 ppb	10:51:40
1	Sb 206.836†	10850.7	10978.1	10393 µg/L	10393 ppb	10:51:40
1	Se 196.026†	6350.4	6420.9	9782.6 µg/L	9782.6 ppb	10:51:40
1	SiO2†	468974.3	474008.7	99950 µg/L	99950 ppb	10:51:35
1	Si 251.611†	568746.3	576167.8	46646 µg/L	46646 ppb	10:51:35
1	Sn 189.927†	23140.0	23451.7	10448 µg/L	10448 ppb	10:51:40
1	Ti 334.940†	4180288.6	4237017.4	10001 µg/L	10001 ppb	10:51:25
1	Tl 190.801†	6812.2	6927.8	9700.4 µg/L	9700.4 ppb	10:51:40
1	U 409.014†	732.4	786.0	68.378 µg/L	68.378 ppb	10:51:35
1	V 292.402†	967311.5	980500.7	10224 µg/L	10224 ppb	10:51:35
1	Zn 213.857†	576866.2	584193.7	14564 µg/L	14564 ppb	10:51:35
2	Sc RADIAL	57811.6	57811.6	99.6 %		10:50:22
2	Al 396.153Radial†	361.1	385.4	79.038 µg/L	79.038 ppb	10:50:22
2	Ca 317.933Radial†	315.7	121.5	112.57 µg/L	112.57 ppb	10:50:42
2	Fe 238.204 Radial†	4.8	-12.4	94.771 µg/L	94.771 ppb	10:50:42
2	K 766.490 Radial†	433886.2	435409.6	306290 µg/L	306290 ppb	10:50:17
2	Mg 279.077 IEC†	-3.6	-17.1	6.6576 µg/L	6.6576 ppb	10:50:42
2	Na 589.592 Radial†	1239.4	678.1	220.12 µg/L	220.12 ppb	10:50:22
2	Sr 421.552†	996029.1	999898.8	10111 µg/L	10111 ppb	10:50:17
2	Sc 361.383	2058752.6	2058752.6	100.70 %		10:51:58
2	Y 371.029	1402482.7	1402482.7	99.822 %		10:51:58
2	Ag 328.068†	-7185.9	-6612.1	14.455 µg/L	14.455 ppb	10:52:04
2	As 188.979†	5076.1	5039.3	9677.0 µg/L	9677.0 ppb	10:52:04
2	B 249.677†	114795.2	113698.1	4974.3 µg/L	4974.3 ppb	10:51:58
2	Ba 233.527†	572742.9	568767.8	14639 µg/L	14639 ppb	10:51:58
2	Be 313.107†	4516389.6	4487869.4	2868.3 µg/L	2868.3 ppb	10:51:48
2	Cd 226.502†	358515.5	356153.9	9629.5 µg/L	9629.5 ppb	10:51:58
2	Co 228.616†	197160.9	195791.4	9470.0 µg/L	9470.0 ppb	10:51:58
2	Cr 267.716†	1143440.5	1135500.7	24149 µg/L	24149 ppb	10:51:58
2	Cu 324.752†	2964638.1	2941431.5	20156 µg/L	20156 ppb	10:51:58
2	Mn 257.610†	2849989.7	2830356.5	9570.2 µg/L	9570.2 ppb	10:51:58
2	Mo 202.031†	97318.3	96646.6	9945.5 µg/L	9945.5 ppb	10:51:58
2	Ni 231.604†	182264.8	180687.3	9637.3 µg/L	9637.3 ppb	10:51:58
2	P 214.914†	7236.5	7164.5	13135 µg/L	13135 ppb	10:52:04
2	Pb 220.353†	96893.9	96124.8	24928 µg/L	24928 ppb	10:51:58



2	S 181.975 Axial†	12126.0	12027.7	51849 µg/L	51849 ppb	10:52:04
2	Sb 206.836†	10835.5	10739.8	10165 µg/L	10165 ppb	10:52:04
2	Se 196.026†	6439.4	6378.7	9718.3 µg/L	9718.3 ppb	10:52:04
2	SiO2†	478041.1	473363.8	99814 µg/L	99814 ppb	10:51:58
2	Si 251.611†	579555.7	575200.6	46567 µg/L	46567 ppb	10:51:58
2	Sn 189.927†	23111.1	22946.9	10223 µg/L	10223 ppb	10:52:04
2	Ti 334.940†	4211452.8	4181960.4	9871.4 µg/L	9871.4 ppb	10:51:48
2	Tl 190.801†	6878.8	6853.8	9596.7 µg/L	9596.7 ppb	10:52:04
2	U 409.014†	847.6	885.4	77.026 µg/L	77.026 ppb	10:51:58
2	V 292.402†	981806.8	974993.9	10167 µg/L	10167 ppb	10:51:58
2	Zn 213.857†	585434.5	580834.1	14480 µg/L	14480 ppb	10:51:58
3	Sc RADIAL	58198.6	58198.6	100 %		10:50:53
3	Al 396.153Radial†	366.4	388.3	99.222 µg/L	99.222 ppb	10:50:53
3	Ca 317.933Radial†	306.7	110.4	102.24 µg/L	102.24 ppb	10:51:13
3	Fe 238.204 Radial†	5.6	-11.6	82.983 µg/L	82.983 ppb	10:51:13
3	K 766.490 Radial†	432517.7	431147.7	303290 µg/L	303290 ppb	10:50:48
3	Mg 279.077 IEC†	-0.3	-13.8	23.035 µg/L	23.035 ppb	10:51:13
3	Na 589.592 Radial†	1158.7	589.3	191.31 µg/L	191.31 ppb	10:50:53
3	Sr 421.552†	993118.7	990345.7	10014 µg/L	10014 ppb	10:50:48
3	Sc 361.383	2062465.3	2062465.3	100.88 %		10:52:22
3	Y 371.029	1404225.3	1404225.3	99.946 %		10:52:22
3	Ag 328.068†	-6458.5	-5878.2	14.097 µg/L	14.097 ppb	10:52:28
3	As 188.979†	4625.7	4583.7	8802.1 µg/L	8802.1 ppb	10:52:28
3	B 249.677†	108491.8	107244.8	4690.0 µg/L	4690.0 ppb	10:52:22
3	Ba 233.527†	528223.5	523614.6	13476 µg/L	13476 ppb	10:52:22
3	Be 313.107†	4347081.6	4311971.1	2755.9 µg/L	2755.9 ppb	10:52:12
3	Cd 226.502†	329432.1	326684.4	8832.6 µg/L	8832.6 ppb	10:52:22
3	Co 228.616†	179552.1	177984.3	8607.7 µg/L	8607.7 ppb	10:52:22
3	Cr 267.716†	101992.8	1011090.4	21503 µg/L	21503 ppb	10:52:22
3	Cu 324.752†	2706467.4	2680222.7	18366 µg/L	18366 ppb	10:52:22
3	Mn 257.610†	2598817.8	2576290.2	8711.1 µg/L	8711.1 ppb	10:52:22
3	Mo 202.031†	88868.2	88096.6	9065.7 µg/L	9065.7 ppb	10:52:22
3	Ni 231.604†	166043.7	164282.5	8762.3 µg/L	8762.3 ppb	10:52:22
3	P 214.914†	6448.7	6370.6	11631 µg/L	11631 ppb	10:52:28
3	Pb 220.353†	90364.8	89479.8	23204 µg/L	23204 ppb	10:52:22
3	S 181.975 Axial†	11142.9	11031.5	47555 µg/L	47555 ppb	10:52:28
3	Sb 206.836†	9839.6	9733.3	9217.7 µg/L	9217.7 ppb	10:52:28
3	Se 196.026†	5877.8	5810.5	8852.6 µg/L	8852.6 ppb	10:52:28
3	SiO2†	447321.7	442058.9	93213 µg/L	93213 ppb	10:52:22
3	Si 251.611†	542179.1	537115.4	43484 µg/L	43484 ppb	10:52:22
3	Sn 189.927†	20282.1	20101.3	8955.2 µg/L	8955.2 ppb	10:52:28
3	Ti 334.940†	4051779.3	4016157.4	9480.1 µg/L	9480.1 ppb	10:52:12
3	Tl 190.801†	6526.2	6492.0	9091.0 µg/L	9091.0 ppb	10:52:28
3	U 409.014†	802.9	839.5	73.039 µg/L	73.039 ppb	10:52:22
3	V 292.402†	892923.0	885133.6	9229.4 µg/L	9229.4 ppb	10:52:22
3	Zn 213.857†	535903.0	530689.9	13231 µg/L	13231 ppb	10:52:22

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2046060.9	100.08 %	1.236			1.23%
Sc RADIAL	58109.6	100 %	0.5			0.46%
Y 371.029	1393098.3	99.154 %	1.2658			1.28%
Ag 328.068†	-6444.3	13.860 µg/L	0.7423	13.860 ppb	0.7423	5.36%
Al 396.153Radial†	414.9	106.41 µg/L	31.587	106.41 ppb	31.587	29.68%
As 188.979†	4908.9	9426.8 µg/L	544.57	9426.8 ppb	544.57	5.78%
QC value within limits for As 188.979 Recovery = 94.27%						
B 249.677†	111662.7	4884.6 µg/L	168.75	4884.6 ppb	168.75	3.45%
QC value within limits for B 249.677 Recovery = 97.69%						
Ba 233.527†	554571.7	14273 µg/L	690.9	14273 ppb	690.9	4.84%
QC value within limits for Ba 233.527 Recovery = 95.15%						
Be 313.107†	4448908.5	2843.4 µg/L	78.10	2843.4 ppb	78.10	2.75%
QC value within limits for Be 313.107 Recovery = 94.78%						
Ca 317.933Radial†	123.8	114.68 µg/L	13.615	114.68 ppb	13.615	11.87%
Cd 226.502†	346466.9	9367.5 µg/L	463.29	9367.5 ppb	463.29	4.95%
QC value within limits for Cd 226.502 Recovery = 93.68%						
Co 228.616†	190149.9	9196.7 µg/L	510.58	9196.7 ppb	510.58	5.55%
QC value within limits for Co 228.616 Recovery = 91.97%						
Cr 267.716†	1095789.2	23304 µg/L	1560.9	23304 ppb	1560.9	6.70%
QC value within limits for Cr 267.716 Recovery = 93.22%						

Cu 324.752†	2861707.6	19610 µg/L	1079.7	19610 ppb	1079.7	5.51%
QC value within limits for Cu 324.752 Recovery = 98.05%						
Fe 238.204 Radial†	-10.7	103.78 µg/L	26.473	103.78 ppb	26.473	25.51%
K 766.490 Radial†	431245.6	303360 µg/L	2895.4	303360 ppb	2895.4	0.95%
QC value within limits for K 766.490 Radial Recovery = 101.12%						
Mg 279.077 IEC†	-13.0	39.791 µg/L	43.9742	39.791 ppb	43.9742	110.51%
Mn 257.610†	2748738.3	9294.2 µg/L	505.22	9294.2 ppb	505.22	5.44%
QC value within limits for Mn 257.610 Recovery = 92.94%						
Mo 202.031†	93941.9	9667.2 µg/L	521.41	9667.2 ppb	521.41	5.39%
QC value within limits for Mo 202.031 Recovery = 96.67%						
Na 589.592 Radial†	700.8	227.51 µg/L	40.393	227.51 ppb	40.393	17.75%
Ni 231.604†	175408.5	9355.7 µg/L	514.14	9355.7 ppb	514.14	5.50%
QC value within limits for Ni 231.604 Recovery = 93.56%						
P 214.914†	6945.6	12726 µg/L	958.5	12726 ppb	958.5	7.53%
QC value less than the lower limit for P 214.914 Recovery = 84.84%						
Pb 220.353†	93965.5	24368 µg/L	1007.5	24368 ppb	1007.5	4.13%
QC value within limits for Pb 220.353 Recovery = 97.47%						
S 181.975 Axial†	11774.8	50759 µg/L	2821.7	50759 ppb	2821.7	5.56%
QC value within limits for S 181.975 Axial Recovery = 101.52%						
Sb 206.836†	10483.7	9925.2 µg/L	623.18	9925.2 ppb	623.18	6.28%
QC value within limits for Sb 206.836 Recovery = 99.25%						
Se 196.026†	6203.4	9451.2 µg/L	519.38	9451.2 ppb	519.38	5.50%
QC value within limits for Se 196.026 Recovery = 94.51%						
SiO2†	463143.8	97659 µg/L	3850.9	97659 ppb	3850.9	3.94%
QC value within limits for SiO2 Recovery = 91.27%						
Si 251.611†	562828.0	45566 µg/L	1803.2	45566 ppb	1803.2	3.96%
QC value within limits for Si 251.611 Recovery = 91.13%						
Sn 189.927†	22166.6	9875.3 µg/L	804.72	9875.3 ppb	804.72	8.15%
QC value within limits for Sn 189.927 Recovery = 98.75%						
Sr 421.552†	990324.9	10014 µg/L	96.9	10014 ppb	96.9	0.97%
QC value within limits for Sr 421.552 Recovery = 100.14%						
Ti 334.940†	4145045.1	9784.3 µg/L	271.37	9784.3 ppb	271.37	2.77%
QC value within limits for Ti 334.940 Recovery = 97.84%						
Tl 190.801†	6757.9	9462.7 µg/L	326.05	9462.7 ppb	326.05	3.45%
QC value within limits for Tl 190.801 Recovery = 94.63%						
U 409.014†	837.0	72.814 µg/L	4.3282	72.814 ppb	4.3282	5.94%
V 292.402†	946876.1	9873.6 µg/L	558.67	9873.6 ppb	558.67	5.66%
QC value within limits for V 292.402 Recovery = 98.74%						
Zn 213.857†	565239.3	14092 µg/L	747.0	14092 ppb	747.0	5.30%
QC value within limits for Zn 213.857 Recovery = 93.94%						
QC Failed. Continue with analysis.						

Sequence No.: 13

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/17/2010 10:52:36

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	58055.1	58055.1	100 %		10:53:13
1	Al 396.153Radial†	7282.6	7303.4	5357.8 µg/L	5357.8 ppb	10:53:13
1	Ca 317.933Radial†	5889.6	5692.4	5272.4 µg/L	5272.4 ppb	10:53:33
1	Fe 238.204 Radial†	644.5	627.0	5398.3 µg/L	5398.3 ppb	10:53:33
1	K 766.490 Radial†	7953.2	7774.0	5468.6 µg/L	5468.6 ppb	10:53:13
1	Mg 279.077 IEC†	591.3	577.7	5440.9 µg/L	5440.9 ppb	10:53:33
1	Na 589.592 Radial†	33755.3	33179.3	10771 µg/L	10771 ppb	10:53:13
1	Sr 421.552†	52759.3	52710.6	532.99 µg/L	532.99 ppb	10:53:13
1	Sc 361.383	2029901.6	2029901.6	99.291 %		10:54:33
1	Y 371.029	1389919.2	1389919.2	98.928 %		10:54:33
1	Ag 328.068†	66283.4	67280.5	530.40 µg/L	530.40 ppb	10:54:38
1	As 188.979†	283.4	283.9	545.24 µg/L	545.24 ppb	10:54:58
1	B 249.677†	12605.0	12398.3	536.26 µg/L	536.26 ppb	10:54:38
1	Ba 233.527†	20679.7	20845.4	536.81 µg/L	536.81 ppb	10:54:38
1	Be 313.107†	824790.8	833649.0	533.30 µg/L	533.30 ppb	10:54:33
1	Cd 226.502†	19655.6	19933.9	538.35 µg/L	538.35 ppb	10:54:38
1	Co 228.616†	11063.4	11147.4	539.22 µg/L	539.22 ppb	10:54:38
1	Cr 267.716†	25135.6	25347.3	539.25 µg/L	539.25 ppb	10:54:38
1	Cu 324.752†	80326.2	78362.3	537.73 µg/L	537.73 ppb	10:54:38
1	Mn 257.610†	158361.0	159728.7	540.59 µg/L	540.59 ppb	10:54:33
1	Mo 202.031†	5262.1	5306.6	546.28 µg/L	546.28 ppb	10:54:58
1	Ni 231.604†	10320.1	10087.1	538.07 µg/L	538.07 ppb	10:54:38
1	P 214.914†	1301.5	1289.2	2667.9 µg/L	2667.9 ppb	10:54:58
1	Pb 220.353†	2212.5	2134.8	553.92 µg/L	553.92 ppb	10:54:58
1	S 181.975 Axial†	263.5	251.5	1084.3 µg/L	1084.3 ppb	10:54:58
1	Sb 206.836†	595.7	579.8	557.10 µg/L	557.10 ppb	10:54:58
1	Se 196.026†	373.2	360.0	556.96 µg/L	556.96 ppb	10:54:58
1	SiO2†	28503.9	27363.0	5769.8 µg/L	5769.8 ppb	10:54:38
1	Si 251.611†	33363.9	33287.7	2694.9 µg/L	2694.9 ppb	10:54:38
1	Sn 189.927†	1221.7	1227.3	546.81 µg/L	546.81 ppb	10:54:58
1	Ti 334.940†	225056.4	226533.1	534.38 µg/L	534.38 ppb	10:54:33
1	Tl 190.801†	357.0	382.5	536.81 µg/L	536.81 ppb	10:54:58
1	U 409.014†	6092.1	6179.3	536.47 µg/L	536.47 ppb	10:54:38
1	V 292.402†	51468.6	51868.2	540.48 µg/L	540.48 ppb	10:54:38
1	Zn 213.857†	22043.6	21682.2	539.54 µg/L	539.54 ppb	10:54:38
2	Sc RADIAL	57436.8	57436.8	99.0 %		10:53:38
2	Al 396.153Radial†	7276.9	7376.0	5411.3 µg/L	5411.3 ppb	10:53:38
2	Ca 317.933Radial†	5885.0	5751.2	5326.8 µg/L	5326.8 ppb	10:53:58
2	Fe 238.204 Radial†	644.0	633.4	5453.4 µg/L	5453.4 ppb	10:53:58
2	K 766.490 Radial†	7969.4	7876.0	5540.3 µg/L	5540.3 ppb	10:53:38
2	Mg 279.077 IEC†	589.6	582.3	5484.4 µg/L	5484.4 ppb	10:53:58
2	Na 589.592 Radial†	33633.4	33419.4	10849 µg/L	10849 ppb	10:53:38
2	Sr 421.552†	52572.0	53089.0	536.82 µg/L	536.82 ppb	10:53:38
2	Sc 361.383	2041867.3	2041867.3	99.876 %		10:55:05
2	Y 371.029	1397784.3	1397784.3	99.488 %		10:55:05
2	Ag 328.068†	66272.6	66878.4	527.23 µg/L	527.23 ppb	10:55:10
2	As 188.979†	278.9	277.7	533.39 µg/L	533.39 ppb	10:55:30
2	B 249.677†	12616.6	12335.5	533.50 µg/L	533.50 ppb	10:55:10
2	Ba 233.527†	20636.1	20679.7	532.54 µg/L	532.54 ppb	10:55:10
2	Be 313.107†	818044.5	822026.4	525.86 µg/L	525.86 ppb	10:55:05
2	Cd 226.502†	19612.6	19774.8	534.05 µg/L	534.05 ppb	10:55:10
2	Co 228.616†	11046.5	11065.2	535.24 µg/L	535.24 ppb	10:55:10
2	Cr 267.716†	25126.3	25189.7	535.90 µg/L	535.90 ppb	10:55:10
2	Cu 324.752†	79998.6	77560.2	532.24 µg/L	532.24 ppb	10:55:10
2	Mn 257.610†	157194.8	157626.4	533.48 µg/L	533.48 ppb	10:55:05
2	Mo 202.031†	5225.8	5239.1	539.35 µg/L	539.35 ppb	10:55:30
2	Ni 231.604†	10356.5	10062.6	536.77 µg/L	536.77 ppb	10:55:10
2	P 214.914†	1275.2	1255.2	2596.5 µg/L	2596.5 ppb	10:55:30
2	Pb 220.353†	2174.9	2084.0	540.75 µg/L	540.75 ppb	10:55:30

2	S 181.975 Axial†	263.8	250.3	1079.1 µg/L	1079.1 ppb	10:55:30
2	Sb 206.836†	587.0	567.6	545.33 µg/L	545.33 ppb	10:55:30
2	Se 196.026†	368.4	353.0	546.37 µg/L	546.37 ppb	10:55:30
2	SiO2†	28481.5	27172.3	5729.6 µg/L	5729.6 ppb	10:55:10
2	Si 251.611†	33304.7	33031.5	2674.2 µg/L	2674.2 ppb	10:55:10
2	Sn 189.927†	1206.9	1205.3	537.03 µg/L	537.03 ppb	10:55:30
2	Ti 334.940†	223282.8	223429.0	527.05 µg/L	527.05 ppb	10:55:05
2	Tl 190.801†	361.4	384.8	539.85 µg/L	539.85 ppb	10:55:30
2	U 409.014†	6088.5	6139.8	533.02 µg/L	533.02 ppb	10:55:10
2	V 292.402†	51364.8	51460.5	536.22 µg/L	536.22 ppb	10:55:10
2	Zn 213.857†	21940.4	21448.7	533.70 µg/L	533.70 ppb	10:55:10
3	Sc RADIAL	57458.0	57458.0	99.0 %		10:54:04
3	Al 396.153Radial†	7183.0	7278.4	5341.2 µg/L	5341.2 ppb	10:54:04
3	Ca 317.933Radial†	5972.4	5837.3	5406.5 µg/L	5406.5 ppb	10:54:24
3	Fe 238.204 Radial†	645.8	635.0	5466.2 µg/L	5466.2 ppb	10:54:24
3	K 766.490 Radial†	7838.5	7740.8	5445.2 µg/L	5445.2 ppb	10:54:04
3	Mg 279.077 IEC†	601.2	593.8	5591.1 µg/L	5591.1 ppb	10:54:24
3	Na 589.592 Radial†	33402.7	33173.8	10769 µg/L	10769 ppb	10:54:04
3	Sr 421.552†	52151.0	52644.2	532.32 µg/L	532.32 ppb	10:54:04
3	Sc 361.383	2044165.8	2044165.8	99.989 %		10:55:37
3	Y 371.029	1399486.6	1399486.6	99.609 %		10:55:37
3	Ag 328.068†	63561.1	64092.0	505.15 µg/L	505.15 ppb	10:55:43
3	As 188.979†	242.8	241.3	463.51 µg/L	463.51 ppb	10:56:03
3	B 249.677†	11979.7	11684.3	505.15 µg/L	505.15 ppb	10:55:43
3	Ba 233.527†	19331.6	19351.8	498.33 µg/L	498.33 ppb	10:55:43
3	Be 313.107†	782642.5	785699.4	502.62 µg/L	502.62 ppb	10:55:37
3	Cd 226.502†	18328.1	18468.1	498.71 µg/L	498.71 ppb	10:55:43
3	Co 228.616†	10248.8	10254.9	495.99 µg/L	495.99 ppb	10:55:43
3	Cr 267.716†	22797.0	22831.8	485.74 µg/L	485.74 ppb	10:55:43
3	Cu 324.752†	74359.4	71830.3	492.98 µg/L	492.98 ppb	10:55:43
3	Mn 257.610†	150225.4	150479.2	509.31 µg/L	509.31 ppb	10:55:37
3	Mo 202.031†	4474.4	4481.7	461.41 µg/L	461.41 ppb	10:56:03
3	Ni 231.604†	9607.8	9302.1	496.21 µg/L	496.21 ppb	10:55:43
3	P 214.914†	1113.7	1092.2	2255.6 µg/L	2255.6 ppb	10:56:03
3	Pb 220.353†	1947.9	1854.6	481.12 µg/L	481.12 ppb	10:56:03
3	S 181.975 Axial†	237.1	223.3	962.57 µg/L	962.57 ppb	10:56:03
3	Sb 206.836†	514.1	494.0	474.23 µg/L	474.23 ppb	10:56:03
3	Se 196.026†	324.1	308.3	478.15 µg/L	478.15 ppb	10:56:03
3	SiO2†	26995.5	25654.1	5409.5 µg/L	5409.5 ppb	10:55:43
3	Si 251.611†	31562.9	31252.0	2530.1 µg/L	2530.1 ppb	10:55:43
3	Sn 189.927†	1021.2	1018.2	453.67 µg/L	453.67 ppb	10:56:03
3	Ti 334.940†	212654.5	212548.2	501.36 µg/L	501.36 ppb	10:55:37
3	Tl 190.801†	325.5	348.5	489.23 µg/L	489.23 ppb	10:56:03
3	U 409.014†	5645.2	5689.5	493.85 µg/L	493.85 ppb	10:55:43
3	V 292.402†	47368.6	47406.1	493.74 µg/L	493.74 ppb	10:55:43
3	Zn 213.857†	20419.2	19902.7	495.19 µg/L	495.19 ppb	10:55:43

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2038644.9	99.719 %	0.3746			0.38%
Sc RADIAL	57649.9	99.3 %	0.60			0.61%
Y 371.029	1395730.0	99.342 %	0.3633			0.37%
Ag 328.068†	66083.6	520.93 µg/L	13.756	520.93 ppb	13.756	2.64%
QC value within limits for Ag 328.068 Recovery = 104.19%						
Al 396.153Radial†	7319.2	5370.1 µg/L	36.65	5370.1 ppb	36.65	0.68%
QC value within limits for Al 396.153Radial Recovery = 107.40%						
As 188.979†	267.7	514.05 µg/L	44.166	514.05 ppb	44.166	8.59%
QC value within limits for As 188.979 Recovery = 102.81%						
B 249.677†	12139.4	524.97 µg/L	17.222	524.97 ppb	17.222	3.28%
QC value within limits for B 249.677 Recovery = 104.99%						
Ba 233.527†	20292.3	522.56 µg/L	21.090	522.56 ppb	21.090	4.04%
QC value within limits for Ba 233.527 Recovery = 104.51%						
Be 313.107†	813791.6	520.60 µg/L	16.001	520.60 ppb	16.001	3.07%
QC value within limits for Be 313.107 Recovery = 104.12%						
Ca 317.933Radial†	5760.3	5335.2 µg/L	67.48	5335.2 ppb	67.48	1.26%
QC value within limits for Ca 317.933Radial Recovery = 106.70%						
Cd 226.502†	19392.3	523.70 µg/L	21.751	523.70 ppb	21.751	4.15%
QC value within limits for Cd 226.502 Recovery = 104.74%						
Co 228.616†	10822.5	523.48 µg/L	23.894	523.48 ppb	23.894	4.56%

QC value within limits for Co 228.616 Recovery = 104.70%							
Cr 267.716†	24456.3	520.30 µg/L	29.974	520.30 ppb	29.974	5.76%	
QC value within limits for Cr 267.716 Recovery = 104.06%							
Cu 324.752†	75917.6	520.98 µg/L	24.408	520.98 ppb	24.408	4.68%	
QC value within limits for Cu 324.752 Recovery = 104.20%							
Fe 238.204 Radial†	631.8	5439.3 µg/L	36.10	5439.3 ppb	36.10	0.66%	
QC value within limits for Fe 238.204 Radial Recovery = 108.79%							
K 766.490 Radial†	7796.9	5484.7 µg/L	49.55	5484.7 ppb	49.55	0.90%	
QC value within limits for K 766.490 Radial Recovery = 109.69%							
Mg 279.077 IEC†	584.6	5505.5 µg/L	77.28	5505.5 ppb	77.28	1.40%	
QC value greater than the upper limit for Mg 279.077 IEC Recovery = 110.11%							
Mn 257.610†	155944.7	527.79 µg/L	16.394	527.79 ppb	16.394	3.11%	
QC value within limits for Mn 257.610 Recovery = 105.56%							
Mo 202.031†	5009.1	515.68 µg/L	47.130	515.68 ppb	47.130	9.14%	
QC value within limits for Mo 202.031 Recovery = 103.14%							
Na 589.592 Radial†	33257.5	10797 µg/L	45.5	10797 ppb	45.5	0.42%	
QC value within limits for Na 589.592 Radial Recovery = 107.97%							
Ni 231.604†	9817.3	523.68 µg/L	23.802	523.68 ppb	23.802	4.55%	
QC value within limits for Ni 231.604 Recovery = 104.74%							
P 214.914†	1212.2	2506.6 µg/L	220.34	2506.6 ppb	220.34	8.79%	
QC value within limits for P 214.914 Recovery = 100.27%							
Pb 220.353†	2024.5	525.26 µg/L	38.794	525.26 ppb	38.794	7.39%	
QC value within limits for Pb 220.353 Recovery = 105.05%							
S 181.975 Axial†	241.7	1042.0 µg/L	68.85	1042.0 ppb	68.85	6.61%	
QC value within limits for S 181.975 Axial Recovery = 104.20%							
Sb 206.836†	547.1	525.55 µg/L	44.836	525.55 ppb	44.836	8.53%	
QC value within limits for Sb 206.836 Recovery = 105.11%							
Se 196.026†	340.5	527.16 µg/L	42.774	527.16 ppb	42.774	8.11%	
QC value within limits for Se 196.026 Recovery = 105.43%							
SiO2†	26729.8	5636.3 µg/L	197.46	5636.3 ppb	197.46	3.50%	
QC value within limits for SiO2 Recovery = 105.40%							
Si 251.611†	32523.7	2633.1 µg/L	89.76	2633.1 ppb	89.76	3.41%	
QC value within limits for Si 251.611 Recovery = 105.32%							
Sn 189.927†	1150.3	512.50 µg/L	51.185	512.50 ppb	51.185	9.99%	
QC value within limits for Sn 189.927 Recovery = 102.50%							
Sr 421.552†	52814.6	534.04 µg/L	2.426	534.04 ppb	2.426	0.45%	
QC value within limits for Sr 421.552 Recovery = 106.81%							
Ti 334.940†	220836.8	520.93 µg/L	17.340	520.93 ppb	17.340	3.33%	
QC value within limits for Ti 334.940 Recovery = 104.19%							
Tl 190.801†	371.9	521.96 µg/L	28.390	521.96 ppb	28.390	5.44%	
QC value within limits for Tl 190.801 Recovery = 104.39%							
U 409.014†	6002.8	521.11 µg/L	23.676	521.11 ppb	23.676	4.54%	
QC value within limits for U 409.014 Recovery = 104.22%							
V 292.402†	50245.0	523.48 µg/L	25.844	523.48 ppb	25.844	4.94%	
QC value within limits for V 292.402 Recovery = 104.70%							
Zn 213.857†	21011.2	522.81 µg/L	24.097	522.81 ppb	24.097	4.61%	
QC value within limits for Zn 213.857 Recovery = 104.56%							
QC Failed. Continue with analysis.							

Sequence No.: 14

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/17/2010 10:56:11

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	58480.1	58480.1	101 %		10:56:43
1	Al 396.153Radial†	55.7	78.2	57.449 µg/L	57.449 ppb	10:56:43
1	Ca 317.933Radial†	240.7	43.4	40.232 µg/L	40.232 ppb	10:57:03
1	Fe 238.204 Radial†	19.7	2.3	19.568 µg/L	19.568 ppb	10:57:03
1	K 766.490 Radial†	287.2	108.1	76.059 µg/L	76.059 ppb	10:56:43
1	Mg 279.077 IEC†	15.9	2.3	22.102 µg/L	22.102 ppb	10:57:03
1	Na 589.592 Radial†	805.0	232.8	75.560 µg/L	75.560 ppb	10:56:43
1	Sr 421.552†	89.4	55.4	0.5606 µg/L	0.5606 ppb	10:56:43
1	Sc 361.383	2086376.8	2086376.8	102.05 %		10:58:02
1	Y 371.029	1433302.1	1433302.1	102.02 %		10:58:02
1	Ag 328.068†	-509.5	24.4	0.1938 µg/L	0.1938 ppb	10:58:07
1	As 188.979†	-3.5	-4.9	-9.3889 µg/L	-9.3889 ppb	10:58:27
1	B 249.677†	446.5	140.8	6.1024 µg/L	6.1024 ppb	10:58:27
1	Ba 233.527†	20.5	38.0	0.9783 µg/L	0.9783 ppb	10:58:27
1	Be 313.107†	-2549.9	469.0	0.2998 µg/L	0.2998 ppb	10:58:07
1	Cd 226.502†	-115.3	25.0	0.6729 µg/L	0.6729 ppb	10:58:27
1	Co 228.616†	3.6	8.5	0.4115 µg/L	0.4115 ppb	10:58:27
1	Cr 267.716†	39.4	70.8	1.5053 µg/L	1.5053 ppb	10:58:27
1	Cu 324.752†	2892.3	296.5	2.0347 µg/L	2.0347 ppb	10:58:07
1	Mn 257.610†	-40.2	197.2	0.6684 µg/L	0.6684 ppb	10:58:27
1	Mo 202.031†	9.0	15.7	1.6128 µg/L	1.6128 ppb	10:58:27
1	Ni 231.604†	310.1	-2.9	-0.1577 µg/L	-0.1577 ppb	10:58:27
1	P 214.914†	24.6	2.6	5.1656 µg/L	5.1656 ppb	10:58:27
1	Pb 220.353†	124.2	28.2	7.3071 µg/L	7.3071 ppb	10:58:27
1	S 181.975 Axial†	20.7	6.5	28.061 µg/L	28.061 ppb	10:58:27
1	Sb 206.836†	33.3	12.5	11.961 µg/L	11.961 ppb	10:58:27
1	Se 196.026†	19.0	2.7	4.1812 µg/L	4.1812 ppb	10:58:27
1	SiO2†	1401.3	28.6	6.0403 µg/L	6.0403 ppb	10:58:07
1	Si 251.611†	398.2	75.7	6.1309 µg/L	6.1309 ppb	10:58:27
1	Sn 189.927†	2.9	-0.3	-0.1181 µg/L	-0.1181 ppb	10:58:27
1	Ti 334.940†	466.1	326.1	0.7687 µg/L	0.7687 ppb	10:58:07
1	Tl 190.801†	-24.9	-1.4	-1.9489 µg/L	-1.9489 ppb	10:58:27
1	U 409.014†	27.0	70.1	6.0972 µg/L	6.0972 ppb	10:58:07
1	V 292.402†	-13.9	18.5	0.2146 µg/L	0.2146 ppb	10:58:07
1	Zn 213.857†	596.1	65.2	1.6303 µg/L	1.6303 ppb	10:58:27
2	Sc RADIAL	58318.8	58318.8	100 %		10:57:08
2	Al 396.153Radial†	29.8	52.5	38.573 µg/L	38.573 ppb	10:57:08
2	Ca 317.933Radial†	234.1	37.6	34.787 µg/L	34.787 ppb	10:57:29
2	Fe 238.204 Radial†	18.8	1.4	12.263 µg/L	12.263 ppb	10:57:29
2	K 766.490 Radial†	323.7	145.2	102.17 µg/L	102.17 ppb	10:57:08
2	Mg 279.077 IEC†	16.3	2.8	26.740 µg/L	26.740 ppb	10:57:29
2	Na 589.592 Radial†	775.2	205.3	66.649 µg/L	66.649 ppb	10:57:08
2	Sr 421.552†	118.5	84.6	0.8553 µg/L	0.8553 ppb	10:57:08
2	Sc 361.383	2075597.0	2075597.0	101.53 %		10:58:33
2	Y 371.029	1425275.8	1425275.8	101.44 %		10:58:33
2	Ag 328.068†	-466.8	63.9	0.5059 µg/L	0.5059 ppb	10:58:38
2	As 188.979†	-0.5	-1.9	-3.7379 µg/L	-3.7379 ppb	10:58:58
2	B 249.677†	427.2	124.0	5.3805 µg/L	5.3805 ppb	10:58:58
2	Ba 233.527†	13.8	31.6	0.8133 µg/L	0.8133 ppb	10:58:58
2	Be 313.107†	-2608.7	398.0	0.2545 µg/L	0.2545 ppb	10:58:38
2	Cd 226.502†	-108.7	30.9	0.8340 µg/L	0.8340 ppb	10:58:58
2	Co 228.616†	13.6	18.4	0.8936 µg/L	0.8936 ppb	10:58:58
2	Cr 267.716†	24.4	56.2	1.1953 µg/L	1.1953 ppb	10:58:58
2	Cu 324.752†	2859.8	279.2	1.9151 µg/L	1.9151 ppb	10:58:38
2	Mn 257.610†	-82.0	155.8	0.5273 µg/L	0.5273 ppb	10:58:58
2	Mo 202.031†	7.9	14.7	1.5129 µg/L	1.5129 ppb	10:58:58
2	Ni 231.604†	304.2	-7.1	-0.3811 µg/L	-0.3811 ppb	10:58:58
2	P 214.914†	18.1	-3.8	-8.1627 µg/L	-8.1627 ppb	10:58:58
2	Pb 220.353†	115.7	20.5	5.3058 µg/L	5.3058 ppb	10:58:58

2	S 181.975 Axial†	20.8	6.7	28.761 µg/L	28.761 ppb	10:58:58
2	Sb 206.836†	27.6	7.0	6.7426 µg/L	6.7426 ppb	10:58:58
2	Se 196.026†	15.2	-0.9	-1.3947 µg/L	-1.3947 ppb	10:58:58
2	SiO2†	1423.0	57.1	12.033 µg/L	12.033 ppb	10:58:38
2	Si 251.611†	386.3	66.0	5.3471 µg/L	5.3471 ppb	10:58:58
2	Sn 189.927†	3.1	-0.1	-0.0324 µg/L	-0.0324 ppb	10:58:58
2	Ti 334.940†	367.8	231.6	0.5452 µg/L	0.5452 ppb	10:58:38
2	Tl 190.801†	-20.7	2.5	3.5377 µg/L	3.5377 ppb	10:58:58
2	U 409.014†	-11.9	32.0	2.7811 µg/L	2.7811 ppb	10:58:38
2	V 292.402†	46.9	78.3	0.8243 µg/L	0.8243 ppb	10:58:38
2	Zn 213.857†	580.4	52.9	1.3211 µg/L	1.3211 ppb	10:58:58
3	Sc RADIAL	58058.3	58058.3	100 %		10:57:34
3	Al 396.153Radial†	43.8	66.7	49.006 µg/L	49.006 ppb	10:57:34
3	Ca 317.933Radial†	228.8	33.3	30.801 µg/L	30.801 ppb	10:57:54
3	Fe 238.204 Radial†	18.6	1.3	11.537 µg/L	11.537 ppb	10:57:54
3	K 766.490 Radial†	325.7	148.7	104.62 µg/L	104.62 ppb	10:57:34
3	Mg 279.077 IEC†	13.7	0.3	2.5778 µg/L	2.5778 ppb	10:57:54
3	Na 589.592 Radial†	756.8	190.4	61.816 µg/L	61.816 ppb	10:57:34
3	Sr 421.552†	93.4	60.1	0.6072 µg/L	0.6072 ppb	10:57:34
3	Sc 361.383	2072433.0	2072433.0	101.37 %		10:59:04
3	Y 371.029	1423631.5	1423631.5	101.33 %		10:59:04
3	Ag 328.068†	-464.0	65.9	0.5236 µg/L	0.5236 ppb	10:59:09
3	As 188.979†	-0.7	-2.2	-4.1907 µg/L	-4.1907 ppb	10:59:29
3	B 249.677†	426.2	123.7	5.3656 µg/L	5.3656 ppb	10:59:29
3	Ba 233.527†	9.4	27.3	0.7029 µg/L	0.7029 ppb	10:59:29
3	Be 313.107†	-2587.9	414.7	0.2651 µg/L	0.2651 ppb	10:59:09
3	Cd 226.502†	-122.3	17.3	0.4654 µg/L	0.4654 ppb	10:59:29
3	Co 228.616†	3.5	8.4	0.4087 µg/L	0.4087 ppb	10:59:29
3	Cr 267.716†	13.6	45.6	0.9709 µg/L	0.9709 ppb	10:59:29
3	Cu 324.752†	2837.5	261.5	1.7938 µg/L	1.7938 ppb	10:59:09
3	Mn 257.610†	-89.4	148.4	0.5034 µg/L	0.5034 ppb	10:59:29
3	Mo 202.031†	9.1	15.8	1.6264 µg/L	1.6264 ppb	10:59:29
3	Ni 231.604†	301.6	-9.2	-0.4931 µg/L	-0.4931 ppb	10:59:29
3	P 214.914†	25.8	3.8	7.8970 µg/L	7.8970 ppb	10:59:29
3	Pb 220.353†	112.1	17.0	4.4220 µg/L	4.4220 ppb	10:59:29
3	S 181.975 Axial†	18.8	4.7	20.219 µg/L	20.219 ppb	10:59:29
3	Sb 206.836†	21.9	1.5	1.4330 µg/L	1.4330 ppb	10:59:29
3	Se 196.026†	18.0	1.9	2.8461 µg/L	2.8461 ppb	10:59:29
3	SiO2†	1431.2	67.3	14.192 µg/L	14.192 ppb	10:59:09
3	Si 251.611†	389.0	69.2	5.6036 µg/L	5.6036 ppb	10:59:29
3	Sn 189.927†	-0.3	-3.4	-1.4973 µg/L	-1.4973 ppb	10:59:29
3	Ti 334.940†	431.6	295.2	0.6970 µg/L	0.6970 ppb	10:59:09
3	Tl 190.801†	-22.8	0.5	0.6481 µg/L	0.6481 ppb	10:59:29
3	U 409.014†	-19.6	24.3	2.1121 µg/L	2.1121 ppb	10:59:09
3	V 292.402†	73.0	104.1	1.0898 µg/L	1.0898 ppb	10:59:09
3	Zn 213.857†	572.9	46.3	1.1587 µg/L	1.1587 ppb	10:59:29

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	2078135.6	101.65 %		0.358				0.35%
Sc RADIAL	58285.7	100 %		0.4				0.37%
Y 371.029	1427403.1	101.60 %		0.368				0.36%
Ag 328.068†	51.4	0.4078 µg/L		0.18550	0.4078 ppb		0.18550	45.49%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	65.8	48.342 µg/L		9.4556	48.342 ppb		9.4556	19.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.0	-5.7725 µg/L		3.14006	-5.7725 ppb		3.14006	54.40%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	129.5	5.6162 µg/L		0.42118	5.6162 ppb		0.42118	7.50%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.3	0.8315 µg/L		0.13861	0.8315 ppb		0.13861	16.67%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	427.2	0.2732 µg/L		0.02371	0.2732 ppb		0.02371	8.68%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	38.1	35.273 µg/L		4.7345	35.273 ppb		4.7345	13.42%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	24.4	0.6574 µg/L		0.18479	0.6574 ppb		0.18479	28.11%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	11.8	0.5713 µg/L		0.27914	0.5713 ppb		0.27914	48.86%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	57.5	1.2238 µg/L	0.26833	1.2238 ppb	0.26833	21.93%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	279.1	1.9145 µg/L	0.12047	1.9145 ppb	0.12047	6.29%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.7	14.456 µg/L	4.4419	14.456 ppb	4.4419	30.73%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	134.0	94.284 µg/L	15.8308	94.284 ppb	15.8308	16.79%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	1.8	17.140 µg/L	12.8227	17.140 ppb	12.8227	74.81%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	167.1	0.5664 µg/L	0.08920	0.5664 ppb	0.08920	15.75%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	15.4	1.5840 µg/L	0.06195	1.5840 ppb	0.06195	3.91%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	209.5	68.009 µg/L	6.9719	68.009 ppb	6.9719	10.25%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-6.4	-0.3440 µg/L	0.17079	-0.3440 ppb	0.17079	49.65%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	0.9	1.6333 µg/L	8.59280	1.6333 ppb	8.59280	526.11%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	21.9	5.6783 µg/L	1.47816	5.6783 ppb	1.47816	26.03%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	6.0	25.680 µg/L	4.7430	25.680 ppb	4.7430	18.47%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	7.0	6.7121 µg/L	5.26401	6.7121 ppb	5.26401	78.43%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	1.2	1.8775 µg/L	2.91141	1.8775 ppb	2.91141	155.07%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	51.0	10.755 µg/L	4.2235	10.755 ppb	4.2235	39.27%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	70.3	5.6939 µg/L	0.39958	5.6939 ppb	0.39958	7.02%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-1.2	-0.5493 µg/L	0.82216	-0.5493 ppb	0.82216	149.68%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	66.7	0.6744 µg/L	0.15838	0.6744 ppb	0.15838	23.49%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	284.3	0.6703 µg/L	0.11410	0.6703 ppb	0.11410	17.02%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	0.5	0.7456 µg/L	2.74459	0.7456 ppb	2.74459	368.09%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	42.2	3.6635 µg/L	2.13407	3.6635 ppb	2.13407	58.25%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	66.9	0.7096 µg/L	0.44876	0.7096 ppb	0.44876	63.24%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	54.8	1.3700 µg/L	0.23957	1.3700 ppb	0.23957	17.49%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.



Sequence No.: 3  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 2/17/2010 11:07:39  
 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	57982.4	57982.4	99.9 %		11:08:14
1	Al 396.153Radial†	7044.5	7074.2	5189.7 µg/L	5189.7 ppb	11:08:14
1	Ca 317.933Radial†	5682.1	5492.1	5086.8 µg/L	5086.8 ppb	11:08:34
1	Fe 238.204 Radial†	623.0	606.3	5220.3 µg/L	5220.3 ppb	11:08:34
1	K 766.490 Radial†	7653.1	7483.6	5264.3 µg/L	5264.3 ppb	11:08:14
1	Mg 279.077 IEC†	570.8	557.9	5254.1 µg/L	5254.1 ppb	11:08:34
1	Na 589.592 Radial†	32784.2	32249.6	10469 µg/L	10469 ppb	11:08:14
1	Sr 421.552†	51285.8	51301.7	518.75 µg/L	518.75 ppb	11:08:14
1	Sc 361.383	2031275.1	2031275.1	99.358 %		11:09:34
1	Y 371.029	1391858.7	1391858.7	99.066 %		11:09:34
1	Ag 328.068†	64687.8	65629.4	517.36 µg/L	517.36 ppb	11:09:39
1	As 188.979†	269.1	269.4	517.32 µg/L	517.32 ppb	11:09:59
1	B 249.677†	12023.0	11803.9	510.52 µg/L	510.52 ppb	11:09:39
1	Ba 233.527†	19955.1	20102.0	517.67 µg/L	517.67 ppb	11:09:39
1	Be 313.107†	803846.1	812007.3	519.45 µg/L	519.45 ppb	11:09:34
1	Cd 226.502†	18929.5	19189.7	518.26 µg/L	518.26 ppb	11:09:39
1	Co 228.616†	10675.2	10749.2	519.95 µg/L	519.95 ppb	11:09:39
1	Cr 267.716†	24215.8	24404.4	519.20 µg/L	519.20 ppb	11:09:39
1	Cu 324.752†	77575.5	75539.1	518.36 µg/L	518.36 ppb	11:09:39
1	Mn 257.610†	153576.7	154805.5	523.92 µg/L	523.92 ppb	11:09:34
1	Mo 202.031†	5111.6	5151.5	530.31 µg/L	530.31 ppb	11:09:59
1	Ni 231.604†	10041.5	9799.6	522.74 µg/L	522.74 ppb	11:09:39
1	P 214.914†	1267.4	1254.0	2595.5 µg/L	2595.5 ppb	11:09:59
1	Pb 220.353†	2105.0	2025.1	525.45 µg/L	525.45 ppb	11:09:59
1	S 181.975 Axial†	258.7	246.5	1062.8 µg/L	1062.8 ppb	11:09:59
1	Sb 206.836†	565.1	548.6	527.27 µg/L	527.27 ppb	11:09:59
1	Se 196.026†	362.2	348.7	539.38 µg/L	539.38 ppb	11:09:59
1	SiO2†	27430.8	26263.5	5538.0 µg/L	5538.0 ppb	11:09:39
1	Si 251.611†	32066.2	31959.0	2587.3 µg/L	2587.3 ppb	11:09:39
1	Sn 189.927†	1186.4	1191.0	530.62 µg/L	530.62 ppb	11:09:59
1	Ti 334.940†	218571.8	219853.4	518.62 µg/L	518.62 ppb	11:09:34
1	Tl 190.801†	350.0	375.2	526.42 µg/L	526.42 ppb	11:09:59
1	U 409.014†	5986.1	6068.5	526.87 µg/L	526.87 ppb	11:09:39
1	V 292.402†	49885.1	50239.4	523.51 µg/L	523.51 ppb	11:09:39
1	Zn 213.857†	21171.7	20789.7	517.29 µg/L	517.29 ppb	11:09:39
2	Sc RADIAL	58387.5	58387.5	101 %		11:08:40
2	Al 396.153Radial†	6978.7	6959.8	5105.6 µg/L	5105.6 ppb	11:08:40
2	Ca 317.933Radial†	5714.2	5484.6	5079.9 µg/L	5079.9 ppb	11:09:00
2	Fe 238.204 Radial†	626.5	605.5	5213.1 µg/L	5213.1 ppb	11:09:00
2	K 766.490 Radial†	7643.3	7420.7	5220.1 µg/L	5220.1 ppb	11:08:40
2	Mg 279.077 IEC†	577.0	560.2	5275.6 µg/L	5275.6 ppb	11:09:00
2	Na 589.592 Radial†	32633.2	31871.7	10347 µg/L	10347 ppb	11:08:40
2	Sr 421.552†	51052.7	50713.8	512.80 µg/L	512.80 ppb	11:08:40
2	Sc 361.383	2043445.5	2043445.5	99.953 %		11:10:06
2	Y 371.029	1398534.9	1398534.9	99.541 %		11:10:06
2	Ag 328.068†	65186.4	65740.5	518.24 µg/L	518.24 ppb	11:10:12
2	As 188.979†	270.1	268.8	516.15 µg/L	516.15 ppb	11:10:32
2	B 249.677†	12185.0	11893.9	514.44 µg/L	514.44 ppb	11:10:12
2	Ba 233.527†	20170.8	20198.2	520.14 µg/L	520.14 ppb	11:10:12
2	Be 313.107†	800497.5	803838.7	514.23 µg/L	514.23 ppb	11:10:06
2	Cd 226.502†	19151.0	19297.9	521.18 µg/L	521.18 ppb	11:10:12
2	Co 228.616†	10821.8	10831.9	523.96 µg/L	523.96 ppb	11:10:12
2	Cr 267.716†	24480.0	24523.6	521.73 µg/L	521.73 ppb	11:10:12
2	Cu 324.752†	78267.2	75766.2	519.91 µg/L	519.91 ppb	11:10:12
2	Mn 257.610†	152984.3	153292.2	518.80 µg/L	518.80 ppb	11:10:06
2	Mo 202.031†	5112.0	5121.2	527.20 µg/L	527.20 ppb	11:10:32
2	Ni 231.604†	10134.8	9832.8	524.51 µg/L	524.51 ppb	11:10:12
2	P 214.914†	1271.4	1250.4	2587.6 µg/L	2587.6 ppb	11:10:32
2	Pb 220.353†	2108.6	2016.1	523.13 µg/L	523.13 ppb	11:10:32

2	S 181.975 Axial†	255.6	241.9	1042.8 µg/L	1042.8 ppb	11:10:32
2	Sb 206.836†	569.3	549.4	527.96 µg/L	527.96 ppb	11:10:32
2	Se 196.026†	359.5	343.8	531.91 µg/L	531.91 ppb	11:10:32
2	SiO2†	27769.8	26438.2	5574.8 µg/L	5574.8 ppb	11:10:12
2	Si 251.611†	32458.7	32159.3	2603.6 µg/L	2603.6 ppb	11:10:12
2	Sn 189.927†	1189.3	1186.7	528.73 µg/L	528.73 ppb	11:10:32
2	Ti 334.940†	217892.4	217863.5	513.93 µg/L	513.93 ppb	11:10:06
2	Tl 190.801†	352.4	375.5	526.77 µg/L	526.77 ppb	11:10:32
2	U 409.014†	5843.4	5889.8	511.33 µg/L	511.33 ppb	11:10:12
2	V 292.402†	50378.5	50434.1	525.48 µg/L	525.48 ppb	11:10:12
2	Zn 213.857†	21418.7	20909.8	520.29 µg/L	520.29 ppb	11:10:12
3	Sc RADIAL	58583.5	58583.5	101 %		11:09:05
3	Al 396.153Radial†	7025.5	6983.0	5124.3 µg/L	5124.3 ppb	11:09:05
3	Ca 317.933Radial†	5694.8	5446.4	5044.5 µg/L	5044.5 ppb	11:09:25
3	Fe 238.204 Radial†	623.9	600.8	5172.0 µg/L	5172.0 ppb	11:09:25
3	K 766.490 Radial†	7655.9	7407.7	5210.9 µg/L	5210.9 ppb	11:09:05
3	Mg 279.077 IEC†	567.8	549.1	5170.2 µg/L	5170.2 ppb	11:09:25
3	Na 589.592 Radial†	32663.3	31793.0	10321 µg/L	10321 ppb	11:09:05
3	Sr 421.552†	51223.4	50713.1	512.79 µg/L	512.79 ppb	11:09:05
3	Sc 361.383	2060255.2	2060255.2	100.78 %		11:10:39
3	Y 371.029	1409680.7	1409680.7	100.33 %		11:10:39
3	Ag 328.068†	62285.2	62329.5	491.24 µg/L	491.24 ppb	11:10:44
3	As 188.979†	233.5	230.2	442.17 µg/L	442.17 ppb	11:11:04
3	B 249.677†	11587.5	11201.5	484.32 µg/L	484.32 ppb	11:10:44
3	Ba 233.527†	18860.6	18733.5	482.41 µg/L	482.41 ppb	11:10:44
3	Be 313.107†	764585.6	761668.8	487.25 µg/L	487.25 ppb	11:10:39
3	Cd 226.502†	17876.2	17876.5	482.75 µg/L	482.75 ppb	11:10:44
3	Co 228.616†	9977.2	9905.4	479.08 µg/L	479.08 ppb	11:10:44
3	Cr 267.716†	22224.8	22085.9	469.87 µg/L	469.87 ppb	11:10:44
3	Cu 324.752†	72782.9	69685.2	478.24 µg/L	478.24 ppb	11:10:44
3	Mn 257.610†	146617.0	145725.3	493.22 µg/L	493.22 ppb	11:10:39
3	Mo 202.031†	4392.3	4365.4	449.42 µg/L	449.42 ppb	11:11:04
3	Ni 231.604†	9404.1	9024.9	481.42 µg/L	481.42 ppb	11:10:44
3	P 214.914†	1108.6	1078.5	2228.3 µg/L	2228.3 ppb	11:11:04
3	Pb 220.353†	1900.3	1792.2	464.94 µg/L	464.94 ppb	11:11:04
3	S 181.975 Axial†	235.9	220.2	949.45 µg/L	949.45 ppb	11:11:04
3	Sb 206.836†	504.6	480.6	461.40 µg/L	461.40 ppb	11:11:04
3	Se 196.026†	322.7	304.4	471.87 µg/L	471.87 ppb	11:11:04
3	SiO2†	26218.3	24672.0	5202.4 µg/L	5202.4 ppb	11:10:44
3	Si 251.611†	30648.5	30098.1	2436.7 µg/L	2436.7 ppb	11:10:44
3	Sn 189.927†	1004.8	993.9	442.83 µg/L	442.83 ppb	11:11:04
3	Ti 334.940†	207381.9	205655.3	485.12 µg/L	485.12 ppb	11:10:39
3	Tl 190.801†	318.3	338.8	475.63 µg/L	475.63 ppb	11:11:04
3	U 409.014†	5487.9	5489.4	476.50 µg/L	476.50 ppb	11:10:44
3	V 292.402†	46317.7	45993.3	479.02 µg/L	479.02 ppb	11:10:44
3	Zn 213.857†	19872.5	19200.7	477.73 µg/L	477.73 ppb	11:10:44

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2044991.9	100.03 %	0.712			0.71%
Sc RADIAL	58317.8	100 %	0.5			0.53%
Y 371.029	1400024.8	99.647 %	0.6409			0.64%
Ag 328.068†	64566.5	508.95 µg/L	15.339	508.95 ppb	15.339	3.01%
QC value within limits for Ag 328.068 Recovery = 101.79%						
Al 396.153Radial†	7005.7	5139.9 µg/L	44.14	5139.9 ppb	44.14	0.86%
QC value within limits for Al 396.153Radial Recovery = 102.80%						
As 188.979†	256.1	491.88 µg/L	43.052	491.88 ppb	43.052	8.75%
QC value within limits for As 188.979 Recovery = 98.38%						
B 249.677†	11633.1	503.09 µg/L	16.376	503.09 ppb	16.376	3.26%
QC value within limits for B 249.677 Recovery = 100.62%						
Ba 233.527†	19677.9	506.74 µg/L	21.108	506.74 ppb	21.108	4.17%
QC value within limits for Ba 233.527 Recovery = 101.35%						
Be 313.107†	792504.9	506.98 µg/L	17.282	506.98 ppb	17.282	3.41%
QC value within limits for Be 313.107 Recovery = 101.40%						
Ca 317.933Radial†	5474.4	5070.4 µg/L	22.72	5070.4 ppb	22.72	0.45%
QC value within limits for Ca 317.933Radial Recovery = 101.41%						
Cd 226.502†	18788.1	507.39 µg/L	21.394	507.39 ppb	21.394	4.22%
QC value within limits for Cd 226.502 Recovery = 101.48%						
Co 228.616†	10495.5	507.66 µg/L	24.832	507.66 ppb	24.832	4.89%

QC value within limits for Co 228.616 Recovery = 101.53%							
Cr 267.716†	23671.3	503.60 µg/L	29.235	503.60 ppb	29.235	5.81%	
QC value within limits for Cr 267.716 Recovery = 100.72%							
Cu 324.752†	73663.5	505.50 µg/L	23.626	505.50 ppb	23.626	4.67%	
QC value within limits for Cu 324.752 Recovery = 101.10%							
Fe 238.204 Radial†	604.2	5201.8 µg/L	26.11	5201.8 ppb	26.11	0.50%	
QC value within limits for Fe 238.204 Radial Recovery = 104.04%							
K 766.490 Radial†	7437.3	5231.8 µg/L	28.53	5231.8 ppb	28.53	0.55%	
QC value within limits for K 766.490 Radial Recovery = 104.64%							
Mg 279.077 IEC†	555.7	5233.3 µg/L	55.70	5233.3 ppb	55.70	1.06%	
QC value within limits for Mg 279.077 IEC Recovery = 104.67%							
Mn 257.610†	151274.3	511.98 µg/L	16.451	511.98 ppb	16.451	3.21%	
QC value within limits for Mn 257.610 Recovery = 102.40%							
Mo 202.031†	4879.4	502.31 µg/L	45.832	502.31 ppb	45.832	9.12%	
QC value within limits for Mo 202.031 Recovery = 100.46%							
Na 589.592 Radial†	31971.4	10379 µg/L	79.2	10379 ppb	79.2	0.76%	
QC value within limits for Na 589.592 Radial Recovery = 103.79%							
Ni 231.604†	9552.4	509.56 µg/L	24.382	509.56 ppb	24.382	4.78%	
QC value within limits for Ni 231.604 Recovery = 101.91%							
P 214.914†	1194.3	2470.4 µg/L	209.76	2470.4 ppb	209.76	8.49%	
QC value within limits for P 214.914 Recovery = 98.82%							
Pb 220.353†	1944.5	504.51 µg/L	34.287	504.51 ppb	34.287	6.80%	
QC value within limits for Pb 220.353 Recovery = 100.90%							
S 181.975 Axial†	236.2	1018.4 µg/L	60.51	1018.4 ppb	60.51	5.94%	
QC value within limits for S 181.975 Axial Recovery = 101.84%							
Sb 206.836†	526.2	505.54 µg/L	38.226	505.54 ppb	38.226	7.56%	
QC value within limits for Sb 206.836 Recovery = 101.11%							
Se 196.026†	332.3	514.39 µg/L	37.011	514.39 ppb	37.011	7.20%	
QC value within limits for Se 196.026 Recovery = 102.88%							
SiO2†	25791.3	5438.4 µg/L	205.21	5438.4 ppb	205.21	3.77%	
QC value within limits for SiO2 Recovery = 101.70%							
Si 251.611†	31405.5	2542.5 µg/L	92.02	2542.5 ppb	92.02	3.62%	
QC value within limits for Si 251.611 Recovery = 101.70%							
Sn 189.927†	1123.9	500.73 µg/L	50.147	500.73 ppb	50.147	10.01%	
QC value within limits for Sn 189.927 Recovery = 100.15%							
Sr 421.552†	50909.6	514.78 µg/L	3.434	514.78 ppb	3.434	0.67%	
QC value within limits for Sr 421.552 Recovery = 102.96%							
Ti 334.940†	214457.4	505.89 µg/L	18.142	505.89 ppb	18.142	3.59%	
QC value within limits for Ti 334.940 Recovery = 101.18%							
Tl 190.801†	363.2	509.61 µg/L	29.428	509.61 ppb	29.428	5.77%	
QC value within limits for Tl 190.801 Recovery = 101.92%							
U 409.014†	5815.9	504.90 µg/L	25.792	504.90 ppb	25.792	5.11%	
QC value within limits for U 409.014 Recovery = 100.98%							
V 292.402†	48888.9	509.34 µg/L	26.277	509.34 ppb	26.277	5.16%	
QC value within limits for V 292.402 Recovery = 101.87%							
Zn 213.857†	20300.1	505.10 µg/L	23.755	505.10 ppb	23.755	4.70%	
QC value within limits for Zn 213.857 Recovery = 101.02%							
All analyte(s) passed QC.							

Sequence No.: 4

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/17/2010 11:11:12

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	56317.9	56317.9	97.0 %		11:11:44
1	Al 396.153Radial†	18.7	42.2	31.017 µg/L	31.017 ppb	11:11:44
1	Ca 317.933Radial†	205.0	15.8	14.662 µg/L	14.662 ppb	11:12:04
1	Fe 238.204 Radial†	14.6	-2.2	-19.063 µg/L	-19.063 ppb	11:12:04
1	K 766.490 Radial†	158.7	-13.3	-9.3890 µg/L	-9.3890 ppb	11:11:44
1	Mg 279.077 IEC†	9.3	-3.8	-35.854 µg/L	-35.854 ppb	11:12:04
1	Na 589.592 Radial†	602.9	55.2	17.923 µg/L	17.923 ppb	11:11:44
1	Sr 421.552†	50.4	18.6	0.1884 µg/L	0.1884 ppb	11:11:44
1	Sc 361.383	2017181.6	2017181.6	98.669 %		11:13:02
1	Y 371.029	1383680.5	1383680.5	98.484 %		11:13:02
1	Ag 328.068†	-552.9	-36.7	-0.2893 µg/L	-0.2893 ppb	11:13:08
1	As 188.979†	0.4	-1.1	-2.1609 µg/L	-2.1609 ppb	11:13:28
1	B 249.677†	352.8	60.8	2.6495 µg/L	2.6495 ppb	11:13:28
1	Ba 233.527†	-17.2	0.6	0.0144 µg/L	0.0144 ppb	11:13:28
1	Be 313.107†	-2913.4	14.8	0.0095 µg/L	0.0095 ppb	11:13:08
1	Cd 226.502†	-134.3	1.8	0.0509 µg/L	0.0509 ppb	11:13:28
1	Co 228.616†	-15.5	-10.7	-0.5163 µg/L	-0.5163 ppb	11:13:28
1	Cr 267.716†	-14.9	17.1	0.3626 µg/L	0.3626 ppb	11:13:28
1	Cu 324.752†	2610.5	108.2	0.7388 µg/L	0.7388 ppb	11:13:08
1	Mn 257.610†	-207.4	26.4	0.0882 µg/L	0.0882 ppb	11:13:28
1	Mo 202.031†	-5.1	1.7	0.1700 µg/L	0.1700 ppb	11:13:28
1	Ni 231.604†	298.7	-4.0	-0.2143 µg/L	-0.2143 ppb	11:13:28
1	P 214.914†	19.8	-1.5	-3.2323 µg/L	-3.2323 ppb	11:13:28
1	Pb 220.353†	100.3	8.1	2.0988 µg/L	2.0988 ppb	11:13:28
1	S 181.975 Axial†	14.8	1.2	5.0583 µg/L	5.0583 ppb	11:13:28
1	Sb 206.836†	26.1	6.2	5.9772 µg/L	5.9772 ppb	11:13:28
1	Se 196.026†	13.8	-1.9	-2.9502 µg/L	-2.9502 ppb	11:13:28
1	SiO2†	1350.9	24.7	5.2019 µg/L	5.2019 ppb	11:13:08
1	Si 251.611†	318.5	8.4	0.6776 µg/L	0.6776 ppb	11:13:28
1	Sn 189.927†	-0.5	-3.6	-1.6020 µg/L	-1.6020 ppb	11:13:28
1	Ti 334.940†	124.6	-4.3	-0.0071 µg/L	-0.0071 ppb	11:13:08
1	Tl 190.801†	-24.8	-2.2	-3.0618 µg/L	-3.0618 ppb	11:13:28
1	U 409.014†	60.0	104.5	9.0920 µg/L	9.0920 ppb	11:13:08
1	V 292.402†	-43.8	-12.4	-0.1179 µg/L	-0.1179 ppb	11:13:08
1	Zn 213.857†	527.0	15.3	0.3855 µg/L	0.3855 ppb	11:13:28
2	Sc RADIAL	55900.6	55900.6	96.3 %		11:12:09
2	Al 396.153Radial†	-18.8	3.4	2.4611 µg/L	2.4611 ppb	11:12:09
2	Ca 317.933Radial†	195.5	7.5	6.9848 µg/L	6.9848 ppb	11:12:29
2	Fe 238.204 Radial†	16.0	-0.6	-5.1987 µg/L	-5.1987 ppb	11:12:29
2	K 766.490 Radial†	237.6	69.8	49.093 µg/L	49.093 ppb	11:12:09
2	Mg 279.077 IEC†	6.9	-6.2	-58.662 µg/L	-58.662 ppb	11:12:29
2	Na 589.592 Radial†	591.6	48.1	15.622 µg/L	15.622 ppb	11:12:09
2	Sr 421.552†	11.2	-21.7	-0.2191 µg/L	-0.2191 ppb	11:12:09
2	Sc 361.383	1991105.8	1991105.8	97.393 %		11:13:34
2	Y 371.029	1367255.9	1367255.9	97.315 %		11:13:34
2	Ag 328.068†	-479.7	31.1	0.2426 µg/L	0.2426 ppb	11:13:39
2	As 188.979†	-4.3	-5.9	-11.396 µg/L	-11.396 ppb	11:13:59
2	B 249.677†	347.6	60.1	2.6134 µg/L	2.6134 ppb	11:13:59
2	Ba 233.527†	-22.0	-4.7	-0.1197 µg/L	-0.1197 ppb	11:13:59
2	Be 313.107†	-2861.0	30.0	0.0191 µg/L	0.0191 ppb	11:13:39
2	Cd 226.502†	-135.7	-1.4	-0.0355 µg/L	-0.0355 ppb	11:13:59
2	Co 228.616†	-9.6	-4.9	-0.2345 µg/L	-0.2345 ppb	11:13:59
2	Cr 267.716†	-18.9	12.8	0.2725 µg/L	0.2725 ppb	11:13:59
2	Cu 324.752†	2602.8	134.9	0.9237 µg/L	0.9237 ppb	11:13:39
2	Mn 257.610†	-212.6	18.3	0.0635 µg/L	0.0635 ppb	11:13:59
2	Mo 202.031†	3.8	10.8	1.1123 µg/L	1.1123 ppb	11:13:59
2	Ni 231.604†	307.0	8.5	0.4521 µg/L	0.4521 ppb	11:13:59
2	P 214.914†	16.3	-4.9	-10.376 µg/L	-10.376 ppb	11:13:59
2	Pb 220.353†	90.9	-0.2	-0.0329 µg/L	-0.0329 ppb	11:13:59

2	S 181.975 Axial†	18.6	5.2	22.627 µg/L	22.627 ppb	11:13:59
2	Sb 206.836†	25.7	6.2	5.9893 µg/L	5.9893 ppb	11:13:59
2	Se 196.026†	16.5	1.1	1.6638 µg/L	1.6638 ppb	11:13:59
2	SiO2†	1343.9	35.4	7.4633 µg/L	7.4633 ppb	11:13:39
2	Si 251.611†	321.3	15.4	1.2465 µg/L	1.2465 ppb	11:13:59
2	Sn 189.927†	2.0	-1.1	-0.4747 µg/L	-0.4747 ppb	11:13:59
2	Ti 334.940†	177.2	51.4	0.1260 µg/L	0.1260 ppb	11:13:39
2	Tl 190.801†	-25.6	-3.4	-4.6751 µg/L	-4.6751 ppb	11:13:59
2	U 409.014†	-87.7	-46.4	-4.0361 µg/L	-4.0361 ppb	11:13:39
2	V 292.402†	-37.8	-6.8	-0.0652 µg/L	-0.0652 ppb	11:13:39
2	Zn 213.857†	530.9	26.3	0.6592 µg/L	0.6592 ppb	11:13:59
3	Sc RADIAL	56416.0	56416.0	97.2 %		11:12:34
3	Al 396.153Radial†	-5.2	17.5	12.861 µg/L	12.861 ppb	11:12:34
3	Ca 317.933Radial†	190.2	0.3	0.2347 µg/L	0.2347 ppb	11:12:55
3	Fe 238.204 Radial†	17.6	0.9	7.3314 µg/L	7.3314 ppb	11:12:55
3	K 766.490 Radial†	179.3	7.6	5.3370 µg/L	5.3370 ppb	11:12:34
3	Mg 279.077 IEC†	10.9	-2.2	-21.027 µg/L	-21.027 ppb	11:12:55
3	Na 589.592 Radial†	614.6	66.2	21.477 µg/L	21.477 ppb	11:12:34
3	Sr 421.552†	51.0	19.1	0.1936 µg/L	0.1936 ppb	11:12:34
3	Sc 361.383	2016619.7	2016619.7	98.641 %		11:14:05
3	Y 371.029	1385023.2	1385023.2	98.580 %		11:14:05
3	Ag 328.068†	-525.8	-9.4	-0.0723 µg/L	-0.0723 ppb	11:14:10
3	As 188.979†	-2.6	-4.1	-7.9217 µg/L	-7.9217 ppb	11:14:30
3	B 249.677†	354.2	62.3	2.7017 µg/L	2.7017 ppb	11:14:30
3	Ba 233.527†	-13.3	4.5	0.1171 µg/L	0.1171 ppb	11:14:30
3	Be 313.107†	-2806.0	122.9	0.0786 µg/L	0.0786 ppb	11:14:10
3	Cd 226.502†	-135.5	0.6	0.0158 µg/L	0.0158 ppb	11:14:30
3	Co 228.616†	-5.5	-0.6	-0.0277 µg/L	-0.0277 ppb	11:14:30
3	Cr 267.716†	-19.4	12.5	0.2661 µg/L	0.2661 ppb	11:14:30
3	Cu 324.752†	2608.1	106.5	0.7306 µg/L	0.7306 ppb	11:14:10
3	Mn 257.610†	-209.7	24.0	0.0828 µg/L	0.0828 ppb	11:14:30
3	Mo 202.031†	-3.5	3.3	0.3448 µg/L	0.3448 ppb	11:14:30
3	Ni 231.604†	301.2	-1.4	-0.0753 µg/L	-0.0753 ppb	11:14:30
3	P 214.914†	32.5	11.3	23.813 µg/L	23.813 ppb	11:14:30
3	Pb 220.353†	106.8	14.7	3.8229 µg/L	3.8229 ppb	11:14:30
3	S 181.975 Axial†	18.2	4.7	20.211 µg/L	20.211 ppb	11:14:30
3	Sb 206.836†	20.6	0.7	0.6621 µg/L	0.6621 ppb	11:14:30
3	Se 196.026†	11.9	-3.8	-5.7151 µg/L	-5.7151 ppb	11:14:30
3	SiO2†	1336.4	10.3	2.1646 µg/L	2.1646 ppb	11:14:10
3	Si 251.611†	325.3	15.3	1.2408 µg/L	1.2408 ppb	11:14:30
3	Sn 189.927†	-2.2	-5.3	-2.3734 µg/L	-2.3734 ppb	11:14:30
3	Ti 334.940†	186.1	58.1	0.1388 µg/L	0.1388 ppb	11:14:10
3	Tl 190.801†	-27.2	-4.6	-6.3696 µg/L	-6.3696 ppb	11:14:30
3	U 409.014†	-57.6	-14.7	-1.2759 µg/L	-1.2759 ppb	11:14:10
3	V 292.402†	-18.6	13.3	0.1392 µg/L	0.1392 ppb	11:14:10
3	Zn 213.857†	519.0	7.3	0.1817 µg/L	0.1817 ppb	11:14:30

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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	2008302.4	98.234 %	0.7286			0.74%
Sc RADIAL	56211.5	96.9 %	0.47			0.49%
Y 371.029	1378653.2	98.126 %	0.7041			0.72%
Ag 328.068†	-5.0	-0.0397 µg/L	0.26744	-0.0397 ppb	0.26744	673.82%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	21.0	15.446 µg/L	14.4522	15.446 ppb	14.4522	93.57%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-3.7	-7.1596 µg/L	4.66446	-7.1596 ppb	4.66446	65.15%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	61.1	2.6549 µg/L	0.04439	2.6549 ppb	0.04439	1.67%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	0.2	0.0039 µg/L	0.11875	0.0039 ppb	0.11875	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	55.9	0.0357 µg/L	0.03745	0.0357 ppb	0.03745	104.76%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	7.9	7.2937 µg/L	7.21837	7.2937 ppb	7.21837	98.97%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	0.4	0.0104 µg/L	0.04344	0.0104 ppb	0.04344	417.87%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-5.4	-0.2595 µg/L	0.24525	-0.2595 ppb	0.24525	94.50%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	14.1	0.3004 µg/L	0.05398	0.3004 ppb	0.05398	17.97%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	116.5	0.7977 µg/L	0.10920	0.7977 ppb	0.10920	13.69%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-0.7	-5.6435 µg/L	13.20283	-5.6435 ppb	13.20283	233.95%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	21.3	15.014 µg/L	30.4184	15.014 ppb	30.4184	202.60%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-4.1	-38.515 µg/L	18.9582	-38.515 ppb	18.9582	49.22%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	22.9	0.0782 µg/L	0.01298	0.0782 ppb	0.01298	16.60%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	5.3	0.5424 µg/L	0.50124	0.5424 ppb	0.50124	92.41%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	56.5	18.341 µg/L	2.9496	18.341 ppb	2.9496	16.08%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	1.0	0.0542 µg/L	0.35154	0.0542 ppb	0.35154	648.82%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	1.7	3.4014 µg/L	18.03408	3.4014 ppb	18.03408	530.19%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	7.6	1.9629 µg/L	1.93146	1.9629 ppb	1.93146	98.40%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	3.7	15.965 µg/L	9.5227	15.965 ppb	9.5227	59.65%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	4.4	4.2095 µg/L	3.07218	4.2095 ppb	3.07218	72.98%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-1.5	-2.3338 µg/L	3.72787	-2.3338 ppb	3.72787	159.73%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	23.4	4.9433 µg/L	2.65878	4.9433 ppb	2.65878	53.79%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	13.0	1.0550 µg/L	0.32680	1.0550 ppb	0.32680	30.98%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-3.3	-1.4834 µg/L	0.95488	-1.4834 ppb	0.95488	64.37%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	5.4	0.0543 µg/L	0.23678	0.0543 ppb	0.23678	436.28%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	35.1	0.0859 µg/L	0.08079	0.0859 ppb	0.08079	94.02%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-3.4	-4.7022 µg/L	1.65410	-4.7022 ppb	1.65410	35.18%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	14.5	1.2600 µg/L	6.92170	1.2600 ppb	6.92170	549.32%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-2.0	-0.0146 µg/L	0.13580	-0.0146 ppb	0.13580	927.81%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	16.3	0.4088 µg/L	0.23961	0.4088 ppb	0.23961	58.61%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

## =====

Analysis Begun

Start Time: 2/17/2010 11:34:41                      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\021710D.sif

Batch ID:

Results Data Set: 021710

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

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Sequence No.: 1                      Autosampler Location: 7  
 Sample ID: CCV                      Date Collected: 2/17/2010 11:34:42  
 Analyst:                      Data Type: Original  
 Initial Sample Wt:                      Initial Sample Vol:  
 Dilution:                      Sample Prep Vol:

## -----

Replicate Data: CCV						
Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59137.4	59137.4	102 %		11:35:15
1	Al 396.153Radial†	6901.5	6796.1	4985.4 µg/L	4985.4 ppb	11:35:15
1	Ca 317.933Radial†	5612.1	5312.4	4920.4 µg/L	4920.4 ppb	11:35:35
1	Fe 238.204 Radial†	607.9	579.3	4987.9 µg/L	4987.9 ppb	11:35:35
1	K 766.490 Radial†	7425.0	7110.1	5001.6 µg/L	5001.6 ppb	11:35:15
1	Mg 279.077 IEC†	562.6	538.7	5073.6 µg/L	5073.6 ppb	11:35:35
1	Na 589.592 Radial†	32232.5	31067.2	10086 µg/L	10086 ppb	11:35:15
1	Sr 421.552†	50507.4	49535.2	500.88 µg/L	500.88 ppb	11:35:15
1	Sc 361.383	2039818.1	2039818.1	99.776 %		11:36:35
1	Y 371.029	1393488.8	1393488.8	99.182 %		11:36:35
1	Ag 328.068†	63899.1	64566.3	508.97 µg/L	508.97 ppb	11:36:40
1	As 188.979†	267.8	266.9	512.57 µg/L	512.57 ppb	11:37:00
1	B 249.677†	11945.9	11676.0	505.08 µg/L	505.08 ppb	11:36:40
1	Ba 233.527†	19744.0	19806.3	510.05 µg/L	510.05 ppb	11:36:40
1	Be 313.107†	788238.9	792976.8	507.28 µg/L	507.28 ppb	11:36:35
1	Cd 226.502†	18676.6	18856.5	509.27 µg/L	509.27 ppb	11:36:40
1	Co 228.616†	10568.9	10597.7	512.62 µg/L	512.62 ppb	11:36:40
1	Cr 267.716†	23937.7	24023.6	511.10 µg/L	511.10 ppb	11:36:40
1	Cu 324.752†	76748.4	74383.2	510.41 µg/L	510.41 ppb	11:36:40
1	Mn 257.610†	150477.0	151051.5	511.21 µg/L	511.21 ppb	11:36:35
1	Mo 202.031†	5051.6	5069.8	521.90 µg/L	521.90 ppb	11:37:00
1	Ni 231.604†	9930.1	9645.7	514.53 µg/L	514.53 ppb	11:36:40
1	P 214.914†	1259.0	1240.3	2567.3 µg/L	2567.3 ppb	11:37:00
1	Pb 220.353†	2084.5	1995.6	517.81 µg/L	517.81 ppb	11:37:00
1	S 181.975 Axial†	251.3	238.1	1026.2 µg/L	1026.2 ppb	11:37:00
1	Sb 206.836†	568.0	549.1	527.70 µg/L	527.70 ppb	11:37:00
1	Se 196.026†	348.3	333.2	515.42 µg/L	515.42 ppb	11:37:00
1	SiO2†	27200.1	25916.7	5464.8 µg/L	5464.8 ppb	11:36:40
1	Si 251.611†	31715.9	31472.7	2548.0 µg/L	2548.0 ppb	11:36:40
1	Sn 189.927†	1172.4	1172.0	522.16 µg/L	522.16 ppb	11:37:00
1	Ti 334.940†	214915.1	215267.2	507.81 µg/L	507.81 ppb	11:36:35
1	Tl 190.801†	351.6	375.3	526.50 µg/L	526.50 ppb	11:37:00
1	U 409.014†	5896.2	5953.1	516.88 µg/L	516.88 ppb	11:36:40
1	V 292.402†	49302.2	49445.0	515.21 µg/L	515.21 ppb	11:36:40
1	Zn 213.857†	20963.8	20492.0	509.90 µg/L	509.90 ppb	11:36:40
2	Sc RADIAL	58369.7	58369.7	101 %		11:35:40
2	Al 396.153Radial†	6898.1	6881.8	5048.5 µg/L	5048.5 ppb	11:35:40
2	Ca 317.933Radial†	5628.2	5400.8	5002.3 µg/L	5002.3 ppb	11:36:01
2	Fe 238.204 Radial†	607.2	586.4	5049.2 µg/L	5049.2 ppb	11:36:01
2	K 766.490 Radial†	7463.0	7243.7	5095.5 µg/L	5095.5 ppb	11:35:40
2	Mg 279.077 IEC†	564.2	547.5	5156.7 µg/L	5156.7 ppb	11:36:01
2	Na 589.592 Radial†	32161.4	31412.5	10198 µg/L	10198 ppb	11:35:40
2	Sr 421.552†	50278.3	49959.4	505.17 µg/L	505.17 ppb	11:35:40
2	Sc 361.383	2054854.5	2054854.5	100.51 %		11:37:07
2	Y 371.029	1403911.9	1403911.9	99.924 %		11:37:07
2	Ag 328.068†	64074.5	64272.2	506.66 µg/L	506.66 ppb	11:37:12
2	As 188.979†	270.8	267.9	514.55 µg/L	514.55 ppb	11:37:33

2	B 249.677†	11947.9	11590.4	501.32 µg/L	501.32 ppb	11:37:12
2	Ba 233.527†	19790.2	19707.5	507.51 µg/L	507.51 ppb	11:37:12
2	Be 313.107†	793463.7	792394.0	506.91 µg/L	506.91 ppb	11:37:07
2	Cd 226.502†	18704.3	18747.1	506.30 µg/L	506.30 ppb	11:37:12
2	Co 228.616†	10592.0	10543.1	509.98 µg/L	509.98 ppb	11:37:12
2	Cr 267.716†	23959.3	23869.6	507.82 µg/L	507.82 ppb	11:37:12
2	Cu 324.752†	76876.8	73948.1	507.43 µg/L	507.43 ppb	11:37:12
2	Mn 257.610†	151646.5	151111.5	511.41 µg/L	511.41 ppb	11:37:07
2	Mo 202.031†	5034.7	5016.0	516.37 µg/L	516.37 ppb	11:37:33
2	Ni 231.604†	9898.6	9541.5	508.97 µg/L	508.97 ppb	11:37:12
2	P 214.914†	1243.1	1215.2	2514.6 µg/L	2514.6 ppb	11:37:33
2	Pb 220.353†	2075.0	1970.9	511.40 µg/L	511.40 ppb	11:37:33
2	S 181.975 Axial†	251.0	235.9	1016.9 µg/L	1016.9 ppb	11:37:33
2	Sb 206.836†	553.6	530.7	510.00 µg/L	510.00 ppb	11:37:33
2	Se 196.026†	355.8	338.1	522.92 µg/L	522.92 ppb	11:37:33
2	SiO2†	27189.1	25706.3	5420.5 µg/L	5420.5 ppb	11:37:12
2	Si 251.611†	31887.4	31410.6	2543.0 µg/L	2543.0 ppb	11:37:12
2	Sn 189.927†	1164.9	1155.9	515.02 µg/L	515.02 ppb	11:37:33
2	Ti 334.940†	216064.0	214834.1	506.78 µg/L	506.78 ppb	11:37:07
2	Tl 190.801†	345.3	366.5	514.25 µg/L	514.25 ppb	11:37:33
2	U 409.014†	5909.5	5923.1	514.25 µg/L	514.25 ppb	11:37:12
2	V 292.402†	49447.8	49228.2	512.94 µg/L	512.94 ppb	11:37:12
2	Zn 213.857†	20978.6	20353.0	506.44 µg/L	506.44 ppb	11:37:12
3	Sc RADIAL	59207.3	59207.3	102 %		11:36:06
3	Al 396.153Radial†	6958.4	6843.8	5022.1 µg/L	5022.1 ppb	11:36:06
3	Ca 317.933Radial†	5624.4	5317.9	4925.4 µg/L	4925.4 ppb	11:36:26
3	Fe 238.204 Radial†	606.0	576.8	4965.5 µg/L	4965.5 ppb	11:36:26
3	K 766.490 Radial†	7518.1	7192.8	5059.7 µg/L	5059.7 ppb	11:36:06
3	Mg 279.077 IEC†	566.2	541.6	5099.4 µg/L	5099.4 ppb	11:36:26
3	Na 589.592 Radial†	32543.3	31334.4	10172 µg/L	10172 ppb	11:36:06
3	Sr 421.552†	50959.6	49919.9	504.77 µg/L	504.77 ppb	11:36:06
3	Sc 361.383	2051953.4	2051953.4	100.37 %		11:37:39
3	Y 371.029	1402692.1	1402692.1	99.837 %		11:37:39
3	Ag 328.068†	60901.8	61201.3	482.33 µg/L	482.33 ppb	11:37:45
3	As 188.979†	241.2	238.8	458.63 µg/L	458.63 ppb	11:38:05
3	B 249.677†	11284.1	10945.8	473.30 µg/L	473.30 ppb	11:37:45
3	Ba 233.527†	18340.6	18291.1	471.02 µg/L	471.02 ppb	11:37:45
3	Be 313.107†	761079.6	761245.2	486.98 µg/L	486.98 ppb	11:37:39
3	Cd 226.502†	17309.6	17383.9	469.45 µg/L	469.45 ppb	11:37:45
3	Co 228.616†	9732.9	9702.1	469.23 µg/L	469.23 ppb	11:37:45
3	Cr 267.716†	21539.9	21492.8	457.26 µg/L	457.26 ppb	11:37:45
3	Cu 324.752†	71140.6	68341.2	469.00 µg/L	469.00 ppb	11:37:45
3	Mn 257.610†	145781.6	145481.5	492.37 µg/L	492.37 ppb	11:37:39
3	Mo 202.031†	4333.7	4324.6	445.21 µg/L	445.21 ppb	11:38:05
3	Ni 231.604†	9088.2	8748.0	466.64 µg/L	466.64 ppb	11:37:45
3	P 214.914†	1095.4	1069.7	2210.8 µg/L	2210.8 ppb	11:38:05
3	Pb 220.353†	1875.5	1775.1	460.51 µg/L	460.51 ppb	11:38:05
3	S 181.975 Axial†	224.6	210.0	905.14 µg/L	905.14 ppb	11:38:05
3	Sb 206.836†	493.5	471.5	452.80 µg/L	452.80 ppb	11:38:05
3	Se 196.026†	313.5	296.4	459.30 µg/L	459.30 ppb	11:38:05
3	SiO2†	25609.9	24171.1	5096.7 µg/L	5096.7 ppb	11:37:45
3	Si 251.611†	29815.7	29391.4	2379.5 µg/L	2379.5 ppb	11:37:45
3	Sn 189.927†	987.4	980.7	436.95 µg/L	436.95 ppb	11:38:05
3	Ti 334.940†	206577.1	205686.0	485.19 µg/L	485.19 ppb	11:37:39
3	Tl 190.801†	309.9	331.7	465.83 µg/L	465.83 ppb	11:38:05
3	U 409.014†	5361.4	5385.4	467.49 µg/L	467.49 ppb	11:37:45
3	V 292.402†	45137.6	45003.5	468.73 µg/L	468.73 ppb	11:37:45
3	Zn 213.857†	19356.3	18766.2	466.93 µg/L	466.93 ppb	11:37:45

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2048875.3	100.22 %	0.390			0.39%
Sc RADIAL	58904.8	101 %	0.8			0.79%
Y 371.029	1400030.9	99.648 %	0.4056			0.41%
Ag 328.068†	63346.6	499.32 µg/L	14.757	499.32 ppb	14.757	2.96%
QC value within limits for Ag 328.068 Recovery = 99.86%						
Al 396.153Radial†	6840.6	5018.7 µg/L	31.71	5018.7 ppb	31.71	0.63%
QC value within limits for Al 396.153Radial Recovery = 100.37%						
As 188.979†	257.9	495.25 µg/L	31.729	495.25 ppb	31.729	6.41%



QC value within limits for As 188.979 Recovery = 99.05%							
B 249.677†	11404.1	493.24 µg/L	17.363	493.24 ppb	17.363	3.52%	
QC value within limits for B 249.677 Recovery = 98.65%							
Ba 233.527†	19268.3	496.19 µg/L	21.838	496.19 ppb	21.838	4.40%	
QC value within limits for Ba 233.527 Recovery = 99.24%							
Be 313.107†	782205.3	500.39 µg/L	11.613	500.39 ppb	11.613	2.32%	
QC value within limits for Be 313.107 Recovery = 100.08%							
Ca 317.933Radial†	5343.7	4949.4 µg/L	45.89	4949.4 ppb	45.89	0.93%	
QC value within limits for Ca 317.933Radial Recovery = 98.99%							
Cd 226.502†	18329.1	495.01 µg/L	22.184	495.01 ppb	22.184	4.48%	
QC value within limits for Cd 226.502 Recovery = 99.00%							
Co 228.616†	10281.0	497.28 µg/L	24.325	497.28 ppb	24.325	4.89%	
QC value within limits for Co 228.616 Recovery = 99.46%							
Cr 267.716†	23128.7	492.06 µg/L	30.182	492.06 ppb	30.182	6.13%	
QC value within limits for Cr 267.716 Recovery = 98.41%							
Cu 324.752†	72224.1	495.61 µg/L	23.095	495.61 ppb	23.095	4.66%	
QC value within limits for Cu 324.752 Recovery = 99.12%							
Fe 238.204 Radial†	580.9	5000.8 µg/L	43.33	5000.8 ppb	43.33	0.87%	
QC value within limits for Fe 238.204 Radial Recovery = 100.02%							
K 766.490 Radial†	7182.2	5052.3 µg/L	47.42	5052.3 ppb	47.42	0.94%	
QC value within limits for K 766.490 Radial Recovery = 101.05%							
Mg 279.077 IEC†	542.6	5109.9 µg/L	42.54	5109.9 ppb	42.54	0.83%	
QC value within limits for Mg 279.077 IEC Recovery = 102.20%							
Mn 257.610†	149214.8	505.00 µg/L	10.936	505.00 ppb	10.936	2.17%	
QC value within limits for Mn 257.610 Recovery = 101.00%							
Mo 202.031†	4803.5	494.49 µg/L	42.768	494.49 ppb	42.768	8.65%	
QC value within limits for Mo 202.031 Recovery = 98.90%							
Na 589.592 Radial†	31271.4	10152 µg/L	58.8	10152 ppb	58.8	0.58%	
QC value within limits for Na 589.592 Radial Recovery = 101.52%							
Ni 231.604†	9311.7	496.71 µg/L	26.189	496.71 ppb	26.189	5.27%	
QC value within limits for Ni 231.604 Recovery = 99.34%							
P 214.914†	1175.1	2430.9 µg/L	192.44	2430.9 ppb	192.44	7.92%	
QC value within limits for P 214.914 Recovery = 97.24%							
Pb 220.353†	1913.9	496.58 µg/L	31.396	496.58 ppb	31.396	6.32%	
QC value within limits for Pb 220.353 Recovery = 99.32%							
S 181.975 Axial†	228.0	982.76 µg/L	67.378	982.76 ppb	67.378	6.86%	
QC value within limits for S 181.975 Axial Recovery = 98.28%							
Sb 206.836†	517.1	496.83 µg/L	39.149	496.83 ppb	39.149	7.88%	
QC value within limits for Sb 206.836 Recovery = 99.37%							
Se 196.026†	322.6	499.21 µg/L	34.772	499.21 ppb	34.772	6.97%	
QC value within limits for Se 196.026 Recovery = 99.84%							
SiO2†	25264.7	5327.3 µg/L	200.93	5327.3 ppb	200.93	3.77%	
QC value within limits for SiO2 Recovery = 99.62%							
Si 251.611†	30758.2	2490.1 µg/L	95.86	2490.1 ppb	95.86	3.85%	
QC value within limits for Si 251.611 Recovery = 99.61%							
Sn 189.927†	1102.9	491.38 µg/L	47.270	491.38 ppb	47.270	9.62%	
QC value within limits for Sn 189.927 Recovery = 98.28%							
Sr 421.552†	49804.8	503.61 µg/L	2.370	503.61 ppb	2.370	0.47%	
QC value within limits for Sr 421.552 Recovery = 100.72%							
Ti 334.940†	211929.1	499.93 µg/L	12.772	499.93 ppb	12.772	2.55%	
QC value within limits for Ti 334.940 Recovery = 99.99%							
Tl 190.801†	357.9	502.19 µg/L	32.079	502.19 ppb	32.079	6.39%	
QC value within limits for Tl 190.801 Recovery = 100.44%							
U 409.014†	5753.9	499.54 µg/L	27.786	499.54 ppb	27.786	5.56%	
QC value within limits for U 409.014 Recovery = 99.91%							
V 292.402†	47892.2	498.96 µg/L	26.204	498.96 ppb	26.204	5.25%	
QC value within limits for V 292.402 Recovery = 99.79%							
Zn 213.857†	19870.4	494.42 µg/L	23.872	494.42 ppb	23.872	4.83%	
QC value within limits for Zn 213.857 Recovery = 98.88%							
All analyte(s) passed QC.							

Sequence No.: 2  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/17/2010 11:38:13  
 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	58568.4	58568.4	101 %		11:38:45
1	Al 396.153Radial†	-16.1	6.9	5.0985 µg/L	5.0985 ppb	11:38:45
1	Ca 317.933Radial†	192.6	-4.5	-4.1915 µg/L	-4.1915 ppb	11:39:05
1	Fe 238.204 Radial†	16.5	-0.9	-7.8272 µg/L	-7.8272 ppb	11:39:05
1	K 766.490 Radial†	188.6	10.1	7.0797 µg/L	7.0797 ppb	11:38:45
1	Mg 279.077 IEC†	10.9	-2.6	-24.848 µg/L	-24.848 ppb	11:39:05
1	Na 589.592 Radial†	574.8	3.4	1.1161 µg/L	1.1161 ppb	11:38:45
1	Sr 421.552†	36.1	2.5	0.0252 µg/L	0.0252 ppb	11:38:45
1	Sc 361.383	2025153.1	2025153.1	99.059 %		11:40:03
1	Y 371.029	1388005.2	1388005.2	98.792 %		11:40:03
1	Ag 328.068†	-464.4	54.8	0.4269 µg/L	0.4269 ppb	11:40:09
1	As 188.979†	-1.5	-3.0	-5.7102 µg/L	-5.7102 ppb	11:40:29
1	B 249.677†	331.3	37.7	1.6405 µg/L	1.6405 ppb	11:40:29
1	Ba 233.527†	-27.9	-10.2	-0.2623 µg/L	-0.2623 ppb	11:40:29
1	Be 313.107†	-2940.1	-0.5	-0.0004 µg/L	-0.0004 ppb	11:40:09
1	Cd 226.502†	-136.5	0.1	0.0037 µg/L	0.0037 ppb	11:40:29
1	Co 228.616†	-15.3	-10.4	-0.5038 µg/L	-0.5038 ppb	11:40:29
1	Cr 267.716†	-30.3	1.6	0.0349 µg/L	0.0349 ppb	11:40:29
1	Cu 324.752†	2584.8	71.8	0.4912 µg/L	0.4912 ppb	11:40:09
1	Mn 257.610†	-240.7	-6.4	-0.0217 µg/L	-0.0217 ppb	11:40:29
1	Mo 202.031†	-3.6	3.2	0.3299 µg/L	0.3299 ppb	11:40:29
1	Ni 231.604†	296.6	-7.4	-0.3934 µg/L	-0.3934 ppb	11:40:29
1	P 214.914†	36.3	15.0	31.652 µg/L	31.652 ppb	11:40:29
1	Pb 220.353†	90.1	-2.5	-0.6539 µg/L	-0.6539 ppb	11:40:29
1	S 181.975 Axial†	16.7	3.1	13.296 µg/L	13.296 ppb	11:40:29
1	Sb 206.836†	32.3	12.4	11.914 µg/L	11.914 ppb	11:40:29
1	Se 196.026†	11.1	-4.7	-7.1550 µg/L	-7.1550 ppb	11:40:29
1	SiO2†	1338.9	7.1	1.4985 µg/L	1.4985 ppb	11:40:09
1	Si 251.611†	299.0	-12.6	-1.0218 µg/L	-1.0218 ppb	11:40:29
1	Sn 189.927†	3.2	0.1	0.0572 µg/L	0.0572 ppb	11:40:29
1	Ti 334.940†	180.3	51.4	0.1232 µg/L	0.1232 ppb	11:40:09
1	Tl 190.801†	-24.9	-2.2	-3.0860 µg/L	-3.0860 ppb	11:40:29
1	U 409.014†	-110.2	-67.6	-5.8792 µg/L	-5.8792 ppb	11:40:09
1	V 292.402†	-57.3	-25.8	-0.2698 µg/L	-0.2698 ppb	11:40:09
1	Zn 213.857†	496.9	-17.2	-0.4289 µg/L	-0.4289 ppb	11:40:29
2	Sc RADIAL	57722.4	57722.4	99.5 %		11:39:10
2	Al 396.153Radial†	-35.4	-12.7	-9.3640 µg/L	-9.3640 ppb	11:39:10
2	Ca 317.933Radial†	186.5	-7.9	-7.3039 µg/L	-7.3039 ppb	11:39:30
2	Fe 238.204 Radial†	18.2	1.0	8.9965 µg/L	8.9965 ppb	11:39:30
2	K 766.490 Radial†	225.7	50.1	35.241 µg/L	35.241 ppb	11:39:10
2	Mg 279.077 IEC†	8.0	-5.4	-50.933 µg/L	-50.933 ppb	11:39:30
2	Na 589.592 Radial†	554.4	-8.7	-2.8144 µg/L	-2.8144 ppb	11:39:10
2	Sr 421.552†	57.6	24.6	0.2490 µg/L	0.2490 ppb	11:39:10
2	Sc 361.383	2047206.5	2047206.5	100.14 %		11:40:35
2	Y 371.029	1404393.2	1404393.2	99.958 %		11:40:35
2	Ag 328.068†	-559.9	-35.4	-0.2754 µg/L	-0.2754 ppb	11:40:40
2	As 188.979†	-1.9	-3.4	-6.5980 µg/L	-6.5980 ppb	11:41:00
2	B 249.677†	310.3	13.1	0.5659 µg/L	0.5659 ppb	11:41:00
2	Ba 233.527†	-19.3	-1.3	-0.0320 µg/L	-0.0320 ppb	11:41:00
2	Be 313.107†	-3037.3	-65.5	-0.0420 µg/L	-0.0420 ppb	11:40:40
2	Cd 226.502†	-146.0	-7.8	-0.2118 µg/L	-0.2118 ppb	11:41:00
2	Co 228.616†	-5.8	-0.8	-0.0369 µg/L	-0.0369 ppb	11:41:00
2	Cr 267.716†	-34.6	-2.4	-0.0504 µg/L	-0.0504 ppb	11:41:00
2	Cu 324.752†	2536.2	-4.8	-0.0317 µg/L	-0.0317 ppb	11:40:40
2	Mn 257.610†	-242.0	-5.1	-0.0139 µg/L	-0.0139 ppb	11:41:00
2	Mo 202.031†	-4.4	2.5	0.2562 µg/L	0.2562 ppb	11:41:00
2	Ni 231.604†	304.2	-3.0	-0.1612 µg/L	-0.1612 ppb	11:41:00
2	P 214.914†	25.6	4.0	8.4424 µg/L	8.4424 ppb	11:41:00
2	Pb 220.353†	87.3	-6.3	-1.6416 µg/L	-1.6416 ppb	11:41:00

2	S 181.975 Axial†	10.6	-3.2	-13.733 µg/L	-13.733 ppb	11:41:00
2	Sb 206.836†	28.4	8.2	7.8967 µg/L	7.8967 ppb	11:41:00
2	Se 196.026†	22.4	6.5	9.9656 µg/L	9.9656 ppb	11:41:00
2	SiO2†	1306.2	-40.1	-8.4565 µg/L	-8.4565 ppb	11:40:40
2	Si 251.611†	300.7	-14.2	-1.1492 µg/L	-1.1492 ppb	11:41:00
2	Sn 189.927†	-1.3	-4.4	-1.9653 µg/L	-1.9653 ppb	11:41:00
2	Ti 334.940†	146.0	15.2	0.0399 µg/L	0.0399 ppb	11:40:40
2	Tl 190.801†	-25.5	-2.5	-3.4959 µg/L	-3.4959 ppb	11:41:00
2	U 409.014†	-8.5	35.2	3.0579 µg/L	3.0579 ppb	11:40:40
2	V 292.402†	-12.4	19.7	0.2090 µg/L	0.2090 ppb	11:40:40
2	Zn 213.857†	504.5	-15.0	-0.3731 µg/L	-0.3731 ppb	11:41:00
3	Sc RADIAL	57634.8	57634.8	99.3 %		11:39:36
3	Al 396.153Radial†	-10.6	12.3	8.9958 µg/L	8.9958 ppb	11:39:36
3	Ca 317.933Radial†	190.0	-4.1	-3.8059 µg/L	-3.8059 ppb	11:39:56
3	Fe 238.204 Radial†	17.0	-0.2	-1.4167 µg/L	-1.4167 ppb	11:39:56
3	K 766.490 Radial†	191.7	16.2	11.407 µg/L	11.407 ppb	11:39:36
3	Mg 279.077 IEC†	12.2	-1.1	-10.737 µg/L	-10.737 ppb	11:39:56
3	Na 589.592 Radial†	567.0	4.9	1.5773 µg/L	1.5773 ppb	11:39:36
3	Sr 421.552†	4.0	-29.3	-0.2965 µg/L	-0.2965 ppb	11:39:36
3	Sc 361.383	2046195.5	2046195.5	100.09 %		11:41:06
3	Y 371.029	1404558.9	1404558.9	99.970 %		11:41:06
3	Ag 328.068†	-530.3	-6.2	-0.0490 µg/L	-0.0490 ppb	11:41:11
3	As 188.979†	0.6	-0.9	-1.6980 µg/L	-1.6980 ppb	11:41:31
3	B 249.677†	305.5	8.4	0.3676 µg/L	0.3676 ppb	11:41:31
3	Ba 233.527†	-16.0	2.0	0.0504 µg/L	0.0504 ppb	11:41:31
3	Be 313.107†	-3082.4	-112.1	-0.0718 µg/L	-0.0718 ppb	11:41:11
3	Cd 226.502†	-132.9	5.2	0.1386 µg/L	0.1386 ppb	11:41:31
3	Co 228.616†	-9.6	-4.5	-0.2195 µg/L	-0.2195 ppb	11:41:31
3	Cr 267.716†	-26.8	5.5	0.1160 µg/L	0.1160 ppb	11:41:31
3	Cu 324.752†	2554.0	14.2	0.0968 µg/L	0.0968 ppb	11:41:11
3	Mn 257.610†	-242.0	-5.2	-0.0174 µg/L	-0.0174 ppb	11:41:31
3	Mo 202.031†	-1.0	5.9	0.6021 µg/L	0.6021 ppb	11:41:31
3	Ni 231.604†	284.8	-22.3	-1.1889 µg/L	-1.1889 ppb	11:41:31
3	P 214.914†	16.7	-4.9	-10.366 µg/L	-10.366 ppb	11:41:31
3	Pb 220.353†	96.8	3.2	0.8202 µg/L	0.8202 ppb	11:41:31
3	S 181.975 Axial†	14.0	0.2	0.7880 µg/L	0.7880 ppb	11:41:31
3	Sb 206.836†	21.4	1.2	1.1651 µg/L	1.1651 ppb	11:41:31
3	Se 196.026†	13.1	-2.8	-4.2661 µg/L	-4.2661 ppb	11:41:31
3	SiO2†	1350.4	4.7	0.9986 µg/L	0.9986 ppb	11:41:11
3	Si 251.611†	302.5	-12.2	-0.9889 µg/L	-0.9889 ppb	11:41:31
3	Sn 189.927†	-4.1	-7.2	-3.2103 µg/L	-3.2103 ppb	11:41:31
3	Ti 334.940†	150.1	19.3	0.0464 µg/L	0.0464 ppb	11:41:11
3	Tl 190.801†	-22.3	0.7	0.9353 µg/L	0.9353 ppb	11:41:31
3	U 409.014†	6.4	50.0	4.3536 µg/L	4.3536 ppb	11:41:11
3	V 292.402†	-37.8	-5.7	-0.0491 µg/L	-0.0491 ppb	11:41:11
3	Zn 213.857†	495.5	-23.8	-0.5904 µg/L	-0.5904 ppb	11:41:31

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Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2039518.3	99.761 %	0.6090			0.61%
Sc RADIAL	57975.2	99.9 %	0.89			0.89%
Y 371.029	1398985.8	99.573 %	0.6769			0.68%
Ag 328.068†	4.4	0.0342 µg/L	0.35842	0.0342 ppb	0.35842	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	2.2	1.5768 µg/L	9.67327	1.5768 ppb	9.67327	613.49%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.4	-4.6688 µg/L	2.61073	-4.6688 ppb	2.61073	55.92%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	19.8	0.8580 µg/L	0.68490	0.8580 ppb	0.68490	79.83%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-3.2	-0.0813 µg/L	0.16207	-0.0813 ppb	0.16207	199.41%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-59.4	-0.0380 µg/L	0.03585	-0.0380 ppb	0.03585	94.28%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-5.5	-5.1004 µg/L	1.91794	-5.1004 ppb	1.91794	37.60%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-0.8	-0.0232 µg/L	0.17675	-0.0232 ppb	0.17675	762.81%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-5.2	-0.2534 µg/L	0.23528	-0.2534 ppb	0.23528	92.86%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	1.6	0.0335 µg/L	0.08321	0.0335 ppb	0.08321	248.59%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	27.1	0.1855 µg/L	0.27246	0.1855 ppb	0.27246	146.92%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	-0.0	-0.0824 µg/L	8.49086	-0.0824 ppb	8.49086	>999.9%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	25.5	17.909 µg/L	15.1649	17.909 ppb	15.1649	84.68%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	-3.1	-28.839 µg/L	20.3929	-28.839 ppb	20.3929	70.71%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	-5.6	-0.0176 µg/L	0.00392	-0.0176 ppb	0.00392	22.22%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	3.8	0.3960 µg/L	0.18217	0.3960 ppb	0.18217	46.00%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	-0.1	-0.0403 µg/L	2.41346	-0.0403 ppb	2.41346	>999.9%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-10.9	-0.5811 µg/L	0.53894	-0.5811 ppb	0.53894	92.74%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	4.7	9.9095 µg/L	21.04725	9.9095 ppb	21.04725	212.40%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-1.9	-0.4918 µg/L	1.23887	-0.4918 ppb	1.23887	251.92%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	0.0	0.1171 µg/L	13.52689	0.1171 ppb	13.52689	>999.9%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	7.3	6.9921 µg/L	5.43144	6.9921 ppb	5.43144	77.68%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-0.3	-0.4852 µg/L	9.16516	-0.4852 ppb	9.16516	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-9.4	-1.9865 µg/L	5.60879	-1.9865 ppb	5.60879	282.35%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	-13.0	-1.0533 µg/L	0.08470	-1.0533 ppb	0.08470	8.04%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	-3.8	-1.7061 µg/L	1.64908	-1.7061 ppb	1.64908	96.66%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-0.7	-0.0074 µg/L	0.27418	-0.0074 ppb	0.27418	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	28.7	0.0698 µg/L	0.04633	0.0698 ppb	0.04633	66.33%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-1.4	-1.8822 µg/L	2.44860	-1.8822 ppb	2.44860	130.09%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	5.9	0.5108 µg/L	5.57168	0.5108 ppb	5.57168	>999.9%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-3.9	-0.0366 µg/L	0.23964	-0.0366 ppb	0.23964	654.46%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-18.7	-0.4641 µg/L	0.11285	-0.4641 ppb	0.11285	24.32%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 3  
 Sample ID: 1202030953|948065|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 301  
 Date Collected: 2/17/2010 11:41:39  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202030953|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57049.5	57049.5	98.3 %		11:42:14
1	Al 396.153Radial†	-21.2	1.4	0.9899 µg/L	0.9899 ppb	11:42:14
1	Ca 317.933Radial†	201.0	9.1	8.4360 µg/L	8.4360 ppb	11:42:35
1	Fe 238.204 Radial†	22.4	5.5	47.295 µg/L	47.295 ppb	11:42:35
1	K 766.490 Radial†	206.7	33.4	23.522 µg/L	23.522 ppb	11:42:14
1	Mg 279.077 IEC†	12.9	-0.3	-3.2197 µg/L	-3.2197 ppb	11:42:35
1	Na 589.592 Radial†	566.7	10.3	3.3533 µg/L	3.3533 ppb	11:42:14
1	Sr 421.552†	73.3	41.2	0.4168 µg/L	0.4168 ppb	11:42:14
1	Sc 361.383	2008728.3	2008728.3	98.255 %		11:43:33
1	Y 371.029	1376415.8	1376415.8	97.967 %		11:43:33
1	Ag 328.068†	-547.7	-33.7	-0.2560 µg/L	-0.2560 ppb	11:43:38
1	As 188.979†	-4.3	-5.9	-11.272 µg/L	-11.272 ppb	11:43:58
1	B 249.677†	328.8	37.9	1.6222 µg/L	1.6222 ppb	11:43:58
1	Ba 233.527†	-17.8	-0.2	-0.0029 µg/L	-0.0029 ppb	11:43:58
1	Be 313.107†	-3051.2	-137.8	-0.0883 µg/L	-0.0883 ppb	11:43:38
1	Cd 226.502†	-125.9	9.8	0.2583 µg/L	0.2583 ppb	11:43:58
1	Co 228.616†	-10.7	-5.9	-0.2867 µg/L	-0.2867 ppb	11:43:58
1	Cr 267.716†	3.1	35.4	0.7533 µg/L	0.7533 ppb	11:43:58
1	Cu 324.752†	2692.9	203.2	1.3990 µg/L	1.3990 ppb	11:43:38
1	Mn 257.610†	-20.1	216.1	0.7372 µg/L	0.7372 ppb	11:43:58
1	Mo 202.031†	-2.4	4.4	0.4551 µg/L	0.4551 ppb	11:43:58
1	Ni 231.604†	294.3	-7.2	-0.3846 µg/L	-0.3846 ppb	11:43:58
1	P 214.914†	24.8	3.7	7.5186 µg/L	7.5186 ppb	11:43:58
1	Pb 220.353†	112.2	20.7	5.3582 µg/L	5.3582 ppb	11:43:58
1	S 181.975 Axial†	19.3	5.8	24.984 µg/L	24.984 ppb	11:43:58
1	Sb 206.836†	23.7	3.9	3.7470 µg/L	3.7470 ppb	11:43:58
1	Se 196.026†	14.4	-1.2	-1.7628 µg/L	-1.7628 ppb	11:43:58
1	SiO2†	1481.5	163.3	34.430 µg/L	34.430 ppb	11:43:38
1	Si 251.611†	463.9	157.7	12.766 µg/L	12.766 ppb	11:43:58
1	Sn 189.927†	3.1	0.1	0.0243 µg/L	0.0243 ppb	11:43:58
1	Ti 334.940†	169.9	42.3	0.1002 µg/L	0.1002 ppb	11:43:38
1	Tl 190.801†	-21.7	0.9	1.2014 µg/L	1.2014 ppb	11:43:58
1	U 409.014†	-60.8	-18.2	-1.5863 µg/L	-1.5863 ppb	11:43:38
1	V 292.402†	43.6	76.5	0.7962 µg/L	0.7962 ppb	11:43:38
1	Zn 213.857†	574.7	66.1	1.6537 µg/L	1.6537 ppb	11:43:58
2	Sc RADIAL	56889.5	56889.5	98.0 %		11:42:40
2	Al 396.153Radial†	-9.6	13.1	9.6036 µg/L	9.6036 ppb	11:42:40
2	Ca 317.933Radial†	208.5	17.3	16.035 µg/L	16.035 ppb	11:43:00
2	Fe 238.204 Radial†	22.5	5.6	48.473 µg/L	48.473 ppb	11:43:00
2	K 766.490 Radial†	196.9	24.0	16.901 µg/L	16.901 ppb	11:42:40
2	Mg 279.077 IEC†	10.0	-3.3	-30.843 µg/L	-30.843 ppb	11:43:00
2	Na 589.592 Radial†	624.3	70.8	22.973 µg/L	22.973 ppb	11:42:40
2	Sr 421.552†	52.4	20.1	0.2037 µg/L	0.2037 ppb	11:42:40
2	Sc 361.383	2089001.8	2089001.8	102.18 %		11:44:04
2	Y 371.029	1431274.8	1431274.8	101.87 %		11:44:04
2	Ag 328.068†	-549.1	-13.7	-0.1036 µg/L	-0.1036 ppb	11:44:09
2	As 188.979†	0.3	-1.2	-2.2536 µg/L	-2.2536 ppb	11:44:30
2	B 249.677†	317.8	14.3	0.5967 µg/L	0.5967 ppb	11:44:30
2	Ba 233.527†	-24.8	-6.3	-0.1624 µg/L	-0.1624 ppb	11:44:30
2	Be 313.107†	-3031.8	0.5	0.0002 µg/L	0.0002 ppb	11:44:09
2	Cd 226.502†	-137.5	3.4	0.0861 µg/L	0.0861 ppb	11:44:30
2	Co 228.616†	-9.2	-4.0	-0.1918 µg/L	-0.1918 ppb	11:44:30
2	Cr 267.716†	-8.4	24.0	0.5093 µg/L	0.5093 ppb	11:44:30
2	Cu 324.752†	2706.5	111.2	0.7686 µg/L	0.7686 ppb	11:44:09
2	Mn 257.610†	-26.9	210.2	0.7186 µg/L	0.7186 ppb	11:44:30
2	Mo 202.031†	-0.1	6.7	0.6954 µg/L	0.6954 ppb	11:44:30
2	Ni 231.604†	305.4	-7.9	-0.4184 µg/L	-0.4184 ppb	11:44:30
2	P 214.914†	29.7	7.5	15.616 µg/L	15.616 ppb	11:44:30
2	Pb 220.353†	101.9	6.2	1.6044 µg/L	1.6044 ppb	11:44:30

2	S 181.975 Axial†	14.6	0.5	2.0381 µg/L	2.0381 ppb	11:44:30
2	Sb 206.836†	26.8	6.0	5.7705 µg/L	5.7705 ppb	11:44:30
2	Se 196.026†	15.1	-1.0	-1.4225 µg/L	-1.4225 ppb	11:44:30
2	SiO2†	1497.1	120.7	25.446 µg/L	25.446 ppb	11:44:09
2	Si 251.611†	473.1	148.5	12.022 µg/L	12.022 ppb	11:44:30
2	Sn 189.927†	3.1	-0.0	-0.0271 µg/L	-0.0271 ppb	11:44:30
2	Ti 334.940†	235.4	99.8	0.2383 µg/L	0.2383 ppb	11:44:09
2	Tl 190.801†	-24.5	-1.0	-1.3479 µg/L	-1.3479 ppb	11:44:30
2	U 409.014†	11.9	55.4	4.8101 µg/L	4.8101 ppb	11:44:09
2	V 292.402†	-25.8	6.8	0.0877 µg/L	0.0877 ppb	11:44:09
2	Zn 213.857†	574.4	43.3	1.0856 µg/L	1.0856 ppb	11:44:30
3	Sc RADIAL	57513.7	57513.7	99.1 %		11:43:05
3	Al 396.153Radial†	-16.5	6.2	4.5793 µg/L	4.5793 ppb	11:43:05
3	Ca 317.933Radial†	210.6	17.1	15.871 µg/L	15.871 ppb	11:43:25
3	Fe 238.204 Radial†	21.4	4.3	37.060 µg/L	37.060 ppb	11:43:25
3	K 766.490 Radial†	159.3	-16.2	-11.369 µg/L	-11.369 ppb	11:43:05
3	Mg 279.077 IEC†	10.0	-3.3	-31.225 µg/L	-31.225 ppb	11:43:25
3	Na 589.592 Radial†	603.6	42.9	13.939 µg/L	13.939 ppb	11:43:05
3	Sr 421.552†	28.2	-4.9	-0.0495 µg/L	-0.0495 ppb	11:43:05
3	Sc 361.383	2092188.3	2092188.3	102.34 %		11:44:35
3	Y 371.029	1433350.9	1433350.9	102.02 %		11:44:35
3	Ag 328.068†	-510.0	25.3	0.1998 µg/L	0.1998 ppb	11:44:40
3	As 188.979†	3.4	1.8	3.5175 µg/L	3.5175 ppb	11:45:01
3	B 249.677†	330.8	26.5	1.1310 µg/L	1.1310 ppb	11:45:01
3	Ba 233.527†	-14.8	3.5	0.0907 µg/L	0.0907 ppb	11:45:01
3	Be 313.107†	-2958.1	77.0	0.0493 µg/L	0.0493 ppb	11:44:40
3	Cd 226.502†	-137.2	3.9	0.0995 µg/L	0.0995 ppb	11:45:01
3	Co 228.616†	1.9	6.8	0.3313 µg/L	0.3313 ppb	11:45:01
3	Cr 267.716†	-14.9	17.7	0.3757 µg/L	0.3757 ppb	11:45:01
3	Cu 324.752†	2682.4	83.6	0.5779 µg/L	0.5779 ppb	11:44:40
3	Mn 257.610†	-26.5	210.7	0.7186 µg/L	0.7186 ppb	11:45:01
3	Mo 202.031†	-1.3	5.6	0.5819 µg/L	0.5819 ppb	11:45:01
3	Ni 231.604†	295.0	-18.5	-0.9894 µg/L	-0.9894 ppb	11:45:01
3	P 214.914†	30.8	8.5	17.930 µg/L	17.930 ppb	11:45:01
3	Pb 220.353†	110.9	14.8	3.8486 µg/L	3.8486 ppb	11:45:01
3	S 181.975 Axial†	17.3	3.1	13.512 µg/L	13.512 ppb	11:45:01
3	Sb 206.836†	22.0	1.3	1.2441 µg/L	1.2441 ppb	11:45:01
3	Se 196.026†	11.6	-4.6	-6.8206 µg/L	-6.8206 ppb	11:45:01
3	SiO2†	1514.3	135.2	28.510 µg/L	28.510 ppb	11:44:40
3	Si 251.611†	483.4	157.9	12.786 µg/L	12.786 ppb	11:45:01
3	Sn 189.927†	5.1	1.9	0.8380 µg/L	0.8380 ppb	11:45:01
3	Ti 334.940†	107.5	-25.6	-0.0577 µg/L	-0.0577 ppb	11:44:40
3	Tl 190.801†	-24.9	-1.4	-1.9009 µg/L	-1.9009 ppb	11:45:01
3	U 409.014†	-88.1	-42.4	-3.6982 µg/L	-3.6982 ppb	11:44:40
3	V 292.402†	-43.7	-10.7	-0.1040 µg/L	-0.1040 ppb	11:44:40
3	Zn 213.857†	572.3	40.4	1.0165 µg/L	1.0165 ppb	11:45:01

## Mean Data: 1202030953|948065|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2063306.1	100.92	%	2.313			2.29%
Sc RADIAL	57150.9	98.5	%	0.56			0.57%
Y 371.029	1413680.5	100.62	%	2.298			2.28%
Ag 328.068†	-7.4	-0.0533	µg/L	0.23199	-0.0533 ppb	0.23199	435.50%
Al 396.153Radial†	6.9	5.0576	µg/L	4.32670	5.0576 ppb	4.32670	85.55%
As 188.979†	-1.7	-3.3362	µg/L	7.45417	-3.3362 ppb	7.45417	223.43%
B 249.677†	26.2	1.1166	µg/L	0.51290	1.1166 ppb	0.51290	45.93%
Ba 233.527†	-1.0	-0.0249	µg/L	0.12799	-0.0249 ppb	0.12799	514.81%
Be 313.107†	-20.1	-0.0129	µg/L	0.06972	-0.0129 ppb	0.06972	540.07%
Ca 317.933Radial†	14.5	13.447	µg/L	4.3408	13.447 ppb	4.3408	32.28%
Cd 226.502†	5.7	0.1480	µg/L	0.09576	0.1480 ppb	0.09576	64.71%
Co 228.616†	-1.0	-0.0491	µg/L	0.33284	-0.0491 ppb	0.33284	678.47%
Cr 267.716†	25.7	0.5461	µg/L	0.19145	0.5461 ppb	0.19145	35.06%
Cu 324.752†	132.7	0.9152	µg/L	0.42974	0.9152 ppb	0.42974	46.96%
Fe 238.204 Radial†	5.2	44.276	µg/L	6.2769	44.276 ppb	6.2769	14.18%
K 766.490 Radial†	13.8	9.6848	µg/L	18.53100	9.6848 ppb	18.53100	191.34%
Mg 279.077 IEC†	-2.3	-21.763	µg/L	16.0597	-21.763 ppb	16.0597	73.80%
Mn 257.610†	212.4	0.7248	µg/L	0.01071	0.7248 ppb	0.01071	1.48%
Mo 202.031†	5.6	0.5775	µg/L	0.12018	0.5775 ppb	0.12018	20.81%
Na 589.592 Radial†	41.3	13.422	µg/L	9.8202	13.422 ppb	9.8202	73.17%

Ni 231.604†	-11.2	-0.5975 µg/L	0.33983	-0.5975 ppb	0.33983	56.88%
P 214.914†	6.5	13.688 µg/L	5.4667	13.688 ppb	5.4667	39.94%
Pb 220.353†	13.9	3.6037 µg/L	1.88889	3.6037 ppb	1.88889	52.41%
S 181.975 Axial†	3.1	13.511 µg/L	11.4730	13.511 ppb	11.4730	84.91%
Sb 206.836†	3.7	3.5872 µg/L	2.26743	3.5872 ppb	2.26743	63.21%
Se 196.026†	-2.3	-3.3353 µg/L	3.02314	-3.3353 ppb	3.02314	90.64%
SiO2†	139.7	29.462 µg/L	4.5670	29.462 ppb	4.5670	15.50%
Si 251.611†	154.7	12.525 µg/L	0.4355	12.525 ppb	0.4355	3.48%
Sn 189.927†	0.6	0.2784 µg/L	0.48532	0.2784 ppb	0.48532	174.32%
Sr 421.552†	18.8	0.1904 µg/L	0.23345	0.1904 ppb	0.23345	122.64%
Ti 334.940†	38.8	0.0936 µg/L	0.14809	0.0936 ppb	0.14809	158.25%
Tl 190.801†	-0.5	-0.6825 µg/L	1.65475	-0.6825 ppb	1.65475	242.47%
U 409.014†	-1.7	-0.1581 µg/L	4.43029	-0.1581 ppb	4.43029	>999.9%
V 292.402†	24.2	0.2599 µg/L	0.47417	0.2599 ppb	0.47417	182.41%
Zn 213.857†	49.9	1.2519 µg/L	0.34969	1.2519 ppb	0.34969	27.93%

Sequence No.: 4

Sample ID: 1202030958|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 302

Date Collected: 2/17/2010 11:45:09

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202030958|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	60601.2	60601.2	104 %		11:45:41
1	Al 396.153Radial†	118551.4	113560.1	83473 µg/L	83473 ppb	11:45:41
1	Ca 317.933Radial†	105956.8	101279.9	93806 µg/L	93806 ppb	11:45:41
1	Fe 238.204 Radial†	22004.4	21056.5	180920 µg/L	180920 ppb	11:46:01
1	K 766.490 Radial†	58732.1	56071.2	39443 µg/L	39443 ppb	11:45:41
1	Mg 279.077 IEC†	4265.0	4071.2	38133 µg/L	38133 ppb	11:46:01
1	Na 589.592 Radial†	32239.6	30309.9	9839.7 µg/L	9839.7 ppb	11:45:41
1	Sr 421.552†	228801.4	219090.9	2215.4 µg/L	2215.4 ppb	11:45:41
1	Sc 361.383	2078274.2	2078274.2	101.66 %		11:47:02
1	Y 371.029	1447363.9	1447363.9	103.02 %		11:47:02
1	Ag 328.068†	36148.7	36083.2	301.59 µg/L	301.59 ppb	11:47:08
1	As 188.979†	557.1	546.6	1056.3 µg/L	1056.3 ppb	11:47:28
1	B 249.677†	35970.8	35087.8	1432.6 µg/L	1432.6 ppb	11:47:08
1	Ba 233.527†	76894.0	75658.6	1947.0 µg/L	1947.0 ppb	11:47:08
1	Be 313.107†	1243389.4	1226090.2	782.54 µg/L	782.54 ppb	11:47:02
1	Cd 226.502†	22331.6	22105.5	577.98 µg/L	577.98 ppb	11:47:08
1	Co 228.616†	19474.8	19162.4	916.89 µg/L	916.89 ppb	11:47:08
1	Cr 267.716†	114258.5	112428.3	2391.1 µg/L	2391.1 ppb	11:47:08
1	Cu 324.752†	262948.7	256125.2	1780.3 µg/L	1780.3 ppb	11:47:08
1	Mn 257.610†	1616965.5	1590846.3	5401.6 µg/L	5401.6 ppb	11:47:02
1	Mo 202.031†	5058.2	4982.6	519.62 µg/L	519.62 ppb	11:47:28
1	Ni 231.604†	25854.8	25126.6	1343.0 µg/L	1343.0 ppb	11:47:08
1	P 214.914†	4045.2	3957.7	8055.1 µg/L	8055.1 ppb	11:47:28
1	Pb 220.353†	3306.7	3159.2	815.85 µg/L	815.85 ppb	11:47:28
1	S 181.975 Axial†	947.0	917.7	3956.2 µg/L	3956.2 ppb	11:47:28
1	Sb 206.836†	1516.8	1471.9	1381.5 µg/L	1381.5 ppb	11:47:28
1	Se 196.026†	1839.1	1793.3	3166.5 µg/L	3166.5 ppb	11:47:28
1	SiO2†	315896.3	309402.9	65241 µg/L	65241 ppb	11:47:08
1	Si 251.611†	389256.2	382597.0	30974 µg/L	30974 ppb	11:47:02
1	Sn 189.927†	2402.9	2360.7	1036.4 µg/L	1036.4 ppb	11:47:28
1	Ti 334.940†	2384155.5	2345164.2	5534.2 µg/L	5534.2 ppb	11:47:02
1	Tl 190.801†	832.6	841.9	1257.4 µg/L	1257.4 ppb	11:47:28
1	U 409.014†	-1947.1	-1871.7	-193.69 µg/L	-193.69 ppb	11:47:08
1	V 292.402†	116790.8	114919.2	1213.3 µg/L	1213.3 ppb	11:47:08
1	Zn 213.857†	233436.5	229112.7	5721.9 µg/L	5721.9 ppb	11:47:08
2	Sc RADIAL	61541.5	61541.5	106 %		11:46:07
2	Al 396.153Radial†	119930.9	113126.4	83154 µg/L	83154 ppb	11:46:07
2	Ca 317.933Radial†	107404.2	101094.5	93634 µg/L	93634 ppb	11:46:07
2	Fe 238.204 Radial†	21898.9	20635.0	177300 µg/L	177300 ppb	11:46:27
2	K 766.490 Radial†	59253.7	55703.6	39184 µg/L	39184 ppb	11:46:07
2	Mg 279.077 IEC†	4244.6	3989.5	37369 µg/L	37369 ppb	11:46:27
2	Na 589.592 Radial†	32586.5	30165.3	9792.7 µg/L	9792.7 ppb	11:46:07
2	Sr 421.552†	231756.4	218529.8	2209.7 µg/L	2209.7 ppb	11:46:07
2	Sc 361.383	2082025.8	2082025.8	101.84 %		11:47:35
2	Y 371.029	1450061.1	1450061.1	103.21 %		11:47:35
2	Ag 328.068†	36381.4	36247.6	302.69 µg/L	302.69 ppb	11:47:40
2	As 188.979†	558.4	546.8	1056.6 µg/L	1056.6 ppb	11:48:00
2	B 249.677†	36264.1	35311.9	1444.2 µg/L	1444.2 ppb	11:47:40
2	Ba 233.527†	77606.9	76222.3	1961.5 µg/L	1961.5 ppb	11:47:40
2	Be 313.107†	1243864.6	1224352.9	781.43 µg/L	781.43 ppb	11:47:35
2	Cd 226.502†	22521.5	22252.5	582.35 µg/L	582.35 ppb	11:47:40
2	Co 228.616†	19635.2	19285.4	922.86 µg/L	922.86 ppb	11:47:40
2	Cr 267.716†	115083.9	113036.3	2404.1 µg/L	2404.1 ppb	11:47:40
2	Cu 324.752†	264484.5	257167.1	1786.9 µg/L	1786.9 ppb	11:47:40
2	Mn 257.610†	1610478.0	1581609.9	5369.9 µg/L	5369.9 ppb	11:47:35
2	Mo 202.031†	5080.3	4995.3	520.79 µg/L	520.79 ppb	11:48:00
2	Ni 231.604†	25928.5	25153.1	1344.4 µg/L	1344.4 ppb	11:47:40
2	P 214.914†	4050.4	3955.6	8052.8 µg/L	8052.8 ppb	11:48:00
2	Pb 220.353†	3315.6	3162.2	816.74 µg/L	816.74 ppb	11:48:00



2	S 181.975 Axial†	952.4	921.4	3971.8 µg/L	3971.8 ppb	11:48:00
2	Sb 206.836†	1524.6	1476.9	1386.1 µg/L	1386.1 ppb	11:48:00
2	Se 196.026†	1854.9	1805.5	3175.9 µg/L	3175.9 ppb	11:48:00
2	SiO2†	318333.8	311236.3	65628 µg/L	65628 ppb	11:47:40
2	Si 251.611†	390169.6	382803.9	30991 µg/L	30991 ppb	11:47:35
2	Sn 189.927†	2419.4	2372.6	1042.0 µg/L	1042.0 ppb	11:48:00
2	Ti 334.940†	2385524.9	2342282.9	5527.4 µg/L	5527.4 ppb	11:47:35
2	Tl 190.801†	834.1	842.0	1256.7 µg/L	1256.7 ppb	11:48:00
2	U 409.014†	-1994.2	-1914.4	-196.89 µg/L	-196.89 ppb	11:47:40
2	V 292.402†	117655.7	115561.5	1219.6 µg/L	1219.6 ppb	11:47:40
2	Zn 213.857†	235269.9	230499.2	5756.9 µg/L	5756.9 ppb	11:47:40
3	Sc RADIAL	61281.8	61281.8	106 %		11:46:32
3	Al 396.153Radial†	119460.5	113160.2	83179 µg/L	83179 ppb	11:46:32
3	Ca 317.933Radial†	107050.4	101188.7	93722 µg/L	93722 ppb	11:46:32
3	Fe 238.204 Radial†	22042.7	20858.7	179220 µg/L	179220 ppb	11:46:53
3	K 766.490 Radial†	59211.6	55900.6	39323 µg/L	39323 ppb	11:46:32
3	Mg 279.077 IEC†	4270.3	4030.8	37755 µg/L	37755 ppb	11:46:53
3	Na 589.592 Radial†	32519.1	30231.6	9814.2 µg/L	9814.2 ppb	11:46:32
3	Sr 421.552†	230703.4	218458.6	2209.0 µg/L	2209.0 ppb	11:46:32
3	Sc 361.383	2066134.6	2066134.6	101.06 %		11:48:08
3	Y 371.029	1440069.1	1440069.1	102.50 %		11:48:08
3	Ag 328.068†	35767.1	35914.5	300.01 µg/L	300.01 ppb	11:48:13
3	As 188.979†	528.9	521.8	1008.7 µg/L	1008.7 ppb	11:48:33
3	B 249.677†	35510.5	34840.2	1422.7 µg/L	1422.7 ppb	11:48:13
3	Ba 233.527†	75362.7	74587.9	1919.4 µg/L	1919.4 ppb	11:48:13
3	Be 313.107†	1227325.8	1217382.1	776.99 µg/L	776.99 ppb	11:48:08
3	Cd 226.502†	21899.8	21807.3	570.08 µg/L	570.08 ppb	11:48:13
3	Co 228.616†	19028.1	18832.9	901.02 µg/L	901.02 ppb	11:48:13
3	Cr 267.716†	111083.4	109947.0	2338.4 µg/L	2338.4 ppb	11:48:13
3	Cu 324.752†	256774.2	251535.4	1748.6 µg/L	1748.6 ppb	11:48:13
3	Mn 257.610†	1592516.2	1575999.8	5351.2 µg/L	5351.2 ppb	11:48:08
3	Mo 202.031†	4809.9	4766.2	497.28 µg/L	497.28 ppb	11:48:33
3	Ni 231.604†	25148.0	24576.6	1313.6 µg/L	1313.6 ppb	11:48:13
3	P 214.914†	3851.1	3789.0	7703.2 µg/L	7703.2 ppb	11:48:33
3	Pb 220.353†	3180.9	3053.9	788.56 µg/L	788.56 ppb	11:48:33
3	S 181.975 Axial†	927.0	903.4	3894.4 µg/L	3894.4 ppb	11:48:33
3	Sb 206.836†	1439.7	1404.3	1317.1 µg/L	1317.1 ppb	11:48:33
3	Se 196.026†	1784.7	1750.1	3096.4 µg/L	3096.4 ppb	11:48:33
3	SiO2†	310095.7	305489.0	64416 µg/L	64416 ppb	11:48:13
3	Si 251.611†	385576.1	381205.4	30862 µg/L	30862 ppb	11:48:08
3	Sn 189.927†	2275.5	2248.4	986.55 µg/L	986.55 ppb	11:48:33
3	Ti 334.940†	2348486.3	2323650.0	5483.4 µg/L	5483.4 ppb	11:48:08
3	Tl 190.801†	798.7	813.3	1216.8 µg/L	1216.8 ppb	11:48:33
3	U 409.014†	-1904.4	-1840.7	-190.75 µg/L	-190.75 ppb	11:48:13
3	V 292.402†	113769.1	112604.3	1189.0 µg/L	1189.0 ppb	11:48:13
3	Zn 213.857†	228724.2	225799.2	5639.2 µg/L	5639.2 ppb	11:48:13

Mean Data: 1202030958|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2075478.2	101.52 %	%	0.406			0.40%
Sc RADIAL	61141.5	105 %	%	0.8			0.79%
Y 371.029	1445831.3	102.91 %	%	0.368			0.36%
Ag 328.068†	36081.8	301.43 µg/L	µg/L	1.350	301.43 ppb	1.350	0.45%
Al 396.153Radial†	113282.2	83269 µg/L	µg/L	177.2	83269 ppb	177.2	0.21%
As 188.979†	538.4	1040.5 µg/L	µg/L	27.60	1040.5 ppb	27.60	2.65%
B 249.677†	35080.0	1433.2 µg/L	µg/L	10.80	1433.2 ppb	10.80	0.75%
Ba 233.527†	75489.6	1942.6 µg/L	µg/L	21.37	1942.6 ppb	21.37	1.10%
Be 313.107†	1222608.4	780.32 µg/L	µg/L	2.939	780.32 ppb	2.939	0.38%
Ca 317.933Radial†	101187.7	93721 µg/L	µg/L	85.9	93721 ppb	85.9	0.09%
Cd 226.502†	22055.1	576.80 µg/L	µg/L	6.219	576.80 ppb	6.219	1.08%
Co 228.616†	19093.6	913.59 µg/L	µg/L	11.288	913.59 ppb	11.288	1.24%
Cr 267.716†	111803.9	2377.8 µg/L	µg/L	34.81	2377.8 ppb	34.81	1.46%
Cu 324.752†	254942.6	1771.9 µg/L	µg/L	20.48	1771.9 ppb	20.48	1.16%
Fe 238.204 Radial†	20850.0	179150 µg/L	µg/L	1811.5	179150 ppb	1811.5	1.01%
K 766.490 Radial†	55891.8	39317 µg/L	µg/L	129.4	39317 ppb	129.4	0.33%
Mg 279.077 IEC†	4030.5	37752 µg/L	µg/L	382.2	37752 ppb	382.2	1.01%
Mn 257.610†	1582818.7	5374.3 µg/L	µg/L	25.48	5374.3 ppb	25.48	0.47%
Mo 202.031†	4914.7	512.56 µg/L	µg/L	13.248	512.56 ppb	13.248	2.58%
Na 589.592 Radial†	30235.6	9815.5 µg/L	µg/L	23.50	9815.5 ppb	23.50	0.24%

Ni 231.604†	24952.1	1333.7 µg/L	17.36	1333.7 ppb	17.36	1.30%
P 214.914†	3900.8	7937.0 µg/L	202.52	7937.0 ppb	202.52	2.55%
Pb 220.353†	3125.1	807.05 µg/L	16.015	807.05 ppb	16.015	1.98%
S 181.975 Axial†	914.2	3940.8 µg/L	40.96	3940.8 ppb	40.96	1.04%
Sb 206.836†	1451.0	1361.6 µg/L	38.58	1361.6 ppb	38.58	2.83%
Se 196.026†	1783.0	3146.3 µg/L	43.43	3146.3 ppb	43.43	1.38%
SiO2†	308709.4	65095 µg/L	619.0	65095 ppb	619.0	0.95%
Si 251.611†	382202.1	30943 µg/L	70.4	30943 ppb	70.4	0.23%
Sn 189.927†	2327.2	1021.7 µg/L	30.54	1021.7 ppb	30.54	2.99%
Sr 421.552†	218693.1	2211.4 µg/L	3.50	2211.4 ppb	3.50	0.16%
Ti 334.940†	2337032.4	5515.0 µg/L	27.56	5515.0 ppb	27.56	0.50%
Tl 190.801†	832.4	1243.6 µg/L	23.24	1243.6 ppb	23.24	1.87%
U 409.014†	-1875.6	-193.78 µg/L	3.071	-193.78 ppb	3.071	1.58%
V 292.402†	114361.7	1207.3 µg/L	16.14	1207.3 ppb	16.14	1.34%
Zn 213.857†	228470.4	5706.0 µg/L	60.44	5706.0 ppb	60.44	1.06%

Sequence No.: 5  
 Sample ID: 245797001|948065|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 303  
 Date Collected: 2/17/2010 11:48:41  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245797001|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59985.5	59985.5	103 %		11:49:13
1	Al 396.153Radial†	103893.9	100543.9	73914 µg/L	73914 ppb	11:49:13
1	Ca 317.933Radial†	48731.2	46953.8	43489 µg/L	43489 ppb	11:49:13
1	Fe 238.204 Radial†	14260.6	13780.4	118390 µg/L	118390 ppb	11:49:33
1	K 766.490 Radial†	15569.8	14887.5	10473 µg/L	10473 ppb	11:49:13
1	Mg 279.077 IEC†	1802.6	1730.6	16162 µg/L	16162 ppb	11:49:33
1	Na 589.592 Radial†	12383.5	11415.4	3705.8 µg/L	3705.8 ppb	11:49:13
1	Sr 421.552†	24566.2	23735.3	240.00 µg/L	240.00 ppb	11:49:13
1	Sc 361.383	2060832.3	2060832.3	100.80 %		11:50:34
1	Y 371.029	1455050.0	1455050.0	103.56 %		11:50:34
1	Ag 328.068†	-2012.7	-1473.0	-3.1932 µg/L	-3.1932 ppb	11:50:39
1	As 188.979†	20.3	18.7	40.532 µg/L	40.532 ppb	11:50:59
1	B 249.677†	1193.1	886.8	-23.166 µg/L	-23.166 ppb	11:50:39
1	Ba 233.527†	43936.7	43604.3	1121.1 µg/L	1121.1 ppb	11:50:39
1	Be 313.107†	10710.8	13592.9	8.1352 µg/L	8.1352 ppb	11:50:39
1	Cd 226.502†	217.8	354.0	-3.7522 µg/L	-3.7522 ppb	11:50:59
1	Co 228.616†	1741.2	1732.3	80.808 µg/L	80.808 ppb	11:50:59
1	Cr 267.716†	3323.2	3328.9	70.860 µg/L	70.860 ppb	11:50:39
1	Cu 324.752†	10257.4	7638.0	68.796 µg/L	68.796 ppb	11:50:39
1	Mn 257.610†	579972.0	575583.9	1961.3 µg/L	1961.3 ppb	11:50:34
1	Mo 202.031†	50.2	56.6	10.325 µg/L	10.325 ppb	11:50:59
1	Ni 231.604†	1522.1	1203.2	65.689 µg/L	65.689 ppb	11:50:59
1	P 214.914†	295.5	271.6	492.31 µg/L	492.31 ppb	11:50:59
1	Pb 220.353†	439.1	342.1	88.403 µg/L	88.403 ppb	11:50:59
1	S 181.975 Axial†	254.3	238.4	1027.8 µg/L	1027.8 ppb	11:50:59
1	Sb 206.836†	31.3	10.8	5.8895 µg/L	5.8895 ppb	11:50:59
1	Se 196.026†	-38.7	-54.3	214.33 µg/L	214.33 ppb	11:50:59
1	SiO2†	330186.9	326209.5	68785 µg/L	68785 ppb	11:50:34
1	Si 251.611†	397884.2	394397.0	31930 µg/L	31930 ppb	11:50:34
1	Sn 189.927†	-11.6	-14.6	-17.447 µg/L	-17.447 ppb	11:50:59
1	Ti 334.940†	632028.8	626858.4	1479.1 µg/L	1479.1 ppb	11:50:34
1	Tl 190.801†	-46.6	-23.3	6.6255 µg/L	6.6255 ppb	11:50:59
1	U 409.014†	-2060.4	-2000.2	-193.11 µg/L	-193.11 ppb	11:50:34
1	V 292.402†	12971.7	12900.3	146.73 µg/L	146.73 ppb	11:50:39
1	Zn 213.857†	14197.8	13565.7	333.04 µg/L	333.04 ppb	11:50:39
2	Sc RADIAL	59975.5	59975.5	103 %		11:49:38
2	Al 396.153Radial†	103318.2	100003.5	73517 µg/L	73517 ppb	11:49:38
2	Ca 317.933Radial†	47995.9	46250.0	42837 µg/L	42837 ppb	11:49:38
2	Fe 238.204 Radial†	14219.6	13743.0	118070 µg/L	118070 ppb	11:49:58
2	K 766.490 Radial†	15436.5	14761.0	10384 µg/L	10384 ppb	11:49:38
2	Mg 279.077 IEC†	1803.4	1731.8	16173 µg/L	16173 ppb	11:49:58
2	Na 589.592 Radial†	12343.4	11378.5	3693.9 µg/L	3693.9 ppb	11:49:38
2	Sr 421.552†	24289.7	23471.8	237.34 µg/L	237.34 ppb	11:49:38
2	Sc 361.383	2069434.3	2069434.3	101.22 %		11:51:07
2	Y 371.029	1460233.1	1460233.1	103.93 %		11:51:07
2	Ag 328.068†	-2001.7	-1453.8	-3.0563 µg/L	-3.0563 ppb	11:51:12
2	As 188.979†	13.7	12.1	27.855 µg/L	27.855 ppb	11:51:32
2	B 249.677†	1195.4	884.2	-23.114 µg/L	-23.114 ppb	11:51:12
2	Ba 233.527†	44303.6	43785.6	1125.8 µg/L	1125.8 ppb	11:51:12
2	Be 313.107†	10723.1	13560.9	8.1161 µg/L	8.1161 ppb	11:51:12
2	Cd 226.502†	223.9	359.1	-3.5793 µg/L	-3.5793 ppb	11:51:32
2	Co 228.616†	1737.4	1721.4	80.290 µg/L	80.290 ppb	11:51:32
2	Cr 267.716†	3338.1	3329.9	70.883 µg/L	70.883 ppb	11:51:12
2	Cu 324.752†	10364.1	7701.2	69.184 µg/L	69.184 ppb	11:51:12
2	Mn 257.610†	581868.9	575066.3	1959.5 µg/L	1959.5 ppb	11:51:07
2	Mo 202.031†	55.9	62.1	10.874 µg/L	10.874 ppb	11:51:32
2	Ni 231.604†	1506.3	1181.3	64.517 µg/L	64.517 ppb	11:51:32
2	P 214.914†	299.7	274.5	498.74 µg/L	498.74 ppb	11:51:32
2	Pb 220.353†	430.3	331.5	85.647 µg/L	85.647 ppb	11:51:32

2	S 181.975 Axial†	248.8	231.9	999.86 µg/L	999.86 ppb	11:51:32
2	Sb 206.836†	31.6	11.1	6.1934 µg/L	6.1934 ppb	11:51:32
2	Se 196.026†	-49.5	-64.8	197.61 µg/L	197.61 ppb	11:51:32
2	SiO2†	331281.6	325929.5	68726 µg/L	68726 ppb	11:51:07
2	Si 251.611†	399075.2	393932.9	31892 µg/L	31892 ppb	11:51:07
2	Sn 189.927†	-3.3	-6.3	-13.727 µg/L	-13.727 ppb	11:51:32
2	Ti 334.940†	633061.6	625272.5	1475.3 µg/L	1475.3 ppb	11:51:07
2	Tl 190.801†	-48.5	-24.9	4.2569 µg/L	4.2569 ppb	11:51:32
2	U 409.014†	-1877.1	-1810.7	-176.54 µg/L	-176.54 ppb	11:51:07
2	V 292.402†	13125.5	12998.7	147.73 µg/L	147.73 ppb	11:51:12
2	Zn 213.857†	14268.3	13576.9	333.33 µg/L	333.33 ppb	11:51:12
3	Sc RADIAL	60451.6	60451.6	104 %		11:50:04
3	Al 396.153Radial†	105235.4	101056.8	74291 µg/L	74291 ppb	11:50:04
3	Ca 317.933Radial†	49064.8	46910.5	43449 µg/L	43449 ppb	11:50:04
3	Fe 238.204 Radial†	14437.0	13843.3	118930 µg/L	118930 ppb	11:50:24
3	K 766.490 Radial†	15695.7	14892.1	10476 µg/L	10476 ppb	11:50:04
3	Mg 279.077 IEC†	1826.4	1740.1	16250 µg/L	16250 ppb	11:50:24
3	Na 589.592 Radial†	12554.2	11486.8	3729.0 µg/L	3729.0 ppb	11:50:04
3	Sr 421.552†	24788.4	23765.4	240.31 µg/L	240.31 ppb	11:50:04
3	Sc 361.383	2066553.5	2066553.5	101.08 %		11:51:40
3	Y 371.029	1459650.3	1459650.3	103.89 %		11:51:40
3	Ag 328.068†	-2010.8	-1465.6	-3.1133 µg/L	-3.1133 ppb	11:51:45
3	As 188.979†	9.7	8.1	20.190 µg/L	20.190 ppb	11:52:05
3	B 249.677†	1166.6	857.3	-24.733 µg/L	-24.733 ppb	11:51:45
3	Ba 233.527†	43616.2	43166.6	1109.9 µg/L	1109.9 ppb	11:51:45
3	Be 313.107†	10389.3	13245.5	7.9190 µg/L	7.9190 ppb	11:51:45
3	Cd 226.502†	209.7	345.4	-4.0490 µg/L	-4.0490 ppb	11:52:05
3	Co 228.616†	1674.8	1661.8	77.427 µg/L	77.427 ppb	11:52:05
3	Cr 267.716†	3242.9	3240.3	68.975 µg/L	68.975 ppb	11:51:45
3	Cu 324.752†	10224.9	7577.7	68.458 µg/L	68.458 ppb	11:51:45
3	Mn 257.610†	576965.1	571016.4	1945.9 µg/L	1945.9 ppb	11:51:40
3	Mo 202.031†	45.2	51.6	9.8254 µg/L	9.8254 ppb	11:52:05
3	Ni 231.604†	1462.6	1140.2	62.335 µg/L	62.335 ppb	11:52:05
3	P 214.914†	295.5	270.7	490.28 µg/L	490.28 ppb	11:52:05
3	Pb 220.353†	418.6	320.6	82.835 µg/L	82.835 ppb	11:52:05
3	S 181.975 Axial†	248.3	231.9	999.49 µg/L	999.49 ppb	11:52:05
3	Sb 206.836†	38.7	18.1	12.855 µg/L	12.855 ppb	11:52:05
3	Se 196.026†	-46.9	-62.3	203.56 µg/L	203.56 ppb	11:52:05
3	SiO2†	329506.3	324629.4	68452 µg/L	68452 ppb	11:51:40
3	Si 251.611†	396704.2	392136.9	31747 µg/L	31747 ppb	11:51:40
3	Sn 189.927†	-8.0	-11.0	-15.903 µg/L	-15.903 ppb	11:52:05
3	Ti 334.940†	626826.1	619975.7	1462.8 µg/L	1462.8 ppb	11:51:40
3	Tl 190.801†	-46.7	-23.3	6.5031 µg/L	6.5031 ppb	11:52:05
3	U 409.014†	-2024.6	-1959.2	-189.62 µg/L	-189.62 ppb	11:51:40
3	V 292.402†	12823.5	12718.1	144.92 µg/L	144.92 ppb	11:51:45
3	Zn 213.857†	14040.2	13370.8	328.14 µg/L	328.14 ppb	11:51:45

Mean Data: 245797001|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2065606.7	101.04 %	0.214			0.21%
Sc RADIAL	60137.5	104 %	0.5			0.45%
Y 371.029	1458311.1	103.80 %	0.202			0.19%
Ag 328.068†	-1464.1	-3.1209 µg/L	0.06873	-3.1209 ppb	0.06873	2.20%
Al 396.153Radial†	100534.7	73908 µg/L	387.2	73908 ppb	387.2	0.52%
As 188.979†	12.9	29.526 µg/L	10.2738	29.526 ppb	10.2738	34.80%
B 249.677†	876.1	-23.671 µg/L	0.9199	-23.671 ppb	0.9199	3.89%
Ba 233.527†	43518.8	1118.9 µg/L	8.18	1118.9 ppb	8.18	0.73%
Be 313.107†	13466.5	8.0568 µg/L	0.11967	8.0568 ppb	0.11967	1.49%
Ca 317.933Radial†	46704.8	43258 µg/L	365.3	43258 ppb	365.3	0.84%
Cd 226.502†	352.8	-3.7935 µg/L	0.23754	-3.7935 ppb	0.23754	6.26%
Co 228.616†	1705.2	79.508 µg/L	1.8207	79.508 ppb	1.8207	2.29%
Cr 267.716†	3299.7	70.239 µg/L	1.0945	70.239 ppb	1.0945	1.56%
Cu 324.752†	7639.0	68.813 µg/L	0.3635	68.813 ppb	0.3635	0.53%
Fe 238.204 Radial†	13788.9	118470 µg/L	435.5	118470 ppb	435.5	0.37%
K 766.490 Radial†	14846.9	10444 µg/L	52.4	10444 ppb	52.4	0.50%
Mg 279.077 IEC†	1734.2	16195 µg/L	48.1	16195 ppb	48.1	0.30%
Mn 257.610†	573888.9	1955.6 µg/L	8.41	1955.6 ppb	8.41	0.43%
Mo 202.031†	56.7	10.341 µg/L	0.5243	10.341 ppb	0.5243	5.07%
Na 589.592 Radial†	11426.9	3709.6 µg/L	17.88	3709.6 ppb	17.88	0.48%

Ni 231.604†	1174.9	64.180 µg/L	1.7019	64.180 ppb	1.7019	2.65%
P 214.914†	272.3	493.78 µg/L	4.419	493.78 ppb	4.419	0.89%
Pb 220.353†	331.4	85.628 µg/L	2.7838	85.628 ppb	2.7838	3.25%
S 181.975 Axial†	234.1	1009.1 µg/L	16.24	1009.1 ppb	16.24	1.61%
Sb 206.836†	13.4	8.3126 µg/L	3.93662	8.3126 ppb	3.93662	47.36%
Se 196.026†	-60.4	205.16 µg/L	8.479	205.16 ppb	8.479	4.13%
SiO2†	325589.5	68654 µg/L	177.8	68654 ppb	177.8	0.26%
Si 251.611†	393488.9	31856 µg/L	96.6	31856 ppb	96.6	0.30%
Sn 189.927†	-10.7	-15.692 µg/L	1.8690	-15.692 ppb	1.8690	11.91%
Sr 421.552†	23657.5	239.22 µg/L	1.634	239.22 ppb	1.634	0.68%
Ti 334.940†	624035.5	1472.4 µg/L	8.51	1472.4 ppb	8.51	0.58%
Tl 190.801†	-23.8	5.7952 µg/L	1.33358	5.7952 ppb	1.33358	23.01%
U 409.014†	-1923.4	-186.42 µg/L	8.737	-186.42 ppb	8.737	4.69%
V 292.402†	12872.4	146.46 µg/L	1.426	146.46 ppb	1.426	0.97%
Zn 213.857†	13504.5	331.50 µg/L	2.919	331.50 ppb	2.919	0.88%

Sequence No.: 6  
 Sample ID: 1202030954|948065|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 304  
 Date Collected: 2/17/2010 11:52:13  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202030954|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59917.0	59917.0	103 %		11:52:45
1	Al 396.153Radial†	101869.0	98697.4	72557 µg/L	72557 ppb	11:52:45
1	Ca 317.933Radial†	57380.1	55385.3	51298 µg/L	51298 ppb	11:52:45
1	Fe 238.204 Radial†	15256.1	14760.4	126810 µg/L	126810 ppb	11:53:05
1	K 766.490 Radial†	15302.6	14645.9	10303 µg/L	10303 ppb	11:52:45
1	Mg 279.077 IEC†	1844.8	1773.5	16557 µg/L	16557 ppb	11:53:05
1	Na 589.592 Radial†	12432.5	11476.5	3725.7 µg/L	3725.7 ppb	11:52:45
1	Sr 421.552†	25750.5	24909.7	251.88 µg/L	251.88 ppb	11:52:45
1	Sc 361.383	2068340.1	2068340.1	101.17 %		11:54:06
1	Y 371.029	1461247.1	1461247.1	104.00 %		11:54:06
1	Ag 328.068†	-2086.7	-1538.9	-3.2192 µg/L	-3.2192 ppb	11:54:11
1	As 188.979†	10.0	8.4	20.900 µg/L	20.900 ppb	11:54:31
1	B 249.677†	1203.1	892.4	-27.310 µg/L	-27.310 ppb	11:54:11
1	Ba 233.527†	37607.8	37190.5	956.23 µg/L	956.23 ppb	11:54:11
1	Be 313.107†	10567.4	13412.6	8.0016 µg/L	8.0016 ppb	11:54:11
1	Cd 226.502†	232.4	367.7	-4.3314 µg/L	-4.3314 ppb	11:54:31
1	Co 228.616†	2012.6	1994.3	93.396 µg/L	93.396 ppb	11:54:31
1	Cr 267.716†	3574.8	3565.6	75.889 µg/L	75.889 ppb	11:54:11
1	Cu 324.752†	10137.7	7482.8	68.903 µg/L	68.903 ppb	11:54:11
1	Mn 257.610†	631165.9	624096.8	2126.4 µg/L	2126.4 ppb	11:54:06
1	Mo 202.031†	55.1	61.3	11.127 µg/L	11.127 ppb	11:54:31
1	Ni 231.604†	1582.2	1257.1	68.660 µg/L	68.660 ppb	11:54:31
1	P 214.914†	308.1	283.0	509.25 µg/L	509.25 ppb	11:54:31
1	Pb 220.353†	424.7	326.2	83.904 µg/L	83.904 ppb	11:54:31
1	S 181.975 Axial†	234.7	218.2	940.50 µg/L	940.50 ppb	11:54:31
1	Sb 206.836†	41.3	20.7	14.584 µg/L	14.584 ppb	11:54:31
1	Se 196.026†	-43.0	-58.3	228.66 µg/L	228.66 ppb	11:54:31
1	SiO2†	333175.1	327974.1	69157 µg/L	69157 ppb	11:54:06
1	Si 251.611†	401353.9	396393.8	32091 µg/L	32091 ppb	11:54:06
1	Sn 189.927†	-12.9	-15.9	-18.894 µg/L	-18.894 ppb	11:54:31
1	Ti 334.940†	654812.1	647102.1	1527.0 µg/L	1527.0 ppb	11:54:06
1	Tl 190.801†	-48.8	-25.3	5.1817 µg/L	5.1817 ppb	11:54:31
1	U 409.014†	-2080.5	-2012.8	-195.85 µg/L	-195.85 ppb	11:54:06
1	V 292.402†	12411.7	12300.1	141.56 µg/L	141.56 ppb	11:54:11
1	Zn 213.857†	15340.7	14644.3	359.63 µg/L	359.63 ppb	11:54:11
2	Sc RADIAL	60257.9	60257.9	104 %		11:53:10
2	Al 396.153Radial†	102247.8	98504.1	72415 µg/L	72415 ppb	11:53:10
2	Ca 317.933Radial†	57350.4	55042.3	50981 µg/L	50981 ppb	11:53:10
2	Fe 238.204 Radial†	15280.7	14700.6	126300 µg/L	126300 ppb	11:53:31
2	K 766.490 Radial†	15377.4	14634.1	10294 µg/L	10294 ppb	11:53:10
2	Mg 279.077 IEC†	1848.5	1767.0	16496 µg/L	16496 ppb	11:53:31
2	Na 589.592 Radial†	12460.9	11435.7	3712.4 µg/L	3712.4 ppb	11:53:10
2	Sr 421.552†	25842.3	24857.0	251.35 µg/L	251.35 ppb	11:53:10
2	Sc 361.383	2068860.9	2068860.9	101.20 %		11:54:39
2	Y 371.029	1461676.0	1461676.0	104.04 %		11:54:39
2	Ag 328.068†	-2069.2	-1521.1	-3.1125 µg/L	-3.1125 ppb	11:54:44
2	As 188.979†	9.2	7.6	19.364 µg/L	19.364 ppb	11:55:04
2	B 249.677†	1183.3	872.5	-27.905 µg/L	-27.905 ppb	11:54:44
2	Ba 233.527†	37486.0	37060.7	952.90 µg/L	952.90 ppb	11:54:44
2	Be 313.107†	10391.8	13236.5	7.8883 µg/L	7.8883 ppb	11:54:44
2	Cd 226.502†	233.1	368.4	-4.2546 µg/L	-4.2546 ppb	11:55:04
2	Co 228.616†	1993.5	1975.0	92.456 µg/L	92.456 ppb	11:55:04
2	Cr 267.716†	3537.8	3528.2	75.094 µg/L	75.094 ppb	11:54:44
2	Cu 324.752†	10186.7	7528.6	69.145 µg/L	69.145 ppb	11:54:44
2	Mn 257.610†	632810.4	625564.8	2131.3 µg/L	2131.3 ppb	11:54:39
2	Mo 202.031†	51.3	57.6	10.723 µg/L	10.723 ppb	11:55:04
2	Ni 231.604†	1594.0	1268.4	69.261 µg/L	69.261 ppb	11:55:04
2	P 214.914†	315.9	290.6	525.57 µg/L	525.57 ppb	11:55:04
2	Pb 220.353†	400.6	302.3	77.705 µg/L	77.705 ppb	11:55:04

2	S 181.975 Axial†	237.6	221.0	952.73 µg/L	952.73 ppb	11:55:04
2	Sb 206.836†	34.0	13.4	7.6672 µg/L	7.6672 ppb	11:55:04
2	Se 196.026†	-42.1	-57.5	228.69 µg/L	228.69 ppb	11:55:04
2	SiO2†	333582.8	328294.1	69225 µg/L	69225 ppb	11:54:39
2	Si 251.611†	401811.7	396746.3	32120 µg/L	32120 ppb	11:54:39
2	Sn 189.927†	-15.7	-18.6	-20.065 µg/L	-20.065 ppb	11:55:04
2	Ti 334.940†	655595.8	647713.5	1528.4 µg/L	1528.4 ppb	11:54:39
2	Tl 190.801†	-51.3	-27.8	1.6897 µg/L	1.6897 ppb	11:55:04
2	U 409.014†	-2038.2	-1970.4	-192.07 µg/L	-192.07 ppb	11:54:39
2	V 292.402†	12409.4	12294.8	141.44 µg/L	141.44 ppb	11:54:44
2	Zn 213.857†	15295.2	14595.5	358.43 µg/L	358.43 ppb	11:54:44
3	Sc RADIAL	60059.4	60059.4	103 %		11:53:36
3	Al 396.153Radial†	102279.5	98860.1	72677 µg/L	72677 ppb	11:53:36
3	Ca 317.933Radial†	57109.6	54992.2	50934 µg/L	50934 ppb	11:53:36
3	Fe 238.204 Radial†	15240.9	14710.7	126390 µg/L	126390 ppb	11:53:56
3	K 766.490 Radial†	15324.8	14632.2	10293 µg/L	10293 ppb	11:53:36
3	Mg 279.077 IEC†	1848.1	1772.4	16547 µg/L	16547 ppb	11:53:56
3	Na 589.592 Radial†	12462.1	11476.6	3725.7 µg/L	3725.7 ppb	11:53:36
3	Sr 421.552†	25834.2	24931.4	252.10 µg/L	252.10 ppb	11:53:36
3	Sc 361.383	2081313.8	2081313.8	101.81 %		11:55:12
3	Y 371.029	1469417.0	1469417.0	104.59 %		11:55:12
3	Ag 328.068†	-2072.0	-1511.6	-3.0503 µg/L	-3.0503 ppb	11:55:17
3	As 188.979†	7.6	6.0	16.123 µg/L	16.123 ppb	11:55:37
3	B 249.677†	1196.6	878.6	-27.690 µg/L	-27.690 ppb	11:55:17
3	Ba 233.527†	36993.0	36354.8	934.75 µg/L	934.75 ppb	11:55:17
3	Be 313.107†	10154.2	12941.6	7.7108 µg/L	7.7108 ppb	11:55:17
3	Cd 226.502†	216.5	350.6	-4.7458 µg/L	-4.7458 ppb	11:55:37
3	Co 228.616†	1935.9	1906.6	89.205 µg/L	89.205 ppb	11:55:37
3	Cr 267.716†	3484.1	3454.5	73.526 µg/L	73.526 ppb	11:55:17
3	Cu 324.752†	10084.0	7367.6	68.054 µg/L	68.054 ppb	11:55:17
3	Mn 257.610†	626090.9	615223.0	2096.4 µg/L	2096.4 ppb	11:55:12
3	Mo 202.031†	50.3	56.3	10.595 µg/L	10.595 ppb	11:55:37
3	Ni 231.604†	1557.2	1222.8	66.830 µg/L	66.830 ppb	11:55:37
3	P 214.914†	293.2	266.4	474.86 µg/L	474.86 ppb	11:55:37
3	Pb 220.353†	400.3	299.7	77.046 µg/L	77.046 ppb	11:55:37
3	S 181.975 Axial†	229.9	212.0	913.93 µg/L	913.93 ppb	11:55:37
3	Sb 206.836†	34.9	14.1	8.2987 µg/L	8.2987 ppb	11:55:37
3	Se 196.026†	-43.5	-58.6	227.22 µg/L	227.22 ppb	11:55:37
3	SiO2†	330387.1	323182.8	68147 µg/L	68147 ppb	11:55:12
3	Si 251.611†	398116.8	390741.2	31634 µg/L	31634 ppb	11:55:12
3	Sn 189.927†	-12.2	-15.1	-18.515 µg/L	-18.515 ppb	11:55:37
3	Ti 334.940†	646884.0	635280.2	1499.1 µg/L	1499.1 ppb	11:55:12
3	Tl 190.801†	-47.8	-24.0	6.5915 µg/L	6.5915 ppb	11:55:37
3	U 409.014†	-2080.5	-1999.9	-194.65 µg/L	-194.65 ppb	11:55:12
3	V 292.402†	12217.9	12033.2	138.75 µg/L	138.75 ppb	11:55:17
3	Zn 213.857†	15194.6	14406.2	353.69 µg/L	353.69 ppb	11:55:17

Mean Data: 1202030954|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2072838.3	101.39 %	0.359			0.35%
Sc RADIAL	60078.1	104 %	0.3			0.28%
Y 371.029	1464113.3	104.21 %	0.327			0.31%
Ag 328.068†	-1523.8	-3.1273 µg/L	0.08547	-3.1273 ppb	0.08547	2.73%
Al 396.153Radial†	98687.2	72549 µg/L	131.0	72549 ppb	131.0	0.18%
As 188.979†	7.3	18.795 µg/L	2.4385	18.795 ppb	2.4385	12.97%
B 249.677†	881.2	-27.635 µg/L	0.3015	-27.635 ppb	0.3015	1.09%
Ba 233.527†	36868.7	947.96 µg/L	11.563	947.96 ppb	11.563	1.22%
Be 313.107†	13196.9	7.8669 µg/L	0.14657	7.8669 ppb	0.14657	1.86%
Ca 317.933Radial†	55139.9	51071 µg/L	198.2	51071 ppb	198.2	0.39%
Cd 226.502†	362.2	-4.4439 µg/L	0.26426	-4.4439 ppb	0.26426	5.95%
Co 228.616†	1958.6	91.686 µg/L	2.1990	91.686 ppb	2.1990	2.40%
Cr 267.716†	3516.1	74.836 µg/L	1.2024	74.836 ppb	1.2024	1.61%
Cu 324.752†	7459.7	68.701 µg/L	0.5732	68.701 ppb	0.5732	0.83%
Fe 238.204 Radial†	14723.9	126500 µg/L	275.1	126500 ppb	275.1	0.22%
K 766.490 Radial†	14637.4	10297 µg/L	5.2	10297 ppb	5.2	0.05%
Mg 279.077 IEC†	1771.0	16533 µg/L	32.6	16533 ppb	32.6	0.20%
Mn 257.610†	621628.2	2118.1 µg/L	18.93	2118.1 ppb	18.93	0.89%
Mo 202.031†	58.4	10.815 µg/L	0.2776	10.815 ppb	0.2776	2.57%
Na 589.592 Radial†	11462.9	3721.3 µg/L	7.66	3721.3 ppb	7.66	0.21%

Ni 231.604†	1249.4	68.251 µg/L	1.2659	68.251 ppb	1.2659	1.85%
P 214.914†	280.0	503.23 µg/L	25.889	503.23 ppb	25.889	5.14%
Pb 220.353†	309.4	79.552 µg/L	3.7839	79.552 ppb	3.7839	4.76%
S 181.975 Axial†	217.1	935.72 µg/L	19.838	935.72 ppb	19.838	2.12%
Sb 206.836†	16.1	10.183 µg/L	3.8242	10.183 ppb	3.8242	37.55%
Se 196.026†	-58.1	228.19 µg/L	0.842	228.19 ppb	0.842	0.37%
SiO2†	326483.7	68843 µg/L	603.7	68843 ppb	603.7	0.88%
Si 251.611†	394627.1	31948 µg/L	272.8	31948 ppb	272.8	0.85%
Sn 189.927†	-16.5	-19.158 µg/L	0.8080	-19.158 ppb	0.8080	4.22%
Sr 421.552†	24899.4	251.77 µg/L	0.387	251.77 ppb	0.387	0.15%
Ti 334.940†	643365.3	1518.1 µg/L	16.55	1518.1 ppb	16.55	1.09%
Tl 190.801†	-25.7	4.4876 µg/L	2.52351	4.4876 ppb	2.52351	56.23%
U 409.014†	-1994.4	-194.19 µg/L	1.931	-194.19 ppb	1.931	0.99%
V 292.402†	12209.4	140.59 µg/L	1.587	140.59 ppb	1.587	1.13%
Zn 213.857†	14548.7	357.25 µg/L	3.139	357.25 ppb	3.139	0.88%



Sequence No.: 7

Sample ID: 1202030956|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 305

Date Collected: 2/17/2010 11:55:45

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202030956|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59883.8	59883.8	103 %		11:56:17
1	Al 396.153Radial†	166955.4	161832.5	118960 µg/L	118960 ppb	11:56:17
1	Ca 317.933Radial†	62575.3	60451.2	55990 µg/L	55990 ppb	11:56:17
1	Fe 238.204 Radial†	17239.5	16690.9	143410 µg/L	143410 ppb	11:56:37
1	K 766.490 Radial†	26456.4	25464.1	17913 µg/L	17913 ppb	11:56:17
1	Mg 279.077 IEC†	2789.4	2690.0	25174 µg/L	25174 ppb	11:56:37
1	Na 589.592 Radial†	27836.9	26412.8	8574.5 µg/L	8574.5 ppb	11:56:17
1	Sr 421.552†	75639.3	73274.7	740.93 µg/L	740.93 ppb	11:56:17
1	Sc 361.383	2050734.7	2050734.7	100.31 %		11:57:37
1	Y 371.029	1453965.2	1453965.2	103.49 %		11:57:37
1	Ag 328.068†	61957.7	62289.9	500.74 µg/L	500.74 ppb	11:57:43
1	As 188.979†	282.1	279.7	542.61 µg/L	542.61 ppb	11:58:03
1	B 249.677†	12844.1	12507.6	469.09 µg/L	469.09 ppb	11:57:43
1	Ba 233.527†	55334.4	55181.4	1419.6 µg/L	1419.6 ppb	11:57:43
1	Be 313.107†	799542.4	800039.9	511.03 µg/L	511.03 ppb	11:57:37
1	Cd 226.502†	18333.4	18414.7	481.75 µg/L	481.75 ppb	11:57:43
1	Co 228.616†	11339.8	11309.8	542.86 µg/L	542.86 ppb	11:58:03
1	Cr 267.716†	28048.7	27994.2	595.60 µg/L	595.60 ppb	11:57:43
1	Cu 324.752†	93414.4	90588.3	640.69 µg/L	640.69 ppb	11:57:43
1	Mn 257.610†	716873.8	714895.7	2435.3 µg/L	2435.3 ppb	11:57:37
1	Mo 202.031†	4856.6	4848.4	504.38 µg/L	504.38 ppb	11:58:03
1	Ni 231.604†	10948.3	10607.8	567.66 µg/L	567.66 ppb	11:58:03
1	P 214.914†	556.4	533.1	984.34 µg/L	984.34 ppb	11:58:03
1	Pb 220.353†	2296.0	2195.4	570.59 µg/L	570.59 ppb	11:58:03
1	S 181.975 Axial†	1417.1	1399.0	6030.7 µg/L	6030.7 ppb	11:58:03
1	Sb 206.836†	468.8	447.2	424.43 µg/L	424.43 ppb	11:58:03
1	Se 196.026†	267.5	250.9	736.06 µg/L	736.06 ppb	11:58:03
1	Si02†	346566.7	344151.5	72568 µg/L	72568 ppb	11:57:43
1	Si 251.611†	416835.7	415233.4	33617 µg/L	33617 ppb	11:57:37
1	Sn 189.927†	1158.6	1151.9	500.59 µg/L	500.59 ppb	11:58:03
1	Ti 334.940†	1077227.8	1073769.3	2533.5 µg/L	2533.5 ppb	11:57:37
1	Tl 190.801†	306.3	328.3	510.24 µg/L	510.24 ppb	11:58:03
1	U 409.014†	3554.0	3586.7	288.66 µg/L	288.66 ppb	11:57:43
1	V 292.402†	62267.9	62107.6	661.64 µg/L	661.64 ppb	11:57:43
1	Zn 213.857†	36462.0	35830.5	886.15 µg/L	886.15 ppb	11:57:43
2	Sc RADIAL	59784.8	59784.8	103 %		11:56:42
2	Al 396.153Radial†	167355.7	162489.1	119440 µg/L	119440 ppb	11:56:42
2	Ca 317.933Radial†	62408.9	60390.2	55934 µg/L	55934 ppb	11:56:42
2	Fe 238.204 Radial†	17292.5	16770.0	144090 µg/L	144090 ppb	11:57:02
2	K 766.490 Radial†	26577.6	25624.3	18025 µg/L	18025 ppb	11:56:42
2	Mg 279.077 IEC†	2786.7	2691.9	25190 µg/L	25190 ppb	11:57:02
2	Na 589.592 Radial†	27940.9	26558.4	8621.8 µg/L	8621.8 ppb	11:56:42
2	Sr 421.552†	75642.5	73399.2	742.19 µg/L	742.19 ppb	11:56:42
2	Sc 361.383	2047909.3	2047909.3	100.17 %		11:58:10
2	Y 371.029	1452973.1	1452973.1	103.42 %		11:58:10
2	Ag 328.068†	61619.0	62037.0	498.78 µg/L	498.78 ppb	11:58:16
2	As 188.979†	284.0	282.0	547.07 µg/L	547.07 ppb	11:58:36
2	B 249.677†	12689.6	12371.1	462.81 µg/L	462.81 ppb	11:58:16
2	Ba 233.527†	54978.5	54902.3	1412.4 µg/L	1412.4 ppb	11:58:16
2	Be 313.107†	812320.2	813895.5	519.88 µg/L	519.88 ppb	11:58:10
2	Cd 226.502†	18271.1	18377.7	480.68 µg/L	480.68 ppb	11:58:16
2	Co 228.616†	11427.0	11412.4	547.75 µg/L	547.75 ppb	11:58:36
2	Cr 267.716†	27987.3	27971.5	595.11 µg/L	595.11 ppb	11:58:16
2	Cu 324.752†	93028.1	90331.1	639.02 µg/L	639.02 ppb	11:58:16
2	Mn 257.610†	727787.6	726776.8	2475.6 µg/L	2475.6 ppb	11:58:10
2	Mo 202.031†	4885.1	4883.6	508.03 µg/L	508.03 ppb	11:58:36
2	Ni 231.604†	11008.3	10682.7	571.66 µg/L	571.66 ppb	11:58:36
2	P 214.914†	570.5	548.0	1015.5 µg/L	1015.5 ppb	11:58:36
2	Pb 220.353†	2314.7	2217.2	576.26 µg/L	576.26 ppb	11:58:36

2	S 181.975 Axial†	1423.3	1407.1	6065.6 µg/L	6065.6 ppb	11:58:36
2	Sb 206.836†	477.1	456.1	433.01 µg/L	433.01 ppb	11:58:36
2	Se 196.026†	264.5	248.2	733.85 µg/L	733.85 ppb	11:58:36
2	SiO2†	343804.9	341871.1	72087 µg/L	72087 ppb	11:58:16
2	Si 251.611†	422323.1	421284.8	34107 µg/L	34107 ppb	11:58:10
2	Sn 189.927†	1163.3	1158.2	503.32 µg/L	503.32 ppb	11:58:36
2	Ti 334.940†	1093441.5	1091436.8	2575.2 µg/L	2575.2 ppb	11:58:10
2	Tl 190.801†	300.2	322.6	503.09 µg/L	503.09 ppb	11:58:36
2	U 409.014†	3583.3	3620.8	291.54 µg/L	291.54 ppb	11:58:16
2	V 292.402†	61901.2	61827.1	658.86 µg/L	658.86 ppb	11:58:16
2	Zn 213.857†	36313.4	35732.3	883.64 µg/L	883.64 ppb	11:58:16
3	Sc RADIAL	59526.8	59526.8	103 %		11:57:08
3	Al 396.153Radial†	166095.5	161964.4	119060 µg/L	119060 ppb	11:57:08
3	Ca 317.933Radial†	61827.1	60085.4	55652 µg/L	55652 ppb	11:57:08
3	Fe 238.204 Radial†	17336.3	16885.4	145080 µg/L	145080 ppb	11:57:28
3	K 766.490 Radial†	26374.1	25537.6	17964 µg/L	17964 ppb	11:57:08
3	Mg 279.077 IEC†	2788.6	2705.4	25316 µg/L	25316 ppb	11:57:28
3	Na 589.592 Radial†	27747.6	26487.4	8598.8 µg/L	8598.8 ppb	11:57:08
3	Sr 421.552†	75080.8	73169.7	739.87 µg/L	739.87 ppb	11:57:08
3	Sc 361.383	2067907.7	2067907.7	101.15 %		11:58:43
3	Y 371.029	1465120.7	1465120.7	104.28 %		11:58:43
3	Ag 328.068†	61494.2	61318.7	493.12 µg/L	493.12 ppb	11:58:48
3	As 188.979†	280.4	275.7	535.07 µg/L	535.07 ppb	11:59:09
3	B 249.677†	12670.5	12229.7	456.13 µg/L	456.13 ppb	11:58:48
3	Ba 233.527†	54385.0	53784.7	1383.7 µg/L	1383.7 ppb	11:58:48
3	Be 313.107†	814606.0	808312.9	516.31 µg/L	516.31 ppb	11:58:43
3	Cd 226.502†	18164.2	18095.7	472.92 µg/L	472.92 ppb	11:58:48
3	Co 228.616†	10971.4	10851.7	520.62 µg/L	520.62 ppb	11:59:09
3	Cr 267.716†	27542.1	27261.2	580.00 µg/L	580.00 ppb	11:58:48
3	Cu 324.752†	91953.2	88370.3	625.73 µg/L	625.73 ppb	11:58:48
3	Mn 257.610†	730080.3	722017.1	2459.6 µg/L	2459.6 ppb	11:58:43
3	Mo 202.031†	4732.2	4685.3	487.66 µg/L	487.66 ppb	11:59:09
3	Ni 231.604†	10634.2	10206.5	546.28 µg/L	546.28 ppb	11:59:09
3	P 214.914†	557.6	529.7	977.18 µg/L	977.18 ppb	11:59:09
3	Pb 220.353†	2272.1	2152.7	559.47 µg/L	559.47 ppb	11:59:09
3	S 181.975 Axial†	1404.1	1374.4	5924.7 µg/L	5924.7 ppb	11:59:09
3	Sb 206.836†	461.1	435.7	413.39 µg/L	413.39 ppb	11:59:09
3	Se 196.026†	260.7	241.9	726.93 µg/L	726.93 ppb	11:59:09
3	SiO2†	338590.1	333396.5	70300 µg/L	70300 ppb	11:58:48
3	Si 251.611†	422589.7	417471.1	33798 µg/L	33798 ppb	11:58:43
3	Sn 189.927†	1127.7	1111.8	482.56 µg/L	482.56 ppb	11:59:09
3	Ti 334.940†	1095139.0	1082558.6	2554.2 µg/L	2554.2 ppb	11:58:43
3	Tl 190.801†	300.3	319.8	499.13 µg/L	499.13 ppb	11:59:09
3	U 409.014†	3440.8	3445.4	276.16 µg/L	276.16 ppb	11:58:48
3	V 292.402†	61020.6	60359.0	643.66 µg/L	643.66 ppb	11:58:48
3	Zn 213.857†	36029.3	35100.9	867.90 µg/L	867.90 ppb	11:58:48

Mean Data: 1202030956|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2055517.2	100.54	%	0.529			0.53%
Sc RADIAL	59731.8	103	%	0.3			0.31%
Y 371.029	1457353.0	103.73	%	0.480			0.46%
Ag 328.068†	61881.9	497.55	µg/L	3.954	497.55 ppb	3.954	0.79%
Al 396.153Radial†	162095.3	119150	µg/L	255.3	119150 ppb	255.3	0.21%
As 188.979†	279.1	541.59	µg/L	6.064	541.59 ppb	6.064	1.12%
B 249.677†	12369.5	462.67	µg/L	6.481	462.67 ppb	6.481	1.40%
Ba 233.527†	54622.8	1405.3	µg/L	19.02	1405.3 ppb	19.02	1.35%
Be 313.107†	807416.1	515.74	µg/L	4.453	515.74 ppb	4.453	0.86%
Ca 317.933Radial†	60308.9	55859	µg/L	181.5	55859 ppb	181.5	0.32%
Cd 226.502†	18296.0	478.45	µg/L	4.817	478.45 ppb	4.817	1.01%
Co 228.616†	11191.3	537.07	µg/L	14.460	537.07 ppb	14.460	2.69%
Cr 267.716†	27742.3	590.24	µg/L	8.867	590.24 ppb	8.867	1.50%
Cu 324.752†	89763.2	635.15	µg/L	8.202	635.15 ppb	8.202	1.29%
Fe 238.204 Radial†	16782.1	144190	µg/L	840.3	144190 ppb	840.3	0.58%
K 766.490 Radial†	25542.0	17967	µg/L	56.4	17967 ppb	56.4	0.31%
Mg 279.077 IEC†	2695.8	25227	µg/L	78.0	25227 ppb	78.0	0.31%
Mn 257.610†	721229.9	2456.8	µg/L	20.27	2456.8 ppb	20.27	0.83%
Mo 202.031†	4805.8	500.02	µg/L	10.864	500.02 ppb	10.864	2.17%
Na 589.592 Radial†	26486.2	8598.4	µg/L	23.64	8598.4 ppb	23.64	0.27%

Ni 231.604†	10499.0	561.87 µg/L	13.646	561.87 ppb	13.646	2.43%
P 214.914†	536.9	992.35 µg/L	20.384	992.35 ppb	20.384	2.05%
Pb 220.353†	2188.4	568.78 µg/L	8.542	568.78 ppb	8.542	1.50%
S 181.975 Axial†	1393.5	6007.0 µg/L	73.40	6007.0 ppb	73.40	1.22%
Sb 206.836†	446.3	423.61 µg/L	9.838	423.61 ppb	9.838	2.32%
Se 196.026†	247.0	732.28 µg/L	4.766	732.28 ppb	4.766	0.65%
SiO2†	339806.4	71652 µg/L	1195.0	71652 ppb	1195.0	1.67%
Si 251.611†	417996.5	33840 µg/L	247.7	33840 ppb	247.7	0.73%
Sn 189.927†	1140.7	495.49 µg/L	11.281	495.49 ppb	11.281	2.28%
Sr 421.552†	73281.2	740.99 µg/L	1.162	740.99 ppb	1.162	0.16%
Ti 334.940†	1082588.2	2554.3 µg/L	20.85	2554.3 ppb	20.85	0.82%
Tl 190.801†	323.6	504.15 µg/L	5.628	504.15 ppb	5.628	1.12%
U 409.014†	3551.0	285.45 µg/L	8.179	285.45 ppb	8.179	2.87%
V 292.402†	61431.2	654.72 µg/L	9.678	654.72 ppb	9.678	1.48%
Zn 213.857†	35554.6	879.23 µg/L	9.894	879.23 ppb	9.894	1.13%

Sequence No.: 8

Sample ID: 1202030957|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 306

Date Collected: 2/17/2010 11:59:17

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202030957|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57333.6	57333.6	98.8 %		11:59:48
1	Al 396.153Radial†	179708.8	181939.8	133740 µg/L	133740 ppb	11:59:48
1	Ca 317.933Radial†	63040.3	63619.5	58925 µg/L	58925 ppb	11:59:48
1	Fe 238.204 Radial†	17446.0	17643.1	151590 µg/L	151590 ppb	12:00:08
1	K 766.490 Radial†	27701.8	27865.3	19602 µg/L	19602 ppb	11:59:48
1	Mg 279.077 IEC†	2986.1	3009.4	28171 µg/L	28171 ppb	12:00:08
1	Na 589.592 Radial†	29021.7	28812.2	9353.4 µg/L	9353.4 ppb	11:59:48
1	Sr 421.552†	78389.2	79319.1	802.05 µg/L	802.05 ppb	11:59:48
1	Sc 361.383	2001841.6	2001841.6	97.918 %		12:01:09
1	Y 371.029	1421269.0	1421269.0	101.16 %		12:01:09
1	Ag 328.068†	63343.1	65213.4	524.40 µg/L	524.40 ppb	12:01:14
1	As 188.979†	291.0	295.7	573.77 µg/L	573.77 ppb	12:01:34
1	B 249.677†	13051.9	13032.6	487.64 µg/L	487.64 ppb	12:01:14
1	Ba 233.527†	59465.1	60747.3	1562.8 µg/L	1562.8 ppb	12:01:14
1	Be 313.107†	835366.3	856093.1	546.90 µg/L	546.90 ppb	12:01:09
1	Cd 226.502†	18784.4	19321.7	505.35 µg/L	505.35 ppb	12:01:14
1	Co 228.616†	12029.7	12290.5	590.38 µg/L	590.38 ppb	12:01:34
1	Cr 267.716†	28421.0	29057.5	618.23 µg/L	618.23 ppb	12:01:14
1	Cu 324.752†	90361.5	89745.0	636.05 µg/L	636.05 ppb	12:01:14
1	Mn 257.610†	868762.3	887468.1	3019.8 µg/L	3019.8 ppb	12:01:09
1	Mo 202.031†	4932.7	5044.4	524.86 µg/L	524.86 ppb	12:01:34
1	Ni 231.604†	11174.9	11105.7	594.30 µg/L	594.30 ppb	12:01:34
1	P 214.914†	576.9	567.6	1055.7 µg/L	1055.7 ppb	12:01:34
1	Pb 220.353†	2404.1	2361.7	614.29 µg/L	614.29 ppb	12:01:34
1	S 181.975 Axial†	1452.3	1469.4	6334.4 µg/L	6334.4 ppb	12:01:34
1	Sb 206.836†	462.0	451.6	428.49 µg/L	428.49 ppb	12:01:34
1	Se 196.026†	287.1	277.4	795.33 µg/L	795.33 ppb	12:01:34
1	SiO2†	350908.1	357023.7	75282 µg/L	75282 ppb	12:01:14
1	Si 251.611†	429142.7	437951.4	35456 µg/L	35456 ppb	12:01:09
1	Sn 189.927†	1178.0	1200.0	521.47 µg/L	521.47 ppb	12:01:34
1	Ti 334.940†	1049934.4	1072124.6	2529.4 µg/L	2529.4 ppb	12:01:09
1	Tl 190.801†	311.2	340.8	531.95 µg/L	531.95 ppb	12:01:34
1	U 409.014†	3721.7	3844.5	309.78 µg/L	309.78 ppb	12:01:14
1	V 292.402†	64676.8	66083.8	703.75 µg/L	703.75 ppb	12:01:14
1	Zn 213.857†	36412.9	36668.1	906.47 µg/L	906.47 ppb	12:01:14
2	Sc RADIAL	57715.6	57715.6	99.4 %		12:00:14
2	Al 396.153Radial†	179905.8	180934.1	133000 µg/L	133000 ppb	12:00:14
2	Ca 317.933Radial†	62912.7	63068.9	58415 µg/L	58415 ppb	12:00:14
2	Fe 238.204 Radial†	17423.4	17503.5	150390 µg/L	150390 ppb	12:00:34
2	K 766.490 Radial†	27752.1	27730.4	19507 µg/L	19507 ppb	12:00:14
2	Mg 279.077 IEC†	2985.9	2989.1	27981 µg/L	27981 ppb	12:00:34
2	Na 589.592 Radial†	29034.9	28631.0	9294.6 µg/L	9294.6 ppb	12:00:14
2	Sr 421.552†	78488.7	78894.0	797.75 µg/L	797.75 ppb	12:00:14
2	Sc 361.383	2040066.9	2040066.9	99.788 %		12:01:41
2	Y 371.029	1444135.9	1444135.9	102.79 %		12:01:41
2	Ag 328.068†	62553.1	63209.6	508.48 µg/L	508.48 ppb	12:01:47
2	As 188.979†	289.4	288.5	559.90 µg/L	559.90 ppb	12:02:07
2	B 249.677†	12838.6	12569.1	468.12 µg/L	468.12 ppb	12:01:47
2	Ba 233.527†	58483.3	58625.5	1508.2 µg/L	1508.2 ppb	12:01:47
2	Be 313.107†	818208.4	822913.5	525.70 µg/L	525.70 ppb	12:01:41
2	Cd 226.502†	18558.7	18736.1	489.65 µg/L	489.65 ppb	12:01:47
2	Co 228.616†	11912.9	11943.2	573.75 µg/L	573.75 ppb	12:02:07
2	Cr 267.716†	27968.7	28060.3	597.01 µg/L	597.01 ppb	12:01:47
2	Cu 324.752†	88725.9	86376.8	612.80 µg/L	612.80 ppb	12:01:47
2	Mn 257.610†	854619.3	856670.7	2915.5 µg/L	2915.5 ppb	12:01:41
2	Mo 202.031†	4879.2	4896.4	509.58 µg/L	509.58 ppb	12:02:07
2	Ni 231.604†	11058.4	10775.1	576.65 µg/L	576.65 ppb	12:02:07
2	P 214.914†	578.6	558.3	1039.0 µg/L	1039.0 ppb	12:02:07
2	Pb 220.353†	2373.4	2284.9	594.40 µg/L	594.40 ppb	12:02:07

2	S 181.975 Axial†	1442.7	1431.9	6172.8 µg/L	6172.8 ppb	12:02:07
2	Sb 206.836†	466.4	447.2	424.27 µg/L	424.27 ppb	12:02:07
2	Se 196.026†	279.4	264.2	772.27 µg/L	772.27 ppb	12:02:07
2	SiO2†	344646.0	344033.4	72543 µg/L	72543 ppb	12:01:47
2	Si 251.611†	420670.5	421249.3	34104 µg/L	34104 ppb	12:01:41
2	Sn 189.927†	1166.3	1165.6	506.27 µg/L	506.27 ppb	12:02:07
2	Ti 334.940†	1029983.8	1032040.4	2434.8 µg/L	2434.8 ppb	12:01:41
2	Tl 190.801†	308.1	331.7	517.95 µg/L	517.95 ppb	12:02:07
2	U 409.014†	3579.0	3630.3	291.34 µg/L	291.34 ppb	12:01:47
2	V 292.402†	63455.7	63622.5	678.09 µg/L	678.09 ppb	12:01:47
2	Zn 213.857†	35798.7	35355.9	873.77 µg/L	873.77 ppb	12:01:47
3	Sc RADIAL	58225.0	58225.0	100 %		12:00:39
3	Al 396.153Radial†	179565.1	179011.6	131590 µg/L	131590 ppb	12:00:39
3	Ca 317.933Radial†	62628.3	62231.8	57640 µg/L	57640 ppb	12:00:39
3	Fe 238.204 Radial†	17135.1	17062.8	146600 µg/L	146600 ppb	12:00:59
3	K 766.490 Radial†	27692.7	27427.0	19293 µg/L	19293 ppb	12:00:39
3	Mg 279.077 IEC†	2950.1	2927.2	27403 µg/L	27403 ppb	12:00:59
3	Na 589.592 Radial†	29008.4	28349.1	9203.1 µg/L	9203.1 ppb	12:00:39
3	Sr 421.552†	78197.1	77912.7	787.83 µg/L	787.83 ppb	12:00:39
3	Sc 361.383	2036409.6	2036409.6	99.609 %		12:02:14
3	Y 371.029	1443436.1	1443436.1	102.74 %		12:02:14
3	Ag 328.068†	62257.6	63025.6	506.74 µg/L	506.74 ppb	12:02:20
3	As 188.979†	278.2	277.8	539.13 µg/L	539.13 ppb	12:02:40
3	B 249.677†	12753.8	12507.1	467.38 µg/L	467.38 ppb	12:02:20
3	Ba 233.527†	57786.7	58031.4	1492.9 µg/L	1492.9 ppb	12:02:20
3	Be 313.107†	812022.0	818175.5	522.68 µg/L	522.68 ppb	12:02:14
3	Cd 226.502†	18352.9	18562.9	485.38 µg/L	485.38 ppb	12:02:20
3	Co 228.616†	11432.6	11482.5	551.45 µg/L	551.45 ppb	12:02:40
3	Cr 267.716†	27487.8	27627.8	587.81 µg/L	587.81 ppb	12:02:20
3	Cu 324.752†	87524.6	85330.4	605.11 µg/L	605.11 ppb	12:02:20
3	Mn 257.610†	847708.7	851271.2	2896.8 µg/L	2896.8 ppb	12:02:14
3	Mo 202.031†	4690.5	4715.8	490.85 µg/L	490.85 ppb	12:02:40
3	Ni 231.604†	10640.2	10375.2	555.27 µg/L	555.27 ppb	12:02:40
3	P 214.914†	555.1	535.7	994.53 µg/L	994.53 ppb	12:02:40
3	Pb 220.353†	2319.6	2235.2	581.52 µg/L	581.52 ppb	12:02:40
3	S 181.975 Axial†	1415.2	1407.0	6065.1 µg/L	6065.1 ppb	12:02:40
3	Sb 206.836†	440.0	421.5	399.58 µg/L	399.58 ppb	12:02:40
3	Se 196.026†	279.2	264.5	763.10 µg/L	763.10 ppb	12:02:40
3	SiO2†	339071.2	339057.0	71494 µg/L	71494 ppb	12:02:20
3	Si 251.611†	416375.4	417694.5	33816 µg/L	33816 ppb	12:02:14
3	Sn 189.927†	1124.4	1125.7	488.80 µg/L	488.80 ppb	12:02:40
3	Ti 334.940†	1020511.0	1024384.2	2416.8 µg/L	2416.8 ppb	12:02:14
3	Tl 190.801†	303.4	327.5	511.36 µg/L	511.36 ppb	12:02:40
3	U 409.014†	3473.2	3530.5	283.23 µg/L	283.23 ppb	12:02:20
3	V 292.402†	62545.1	62822.6	669.24 µg/L	669.24 ppb	12:02:20
3	Zn 213.857†	35494.6	35115.0	868.05 µg/L	868.05 ppb	12:02:20

Mean Data: 1202030957|948065|1

Analyte	Mean Corrected	Conc.	Calib.	Std.Dev.	Conc.	Sample	Std.Dev.	RSD
	Intensity		Units		Units			
Sc 361.383	2026106.0	99.105	%	1.0317				1.04%
Sc RADIAL	57758.1	99.5	%	0.77				0.77%
Y 371.029	1436280.3	102.23	%	0.926				0.91%
Ag 328.068†	63816.2	513.21	µg/L	9.733	513.21	ppb	9.733	1.90%
Al 396.153Radial†	180628.5	132780	µg/L	1093.4	132780	ppb	1093.4	0.82%
As 188.979†	287.4	557.60	µg/L	17.435	557.60	ppb	17.435	3.13%
B 249.677†	12702.9	474.38	µg/L	11.491	474.38	ppb	11.491	2.42%
Ba 233.527†	59134.7	1521.3	µg/L	36.73	1521.3	ppb	36.73	2.41%
Be 313.107†	832394.0	531.76	µg/L	13.199	531.76	ppb	13.199	2.48%
Ca 317.933Radial†	62973.4	58326	µg/L	647.2	58326	ppb	647.2	1.11%
Cd 226.502†	18873.5	493.46	µg/L	10.516	493.46	ppb	10.516	2.13%
Co 228.616†	11905.4	571.86	µg/L	19.531	571.86	ppb	19.531	3.42%
Cr 267.716†	28248.6	601.02	µg/L	15.599	601.02	ppb	15.599	2.60%
Cu 324.752†	87150.7	617.99	µg/L	16.110	617.99	ppb	16.110	2.61%
Fe 238.204 Radial†	17403.2	149530	µg/L	2602.8	149530	ppb	2602.8	1.74%
K 766.490 Radial†	27674.2	19467	µg/L	157.9	19467	ppb	157.9	0.81%
Mg 279.077 IEC†	2975.3	27852	µg/L	400.3	27852	ppb	400.3	1.44%
Mn 257.610†	865136.7	2944.0	µg/L	66.28	2944.0	ppb	66.28	2.25%
Mo 202.031†	4885.5	508.43	µg/L	17.033	508.43	ppb	17.033	3.35%
Na 589.592 Radial†	28597.4	9283.7	µg/L	75.75	9283.7	ppb	75.75	0.82%

Ni 231.604†	10752.0	575.41 µg/L	19.545	575.41 ppb	19.545	3.40%
P 214.914†	553.9	1029.7 µg/L	31.61	1029.7 ppb	31.61	3.07%
Pb 220.353†	2293.9	596.73 µg/L	16.509	596.73 ppb	16.509	2.77%
S 181.975 Axial†	1436.1	6190.8 µg/L	135.51	6190.8 ppb	135.51	2.19%
Sb 206.836†	440.1	417.45 µg/L	15.614	417.45 ppb	15.614	3.74%
Se 196.026†	268.7	776.90 µg/L	16.610	776.90 ppb	16.610	2.14%
SiO2†	346704.7	73107 µg/L	1956.0	73107 ppb	1956.0	2.68%
Si 251.611†	425631.8	34458 µg/L	875.7	34458 ppb	875.7	2.54%
Sn 189.927†	1163.8	505.51 µg/L	16.346	505.51 ppb	16.346	3.23%
Sr 421.552†	78708.6	795.87 µg/L	7.293	795.87 ppb	7.293	0.92%
Ti 334.940†	1042849.8	2460.3 µg/L	60.51	2460.3 ppb	60.51	2.46%
Tl 190.801†	333.3	520.42 µg/L	10.513	520.42 ppb	10.513	2.02%
U 409.014†	3668.5	294.78 µg/L	13.602	294.78 ppb	13.602	4.61%
V 292.402†	64176.3	683.70 µg/L	17.925	683.70 ppb	17.925	2.62%
Zn 213.857†	35713.0	882.77 µg/L	20.729	882.77 ppb	20.729	2.35%

Sequence No.: 9  
 Sample ID: 1202030955|948065|5  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 307  
 Date Collected: 2/17/2010 12:02:48  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: 1202030955|948065|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58395.8	58395.8	101 %		12:03:20
1	Al 396.153Radial†	21454.1	21345.6	15692 µg/L	15692 ppb	12:03:20
1	Ca 317.933Radial†	10142.6	9885.0	9155.6 µg/L	9155.6 ppb	12:03:20
1	Fe 238.204 Radial†	3005.7	2970.1	25517 µg/L	25517 ppb	12:03:40
1	K 766.490 Radial†	3323.4	3126.2	2199.1 µg/L	2199.1 ppb	12:03:20
1	Mg 279.077 IEC†	384.5	368.8	3443.5 µg/L	3443.5 ppb	12:03:40
1	Na 589.592 Radial†	3006.9	2422.4	786.38 µg/L	786.38 ppb	12:03:20
1	Sr 421.552†	5045.1	4980.9	50.365 µg/L	50.365 ppb	12:03:20
1	Sc 361.383	2035527.3	2035527.3	99.566 %		12:04:39
1	Y 371.029	1397380.9	1397380.9	99.459 %		12:04:39
1	Ag 328.068†	-852.1	-332.1	-0.8079 µg/L	-0.8079 ppb	12:04:44
1	As 188.979†	2.9	1.4	3.7623 µg/L	3.7623 ppb	12:05:04
1	B 249.677†	527.5	233.1	-3.1726 µg/L	-3.1726 ppb	12:04:44
1	Ba 233.527†	9132.9	9190.7	236.30 µg/L	236.30 ppb	12:04:44
1	Be 313.107†	-97.1	2870.1	1.7194 µg/L	1.7194 ppb	12:04:44
1	Cd 226.502†	-61.6	76.1	-0.8151 µg/L	-0.8151 ppb	12:05:04
1	Co 228.616†	348.0	354.5	16.525 µg/L	16.525 ppb	12:05:04
1	Cr 267.716†	683.8	719.0	15.305 µg/L	15.305 ppb	12:04:44
1	Cu 324.752†	4073.3	1553.4	14.192 µg/L	14.192 ppb	12:04:44
1	Mn 257.610†	119657.8	120415.9	410.41 µg/L	410.41 ppb	12:04:44
1	Mo 202.031†	7.6	14.5	2.4646 µg/L	2.4646 ppb	12:05:04
1	Ni 231.604†	557.7	253.4	13.843 µg/L	13.843 ppb	12:05:04
1	P 214.914†	84.2	63.0	115.58 µg/L	115.58 ppb	12:05:04
1	Pb 220.353†	160.2	67.4	17.392 µg/L	17.392 ppb	12:05:04
1	S 181.975 Axial†	66.0	52.5	226.43 µg/L	226.43 ppb	12:05:04
1	Sb 206.836†	28.5	8.5	7.1846 µg/L	7.1846 ppb	12:05:04
1	Se 196.026†	1.8	-14.0	42.763 µg/L	42.763 ppb	12:05:04
1	SiO2†	68167.2	67119.8	14153 µg/L	14153 ppb	12:04:44
1	Si 251.611†	81508.0	81548.8	6602.1 µg/L	6602.1 ppb	12:04:44
1	Sn 189.927†	-4.4	-7.5	-5.7165 µg/L	-5.7165 ppb	12:05:04
1	Ti 334.940†	130067.6	130503.9	307.92 µg/L	307.92 ppb	12:04:39
1	Tl 190.801†	-25.5	-2.6	4.6119 µg/L	4.6119 ppb	12:05:04
1	U 409.014†	-350.7	-308.5	-30.943 µg/L	-30.943 ppb	12:04:44
1	V 292.402†	2665.2	2708.9	30.902 µg/L	30.902 ppb	12:04:44
1	Zn 213.857†	3330.1	2825.7	69.326 µg/L	69.326 ppb	12:04:44
2	Sc RADIAL	57591.0	57591.0	99.2 %		12:03:45
2	Al 396.153Radial†	21195.7	21383.1	15720 µg/L	15720 ppb	12:03:45
2	Ca 317.933Radial†	9989.6	9871.8	9143.3 µg/L	9143.3 ppb	12:03:45
2	Fe 238.204 Radial†	2965.8	2971.5	25530 µg/L	25530 ppb	12:04:05
2	K 766.490 Radial†	3292.5	3141.2	2209.7 µg/L	2209.7 ppb	12:03:45
2	Mg 279.077 IEC†	379.7	369.3	3448.2 µg/L	3448.2 ppb	12:04:05
2	Na 589.592 Radial†	2994.4	2451.5	795.84 µg/L	795.84 ppb	12:03:45
2	Sr 421.552†	4995.3	5000.8	50.566 µg/L	50.566 ppb	12:03:45
2	Sc 361.383	2064305.4	2064305.4	100.97 %		12:05:10
2	Y 371.029	1419123.9	1419123.9	101.01 %		12:05:10
2	Ag 328.068†	-869.5	-337.5	-0.8504 µg/L	-0.8504 ppb	12:05:16
2	As 188.979†	2.1	0.6	2.1996 µg/L	2.1996 ppb	12:05:36
2	B 249.677†	517.2	215.4	-3.9459 µg/L	-3.9459 ppb	12:05:16
2	Ba 233.527†	9085.5	9015.9	231.81 µg/L	231.81 ppb	12:05:16
2	Be 313.107†	-160.5	2808.6	1.6794 µg/L	1.6794 ppb	12:05:16
2	Cd 226.502†	-61.7	76.8	-0.7964 µg/L	-0.7964 ppb	12:05:36
2	Co 228.616†	345.1	346.8	16.150 µg/L	16.150 ppb	12:05:36
2	Cr 267.716†	651.9	677.8	14.428 µg/L	14.428 ppb	12:05:16
2	Cu 324.752†	4090.4	1513.4	13.919 µg/L	13.919 ppb	12:05:16
2	Mn 257.610†	119255.8	118342.4	403.40 µg/L	403.40 ppb	12:05:16
2	Mo 202.031†	10.3	17.1	2.7267 µg/L	2.7267 ppb	12:05:36
2	Ni 231.604†	559.1	247.0	13.500 µg/L	13.500 ppb	12:05:36
2	P 214.914†	75.2	52.9	94.228 µg/L	94.228 ppb	12:05:36
2	Pb 220.353†	170.3	75.1	19.414 µg/L	19.414 ppb	12:05:36

2	S 181.975 Axial†	66.3	51.8	223.35 µg/L	223.35 ppb	12:05:36
2	Sb 206.836†	25.2	4.8	3.6891 µg/L	3.6891 ppb	12:05:36
2	Se 196.026†	7.5	-8.4	51.333 µg/L	51.333 ppb	12:05:36
2	SiO2†	68092.4	66091.3	13936 µg/L	13936 ppb	12:05:16
2	Si 251.611†	81218.7	80121.0	6486.5 µg/L	6486.5 ppb	12:05:16
2	Sn 189.927†	-6.1	-9.1	-6.4342 µg/L	-6.4342 ppb	12:05:36
2	Ti 334.940†	132679.7	131269.7	309.73 µg/L	309.73 ppb	12:05:10
2	Tl 190.801†	-27.9	-4.6	1.7852 µg/L	1.7852 ppb	12:05:36
2	U 409.014†	-515.8	-467.1	-44.741 µg/L	-44.741 ppb	12:05:16
2	V 292.402†	2680.0	2686.2	30.656 µg/L	30.656 ppb	12:05:16
2	Zn 213.857†	3319.9	2769.1	67.907 µg/L	67.907 ppb	12:05:16
3	Sc RADIAL	57441.4	57441.4	99.0 %		12:04:10
3	Al 396.153Radial†	21078.5	21320.4	15674 µg/L	15674 ppb	12:04:10
3	Ca 317.933Radial†	9921.6	9829.2	9103.9 µg/L	9103.9 ppb	12:04:10
3	Fe 238.204 Radial†	2966.4	2979.9	25602 µg/L	25602 ppb	12:04:31
3	K 766.490 Radial†	3295.3	3152.7	2217.7 µg/L	2217.7 ppb	12:04:10
3	Mg 279.077 IEC†	381.1	371.6	3470.2 µg/L	3470.2 ppb	12:04:31
3	Na 589.592 Radial†	2944.1	2408.5	781.90 µg/L	781.90 ppb	12:04:10
3	Sr 421.552†	4978.2	4996.5	50.523 µg/L	50.523 ppb	12:04:10
3	Sc 361.383	2091800.3	2091800.3	102.32 %		12:05:42
3	Y 371.029	1437662.1	1437662.1	102.33 %		12:05:42
3	Ag 328.068†	-836.1	-293.5	-0.5125 µg/L	-0.5125 ppb	12:05:47
3	As 188.979†	4.6	3.0	6.7084 µg/L	6.7084 ppb	12:06:08
3	B 249.677†	500.9	192.8	-4.9662 µg/L	-4.9662 ppb	12:05:47
3	Ba 233.527†	8838.3	8656.0	222.55 µg/L	222.55 ppb	12:05:47
3	Be 313.107†	-303.2	2671.3	1.5983 µg/L	1.5983 ppb	12:05:47
3	Cd 226.502†	-69.0	70.5	-0.9772 µg/L	-0.9772 ppb	12:06:08
3	Co 228.616†	307.2	305.3	14.175 µg/L	14.175 ppb	12:06:08
3	Cr 267.716†	643.3	660.9	14.068 µg/L	14.068 ppb	12:05:47
3	Cu 324.752†	4035.8	1406.8	13.199 µg/L	13.199 ppb	12:05:47
3	Mn 257.610†	115656.1	113271.9	386.27 µg/L	386.27 ppb	12:05:47
3	Mo 202.031†	4.8	11.6	2.1644 µg/L	2.1644 ppb	12:06:08
3	Ni 231.604†	542.8	223.7	12.261 µg/L	12.261 ppb	12:06:08
3	P 214.914†	67.6	44.5	76.603 µg/L	76.603 ppb	12:06:08
3	Pb 220.353†	164.1	66.9	17.273 µg/L	17.273 ppb	12:06:08
3	S 181.975 Axial†	61.9	46.6	201.09 µg/L	201.09 ppb	12:06:08
3	Sb 206.836†	20.0	-0.6	-1.5337 µg/L	-1.5337 ppb	12:06:08
3	Se 196.026†	5.7	-10.3	48.714 µg/L	48.714 ppb	12:06:08
3	SiO2†	66836.9	63977.9	13490 µg/L	13490 ppb	12:05:47
3	Si 251.611†	79723.5	77602.4	6282.6 µg/L	6282.6 ppb	12:05:47
3	Sn 189.927†	-2.6	-5.7	-4.8905 µg/L	-4.8905 ppb	12:06:08
3	Ti 334.940†	126613.5	123613.8	291.66 µg/L	291.66 ppb	12:05:42
3	Tl 190.801†	-24.9	-1.4	6.1026 µg/L	6.1026 ppb	12:06:08
3	U 409.014†	-531.2	-475.4	-45.472 µg/L	-45.472 ppb	12:05:47
3	V 292.402†	2548.4	2522.7	28.975 µg/L	28.975 ppb	12:05:47
3	Zn 213.857†	3254.6	2662.0	65.225 µg/L	65.225 ppb	12:05:47

## Mean Data: 1202030955|948065|5

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	2063877.7	100.95 %		1.376			1.36%
Sc RADIAL	57809.4	99.6 %		0.88			0.89%
Y 371.029	1418055.6	100.93 %		1.435			1.42%
Ag 328.068†	-321.0	-0.7236 µg/L		0.18409	-0.7236 ppb	0.18409	25.44%
Al 396.153Radial†	21349.7	15695 µg/L		23.2	15695 ppb	23.2	0.15%
As 188.979†	1.7	4.2234 µg/L		2.28948	4.2234 ppb	2.28948	54.21%
B 249.677†	213.8	-4.0282 µg/L		0.89960	-4.0282 ppb	0.89960	22.33%
Ba 233.527†	8954.2	230.22 µg/L		7.011	230.22 ppb	7.011	3.05%
Be 313.107†	2783.3	1.6657 µg/L		0.06166	1.6657 ppb	0.06166	3.70%
Ca 317.933Radial†	9862.0	9134.3 µg/L		27.01	9134.3 ppb	27.01	0.30%
Cd 226.502†	74.5	-0.8629 µg/L		0.09940	-0.8629 ppb	0.09940	11.52%
Co 228.616†	335.5	15.617 µg/L		1.2628	15.617 ppb	1.2628	8.09%
Cr 267.716†	685.9	14.600 µg/L		0.6363	14.600 ppb	0.6363	4.36%
Cu 324.752†	1491.2	13.770 µg/L		0.5132	13.770 ppb	0.5132	3.73%
Fe 238.204 Radial†	2973.8	25549 µg/L		45.7	25549 ppb	45.7	0.18%
K 766.490 Radial†	3140.0	2208.8 µg/L		9.35	2208.8 ppb	9.35	0.42%
Mg 279.077 IEC†	369.9	3454.0 µg/L		14.20	3454.0 ppb	14.20	0.41%
Mn 257.610†	117343.4	400.03 µg/L		12.422	400.03 ppb	12.422	3.11%
Mo 202.031†	14.4	2.4519 µg/L		0.28139	2.4519 ppb	0.28139	11.48%
Na 589.592 Radial†	2427.5	788.04 µg/L		7.117	788.04 ppb	7.117	0.90%



Ni 231.604†	241.4	13.201 µg/L	0.8321	13.201 ppb	0.8321	6.30%
P 214.914†	53.5	95.470 µg/L	19.5183	95.470 ppb	19.5183	20.44%
Pb 220.353†	69.8	18.026 µg/L	1.2033	18.026 ppb	1.2033	6.68%
S 181.975 Axial†	50.3	216.96 µg/L	13.827	216.96 ppb	13.827	6.37%
Sb 206.836†	4.2	3.1134 µg/L	4.38757	3.1134 ppb	4.38757	140.93%
Se 196.026†	-10.9	47.603 µg/L	4.3921	47.603 ppb	4.3921	9.23%
SiO2†	65729.7	13860 µg/L	337.8	13860 ppb	337.8	2.44%
Si 251.611†	79757.4	6457.0 µg/L	161.77	6457.0 ppb	161.77	2.51%
Sn 189.927†	-7.4	-5.6804 µg/L	0.77248	-5.6804 ppb	0.77248	13.60%
Sr 421.552†	4992.7	50.485 µg/L	0.1059	50.485 ppb	0.1059	0.21%
Ti 334.940†	128462.5	303.10 µg/L	9.954	303.10 ppb	9.954	3.28%
Tl 190.801†	-2.9	4.1666 µg/L	2.19286	4.1666 ppb	2.19286	52.63%
U 409.014†	-417.0	-40.385 µg/L	8.1855	-40.385 ppb	8.1855	20.27%
V 292.402†	2639.3	30.178 µg/L	1.0485	30.178 ppb	1.0485	3.47%
Zn 213.857†	2752.3	67.486 µg/L	2.0826	67.486 ppb	2.0826	3.09%

Sequence No.: 10

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/17/2010 12:06:15

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	60642.4	60642.4	104 %		12:06:53
1	Al 396.153Radial†	6824.9	6554.7	4808.2 µg/L	4808.2 ppb	12:06:53
1	Ca 317.933Radial†	5617.4	5180.7	4798.4 µg/L	4798.4 ppb	12:07:13
1	Fe 238.204 Radial†	612.3	568.7	4896.8 µg/L	4896.8 ppb	12:07:13
1	K 766.490 Radial†	7409.4	6914.3	4863.8 µg/L	4863.8 ppb	12:06:53
1	Mg 279.077 IEC†	563.0	525.4	4948.9 µg/L	4948.9 ppb	12:07:13
1	Na 589.592 Radial†	31755.0	29825.1	9682.3 µg/L	9682.3 ppb	12:06:53
1	Sr 421.552†	49737.0	47567.8	480.99 µg/L	480.99 ppb	12:06:53
1	Sc 361.383	2102125.1	2102125.1	102.82 %		12:08:12
1	Y 371.029	1434702.8	1434702.8	102.12 %		12:08:12
1	Ag 328.068†	64404.3	63159.3	497.89 µg/L	497.89 ppb	12:08:17
1	As 188.979†	272.6	263.6	506.25 µg/L	506.25 ppb	12:08:38
1	B 249.677†	12074.1	11445.7	495.12 µg/L	495.12 ppb	12:08:17
1	Ba 233.527†	20096.5	19562.6	503.77 µg/L	503.77 ppb	12:08:17
1	Be 313.107†	799339.3	780356.4	499.21 µg/L	499.21 ppb	12:08:12
1	Cd 226.502†	19049.3	18664.2	504.08 µg/L	504.08 ppb	12:08:17
1	Co 228.616†	10769.8	10479.0	506.89 µg/L	506.89 ppb	12:08:17
1	Cr 267.716†	24323.1	23687.4	503.94 µg/L	503.94 ppb	12:08:17
1	Cu 324.752†	77286.0	72626.1	498.35 µg/L	498.35 ppb	12:08:17
1	Mn 257.610†	152672.2	148716.3	503.30 µg/L	503.30 ppb	12:08:12
1	Mo 202.031†	5105.3	4972.0	511.84 µg/L	511.84 ppb	12:08:38
1	Ni 231.604†	10053.6	9470.8	505.19 µg/L	505.19 ppb	12:08:17
1	P 214.914†	1263.4	1207.1	2498.5 µg/L	2498.5 ppb	12:08:38
1	Pb 220.353†	2109.0	1957.6	507.95 µg/L	507.95 ppb	12:08:38
1	S 181.975 Axial†	253.4	232.6	1002.9 µg/L	1002.9 ppb	12:08:38
1	Sb 206.836†	571.8	535.9	515.02 µg/L	515.02 ppb	12:08:38
1	Se 196.026†	361.9	336.1	519.72 µg/L	519.72 ppb	12:08:38
1	SiO2†	27832.0	25723.2	5424.0 µg/L	5424.0 ppb	12:08:17
1	Si 251.611†	32616.2	31406.1	2542.6 µg/L	2542.6 ppb	12:08:17
1	Sn 189.927†	1188.1	1152.4	513.41 µg/L	513.41 ppb	12:08:38
1	Ti 334.940†	216919.8	210832.4	497.35 µg/L	497.35 ppb	12:08:12
1	Tl 190.801†	350.7	364.0	510.68 µg/L	510.68 ppb	12:08:38
1	U 409.014†	5853.1	5736.0	498.01 µg/L	498.01 ppb	12:08:17
1	V 292.402†	49862.2	48525.0	505.62 µg/L	505.62 ppb	12:08:17
1	Zn 213.857†	21220.1	20118.5	500.61 µg/L	500.61 ppb	12:08:17
2	Sc RADIAL	60055.0	60055.0	103 %		12:07:18
2	Al 396.153Radial†	6932.3	6722.3	4931.3 µg/L	4931.3 ppb	12:07:18
2	Ca 317.933Radial†	5635.4	5250.7	4863.2 µg/L	4863.2 ppb	12:07:38
2	Fe 238.204 Radial†	616.5	578.6	4981.4 µg/L	4981.4 ppb	12:07:38
2	K 766.490 Radial†	7468.0	7040.3	4952.5 µg/L	4952.5 ppb	12:07:18
2	Mg 279.077 IEC†	557.3	525.1	4946.0 µg/L	4946.0 ppb	12:07:38
2	Na 589.592 Radial†	32184.7	30537.7	9913.6 µg/L	9913.6 ppb	12:07:18
2	Sr 421.552†	50576.6	48844.7	493.90 µg/L	493.90 ppb	12:07:18
2	Sc 361.383	2108587.1	2108587.1	103.14 %		12:08:44
2	Y 371.029	1437971.4	1437971.4	102.35 %		12:08:44
2	Ag 328.068†	64758.4	63310.7	499.09 µg/L	499.09 ppb	12:08:50
2	As 188.979†	284.9	274.8	527.71 µg/L	527.71 ppb	12:09:10
2	B 249.677†	12148.7	11482.1	496.65 µg/L	496.65 ppb	12:08:50
2	Ba 233.527†	20197.1	19600.3	504.74 µg/L	504.74 ppb	12:08:50
2	Be 313.107†	807076.4	785475.6	502.48 µg/L	502.48 ppb	12:08:44
2	Cd 226.502†	19152.6	18707.6	505.24 µg/L	505.24 ppb	12:08:50
2	Co 228.616†	10803.6	10479.7	506.92 µg/L	506.92 ppb	12:08:50
2	Cr 267.716†	24412.3	23701.3	504.24 µg/L	504.24 ppb	12:08:50
2	Cu 324.752†	77576.1	72677.0	498.71 µg/L	498.71 ppb	12:08:50
2	Mn 257.610†	154267.5	149808.0	507.01 µg/L	507.01 ppb	12:08:44
2	Mo 202.031†	5148.9	4999.0	514.62 µg/L	514.62 ppb	12:09:10
2	Ni 231.604†	10149.7	9533.9	508.57 µg/L	508.57 ppb	12:08:50
2	P 214.914†	1278.9	1218.4	2522.4 µg/L	2522.4 ppb	12:09:10
2	Pb 220.353†	2118.3	1960.3	508.65 µg/L	508.65 ppb	12:09:10

2	S 181.975 Axial†	259.4	237.7	1024.6 µg/L	1024.6 ppb	12:09:10
2	Sb 206.836†	582.5	544.6	523.39 µg/L	523.39 ppb	12:09:10
2	Se 196.026†	363.9	337.0	521.30 µg/L	521.30 ppb	12:09:10
2	SiO2†	28144.6	25943.4	5470.5 µg/L	5470.5 ppb	12:08:50
2	Si 251.611†	32951.3	31633.7	2561.0 µg/L	2561.0 ppb	12:08:50
2	Sn 189.927†	1200.8	1161.2	517.33 µg/L	517.33 ppb	12:09:10
2	Ti 334.940†	219071.3	212271.9	500.75 µg/L	500.75 ppb	12:08:44
2	Tl 190.801†	355.7	367.8	516.00 µg/L	516.00 ppb	12:09:10
2	U 409.014†	5961.5	5823.7	505.62 µg/L	505.62 ppb	12:08:50
2	V 292.402†	50168.7	48673.5	507.19 µg/L	507.19 ppb	12:08:50
2	Zn 213.857†	21352.5	20183.6	502.23 µg/L	502.23 ppb	12:08:50
3	Sc RADIAL	60137.6	60137.6	104 %		12:07:43
3	Al 396.153Radial†	6918.8	6700.2	4916.3 µg/L	4916.3 ppb	12:07:43
3	Ca 317.933Radial†	5634.4	5242.3	4855.4 µg/L	4855.4 ppb	12:08:03
3	Fe 238.204 Radial†	617.0	578.2	4977.9 µg/L	4977.9 ppb	12:08:03
3	K 766.490 Radial†	7496.1	7057.6	4964.6 µg/L	4964.6 ppb	12:07:43
3	Mg 279.077 IEC†	559.3	526.3	4956.0 µg/L	4956.0 ppb	12:08:03
3	Na 589.592 Radial†	32084.6	30398.3	9868.4 µg/L	9868.4 ppb	12:07:43
3	Sr 421.552†	50405.4	48612.4	491.55 µg/L	491.55 ppb	12:07:43
3	Sc 361.383	2065428.8	2065428.8	101.03 %		12:09:17
3	Y 371.029	1407855.5	1407855.5	100.20 %		12:09:17
3	Ag 328.068†	63197.2	63077.4	497.14 µg/L	497.14 ppb	12:09:22
3	As 188.979†	243.5	239.6	460.13 µg/L	460.13 ppb	12:09:42
3	B 249.677†	11825.4	11408.2	493.41 µg/L	493.41 ppb	12:09:22
3	Ba 233.527†	19273.9	19095.6	491.73 µg/L	491.73 ppb	12:09:22
3	Be 313.107†	780805.8	775823.5	496.31 µg/L	496.31 ppb	12:09:17
3	Cd 226.502†	18215.5	18168.0	490.65 µg/L	490.65 ppb	12:09:22
3	Co 228.616†	10209.2	10110.3	488.99 µg/L	488.99 ppb	12:09:22
3	Cr 267.716†	22745.1	22545.8	479.66 µg/L	479.66 ppb	12:09:22
3	Cu 324.752†	73667.7	70380.1	482.97 µg/L	482.97 ppb	12:09:22
3	Mn 257.610†	149405.3	148120.7	501.30 µg/L	501.30 ppb	12:09:17
3	Mo 202.031†	4441.1	4402.8	453.26 µg/L	453.26 ppb	12:09:42
3	Ni 231.604†	9613.0	9208.3	491.20 µg/L	491.20 ppb	12:09:22
3	P 214.914†	1124.9	1091.8	2256.1 µg/L	2256.1 ppb	12:09:42
3	Pb 220.353†	1920.4	1807.3	468.85 µg/L	468.85 ppb	12:09:42
3	S 181.975 Axial†	232.5	216.3	932.39 µg/L	932.39 ppb	12:09:42
3	Sb 206.836†	499.2	474.0	455.08 µg/L	455.08 ppb	12:09:42
3	Se 196.026†	331.0	311.7	482.77 µg/L	482.77 ppb	12:09:42
3	SiO2†	27155.2	25534.2	5384.2 µg/L	5384.2 ppb	12:09:22
3	Si 251.611†	31870.6	31231.6	2528.5 µg/L	2528.5 ppb	12:09:22
3	Sn 189.927†	1025.0	1011.5	450.66 µg/L	450.66 ppb	12:09:42
3	Ti 334.940†	211431.2	209147.8	493.37 µg/L	493.37 ppb	12:09:17
3	Tl 190.801†	323.5	343.2	481.75 µg/L	481.75 ppb	12:09:42
3	U 409.014†	5589.5	5576.3	484.10 µg/L	484.10 ppb	12:09:22
3	V 292.402†	47241.8	46792.9	487.28 µg/L	487.28 ppb	12:09:22
3	Zn 213.857†	20273.4	19548.1	486.40 µg/L	486.40 ppb	12:09:22

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2092047.0	102.33 %	1.139			1.11%
Sc RADIAL	60278.3	104 %	0.5			0.53%
Y 371.029	1426843.2	101.56 %	1.176			1.16%
Ag 328.068†	63182.5	498.04 µg/L	0.985	498.04 ppb	0.985	0.20%
QC value within limits for Ag 328.068 Recovery = 99.61%						
Al 396.153Radial†	6659.1	4885.3 µg/L	67.18	4885.3 ppb	67.18	1.38%
QC value within limits for Al 396.153Radial Recovery = 97.71%						
As 188.979†	259.3	498.03 µg/L	34.530	498.03 ppb	34.530	6.93%
QC value within limits for As 188.979 Recovery = 99.61%						
B 249.677†	11445.4	495.06 µg/L	1.624	495.06 ppb	1.624	0.33%
QC value within limits for B 249.677 Recovery = 99.01%						
Ba 233.527†	19419.5	500.08 µg/L	7.246	500.08 ppb	7.246	1.45%
QC value within limits for Ba 233.527 Recovery = 100.02%						
Be 313.107†	780551.8	499.33 µg/L	3.089	499.33 ppb	3.089	0.62%
QC value within limits for Be 313.107 Recovery = 99.87%						
Ca 317.933Radial†	5224.5	4839.0 µg/L	35.38	4839.0 ppb	35.38	0.73%
QC value within limits for Ca 317.933Radial Recovery = 96.78%						
Cd 226.502†	18513.2	499.99 µg/L	8.109	499.99 ppb	8.109	1.62%
QC value within limits for Cd 226.502 Recovery = 100.00%						
Co 228.616†	10356.4	500.94 µg/L	10.344	500.94 ppb	10.344	2.06%

QC value within limits for Co 228.616 Recovery = 100.19%							
Cr 267.716†	23311.5	495.94 µg/L	14.107	495.94 ppb	14.107	2.84%	
QC value within limits for Cr 267.716 Recovery = 99.19%							
Cu 324.752†	71894.4	493.35 µg/L	8.985	493.35 ppb	8.985	1.82%	
QC value within limits for Cu 324.752 Recovery = 98.67%							
Fe 238.204 Radial†	575.2	4952.0 µg/L	47.85	4952.0 ppb	47.85	0.97%	
QC value within limits for Fe 238.204 Radial Recovery = 99.04%							
K 766.490 Radial†	7004.1	4927.0 µg/L	55.01	4927.0 ppb	55.01	1.12%	
QC value within limits for K 766.490 Radial Recovery = 98.54%							
Mg 279.077 IEC†	525.6	4950.3 µg/L	5.18	4950.3 ppb	5.18	0.10%	
QC value within limits for Mg 279.077 IEC Recovery = 99.01%							
Mn 257.610†	148881.7	503.87 µg/L	2.895	503.87 ppb	2.895	0.57%	
QC value within limits for Mn 257.610 Recovery = 100.77%							
Mo 202.031†	4791.3	493.24 µg/L	34.651	493.24 ppb	34.651	7.03%	
QC value within limits for Mo 202.031 Recovery = 98.65%							
Na 589.592 Radial†	30253.7	9821.4 µg/L	122.60	9821.4 ppb	122.60	1.25%	
QC value within limits for Na 589.592 Radial Recovery = 98.21%							
Ni 231.604†	9404.4	501.65 µg/L	9.208	501.65 ppb	9.208	1.84%	
QC value within limits for Ni 231.604 Recovery = 100.33%							
P 214.914†	1172.5	2425.7 µg/L	147.36	2425.7 ppb	147.36	6.08%	
QC value within limits for P 214.914 Recovery = 97.03%							
Pb 220.353†	1908.4	495.15 µg/L	22.776	495.15 ppb	22.776	4.60%	
QC value within limits for Pb 220.353 Recovery = 99.03%							
S 181.975 Axial†	228.9	986.62 µg/L	48.201	986.62 ppb	48.201	4.89%	
QC value within limits for S 181.975 Axial Recovery = 98.66%							
Sb 206.836†	518.2	497.83 µg/L	37.262	497.83 ppb	37.262	7.48%	
QC value within limits for Sb 206.836 Recovery = 99.57%							
Se 196.026†	328.3	507.93 µg/L	21.805	507.93 ppb	21.805	4.29%	
QC value within limits for Se 196.026 Recovery = 101.59%							
SiO2†	25733.6	5426.2 µg/L	43.18	5426.2 ppb	43.18	0.80%	
QC value within limits for SiO2 Recovery = 101.47%							
Si 251.611†	31423.8	2544.0 µg/L	16.32	2544.0 ppb	16.32	0.64%	
QC value within limits for Si 251.611 Recovery = 101.76%							
Sn 189.927†	1108.3	493.80 µg/L	37.414	493.80 ppb	37.414	7.58%	
QC value within limits for Sn 189.927 Recovery = 98.76%							
Sr 421.552†	48341.6	488.81 µg/L	6.878	488.81 ppb	6.878	1.41%	
QC value within limits for Sr 421.552 Recovery = 97.76%							
Ti 334.940†	210750.7	497.16 µg/L	3.691	497.16 ppb	3.691	0.74%	
QC value within limits for Ti 334.940 Recovery = 99.43%							
Tl 190.801†	358.3	502.81 µg/L	18.435	502.81 ppb	18.435	3.67%	
QC value within limits for Tl 190.801 Recovery = 100.56%							
U 409.014†	5712.0	495.91 µg/L	10.912	495.91 ppb	10.912	2.20%	
QC value within limits for U 409.014 Recovery = 99.18%							
V 292.402†	47997.2	500.03 µg/L	11.069	500.03 ppb	11.069	2.21%	
QC value within limits for V 292.402 Recovery = 100.01%							
Zn 213.857†	19950.1	496.41 µg/L	8.708	496.41 ppb	8.708	1.75%	
QC value within limits for Zn 213.857 Recovery = 99.28%							
All analyte(s) passed QC.							

Sequence No.: 11

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/17/2010 12:09:50

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	58004.9	58004.9	99.9 %		12:10:22
1	Al 396.153Radial†	7.8	30.7	22.597 µg/L	22.597 ppb	12:10:22
1	Ca 317.933Radial†	197.7	2.4	2.2042 µg/L	2.2042 ppb	12:10:42
1	Fe 238.204 Radial†	18.7	1.5	12.485 µg/L	12.485 ppb	12:10:42
1	K 766.490 Radial†	220.2	43.4	30.558 µg/L	30.558 ppb	12:10:22
1	Mg 279.077 IEC†	8.5	-4.9	-46.184 µg/L	-46.184 ppb	12:10:42
1	Na 589.592 Radial†	602.0	36.2	11.765 µg/L	11.765 ppb	12:10:22
1	Sr 421.552†	32.2	-1.1	-0.0114 µg/L	-0.0114 ppb	12:10:22
1	Sc 361.383	2094242.0	2094242.0	102.44 %		12:11:40
1	Y 371.029	1433211.2	1433211.2	102.01 %		12:11:40
1	Ag 328.068†	-584.2	-46.6	-0.3655 µg/L	-0.3655 ppb	12:11:46
1	As 188.979†	-2.8	-4.2	-8.0963 µg/L	-8.0963 ppb	12:12:06
1	B 249.677†	333.7	29.0	1.2540 µg/L	1.2540 ppb	12:12:06
1	Ba 233.527†	-7.9	10.3	0.2634 µg/L	0.2634 ppb	12:12:06
1	Be 313.107†	-3005.1	33.9	0.0216 µg/L	0.0216 ppb	12:11:46
1	Cd 226.502†	-135.3	5.9	0.1570 µg/L	0.1570 ppb	12:12:06
1	Co 228.616†	1.4	6.4	0.3100 µg/L	0.3100 ppb	12:12:06
1	Cr 267.716†	-13.1	19.4	0.4117 µg/L	0.4117 ppb	12:12:06
1	Cu 324.752†	2609.4	9.7	0.0682 µg/L	0.0682 ppb	12:11:46
1	Mn 257.610†	-111.9	127.4	0.4341 µg/L	0.4341 ppb	12:12:06
1	Mo 202.031†	-4.4	2.6	0.2679 µg/L	0.2679 ppb	12:12:06
1	Ni 231.604†	304.9	-9.2	-0.4901 µg/L	-0.4901 ppb	12:12:06
1	P 214.914†	35.3	12.9	27.164 µg/L	27.164 ppb	12:12:06
1	Pb 220.353†	98.0	2.1	0.5377 µg/L	0.5377 ppb	12:12:06
1	S 181.975 Axial†	20.2	5.9	25.598 µg/L	25.598 ppb	12:12:06
1	Sb 206.836†	24.9	4.2	4.0107 µg/L	4.0107 ppb	12:12:06
1	Se 196.026†	14.8	-1.5	-2.1360 µg/L	-2.1360 ppb	12:12:06
1	SiO2†	1487.3	107.5	22.657 µg/L	22.657 ppb	12:11:46
1	Si 251.611†	479.6	153.7	12.441 µg/L	12.441 ppb	12:12:06
1	Sn 189.927†	0.9	-2.2	-0.9812 µg/L	-0.9812 ppb	12:12:06
1	Ti 334.940†	231.4	95.3	0.2287 µg/L	0.2287 ppb	12:11:46
1	Tl 190.801†	-23.4	0.1	0.1088 µg/L	0.1088 ppb	12:12:06
1	U 409.014†	43.1	85.8	7.4594 µg/L	7.4594 ppb	12:11:46
1	V 292.402†	-56.4	-23.0	-0.2247 µg/L	-0.2247 ppb	12:11:46
1	Zn 213.857†	504.2	-26.7	-0.6649 µg/L	-0.6649 ppb	12:12:06
2	Sc RADIAL	58369.4	58369.4	101 %		12:10:47
2	Al 396.153Radial†	-21.6	1.5	1.0647 µg/L	1.0647 ppb	12:10:47
2	Ca 317.933Radial†	208.5	11.9	11.024 µg/L	11.024 ppb	12:11:07
2	Fe 238.204 Radial†	19.9	2.5	21.502 µg/L	21.502 ppb	12:11:07
2	K 766.490 Radial†	145.6	-32.1	-22.548 µg/L	-22.548 ppb	12:10:47
2	Mg 279.077 IEC†	8.5	-5.0	-47.290 µg/L	-47.290 ppb	12:11:07
2	Na 589.592 Radial†	531.7	-37.4	-12.147 µg/L	-12.147 ppb	12:10:47
2	Sr 421.552†	46.1	12.5	0.1269 µg/L	0.1269 ppb	12:10:47
2	Sc 361.383	2088712.7	2088712.7	102.17 %		12:12:12
2	Y 371.029	1429118.4	1429118.4	101.72 %		12:12:12
2	Ag 328.068†	-562.7	-27.1	-0.2109 µg/L	-0.2109 ppb	12:12:17
2	As 188.979†	-0.9	-2.4	-4.5714 µg/L	-4.5714 ppb	12:12:37
2	B 249.677†	339.9	35.9	1.5482 µg/L	1.5482 ppb	12:12:37
2	Ba 233.527†	-18.9	-0.6	-0.0143 µg/L	-0.0143 ppb	12:12:37
2	Be 313.107†	-3102.5	-69.1	-0.0443 µg/L	-0.0443 ppb	12:12:17
2	Cd 226.502†	-131.3	9.4	0.2516 µg/L	0.2516 ppb	12:12:37
2	Co 228.616†	-0.8	4.2	0.2033 µg/L	0.2033 ppb	12:12:37
2	Cr 267.716†	-19.4	13.2	0.2802 µg/L	0.2802 ppb	12:12:37
2	Cu 324.752†	2631.0	37.6	0.2607 µg/L	0.2607 ppb	12:12:17
2	Mn 257.610†	-154.2	85.6	0.2943 µg/L	0.2943 ppb	12:12:37
2	Mo 202.031†	-1.2	5.7	0.5887 µg/L	0.5887 ppb	12:12:37
2	Ni 231.604†	306.6	-6.7	-0.3551 µg/L	-0.3551 ppb	12:12:37
2	P 214.914†	21.7	-0.3	-0.7790 µg/L	-0.7790 ppb	12:12:37
2	Pb 220.353†	97.3	1.7	0.4390 µg/L	0.4390 ppb	12:12:37

2	S 181.975 Axial†	18.7	4.5	19.366 µg/L	19.366 ppb	12:12:37
2	Sb 206.836†	28.1	7.4	7.0701 µg/L	7.0701 ppb	12:12:37
2	Se 196.026†	13.3	-2.8	-4.2379 µg/L	-4.2379 ppb	12:12:37
2	SiO2†	1497.1	120.9	25.485 µg/L	25.485 ppb	12:12:17
2	Si 251.611†	474.6	150.1	12.148 µg/L	12.148 ppb	12:12:37
2	Sn 189.927†	-1.9	-4.9	-2.1947 µg/L	-2.1947 ppb	12:12:37
2	Ti 334.940†	268.6	132.3	0.3162 µg/L	0.3162 ppb	12:12:17
2	Tl 190.801†	-25.0	-1.5	-2.1011 µg/L	-2.1011 ppb	12:12:37
2	U 409.014†	-108.0	-62.0	-5.4011 µg/L	-5.4011 ppb	12:12:17
2	V 292.402†	-34.6	-1.8	-0.0167 µg/L	-0.0167 ppb	12:12:17
2	Zn 213.857†	512.4	-17.4	-0.4323 µg/L	-0.4323 ppb	12:12:37
3	Sc RADIAL	59004.6	59004.6	102 %		12:11:12
3	Al 396.153Radial†	-11.2	11.9	8.7379 µg/L	8.7379 ppb	12:11:12
3	Ca 317.933Radial†	195.6	-3.0	-2.8044 µg/L	-2.8044 ppb	12:11:33
3	Fe 238.204 Radial†	18.6	1.1	9.2468 µg/L	9.2468 ppb	12:11:33
3	K 766.490 Radial†	148.4	-30.9	-21.748 µg/L	-21.748 ppb	12:11:12
3	Mg 279.077 IEC†	10.1	-3.5	-32.695 µg/L	-32.695 ppb	12:11:33
3	Na 589.592 Radial†	537.7	-37.3	-12.105 µg/L	-12.105 ppb	12:11:12
3	Sr 421.552†	67.2	32.7	0.3310 µg/L	0.3310 ppb	12:11:12
3	Sc 361.383	2071395.8	2071395.8	101.32 %		12:12:43
3	Y 371.029	1417025.5	1417025.5	100.86 %		12:12:43
3	Ag 328.068†	-535.6	-5.0	-0.0374 µg/L	-0.0374 ppb	12:12:48
3	As 188.979†	-1.2	-2.7	-5.2270 µg/L	-5.2270 ppb	12:13:08
3	B 249.677†	335.7	34.6	1.4981 µg/L	1.4981 ppb	12:13:08
3	Ba 233.527†	-14.6	3.5	0.0912 µg/L	0.0912 ppb	12:13:08
3	Be 313.107†	-3009.9	-3.1	-0.0021 µg/L	-0.0021 ppb	12:12:48
3	Cd 226.502†	-132.4	7.2	0.1939 µg/L	0.1939 ppb	12:13:08
3	Co 228.616†	-8.5	-3.4	-0.1628 µg/L	-0.1628 ppb	12:13:08
3	Cr 267.716†	-25.2	7.3	0.1553 µg/L	0.1553 ppb	12:13:08
3	Cu 324.752†	2589.9	18.6	0.1286 µg/L	0.1286 ppb	12:12:48
3	Mn 257.610†	-164.2	74.5	0.2545 µg/L	0.2545 ppb	12:13:08
3	Mo 202.031†	-0.7	6.2	0.6361 µg/L	0.6361 ppb	12:13:08
3	Ni 231.604†	300.6	-10.1	-0.5367 µg/L	-0.5367 ppb	12:13:08
3	P 214.914†	23.7	1.8	3.7789 µg/L	3.7789 ppb	12:13:08
3	Pb 220.353†	101.2	6.3	1.6460 µg/L	1.6460 ppb	12:13:08
3	S 181.975 Axial†	16.6	2.6	11.249 µg/L	11.249 ppb	12:13:08
3	Sb 206.836†	22.1	1.7	1.6298 µg/L	1.6298 ppb	12:13:08
3	Se 196.026†	8.6	-7.3	-11.110 µg/L	-11.110 ppb	12:13:08
3	SiO2†	1521.6	157.3	33.163 µg/L	33.163 ppb	12:12:48
3	Si 251.611†	492.2	171.3	13.868 µg/L	13.868 ppb	12:13:08
3	Sn 189.927†	2.2	-0.9	-0.3934 µg/L	-0.3934 ppb	12:13:08
3	Ti 334.940†	240.1	106.4	0.2536 µg/L	0.2536 ppb	12:12:48
3	Tl 190.801†	-21.0	2.2	3.0662 µg/L	3.0662 ppb	12:13:08
3	U 409.014†	-48.8	-4.4	-0.3873 µg/L	-0.3873 ppb	12:12:48
3	V 292.402†	-20.9	11.5	0.1240 µg/L	0.1240 ppb	12:12:48
3	Zn 213.857†	501.4	-24.0	-0.5978 µg/L	-0.5978 ppb	12:13:08

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2084783.5	101.98 %	0.583			0.57%
Sc RADIAL	58459.6	101 %	0.9			0.87%
Y 371.029	1426451.7	101.53 %	0.599			0.59%
Ag 328.068†	-26.2	-0.2046 µg/L	0.16411	-0.2046 ppb	0.16411	80.22%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	14.7	10.800 µg/L	10.9132	10.800 ppb	10.9132	101.05%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-3.1	-5.9649 µg/L	1.87473	-5.9649 ppb	1.87473	31.43%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	33.2	1.4334 µg/L	0.15744	1.4334 ppb	0.15744	10.98%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	4.4	0.1134 µg/L	0.14021	0.1134 ppb	0.14021	123.63%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-12.8	-0.0083 µg/L	0.03341	-0.0083 ppb	0.03341	404.30%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	3.8	3.4746 µg/L	7.00123	3.4746 ppb	7.00123	201.50%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	7.5	0.2008 µg/L	0.04765	0.2008 ppb	0.04765	23.73%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.4	0.1168 µg/L	0.24798	0.1168 ppb	0.24798	212.30%

QC value within limits	for Co 228.616	Recovery = Not calculated				
Cr 267.716†	13.3	0.2824 µg/L	0.12824	0.2824 ppb	0.12824	45.41%
QC value within limits	for Cr 267.716	Recovery = Not calculated				
Cu 324.752†	22.0	0.1525 µg/L	0.09849	0.1525 ppb	0.09849	64.58%
QC value within limits	for Cu 324.752	Recovery = Not calculated				
Fe 238.204 Radial†	1.7	14.411 µg/L	6.3504	14.411 ppb	6.3504	44.07%
QC value within limits	for Fe 238.204 Radial	Recovery = Not calculated				
K 766.490 Radial†	-6.5	-4.5794 µg/L	30.43238	-4.5794 ppb	30.43238	664.55%
QC value within limits	for K 766.490 Radial	Recovery = Not calculated				
Mg 279.077 IEC†	-4.5	-42.056 µg/L	8.1258	-42.056 ppb	8.1258	19.32%
QC value within limits	for Mg 279.077 IEC	Recovery = Not calculated				
Mn 257.610†	95.8	0.3277 µg/L	0.09432	0.3277 ppb	0.09432	28.79%
QC value within limits	for Mn 257.610	Recovery = Not calculated				
Mo 202.031†	4.8	0.4976 µg/L	0.20032	0.4976 ppb	0.20032	40.26%
QC value within limits	for Mo 202.031	Recovery = Not calculated				
Na 589.592 Radial†	-12.8	-4.1623 µg/L	13.79322	-4.1623 ppb	13.79322	331.39%
QC value within limits	for Na 589.592 Radial	Recovery = Not calculated				
Ni 231.604†	-8.6	-0.4607 µg/L	0.09432	-0.4607 ppb	0.09432	20.47%
QC value within limits	for Ni 231.604	Recovery = Not calculated				
P 214.914†	4.8	10.055 µg/L	14.9915	10.055 ppb	14.9915	149.10%
QC value within limits	for P 214.914	Recovery = Not calculated				
Pb 220.353†	3.4	0.8742 µg/L	0.67016	0.8742 ppb	0.67016	76.66%
QC value within limits	for Pb 220.353	Recovery = Not calculated				
S 181.975 Axial†	4.3	18.738 µg/L	7.1953	18.738 ppb	7.1953	38.40%
QC value within limits	for S 181.975 Axial	Recovery = Not calculated				
Sb 206.836†	4.4	4.2369 µg/L	2.72718	4.2369 ppb	2.72718	64.37%
QC value within limits	for Sb 206.836	Recovery = Not calculated				
Se 196.026†	-3.9	-5.8278 µg/L	4.69332	-5.8278 ppb	4.69332	80.53%
QC value within limits	for Se 196.026	Recovery = Not calculated				
SiO2†	128.5	27.102 µg/L	5.4365	27.102 ppb	5.4365	20.06%
QC value within limits	for SiO2	Recovery = Not calculated				
Si 251.611†	158.3	12.819 µg/L	0.9204	12.819 ppb	0.9204	7.18%
QC value within limits	for Si 251.611	Recovery = Not calculated				
Sn 189.927†	-2.7	-1.1898 µg/L	0.91862	-1.1898 ppb	0.91862	77.21%
QC value within limits	for Sn 189.927	Recovery = Not calculated				
Sr 421.552†	14.7	0.1488 µg/L	0.17225	0.1488 ppb	0.17225	115.74%
QC value within limits	for Sr 421.552	Recovery = Not calculated				
Ti 334.940†	111.3	0.2661 µg/L	0.04508	0.2661 ppb	0.04508	16.94%
QC value within limits	for Ti 334.940	Recovery = Not calculated				
Tl 190.801†	0.3	0.3579 µg/L	2.59265	0.3579 ppb	2.59265	724.33%
QC value within limits	for Tl 190.801	Recovery = Not calculated				
U 409.014†	6.4	0.5570 µg/L	6.48204	0.5570 ppb	6.48204	>999.9%
QC value within limits	for U 409.014	Recovery = Not calculated				
V 292.402†	-4.5	-0.0391 µg/L	0.17541	-0.0391 ppb	0.17541	448.11%
QC value within limits	for V 292.402	Recovery = Not calculated				
Zn 213.857†	-22.7	-0.5650 µg/L	0.11967	-0.5650 ppb	0.11967	21.18%
QC value within limits	for Zn 213.857	Recovery = Not calculated				

All analyte(s) passed QC.

Sequence No.: 21

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/17/2010 12:45:00

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	56519.5	56519.5	97.4 %		12:45:37
1	Al 396.153Radial†	7323.6	7543.2	5534.1 µg/L	5534.1 ppb	12:45:37
1	Ca 317.933Radial†	5915.9	5879.5	5445.6 µg/L	5445.6 ppb	12:45:57
1	Fe 238.204 Radial†	650.5	650.8	5602.4 µg/L	5602.4 ppb	12:45:57
1	K 766.490 Radial†	7742.0	7773.1	5468.0 µg/L	5468.0 ppb	12:45:37
1	Mg 279.077 IEC†	595.8	598.4	5635.5 µg/L	5635.5 ppb	12:45:57
1	Na 589.592 Radial†	33494.2	33827.9	10982 µg/L	10982 ppb	12:45:37
1	Sr 421.552†	52913.3	54301.6	549.08 µg/L	549.08 ppb	12:45:37
1	Sc 361.383	2026745.3	2026745.3	99.136 %		12:46:57
1	Y 371.029	1377057.3	1377057.3	98.013 %		12:46:57
1	Ag 328.068†	66338.0	67439.5	531.66 µg/L	531.66 ppb	12:47:02
1	As 188.979†	287.2	288.2	553.50 µg/L	553.50 ppb	12:47:22
1	B 249.677†	12414.9	12226.3	528.69 µg/L	528.69 ppb	12:47:02
1	Ba 233.527†	20743.9	20942.6	539.31 µg/L	539.31 ppb	12:47:02
1	Be 313.107†	830387.6	840588.2	537.74 µg/L	537.74 ppb	12:46:57
1	Cd 226.502†	19588.7	19897.3	537.34 µg/L	537.34 ppb	12:47:02
1	Co 228.616†	11149.1	11251.2	544.24 µg/L	544.24 ppb	12:47:02
1	Cr 267.716†	25029.7	25279.9	537.82 µg/L	537.82 ppb	12:47:02
1	Cu 324.752†	79511.8	77666.8	532.99 µg/L	532.99 ppb	12:47:02
1	Mn 257.610†	158178.8	159793.2	540.82 µg/L	540.82 ppb	12:46:57
1	Mo 202.031†	5288.7	5341.7	549.91 µg/L	549.91 ppb	12:47:22
1	Ni 231.604†	10369.2	10152.8	541.57 µg/L	541.57 ppb	12:47:02
1	P 214.914†	1328.0	1318.0	2729.0 µg/L	2729.0 ppb	12:47:22
1	Pb 220.353†	2196.1	2121.7	550.55 µg/L	550.55 ppb	12:47:22
1	S 181.975 Axial†	267.3	255.8	1102.8 µg/L	1102.8 ppb	12:47:22
1	Sb 206.836†	590.1	575.1	552.67 µg/L	552.67 ppb	12:47:22
1	Se 196.026†	368.6	355.9	551.06 µg/L	551.06 ppb	12:47:22
1	SiO2†	28610.9	27515.6	5802.0 µg/L	5802.0 ppb	12:47:02
1	Si 251.611†	33613.6	33591.9	2719.5 µg/L	2719.5 ppb	12:47:02
1	Sn 189.927†	1240.0	1247.7	555.90 µg/L	555.90 ppb	12:47:22
1	Ti 334.940†	226324.6	228165.3	538.22 µg/L	538.22 ppb	12:46:57
1	Tl 190.801†	358.4	384.5	539.53 µg/L	539.53 ppb	12:47:22
1	U 409.014†	6160.7	6258.0	543.28 µg/L	543.28 ppb	12:47:02
1	V 292.402†	51415.4	51895.4	540.81 µg/L	540.81 ppb	12:47:02
1	Zn 213.857†	21899.5	21571.4	536.73 µg/L	536.73 ppb	12:47:02
2	Sc RADIAL	57128.8	57128.8	98.4 %		12:46:02
2	Al 396.153Radial†	7368.1	7508.3	5508.5 µg/L	5508.5 ppb	12:46:02
2	Ca 317.933Radial†	5904.6	5803.2	5374.9 µg/L	5374.9 ppb	12:46:22
2	Fe 238.204 Radial†	649.8	642.8	5534.3 µg/L	5534.3 ppb	12:46:22
2	K 766.490 Radial†	7863.8	7812.0	5495.4 µg/L	5495.4 ppb	12:46:02
2	Mg 279.077 IEC†	590.8	586.8	5526.4 µg/L	5526.4 ppb	12:46:22
2	Na 589.592 Radial†	33761.1	33732.3	10951 µg/L	10951 ppb	12:46:02
2	Sr 421.552†	53452.7	54270.1	548.76 µg/L	548.76 ppb	12:46:02
2	Sc 361.383	2023995.5	2023995.5	99.002 %		12:47:29
2	Y 371.029	1375239.7	1375239.7	97.883 %		12:47:29
2	Ag 328.068†	65665.7	66851.3	527.03 µg/L	527.03 ppb	12:47:34
2	As 188.979†	281.0	282.4	542.29 µg/L	542.29 ppb	12:47:54
2	B 249.677†	12291.8	12119.0	524.06 µg/L	524.06 ppb	12:47:34
2	Ba 233.527†	20500.8	20725.5	533.72 µg/L	533.72 ppb	12:47:34
2	Be 313.107†	825713.8	837005.3	535.45 µg/L	535.45 ppb	12:47:29
2	Cd 226.502†	19354.5	19687.6	531.68 µg/L	531.68 ppb	12:47:34
2	Co 228.616†	11013.6	11129.6	538.35 µg/L	538.35 ppb	12:47:34
2	Cr 267.716†	24743.5	25025.2	532.40 µg/L	532.40 ppb	12:47:34
2	Cu 324.752†	78841.6	77098.8	529.09 µg/L	529.09 ppb	12:47:34
2	Mn 257.610†	157310.9	159133.3	538.59 µg/L	538.59 ppb	12:47:29
2	Mo 202.031†	5233.0	5292.6	544.85 µg/L	544.85 ppb	12:47:54
2	Ni 231.604†	10273.5	10070.3	537.17 µg/L	537.17 ppb	12:47:34
2	P 214.914†	1314.9	1306.6	2705.3 µg/L	2705.3 ppb	12:47:54
2	Pb 220.353†	2179.9	2108.3	547.07 µg/L	547.07 ppb	12:47:54



2	S 181.975 Axial†	262.6	251.5	1084.1 µg/L	1084.1 ppb	12:47:54
2	Sb 206.836†	582.8	568.5	546.34 µg/L	546.34 ppb	12:47:54
2	Se 196.026†	365.5	353.3	546.98 µg/L	546.98 ppb	12:47:54
2	SiO2†	28424.4	27366.4	5770.5 µg/L	5770.5 ppb	12:47:34
2	Si 251.611†	33337.3	33358.9	2700.7 µg/L	2700.7 ppb	12:47:34
2	Sn 189.927†	1219.2	1228.4	547.30 µg/L	547.30 ppb	12:47:54
2	Ti 334.940†	224974.8	227112.2	535.74 µg/L	535.74 ppb	12:47:29
2	Tl 190.801†	362.0	388.6	545.30 µg/L	545.30 ppb	12:47:54
2	U 409.014†	6119.5	6224.9	540.41 µg/L	540.41 ppb	12:47:34
2	V 292.402†	50931.7	51477.2	536.45 µg/L	536.45 ppb	12:47:34
2	Zn 213.857†	21675.8	21375.4	531.86 µg/L	531.86 ppb	12:47:34
3	Sc RADIAL	57312.1	57312.1	98.7 %		12:46:27
3	Al 396.153Radial†	7322.3	7437.9	5458.6 µg/L	5458.6 ppb	12:46:27
3	Ca 317.933Radial†	5858.6	5737.4	5314.0 µg/L	5314.0 ppb	12:46:48
3	Fe 238.204 Radial†	639.5	630.4	5426.3 µg/L	5426.3 ppb	12:46:48
3	K 766.490 Radial†	7771.5	7693.1	5411.6 µg/L	5411.6 ppb	12:46:27
3	Mg 279.077 IEC†	585.5	579.5	5455.7 µg/L	5455.7 ppb	12:46:48
3	Na 589.592 Radial†	33647.2	33507.2	10878 µg/L	10878 ppb	12:46:27
3	Sr 421.552†	53176.4	53816.6	544.18 µg/L	544.18 ppb	12:46:27
3	Sc 361.383	2058907.1	2058907.1	100.71 %		12:48:01
3	Y 371.029	1397924.8	1397924.8	99.498 %		12:48:01
3	Ag 328.068†	63200.6	63278.9	498.76 µg/L	498.76 ppb	12:48:07
3	As 188.979†	246.7	243.5	467.72 µg/L	467.72 ppb	12:48:27
3	B 249.677†	11751.0	11371.4	491.58 µg/L	491.58 ppb	12:48:07
3	Ba 233.527†	19338.4	19220.1	494.94 µg/L	494.94 ppb	12:48:07
3	Be 313.107†	799064.8	796401.8	509.47 µg/L	509.47 ppb	12:48:01
3	Cd 226.502†	18210.9	18220.6	492.02 µg/L	492.02 ppb	12:48:07
3	Co 228.616†	10261.8	10194.5	493.04 µg/L	493.04 ppb	12:48:07
3	Cr 267.716†	22670.6	22543.1	479.60 µg/L	479.60 ppb	12:48:07
3	Cu 324.752†	73889.4	70831.1	486.13 µg/L	486.13 ppb	12:48:07
3	Mn 257.610†	152706.2	151866.8	514.01 µg/L	514.01 ppb	12:48:01
3	Mo 202.031†	4452.3	4427.8	455.85 µg/L	455.85 ppb	12:48:27
3	Ni 231.604†	9606.9	9232.4	492.49 µg/L	492.49 ppb	12:48:07
3	P 214.914†	1149.5	1119.8	2314.7 µg/L	2314.7 ppb	12:48:27
3	Pb 220.353†	1928.5	1821.4	472.51 µg/L	472.51 ppb	12:48:27
3	S 181.975 Axial†	240.6	225.1	970.38 µg/L	970.38 ppb	12:48:27
3	Sb 206.836†	506.6	482.8	463.55 µg/L	463.55 ppb	12:48:27
3	Se 196.026†	326.8	308.7	478.75 µg/L	478.75 ppb	12:48:27
3	SiO2†	27121.6	25586.0	5395.1 µg/L	5395.1 ppb	12:48:07
3	Si 251.611†	31824.7	31286.0	2532.9 µg/L	2532.9 ppb	12:48:07
3	Sn 189.927†	1028.6	1018.3	453.70 µg/L	453.70 ppb	12:48:27
3	Ti 334.940†	216718.6	215060.9	507.30 µg/L	507.30 ppb	12:48:01
3	Tl 190.801†	334.0	354.6	497.83 µg/L	497.83 ppb	12:48:27
3	U 409.014†	5568.6	5573.1	483.73 µg/L	483.73 ppb	12:48:07
3	V 292.402†	47308.9	47007.6	489.56 µg/L	489.56 ppb	12:48:07
3	Zn 213.857†	20382.7	19720.2	490.65 µg/L	490.65 ppb	12:48:07

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2036549.3	99.616 %	0.9495			0.95%
Sc RADIAL	56986.8	98.2 %	0.71			0.73%
Y 371.029	1383407.3	98.465 %	0.8972			0.91%
Ag 328.068†	65856.6	519.15 µg/L	17.810	519.15 ppb	17.810	3.43%
QC value within limits for Ag 328.068 Recovery = 103.83%						
Al 396.153Radial†	7496.5	5500.4 µg/L	38.38	5500.4 ppb	38.38	0.70%
QC value greater than the upper limit for Al 396.153Radial Recovery = 110.01%						
As 188.979†	271.4	521.17 µg/L	46.624	521.17 ppb	46.624	8.95%
QC value within limits for As 188.979 Recovery = 104.23%						
B 249.677†	11905.5	514.77 µg/L	20.222	514.77 ppb	20.222	3.93%
QC value within limits for B 249.677 Recovery = 102.95%						
Ba 233.527†	20296.1	522.65 µg/L	24.164	522.65 ppb	24.164	4.62%
QC value within limits for Ba 233.527 Recovery = 104.53%						
Be 313.107†	824665.1	527.55 µg/L	15.699	527.55 ppb	15.699	2.98%
QC value within limits for Be 313.107 Recovery = 105.51%						
Ca 317.933Radial†	5806.7	5378.2 µg/L	65.85	5378.2 ppb	65.85	1.22%
QC value within limits for Ca 317.933Radial Recovery = 107.56%						
Cd 226.502†	19268.5	520.35 µg/L	24.694	520.35 ppb	24.694	4.75%
QC value within limits for Cd 226.502 Recovery = 104.07%						
Co 228.616†	10858.5	525.21 µg/L	28.012	525.21 ppb	28.012	5.33%

QC value within limits for Co 228.616 Recovery = 105.04%							
Cr 267.716†	24282.7	516.61 µg/L	32.164	516.61 ppb	32.164	6.23%	
QC value within limits for Cr 267.716 Recovery = 103.32%							
Cu 324.752†	75198.9	516.07 µg/L	26.005	516.07 ppb	26.005	5.04%	
QC value within limits for Cu 324.752 Recovery = 103.21%							
Fe 238.204 Radial†	641.3	5521.0 µg/L	88.80	5521.0 ppb	88.80	1.61%	
QC value greater than the upper limit for Fe 238.204 Radial Recovery = 110.42%							
K 766.490 Radial†	7759.4	5458.3 µg/L	42.68	5458.3 ppb	42.68	0.78%	
QC value within limits for K 766.490 Radial Recovery = 109.17%							
Mg 279.077 IEC†	588.2	5539.2 µg/L	90.55	5539.2 ppb	90.55	1.63%	
QC value greater than the upper limit for Mg 279.077 IEC Recovery = 110.78%							
Mn 257.610†	156931.1	531.14 µg/L	14.880	531.14 ppb	14.880	2.80%	
QC value within limits for Mn 257.610 Recovery = 106.23%							
Mo 202.031†	5020.7	516.87 µg/L	52.904	516.87 ppb	52.904	10.24%	
QC value within limits for Mo 202.031 Recovery = 103.37%							
Na 589.592 Radial†	33689.1	10937 µg/L	53.4	10937 ppb	53.4	0.49%	
QC value within limits for Na 589.592 Radial Recovery = 109.37%							
Ni 231.604†	9818.5	523.75 µg/L	27.160	523.75 ppb	27.160	5.19%	
QC value within limits for Ni 231.604 Recovery = 104.75%							
P 214.914†	1248.1	2583.0 µg/L	232.69	2583.0 ppb	232.69	9.01%	
QC value within limits for P 214.914 Recovery = 103.32%							
Pb 220.353†	2017.1	523.38 µg/L	44.083	523.38 ppb	44.083	8.42%	
QC value within limits for Pb 220.353 Recovery = 104.68%							
S 181.975 Axial†	244.1	1052.4 µg/L	71.65	1052.4 ppb	71.65	6.81%	
QC value within limits for S 181.975 Axial Recovery = 105.24%							
Sb 206.836†	542.1	520.85 µg/L	49.726	520.85 ppb	49.726	9.55%	
QC value within limits for Sb 206.836 Recovery = 104.17%							
Se 196.026†	339.3	525.59 µg/L	40.620	525.59 ppb	40.620	7.73%	
QC value within limits for Se 196.026 Recovery = 105.12%							
SiO2†	26822.7	5655.9 µg/L	226.38	5655.9 ppb	226.38	4.00%	
QC value within limits for SiO2 Recovery = 105.77%							
Si 251.611†	32745.6	2651.0 µg/L	102.77	2651.0 ppb	102.77	3.88%	
QC value within limits for Si 251.611 Recovery = 106.04%							
Sn 189.927†	1164.8	518.96 µg/L	56.688	518.96 ppb	56.688	10.92%	
QC value within limits for Sn 189.927 Recovery = 103.79%							
Sr 421.552†	54129.5	547.34 µg/L	2.744	547.34 ppb	2.744	0.50%	
QC value within limits for Sr 421.552 Recovery = 109.47%							
Ti 334.940†	223446.1	527.09 µg/L	17.181	527.09 ppb	17.181	3.26%	
QC value within limits for Ti 334.940 Recovery = 105.42%							
Tl 190.801†	375.9	527.55 µg/L	25.902	527.55 ppb	25.902	4.91%	
QC value within limits for Tl 190.801 Recovery = 105.51%							
U 409.014†	6018.7	522.47 µg/L	33.585	522.47 ppb	33.585	6.43%	
QC value within limits for U 409.014 Recovery = 104.49%							
V 292.402†	50126.7	522.27 µg/L	28.411	522.27 ppb	28.411	5.44%	
QC value within limits for V 292.402 Recovery = 104.45%							
Zn 213.857†	20889.0	519.75 µg/L	25.314	519.75 ppb	25.314	4.87%	
QC value within limits for Zn 213.857 Recovery = 103.95%							
QC Failed. Continue with analysis.							

Sequence No.: 22

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/17/2010 12:48:35

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	58980.0	58980.0	102 %		12:49:07
1	Al 396.153Radial†	-17.8	5.4	3.9529 µg/L	3.9529 ppb	12:49:07
1	Ca 317.933Radial†	200.1	1.5	1.3584 µg/L	1.3584 ppb	12:49:27
1	Fe 238.204 Radial†	17.4	-0.2	-1.3703 µg/L	-1.3703 ppb	12:49:27
1	K 766.490 Radial†	155.4	-23.9	-16.832 µg/L	-16.832 ppb	12:49:07
1	Mg 279.077 IEC†	11.5	-2.1	-19.777 µg/L	-19.777 ppb	12:49:27
1	Na 589.592 Radial†	540.7	-34.1	-11.069 µg/L	-11.069 ppb	12:49:07
1	Sr 421.552†	48.4	14.3	0.1446 µg/L	0.1446 ppb	12:49:07
1	Sc 361.383	2079602.5	2079602.5	101.72 %		12:50:26
1	Y 371.029	1416473.3	1416473.3	100.82 %		12:50:26
1	Ag 328.068†	-551.9	-18.9	-0.1477 µg/L	-0.1477 ppb	12:50:31
1	As 188.979†	-2.5	-4.0	-7.6285 µg/L	-7.6285 ppb	12:50:51
1	B 249.677†	321.3	19.1	0.8311 µg/L	0.8311 ppb	12:50:51
1	Ba 233.527†	-14.5	3.7	0.0957 µg/L	0.0957 ppb	12:50:51
1	Be 313.107†	-3259.0	-236.3	-0.1513 µg/L	-0.1513 ppb	12:50:31
1	Cd 226.502†	-140.0	0.3	0.0076 µg/L	0.0076 ppb	12:50:51
1	Co 228.616†	-17.3	-12.0	-0.5815 µg/L	-0.5815 ppb	12:50:51
1	Cr 267.716†	-39.2	-6.3	-0.1345 µg/L	-0.1345 ppb	12:50:31
1	Cu 324.752†	2597.6	16.0	0.1097 µg/L	0.1097 ppb	12:50:31
1	Mn 257.610†	-143.3	95.7	0.3243 µg/L	0.3243 ppb	12:50:51
1	Mo 202.031†	-2.3	4.6	0.4766 µg/L	0.4766 ppb	12:50:51
1	Ni 231.604†	284.3	-27.3	-1.4588 µg/L	-1.4588 ppb	12:50:51
1	P 214.914†	28.7	6.7	14.054 µg/L	14.054 ppb	12:50:51
1	Pb 220.353†	99.0	3.8	0.9888 µg/L	0.9888 ppb	12:50:51
1	S 181.975 Axial†	18.2	4.1	17.496 µg/L	17.496 ppb	12:50:51
1	Sb 206.836†	26.6	6.0	5.7159 µg/L	5.7159 ppb	12:50:51
1	Se 196.026†	9.4	-6.6	-10.018 µg/L	-10.018 ppb	12:50:51
1	SiO2†	1456.7	87.5	18.452 µg/L	18.452 ppb	12:50:31
1	Si 251.611†	398.7	77.4	6.2693 µg/L	6.2693 ppb	12:50:51
1	Sn 189.927†	-0.3	-3.3	-1.4911 µg/L	-1.4911 ppb	12:50:51
1	Ti 334.940†	235.8	101.2	0.2406 µg/L	0.2406 ppb	12:50:31
1	Tl 190.801†	-25.6	-2.2	-3.0943 µg/L	-3.0943 ppb	12:50:51
1	U 409.014†	-16.5	27.5	2.3921 µg/L	2.3921 ppb	12:50:31
1	V 292.402†	-33.2	-0.5	0.0002 µg/L	0.0002 ppb	12:50:31
1	Zn 213.857†	499.9	-27.4	-0.6785 µg/L	-0.6785 ppb	12:50:51
2	Sc RADIAL	57348.8	57348.8	98.8 %		12:49:32
2	Al 396.153Radial†	-29.9	-7.4	-5.4461 µg/L	-5.4461 ppb	12:49:32
2	Ca 317.933Radial†	188.3	-4.9	-4.5247 µg/L	-4.5247 ppb	12:49:53
2	Fe 238.204 Radial†	16.1	-1.0	-8.2885 µg/L	-8.2885 ppb	12:49:53
2	K 766.490 Radial†	194.5	20.0	14.072 µg/L	14.072 ppb	12:49:32
2	Mg 279.077 IEC†	12.1	-1.2	-11.315 µg/L	-11.315 ppb	12:49:53
2	Na 589.592 Radial†	475.0	-85.4	-27.735 µg/L	-27.735 ppb	12:49:32
2	Sr 421.552†	64.3	31.7	0.3208 µg/L	0.3208 ppb	12:49:32
2	Sc 361.383	2081519.0	2081519.0	101.82 %		12:50:57
2	Y 371.029	1417928.6	1417928.6	100.92 %		12:50:57
2	Ag 328.068†	-567.8	-34.0	-0.2645 µg/L	-0.2645 ppb	12:51:02
2	As 188.979†	0.4	-1.1	-2.1141 µg/L	-2.1141 ppb	12:51:22
2	B 249.677†	315.8	13.5	0.5887 µg/L	0.5887 ppb	12:51:22
2	Ba 233.527†	-15.9	2.3	0.0604 µg/L	0.0604 ppb	12:51:22
2	Be 313.107†	-3347.7	-320.4	-0.2051 µg/L	-0.2051 ppb	12:51:02
2	Cd 226.502†	-135.9	4.5	0.1204 µg/L	0.1204 ppb	12:51:22
2	Co 228.616†	-19.1	-13.8	-0.6653 µg/L	-0.6653 ppb	12:51:22
2	Cr 267.716†	-33.6	-0.8	-0.0167 µg/L	-0.0167 ppb	12:51:02
2	Cu 324.752†	2566.7	-16.7	-0.1154 µg/L	-0.1154 ppb	12:51:02
2	Mn 257.610†	-135.9	103.1	0.3480 µg/L	0.3480 ppb	12:51:22
2	Mo 202.031†	9.5	16.2	1.6628 µg/L	1.6628 ppb	12:51:22
2	Ni 231.604†	296.8	-15.2	-0.8122 µg/L	-0.8122 ppb	12:51:22
2	P 214.914†	27.7	5.7	11.920 µg/L	11.920 ppb	12:51:22
2	Pb 220.353†	92.4	-2.8	-0.7140 µg/L	-0.7140 ppb	12:51:22

2	S 181.975 Axial†	14.8	0.7	2.9957 µg/L	2.9957 ppb	12:51:22
2	Sb 206.836†	25.6	4.9	4.7572 µg/L	4.7572 ppb	12:51:22
2	Se 196.026†	9.4	-6.6	-10.063 µg/L	-10.063 ppb	12:51:22
2	SiO2†	1407.9	38.3	8.0743 µg/L	8.0743 ppb	12:51:02
2	Si 251.611†	428.1	105.9	8.5774 µg/L	8.5774 ppb	12:51:22
2	Sn 189.927†	-0.2	-3.3	-1.4823 µg/L	-1.4823 ppb	12:51:22
2	Ti 334.940†	246.1	111.1	0.2631 µg/L	0.2631 ppb	12:51:02
2	Tl 190.801†	-23.3	0.0	0.0566 µg/L	0.0566 ppb	12:51:22
2	U 409.014†	-13.4	30.5	2.6539 µg/L	2.6539 ppb	12:51:02
2	V 292.402†	-3.3	28.8	0.3111 µg/L	0.3111 ppb	12:51:02
2	Zn 213.857†	497.1	-30.6	-0.7629 µg/L	-0.7629 ppb	12:51:22
3	Sc RADIAL	58272.6	58272.6	100 %		12:49:58
3	Al 396.153Radial†	1.8	24.7	18.151 µg/L	18.151 ppb	12:49:58
3	Ca 317.933Radial†	196.5	0.2	0.2272 µg/L	0.2272 ppb	12:50:18
3	Fe 238.204 Radial†	17.6	0.2	2.0782 µg/L	2.0782 ppb	12:50:18
3	K 766.490 Radial†	129.9	-47.5	-33.436 µg/L	-33.436 ppb	12:49:58
3	Mg 279.077 IEC†	10.5	-3.0	-28.125 µg/L	-28.125 ppb	12:50:18
3	Na 589.592 Radial†	524.8	-43.5	-14.107 µg/L	-14.107 ppb	12:49:58
3	Sr 421.552†	22.6	-10.8	-0.1096 µg/L	-0.1096 ppb	12:49:58
3	Sc 361.383	2093221.5	2093221.5	102.39 %		12:51:28
3	Y 371.029	1427391.0	1427391.0	101.60 %		12:51:28
3	Ag 328.068†	-586.7	-49.3	-0.3842 µg/L	-0.3842 ppb	12:51:33
3	As 188.979†	-0.5	-2.0	-3.7808 µg/L	-3.7808 ppb	12:51:54
3	B 249.677†	311.6	7.6	0.3272 µg/L	0.3272 ppb	12:51:54
3	Ba 233.527†	-17.7	0.7	0.0172 µg/L	0.0172 ppb	12:51:54
3	Be 313.107†	-3353.0	-307.2	-0.1966 µg/L	-0.1966 ppb	12:51:33
3	Cd 226.502†	-142.7	-1.4	-0.0382 µg/L	-0.0382 ppb	12:51:54
3	Co 228.616†	-15.8	-10.4	-0.5022 µg/L	-0.5022 ppb	12:51:54
3	Cr 267.716†	-38.6	-5.5	-0.1170 µg/L	-0.1170 ppb	12:51:33
3	Cu 324.752†	2585.6	-12.2	-0.0836 µg/L	-0.0836 ppb	12:51:33
3	Mn 257.610†	-139.0	100.8	0.3424 µg/L	0.3424 ppb	12:51:54
3	Mo 202.031†	-2.4	4.5	0.4670 µg/L	0.4670 ppb	12:51:54
3	Ni 231.604†	304.6	-9.3	-0.4952 µg/L	-0.4952 ppb	12:51:54
3	P 214.914†	38.0	15.5	32.744 µg/L	32.744 ppb	12:51:54
3	Pb 220.353†	91.6	-4.1	-1.0588 µg/L	-1.0588 ppb	12:51:54
3	S 181.975 Axial†	13.3	-0.8	-3.3478 µg/L	-3.3478 ppb	12:51:54
3	Sb 206.836†	22.5	1.8	1.7316 µg/L	1.7316 ppb	12:51:54
3	Se 196.026†	5.9	-10.1	-15.380 µg/L	-15.380 ppb	12:51:54
3	SiO2†	1450.7	72.3	15.252 µg/L	15.252 ppb	12:51:33
3	Si 251.611†	419.6	95.4	7.7212 µg/L	7.7212 ppb	12:51:54
3	Sn 189.927†	-0.1	-3.2	-1.4145 µg/L	-1.4145 ppb	12:51:54
3	Ti 334.940†	173.7	39.1	0.0945 µg/L	0.0945 ppb	12:51:33
3	Tl 190.801†	-20.9	2.5	3.4698 µg/L	3.4698 ppb	12:51:54
3	U 409.014†	-89.9	-44.1	-3.8339 µg/L	-3.8339 ppb	12:51:33
3	V 292.402†	-9.8	22.5	0.2314 µg/L	0.2314 ppb	12:51:33
3	Zn 213.857†	496.3	-34.2	-0.8521 µg/L	-0.8521 ppb	12:51:54

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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	2084781.0	101.98 %	0.361			0.35%
Sc RADIAL	58200.5	100 %	1.4			1.41%
Y 371.029	1420597.6	101.11 %	0.422			0.42%
Ag 328.068†	-34.0	-0.2655 µg/L	0.11828	-0.2655 ppb	0.11828	44.55%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	7.6	5.5524 µg/L	11.87937	5.5524 ppb	11.87937	213.95%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.3	-4.5078 µg/L	2.82818	-4.5078 ppb	2.82818	62.74%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	13.4	0.5823 µg/L	0.25204	0.5823 ppb	0.25204	43.28%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.2	0.0578 µg/L	0.03932	0.0578 ppb	0.03932	68.08%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-288.0	-0.1844 µg/L	0.02895	-0.1844 ppb	0.02895	15.70%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-1.1	-0.9797 µg/L	3.12174	-0.9797 ppb	3.12174	318.64%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.1	0.0300 µg/L	0.08163	0.0300 ppb	0.08163	272.41%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-12.0	-0.5830 µg/L	0.08159	-0.5830 ppb	0.08159	13.99%

Cr	267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
		-4.2	-0.0894 µg/L	0.06357	-0.0894 ppb	0.06357 71.12%
Cu	324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
		-4.3	-0.0298 µg/L	0.12180	-0.0298 ppb	0.12180 409.22%
Fe	238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
		-0.3	-2.5268 µg/L	5.27926	-2.5268 ppb	5.27926 208.93%
K	766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
		-17.2	-12.065 µg/L	24.1099	-12.065 ppb	24.1099 199.83%
Mg	279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
		-2.1	-19.739 µg/L	8.4050	-19.739 ppb	8.4050 42.58%
Mn	257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
		99.9	0.3382 µg/L	0.01240	0.3382 ppb	0.01240 3.67%
Mo	202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
		8.4	0.8688 µg/L	0.68766	0.8688 ppb	0.68766 79.15%
Na	589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
		-54.3	-17.637 µg/L	8.8763	-17.637 ppb	8.8763 50.33%
Ni	231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
		-17.3	-0.9221 µg/L	0.49110	-0.9221 ppb	0.49110 53.26%
P	214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
		9.3	19.573 µg/L	11.4562	19.573 ppb	11.4562 58.53%
Pb	220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
		-1.0	-0.2613 µg/L	1.09629	-0.2613 ppb	1.09629 419.54%
S	181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
		1.3	5.7146 µg/L	10.68458	5.7146 ppb	10.68458 186.97%
Sb	206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
		4.2	4.0682 µg/L	2.07959	4.0682 ppb	2.07959 51.12%
Se	196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
		-7.8	-11.821 µg/L	3.0827	-11.821 ppb	3.0827 26.08%
SiO2†		QC value within limits for Se 196.026	Recovery = Not calculated			
		66.0	13.926 µg/L	5.3142	13.926 ppb	5.3142 38.16%
Si	251.611†	QC value within limits for SiO2	Recovery = Not calculated			
		92.9	7.5226 µg/L	1.16676	7.5226 ppb	1.16676 15.51%
Sn	189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
		-3.3	-1.4627 µg/L	0.04190	-1.4627 ppb	0.04190 2.86%
Sr	421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
		11.7	0.1186 µg/L	0.21635	0.1186 ppb	0.21635 182.43%
Ti	334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
		83.8	0.1994 µg/L	0.09156	0.1994 ppb	0.09156 45.92%
Tl	190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
		0.1	0.1440 µg/L	3.28294	0.1440 ppb	3.28294 >999.9%
U	409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
		4.6	0.4040 µg/L	3.67250	0.4040 ppb	3.67250 909.03%
V	292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
		16.9	0.1809 µg/L	0.16146	0.1809 ppb	0.16146 89.24%
Zn	213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
		-30.7	-0.7645 µg/L	0.08682	-0.7645 ppb	0.08682 11.36%
		QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/17/2010 13:27:37

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	60651.9	60651.9	105 %		13:28:13
1	Al 396.153Radial†	6950.0	6673.4	4895.5 µg/L	4895.5 ppb	13:28:13
1	Ca 317.933Radial†	5772.1	5328.0	4934.8 µg/L	4934.8 ppb	13:28:33
1	Fe 238.204 Radial†	619.2	575.2	4952.6 µg/L	4952.6 ppb	13:28:33
1	K 766.490 Radial†	7545.2	7043.1	4954.5 µg/L	4954.5 ppb	13:28:13
1	Mg 279.077 IEC†	564.7	526.9	4962.6 µg/L	4962.6 ppb	13:28:33
1	Na 589.592 Radial†	32150.1	30198.4	9803.5 µg/L	9803.5 ppb	13:28:13
1	Sr 421.552†	50898.1	48671.3	492.15 µg/L	492.15 ppb	13:28:13
1	Sc 361.383	2104931.1	2104931.1	102.96 %		13:29:33
1	Y 371.029	1424828.3	1424828.3	101.41 %		13:29:33
1	Ag 328.068†	63870.8	62557.7	493.16 µg/L	493.16 ppb	13:29:38
1	As 188.979†	276.5	267.0	512.89 µg/L	512.89 ppb	13:29:58
1	B 249.677†	12068.3	11424.5	494.16 µg/L	494.16 ppb	13:29:38
1	Ba 233.527†	20064.6	19505.6	502.30 µg/L	502.30 ppb	13:29:38
1	Be 313.107†	803108.9	782981.3	500.89 µg/L	500.89 ppb	13:29:33
1	Cd 226.502†	18990.1	18582.0	501.85 µg/L	501.85 ppb	13:29:38
1	Co 228.616†	10811.6	10505.7	508.18 µg/L	508.18 ppb	13:29:38
1	Cr 267.716†	24148.1	23485.8	499.65 µg/L	499.65 ppb	13:29:38
1	Cu 324.752†	76859.1	72111.3	494.83 µg/L	494.83 ppb	13:29:38
1	Mn 257.610†	153096.0	148930.0	504.03 µg/L	504.03 ppb	13:29:33
1	Mo 202.031†	5055.6	4917.0	506.18 µg/L	506.18 ppb	13:29:58
1	Ni 231.604†	10110.3	9512.8	507.44 µg/L	507.44 ppb	13:29:38
1	P 214.914†	1275.4	1217.1	2520.0 µg/L	2520.0 ppb	13:29:58
1	Pb 220.353†	2107.2	1953.1	506.79 µg/L	506.79 ppb	13:29:58
1	S 181.975 Axial†	255.0	233.8	1008.1 µg/L	1008.1 ppb	13:29:58
1	Sb 206.836†	564.7	528.3	507.65 µg/L	507.65 ppb	13:29:58
1	Se 196.026†	348.4	322.5	499.12 µg/L	499.12 ppb	13:29:58
1	SiO2†	27794.1	25650.3	5408.7 µg/L	5408.7 ppb	13:29:38
1	Si 251.611†	32616.4	31364.0	2539.2 µg/L	2539.2 ppb	13:29:38
1	Sn 189.927†	1187.4	1150.2	512.44 µg/L	512.44 ppb	13:29:58
1	Ti 334.940†	218177.3	211772.6	499.57 µg/L	499.57 ppb	13:29:33
1	Tl 190.801†	347.5	360.5	505.78 µg/L	505.78 ppb	13:29:58
1	U 409.014†	5836.4	5712.2	495.93 µg/L	495.93 ppb	13:29:38
1	V 292.402†	49555.9	48162.9	501.85 µg/L	501.85 ppb	13:29:38
1	Zn 213.857†	21280.8	20150.0	501.39 µg/L	501.39 ppb	13:29:38
2	Sc RADIAL	60368.4	60368.4	104 %		13:28:38
2	Al 396.153Radial†	6924.8	6680.4	4900.7 µg/L	4900.7 ppb	13:28:38
2	Ca 317.933Radial†	5743.9	5326.7	4933.6 µg/L	4933.6 ppb	13:28:58
2	Fe 238.204 Radial†	612.9	572.0	4924.9 µg/L	4924.9 ppb	13:28:58
2	K 766.490 Radial†	7431.6	6967.9	4901.5 µg/L	4901.5 ppb	13:28:38
2	Mg 279.077 IEC†	559.1	524.1	4936.0 µg/L	4936.0 ppb	13:28:58
2	Na 589.592 Radial†	31940.5	30141.4	9785.0 µg/L	9785.0 ppb	13:28:38
2	Sr 421.552†	50575.6	48590.0	491.33 µg/L	491.33 ppb	13:28:38
2	Sc 361.383	2110691.0	2110691.0	103.24 %		13:30:05
2	Y 371.029	1428002.3	1428002.3	101.64 %		13:30:05
2	Ag 328.068†	63687.9	62211.2	490.43 µg/L	490.43 ppb	13:30:10
2	As 188.979†	278.2	268.0	514.66 µg/L	514.66 ppb	13:30:30
2	B 249.677†	12037.0	11362.2	491.46 µg/L	491.46 ppb	13:30:10
2	Ba 233.527†	19963.4	19354.4	498.41 µg/L	498.41 ppb	13:30:10
2	Be 313.107†	801421.3	779218.1	498.48 µg/L	498.48 ppb	13:30:05
2	Cd 226.502†	18886.4	18431.2	497.78 µg/L	497.78 ppb	13:30:10
2	Co 228.616†	10736.7	10404.5	503.28 µg/L	503.28 ppb	13:30:10
2	Cr 267.716†	23993.8	23272.4	495.11 µg/L	495.11 ppb	13:30:10
2	Cu 324.752†	76481.2	71541.5	490.92 µg/L	490.92 ppb	13:30:10
2	Mn 257.610†	152675.6	148117.1	501.28 µg/L	501.28 ppb	13:30:05
2	Mo 202.031†	5042.0	4890.5	503.45 µg/L	503.45 ppb	13:30:30
2	Ni 231.604†	10038.5	9416.4	502.29 µg/L	502.29 ppb	13:30:10
2	P 214.914†	1282.3	1220.5	2527.5 µg/L	2527.5 ppb	13:30:30
2	Pb 220.353†	2101.8	1942.3	503.98 µg/L	503.98 ppb	13:30:30

2	S 181.975 Axial†	254.7	232.9	1003.9 µg/L	1003.9 ppb	13:30:30
2	Sb 206.836†	567.7	529.7	509.02 µg/L	509.02 ppb	13:30:30
2	Se 196.026†	347.6	320.9	496.55 µg/L	496.55 ppb	13:30:30
2	SiO2†	27644.3	25431.5	5362.5 µg/L	5362.5 ppb	13:30:10
2	Si 251.611†	32480.7	31146.1	2521.5 µg/L	2521.5 ppb	13:30:10
2	Sn 189.927†	1187.1	1146.7	510.89 µg/L	510.89 ppb	13:30:30
2	Ti 334.940†	217923.9	210948.9	497.63 µg/L	497.63 ppb	13:30:05
2	Tl 190.801†	349.8	361.7	507.45 µg/L	507.45 ppb	13:30:30
2	U 409.014†	5764.6	5627.3	488.54 µg/L	488.54 ppb	13:30:10
2	V 292.402†	49375.5	47856.8	498.65 µg/L	498.65 ppb	13:30:10
2	Zn 213.857†	21178.5	19994.4	497.53 µg/L	497.53 ppb	13:30:10
3	Sc RADIAL	59912.4	59912.4	103 %		13:29:03
3	Al 396.153Radial†	6928.9	6735.1	4942.2 µg/L	4942.2 ppb	13:29:03
3	Ca 317.933Radial†	5812.5	5435.3	5034.2 µg/L	5034.2 ppb	13:29:24
3	Fe 238.204 Radial†	622.1	585.4	5039.1 µg/L	5039.1 ppb	13:29:24
3	K 766.490 Radial†	7480.1	7069.2	4972.8 µg/L	4972.8 ppb	13:29:03
3	Mg 279.077 IEC†	574.3	542.9	5111.8 µg/L	5111.8 ppb	13:29:24
3	Na 589.592 Radial†	32031.9	30463.7	9889.6 µg/L	9889.6 ppb	13:29:03
3	Sr 421.552†	50619.6	49002.6	495.50 µg/L	495.50 ppb	13:29:03
3	Sc 361.383	2107541.1	2107541.1	103.09 %		13:30:37
3	Y 371.029	1427393.9	1427393.9	101.60 %		13:30:37
3	Ag 328.068†	61511.5	60192.3	474.43 µg/L	474.43 ppb	13:30:43
3	As 188.979†	245.4	236.6	454.40 µg/L	454.40 ppb	13:31:03
3	B 249.677†	11562.9	10919.7	472.13 µg/L	472.13 ppb	13:30:43
3	Ba 233.527†	18866.2	18318.9	471.73 µg/L	471.73 ppb	13:30:43
3	Be 313.107†	770394.0	750280.6	479.97 µg/L	479.97 ppb	13:30:37
3	Cd 226.502†	17812.9	17417.2	470.35 µg/L	470.35 ppb	13:30:43
3	Co 228.616†	10114.0	9816.0	474.76 µg/L	474.76 ppb	13:30:43
3	Cr 267.716†	22134.2	21503.3	457.48 µg/L	457.48 ppb	13:30:43
3	Cu 324.752†	72111.5	67413.4	462.65 µg/L	462.65 ppb	13:30:43
3	Mn 257.610†	146984.4	142817.4	483.37 µg/L	483.37 ppb	13:30:37
3	Mo 202.031†	4422.1	4296.5	442.33 µg/L	442.33 ppb	13:31:03
3	Ni 231.604†	9412.6	8823.9	470.69 µg/L	470.69 ppb	13:30:43
3	P 214.914†	1148.6	1092.6	2259.6 µg/L	2259.6 ppb	13:31:03
3	Pb 220.353†	1925.5	1774.3	460.32 µg/L	460.32 ppb	13:31:03
3	S 181.975 Axial†	238.5	217.6	937.85 µg/L	937.85 ppb	13:31:03
3	Sb 206.836†	510.9	475.4	456.47 µg/L	456.47 ppb	13:31:03
3	Se 196.026†	328.4	302.7	469.01 µg/L	469.01 ppb	13:31:03
3	SiO2†	26707.7	24563.0	5179.4 µg/L	5179.4 ppb	13:30:43
3	Si 251.611†	31260.1	30009.1	2429.5 µg/L	2429.5 ppb	13:30:43
3	Sn 189.927†	1027.9	994.0	442.88 µg/L	442.88 ppb	13:31:03
3	Ti 334.940†	208940.7	202550.2	477.79 µg/L	477.79 ppb	13:30:37
3	Tl 190.801†	331.3	344.3	483.14 µg/L	483.14 ppb	13:31:03
3	U 409.014†	5411.1	5292.7	459.41 µg/L	459.41 ppb	13:30:43
3	V 292.402†	46136.5	44786.4	466.48 µg/L	466.48 ppb	13:30:43
3	Zn 213.857†	19929.7	18813.8	468.11 µg/L	468.11 ppb	13:30:43

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2107721.1	103.10 %	0.141			0.14%
Sc RADIAL	60310.9	104 %	0.6			0.62%
Y 371.029	1426741.5	101.55 %	0.120			0.12%
Ag 328.068†	61653.7	486.01 µg/L	10.121	486.01 ppb	10.121	2.08%
QC value within limits for Ag 328.068 Recovery = 97.20%						
Al 396.153Radial†	6696.3	4912.8 µg/L	25.57	4912.8 ppb	25.57	0.52%
QC value within limits for Al 396.153Radial Recovery = 98.26%						
As 188.979†	257.2	493.98 µg/L	34.293	493.98 ppb	34.293	6.94%
QC value within limits for As 188.979 Recovery = 98.80%						
B 249.677†	11235.5	485.92 µg/L	12.014	485.92 ppb	12.014	2.47%
QC value within limits for B 249.677 Recovery = 97.18%						
Ba 233.527†	19059.7	490.81 µg/L	16.638	490.81 ppb	16.638	3.39%
QC value within limits for Ba 233.527 Recovery = 98.16%						
Be 313.107†	770826.7	493.11 µg/L	11.446	493.11 ppb	11.446	2.32%
QC value within limits for Be 313.107 Recovery = 98.62%						
Ca 317.933Radial†	5363.3	4967.5 µg/L	57.71	4967.5 ppb	57.71	1.16%
QC value within limits for Ca 317.933Radial Recovery = 99.35%						
Cd 226.502†	18143.4	489.99 µg/L	17.136	489.99 ppb	17.136	3.50%
QC value within limits for Cd 226.502 Recovery = 98.00%						
Co 228.616†	10242.1	495.40 µg/L	18.045	495.40 ppb	18.045	3.64%

QC value within limits for Co 228.616 Recovery = 99.08%							
Cr 267.716†	22753.9	484.08 µg/L	23.150	484.08 ppb	23.150	4.78%	
QC value within limits for Cr 267.716 Recovery = 96.82%							
Cu 324.752†	70355.4	482.80 µg/L	17.560	482.80 ppb	17.560	3.64%	
QC value within limits for Cu 324.752 Recovery = 96.56%							
Fe 238.204 Radial†	577.5	4972.2 µg/L	59.59	4972.2 ppb	59.59	1.20%	
QC value within limits for Fe 238.204 Radial Recovery = 99.44%							
K 766.490 Radial†	7026.7	4942.9 µg/L	37.00	4942.9 ppb	37.00	0.75%	
QC value within limits for K 766.490 Radial Recovery = 98.86%							
Mg 279.077 IEC†	531.3	5003.5 µg/L	94.76	5003.5 ppb	94.76	1.89%	
QC value within limits for Mg 279.077 IEC Recovery = 100.07%							
Mn 257.610†	146621.5	496.23 µg/L	11.220	496.23 ppb	11.220	2.26%	
QC value within limits for Mn 257.610 Recovery = 99.25%							
Mo 202.031†	4701.3	483.99 µg/L	36.104	483.99 ppb	36.104	7.46%	
QC value within limits for Mo 202.031 Recovery = 96.80%							
Na 589.592 Radial†	30267.8	9826.0 µg/L	55.83	9826.0 ppb	55.83	0.57%	
QC value within limits for Na 589.592 Radial Recovery = 98.26%							
Ni 231.604†	9251.0	493.47 µg/L	19.899	493.47 ppb	19.899	4.03%	
QC value within limits for Ni 231.604 Recovery = 98.69%							
P 214.914†	1176.7	2435.7 µg/L	152.54	2435.7 ppb	152.54	6.26%	
QC value within limits for P 214.914 Recovery = 97.43%							
Pb 220.353†	1889.9	490.36 µg/L	26.057	490.36 ppb	26.057	5.31%	
QC value within limits for Pb 220.353 Recovery = 98.07%							
S 181.975 Axial†	228.1	983.26 µg/L	39.379	983.26 ppb	39.379	4.00%	
QC value within limits for S 181.975 Axial Recovery = 98.33%							
Sb 206.836†	511.1	491.05 µg/L	29.952	491.05 ppb	29.952	6.10%	
QC value within limits for Sb 206.836 Recovery = 98.21%							
Se 196.026†	315.4	488.23 µg/L	16.688	488.23 ppb	16.688	3.42%	
QC value within limits for Se 196.026 Recovery = 97.65%							
SiO2†	25215.0	5316.9 µg/L	121.26	5316.9 ppb	121.26	2.28%	
QC value within limits for SiO2 Recovery = 99.43%							
Si 251.611†	30839.7	2496.7 µg/L	58.90	2496.7 ppb	58.90	2.36%	
QC value within limits for Si 251.611 Recovery = 99.87%							
Sn 189.927†	1097.0	488.74 µg/L	39.718	488.74 ppb	39.718	8.13%	
QC value within limits for Sn 189.927 Recovery = 97.75%							
Sr 421.552†	48754.6	492.99 µg/L	2.210	492.99 ppb	2.210	0.45%	
QC value within limits for Sr 421.552 Recovery = 98.60%							
Ti 334.940†	208423.9	491.66 µg/L	12.053	491.66 ppb	12.053	2.45%	
QC value within limits for Ti 334.940 Recovery = 98.33%							
Tl 190.801†	355.5	498.79 µg/L	13.579	498.79 ppb	13.579	2.72%	
QC value within limits for Tl 190.801 Recovery = 99.76%							
U 409.014†	5544.1	481.29 µg/L	19.306	481.29 ppb	19.306	4.01%	
QC value within limits for U 409.014 Recovery = 96.26%							
V 292.402†	46935.3	488.99 µg/L	19.564	488.99 ppb	19.564	4.00%	
QC value within limits for V 292.402 Recovery = 97.80%							
Zn 213.857†	19652.7	489.01 µg/L	18.203	489.01 ppb	18.203	3.72%	
QC value within limits for Zn 213.857 Recovery = 97.80%							

All analyte(s) passed QC.



Sequence No.: 3

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/17/2010 13:31:11

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	59451.7	59451.7	102 %		13:31:43
1	Al 396.153Radial†	19.7	42.2	30.996 µg/L	30.996 ppb	13:31:43
1	Ca 317.933Radial†	195.5	-4.6	-4.2646 µg/L	-4.2646 ppb	13:32:03
1	Fe 238.204 Radial†	18.0	0.4	3.0782 µg/L	3.0782 ppb	13:32:03
1	K 766.490 Radial†	173.9	-7.1	-4.9988 µg/L	-4.9988 ppb	13:31:43
1	Mg 279.077 IEC†	11.8	-1.9	-18.070 µg/L	-18.070 ppb	13:32:03
1	Na 589.592 Radial†	495.0	-82.9	-26.904 µg/L	-26.904 ppb	13:31:43
1	Sr 421.552†	49.9	15.4	0.1556 µg/L	0.1556 ppb	13:31:43
1	Sc 361.383	2092807.8	2092807.8	102.37 %		13:33:01
1	Y 371.029	1421278.8	1421278.8	101.16 %		13:33:01
1	Ag 328.068†	-550.0	-13.6	-0.1047 µg/L	-0.1047 ppb	13:33:07
1	As 188.979†	-2.9	-4.3	-8.2822 µg/L	-8.2822 ppb	13:33:27
1	B 249.677†	334.5	30.0	1.3024 µg/L	1.3024 ppb	13:33:27
1	Ba 233.527†	-17.6	0.8	0.0204 µg/L	0.0204 ppb	13:33:27
1	Be 313.107†	-3503.7	-455.1	-0.2913 µg/L	-0.2913 ppb	13:33:07
1	Cd 226.502†	-134.5	6.5	0.1749 µg/L	0.1749 ppb	13:33:27
1	Co 228.616†	-8.8	-3.6	-0.1735 µg/L	-0.1735 ppb	13:33:27
1	Cr 267.716†	-28.9	3.9	0.0839 µg/L	0.0839 ppb	13:33:27
1	Cu 324.752†	2622.3	24.0	0.1652 µg/L	0.1652 ppb	13:33:07
1	Mn 257.610†	-134.8	104.9	0.3559 µg/L	0.3559 ppb	13:33:27
1	Mo 202.031†	-5.7	1.3	0.1364 µg/L	0.1364 ppb	13:33:27
1	Ni 231.604†	292.7	-20.9	-1.1142 µg/L	-1.1142 ppb	13:33:27
1	P 214.914†	29.2	7.0	14.648 µg/L	14.648 ppb	13:33:27
1	Pb 220.353†	100.7	4.9	1.2593 µg/L	1.2593 ppb	13:33:27
1	S 181.975 Axial†	17.4	3.2	13.729 µg/L	13.729 ppb	13:33:27
1	Sb 206.836†	28.0	7.2	6.8595 µg/L	6.8595 ppb	13:33:27
1	Se 196.026†	19.2	2.9	4.4980 µg/L	4.4980 ppb	13:33:27
1	SiO2†	1426.0	48.5	10.236 µg/L	10.236 ppb	13:33:07
1	Si 251.611†	375.1	52.0	4.2087 µg/L	4.2087 ppb	13:33:27
1	Sn 189.927†	1.7	-1.4	-0.6313 µg/L	-0.6313 ppb	13:33:27
1	Ti 334.940†	255.7	119.2	0.2827 µg/L	0.2827 ppb	13:33:07
1	Tl 190.801†	-24.5	-1.0	-1.3973 µg/L	-1.3973 ppb	13:33:27
1	U 409.014†	-1.2	42.5	3.6947 µg/L	3.6947 ppb	13:33:07
1	V 292.402†	-9.6	22.7	0.2386 µg/L	0.2386 ppb	13:33:07
1	Zn 213.857†	518.2	-12.6	-0.3114 µg/L	-0.3114 ppb	13:33:27
2	Sc RADIAL	59527.2	59527.2	103 %		13:32:08
2	Al 396.153Radial†	9.3	32.0	23.485 µg/L	23.485 ppb	13:32:08
2	Ca 317.933Radial†	201.2	0.7	0.6684 µg/L	0.6684 ppb	13:32:28
2	Fe 238.204 Radial†	18.2	0.5	3.9660 µg/L	3.9660 ppb	13:32:28
2	K 766.490 Radial†	174.0	-7.3	-5.1055 µg/L	-5.1055 ppb	13:32:08
2	Mg 279.077 IEC†	16.9	3.0	28.367 µg/L	28.367 ppb	13:32:28
2	Na 589.592 Radial†	544.4	-35.4	-11.494 µg/L	-11.494 ppb	13:32:08
2	Sr 421.552†	78.1	42.8	0.4327 µg/L	0.4327 ppb	13:32:08
2	Sc 361.383	2089852.0	2089852.0	102.22 %		13:33:33
2	Y 371.029	1419077.9	1419077.9	101.00 %		13:33:33
2	Ag 328.068†	-634.7	-97.2	-0.7587 µg/L	-0.7587 ppb	13:33:38
2	As 188.979†	0.6	-0.9	-1.7885 µg/L	-1.7885 ppb	13:33:58
2	B 249.677†	342.7	38.5	1.6683 µg/L	1.6683 ppb	13:33:58
2	Ba 233.527†	-22.3	-3.8	-0.0978 µg/L	-0.0978 ppb	13:33:58
2	Be 313.107†	-3515.9	-471.9	-0.3021 µg/L	-0.3021 ppb	13:33:38
2	Cd 226.502†	-137.2	3.8	0.1009 µg/L	0.1009 ppb	13:33:58
2	Co 228.616†	-18.9	-13.5	-0.6544 µg/L	-0.6544 ppb	13:33:58
2	Cr 267.716†	-27.1	5.7	0.1204 µg/L	0.1204 ppb	13:33:58
2	Cu 324.752†	2661.6	66.2	0.4540 µg/L	0.4540 ppb	13:33:38
2	Mn 257.610†	-135.5	104.1	0.3514 µg/L	0.3514 ppb	13:33:58
2	Mo 202.031†	3.8	10.6	1.0902 µg/L	1.0902 ppb	13:33:58
2	Ni 231.604†	297.3	-15.9	-0.8478 µg/L	-0.8478 ppb	13:33:58
2	P 214.914†	27.0	4.8	10.075 µg/L	10.075 ppb	13:33:58
2	Pb 220.353†	95.4	-0.2	-0.0508 µg/L	-0.0508 ppb	13:33:58

2	S 181.975 Axial†	19.9	5.6	24.296 µg/L	24.296 ppb	13:33:58
2	Sb 206.836†	26.3	5.6	5.3815 µg/L	5.3815 ppb	13:33:58
2	Se 196.026†	17.5	1.2	1.8676 µg/L	1.8676 ppb	13:33:58
2	SiO2†	1430.0	54.4	11.470 µg/L	11.470 ppb	13:33:38
2	Si 251.611†	370.4	47.9	3.8739 µg/L	3.8739 ppb	13:33:58
2	Sn 189.927†	-0.3	-3.3	-1.4823 µg/L	-1.4823 ppb	13:33:58
2	Ti 334.940†	245.2	109.2	0.2556 µg/L	0.2556 ppb	13:33:38
2	Tl 190.801†	-18.6	4.7	6.5586 µg/L	6.5586 ppb	13:33:58
2	U 409.014†	-13.2	30.8	2.6790 µg/L	2.6790 ppb	13:33:38
2	V 292.402†	-4.4	27.8	0.2979 µg/L	0.2979 ppb	13:33:38
2	Zn 213.857†	512.0	-18.0	-0.4505 µg/L	-0.4505 ppb	13:33:58
3	Sc RADIAL	59720.1	59720.1	103 %		13:32:34
3	Al 396.153Radial†	10.2	32.8	24.113 µg/L	24.113 ppb	13:32:34
3	Ca 317.933Radial†	198.8	-2.3	-2.0898 µg/L	-2.0898 ppb	13:32:54
3	Fe 238.204 Radial†	16.3	-1.5	-12.616 µg/L	-12.616 ppb	13:32:54
3	K 766.490 Radial†	152.3	-28.9	-20.332 µg/L	-20.332 ppb	13:32:34
3	Mg 279.077 IEC†	10.6	-3.1	-29.078 µg/L	-29.078 ppb	13:32:54
3	Na 589.592 Radial†	516.6	-64.1	-20.818 µg/L	-20.818 ppb	13:32:34
3	Sr 421.552†	29.1	-5.1	-0.0512 µg/L	-0.0512 ppb	13:32:34
3	Sc 361.383	2068059.9	2068059.9	101.16 %		13:34:04
3	Y 371.029	1404459.5	1404459.5	99.963 %		13:34:04
3	Ag 328.068†	-633.0	-102.1	-0.8001 µg/L	-0.8001 ppb	13:34:09
3	As 188.979†	-0.7	-2.1	-4.1037 µg/L	-4.1037 ppb	13:34:29
3	B 249.677†	345.3	44.6	1.9406 µg/L	1.9406 ppb	13:34:29
3	Ba 233.527†	-21.3	-3.0	-0.0781 µg/L	-0.0781 ppb	13:34:29
3	Be 313.107†	-3575.6	-567.1	-0.3630 µg/L	-0.3630 ppb	13:34:09
3	Cd 226.502†	-139.4	0.2	0.0056 µg/L	0.0056 ppb	13:34:29
3	Co 228.616†	-16.3	-11.1	-0.5368 µg/L	-0.5368 ppb	13:34:29
3	Cr 267.716†	-43.2	-10.5	-0.2228 µg/L	-0.2228 ppb	13:34:29
3	Cu 324.752†	2586.2	19.1	0.1289 µg/L	0.1289 ppb	13:34:09
3	Mn 257.610†	-148.0	90.3	0.3047 µg/L	0.3047 ppb	13:34:29
3	Mo 202.031†	2.3	9.2	0.9421 µg/L	0.9421 ppb	13:34:29
3	Ni 231.604†	299.4	-10.8	-0.5754 µg/L	-0.5754 ppb	13:34:29
3	P 214.914†	36.3	14.3	30.237 µg/L	30.237 ppb	13:34:29
3	Pb 220.353†	104.7	10.0	2.5986 µg/L	2.5986 ppb	13:34:29
3	S 181.975 Axial†	15.8	1.8	7.8126 µg/L	7.8126 ppb	13:34:29
3	Sb 206.836†	29.7	9.2	8.7746 µg/L	8.7746 ppb	13:34:29
3	Se 196.026†	17.5	1.4	2.1372 µg/L	2.1372 ppb	13:34:29
3	SiO2†	1412.7	52.0	10.968 µg/L	10.968 ppb	13:34:09
3	Si 251.611†	391.1	72.2	5.8448 µg/L	5.8448 ppb	13:34:29
3	Sn 189.927†	-1.4	-4.5	-2.0027 µg/L	-2.0027 ppb	13:34:29
3	Ti 334.940†	200.2	67.3	0.1611 µg/L	0.1611 ppb	13:34:09
3	Tl 190.801†	-28.4	-5.1	-7.0623 µg/L	-7.0623 ppb	13:34:29
3	U 409.014†	-30.0	14.0	1.2222 µg/L	1.2222 ppb	13:34:09
3	V 292.402†	-32.0	0.5	0.0113 µg/L	0.0113 ppb	13:34:09
3	Zn 213.857†	511.3	-13.4	-0.3320 µg/L	-0.3320 ppb	13:34:29

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2083573.2	101.92 %	0.661			0.65%
Sc RADIAL	59566.3	103 %	0.62			0.23%
Y 371.029	1414938.7	100.71 %	0.651			0.65%
Ag 328.068†	-71.0	-0.5545 µg/L	0.39012	-0.5545 ppb	0.39012	70.35%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	35.7	26.198 µg/L	4.1673	26.198 ppb	4.1673	15.91%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.5	-4.7248 µg/L	3.29115	-4.7248 ppb	3.29115	69.66%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	37.7	1.6371 µg/L	0.32023	1.6371 ppb	0.32023	19.56%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-2.0	-0.0518 µg/L	0.06335	-0.0518 ppb	0.06335	122.19%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-498.1	-0.3188 µg/L	0.03864	-0.3188 ppb	0.03864	12.12%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-2.0	-1.8953 µg/L	2.47222	-1.8953 ppb	2.47222	130.44%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	3.5	0.0938 µg/L	0.08492	0.0938 ppb	0.08492	90.54%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-9.4	-0.4549 µg/L	0.25069	-0.4549 ppb	0.25069	55.11%

Cr	267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
		-0.3	-0.0062 µg/L	0.18851	-0.0062 ppb	0.18851 >999.9%
Cu	324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
		36.4	0.2494 µg/L	0.17817	0.2494 ppb	0.17817 71.45%
Fe	238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
		-0.2	-1.8573 µg/L	9.32786	-1.8573 ppb	9.32786 502.24%
K	766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
		-14.4	-10.145 µg/L	8.8218	-10.145 ppb	8.8218 86.95%
Mg	279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
		-0.7	-6.2605 µg/L	30.48948	-6.2605 ppb	30.48948 487.01%
Mn	257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
		99.8	0.3373 µg/L	0.02834	0.3373 ppb	0.02834 8.40%
Mo	202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
		7.0	0.7229 µg/L	0.51327	0.7229 ppb	0.51327 71.00%
Na	589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
		-60.8	-19.739 µg/L	7.7615	-19.739 ppb	7.7615 39.32%
Ni	231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
		-15.8	-0.8458 µg/L	0.26939	-0.8458 ppb	0.26939 31.85%
P	214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
		8.7	18.320 µg/L	10.5709	18.320 ppb	10.5709 57.70%
Pb	220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
		4.9	1.2690 µg/L	1.32469	1.2690 ppb	1.32469 104.39%
S	181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
		3.5	15.279 µg/L	8.3504	15.279 ppb	8.3504 54.65%
Sb	206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
		7.3	7.0052 µg/L	1.70126	7.0052 ppb	1.70126 24.29%
Se	196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
		1.9	2.8343 µg/L	1.44714	2.8343 ppb	1.44714 51.06%
SiO2†		QC value within limits for Se 196.026	Recovery = Not calculated			
		51.7	10.891 µg/L	0.6204	10.891 ppb	0.6204 5.70%
Si	251.611†	QC value within limits for SiO2	Recovery = Not calculated			
		57.3	4.6425 µg/L	1.05464	4.6425 ppb	1.05464 22.72%
Sn	189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
		-3.1	-1.3721 µg/L	0.69231	-1.3721 ppb	0.69231 50.46%
Sr	421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
		17.7	0.1790 µg/L	0.24277	0.1790 ppb	0.24277 135.61%
Ti	334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
		98.6	0.2331 µg/L	0.06384	0.2331 ppb	0.06384 27.38%
Tl	190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
		-0.5	-0.6336 µg/L	6.84252	-0.6336 ppb	6.84252 >999.9%
U	409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
		29.1	2.5320 µg/L	1.24277	2.5320 ppb	1.24277 49.08%
V	292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
		17.0	0.1826 µg/L	0.15129	0.1826 ppb	0.15129 82.84%
Zn	213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
		-14.7	-0.3646 µg/L	0.07506	-0.3646 ppb	0.07506 20.59%

QC value within limits for Zn 213.857 Recovery = Not calculated

All analyte(s) passed QC.

=====  
Analysis Begun

Start Time: 2/17/2010 13:52:45

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\021710D.sif

Batch ID:

Results Data Set: 021710

Results Library: c:\pe\optima1\Results\Results.mdb  
=====

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/17/2010 13:52:46

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
=====

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	60391.9	60391.9	104 %		13:53:24
1	Al 396.153Radial†	6869.6	6624.7	4859.8 µg/L	4859.8 ppb	13:53:24
1	Ca 317.933Radial†	5654.2	5238.4	4851.8 µg/L	4851.8 ppb	13:53:44
1	Fe 238.204 Radial†	602.6	561.8	4837.3 µg/L	4837.3 ppb	13:53:44
1	K 766.490 Radial†	7437.3	6970.5	4903.4 µg/L	4903.4 ppb	13:53:24
1	Mg 279.077 IEC†	557.6	522.4	4920.2 µg/L	4920.2 ppb	13:53:44
1	Na 589.592 Radial†	31925.5	30115.0	9776.4 µg/L	9776.4 ppb	13:53:24
1	Sr 421.552†	50271.9	48279.2	488.18 µg/L	488.18 ppb	13:53:24
1	Sc 361.383	2104799.5	2104799.5	102.95 %		13:54:43
1	Y 371.029	1426284.2	1426284.2	101.52 %		13:54:43
1	Ag 328.068†	63581.5	62280.5	490.97 µg/L	490.97 ppb	13:54:49
1	As 188.979†	273.5	264.2	507.38 µg/L	507.38 ppb	13:55:09
1	B 249.677†	11892.9	11254.8	486.85 µg/L	486.85 ppb	13:54:49
1	Ba 233.527†	19864.5	19312.4	497.33 µg/L	497.33 ppb	13:54:49
1	Be 313.107†	790749.9	771025.7	493.24 µg/L	493.24 ppb	13:54:43
1	Cd 226.502†	18809.3	18407.5	497.15 µg/L	497.15 ppb	13:54:49
1	Co 228.616†	10696.3	10394.4	502.79 µg/L	502.79 ppb	13:54:49
1	Cr 267.716†	23968.9	23313.3	495.98 µg/L	495.98 ppb	13:54:49
1	Cu 324.752†	76350.7	71622.1	491.46 µg/L	491.46 ppb	13:54:49
1	Mn 257.610†	150625.4	146539.5	495.94 µg/L	495.94 ppb	13:54:43
1	Mo 202.031†	5008.6	4871.8	501.52 µg/L	501.52 ppb	13:55:09
1	Ni 231.604†	9976.1	9383.1	500.51 µg/L	500.51 ppb	13:54:49
1	P 214.914†	1271.1	1213.0	2511.6 µg/L	2511.6 ppb	13:55:09
1	Pb 220.353†	2081.6	1928.3	500.34 µg/L	500.34 ppb	13:55:09
1	S 181.975 Axial†	250.3	229.3	988.48 µg/L	988.48 ppb	13:55:09
1	Sb 206.836†	562.7	526.4	505.84 µg/L	505.84 ppb	13:55:09
1	Se 196.026†	350.0	324.1	501.20 µg/L	501.20 ppb	13:55:09
1	SiO2†	27424.4	25292.9	5333.3 µg/L	5333.3 ppb	13:54:49
1	Si 251.611†	32135.7	30899.0	2501.5 µg/L	2501.5 ppb	13:54:49
1	Sn 189.927†	1158.9	1122.5	500.14 µg/L	500.14 ppb	13:55:09
1	Ti 334.940†	215300.9	208992.0	493.01 µg/L	493.01 ppb	13:54:43
1	Tl 190.801†	347.1	360.0	505.07 µg/L	505.07 ppb	13:55:09
1	U 409.014†	5907.2	5781.4	501.96 µg/L	501.96 ppb	13:54:49
1	V 292.402†	49273.5	47891.6	499.00 µg/L	499.00 ppb	13:54:49
1	Zn 213.857†	20974.5	19853.8	494.02 µg/L	494.02 ppb	13:54:49
2	Sc RADIAL	61071.5	61071.5	105 %		13:53:49
2	Al 396.153Radial†	6889.8	6570.5	4820.0 µg/L	4820.0 ppb	13:53:49
2	Ca 317.933Radial†	5652.3	5176.1	4794.1 µg/L	4794.1 ppb	13:54:09
2	Fe 238.204 Radial†	602.1	555.0	4778.5 µg/L	4778.5 ppb	13:54:09
2	K 766.490 Radial†	7515.8	6965.6	4899.9 µg/L	4899.9 ppb	13:53:49
2	Mg 279.077 IEC†	559.2	518.0	4878.8 µg/L	4878.8 ppb	13:54:09
2	Na 589.592 Radial†	32157.6	29994.2	9737.2 µg/L	9737.2 ppb	13:53:49
2	Sr 421.552†	50897.6	48336.2	488.76 µg/L	488.76 ppb	13:53:49
2	Sc 361.383	2109226.6	2109226.6	103.17 %		13:55:16
2	Y 371.029	1429850.1	1429850.1	101.77 %		13:55:16
2	Ag 328.068†	63372.9	61948.8	488.35 µg/L	488.35 ppb	13:55:21
2	As 188.979†	278.4	268.3	515.36 µg/L	515.36 ppb	13:55:41

2	B 249.677†	11924.6	11261.4	487.16 µg/L	487.16 ppb	13:55:21
2	Ba 233.527†	19800.5	19209.9	494.68 µg/L	494.68 ppb	13:55:21
2	Be 313.107†	788661.5	767389.4	490.91 µg/L	490.91 ppb	13:55:16
2	Cd 226.502†	18685.3	18248.9	492.87 µg/L	492.87 ppb	13:55:21
2	Co 228.616†	10642.6	10320.6	499.22 µg/L	499.22 ppb	13:55:21
2	Cr 267.716†	23830.4	23130.2	492.09 µg/L	492.09 ppb	13:55:21
2	Cu 324.752†	76111.5	71234.6	488.80 µg/L	488.80 ppb	13:55:21
2	Mn 257.610†	150027.4	145652.9	492.93 µg/L	492.93 ppb	13:55:16
2	Mo 202.031†	5015.7	4868.4	501.17 µg/L	501.17 ppb	13:55:41
2	Ni 231.604†	9941.6	9329.3	497.64 µg/L	497.64 ppb	13:55:21
2	P 214.914†	1274.0	1213.3	2512.6 µg/L	2512.6 ppb	13:55:41
2	Pb 220.353†	2075.6	1918.3	497.75 µg/L	497.75 ppb	13:55:41
2	S 181.975 Axial†	251.9	230.3	992.80 µg/L	992.80 ppb	13:55:41
2	Sb 206.836†	556.8	519.6	499.34 µg/L	499.34 ppb	13:55:41
2	Se 196.026†	354.5	327.7	506.68 µg/L	506.68 ppb	13:55:41
2	SiO2†	27333.6	25149.0	5302.9 µg/L	5302.9 ppb	13:55:21
2	Si 251.611†	32054.0	30754.3	2489.8 µg/L	2489.8 ppb	13:55:21
2	Sn 189.927†	1175.1	1135.9	506.10 µg/L	506.10 ppb	13:55:41
2	Ti 334.940†	214763.2	208031.8	490.75 µg/L	490.75 ppb	13:55:16
2	Tl 190.801†	345.9	358.2	502.49 µg/L	502.49 ppb	13:55:41
2	U 409.014†	5876.9	5740.0	498.37 µg/L	498.37 ppb	13:55:21
2	V 292.402†	49016.0	47541.6	495.38 µg/L	495.38 ppb	13:55:21
2	Zn 213.857†	20901.7	19740.5	491.20 µg/L	491.20 ppb	13:55:21
3	Sc RADIAL	60421.3	60421.3	104 %		13:54:14
3	Al 396.153Radial†	6883.6	6635.0	4868.8 µg/L	4868.8 ppb	13:54:14
3	Ca 317.933Radial†	5641.2	5223.2	4837.8 µg/L	4837.8 ppb	13:54:34
3	Fe 238.204 Radial†	606.4	565.2	4866.0 µg/L	4866.0 ppb	13:54:34
3	K 766.490 Radial†	7424.4	6954.6	4892.2 µg/L	4892.2 ppb	13:54:14
3	Mg 279.077 IEC†	559.7	524.2	4936.3 µg/L	4936.3 ppb	13:54:34
3	Na 589.592 Radial†	31958.7	30132.1	9781.9 µg/L	9781.9 ppb	13:54:14
3	Sr 421.552†	50413.4	48391.6	489.32 µg/L	489.32 ppb	13:54:14
3	Sc 361.383	2108094.0	2108094.0	103.12 %		13:55:48
3	Y 371.029	1429123.5	1429123.5	101.72 %		13:55:48
3	Ag 328.068†	61551.9	60215.8	474.60 µg/L	474.60 ppb	13:55:53
3	As 188.979†	245.1	236.2	453.71 µg/L	453.71 ppb	13:56:14
3	B 249.677†	11506.0	10861.7	469.70 µg/L	469.70 ppb	13:55:53
3	Ba 233.527†	18870.9	18318.7	471.72 µg/L	471.72 ppb	13:55:53
3	Be 313.107†	767854.9	747622.2	478.27 µg/L	478.27 ppb	13:55:48
3	Cd 226.502†	17735.8	17337.9	468.22 µg/L	468.22 ppb	13:55:53
3	Co 228.616†	10031.0	9732.9	470.73 µg/L	470.73 ppb	13:55:53
3	Cr 267.716†	22055.6	21421.4	455.74 µg/L	455.74 ppb	13:55:53
3	Cu 324.752†	72181.1	67462.6	462.97 µg/L	462.97 ppb	13:55:53
3	Mn 257.610†	146470.3	142281.4	481.54 µg/L	481.54 ppb	13:55:48
3	Mo 202.031†	4362.2	4237.3	436.23 µg/L	436.23 ppb	13:56:14
3	Ni 231.604†	9369.0	8779.1	468.30 µg/L	468.30 ppb	13:55:53
3	P 214.914†	1123.2	1067.7	2207.0 µg/L	2207.0 ppb	13:56:14
3	Pb 220.353†	1882.5	1732.1	449.36 µg/L	449.36 ppb	13:56:14
3	S 181.975 Axial†	232.2	211.4	911.25 µg/L	911.25 ppb	13:56:14
3	Sb 206.836†	498.6	463.4	444.89 µg/L	444.89 ppb	13:56:14
3	Se 196.026†	327.7	302.0	467.64 µg/L	467.64 ppb	13:56:14
3	SiO2†	26337.6	24197.4	5102.3 µg/L	5102.3 ppb	13:55:53
3	Si 251.611†	30786.7	29542.0	2391.7 µg/L	2391.7 ppb	13:55:53
3	Sn 189.927†	998.8	965.5	430.17 µg/L	430.17 ppb	13:56:14
3	Ti 334.940†	208391.3	201964.2	476.42 µg/L	476.42 ppb	13:55:48
3	Tl 190.801†	321.9	335.1	470.40 µg/L	470.40 ppb	13:56:14
3	U 409.014†	5414.4	5294.5	459.60 µg/L	459.60 ppb	13:55:53
3	V 292.402†	46082.6	44722.3	465.75 µg/L	465.75 ppb	13:55:53
3	Zn 213.857†	19814.1	18696.6	465.20 µg/L	465.20 ppb	13:55:53

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2107373.4	103.08 %	0.112			0.11%
Sc RADIAL	60628.2	104 %	0.7			0.63%
Y 371.029	1428419.3	101.67 %	0.134			0.13%
Ag 328.068†	61481.7	484.64 µg/L	8.794	484.64 ppb	8.794	1.81%
QC value within limits for Ag 328.068 Recovery = 96.93%						
Al 396.153Radial†	6610.1	4849.5 µg/L	25.98	4849.5 ppb	25.98	0.54%
QC value within limits for Al 396.153Radial Recovery = 96.99%						
As 188.979†	256.2	492.15 µg/L	33.533	492.15 ppb	33.533	6.81%

QC value within limits for As 188.979 Recovery = 98.43%							
B 249.677†	11125.9	481.24 µg/L	9.990	481.24 ppb	9.990	2.08%	
QC value within limits for B 249.677 Recovery = 96.25%							
Ba 233.527†	18947.0	487.91 µg/L	14.081	487.91 ppb	14.081	2.89%	
QC value within limits for Ba 233.527 Recovery = 97.58%							
Be 313.107†	762012.4	487.47 µg/L	8.056	487.47 ppb	8.056	1.65%	
QC value within limits for Be 313.107 Recovery = 97.49%							
Ca 317.933Radial†	5212.6	4827.9 µg/L	30.08	4827.9 ppb	30.08	0.62%	
QC value within limits for Ca 317.933Radial Recovery = 96.56%							
Cd 226.502†	17998.1	486.08 µg/L	15.613	486.08 ppb	15.613	3.21%	
QC value within limits for Cd 226.502 Recovery = 97.22%							
Co 228.616†	10149.3	490.92 µg/L	17.569	490.92 ppb	17.569	3.58%	
QC value within limits for Co 228.616 Recovery = 98.18%							
Cr 267.716†	22621.6	481.27 µg/L	22.196	481.27 ppb	22.196	4.61%	
QC value within limits for Cr 267.716 Recovery = 96.25%							
Cu 324.752†	70106.5	481.08 µg/L	15.741	481.08 ppb	15.741	3.27%	
QC value within limits for Cu 324.752 Recovery = 96.22%							
Fe 238.204 Radial†	560.7	4827.2 µg/L	44.61	4827.2 ppb	44.61	0.92%	
QC value within limits for Fe 238.204 Radial Recovery = 96.54%							
K 766.490 Radial†	6963.6	4898.5 µg/L	5.71	4898.5 ppb	5.71	0.12%	
QC value within limits for K 766.490 Radial Recovery = 97.97%							
Mg 279.077 IEC†	521.5	4911.7 µg/L	29.69	4911.7 ppb	29.69	0.60%	
QC value within limits for Mg 279.077 IEC Recovery = 98.23%							
Mn 257.610†	144824.6	490.14 µg/L	7.594	490.14 ppb	7.594	1.55%	
QC value within limits for Mn 257.610 Recovery = 98.03%							
Mo 202.031†	4659.2	479.64 µg/L	37.594	479.64 ppb	37.594	7.84%	
QC value within limits for Mo 202.031 Recovery = 95.93%							
Na 589.592 Radial†	30080.4	9765.2 µg/L	24.40	9765.2 ppb	24.40	0.25%	
QC value within limits for Na 589.592 Radial Recovery = 97.65%							
Ni 231.604†	9163.8	488.82 µg/L	17.827	488.82 ppb	17.827	3.65%	
QC value within limits for Ni 231.604 Recovery = 97.76%							
P 214.914†	1164.7	2410.4 µg/L	176.17	2410.4 ppb	176.17	7.31%	
QC value within limits for P 214.914 Recovery = 96.42%							
Pb 220.353†	1859.6	482.48 µg/L	28.717	482.48 ppb	28.717	5.95%	
QC value within limits for Pb 220.353 Recovery = 96.50%							
S 181.975 Axial†	223.7	964.18 µg/L	45.885	964.18 ppb	45.885	4.76%	
QC value within limits for S 181.975 Axial Recovery = 96.42%							
Sb 206.836†	503.1	483.36 µg/L	33.471	483.36 ppb	33.471	6.92%	
QC value within limits for Sb 206.836 Recovery = 96.67%							
Se 196.026†	317.9	491.84 µg/L	21.139	491.84 ppb	21.139	4.30%	
QC value within limits for Se 196.026 Recovery = 98.37%							
SiO2†	24879.8	5246.2 µg/L	125.53	5246.2 ppb	125.53	2.39%	
QC value within limits for SiO2 Recovery = 98.11%							
Si 251.611†	30398.5	2461.0 µg/L	60.33	2461.0 ppb	60.33	2.45%	
QC value within limits for Si 251.611 Recovery = 98.44%							
Sn 189.927†	1074.7	478.80 µg/L	42.222	478.80 ppb	42.222	8.82%	
QC value within limits for Sn 189.927 Recovery = 95.76%							
Sr 421.552†	48335.7	488.75 µg/L	0.568	488.75 ppb	0.568	0.12%	
QC value within limits for Sr 421.552 Recovery = 97.75%							
Ti 334.940†	206329.3	486.72 µg/L	8.996	486.72 ppb	8.996	1.85%	
QC value within limits for Ti 334.940 Recovery = 97.34%							
Tl 190.801†	351.1	492.65 µg/L	19.315	492.65 ppb	19.315	3.92%	
QC value within limits for Tl 190.801 Recovery = 98.53%							
U 409.014†	5605.3	486.64 µg/L	23.490	486.64 ppb	23.490	4.83%	
QC value within limits for U 409.014 Recovery = 97.33%							
V 292.402†	46718.5	486.71 µg/L	18.244	486.71 ppb	18.244	3.75%	
QC value within limits for V 292.402 Recovery = 97.34%							
Zn 213.857†	19430.3	483.47 µg/L	15.884	483.47 ppb	15.884	3.29%	
QC value within limits for Zn 213.857 Recovery = 96.69%							
All analyte(s) passed QC.							

Sequence No.: 2  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/17/2010 13:56:22  
 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	58559.1	58559.1	101 %		13:56:54
1	Al 396.153Radial†	-4.0	18.9	13.896 µg/L	13.896 ppb	13:56:54
1	Ca 317.933Radial†	201.3	4.1	3.7905 µg/L	3.7905 ppb	13:57:14
1	Fe 238.204 Radial†	15.7	-1.7	-14.578 µg/L	-14.578 ppb	13:57:14
1	K 766.490 Radial†	107.7	-70.1	-49.315 µg/L	-49.315 ppb	13:56:54
1	Mg 279.077 IEC†	10.5	-3.0	-27.927 µg/L	-27.927 ppb	13:57:14
1	Na 589.592 Radial†	521.7	-49.1	-15.931 µg/L	-15.931 ppb	13:56:54
1	Sr 421.552†	30.0	-3.6	-0.0366 µg/L	-0.0366 ppb	13:56:54
1	Sc 361.383	2101292.9	2101292.9	102.78 %		13:58:12
1	Y 371.029	1430566.1	1430566.1	101.82 %		13:58:12
1	Ag 328.068†	-644.0	-102.9	-0.8062 µg/L	-0.8062 ppb	13:58:18
1	As 188.979†	-3.8	-5.2	-10.001 µg/L	-10.001 ppb	13:58:38
1	B 249.677†	315.4	10.2	0.4489 µg/L	0.4489 ppb	13:58:38
1	Ba 233.527†	-25.0	-6.4	-0.1633 µg/L	-0.1633 ppb	13:58:38
1	Be 313.107†	-3186.8	-133.0	-0.0850 µg/L	-0.0850 ppb	13:58:18
1	Cd 226.502†	-138.3	3.4	0.0933 µg/L	0.0933 ppb	13:58:38
1	Co 228.616†	-10.8	-5.5	-0.2650 µg/L	-0.2650 ppb	13:58:38
1	Cr 267.716†	-20.4	12.4	0.2635 µg/L	0.2635 ppb	13:58:38
1	Cu 324.752†	2552.8	-53.8	-0.3710 µg/L	-0.3710 ppb	13:58:18
1	Mn 257.610†	-217.5	25.0	0.0836 µg/L	0.0836 ppb	13:58:38
1	Mo 202.031†	6.4	13.0	1.3423 µg/L	1.3423 ppb	13:58:38
1	Ni 231.604†	297.5	-17.3	-0.9260 µg/L	-0.9260 ppb	13:58:38
1	P 214.914†	24.0	1.8	3.8695 µg/L	3.8695 ppb	13:58:38
1	Pb 220.353†	107.7	11.3	2.9288 µg/L	2.9288 ppb	13:58:38
1	S 181.975 Axial†	15.0	0.8	3.4778 µg/L	3.4778 ppb	13:58:38
1	Sb 206.836†	25.3	4.5	4.3269 µg/L	4.3269 ppb	13:58:38
1	Se 196.026†	16.2	-0.1	-0.1649 µg/L	-0.1649 ppb	13:58:38
1	SiO2†	1365.6	-15.8	-3.3406 µg/L	-3.3406 ppb	13:58:18
1	Si 251.611†	315.3	-7.7	-0.6216 µg/L	-0.6216 ppb	13:58:38
1	Sn 189.927†	-0.3	-3.3	-1.4892 µg/L	-1.4892 ppb	13:58:38
1	Ti 334.940†	74.4	-58.2	-0.1351 µg/L	-0.1351 ppb	13:58:18
1	Tl 190.801†	-23.6	0.0	0.0214 µg/L	0.0214 ppb	13:58:38
1	U 409.014†	-25.9	18.5	1.6142 µg/L	1.6142 ppb	13:58:18
1	V 292.402†	-33.3	-0.3	0.0074 µg/L	0.0074 ppb	13:58:18
1	Zn 213.857†	486.8	-45.2	-1.1265 µg/L	-1.1265 ppb	13:58:38
2	Sc RADIAL	59107.2	59107.2	102 %		13:57:19
2	Al 396.153Radial†	-23.5	-0.2	-0.1732 µg/L	-0.1732 ppb	13:57:19
2	Ca 317.933Radial†	196.9	-2.1	-1.9455 µg/L	-1.9455 ppb	13:57:39
2	Fe 238.204 Radial†	17.8	0.3	2.2712 µg/L	2.2712 ppb	13:57:39
2	K 766.490 Radial†	176.1	-4.0	-2.8130 µg/L	-2.8130 ppb	13:57:19
2	Mg 279.077 IEC†	16.6	2.8	26.648 µg/L	26.648 ppb	13:57:39
2	Na 589.592 Radial†	487.1	-87.8	-28.516 µg/L	-28.516 ppb	13:57:19
2	Sr 421.552†	8.0	-25.5	-0.2574 µg/L	-0.2574 ppb	13:57:19
2	Sc 361.383	2091761.7	2091761.7	102.32 %		13:58:44
2	Y 371.029	1424316.5	1424316.5	101.38 %		13:58:44
2	Ag 328.068†	-542.7	-6.7	-0.0488 µg/L	-0.0488 ppb	13:58:49
2	As 188.979†	-3.9	-5.3	-10.213 µg/L	-10.213 ppb	13:59:09
2	B 249.677†	322.8	18.8	0.8139 µg/L	0.8139 ppb	13:59:09
2	Ba 233.527†	-22.4	-3.9	-0.0992 µg/L	-0.0992 ppb	13:59:09
2	Be 313.107†	-3093.1	-55.5	-0.0356 µg/L	-0.0356 ppb	13:58:49
2	Cd 226.502†	-135.5	5.6	0.1497 µg/L	0.1497 ppb	13:59:09
2	Co 228.616†	-8.4	-3.2	-0.1547 µg/L	-0.1547 ppb	13:59:09
2	Cr 267.716†	-27.2	5.7	0.1205 µg/L	0.1205 ppb	13:59:09
2	Cu 324.752†	2562.5	-33.1	-0.2263 µg/L	-0.2263 ppb	13:58:49
2	Mn 257.610†	-195.4	45.6	0.1534 µg/L	0.1534 ppb	13:59:09
2	Mo 202.031†	1.8	8.7	0.8920 µg/L	0.8920 ppb	13:59:09
2	Ni 231.604†	303.0	-10.6	-0.5670 µg/L	-0.5670 ppb	13:59:09
2	P 214.914†	29.9	7.6	16.122 µg/L	16.122 ppb	13:59:09
2	Pb 220.353†	108.1	12.1	3.1366 µg/L	3.1366 ppb	13:59:09

2	S 181.975 Axial†	16.0	1.8	7.7419 µg/L	7.7419 ppb	13:59:09
2	Sb 206.836†	26.0	5.2	5.0217 µg/L	5.0217 ppb	13:59:09
2	Se 196.026†	14.7	-1.5	-2.2743 µg/L	-2.2743 ppb	13:59:09
2	SiO2†	1369.7	-5.8	-1.2252 µg/L	-1.2252 ppb	13:58:49
2	Si 251.611†	330.5	8.6	0.6933 µg/L	0.6933 ppb	13:59:09
2	Sn 189.927†	-0.2	-3.3	-1.4806 µg/L	-1.4806 ppb	13:59:09
2	Ti 334.940†	239.6	103.6	0.2423 µg/L	0.2423 ppb	13:58:49
2	Tl 190.801†	-22.3	1.2	1.6281 µg/L	1.6281 ppb	13:59:09
2	U 409.014†	-34.1	10.3	0.8985 µg/L	0.8985 ppb	13:58:49
2	V 292.402†	20.4	52.0	0.5433 µg/L	0.5433 ppb	13:58:49
2	Zn 213.857†	494.9	-35.1	-0.8794 µg/L	-0.8794 ppb	13:59:09
3	Sc RADIAL	59526.7	59526.7	103 %		13:57:45
3	Al 396.153Radial†	-23.7	-0.2	-0.1550 µg/L	-0.1550 ppb	13:57:45
3	Ca 317.933Radial†	196.5	-3.8	-3.5601 µg/L	-3.5601 ppb	13:58:05
3	Fe 238.204 Radial†	12.7	-4.9	-41.733 µg/L	-41.733 ppb	13:58:05
3	K 766.490 Radial†	199.6	17.7	12.452 µg/L	12.452 ppb	13:57:45
3	Mg 279.077 IEC†	15.9	2.1	19.627 µg/L	19.627 ppb	13:58:05
3	Na 589.592 Radial†	524.1	-55.2	-17.906 µg/L	-17.906 ppb	13:57:45
3	Sr 421.552†	34.9	0.7	0.0074 µg/L	0.0074 ppb	13:57:45
3	Sc 361.383	2072460.7	2072460.7	101.37 %		13:59:15
3	Y 371.029	1410185.3	1410185.3	100.37 %		13:59:15
3	Ag 328.068†	-643.7	-111.4	-0.8715 µg/L	-0.8715 ppb	13:59:20
3	As 188.979†	-3.9	-5.3	-10.192 µg/L	-10.192 ppb	13:59:40
3	B 249.677†	302.8	1.9	0.1052 µg/L	0.1052 ppb	13:59:40
3	Ba 233.527†	-11.6	6.5	0.1678 µg/L	0.1678 ppb	13:59:40
3	Be 313.107†	-3211.6	-200.5	-0.1284 µg/L	-0.1284 ppb	13:59:20
3	Cd 226.502†	-146.0	-6.0	-0.1593 µg/L	-0.1593 ppb	13:59:40
3	Co 228.616†	-12.1	-6.9	-0.3331 µg/L	-0.3331 ppb	13:59:40
3	Cr 267.716†	-22.6	9.9	0.2099 µg/L	0.2099 ppb	13:59:40
3	Cu 324.752†	2604.1	31.3	0.2088 µg/L	0.2088 ppb	13:59:20
3	Mn 257.610†	-217.4	22.2	0.0686 µg/L	0.0686 ppb	13:59:40
3	Mo 202.031†	-3.7	3.3	0.3340 µg/L	0.3340 ppb	13:59:40
3	Ni 231.604†	284.4	-26.3	-1.4023 µg/L	-1.4023 ppb	13:59:40
3	P 214.914†	29.9	8.0	16.746 µg/L	16.746 ppb	13:59:40
3	Pb 220.353†	98.1	3.2	0.8382 µg/L	0.8382 ppb	13:59:40
3	S 181.975 Axial†	15.9	1.9	8.1279 µg/L	8.1279 ppb	13:59:40
3	Sb 206.836†	27.1	6.6	6.3056 µg/L	6.3056 ppb	13:59:40
3	Se 196.026†	15.9	-0.2	-0.3721 µg/L	-0.3721 ppb	13:59:40
3	SiO2†	1369.2	6.2	1.3101 µg/L	1.3101 ppb	13:59:20
3	Si 251.611†	320.8	2.0	0.1629 µg/L	0.1629 ppb	13:59:40
3	Sn 189.927†	-2.2	-5.3	-2.3547 µg/L	-2.3547 ppb	13:59:40
3	Ti 334.940†	161.0	28.2	0.0650 µg/L	0.0650 ppb	13:59:20
3	Tl 190.801†	-25.6	-2.3	-3.1754 µg/L	-3.1754 ppb	13:59:40
3	U 409.014†	-67.0	-22.4	-1.9409 µg/L	-1.9409 ppb	13:59:20
3	V 292.402†	7.8	39.8	0.4054 µg/L	0.4054 ppb	13:59:20
3	Zn 213.857†	492.6	-32.9	-0.8187 µg/L	-0.8187 ppb	13:59:40

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2088505.1	102.16 %	0.719			0.70%
Sc RADIAL	59064.3	102 %	0.8			0.82%
Y 371.029	1421689.3	101.19 %	0.743			0.73%
Ag 328.068†	-73.7	-0.5755 µg/L	0.45727	-0.5755 ppb	0.45727	79.45%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	6.2	4.5224 µg/L	8.11735	4.5224 ppb	8.11735	179.49%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-5.3	-10.135 µg/L	0.1164	-10.135 ppb	0.1164	1.15%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	10.3	0.4560 µg/L	0.35439	0.4560 ppb	0.35439	77.72%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-1.2	-0.0316 µg/L	0.17559	-0.0316 ppb	0.17559	556.28%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-129.7	-0.0830 µg/L	0.04640	-0.0830 ppb	0.04640	55.90%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.6	-0.5717 µg/L	3.86307	-0.5717 ppb	3.86307	675.72%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.0	0.0279 µg/L	0.16453	0.0279 ppb	0.16453	589.26%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-5.2	-0.2510 µg/L	0.09003	-0.2510 ppb	0.09003	35.87%



Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated				
	9.3	0.1980 µg/L	0.07224	0.1980 ppb	0.07224	36.49%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated				
	-18.5	-0.1295 µg/L	0.30178	-0.1295 ppb	0.30178	233.02%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated				
	-2.1	-18.013 µg/L	22.2022	-18.013 ppb	22.2022	123.25%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated				
	-18.8	-13.225 µg/L	32.1731	-13.225 ppb	32.1731	243.27%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated				
	0.6	6.1159 µg/L	29.69025	6.1159 ppb	29.69025	485.46%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated				
	30.9	0.1019 µg/L	0.04524	0.1019 ppb	0.04524	44.41%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated				
	8.3	0.8561 µg/L	0.50510	0.8561 ppb	0.50510	59.00%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated				
	-64.0	-20.784 µg/L	6.7681	-20.784 ppb	6.7681	32.56%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated				
	-18.1	-0.9651 µg/L	0.41898	-0.9651 ppb	0.41898	43.41%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated				
	5.8	12.246 µg/L	7.2607	12.246 ppb	7.2607	59.29%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated				
	8.9	2.3012 µg/L	1.27123	2.3012 ppb	1.27123	55.24%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated				
	1.5	6.4492 µg/L	2.58051	6.4492 ppb	2.58051	40.01%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated				
	5.4	5.2180 µg/L	1.00386	5.2180 ppb	1.00386	19.24%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated				
	-0.6	-0.9371 µg/L	1.16268	-0.9371 ppb	1.16268	124.07%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated				
	-5.1	-1.0853 µg/L	2.32849	-1.0853 ppb	2.32849	214.56%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated				
	1.0	0.0782 µg/L	0.66150	0.0782 ppb	0.66150	845.70%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated				
	-4.0	-1.7748 µg/L	0.50221	-1.7748 ppb	0.50221	28.30%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated				
	-9.4	-0.0955 µg/L	0.14193	-0.0955 ppb	0.14193	148.57%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated				
	24.5	0.0574 µg/L	0.18884	0.0574 ppb	0.18884	328.97%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated				
	-0.4	-0.5086 µg/L	2.44521	-0.5086 ppb	2.44521	480.76%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated				
	2.2	0.1906 µg/L	1.88032	0.1906 ppb	1.88032	986.52%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated				
	30.5	0.3187 µg/L	0.27827	0.3187 ppb	0.27827	87.31%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated				
	-37.8	-0.9416 µg/L	0.16304	-0.9416 ppb	0.16304	17.32%
All analyte(s) passed QC.						

Sequence No.: 3  
 Sample ID: 245797002|948065|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 308  
 Date Collected: 2/17/2010 13:59:48  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245797002|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	60552.9	60552.9	104 %		14:00:26
1	Al 396.153Radial†	96787.9	92791.1	68215 µg/L	68215 ppb	14:00:26
1	Ca 317.933Radial†	18512.2	17547.9	16253 µg/L	16253 ppb	14:00:26
1	Fe 238.204 Radial†	15266.6	14615.3	125570 µg/L	125570 ppb	14:00:26
1	K 766.490 Radial†	11568.0	10910.7	7675.1 µg/L	7675.1 ppb	14:00:26
1	Mg 279.077 IEC†	1377.2	1306.6	12163 µg/L	12163 ppb	14:00:46
1	Na 589.592 Radial†	6070.0	5251.7	1704.9 µg/L	1704.9 ppb	14:00:26
1	Sr 421.552†	17740.7	16970.5	171.60 µg/L	171.60 ppb	14:00:26
1	Sc 361.383	2090599.6	2090599.6	102.26 %		14:01:47
1	Y 371.029	1525483.9	1525483.9	108.58 %		14:01:47
1	Ag 328.068†	-2116.0	-1545.5	-3.5125 µg/L	-3.5125 ppb	14:01:52
1	As 188.979†	17.1	15.2	35.697 µg/L	35.697 ppb	14:02:12
1	B 249.677†	1297.4	971.9	-23.096 µg/L	-23.096 ppb	14:01:52
1	Ba 233.527†	30915.3	30250.1	777.78 µg/L	777.78 ppb	14:01:52
1	Be 313.107†	20983.5	23487.3	14.363 µg/L	14.363 ppb	14:01:52
1	Cd 226.502†	249.2	381.7	-3.7811 µg/L	-3.7811 ppb	14:02:12
1	Co 228.616†	1521.3	1492.7	68.630 µg/L	68.630 ppb	14:02:12
1	Cr 267.716†	6904.6	6784.2	144.31 µg/L	144.31 ppb	14:01:52
1	Cu 324.752†	79065.3	74780.5	529.89 µg/L	529.89 ppb	14:01:52
1	Mn 257.610†	630875.2	617170.0	2103.0 µg/L	2103.0 ppb	14:01:47
1	Mo 202.031†	23.6	30.0	7.8577 µg/L	7.8577 ppb	14:02:12
1	Ni 231.604†	2190.1	1834.9	99.529 µg/L	99.529 ppb	14:02:12
1	P 214.914†	393.6	363.3	629.92 µg/L	629.92 ppb	14:02:12
1	Pb 220.353†	1038.0	921.5	237.05 µg/L	237.05 ppb	14:02:12
1	S 181.975 Axial†	77.4	61.9	266.97 µg/L	266.97 ppb	14:02:12
1	Sb 206.836†	44.3	23.2	19.164 µg/L	19.164 ppb	14:02:12
1	Se 196.026†	-38.1	-53.1	246.81 µg/L	246.81 ppb	14:02:12
1	SiO2†	295909.5	288025.7	60733 µg/L	60733 ppb	14:01:47
1	Si 251.611†	356912.9	348710.9	28231 µg/L	28231 ppb	14:01:47
1	Sn 189.927†	1.8	-1.3	-12.626 µg/L	-12.626 ppb	14:02:12
1	Ti 334.940†	759693.4	742774.3	1752.6 µg/L	1752.6 ppb	14:01:47
1	Tl 190.801†	-55.9	-31.7	1.5660 µg/L	1.5660 ppb	14:02:12
1	U 409.014†	1021.8	1042.9	72.278 µg/L	72.278 ppb	14:01:47
1	V 292.402†	10093.9	9902.9	117.15 µg/L	117.15 ppb	14:01:52
1	Zn 213.857†	21337.7	20347.3	501.98 µg/L	501.98 ppb	14:01:52
2	Sc RADIAL	60658.1	60658.1	105 %		14:00:51
2	Al 396.153Radial†	97573.7	93382.0	68649 µg/L	68649 ppb	14:00:51
2	Ca 317.933Radial†	18526.0	17530.4	16237 µg/L	16237 ppb	14:00:51
2	Fe 238.204 Radial†	15289.0	14611.4	125530 µg/L	125530 ppb	14:00:51
2	K 766.490 Radial†	11602.8	10924.8	7685.0 µg/L	7685.0 ppb	14:00:51
2	Mg 279.077 IEC†	1395.2	1321.5	12304 µg/L	12304 ppb	14:01:11
2	Na 589.592 Radial†	6072.5	5244.1	1702.4 µg/L	1702.4 ppb	14:00:51
2	Sr 421.552†	17877.3	17071.8	172.62 µg/L	172.62 ppb	14:00:51
2	Sc 361.383	2076353.2	2076353.2	101.56 %		14:02:20
2	Y 371.029	1517213.8	1517213.8	107.99 %		14:02:20
2	Ag 328.068†	-2039.4	-1484.3	-3.0261 µg/L	-3.0261 ppb	14:02:25
2	As 188.979†	7.2	5.6	17.147 µg/L	17.147 ppb	14:02:45
2	B 249.677†	1253.2	937.2	-24.585 µg/L	-24.585 ppb	14:02:25
2	Ba 233.527†	31196.3	30734.2	790.23 µg/L	790.23 ppb	14:02:25
2	Be 313.107†	21083.9	23727.0	14.511 µg/L	14.511 ppb	14:02:25
2	Cd 226.502†	262.8	396.7	-3.3712 µg/L	-3.3712 ppb	14:02:45
2	Co 228.616†	1522.3	1503.9	69.141 µg/L	69.141 ppb	14:02:45
2	Cr 267.716†	6975.0	6899.9	146.77 µg/L	146.77 ppb	14:02:25
2	Cu 324.752†	79719.8	75955.4	537.94 µg/L	537.94 ppb	14:02:25
2	Mn 257.610†	632361.8	622866.7	2122.3 µg/L	2122.3 ppb	14:02:20
2	Mo 202.031†	26.0	32.5	8.1133 µg/L	8.1133 ppb	14:02:45
2	Ni 231.604†	2208.0	1867.3	101.26 µg/L	101.26 ppb	14:02:45
2	P 214.914†	403.7	376.0	655.89 µg/L	655.89 ppb	14:02:45
2	Pb 220.353†	1058.6	948.8	244.14 µg/L	244.14 ppb	14:02:45

2	S 181.975 Axial†	77.4	62.4	269.09 µg/L	269.09 ppb	14:02:45
2	Sb 206.836†	44.1	23.3	19.233 µg/L	19.233 ppb	14:02:45
2	Se 196.026†	-47.7	-62.8	231.86 µg/L	231.86 ppb	14:02:45
2	SiO2†	296001.6	290101.8	61171 µg/L	61171 ppb	14:02:20
2	Si 251.611†	356982.3	351174.1	28431 µg/L	28431 ppb	14:02:20
2	Sn 189.927†	5.7	2.6	-10.869 µg/L	-10.869 ppb	14:02:45
2	Ti 334.940†	760895.2	749054.8	1767.4 µg/L	1767.4 ppb	14:02:20
2	Tl 190.801†	-54.0	-30.3	3.7908 µg/L	3.7908 ppb	14:02:45
2	U 409.014†	1113.4	1140.0	80.726 µg/L	80.726 ppb	14:02:20
2	V 292.402†	10166.7	10042.3	118.60 µg/L	118.60 ppb	14:02:25
2	Zn 213.857†	21541.1	20690.7	510.55 µg/L	510.55 ppb	14:02:25
3	Sc RADIAL	60476.2	60476.2	104 %		14:01:17
3	Al 396.153Radial†	99134.7	95160.9	69957 µg/L	69957 ppb	14:01:17
3	Ca 317.933Radial†	18842.2	17887.2	16567 µg/L	16567 ppb	14:01:17
3	Fe 238.204 Radial†	15558.5	14914.0	128130 µg/L	128130 ppb	14:01:17
3	K 766.490 Radial†	11846.9	11192.4	7873.2 µg/L	7873.2 ppb	14:01:17
3	Mg 279.077 IEC†	1401.6	1331.7	12397 µg/L	12397 ppb	14:01:37
3	Na 589.592 Radial†	6173.9	5358.9	1739.7 µg/L	1739.7 ppb	14:01:17
3	Sr 421.552†	18161.9	17396.4	175.91 µg/L	175.91 ppb	14:01:17
3	Sc 361.383	2074549.9	2074549.9	101.47 %		14:02:53
3	Y 371.029	1514049.8	1514049.8	107.76 %		14:02:53
3	Ag 328.068†	-2044.3	-1490.9	-2.9180 µg/L	-2.9180 ppb	14:02:58
3	As 188.979†	15.2	13.5	32.489 µg/L	32.489 ppb	14:03:18
3	B 249.677†	1266.5	951.4	-25.330 µg/L	-25.330 ppb	14:02:58
3	Ba 233.527†	30671.9	30244.1	777.63 µg/L	777.63 ppb	14:02:58
3	Be 313.107†	20635.7	23303.4	14.243 µg/L	14.243 ppb	14:02:58
3	Cd 226.502†	234.0	368.6	-4.4272 µg/L	-4.4272 ppb	14:03:18
3	Co 228.616†	1463.5	1447.2	66.416 µg/L	66.416 ppb	14:03:18
3	Cr 267.716†	6783.2	6716.8	142.87 µg/L	142.87 ppb	14:02:58
3	Cu 324.752†	78448.1	74770.4	530.18 µg/L	530.18 ppb	14:02:58
3	Mn 257.610†	629404.6	620493.7	2114.6 µg/L	2114.6 ppb	14:02:53
3	Mo 202.031†	22.4	28.9	7.8449 µg/L	7.8449 ppb	14:03:18
3	Ni 231.604†	2139.2	1801.4	97.774 µg/L	97.774 ppb	14:03:18
3	P 214.914†	379.7	352.6	605.78 µg/L	605.78 ppb	14:03:18
3	Pb 220.353†	1022.6	914.2	235.15 µg/L	235.15 ppb	14:03:18
3	S 181.975 Axial†	75.9	61.0	263.07 µg/L	263.07 ppb	14:03:18
3	Sb 206.836†	40.0	19.2	15.383 µg/L	15.383 ppb	14:03:18
3	Se 196.026†	-46.8	-62.0	240.02 µg/L	240.02 ppb	14:03:18
3	SiO2†	295158.3	289524.0	61049 µg/L	61049 ppb	14:02:53
3	Si 251.611†	355842.4	350356.3	28364 µg/L	28364 ppb	14:02:53
3	Sn 189.927†	-1.7	-4.7	-14.384 µg/L	-14.384 ppb	14:03:18
3	Ti 334.940†	756252.8	745131.1	1758.1 µg/L	1758.1 ppb	14:02:53
3	Tl 190.801†	-53.8	-30.0	4.4342 µg/L	4.4342 ppb	14:03:18
3	U 409.014†	1119.0	1146.4	80.910 µg/L	80.910 ppb	14:02:53
3	V 292.402†	10097.2	9982.6	118.28 µg/L	118.28 ppb	14:02:58
3	Zn 213.857†	21328.5	20499.6	505.66 µg/L	505.66 ppb	14:02:58

## Mean Data: 245797002|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2080500.9	101.77 %	%	0.430			0.42%
Sc RADIAL	60562.4	104 %	%	0.2			0.15%
Y 371.029	1518915.8	108.11 %	%	0.420			0.39%
Ag 328.068†	-1506.9	-3.1522 µg/L	µg/L	0.31666	-3.1522 ppb	0.31666	10.05%
Al 396.153Radial†	93778.0	68941 µg/L	µg/L	906.9	68941 ppb	906.9	1.32%
As 188.979†	11.4	28.444 µg/L	µg/L	9.9141	28.444 ppb	9.9141	34.85%
B 249.677†	953.5	-24.337 µg/L	µg/L	1.1376	-24.337 ppb	1.1376	4.67%
Ba 233.527†	30409.5	781.88 µg/L	µg/L	7.231	781.88 ppb	7.231	0.92%
Be 313.107†	23505.9	14.372 µg/L	µg/L	0.1340	14.372 ppb	0.1340	0.93%
Ca 317.933Radial†	17655.2	16352 µg/L	µg/L	186.3	16352 ppb	186.3	1.14%
Cd 226.502†	382.3	-3.8598 µg/L	µg/L	0.53239	-3.8598 ppb	0.53239	13.79%
Co 228.616†	1481.3	68.063 µg/L	µg/L	1.4483	68.063 ppb	1.4483	2.13%
Cr 267.716†	6800.3	144.65 µg/L	µg/L	1.969	144.65 ppb	1.969	1.36%
Cu 324.752†	75168.8	532.67 µg/L	µg/L	4.565	532.67 ppb	4.565	0.86%
Fe 238.204 Radial†	14713.5	126410 µg/L	µg/L	1491.2	126410 ppb	1491.2	1.18%
K 766.490 Radial†	11009.3	7744.4 µg/L	µg/L	111.65	7744.4 ppb	111.65	1.44%
Mg 279.077 IEC†	1319.9	12288 µg/L	µg/L	117.8	12288 ppb	117.8	0.96%
Mn 257.610†	620176.8	2113.3 µg/L	µg/L	9.69	2113.3 ppb	9.69	0.46%
Mo 202.031†	30.5	7.9386 µg/L	µg/L	0.15141	7.9386 ppb	0.15141	1.91%
Na 589.592 Radial†	5284.9	1715.7 µg/L	µg/L	20.84	1715.7 ppb	20.84	1.21%

Ni 231.604†	1834.5	99.520 µg/L	1.7410	99.520 ppb	1.7410	1.75%
P 214.914†	364.0	630.53 µg/L	25.058	630.53 ppb	25.058	3.97%
Pb 220.353†	928.2	238.78 µg/L	4.741	238.78 ppb	4.741	1.99%
S 181.975 Axial†	61.8	266.38 µg/L	3.053	266.38 ppb	3.053	1.15%
Sb 206.836†	21.9	17.927 µg/L	2.2031	17.927 ppb	2.2031	12.29%
Se 196.026†	-59.3	239.56 µg/L	7.488	239.56 ppb	7.488	3.13%
SiO2†	289217.2	60985 µg/L	225.9	60985 ppb	225.9	0.37%
Si 251.611†	350080.4	28342 µg/L	101.6	28342 ppb	101.6	0.36%
Sn 189.927†	-1.2	-12.626 µg/L	1.7574	-12.626 ppb	1.7574	13.92%
Sr 421.552†	17146.2	173.38 µg/L	2.249	173.38 ppb	2.249	1.30%
Ti 334.940†	745653.4	1759.4 µg/L	7.48	1759.4 ppb	7.48	0.43%
Tl 190.801†	-30.7	3.2637 µg/L	1.50500	3.2637 ppb	1.50500	46.11%
U 409.014†	1109.8	77.972 µg/L	4.9312	77.972 ppb	4.9312	6.32%
V 292.402†	9975.9	118.01 µg/L	0.760	118.01 ppb	0.760	0.64%
Zn 213.857†	20512.6	506.06 µg/L	4.303	506.06 ppb	4.303	0.85%

Sequence No.: 4  
 Sample ID: 245797003|948065|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 309  
 Date Collected: 2/17/2010 14:03:26  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245797003|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59501.2	59501.2	103 %		14:03:58
1	Al 396.153Radial†	25503.2	24899.0	18304 µg/L	18304 ppb	14:03:58
1	Ca 317.933Radial†	3955.2	3662.6	3392.3 µg/L	3392.3 ppb	14:04:18
1	Fe 238.204 Radial†	10584.7	10307.1	88554 µg/L	88554 ppb	14:03:58
1	K 766.490 Radial†	5572.5	5258.6	3699.1 µg/L	3699.1 ppb	14:03:58
1	Mg 279.077 IEC†	248.2	228.7	2057.2 µg/L	2057.2 ppb	14:04:18
1	Na 589.592 Radial†	6440.8	5716.3	1855.7 µg/L	1855.7 ppb	14:03:58
1	Sr 421.552†	2986.7	2879.9	29.121 µg/L	29.121 ppb	14:03:58
1	Sc 361.383	2064986.7	2064986.7	101.01 %		14:05:18
1	Y 371.029	1485555.5	1485555.5	105.74 %		14:05:18
1	Ag 328.068†	-1674.3	-1134.0	-3.0282 µg/L	-3.0282 ppb	14:05:23
1	As 188.979†	7.9	6.3	17.074 µg/L	17.074 ppb	14:05:44
1	B 249.677†	931.1	625.1	-18.918 µg/L	-18.918 ppb	14:05:23
1	Ba 233.527†	9342.3	9267.2	238.29 µg/L	238.29 ppb	14:05:23
1	Be 313.107†	5679.9	8590.8	4.6096 µg/L	4.6096 ppb	14:05:23
1	Cd 226.502†	100.8	237.8	-3.5204 µg/L	-3.5204 ppb	14:05:44
1	Co 228.616†	3055.6	3030.2	141.88 µg/L	141.88 ppb	14:05:44
1	Cr 267.716†	4520.5	4507.6	95.864 µg/L	95.864 ppb	14:05:23
1	Cu 324.752†	8994.0	6366.8	55.937 µg/L	55.937 ppb	14:05:23
1	Mn 257.610†	733486.6	726410.5	2467.9 µg/L	2467.9 ppb	14:05:18
1	Mo 202.031†	44.7	51.1	8.6266 µg/L	8.6266 ppb	14:05:44
1	Ni 231.604†	1504.5	1182.8	64.136 µg/L	64.136 ppb	14:05:44
1	P 214.914†	301.1	276.5	511.90 µg/L	511.90 ppb	14:05:44
1	Pb 220.353†	294.2	197.8	49.022 µg/L	49.022 ppb	14:05:44
1	S 181.975 Axial†	39.8	25.6	110.39 µg/L	110.39 ppb	14:05:44
1	Sb 206.836†	29.1	8.6	6.9808 µg/L	6.9808 ppb	14:05:44
1	Se 196.026†	-24.8	-40.4	177.64 µg/L	177.64 ppb	14:05:44
1	SiO2†	133072.2	130401.0	27497 µg/L	27497 ppb	14:05:23
1	Si 251.611†	163962.8	162013.7	13116 µg/L	13116 ppb	14:05:18
1	Sn 189.927†	0.2	-2.9	-10.518 µg/L	-10.518 ppb	14:05:44
1	Ti 334.940†	997675.4	987598.2	2331.1 µg/L	2331.1 ppb	14:05:18
1	Tl 190.801†	-56.1	-32.6	-1.7541 µg/L	-1.7541 ppb	14:05:44
1	U 409.014†	-1649.4	-1589.3	-150.77 µg/L	-150.77 ppb	14:05:18
1	V 292.402†	3949.5	3942.2	51.114 µg/L	51.114 ppb	14:05:23
1	Zn 213.857†	14894.6	14227.3	351.85 µg/L	351.85 ppb	14:05:23
2	Sc RADIAL	59297.7	59297.7	102 %		14:04:23
2	Al 396.153Radial†	25498.6	24979.9	18364 µg/L	18364 ppb	14:04:23
2	Ca 317.933Radial†	3981.2	3701.2	3428.1 µg/L	3428.1 ppb	14:04:43
2	Fe 238.204 Radial†	10600.4	10358.0	88991 µg/L	88991 ppb	14:04:23
2	K 766.490 Radial†	5554.7	5259.8	3700.0 µg/L	3700.0 ppb	14:04:23
2	Mg 279.077 IEC†	247.0	228.3	2053.5 µg/L	2053.5 ppb	14:04:43
2	Na 589.592 Radial†	6443.1	5740.0	1863.4 µg/L	1863.4 ppb	14:04:23
2	Sr 421.552†	2947.1	2851.2	28.831 µg/L	28.831 ppb	14:04:23
2	Sc 361.383	2070714.0	2070714.0	101.29 %		14:05:51
2	Y 371.029	1489651.5	1489651.5	106.03 %		14:05:51
2	Ag 328.068†	-1648.3	-1103.7	-2.7669 µg/L	-2.7669 ppb	14:05:56
2	As 188.979†	6.7	5.2	14.883 µg/L	14.883 ppb	14:06:16
2	B 249.677†	941.4	632.7	-18.814 µg/L	-18.814 ppb	14:05:56
2	Ba 233.527†	9329.1	9228.5	237.30 µg/L	237.30 ppb	14:05:56
2	Be 313.107†	5555.9	8452.8	4.5245 µg/L	4.5245 ppb	14:05:56
2	Cd 226.502†	108.3	244.9	-3.3783 µg/L	-3.3783 ppb	14:06:16
2	Co 228.616†	3075.3	3041.2	142.43 µg/L	142.43 ppb	14:06:16
2	Cr 267.716†	4509.6	4484.5	95.371 µg/L	95.371 ppb	14:05:56
2	Cu 324.752†	8941.2	6290.0	55.472 µg/L	55.472 ppb	14:05:56
2	Mn 257.610†	731402.8	722344.7	2454.2 µg/L	2454.2 ppb	14:05:51
2	Mo 202.031†	45.8	52.1	8.7394 µg/L	8.7394 ppb	14:06:16
2	Ni 231.604†	1511.3	1185.3	64.276 µg/L	64.276 ppb	14:06:16
2	P 214.914†	298.8	273.4	505.20 µg/L	505.20 ppb	14:06:16
2	Pb 220.353†	287.7	190.5	47.131 µg/L	47.131 ppb	14:06:16

2	S 181.975 Axial†	38.2	23.9	102.96 µg/L	102.96 ppb	14:06:16
2	Sb 206.836†	27.7	7.2	5.6007 µg/L	5.6007 ppb	14:06:16
2	Se 196.026†	-28.7	-44.2	173.07 µg/L	173.07 ppb	14:06:16
2	SiO2†	132433.8	129406.3	27287 µg/L	27287 ppb	14:05:56
2	Si 251.611†	163885.0	161487.8	13074 µg/L	13074 ppb	14:05:51
2	Sn 189.927†	6.2	3.0	-7.9257 µg/L	-7.9257 ppb	14:06:16
2	Ti 334.940†	996812.0	984013.9	2322.6 µg/L	2322.6 ppb	14:05:51
2	Tl 190.801†	-55.2	-31.5	-0.4128 µg/L	-0.4128 ppb	14:06:16
2	U 409.014†	-1687.4	-1622.3	-153.70 µg/L	-153.70 ppb	14:05:51
2	V 292.402†	3912.2	3894.6	50.671 µg/L	50.671 ppb	14:05:56
2	Zn 213.857†	14862.0	14154.2	350.00 µg/L	350.00 ppb	14:05:56
3	Sc RADIAL	58889.8	58889.8	101 %		14:04:48
3	Al 396.153Radial†	25414.5	25069.8	18430 µg/L	18430 ppb	14:04:48
3	Ca 317.933Radial†	3955.8	3703.1	3429.9 µg/L	3429.9 ppb	14:05:08
3	Fe 238.204 Radial†	10537.2	10367.5	89073 µg/L	89073 ppb	14:04:48
3	K 766.490 Radial†	5503.7	5247.2	3691.1 µg/L	3691.1 ppb	14:04:48
3	Mg 279.077 IEC†	246.6	229.6	2065.4 µg/L	2065.4 ppb	14:05:08
3	Na 589.592 Radial†	6485.9	5825.9	1891.3 µg/L	1891.3 ppb	14:04:48
3	Sr 421.552†	2951.7	2875.7	29.078 µg/L	29.078 ppb	14:04:48
3	Sc 361.383	2069612.9	2069612.9	101.23 %		14:06:24
3	Y 371.029	1489149.3	1489149.3	105.99 %		14:06:24
3	Ag 328.068†	-1624.9	-1081.5	-2.5925 µg/L	-2.5925 ppb	14:06:29
3	As 188.979†	5.6	4.0	12.725 µg/L	12.725 ppb	14:06:49
3	B 249.677†	920.7	612.7	-19.728 µg/L	-19.728 ppb	14:06:29
3	Ba 233.527†	9186.9	9093.0	233.81 µg/L	233.81 ppb	14:06:29
3	Be 313.107†	5399.0	8300.8	4.4297 µg/L	4.4297 ppb	14:06:29
3	Cd 226.502†	89.5	226.4	-3.8903 µg/L	-3.8903 ppb	14:06:49
3	Co 228.616†	2880.5	2850.4	133.21 µg/L	133.21 ppb	14:06:49
3	Cr 267.716†	4416.3	4394.7	93.462 µg/L	93.462 ppb	14:06:29
3	Cu 324.752†	8898.4	6252.5	55.226 µg/L	55.226 ppb	14:06:29
3	Mn 257.610†	732095.3	723412.9	2457.8 µg/L	2457.8 ppb	14:06:24
3	Mo 202.031†	43.4	49.8	8.5051 µg/L	8.5051 ppb	14:06:49
3	Ni 231.604†	1431.6	1107.4	60.127 µg/L	60.127 ppb	14:06:49
3	P 214.914†	286.4	261.4	479.70 µg/L	479.70 ppb	14:06:49
3	Pb 220.353†	291.6	194.6	48.186 µg/L	48.186 ppb	14:06:49
3	S 181.975 Axial†	37.5	23.3	100.35 µg/L	100.35 ppb	14:06:49
3	Sb 206.836†	29.1	8.6	6.9688 µg/L	6.9688 ppb	14:06:49
3	Se 196.026†	-18.5	-34.2	188.55 µg/L	188.55 ppb	14:06:49
3	SiO2†	131753.9	128804.3	27160 µg/L	27160 ppb	14:06:29
3	Si 251.611†	163376.4	161071.6	13040 µg/L	13040 ppb	14:06:24
3	Sn 189.927†	-4.8	-7.8	-12.749 µg/L	-12.749 ppb	14:06:49
3	Ti 334.940†	993435.8	981202.4	2316.0 µg/L	2316.0 ppb	14:06:24
3	Tl 190.801†	-52.6	-29.0	3.1509 µg/L	3.1509 ppb	14:06:49
3	U 409.014†	-1701.4	-1636.9	-154.99 µg/L	-154.99 ppb	14:06:24
3	V 292.402†	3840.1	3825.4	49.962 µg/L	49.962 ppb	14:06:29
3	Zn 213.857†	14595.0	13898.4	343.60 µg/L	343.60 ppb	14:06:29

## Mean Data: 245797003|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2068437.9	101.18 %	0.149			0.15%
Sc RADIAL	59229.6	102 %	0.5			0.53%
Y 371.029	1488118.8	105.92 %	0.159			0.15%
Ag 328.068†	-1106.4	-2.7959 µg/L	0.21929	-2.7959 ppb	0.21929	7.84%
Al 396.153Radial†	24982.9	18366 µg/L	62.8	18366 ppb	62.8	0.34%
As 188.979†	5.2	14.894 µg/L	2.1746	14.894 ppb	2.1746	14.60%
B 249.677†	623.5	-19.153 µg/L	0.5003	-19.153 ppb	0.5003	2.61%
Ba 233.527†	9196.2	236.47 µg/L	2.352	236.47 ppb	2.352	0.99%
Be 313.107†	8448.1	4.5213 µg/L	0.08996	4.5213 ppb	0.08996	1.99%
Ca 317.933Radial†	3689.0	3416.7 µg/L	21.20	3416.7 ppb	21.20	0.62%
Cd 226.502†	236.4	-3.5964 µg/L	0.26432	-3.5964 ppb	0.26432	7.35%
Co 228.616†	2973.9	139.17 µg/L	5.175	139.17 ppb	5.175	3.72%
Cr 267.716†	4462.3	94.899 µg/L	1.2685	94.899 ppb	1.2685	1.34%
Cu 324.752†	6303.1	55.545 µg/L	0.3612	55.545 ppb	0.3612	0.65%
Fe 238.204 Radial†	10344.2	88873 µg/L	278.8	88873 ppb	278.8	0.31%
K 766.490 Radial†	5255.2	3696.8 µg/L	4.89	3696.8 ppb	4.89	0.13%
Mg 279.077 IEC†	228.9	2058.7 µg/L	6.09	2058.7 ppb	6.09	0.30%
Mn 257.610†	724056.0	2460.0 µg/L	7.09	2460.0 ppb	7.09	0.29%
Mo 202.031†	51.0	8.6237 µg/L	0.11717	8.6237 ppb	0.11717	1.36%
Na 589.592 Radial†	5760.8	1870.1 µg/L	18.73	1870.1 ppb	18.73	1.00%

Ni 231.604†	1158.5	62.846 µg/L	2.3557	62.846 ppb	2.3557	3.75%
P 214.914†	270.4	498.93 µg/L	16.992	498.93 ppb	16.992	3.41%
Pb 220.353†	194.3	48.113 µg/L	0.9476	48.113 ppb	0.9476	1.97%
S 181.975 Axial†	24.3	104.57 µg/L	5.207	104.57 ppb	5.207	4.98%
Sb 206.836†	8.2	6.5168 µg/L	0.79337	6.5168 ppb	0.79337	12.17%
Se 196.026†	-39.6	179.75 µg/L	7.951	179.75 ppb	7.951	4.42%
SiO2†	129537.2	27314 µg/L	170.0	27314 ppb	170.0	0.62%
Si 251.611†	161524.4	13077 µg/L	38.2	13077 ppb	38.2	0.29%
Sn 189.927†	-2.6	-10.398 µg/L	2.4141	-10.398 ppb	2.4141	23.22%
Sr 421.552†	2868.9	29.010 µg/L	0.1567	29.010 ppb	0.1567	0.54%
Ti 334.940†	984271.5	2323.2 µg/L	7.57	2323.2 ppb	7.57	0.33%
Tl 190.801†	-31.0	0.3280 µg/L	2.53504	0.3280 ppb	2.53504	772.97%
U 409.014†	-1616.2	-153.15 µg/L	2.164	-153.15 ppb	2.164	1.41%
V 292.402†	3887.4	50.582 µg/L	0.5812	50.582 ppb	0.5812	1.15%
Zn 213.857†	14093.3	348.49 µg/L	4.328	348.49 ppb	4.328	1.24%

Sequence No.: 5

Sample ID: 245797004|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 310

Date Collected: 2/17/2010 14:06:57

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797004|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58275.0	58275.0	100 %		14:07:29
1	Al 396.153Radial†	42135.9	41987.4	30867 µg/L	30867 ppb	14:07:29
1	Ca 317.933Radial†	8517.5	8287.4	7675.9 µg/L	7675.9 ppb	14:07:49
1	Fe 238.204 Radial†	8720.0	8667.3	74464 µg/L	74464 ppb	14:07:49
1	K 766.490 Radial†	7730.8	7522.5	5291.6 µg/L	5291.6 ppb	14:07:29
1	Mg 279.077 IEC†	633.5	617.5	5732.3 µg/L	5732.3 ppb	14:07:49
1	Na 589.592 Radial†	2130.6	1555.8	505.08 µg/L	505.08 ppb	14:07:29
1	Sr 421.552†	6815.0	6753.9	68.294 µg/L	68.294 ppb	14:07:29
1	Sc 361.383	2039453.3	2039453.3	99.758 %		14:08:49
1	Y 371.029	1408642.3	1408642.3	100.26 %		14:08:49
1	Ag 328.068†	-1221.9	-701.2	-0.1607 µg/L	-0.1607 ppb	14:08:54
1	As 188.979†	3.6	2.1	8.0403 µg/L	8.0403 ppb	14:09:14
1	B 249.677†	880.9	586.3	-13.315 µg/L	-13.315 ppb	14:08:54
1	Ba 233.527†	14884.2	14938.3	384.17 µg/L	384.17 ppb	14:08:54
1	Be 313.107†	58729.4	61839.4	38.864 µg/L	38.864 ppb	14:08:54
1	Cd 226.502†	116.2	254.5	-1.5018 µg/L	-1.5018 ppb	14:09:14
1	Co 228.616†	956.9	964.3	42.805 µg/L	42.805 ppb	14:09:14
1	Cr 267.716†	2515.6	2553.9	54.360 µg/L	54.360 ppb	14:09:14
1	Cu 324.752†	771881.9	771216.3	5295.1 µg/L	5295.1 ppb	14:08:49
1	Mn 257.610†	431308.1	432590.7	1472.4 µg/L	1472.4 ppb	14:08:49
1	Mo 202.031†	28.2	35.1	6.4442 µg/L	6.4442 ppb	14:09:14
1	Ni 231.604†	1045.3	741.1	40.487 µg/L	40.487 ppb	14:09:14
1	P 214.914†	404.4	383.8	200.02 µg/L	200.02 ppb	14:09:14
1	Pb 220.353†	3400.0	3314.7	848.88 µg/L	848.88 ppb	14:09:14
1	S 181.975 Axial†	78.8	65.1	280.84 µg/L	280.84 ppb	14:09:14
1	Sb 206.836†	56.3	36.3	33.467 µg/L	33.467 ppb	14:09:14
1	Se 196.026†	-13.8	-29.7	150.98 µg/L	150.98 ppb	14:09:14
1	SiO2†	216714.3	215895.4	45524 µg/L	45524 ppb	14:08:49
1	Si 251.611†	261000.2	261318.7	21156 µg/L	21156 ppb	14:08:49
1	Sn 189.927†	33.1	30.1	6.1035 µg/L	6.1035 ppb	14:09:14
1	Ti 334.940†	788672.7	790454.7	1865.5 µg/L	1865.5 ppb	14:08:49
1	Tl 190.801†	-40.9	-18.1	10.370 µg/L	10.370 ppb	14:09:14
1	U 409.014†	9656.4	9723.5	835.04 µg/L	835.04 ppb	14:08:54
1	V 292.402†	9305.4	9360.0	106.13 µg/L	106.13 ppb	14:08:54
1	Zn 213.857†	16101.0	15621.2	378.90 µg/L	378.90 ppb	14:08:54
2	Sc RADIAL	58140.2	58140.2	100 %		14:07:54
2	Al 396.153Radial†	42321.8	42270.3	31075 µg/L	31075 ppb	14:07:54
2	Ca 317.933Radial†	8571.5	8361.0	7744.1 µg/L	7744.1 ppb	14:08:14
2	Fe 238.204 Radial†	8790.1	8757.4	75238 µg/L	75238 ppb	14:08:14
2	K 766.490 Radial†	7712.2	7521.8	5291.2 µg/L	5291.2 ppb	14:07:54
2	Mg 279.077 IEC†	636.2	621.7	5770.9 µg/L	5770.9 ppb	14:08:14
2	Na 589.592 Radial†	2101.3	1531.4	497.15 µg/L	497.15 ppb	14:07:54
2	Sr 421.552†	6847.1	6801.8	68.777 µg/L	68.777 ppb	14:07:54
2	Sc 361.383	2040094.5	2040094.5	99.789 %		14:09:22
2	Y 371.029	1409530.1	1409530.1	100.32 %		14:09:22
2	Ag 328.068†	-1179.7	-658.5	0.2208 µg/L	0.2208 ppb	14:09:27
2	As 188.979†	9.2	7.7	18.762 µg/L	18.762 ppb	14:09:47
2	B 249.677†	839.6	544.7	-15.529 µg/L	-15.529 ppb	14:09:27
2	Ba 233.527†	14818.6	14867.9	382.36 µg/L	382.36 ppb	14:09:27
2	Be 313.107†	58525.8	61616.8	38.717 µg/L	38.717 ppb	14:09:27
2	Cd 226.502†	119.0	257.2	-1.5162 µg/L	-1.5162 ppb	14:09:47
2	Co 228.616†	949.1	956.1	42.384 µg/L	42.384 ppb	14:09:47
2	Cr 267.716†	2510.6	2548.1	54.237 µg/L	54.237 ppb	14:09:47
2	Cu 324.752†	777258.3	776360.8	5330.5 µg/L	5330.5 ppb	14:09:22
2	Mn 257.610†	433322.7	434473.6	1478.8 µg/L	1478.8 ppb	14:09:22
2	Mo 202.031†	26.5	33.4	6.2975 µg/L	6.2975 ppb	14:09:47
2	Ni 231.604†	1035.1	730.5	39.930 µg/L	39.930 ppb	14:09:47
2	P 214.914†	395.0	374.3	175.77 µg/L	175.77 ppb	14:09:47
2	Pb 220.353†	3377.9	3291.5	842.76 µg/L	842.76 ppb	14:09:47



2	S 181.975 Axial†	76.8	63.2	272.34 µg/L	272.34 ppb	14:09:47
2	Sb 206.836†	60.5	40.4	37.469 µg/L	37.469 ppb	14:09:47
2	Se 196.026†	-25.7	-41.6	134.85 µg/L	134.85 ppb	14:09:47
2	SiO2†	218179.7	217295.6	45819 µg/L	45819 ppb	14:09:22
2	Si 251.611†	262864.3	263104.5	21301 µg/L	21301 ppb	14:09:22
2	Sn 189.927†	30.3	27.3	4.7676 µg/L	4.7676 ppb	14:09:47
2	Ti 334.940†	794054.3	795599.2	1877.7 µg/L	1877.7 ppb	14:09:22
2	Tl 190.801†	-39.8	-16.9	12.279 µg/L	12.279 ppb	14:09:47
2	U 409.014†	9784.8	9849.2	845.86 µg/L	845.86 ppb	14:09:27
2	V 292.402†	9289.3	9341.0	106.03 µg/L	106.03 ppb	14:09:27
2	Zn 213.857†	16058.8	15573.8	377.62 µg/L	377.62 ppb	14:09:27
3	Sc RADIAL	58518.8	58518.8	101 %		14:08:19
3	Al 396.153Radial†	42565.9	42239.1	31052 µg/L	31052 ppb	14:08:19
3	Ca 317.933Radial†	8527.0	8261.5	7651.8 µg/L	7651.8 ppb	14:08:40
3	Fe 238.204 Radial†	8778.0	8688.6	74647 µg/L	74647 ppb	14:08:40
3	K 766.490 Radial†	7748.9	7508.3	5281.7 µg/L	5281.7 ppb	14:08:19
3	Mg 279.077 IEC†	642.6	623.9	5792.0 µg/L	5792.0 ppb	14:08:40
3	Na 589.592 Radial†	2130.5	1546.8	502.16 µg/L	502.16 ppb	14:08:19
3	Sr 421.552†	6861.0	6771.3	68.469 µg/L	68.469 ppb	14:08:19
3	Sc 361.383	2041882.3	2041882.3	99.877 %		14:09:54
3	Y 371.029	1410580.0	1410580.0	100.40 %		14:09:54
3	Ag 328.068†	-1123.9	-601.6	0.6033 µg/L	0.6033 ppb	14:09:59
3	As 188.979†	3.6	2.1	7.9970 µg/L	7.9970 ppb	14:10:20
3	B 249.677†	840.7	545.0	-15.210 µg/L	-15.210 ppb	14:09:59
3	Ba 233.527†	14391.3	14427.0	371.02 µg/L	371.02 ppb	14:09:59
3	Be 313.107†	56723.7	59761.2	37.541 µg/L	37.541 ppb	14:09:59
3	Cd 226.502†	106.9	245.0	-1.7810 µg/L	-1.7810 ppb	14:10:20
3	Co 228.616†	896.4	902.5	39.855 µg/L	39.855 ppb	14:10:20
3	Cr 267.716†	2336.6	2371.7	50.484 µg/L	50.484 ppb	14:10:20
3	Cu 324.752†	766557.5	764964.8	5252.3 µg/L	5252.3 ppb	14:09:54
3	Mn 257.610†	428098.1	428862.4	1459.8 µg/L	1459.8 ppb	14:09:54
3	Mo 202.031†	23.3	30.2	5.9407 µg/L	5.9407 ppb	14:10:20
3	Ni 231.604†	985.3	679.7	37.216 µg/L	37.216 ppb	14:10:20
3	P 214.914†	376.1	355.0	143.74 µg/L	143.74 ppb	14:10:20
3	Pb 220.353†	3241.9	3152.4	806.85 µg/L	806.85 ppb	14:10:20
3	S 181.975 Axial†	79.3	65.6	282.77 µg/L	282.77 ppb	14:10:20
3	Sb 206.836†	52.6	32.5	29.940 µg/L	29.940 ppb	14:10:20
3	Se 196.026†	-17.2	-33.1	146.24 µg/L	146.24 ppb	14:10:20
3	SiO2†	215411.7	214332.8	45194 µg/L	45194 ppb	14:09:54
3	Si 251.611†	259457.7	259463.1	21006 µg/L	21006 ppb	14:09:54
3	Sn 189.927†	27.7	24.6	3.6556 µg/L	3.6556 ppb	14:10:20
3	Ti 334.940†	781172.5	782004.8	1845.6 µg/L	1845.6 ppb	14:09:54
3	Tl 190.801†	-40.4	-17.5	10.916 µg/L	10.916 ppb	14:10:20
3	U 409.014†	9433.7	9489.0	814.61 µg/L	814.61 ppb	14:09:59
3	V 292.402†	8925.0	8968.1	102.08 µg/L	102.08 ppb	14:09:59
3	Zn 213.857†	15629.9	15130.3	366.68 µg/L	366.68 ppb	14:09:59

Mean Data: 245797004|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2040476.7	99.808	%	0.0616			0.06%
Sc RADIAL	58311.4	100	%	0.3			0.33%
Y 371.029	1409584.1	100.33	%	0.069			0.07%
Ag 328.068†	-653.8	0.2211	µg/L	0.38199	0.2211 ppb	0.38199	172.75%
Al 396.153Radial†	42165.6	30998	µg/L	114.0	30998 ppb	114.0	0.37%
As 188.979†	4.0	11.600	µg/L	6.2027	11.600 ppb	6.2027	53.47%
B 249.677†	558.7	-14.685	µg/L	1.1967	-14.685 ppb	1.1967	8.15%
Ba 233.527†	14744.4	379.18	µg/L	7.127	379.18 ppb	7.127	1.88%
Be 313.107†	61072.5	38.374	µg/L	0.7248	38.374 ppb	0.7248	1.89%
Ca 317.933Radial†	8303.3	7690.6	µg/L	47.84	7690.6 ppb	47.84	0.62%
Cd 226.502†	252.2	-1.5997	µg/L	0.15720	-1.5997 ppb	0.15720	9.83%
Co 228.616†	940.9	41.681	µg/L	1.5958	41.681 ppb	1.5958	3.83%
Cr 267.716†	2491.3	53.027	µg/L	2.2033	53.027 ppb	2.2033	4.16%
Cu 324.752†	770847.3	5292.7	µg/L	39.15	5292.7 ppb	39.15	0.74%
Fe 238.204 Radial†	8704.4	74783	µg/L	404.8	74783 ppb	404.8	0.54%
K 766.490 Radial†	7517.5	5288.2	µg/L	5.61	5288.2 ppb	5.61	0.11%
Mg 279.077 IEC†	621.0	5765.1	µg/L	30.27	5765.1 ppb	30.27	0.53%
Mn 257.610†	431975.5	1470.3	µg/L	9.69	1470.3 ppb	9.69	0.66%
Mo 202.031†	32.9	6.2274	µg/L	0.25892	6.2274 ppb	0.25892	4.16%
Na 589.592 Radial†	1544.7	501.46	µg/L	4.007	501.46 ppb	4.007	0.80%

Ni 231.604†	717.1	39.211 µg/L	1.7500	39.211 ppb	1.7500	4.46%
P 214.914†	371.0	173.18 µg/L	28.232	173.18 ppb	28.232	16.30%
Pb 220.353†	3252.9	832.83 µg/L	22.702	832.83 ppb	22.702	2.73%
S 181.975 Axial†	64.6	278.65 µg/L	5.550	278.65 ppb	5.550	1.99%
Sb 206.836†	36.4	33.626 µg/L	3.7667	33.626 ppb	3.7667	11.20%
Se 196.026†	-34.8	144.02 µg/L	8.288	144.02 ppb	8.288	5.75%
SiO2†	215841.2	45513 µg/L	312.5	45513 ppb	312.5	0.69%
Si 251.611†	261295.4	21154 µg/L	147.4	21154 ppb	147.4	0.70%
Sn 189.927†	27.3	4.8422 µg/L	1.22565	4.8422 ppb	1.22565	25.31%
Sr 421.552†	6775.7	68.513 µg/L	0.2448	68.513 ppb	0.2448	0.36%
Ti 334.940†	789352.9	1862.9 µg/L	16.20	1862.9 ppb	16.20	0.87%
Tl 190.801†	-17.5	11.188 µg/L	0.9827	11.188 ppb	0.9827	8.78%
U 409.014†	9687.2	831.84 µg/L	15.866	831.84 ppb	15.866	1.91%
V 292.402†	9223.0	104.75 µg/L	2.309	104.75 ppb	2.309	2.20%
Zn 213.857†	15441.8	374.40 µg/L	6.722	374.40 ppb	6.722	1.80%

Sequence No.: 6

Sample ID: 245797005|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 311

Date Collected: 2/17/2010 14:10:28

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797005|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59168.2	59168.2	102 %		14:11:00
1	Al 396.153Radial†	47881.6	46990.0	34544 µg/L	34544 ppb	14:11:00
1	Ca 317.933Radial†	11364.4	10951.9	10144 µg/L	10144 ppb	14:11:20
1	Fe 238.204 Radial†	9495.3	9296.7	79872 µg/L	79872 ppb	14:11:20
1	K 766.490 Radial†	9004.9	8656.0	6089.0 µg/L	6089.0 ppb	14:11:00
1	Mg 279.077 IEC†	691.1	664.5	6168.4 µg/L	6168.4 ppb	14:11:20
1	Na 589.592 Radial†	3038.5	2414.3	783.78 µg/L	783.78 ppb	14:11:00
1	Sr 421.552†	8250.6	8059.7	81.497 µg/L	81.497 ppb	14:11:00
1	Sc 361.383	2053397.3	2053397.3	100.44 %		14:12:20
1	Y 371.029	1422339.9	1422339.9	101.24 %		14:12:20
1	Ag 328.068†	-1320.4	-790.9	-0.4259 µg/L	-0.4259 ppb	14:12:25
1	As 188.979†	11.5	9.9	23.229 µg/L	23.229 ppb	14:12:46
1	B 249.677†	888.9	588.3	-16.061 µg/L	-16.061 ppb	14:12:25
1	Ba 233.527†	17898.8	17838.4	458.75 µg/L	458.75 ppb	14:12:25
1	Be 313.107†	15521.5	18421.0	10.882 µg/L	10.882 ppb	14:12:25
1	Cd 226.502†	2416.2	2543.5	59.712 µg/L	59.712 ppb	14:12:46
1	Co 228.616†	1688.1	1685.7	76.669 µg/L	76.669 ppb	14:12:46
1	Cr 267.716†	2278.7	2300.9	48.990 µg/L	48.990 ppb	14:12:46
1	Cu 324.752†	128743.0	125641.2	872.06 µg/L	872.06 ppb	14:12:25
1	Mn 257.610†	639605.5	637039.3	2164.4 µg/L	2164.4 ppb	14:12:20
1	Mo 202.031†	26.7	33.5	6.4819 µg/L	6.4819 ppb	14:12:46
1	Ni 231.604†	973.1	662.0	36.293 µg/L	36.293 ppb	14:12:46
1	P 214.914†	554.5	530.5	973.14 µg/L	973.14 ppb	14:12:46
1	Pb 220.353†	1373.3	1273.7	327.59 µg/L	327.59 ppb	14:12:46
1	S 181.975 Axial†	174.5	159.9	689.21 µg/L	689.21 ppb	14:12:46
1	Sb 206.836†	41.7	21.3	19.038 µg/L	19.038 ppb	14:12:46
1	Se 196.026†	-30.3	-46.0	139.85 µg/L	139.85 ppb	14:12:46
1	SiO2†	203041.1	200806.9	42342 µg/L	42342 ppb	14:12:20
1	Si 251.611†	244789.7	243402.5	19705 µg/L	19705 ppb	14:12:20
1	Sn 189.927†	4.5	1.4	-7.2287 µg/L	-7.2287 ppb	14:12:46
1	Ti 334.940†	1012730.0	1008161.6	2379.4 µg/L	2379.4 ppb	14:12:20
1	Tl 190.801†	-49.3	-26.1	6.4377 µg/L	6.4377 ppb	14:12:46
1	U 409.014†	2383.4	2416.6	198.50 µg/L	198.50 ppb	14:12:25
1	V 292.402†	10796.2	10780.9	120.72 µg/L	120.72 ppb	14:12:25
1	Zn 213.857†	22272.5	21656.1	537.00 µg/L	537.00 ppb	14:12:25
2	Sc RADIAL	59630.2	59630.2	103 %		14:11:26
2	Al 396.153Radial†	48438.9	47168.5	34676 µg/L	34676 ppb	14:11:26
2	Ca 317.933Radial†	11349.7	10851.2	10050 µg/L	10050 ppb	14:11:46
2	Fe 238.204 Radial†	9468.4	9198.4	79027 µg/L	79027 ppb	14:11:46
2	K 766.490 Radial†	9032.0	8614.0	6059.5 µg/L	6059.5 ppb	14:11:26
2	Mg 279.077 IEC†	688.4	656.6	6095.5 µg/L	6095.5 ppb	14:11:46
2	Na 589.592 Radial†	3052.2	2404.6	780.61 µg/L	780.61 ppb	14:11:26
2	Sr 421.552†	8357.1	8100.7	81.911 µg/L	81.911 ppb	14:11:26
2	Sc 361.383	2046101.2	2046101.2	100.08 %		14:12:53
2	Y 371.029	1416505.2	1416505.2	100.82 %		14:12:53
2	Ag 328.068†	-1295.7	-771.0	-0.3138 µg/L	-0.3138 ppb	14:12:58
2	As 188.979†	8.2	6.7	16.910 µg/L	16.910 ppb	14:13:18
2	B 249.677†	895.2	597.7	-15.209 µg/L	-15.209 ppb	14:12:58
2	Ba 233.527†	17968.5	17971.5	462.17 µg/L	462.17 ppb	14:12:58
2	Be 313.107†	15577.8	18532.4	10.951 µg/L	10.951 ppb	14:12:58
2	Cd 226.502†	2422.5	2558.4	60.208 µg/L	60.208 ppb	14:13:18
2	Co 228.616†	1678.7	1682.3	76.494 µg/L	76.494 ppb	14:13:18
2	Cr 267.716†	2293.4	2323.7	49.476 µg/L	49.476 ppb	14:13:18
2	Cu 324.752†	129322.0	126676.9	879.04 µg/L	879.04 ppb	14:12:58
2	Mn 257.610†	638642.6	638347.9	2168.7 µg/L	2168.7 ppb	14:12:53
2	Mo 202.031†	36.4	43.2	7.4501 µg/L	7.4501 ppb	14:13:18
2	Ni 231.604†	965.6	658.0	36.066 µg/L	36.066 ppb	14:13:18
2	P 214.914†	566.1	544.1	1001.8 µg/L	1001.8 ppb	14:13:18
2	Pb 220.353†	1362.9	1268.2	326.19 µg/L	326.19 ppb	14:13:18

2	S 181.975 Axial†	172.4	158.5	683.25 µg/L	683.25 ppb	14:13:18
2	Sb 206.836†	31.3	11.1	9.3015 µg/L	9.3015 ppb	14:13:18
2	Se 196.026†	-25.2	-41.0	145.26 µg/L	145.26 ppb	14:13:18
2	SiO2†	202906.3	201393.0	42466 µg/L	42466 ppb	14:12:53
2	Si 251.611†	244252.9	243735.3	19732 µg/L	19732 ppb	14:12:53
2	Sn 189.927†	1.7	-1.4	-8.3768 µg/L	-8.3768 ppb	14:13:18
2	Ti 334.940†	1011434.4	1010462.5	2384.8 µg/L	2384.8 ppb	14:12:53
2	Tl 190.801†	-45.0	-22.1	12.061 µg/L	12.061 ppb	14:13:18
2	U 409.014†	2445.1	2486.8	204.73 µg/L	204.73 ppb	14:12:58
2	V 292.402†	10891.6	10914.6	122.01 µg/L	122.01 ppb	14:12:58
2	Zn 213.857†	22308.5	21771.0	539.92 µg/L	539.92 ppb	14:12:58
3	Sc RADIAL	59097.4	59097.4	102 %		14:11:51
3	Al 396.153Radial†	48385.5	47541.1	34950 µg/L	34950 ppb	14:11:51
3	Ca 317.933Radial†	11341.4	10942.7	10135 µg/L	10135 ppb	14:12:11
3	Fe 238.204 Radial†	9462.2	9275.3	79688 µg/L	79688 ppb	14:12:11
3	K 766.490 Radial†	9091.0	8751.1	6156.0 µg/L	6156.0 ppb	14:11:51
3	Mg 279.077 IEC†	691.1	665.3	6176.7 µg/L	6176.7 ppb	14:12:11
3	Na 589.592 Radial†	3054.4	2433.5	790.01 µg/L	790.01 ppb	14:11:51
3	Sr 421.552†	8256.0	8074.7	81.649 µg/L	81.649 ppb	14:11:51
3	Sc 361.383	2044289.6	2044289.6	99.995 %		14:13:25
3	Y 371.029	1415784.3	1415784.3	100.77 %		14:13:25
3	Ag 328.068†	-1304.9	-781.3	-0.3674 µg/L	-0.3674 ppb	14:13:30
3	As 188.979†	12.8	11.3	25.840 µg/L	25.840 ppb	14:13:50
3	B 249.677†	868.0	571.3	-16.706 µg/L	-16.706 ppb	14:13:30
3	Ba 233.527†	17648.1	17667.0	454.34 µg/L	454.34 ppb	14:13:30
3	Be 313.107†	15222.9	18191.3	10.741 µg/L	10.741 ppb	14:13:30
3	Cd 226.502†	2313.8	2451.9	57.255 µg/L	57.255 ppb	14:13:50
3	Co 228.616†	1581.6	1586.7	71.912 µg/L	71.912 ppb	14:13:50
3	Cr 267.716†	2133.4	2165.7	46.116 µg/L	46.116 ppb	14:13:50
3	Cu 324.752†	126942.8	124412.1	863.62 µg/L	863.62 ppb	14:13:30
3	Mn 257.610†	633727.8	633998.4	2154.1 µg/L	2154.1 ppb	14:13:25
3	Mo 202.031†	26.9	33.7	6.4984 µg/L	6.4984 ppb	14:13:50
3	Ni 231.604†	921.1	614.4	33.752 µg/L	33.752 ppb	14:13:50
3	P 214.914†	532.6	511.0	933.21 µg/L	933.21 ppb	14:13:50
3	Pb 220.353†	1333.8	1240.3	318.97 µg/L	318.97 ppb	14:13:50
3	S 181.975 Axial†	172.8	159.0	685.61 µg/L	685.61 ppb	14:13:50
3	Sb 206.836†	32.9	12.7	10.851 µg/L	10.851 ppb	14:13:50
3	Se 196.026†	-28.3	-44.2	142.10 µg/L	142.10 ppb	14:13:50
3	SiO2†	201379.5	200045.8	42182 µg/L	42182 ppb	14:13:25
3	Si 251.611†	242554.6	242253.1	19612 µg/L	19612 ppb	14:13:25
3	Sn 189.927†	7.5	4.4	-5.8631 µg/L	-5.8631 ppb	14:13:50
3	Ti 334.940†	1001395.9	1001319.0	2363.3 µg/L	2363.3 ppb	14:13:25
3	Tl 190.801†	-47.2	-24.2	8.9417 µg/L	8.9417 ppb	14:13:50
3	U 409.014†	2274.2	2318.0	189.95 µg/L	189.95 ppb	14:13:30
3	V 292.402†	10669.1	10701.8	119.86 µg/L	119.86 ppb	14:13:30
3	Zn 213.857†	21970.5	21452.8	531.94 µg/L	531.94 ppb	14:13:30

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Mean Data: 245797005|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2047929.4	100.17 %	0.236			0.24%
Sc RADIAL	59298.6	102 %	0.5			0.49%
Y 371.029	1418209.8	100.94 %	0.256			0.25%
Ag 328.068†	-781.1	-0.3691 µg/L	0.05609	-0.3691 ppb	0.05609	15.20%
Al 396.153Radial†	47233.2	34723 µg/L	206.7	34723 ppb	206.7	0.60%
As 188.979†	9.3	21.993 µg/L	4.5914	21.993 ppb	4.5914	20.88%
B 249.677†	585.8	-15.992 µg/L	0.7512	-15.992 ppb	0.7512	4.70%
Ba 233.527†	17825.6	458.42 µg/L	3.926	458.42 ppb	3.926	0.86%
Be 313.107†	18381.6	10.858 µg/L	0.1071	10.858 ppb	0.1071	0.99%
Ca 317.933Radial†	10915.3	10110 µg/L	51.5	10110 ppb	51.5	0.51%
Cd 226.502†	2517.9	59.058 µg/L	1.5814	59.058 ppb	1.5814	2.68%
Co 228.616†	1651.6	75.025 µg/L	2.6974	75.025 ppb	2.6974	3.60%
Cr 267.716†	2263.4	48.194 µg/L	1.8159	48.194 ppb	1.8159	3.77%
Cu 324.752†	125576.7	871.57 µg/L	7.725	871.57 ppb	7.725	0.89%
Fe 238.204 Radial†	9256.8	79529 µg/L	444.1	79529 ppb	444.1	0.56%
K 766.490 Radial†	8673.7	6101.5 µg/L	49.44	6101.5 ppb	49.44	0.81%
Mg 279.077 IEC†	662.1	6146.9 µg/L	44.71	6146.9 ppb	44.71	0.73%
Mn 257.610†	636461.9	2162.4 µg/L	7.51	2162.4 ppb	7.51	0.35%
Mo 202.031†	36.8	6.8101 µg/L	0.55430	6.8101 ppb	0.55430	8.14%
Na 589.592 Radial†	2417.5	784.80 µg/L	4.782	784.80 ppb	4.782	0.61%

Ni 231.604†	644.8	35.370 µg/L	1.4059	35.370 ppb	1.4059	3.97%
P 214.914†	528.5	969.37 µg/L	34.436	969.37 ppb	34.436	3.55%
Pb 220.353†	1260.8	324.25 µg/L	4.624	324.25 ppb	4.624	1.43%
S 181.975 Axial†	159.1	686.02 µg/L	3.004	686.02 ppb	3.004	0.44%
Sb 206.836†	15.1	13.064 µg/L	5.2320	13.064 ppb	5.2320	40.05%
Se 196.026†	-43.7	142.40 µg/L	2.717	142.40 ppb	2.717	1.91%
SiO2†	200748.6	42330 µg/L	142.4	42330 ppb	142.4	0.34%
Si 251.611†	243130.3	19683 µg/L	63.0	19683 ppb	63.0	0.32%
Sn 189.927†	1.5	-7.1562 µg/L	1.25839	-7.1562 ppb	1.25839	17.58%
Sr 421.552†	8078.4	81.686 µg/L	0.2098	81.686 ppb	0.2098	0.26%
Ti 334.940†	1006647.7	2375.8 µg/L	11.23	2375.8 ppb	11.23	0.47%
Tl 190.801†	-24.1	9.1469 µg/L	2.81733	9.1469 ppb	2.81733	30.80%
U 409.014†	2407.1	197.73 µg/L	7.422	197.73 ppb	7.422	3.75%
V 292.402†	10799.1	120.86 µg/L	1.079	120.86 ppb	1.079	0.89%
Zn 213.857†	21626.6	536.28 µg/L	4.035	536.28 ppb	4.035	0.75%

Sequence No.: 7  
 Sample ID: 245797006|948065|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 312  
 Date Collected: 2/17/2010 14:13:58  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245797006|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58770.0	58770.0	101 %		14:14:30
1	Al 396.153Radial†	24673.5	24389.2	17930 µg/L	17930 ppb	14:14:30
1	Ca 317.933Radial†	5331.0	5069.2	4695.1 µg/L	4695.1 ppb	14:14:50
1	Fe 238.204 Radial†	9149.1	9017.9	77476 µg/L	77476 ppb	14:14:30
1	K 766.490 Radial†	4824.5	4587.5	3227.1 µg/L	3227.1 ppb	14:14:30
1	Mg 279.077 IEC†	375.7	357.6	3282.9 µg/L	3282.9 ppb	14:14:50
1	Na 589.592 Radial†	4868.1	4241.3	1376.9 µg/L	1376.9 ppb	14:14:30
1	Sr 421.552†	3867.8	3786.3	38.286 µg/L	38.286 ppb	14:14:30
1	Sc 361.383	2070798.4	2070798.4	101.29 %		14:15:50
1	Y 371.029	1459955.9	1459955.9	103.91 %		14:15:50
1	Ag 328.068†	-1592.0	-1048.0	-2.9526 µg/L	-2.9526 ppb	14:15:55
1	As 188.979†	-0.6	-2.1	0.2519 µg/L	0.2519 ppb	14:16:16
1	B 249.677†	742.4	436.2	-21.128 µg/L	-21.128 ppb	14:15:55
1	Ba 233.527†	7344.3	7268.6	186.95 µg/L	186.95 ppb	14:15:55
1	Be 313.107†	3952.4	6869.6	3.6511 µg/L	3.6511 ppb	14:15:55
1	Cd 226.502†	79.1	216.1	-2.7958 µg/L	-2.7958 ppb	14:16:16
1	Co 228.616†	1342.3	1330.2	60.341 µg/L	60.341 ppb	14:16:16
1	Cr 267.716†	10819.1	10713.4	227.82 µg/L	227.82 ppb	14:15:55
1	Cu 324.752†	7379.2	4747.5	43.302 µg/L	43.302 ppb	14:15:55
1	Mn 257.610†	510091.2	503825.0	1713.7 µg/L	1713.7 ppb	14:15:50
1	Mo 202.031†	45.8	52.1	8.3024 µg/L	8.3024 ppb	14:16:16
1	Ni 231.604†	2644.7	2304.2	123.97 µg/L	123.97 ppb	14:16:16
1	P 214.914†	210.9	186.6	332.43 µg/L	332.43 ppb	14:16:16
1	Pb 220.353†	215.1	118.8	28.933 µg/L	28.933 ppb	14:16:16
1	S 181.975 Axial†	68.9	54.2	233.86 µg/L	233.86 ppb	14:16:16
1	Sb 206.836†	29.4	8.8	5.5475 µg/L	5.5475 ppb	14:16:16
1	Se 196.026†	-21.4	-37.0	151.07 µg/L	151.07 ppb	14:16:16
1	SiO2†	146368.0	143157.5	30186 µg/L	30186 ppb	14:15:55
1	Si 251.611†	179804.1	177197.4	14346 µg/L	14346 ppb	14:15:50
1	Sn 189.927†	3.5	0.4	-7.7301 µg/L	-7.7301 ppb	14:16:16
1	Ti 334.940†	839354.9	828524.0	1955.5 µg/L	1955.5 ppb	14:15:50
1	Tl 190.801†	-45.1	-21.6	5.7409 µg/L	5.7409 ppb	14:16:16
1	U 409.014†	-1317.0	-1256.5	-120.36 µg/L	-120.36 ppb	14:15:50
1	V 292.402†	5462.8	5425.3	65.408 µg/L	65.408 ppb	14:15:55
1	Zn 213.857†	12629.5	11949.7	294.99 µg/L	294.99 ppb	14:15:55
2	Sc RADIAL	58717.1	58717.1	101 %		14:14:55
2	Al 396.153Radial†	24791.2	24527.5	18031 µg/L	18031 ppb	14:14:55
2	Ca 317.933Radial†	5363.9	5106.5	4729.6 µg/L	4729.6 ppb	14:15:15
2	Fe 238.204 Radial†	9190.9	9067.4	77902 µg/L	77902 ppb	14:14:55
2	K 766.490 Radial†	4884.6	4651.2	3271.9 µg/L	3271.9 ppb	14:14:55
2	Mg 279.077 IEC†	380.5	362.7	3330.2 µg/L	3330.2 ppb	14:15:15
2	Na 589.592 Radial†	4933.3	4310.1	1399.2 µg/L	1399.2 ppb	14:14:55
2	Sr 421.552†	3892.6	3814.3	38.569 µg/L	38.569 ppb	14:14:55
2	Sc 361.383	2056615.5	2056615.5	100.60 %		14:16:23
2	Y 371.029	1450194.9	1450194.9	103.22 %		14:16:23
2	Ag 328.068†	-1565.6	-1032.7	-2.8017 µg/L	-2.8017 ppb	14:16:28
2	As 188.979†	4.8	3.3	10.578 µg/L	10.578 ppb	14:16:48
2	B 249.677†	771.2	469.8	-19.881 µg/L	-19.881 ppb	14:16:28
2	Ba 233.527†	7393.7	7367.8	189.50 µg/L	189.50 ppb	14:16:28
2	Be 313.107†	4012.8	6956.5	3.7039 µg/L	3.7039 ppb	14:16:28
2	Cd 226.502†	98.9	236.2	-2.2982 µg/L	-2.2982 ppb	14:16:48
2	Co 228.616†	1343.2	1340.2	60.808 µg/L	60.808 ppb	14:16:48
2	Cr 267.716†	10946.5	10913.7	232.07 µg/L	232.07 ppb	14:16:28
2	Cu 324.752†	7389.1	4807.6	43.772 µg/L	43.772 ppb	14:16:28
2	Mn 257.610†	508980.5	506193.8	1721.8 µg/L	1721.8 ppb	14:16:23
2	Mo 202.031†	38.6	45.3	7.6169 µg/L	7.6169 ppb	14:16:48
2	Ni 231.604†	2638.4	2316.0	124.61 µg/L	124.61 ppb	14:16:48
2	P 214.914†	211.2	188.4	335.71 µg/L	335.71 ppb	14:16:48
2	Pb 220.353†	228.1	133.2	32.670 µg/L	32.670 ppb	14:16:48

2	S 181.975 Axial†	66.2	52.0	224.34 µg/L	224.34 ppb	14:16:48
2	Sb 206.836†	36.2	15.8	12.193 µg/L	12.193 ppb	14:16:48
2	Se 196.026†	-22.9	-38.6	149.82 µg/L	149.82 ppb	14:16:48
2	SiO2†	146948.1	144730.8	30518 µg/L	30518 ppb	14:16:28
2	Si 251.611†	179204.6	177825.7	14396 µg/L	14396 ppb	14:16:23
2	Sn 189.927†	-2.2	-5.3	-10.302 µg/L	-10.302 ppb	14:16:48
2	Ti 334.940†	836846.3	831744.9	1963.1 µg/L	1963.1 ppb	14:16:23
2	Tl 190.801†	-48.9	-25.7	0.1628 µg/L	0.1628 ppb	14:16:48
2	U 409.014†	-1365.4	-1313.6	-125.39 µg/L	-125.39 ppb	14:16:23
2	V 292.402†	5482.7	5482.2	66.044 µg/L	66.044 ppb	14:16:28
2	Zn 213.857†	12700.0	12105.7	298.87 µg/L	298.87 ppb	14:16:28
3	Sc RADIAL	58223.8	58223.8	100 %		14:15:20
3	Al 396.153Radial†	24630.1	24574.4	18066 µg/L	18066 ppb	14:15:20
3	Ca 317.933Radial†	5315.5	5103.1	4726.5 µg/L	4726.5 ppb	14:15:41
3	Fe 238.204 Radial†	9158.1	9111.7	78282 µg/L	78282 ppb	14:15:20
3	K 766.490 Radial†	4834.1	4641.8	3265.3 µg/L	3265.3 ppb	14:15:20
3	Mg 279.077 IEC†	381.6	367.0	3370.0 µg/L	3370.0 ppb	14:15:41
3	Na 589.592 Radial†	4855.7	4274.0	1387.5 µg/L	1387.5 ppb	14:15:20
3	Sr 421.552†	3850.9	3805.3	38.478 µg/L	38.478 ppb	14:15:20
3	Sc 361.383	2047940.0	2047940.0	100.17 %		14:16:56
3	Y 371.029	1443919.1	1443919.1	102.77 %		14:16:56
3	Ag 328.068†	-1544.2	-1017.9	-2.6669 µg/L	-2.6669 ppb	14:17:01
3	As 188.979†	5.4	3.9	11.798 µg/L	11.798 ppb	14:17:21
3	B 249.677†	724.0	426.0	-21.991 µg/L	-21.991 ppb	14:17:01
3	Ba 233.527†	7235.2	7240.6	186.23 µg/L	186.23 ppb	14:17:01
3	Be 313.107†	3807.9	6768.8	3.5912 µg/L	3.5912 ppb	14:17:01
3	Cd 226.502†	76.5	214.3	-2.9413 µg/L	-2.9413 ppb	14:17:21
3	Co 228.616†	1254.2	1257.0	56.822 µg/L	56.822 ppb	14:17:21
3	Cr 267.716†	10659.3	10673.1	226.96 µg/L	226.96 ppb	14:17:01
3	Cu 324.752†	7278.2	4728.1	43.280 µg/L	43.280 ppb	14:17:01
3	Mn 257.610†	501615.7	500985.1	1704.2 µg/L	1704.2 ppb	14:16:56
3	Mo 202.031†	45.6	52.4	8.3681 µg/L	8.3681 ppb	14:17:21
3	Ni 231.604†	2498.1	2187.1	117.73 µg/L	117.73 ppb	14:17:21
3	P 214.914†	197.7	175.7	308.84 µg/L	308.84 ppb	14:17:21
3	Pb 220.353†	217.2	123.3	30.084 µg/L	30.084 ppb	14:17:21
3	S 181.975 Axial†	70.6	56.7	244.45 µg/L	244.45 ppb	14:17:21
3	Sb 206.836†	31.8	11.6	8.1805 µg/L	8.1805 ppb	14:17:21
3	Se 196.026†	-19.7	-35.6	155.41 µg/L	155.41 ppb	14:17:21
3	SiO2†	145055.4	143460.2	30250 µg/L	30250 ppb	14:17:01
3	Si 251.611†	177277.6	176656.6	14302 µg/L	14302 ppb	14:16:56
3	Sn 189.927†	-5.1	-8.2	-11.612 µg/L	-11.612 ppb	14:17:21
3	Ti 334.940†	825083.5	823526.3	1943.7 µg/L	1943.7 ppb	14:16:56
3	Tl 190.801†	-41.7	-18.7	9.6415 µg/L	9.6415 ppb	14:17:21
3	U 409.014†	-1363.1	-1317.0	-125.74 µg/L	-125.74 ppb	14:16:56
3	V 292.402†	5391.3	5414.0	65.380 µg/L	65.380 ppb	14:17:01
3	Zn 213.857†	12513.9	11973.4	295.57 µg/L	295.57 ppb	14:17:01

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Mean Data: 245797006|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2058451.3	100.69 %	0.564			0.56%
Sc RADIAL	58570.3	101 %	0.5			0.51%
Y 371.029	1451356.6	103.30 %	0.575			0.56%
Ag 328.068†	-1032.9	-2.8071 µg/L	0.14295	-2.8071 ppb	0.14295	5.09%
Al 396.153Radial†	24497.0	18009 µg/L	70.8	18009 ppb	70.8	0.39%
As 188.979†	1.7	7.5427 µg/L	6.34344	7.5427 ppb	6.34344	84.10%
B 249.677†	444.0	-21.000 µg/L	1.0608	-21.000 ppb	1.0608	5.05%
Ba 233.527†	7292.3	187.56 µg/L	1.718	187.56 ppb	1.718	0.92%
Be 313.107†	6865.0	3.6487 µg/L	0.05639	3.6487 ppb	0.05639	1.55%
Ca 317.933Radial†	5092.9	4717.1 µg/L	19.09	4717.1 ppb	19.09	0.40%
Cd 226.502†	222.2	-2.6784 µg/L	0.33722	-2.6784 ppb	0.33722	12.59%
Co 228.616†	1309.1	59.323 µg/L	2.1793	59.323 ppb	2.1793	3.67%
Cr 267.716†	10766.7	228.95 µg/L	2.740	228.95 ppb	2.740	1.20%
Cu 324.752†	4761.1	43.451 µg/L	0.2782	43.451 ppb	0.2782	0.64%
Fe 238.204 Radial†	9065.6	77887 µg/L	403.0	77887 ppb	403.0	0.52%
K 766.490 Radial†	4626.9	3254.8 µg/L	24.19	3254.8 ppb	24.19	0.74%
Mg 279.077 IEC†	362.4	3327.7 µg/L	43.65	3327.7 ppb	43.65	1.31%
Mn 257.610†	503668.0	1713.3 µg/L	8.79	1713.3 ppb	8.79	0.51%
Mo 202.031†	49.9	8.0958 µg/L	0.41603	8.0958 ppb	0.41603	5.14%
Na 589.592 Radial†	4275.1	1387.9 µg/L	11.16	1387.9 ppb	11.16	0.80%

Ni 231.604†	2269.1	122.10 µg/L	3.799	122.10 ppb	3.799	3.11%
P 214.914†	183.6	325.66 µg/L	14.657	325.66 ppb	14.657	4.50%
Pb 220.353†	125.1	30.562 µg/L	1.9136	30.562 ppb	1.9136	6.26%
S 181.975 Axial†	54.3	234.22 µg/L	10.062	234.22 ppb	10.062	4.30%
Sb 206.836†	12.1	8.6405 µg/L	3.34678	8.6405 ppb	3.34678	38.73%
Se 196.026†	-37.1	152.10 µg/L	2.932	152.10 ppb	2.932	1.93%
SiO2†	143782.8	30318 µg/L	176.0	30318 ppb	176.0	0.58%
Si 251.611†	177226.6	14348 µg/L	47.4	14348 ppb	47.4	0.33%
Sn 189.927†	-4.4	-9.8815 µg/L	1.97493	-9.8815 ppb	1.97493	19.99%
Sr 421.552†	3802.0	38.444 µg/L	0.1446	38.444 ppb	0.1446	0.38%
Ti 334.940†	827931.7	1954.1 µg/L	9.78	1954.1 ppb	9.78	0.50%
Tl 190.801†	-22.0	5.1818 µg/L	4.76402	5.1818 ppb	4.76402	91.94%
U 409.014†	-1295.7	-123.83 µg/L	3.006	-123.83 ppb	3.006	2.43%
V 292.402†	5440.5	65.611 µg/L	0.3753	65.611 ppb	0.3753	0.57%
Zn 213.857†	12009.6	296.47 µg/L	2.095	296.47 ppb	2.095	0.71%



Sequence No.: 8

Sample ID: 245797007|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 313

Date Collected: 2/17/2010 14:17:29

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797007|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59525.4	59525.4	103 %		14:18:01
1	Al 396.153Radial†	63920.8	62346.6	45834 µg/L	45834 ppb	14:18:01
1	Ca 317.933Radial†	10992.6	10522.5	9746.0 µg/L	9746.0 ppb	14:18:21
1	Fe 238.204 Radial†	10806.6	10519.3	90376 µg/L	90376 ppb	14:18:21
1	K 766.490 Radial†	12213.5	11731.4	8252.4 µg/L	8252.4 ppb	14:18:01
1	Mg 279.077 IEC†	1090.0	1049.3	9779.1 µg/L	9779.1 ppb	14:18:21
1	Na 589.592 Radial†	2464.4	1836.7	596.25 µg/L	596.25 ppb	14:18:01
1	Sr 421.552†	9755.4	9478.3	95.842 µg/L	95.842 ppb	14:18:01
1	Sc 361.383	2079419.7	2079419.7	101.71 %		14:19:21
1	Y 371.029	1421092.2	1421092.2	101.15 %		14:19:21
1	Ag 328.068†	-1773.1	-1219.6	-2.7641 µg/L	-2.7641 ppb	14:19:26
1	As 188.979†	5.7	4.2	12.742 µg/L	12.742 ppb	14:19:46
1	B 249.677†	811.4	501.0	-25.241 µg/L	-25.241 ppb	14:19:26
1	Ba 233.527†	16923.3	16656.2	428.46 µg/L	428.46 ppb	14:19:26
1	Be 313.107†	6569.0	9426.0	5.4097 µg/L	5.4097 ppb	14:19:26
1	Cd 226.502†	160.3	295.6	-2.1684 µg/L	-2.1684 ppb	14:19:46
1	Co 228.616†	1268.6	1252.2	57.231 µg/L	57.231 ppb	14:19:46
1	Cr 267.716†	4981.4	4929.7	104.92 µg/L	104.92 ppb	14:19:26
1	Cu 324.752†	13026.3	10269.3	82.933 µg/L	82.933 ppb	14:19:26
1	Mn 257.610†	478206.1	470389.0	1602.1 µg/L	1602.1 ppb	14:19:21
1	Mo 202.031†	-3.6	3.3	3.7762 µg/L	3.7762 ppb	14:19:46
1	Ni 231.604†	1463.9	1132.5	61.578 µg/L	61.578 ppb	14:19:46
1	P 214.914†	265.1	239.1	436.58 µg/L	436.58 ppb	14:19:46
1	Pb 220.353†	582.7	479.4	123.36 µg/L	123.36 ppb	14:19:46
1	S 181.975 Axial†	72.7	57.6	248.41 µg/L	248.41 ppb	14:19:46
1	Sb 206.836†	33.9	13.1	10.531 µg/L	10.531 ppb	14:19:46
1	Se 196.026†	-19.9	-35.4	181.62 µg/L	181.62 ppb	14:19:46
1	SiO2†	257181.2	251505.4	53033 µg/L	53033 ppb	14:19:21
1	Si 251.611†	310074.6	304538.0	24655 µg/L	24655 ppb	14:19:21
1	Sn 189.927†	-13.3	-16.1	-15.707 µg/L	-15.707 ppb	14:19:46
1	Ti 334.940†	704222.6	692231.8	1633.4 µg/L	1633.4 ppb	14:19:21
1	Tl 190.801†	-41.6	-18.0	11.202 µg/L	11.202 ppb	14:19:46
1	U 409.014†	-619.1	-565.0	-62.302 µg/L	-62.302 ppb	14:19:26
1	V 292.402†	16251.3	16009.6	175.60 µg/L	175.60 ppb	14:19:26
1	Zn 213.857†	9565.2	8885.2	217.43 µg/L	217.43 ppb	14:19:26
2	Sc RADIAL	59629.1	59629.1	103 %		14:18:26
2	Al 396.153Radial†	64477.9	62780.4	46153 µg/L	46153 ppb	14:18:26
2	Ca 317.933Radial†	11012.7	10523.4	9746.8 µg/L	9746.8 ppb	14:18:46
2	Fe 238.204 Radial†	10811.7	10506.0	90261 µg/L	90261 ppb	14:18:46
2	K 766.490 Radial†	12359.1	11852.5	8337.6 µg/L	8337.6 ppb	14:18:26
2	Mg 279.077 IEC†	1085.2	1042.8	9718.6 µg/L	9718.6 ppb	14:18:46
2	Na 589.592 Radial†	2459.1	1827.3	593.21 µg/L	593.21 ppb	14:18:26
2	Sr 421.552†	9813.3	9518.1	96.244 µg/L	96.244 ppb	14:18:26
2	Sc 361.383	2075457.6	2075457.6	101.52 %		14:19:53
2	Y 371.029	1418413.5	1418413.5	100.96 %		14:19:53
2	Ag 328.068†	-1724.1	-1174.7	-2.4289 µg/L	-2.4289 ppb	14:19:58
2	As 188.979†	6.1	4.5	13.466 µg/L	13.466 ppb	14:20:19
2	B 249.677†	814.8	505.9	-24.972 µg/L	-24.972 ppb	14:19:58
2	Ba 233.527†	16742.3	16509.8	424.69 µg/L	424.69 ppb	14:19:58
2	Be 313.107†	6476.6	9347.2	5.3661 µg/L	5.3661 ppb	14:19:58
2	Cd 226.502†	145.5	281.3	-2.5420 µg/L	-2.5420 ppb	14:20:19
2	Co 228.616†	1255.0	1241.2	56.736 µg/L	56.736 ppb	14:20:19
2	Cr 267.716†	4896.2	4855.1	103.33 µg/L	103.33 ppb	14:19:58
2	Cu 324.752†	12863.6	10133.6	81.987 µg/L	81.987 ppb	14:19:58
2	Mn 257.610†	471323.1	464506.5	1582.2 µg/L	1582.2 ppb	14:19:53
2	Mo 202.031†	7.6	14.4	4.9115 µg/L	4.9115 ppb	14:20:19
2	Ni 231.604†	1446.5	1118.1	60.807 µg/L	60.807 ppb	14:20:19
2	P 214.914†	260.0	234.5	427.32 µg/L	427.32 ppb	14:20:19
2	Pb 220.353†	586.0	483.7	124.51 µg/L	124.51 ppb	14:20:19

2	S 181.975 Axial†	68.6	53.7	231.61 µg/L	231.61 ppb	14:20:19
2	Sb 206.836†	27.0	6.5	4.1991 µg/L	4.1991 ppb	14:20:19
2	Se 196.026†	-22.5	-38.1	177.30 µg/L	177.30 ppb	14:20:19
2	SiO2†	254565.4	249411.4	52591 µg/L	52591 ppb	14:19:53
2	Si 251.611†	306695.7	301791.7	24433 µg/L	24433 ppb	14:19:53
2	Sn 189.927†	-7.3	-10.3	-13.102 µg/L	-13.102 ppb	14:20:19
2	Ti 334.940†	695213.2	684679.0	1615.5 µg/L	1615.5 ppb	14:19:53
2	Tl 190.801†	-45.9	-22.2	5.0338 µg/L	5.0338 ppb	14:20:19
2	U 409.014†	-727.5	-672.9	-71.681 µg/L	-71.681 ppb	14:19:58
2	V 292.402†	16081.9	15873.3	174.18 µg/L	174.18 ppb	14:19:58
2	Zn 213.857†	9445.5	8785.3	214.94 µg/L	214.94 ppb	14:19:58
3	Sc RADIAL	58006.8	58006.8	99.9 %		14:18:51
3	Al 396.153Radial†	65497.0	65555.2	48193 µg/L	48193 ppb	14:18:51
3	Ca 317.933Radial†	10919.5	10729.9	9938.1 µg/L	9938.1 ppb	14:19:12
3	Fe 238.204 Radial†	10746.6	10735.1	92229 µg/L	92229 ppb	14:19:12
3	K 766.490 Radial†	12540.0	12369.9	8701.6 µg/L	8701.6 ppb	14:18:51
3	Mg 279.077 IEC†	1082.4	1069.5	9967.8 µg/L	9967.8 ppb	14:19:12
3	Na 589.592 Radial†	2536.9	1972.1	640.22 µg/L	640.22 ppb	14:18:51
3	Sr 421.552†	9993.1	9965.1	100.76 µg/L	100.76 ppb	14:18:51
3	Sc 361.383	2087080.7	2087080.7	102.09 %		14:20:26
3	Y 371.029	1426204.9	1426204.9	101.51 %		14:20:26
3	Ag 328.068†	-1673.5	-1115.6	-1.8781 µg/L	-1.8781 ppb	14:20:31
3	As 188.979†	10.7	9.0	22.119 µg/L	22.119 ppb	14:20:51
3	B 249.677†	852.9	538.7	-24.576 µg/L	-24.576 ppb	14:20:31
3	Ba 233.527†	16418.1	16100.3	414.15 µg/L	414.15 ppb	14:20:31
3	Be 313.107†	6247.1	9086.9	5.2056 µg/L	5.2056 ppb	14:20:31
3	Cd 226.502†	121.5	256.9	-3.4260 µg/L	-3.4260 ppb	14:20:51
3	Co 228.616†	1187.6	1168.4	53.241 µg/L	53.241 ppb	14:20:51
3	Cr 267.716†	4817.3	4751.0	101.11 µg/L	101.11 ppb	14:20:31
3	Cu 324.752†	12678.3	9881.4	80.533 µg/L	80.533 ppb	14:20:31
3	Mn 257.610†	470488.3	461103.3	1571.0 µg/L	1571.0 ppb	14:20:26
3	Mo 202.031†	1.7	8.6	4.3856 µg/L	4.3856 ppb	14:20:51
3	Ni 231.604†	1381.8	1046.8	57.030 µg/L	57.030 ppb	14:20:51
3	P 214.914†	237.7	211.3	377.44 µg/L	377.44 ppb	14:20:51
3	Pb 220.353†	554.0	449.1	115.58 µg/L	115.58 ppb	14:20:51
3	S 181.975 Axial†	65.5	50.4	217.17 µg/L	217.17 ppb	14:20:51
3	Sb 206.836†	31.1	10.3	7.8570 µg/L	7.8570 ppb	14:20:51
3	Se 196.026†	-25.0	-40.4	178.86 µg/L	178.86 ppb	14:20:51
3	SiO2†	253619.3	247088.2	52101 µg/L	52101 ppb	14:20:26
3	Si 251.611†	305869.0	299299.4	24231 µg/L	24231 ppb	14:20:26
3	Sn 189.927†	-13.5	-16.3	-15.980 µg/L	-15.980 ppb	14:20:51
3	Ti 334.940†	692233.1	677946.1	1599.6 µg/L	1599.6 ppb	14:20:26
3	Tl 190.801†	-37.2	-13.5	17.440 µg/L	17.440 ppb	14:20:51
3	U 409.014†	-603.5	-547.4	-61.047 µg/L	-61.047 ppb	14:20:31
3	V 292.402†	15641.2	15353.4	169.06 µg/L	169.06 ppb	14:20:31
3	Zn 213.857†	9331.3	8621.6	210.75 µg/L	210.75 ppb	14:20:31

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Mean Data: 245797007|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2080652.7	101.77 %	0.289			0.28%
Sc RADIAL	59053.8	102 %	1.6			1.54%
Y 371.029	1421903.5	101.20 %	0.282			0.28%
Ag 328.068†	-1170.0	-2.3570 µg/L	0.44733	-2.3570 ppb	0.44733	18.98%
Al 396.153Radial†	63560.8	46726 µg/L	1279.7	46726 ppb	1279.7	2.74%
As 188.979†	5.9	16.109 µg/L	5.2174	16.109 ppb	5.2174	32.39%
B 249.677†	515.2	-24.930 µg/L	0.3346	-24.930 ppb	0.3346	1.34%
Ba 233.527†	16422.1	422.43 µg/L	7.414	422.43 ppb	7.414	1.76%
Be 313.107†	9286.7	5.3271 µg/L	0.10749	5.3271 ppb	0.10749	2.02%
Ca 317.933Radial†	10591.9	9810.3 µg/L	110.67	9810.3 ppb	110.67	1.13%
Cd 226.502†	277.9	-2.7121 µg/L	0.64584	-2.7121 ppb	0.64584	23.81%
Co 228.616†	1220.6	55.736 µg/L	2.1744	55.736 ppb	2.1744	3.90%
Cr 267.716†	4845.3	103.12 µg/L	1.911	103.12 ppb	1.911	1.85%
Cu 324.752†	10094.8	81.817 µg/L	1.2091	81.817 ppb	1.2091	1.48%
Fe 238.204 Radial†	10586.8	90955 µg/L	1104.7	90955 ppb	1104.7	1.21%
K 766.490 Radial†	11984.6	8430.5 µg/L	238.55	8430.5 ppb	238.55	2.83%
Mg 279.077 IEC†	1053.9	9821.8 µg/L	129.99	9821.8 ppb	129.99	1.32%
Mn 257.610†	465332.9	1585.1 µg/L	15.78	1585.1 ppb	15.78	1.00%
Mo 202.031†	8.8	4.3578 µg/L	0.56816	4.3578 ppb	0.56816	13.04%
Na 589.592 Radial†	1878.7	609.89 µg/L	26.303	609.89 ppb	26.303	4.31%

Ni 231.604†	1099.1	59.805 µg/L	2.4342	59.805 ppb	2.4342	4.07%
P 214.914†	228.3	413.78 µg/L	31.812	413.78 ppb	31.812	7.69%
Pb 220.353†	470.7	121.15 µg/L	4.857	121.15 ppb	4.857	4.01%
S 181.975 Axial†	53.9	232.39 µg/L	15.634	232.39 ppb	15.634	6.73%
Sb 206.836†	10.0	7.5289 µg/L	3.17848	7.5289 ppb	3.17848	42.22%
Se 196.026†	-37.9	179.26 µg/L	2.190	179.26 ppb	2.190	1.22%
SiO2†	249335.0	52575 µg/L	465.9	52575 ppb	465.9	0.89%
Si 251.611†	301876.3	24439 µg/L	212.1	24439 ppb	212.1	0.87%
Sn 189.927†	-14.2	-14.930 µg/L	1.5888	-14.930 ppb	1.5888	10.64%
Sr 421.552†	9653.9	97.617 µg/L	2.7333	97.617 ppb	2.7333	2.80%
Ti 334.940†	684952.3	1616.2 µg/L	16.88	1616.2 ppb	16.88	1.04%
Tl 190.801†	-17.9	11.225 µg/L	6.2029	11.225 ppb	6.2029	55.26%
U 409.014†	-595.1	-65.010 µg/L	5.8111	-65.010 ppb	5.8111	8.94%
V 292.402†	15745.5	172.95 µg/L	3.439	172.95 ppb	3.439	1.99%
Zn 213.857†	8764.0	214.37 µg/L	3.376	214.37 ppb	3.376	1.57%

Sequence No.: 9

Sample ID: 245797008|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 314

Date Collected: 2/17/2010 14:20:59

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797008|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59196.9	59196.9	102 %			14:21:31
1	Al 396.153Radial†	32438.6	31826.5	23397 µg/L		23397 ppb	14:21:31
1	Ca 317.933Radial†	10750.4	10344.5	9581.1 µg/L		9581.1 ppb	14:21:31
1	Fe 238.204 Radial†	7799.7	7629.8	65550 µg/L		65550 ppb	14:21:31
1	K 766.490 Radial†	7110.9	6794.8	4779.8 µg/L		4779.8 ppb	14:21:31
1	Mg 279.077 IEC†	537.2	513.2	4760.3 µg/L		4760.3 ppb	14:21:51
1	Na 589.592 Radial†	2107.5	1500.1	486.97 µg/L		486.97 ppb	14:21:31
1	Sr 421.552†	6986.8	6816.8	68.929 µg/L		68.929 ppb	14:21:31
1	Sc 361.383	2039114.6	2039114.6	99.742 %			14:22:50
1	Y 371.029	1408527.5	1408527.5	100.25 %			14:22:50
1	Ag 328.068†	-1324.4	-804.2	-1.6731 µg/L		-1.6731 ppb	14:22:56
1	As 188.979†	2.8	1.4	5.9146 µg/L		5.9146 ppb	14:23:16
1	B 249.677†	753.5	458.7	-14.148 µg/L		-14.148 ppb	14:22:56
1	Ba 233.527†	11922.4	11971.3	307.86 µg/L		307.86 ppb	14:22:56
1	Be 313.107†	9263.6	12255.2	7.0940 µg/L		7.0940 ppb	14:22:56
1	Cd 226.502†	150.9	289.3	0.4576 µg/L		0.4576 ppb	14:23:16
1	Co 228.616†	395.5	401.5	15.344 µg/L		15.344 ppb	14:23:16
1	Cr 267.716†	4168.6	4211.6	89.590 µg/L		89.590 ppb	14:22:56
1	Cu 324.752†	18002.0	15511.1	115.40 µg/L		115.40 ppb	14:22:56
1	Mn 257.610†	523106.6	524698.9	1782.7 µg/L		1782.7 ppb	14:22:50
1	Mo 202.031†	21.0	27.9	5.3666 µg/L		5.3666 ppb	14:23:16
1	Ni 231.604†	1270.1	966.6	52.446 µg/L		52.446 ppb	14:23:16
1	P 214.914†	430.4	409.9	806.82 µg/L		806.82 ppb	14:23:16
1	Pb 220.353†	530.2	438.0	112.12 µg/L		112.12 ppb	14:23:16
1	S 181.975 Axial†	147.4	133.9	577.41 µg/L		577.41 ppb	14:23:16
1	Sb 206.836†	33.0	13.0	10.600 µg/L		10.600 ppb	14:23:16
1	Se 196.026†	-20.3	-36.2	117.06 µg/L		117.06 ppb	14:23:16
1	SiO2†	191420.1	190571.7	40184 µg/L		40184 ppb	14:22:56
1	Si 251.611†	234681.3	234975.0	19023 µg/L		19023 ppb	14:22:50
1	Sn 189.927†	-12.1	-15.2	-13.243 µg/L		-13.243 ppb	14:23:16
1	Ti 334.940†	830647.9	832670.0	1965.3 µg/L		1965.3 ppb	14:22:50
1	Tl 190.801†	-45.4	-22.5	3.4636 µg/L		3.4636 ppb	14:23:16
1	U 409.014†	1266.8	1313.8	104.59 µg/L		104.59 ppb	14:22:56
1	V 292.402†	7177.5	7228.2	82.455 µg/L		82.455 ppb	14:22:56
1	Zn 213.857†	14789.2	14308.6	354.78 µg/L		354.78 ppb	14:22:56
2	Sc RADIAL	58259.7	58259.7	100 %			14:21:56
2	Al 396.153Radial†	32246.5	32146.7	23633 µg/L		23633 ppb	14:21:56
2	Ca 317.933Radial†	10592.5	10356.8	9592.5 µg/L		9592.5 ppb	14:21:56
2	Fe 238.204 Radial†	7699.7	7653.2	65751 µg/L		65751 ppb	14:21:56
2	K 766.490 Radial†	7056.8	6853.1	4820.8 µg/L		4820.8 ppb	14:21:56
2	Mg 279.077 IEC†	537.8	522.3	4845.7 µg/L		4845.7 ppb	14:22:16
2	Na 589.592 Radial†	2066.0	1492.0	484.34 µg/L		484.34 ppb	14:21:56
2	Sr 421.552†	6946.0	6886.3	69.631 µg/L		69.631 ppb	14:21:56
2	Sc 361.383	2044919.6	2044919.6	100.03 %			14:23:23
2	Y 371.029	1412520.1	1412520.1	100.54 %			14:23:23
2	Ag 328.068†	-1372.9	-848.9	-2.0132 µg/L		-2.0132 ppb	14:23:28
2	As 188.979†	8.0	6.5	15.821 µg/L		15.821 ppb	14:23:48
2	B 249.677†	718.4	421.4	-15.871 µg/L		-15.871 ppb	14:23:28
2	Ba 233.527†	11945.4	11960.3	307.58 µg/L		307.58 ppb	14:23:28
2	Be 313.107†	9274.7	12239.9	7.0889 µg/L		7.0889 ppb	14:23:28
2	Cd 226.502†	160.2	298.1	0.6747 µg/L		0.6747 ppb	14:23:48
2	Co 228.616†	374.1	379.0	14.280 µg/L		14.280 ppb	14:23:48
2	Cr 267.716†	4181.4	4212.5	89.610 µg/L		89.610 ppb	14:23:28
2	Cu 324.752†	18038.5	15496.3	115.33 µg/L		115.33 ppb	14:23:28
2	Mn 257.610†	522053.6	522157.3	1774.1 µg/L		1774.1 ppb	14:23:23
2	Mo 202.031†	25.5	32.4	5.8291 µg/L		5.8291 ppb	14:23:48
2	Ni 231.604†	1271.4	964.3	52.324 µg/L		52.324 ppb	14:23:48
2	P 214.914†	428.9	407.2	801.08 µg/L		801.08 ppb	14:23:48
2	Pb 220.353†	513.3	419.6	107.35 µg/L		107.35 ppb	14:23:48

2	S 181.975 Axial†	151.3	137.4	592.45 µg/L	592.45 ppb	14:23:48
2	Sb 206.836†	32.4	12.2	9.9074 µg/L	9.9074 ppb	14:23:48
2	Se 196.026†	-14.5	-30.3	126.51 µg/L	126.51 ppb	14:23:48
2	SiO2†	191628.0	190234.7	40113 µg/L	40113 ppb	14:23:28
2	Si 251.611†	233552.1	233178.1	18878 µg/L	18878 ppb	14:23:23
2	Sn 189.927†	-4.2	-7.3	-9.7459 µg/L	-9.7459 ppb	14:23:48
2	Ti 334.940†	827825.8	827484.5	1953.0 µg/L	1953.0 ppb	14:23:23
2	Tl 190.801†	-45.6	-22.6	3.2358 µg/L	3.2358 ppb	14:23:48
2	U 409.014†	1254.0	1297.3	103.13 µg/L	103.13 ppb	14:23:28
2	V 292.402†	7155.8	7186.1	82.047 µg/L	82.047 ppb	14:23:28
2	Zn 213.857†	14870.8	14348.1	355.76 µg/L	355.76 ppb	14:23:28
3	Sc RADIAL	58441.4	58441.4	101 %		14:22:21
3	Al 396.153Radial†	32465.6	32264.5	23719 µg/L	23719 ppb	14:22:21
3	Ca 317.933Radial†	10642.4	10373.5	9608.0 µg/L	9608.0 ppb	14:22:21
3	Fe 238.204 Radial†	7729.9	7659.3	65804 µg/L	65804 ppb	14:22:21
3	K 766.490 Radial†	7176.0	6949.6	4888.7 µg/L	4888.7 ppb	14:22:21
3	Mg 279.077 IEC†	534.0	516.9	4794.5 µg/L	4794.5 ppb	14:22:42
3	Na 589.592 Radial†	2070.8	1490.4	483.83 µg/L	483.83 ppb	14:22:21
3	Sr 421.552†	6941.1	6859.9	69.365 µg/L	69.365 ppb	14:22:21
3	Sc 361.383	2057709.1	2057709.1	100.65 %		14:23:55
3	Y 371.029	1421319.9	1421319.9	101.16 %		14:23:55
3	Ag 328.068†	-1335.0	-802.7	-1.6556 µg/L	-1.6556 ppb	14:24:00
3	As 188.979†	6.0	4.4	11.863 µg/L	11.863 ppb	14:24:20
3	B 249.677†	726.3	424.8	-15.756 µg/L	-15.756 ppb	14:24:00
3	Ba 233.527†	11745.2	11687.2	300.56 µg/L	300.56 ppb	14:24:00
3	Be 313.107†	9059.8	11968.8	6.9221 µg/L	6.9221 ppb	14:24:00
3	Cd 226.502†	125.0	262.2	-0.3053 µg/L	-0.3053 ppb	14:24:20
3	Co 228.616†	371.7	374.3	14.090 µg/L	14.090 ppb	14:24:20
3	Cr 267.716†	4088.2	4093.9	87.088 µg/L	87.088 ppb	14:24:00
3	Cu 324.752†	17707.3	15055.2	112.31 µg/L	112.31 ppb	14:24:00
3	Mn 257.610†	520435.3	517305.6	1757.7 µg/L	1757.7 ppb	14:23:55
3	Mo 202.031†	14.6	21.4	4.7049 µg/L	4.7049 ppb	14:24:20
3	Ni 231.604†	1229.3	914.6	49.670 µg/L	49.670 ppb	14:24:20
3	P 214.914†	416.8	392.5	770.40 µg/L	770.40 ppb	14:24:20
3	Pb 220.353†	508.8	412.0	105.38 µg/L	105.38 ppb	14:24:20
3	S 181.975 Axial†	147.7	133.0	573.23 µg/L	573.23 ppb	14:24:20
3	Sb 206.836†	27.6	7.3	5.1606 µg/L	5.1606 ppb	14:24:20
3	Se 196.026†	-23.4	-39.1	113.36 µg/L	113.36 ppb	14:24:20
3	SiO2†	189105.5	186537.8	39334 µg/L	39334 ppb	14:24:00
3	Si 251.611†	233206.8	231383.9	18732 µg/L	18732 ppb	14:23:55
3	Sn 189.927†	-6.2	-9.2	-10.613 µg/L	-10.613 ppb	14:24:20
3	Ti 334.940†	825404.6	819935.0	1935.2 µg/L	1935.2 ppb	14:23:55
3	Tl 190.801†	-45.5	-22.3	3.5415 µg/L	3.5415 ppb	14:24:20
3	U 409.014†	1235.3	1271.0	100.83 µg/L	100.83 ppb	14:24:00
3	V 292.402†	7094.0	7080.1	80.946 µg/L	80.946 ppb	14:24:00
3	Zn 213.857†	14681.3	14067.5	348.74 µg/L	348.74 ppb	14:24:00

Mean Data: 245797008|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2047247.8	100.14 %	0.465			0.46%
Sc RADIAL	58632.6	101 %	0.9			0.85%
Y 371.029	1414122.5	100.65 %	0.466			0.46%
Ag 328.068†	-818.6	-1.7806 µg/L	0.20162	-1.7806 ppb	0.20162	11.32%
Al 396.153Radial†	32079.2	23583 µg/L	166.6	23583 ppb	166.6	0.71%
As 188.979†	4.1	11.200 µg/L	4.9865	11.200 ppb	4.9865	44.52%
B 249.677†	435.0	-15.258 µg/L	0.9633	-15.258 ppb	0.9633	6.31%
Ba 233.527†	11872.9	305.33 µg/L	4.138	305.33 ppb	4.138	1.36%
Be 313.107†	12154.6	7.0350 µg/L	0.09777	7.0350 ppb	0.09777	1.39%
Ca 317.933Radial†	10358.3	9593.9 µg/L	13.49	9593.9 ppb	13.49	0.14%
Cd 226.502†	283.2	0.2757 µg/L	0.51472	0.2757 ppb	0.51472	186.73%
Co 228.616†	384.9	14.571 µg/L	0.6758	14.571 ppb	0.6758	4.64%
Cr 267.716†	4172.7	88.763 µg/L	1.4504	88.763 ppb	1.4504	1.63%
Cu 324.752†	15354.2	114.35 µg/L	1.763	114.35 ppb	1.763	1.54%
Fe 238.204 Radial†	7647.4	65702 µg/L	133.9	65702 ppb	133.9	0.20%
K 766.490 Radial†	6865.8	4829.7 µg/L	55.00	4829.7 ppb	55.00	1.14%
Mg 279.077 IEC†	517.5	4800.2 µg/L	42.96	4800.2 ppb	42.96	0.90%
Mn 257.610†	521387.3	1771.5 µg/L	12.69	1771.5 ppb	12.69	0.72%
Mo 202.031†	27.2	5.3002 µg/L	0.56499	5.3002 ppb	0.56499	10.66%
Na 589.592 Radial†	1494.1	485.05 µg/L	1.685	485.05 ppb	1.685	0.35%

Ni 231.604†	948.5	51.480 µg/L	1.5687	51.480 ppb	1.5687	3.05%
P 214.914†	403.2	792.77 µg/L	19.578	792.77 ppb	19.578	2.47%
Pb 220.353†	423.2	108.28 µg/L	3.464	108.28 ppb	3.464	3.20%
S 181.975 Axial†	134.8	581.03 µg/L	10.110	581.03 ppb	10.110	1.74%
Sb 206.836†	10.8	8.5561 µg/L	2.96091	8.5561 ppb	2.96091	34.61%
Se 196.026†	-35.2	118.98 µg/L	6.778	118.98 ppb	6.778	5.70%
SiO2†	189114.7	39877 µg/L	471.9	39877 ppb	471.9	1.18%
Si 251.611†	233179.0	18878 µg/L	145.4	18878 ppb	145.4	0.77%
Sn 189.927†	-10.6	-11.200 µg/L	1.8211	-11.200 ppb	1.8211	16.26%
Sr 421.552†	6854.3	69.308 µg/L	0.3548	69.308 ppb	0.3548	0.51%
Ti 334.940†	826696.5	1951.2 µg/L	15.12	1951.2 ppb	15.12	0.77%
Tl 190.801†	-22.5	3.4136 µg/L	0.15886	3.4136 ppb	0.15886	4.65%
U 409.014†	1294.0	102.85 µg/L	1.896	102.85 ppb	1.896	1.84%
V 292.402†	7164.8	81.816 µg/L	0.7805	81.816 ppb	0.7805	0.95%
Zn 213.857†	14241.4	353.09 µg/L	3.801	353.09 ppb	3.801	1.08%

Sequence No.: 10

Sample ID: 245797009|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 315

Date Collected: 2/17/2010 14:24:28

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797009|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59023.9	59023.9	102 %		14:25:00
1	Al 396.153Radial†	22813.2	22455.1	16508 µg/L	16508 ppb	14:25:00
1	Ca 317.933Radial†	5171.5	4889.7	4528.9 µg/L	4528.9 ppb	14:25:20
1	Fe 238.204 Radial†	8335.7	8179.3	70272 µg/L	70272 ppb	14:25:00
1	K 766.490 Radial†	7903.1	7594.2	5342.1 µg/L	5342.1 ppb	14:25:00
1	Mg 279.077 IEC†	287.7	269.5	2461.3 µg/L	2461.3 ppb	14:25:20
1	Na 589.592 Radial†	8072.1	7371.1	2392.9 µg/L	2392.9 ppb	14:25:00
1	Sr 421.552†	4026.7	3926.1	39.699 µg/L	39.699 ppb	14:25:00
1	Sc 361.383	2046088.2	2046088.2	100.08 %		14:26:20
1	Y 371.029	1480188.0	1480188.0	105.35 %		14:26:20
1	Ag 328.068†	-1502.3	-977.4	-3.0420 µg/L	-3.0420 ppb	14:26:25
1	As 188.979†	4.5	3.0	9.5680 µg/L	9.5680 ppb	14:26:46
1	B 249.677†	799.2	501.8	-14.818 µg/L	-14.818 ppb	14:26:25
1	Ba 233.527†	12505.0	12512.7	321.70 µg/L	321.70 ppb	14:26:25
1	Be 313.107†	2981.7	5946.8	3.3459 µg/L	3.3459 ppb	14:26:25
1	Cd 226.502†	72.2	210.1	-2.2249 µg/L	-2.2249 ppb	14:26:25
1	Co 228.616†	2219.5	2222.6	105.12 µg/L	105.12 ppb	14:26:46
1	Cr 267.716†	1858.0	1888.6	40.172 µg/L	40.172 ppb	14:26:25
1	Cu 324.752†	7451.3	4907.6	43.397 µg/L	43.397 ppb	14:26:25
1	Mn 257.610†	749656.2	749274.0	2542.7 µg/L	2542.7 ppb	14:26:20
1	Mo 202.031†	66.0	72.8	10.161 µg/L	10.161 ppb	14:26:46
1	Ni 231.604†	1067.0	759.3	41.331 µg/L	41.331 ppb	14:26:46
1	P 214.914†	233.4	211.6	390.56 µg/L	390.56 ppb	14:26:46
1	Pb 220.353†	326.8	233.0	58.786 µg/L	58.786 ppb	14:26:46
1	S 181.975 Axial†	39.2	25.4	109.39 µg/L	109.39 ppb	14:26:46
1	Sb 206.836†	35.8	15.6	14.190 µg/L	14.190 ppb	14:26:46
1	Se 196.026†	-14.3	-30.2	142.61 µg/L	142.61 ppb	14:26:46
1	SiO2†	164474.5	162994.2	34369 µg/L	34369 ppb	14:26:25
1	Si 251.611†	199404.1	198925.0	16105 µg/L	16105 ppb	14:26:20
1	Sn 189.927†	6.8	3.7	-5.5556 µg/L	-5.5556 ppb	14:26:46
1	Ti 334.940†	511780.3	511227.3	1206.6 µg/L	1206.6 ppb	14:26:20
1	Tl 190.801†	-42.9	-20.0	3.5300 µg/L	3.5300 ppb	14:26:46
1	U 409.014†	-1789.3	-1744.1	-161.77 µg/L	-161.77 ppb	14:26:20
1	V 292.402†	2627.9	2657.8	35.618 µg/L	35.618 ppb	14:26:25
1	Zn 213.857†	11709.5	11181.0	276.48 µg/L	276.48 ppb	14:26:25
2	Sc RADIAL	58735.3	58735.3	101 %		14:25:25
2	Al 396.153Radial†	22790.4	22542.8	16572 µg/L	16572 ppb	14:25:25
2	Ca 317.933Radial†	5138.9	4882.5	4522.2 µg/L	4522.2 ppb	14:25:45
2	Fe 238.204 Radial†	8325.9	8209.8	70534 µg/L	70534 ppb	14:25:25
2	K 766.490 Radial†	7912.2	7641.4	5375.3 µg/L	5375.3 ppb	14:25:25
2	Mg 279.077 IEC†	290.0	273.1	2495.3 µg/L	2495.3 ppb	14:25:45
2	Na 589.592 Radial†	8068.1	7406.2	2404.3 µg/L	2404.3 ppb	14:25:25
2	Sr 421.552†	4006.9	3926.0	39.698 µg/L	39.698 ppb	14:25:25
2	Sc 361.383	2060809.5	2060809.5	100.80 %		14:26:53
2	Y 371.029	1491616.6	1491616.6	106.17 %		14:26:53
2	Ag 328.068†	-1450.2	-915.0	-2.5383 µg/L	-2.5383 ppb	14:26:58
2	As 188.979†	13.6	12.0	26.905 µg/L	26.905 ppb	14:27:18
2	B 249.677†	813.9	510.6	-14.574 µg/L	-14.574 ppb	14:26:58
2	Ba 233.527†	12433.0	12352.0	317.56 µg/L	317.56 ppb	14:26:58
2	Be 313.107†	2916.0	5860.4	3.2937 µg/L	3.2937 ppb	14:26:58
2	Cd 226.502†	62.1	199.6	-2.5391 µg/L	-2.5391 ppb	14:26:58
2	Co 228.616†	2201.9	2189.3	103.53 µg/L	103.53 ppb	14:27:18
2	Cr 267.716†	1840.6	1858.1	39.524 µg/L	39.524 ppb	14:26:58
2	Cu 324.752†	7503.0	4905.7	43.421 µg/L	43.421 ppb	14:26:58
2	Mn 257.610†	751570.5	745822.3	2531.1 µg/L	2531.1 ppb	14:26:53
2	Mo 202.031†	64.4	70.8	9.9612 µg/L	9.9612 ppb	14:27:18
2	Ni 231.604†	1061.7	746.5	40.651 µg/L	40.651 ppb	14:27:18
2	P 214.914†	235.7	212.3	391.69 µg/L	391.69 ppb	14:27:18
2	Pb 220.353†	311.5	215.5	54.249 µg/L	54.249 ppb	14:27:18

2	S 181.975 Axial†	40.0	25.9	111.59 µg/L	111.59 ppb	14:27:18
2	Sb 206.836†	28.1	7.8	6.7083 µg/L	6.7083 ppb	14:27:18
2	Se 196.026†	-21.0	-36.7	133.39 µg/L	133.39 ppb	14:27:18
2	SiO2†	163371.5	160726.1	33891 µg/L	33891 ppb	14:26:58
2	Si 251.611†	200489.9	198578.9	16077 µg/L	16077 ppb	14:26:53
2	Sn 189.927†	2.6	-0.5	-7.4841 µg/L	-7.4841 ppb	14:27:18
2	Ti 334.940†	512024.0	507816.1	1198.6 µg/L	1198.6 ppb	14:26:53
2	Tl 190.801†	-39.3	-16.0	8.9400 µg/L	8.9400 ppb	14:27:18
2	U 409.014†	-1882.2	-1823.5	-168.71 µg/L	-168.71 ppb	14:26:53
2	V 292.402†	2625.8	2637.0	35.424 µg/L	35.424 ppb	14:26:58
2	Zn 213.857†	11635.8	11024.3	272.54 µg/L	272.54 ppb	14:26:58
3	Sc RADIAL	58461.0	58461.0	101 %		14:25:50
3	Al 396.153Radial†	22860.6	22718.1	16701 µg/L	16701 ppb	14:25:50
3	Ca 317.933Radial†	5174.3	4941.5	4576.8 µg/L	4576.8 ppb	14:26:11
3	Fe 238.204 Radial†	8336.6	8259.0	70958 µg/L	70958 ppb	14:25:50
3	K 766.490 Radial†	7900.2	7666.2	5392.7 µg/L	5392.7 ppb	14:25:50
3	Mg 279.077 IEC†	287.7	272.2	2485.6 µg/L	2485.6 ppb	14:26:11
3	Na 589.592 Radial†	8037.6	7413.3	2406.6 µg/L	2406.6 ppb	14:25:50
3	Sr 421.552†	4029.2	3966.8	40.111 µg/L	40.111 ppb	14:25:50
3	Sc 361.383	2077947.8	2077947.8	101.64 %		14:27:26
3	Y 371.029	1500520.6	1500520.6	106.80 %		14:27:26
3	Ag 328.068†	-1459.9	-912.7	-2.4991 µg/L	-2.4991 ppb	14:27:31
3	As 188.979†	12.9	11.2	25.403 µg/L	25.403 ppb	14:27:51
3	B 249.677†	772.8	463.6	-16.839 µg/L	-16.839 ppb	14:27:31
3	Ba 233.527†	12084.2	11907.1	306.13 µg/L	306.13 ppb	14:27:31
3	Be 313.107†	2794.9	5717.3	3.2121 µg/L	3.2121 ppb	14:27:31
3	Cd 226.502†	47.2	184.4	-2.9996 µg/L	-2.9996 ppb	14:27:31
3	Co 228.616†	2086.0	2057.4	97.191 µg/L	97.191 ppb	14:27:51
3	Cr 267.716†	1781.9	1785.4	37.976 µg/L	37.976 ppb	14:27:31
3	Cu 324.752†	7335.8	4679.8	41.931 µg/L	41.931 ppb	14:27:31
3	Mn 257.610†	743129.5	731368.2	2482.3 µg/L	2482.3 ppb	14:27:26
3	Mo 202.031†	64.3	70.1	9.9112 µg/L	9.9112 ppb	14:27:51
3	Ni 231.604†	1010.1	687.0	37.489 µg/L	37.489 ppb	14:27:51
3	P 214.914†	206.8	181.8	327.37 µg/L	327.37 ppb	14:27:51
3	Pb 220.353†	305.5	207.1	52.057 µg/L	52.057 ppb	14:27:51
3	S 181.975 Axial†	41.2	26.7	115.12 µg/L	115.12 ppb	14:27:51
3	Sb 206.836†	23.6	3.1	2.2085 µg/L	2.2085 ppb	14:27:51
3	Se 196.026†	-24.5	-40.0	129.49 µg/L	129.49 ppb	14:27:51
3	SiO2†	159562.0	155641.4	32819 µg/L	32819 ppb	14:27:31
3	Si 251.611†	198186.6	194672.4	15760 µg/L	15760 ppb	14:27:26
3	Sn 189.927†	4.6	1.5	-6.6398 µg/L	-6.6398 ppb	14:27:51
3	Ti 334.940†	505048.1	496763.5	1172.5 µg/L	1172.5 ppb	14:27:26
3	Tl 190.801†	-42.0	-18.4	5.3015 µg/L	5.3015 ppb	14:27:51
3	U 409.014†	-1825.0	-1751.8	-162.54 µg/L	-162.54 ppb	14:27:26
3	V 292.402†	2559.4	2550.1	34.582 µg/L	34.582 ppb	14:27:31
3	Zn 213.857†	11338.0	10636.1	262.81 µg/L	262.81 ppb	14:27:31

Mean Data: 245797009|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2061615.1	100.84 %	0.780			0.77%
Sc RADIAL	58740.1	101 %	0.5			0.48%
Y 371.029	1490775.1	106.11 %	0.725			0.68%
Ag 328.068†	-935.0	-2.6931 µg/L	0.30274	-2.6931 ppb	0.30274	11.24%
Al 396.153Radial†	22572.0	16594 µg/L	98.5	16594 ppb	98.5	0.59%
As 188.979†	8.7	20.625 µg/L	9.6052	20.625 ppb	9.6052	46.57%
B 249.677†	492.0	-15.410 µg/L	1.2434	-15.410 ppb	1.2434	8.07%
Ba 233.527†	12257.2	315.13 µg/L	8.066	315.13 ppb	8.066	2.56%
Be 313.107†	5841.5	3.2839 µg/L	0.06746	3.2839 ppb	0.06746	2.05%
Ca 317.933Radial†	4904.6	4542.6 µg/L	29.79	4542.6 ppb	29.79	0.66%
Cd 226.502†	198.0	-2.5879 µg/L	0.38966	-2.5879 ppb	0.38966	15.06%
Co 228.616†	2156.5	101.95 µg/L	4.196	101.95 ppb	4.196	4.12%
Cr 267.716†	1844.0	39.224 µg/L	1.1284	39.224 ppb	1.1284	2.88%
Cu 324.752†	4831.0	42.916 µg/L	0.8532	42.916 ppb	0.8532	1.99%
Fe 238.204 Radial†	8216.0	70588 µg/L	345.8	70588 ppb	345.8	0.49%
K 766.490 Radial†	7633.9	5370.1 µg/L	25.72	5370.1 ppb	25.72	0.48%
Mg 279.077 IEC†	271.6	2480.7 µg/L	17.48	2480.7 ppb	17.48	0.70%
Mn 257.610†	742154.9	2518.7 µg/L	32.08	2518.7 ppb	32.08	1.27%
Mo 202.031†	71.2	10.011 µg/L	0.1320	10.011 ppb	0.1320	1.32%
Na 589.592 Radial†	7396.9	2401.3 µg/L	7.33	2401.3 ppb	7.33	0.31%



Ni 231.604†	730.9	39.824 µg/L	2.0504	39.824 ppb	2.0504	5.15%
P 214.914†	201.9	369.87 µg/L	36.817	369.87 ppb	36.817	9.95%
Pb 220.353†	218.5	55.031 µg/L	3.4321	55.031 ppb	3.4321	6.24%
S 181.975 Axial†	26.0	112.03 µg/L	2.890	112.03 ppb	2.890	2.58%
Sb 206.836†	8.8	7.7021 µg/L	6.05203	7.7021 ppb	6.05203	78.58%
Se 196.026†	-35.6	135.17 µg/L	6.735	135.17 ppb	6.735	4.98%
SiO2†	159787.2	33693 µg/L	793.9	33693 ppb	793.9	2.36%
Si 251.611†	197392.1	15981 µg/L	191.2	15981 ppb	191.2	1.20%
Sn 189.927†	1.6	-6.5598 µg/L	0.96677	-6.5598 ppb	0.96677	14.74%
Sr 421.552†	3939.6	39.836 µg/L	0.2378	39.836 ppb	0.2378	0.60%
Ti 334.940†	505269.0	1192.5 µg/L	17.85	1192.5 ppb	17.85	1.50%
Tl 190.801†	-18.1	5.9238 µg/L	2.75815	5.9238 ppb	2.75815	46.56%
U 409.014†	-1773.2	-164.34 µg/L	3.804	-164.34 ppb	3.804	2.32%
V 292.402†	2615.0	35.208 µg/L	0.5505	35.208 ppb	0.5505	1.56%
Zn 213.857†	10947.1	270.61 µg/L	7.036	270.61 ppb	7.036	2.60%

Sequence No.: 11

Sample ID: 245797010|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 316

Date Collected: 2/17/2010 14:27:59

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797010|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	60784.9	60784.9	105 %			14:28:31
1	Al 396.153Radial†	97760.9	93366.0	68638 µg/L		68638 ppb	14:28:31
1	Ca 317.933Radial†	24819.1	23502.1	21768 µg/L		21768 ppb	14:28:51
1	Fe 238.204 Radial†	12576.4	11990.8	103020 µg/L		103020 ppb	14:28:51
1	K 766.490 Radial†	14564.9	13729.8	9658.2 µg/L		9658.2 ppb	14:28:31
1	Mg 279.077 IEC†	1618.5	1531.9	14308 µg/L		14308 ppb	14:28:51
1	Na 589.592 Radial†	2522.9	1842.8	598.23 µg/L		598.23 ppb	14:28:51
1	Sr 421.552†	19669.2	18747.0	189.56 µg/L		189.56 ppb	14:28:31
1	Sc 361.383	2097542.2	2097542.2	102.60 %			14:29:51
1	Y 371.029	1457687.6	1457687.6	103.75 %			14:29:51
1	Ag 328.068†	-1949.4	-1376.4	-3.2818 µg/L		-3.2818 ppb	14:29:57
1	As 188.979†	12.6	10.8	25.604 µg/L		25.604 ppb	14:30:17
1	B 249.677†	946.1	625.4	-26.438 µg/L		-26.438 ppb	14:29:57
1	Ba 233.527†	29266.1	28542.6	733.98 µg/L		733.98 ppb	14:29:57
1	Be 313.107†	12441.8	15094.1	9.2501 µg/L		9.2501 ppb	14:29:57
1	Cd 226.502†	194.1	327.2	-2.7331 µg/L		-2.7331 ppb	14:30:17
1	Co 228.616†	1007.9	987.3	45.572 µg/L		45.572 ppb	14:30:17
1	Cr 267.716†	5006.8	4912.2	104.53 µg/L		104.53 ppb	14:29:57
1	Cu 324.752†	16347.4	13395.7	106.11 µg/L		106.11 ppb	14:29:57
1	Mn 257.610†	437825.2	426969.2	1456.8 µg/L		1456.8 ppb	14:29:51
1	Mo 202.031†	8.7	15.3	5.4937 µg/L		5.4937 ppb	14:30:17
1	Ni 231.604†	1682.9	1333.5	72.488 µg/L		72.488 ppb	14:30:17
1	P 214.914†	327.9	298.0	554.91 µg/L		554.91 ppb	14:30:17
1	Pb 220.353†	476.2	370.6	95.922 µg/L		95.922 ppb	14:30:17
1	S 181.975 Axial†	131.4	114.3	492.53 µg/L		492.53 ppb	14:30:17
1	Sb 206.836†	26.2	5.3	2.0664 µg/L		2.0664 ppb	14:30:17
1	Se 196.026†	-33.3	-48.3	189.06 µg/L		189.06 ppb	14:30:17
1	Si02†	303033.2	294011.1	61996 µg/L		61996 ppb	14:29:51
1	Si 251.611†	365224.6	355656.9	28793 µg/L		28793 ppb	14:29:51
1	Sn 189.927†	-10.6	-13.5	-15.400 µg/L		-15.400 ppb	14:30:17
1	Ti 334.940†	467359.4	455387.9	1074.1 µg/L		1074.1 ppb	14:29:51
1	Tl 190.801†	-37.4	-13.6	14.329 µg/L		14.329 ppb	14:30:17
1	U 409.014†	-979.4	-910.9	-94.883 µg/L		-94.883 ppb	14:29:51
1	V 292.402†	15071.1	14721.3	163.81 µg/L		163.81 ppb	14:29:57
1	Zn 213.857†	11755.6	10938.9	267.95 µg/L		267.95 ppb	14:29:57
2	Sc RADIAL	60601.9	60601.9	104 %			14:28:56
2	Al 396.153Radial†	97534.3	93430.8	68685 µg/L		68685 ppb	14:28:56
2	Ca 317.933Radial†	24896.1	23647.4	21902 µg/L		21902 ppb	14:29:16
2	Fe 238.204 Radial†	12621.0	12069.8	103700 µg/L		103700 ppb	14:29:16
2	K 766.490 Radial†	14571.6	13778.3	9692.3 µg/L		9692.3 ppb	14:28:56
2	Mg 279.077 IEC†	1620.3	1538.3	14368 µg/L		14368 ppb	14:29:16
2	Na 589.592 Radial†	2518.8	1846.1	599.30 µg/L		599.30 ppb	14:29:16
2	Sr 421.552†	19589.6	18727.5	189.37 µg/L		189.37 ppb	14:28:56
2	Sc 361.383	2099101.2	2099101.2	102.68 %			14:30:24
2	Y 371.029	1460254.0	1460254.0	103.93 %			14:30:24
2	Ag 328.068†	-1933.0	-1358.9	-3.1054 µg/L		-3.1054 ppb	14:30:30
2	As 188.979†	12.6	10.8	25.611 µg/L		25.611 ppb	14:30:50
2	B 249.677†	926.3	605.4	-27.662 µg/L		-27.662 ppb	14:30:30
2	Ba 233.527†	29233.3	28489.5	732.61 µg/L		732.61 ppb	14:30:30
2	Be 313.107†	12393.7	15038.2	9.2136 µg/L		9.2136 ppb	14:30:30
2	Cd 226.502†	188.2	321.3	-2.9688 µg/L		-2.9688 ppb	14:30:50
2	Co 228.616†	986.0	965.3	44.503 µg/L		44.503 ppb	14:30:50
2	Cr 267.716†	4933.5	4837.1	102.94 µg/L		102.94 ppb	14:30:30
2	Cu 324.752†	16267.9	13306.4	105.60 µg/L		105.60 ppb	14:30:30
2	Mn 257.610†	437882.5	426708.0	1456.0 µg/L		1456.0 ppb	14:30:24
2	Mo 202.031†	21.2	27.5	6.7716 µg/L		6.7716 ppb	14:30:50
2	Ni 231.604†	1680.5	1329.9	72.308 µg/L		72.308 ppb	14:30:50
2	P 214.914†	311.4	281.7	520.03 µg/L		520.03 ppb	14:30:50
2	Pb 220.353†	471.8	365.9	94.690 µg/L		94.690 ppb	14:30:50

2	S 181.975 Axial†	131.8	114.6	493.85 µg/L	493.85 ppb	14:30:50
2	Sb 206.836†	33.3	12.3	8.7437 µg/L	8.7437 ppb	14:30:50
2	Se 196.026†	-39.7	-54.5	181.47 µg/L	181.47 ppb	14:30:50
2	SiO2†	303703.4	294444.4	62087 µg/L	62087 ppb	14:30:24
2	Si 251.611†	366183.7	356326.6	28848 µg/L	28848 ppb	14:30:24
2	Sn 189.927†	-7.7	-10.6	-14.188 µg/L	-14.188 ppb	14:30:50
2	Ti 334.940†	468522.1	456181.9	1076.0 µg/L	1076.0 ppb	14:30:24
2	Tl 190.801†	-42.4	-18.4	7.7363 µg/L	7.7363 ppb	14:30:50
2	U 409.014†	-971.1	-902.1	-94.220 µg/L	-94.220 ppb	14:30:24
2	V 292.402†	15042.7	14682.8	163.50 µg/L	163.50 ppb	14:30:30
2	Zn 213.857†	11698.5	10874.7	266.31 µg/L	266.31 ppb	14:30:30
3	Sc RADIAL	59717.7	59717.7	103 %		14:29:21
3	Al 396.153Radial†	95957.6	93281.7	68576 µg/L	68576 ppb	14:29:21
3	Ca 317.933Radial†	24599.1	23711.8	21962 µg/L	21962 ppb	14:29:42
3	Fe 238.204 Radial†	12523.5	12154.0	104420 µg/L	104420 ppb	14:29:42
3	K 766.490 Radial†	14340.5	13760.3	9679.6 µg/L	9679.6 ppb	14:29:21
3	Mg 279.077 IEC†	1615.8	1556.9	14542 µg/L	14542 ppb	14:29:42
3	Na 589.592 Radial†	2497.9	1861.5	604.32 µg/L	604.32 ppb	14:29:42
3	Sr 421.552†	19202.0	18628.6	188.37 µg/L	188.37 ppb	14:29:21
3	Sc 361.383	2094831.1	2094831.1	102.47 %		14:30:57
3	Y 371.029	1456856.0	1456856.0	103.69 %		14:30:57
3	Ag 328.068†	-1856.4	-1288.0	-2.5273 µg/L	-2.5273 ppb	14:31:03
3	As 188.979†	13.5	11.7	27.355 µg/L	27.355 ppb	14:31:23
3	B 249.677†	969.1	649.1	-26.148 µg/L	-26.148 ppb	14:31:03
3	Ba 233.527†	28691.5	28018.7	720.50 µg/L	720.50 ppb	14:31:03
3	Be 313.107†	12133.3	14808.7	9.0735 µg/L	9.0735 ppb	14:31:03
3	Cd 226.502†	162.3	296.4	-3.7279 µg/L	-3.7279 ppb	14:31:23
3	Co 228.616†	942.5	924.8	42.576 µg/L	42.576 ppb	14:31:23
3	Cr 267.716†	4853.6	4769.0	101.49 µg/L	101.49 ppb	14:31:03
3	Cu 324.752†	16019.8	13096.6	104.26 µg/L	104.26 ppb	14:31:03
3	Mn 257.610†	431454.2	421303.8	1437.8 µg/L	1437.8 ppb	14:30:57
3	Mo 202.031†	10.8	17.5	5.7639 µg/L	5.7639 ppb	14:31:23
3	Ni 231.604†	1593.0	1247.9	67.942 µg/L	67.942 ppb	14:31:23
3	P 214.914†	305.4	276.4	508.50 µg/L	508.50 ppb	14:31:23
3	Pb 220.353†	452.5	348.0	90.009 µg/L	90.009 ppb	14:31:23
3	S 181.975 Axial†	135.1	118.0	508.88 µg/L	508.88 ppb	14:31:23
3	Sb 206.836†	32.0	11.1	7.5955 µg/L	7.5955 ppb	14:31:23
3	Se 196.026†	-24.7	-40.0	205.39 µg/L	205.39 ppb	14:31:23
3	SiO2†	299918.3	291353.5	61435 µg/L	61435 ppb	14:30:57
3	Si 251.611†	361716.7	352694.1	28554 µg/L	28554 ppb	14:30:57
3	Sn 189.927†	-4.9	-7.9	-13.027 µg/L	-13.027 ppb	14:31:23
3	Ti 334.940†	459889.9	448687.7	1058.3 µg/L	1058.3 ppb	14:30:57
3	Tl 190.801†	-40.0	-16.1	10.732 µg/L	10.732 ppb	14:31:23
3	U 409.014†	-897.9	-832.6	-88.280 µg/L	-88.280 ppb	14:30:57
3	V 292.402†	14675.5	14354.2	160.20 µg/L	160.20 ppb	14:31:03
3	Zn 213.857†	11496.1	10700.5	261.92 µg/L	261.92 ppb	14:31:03

Mean Data: 245797010|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2097158.2	102.58 %	0.106			0.10%
Sc RADIAL	60368.2	104 %	1.0			0.95%
Y 371.029	1458265.9	103.79 %	0.126			0.12%
Ag 328.068†	-1341.1	-2.9715 µg/L	0.39468	-2.9715 ppb	0.39468	13.28%
Al 396.153Radial†	93359.5	68633 µg/L	55.0	68633 ppb	55.0	0.08%
As 188.979†	11.1	26.190 µg/L	1.0088	26.190 ppb	1.0088	3.85%
B 249.677†	626.6	-26.749 µg/L	0.8038	-26.749 ppb	0.8038	3.01%
Ba 233.527†	28350.3	729.03 µg/L	7.417	729.03 ppb	7.417	1.02%
Be 313.107†	14980.4	9.1791 µg/L	0.09323	9.1791 ppb	0.09323	1.02%
Ca 317.933Radial†	23620.4	21877 µg/L	99.5	21877 ppb	99.5	0.45%
Cd 226.502†	314.9	-3.1432 µg/L	0.51984	-3.1432 ppb	0.51984	16.54%
Co 228.616†	959.1	44.217 µg/L	1.5183	44.217 ppb	1.5183	3.43%
Cr 267.716†	4839.4	102.99 µg/L	1.524	102.99 ppb	1.524	1.48%
Cu 324.752†	13266.2	105.32 µg/L	0.957	105.32 ppb	0.957	0.91%
Fe 238.204 Radial†	12071.5	103710 µg/L	701.3	103710 ppb	701.3	0.68%
K 766.490 Radial†	13756.1	9676.7 µg/L	17.23	9676.7 ppb	17.23	0.18%
Mg 279.077 IEC†	1542.4	14406 µg/L	121.5	14406 ppb	121.5	0.84%
Mn 257.610†	424993.6	1450.2 µg/L	10.74	1450.2 ppb	10.74	0.74%
Mo 202.031†	20.1	6.0097 µg/L	0.67346	6.0097 ppb	0.67346	11.21%
Na 589.592 Radial†	1850.1	600.62 µg/L	3.247	600.62 ppb	3.247	0.54%

Ni 231.604†	1303.8	70.913 µg/L	2.5744	70.913 ppb	2.5744	3.63%
P 214.914†	285.4	527.81 µg/L	24.166	527.81 ppb	24.166	4.58%
Pb 220.353†	361.5	93.540 µg/L	3.1197	93.540 ppb	3.1197	3.34%
S 181.975 Axial†	115.6	498.42 µg/L	9.083	498.42 ppb	9.083	1.82%
Sb 206.836†	9.6	6.1352 µg/L	3.57013	6.1352 ppb	3.57013	58.19%
Se 196.026†	-47.6	191.97 µg/L	12.226	191.97 ppb	12.226	6.37%
SiO2†	293269.7	61839 µg/L	352.9	61839 ppb	352.9	0.57%
Si 251.611†	354892.5	28732 µg/L	156.5	28732 ppb	156.5	0.54%
Sn 189.927†	-10.6	-14.205 µg/L	1.1863	-14.205 ppb	1.1863	8.35%
Sr 421.552†	18701.1	189.10 µg/L	0.642	189.10 ppb	0.642	0.34%
Ti 334.940†	453419.2	1069.5 µg/L	9.73	1069.5 ppb	9.73	0.91%
Tl 190.801†	-16.0	10.932 µg/L	3.3009	10.932 ppb	3.3009	30.19%
U 409.014†	-881.8	-92.461 µg/L	3.6360	-92.461 ppb	3.6360	3.93%
V 292.402†	14586.1	162.50 µg/L	2.001	162.50 ppb	2.001	1.23%
Zn 213.857†	10838.1	265.39 µg/L	3.118	265.39 ppb	3.118	1.17%

Sequence No.: 12  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 2/17/2010 14:31:31  
 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	59524.9	59524.9	103 %		14:32:08
1	Al 396.153Radial†	6808.0	6660.8	4886.4 µg/L	4886.4 ppb	14:32:08
1	Ca 317.933Radial†	5614.9	5279.2	4889.6 µg/L	4889.6 ppb	14:32:28
1	Fe 238.204 Radial†	605.1	572.7	4930.6 µg/L	4930.6 ppb	14:32:28
1	K 766.490 Radial†	7315.3	6955.7	4893.0 µg/L	4893.0 ppb	14:32:08
1	Mg 279.077 IEC†	556.2	528.8	4980.7 µg/L	4980.7 ppb	14:32:28
1	Na 589.592 Radial†	31635.9	30279.6	9829.8 µg/L	9829.8 ppb	14:32:08
1	Sr 421.552†	49681.1	48406.8	489.47 µg/L	489.47 ppb	14:32:08
1	Sc 361.383	2098852.3	2098852.3	102.66 %		14:33:27
1	Y 371.029	1426754.1	1426754.1	101.55 %		14:33:27
1	Ag 328.068†	63191.6	62075.8	489.34 µg/L	489.34 ppb	14:33:33
1	As 188.979†	270.5	262.0	503.13 µg/L	503.13 ppb	14:33:53
1	B 249.677†	11789.6	11186.9	483.84 µg/L	483.84 ppb	14:33:33
1	Ba 233.527†	19580.7	19090.7	491.62 µg/L	491.62 ppb	14:33:33
1	Be 313.107†	790936.1	773383.5	494.75 µg/L	494.75 ppb	14:33:27
1	Cd 226.502†	18383.7	18044.7	487.33 µg/L	487.33 ppb	14:33:33
1	Co 228.616†	10531.8	10263.6	496.45 µg/L	496.45 ppb	14:33:33
1	Cr 267.716†	23587.9	23008.1	489.49 µg/L	489.49 ppb	14:33:33
1	Cu 324.752†	75884.4	71378.1	489.80 µg/L	489.80 ppb	14:33:33
1	Mn 257.610†	150837.3	147160.6	498.05 µg/L	498.05 ppb	14:33:27
1	Mo 202.031†	4983.4	4861.0	500.42 µg/L	500.42 ppb	14:33:53
1	Ni 231.604†	9781.3	9220.8	491.86 µg/L	491.86 ppb	14:33:33
1	P 214.914†	1255.8	1201.6	2487.6 µg/L	2487.6 ppb	14:33:53
1	Pb 220.353†	2076.3	1928.9	500.51 µg/L	500.51 ppb	14:33:53
1	S 181.975 Axial†	254.8	234.4	1010.4 µg/L	1010.4 ppb	14:33:53
1	Sb 206.836†	553.7	519.2	498.98 µg/L	498.98 ppb	14:33:53
1	Se 196.026†	349.2	324.3	501.72 µg/L	501.72 ppb	14:33:53
1	SiO2†	27204.7	25154.4	5304.1 µg/L	5304.1 ppb	14:33:33
1	Si 251.611†	31881.9	30740.3	2488.7 µg/L	2488.7 ppb	14:33:33
1	Sn 189.927†	1157.3	1124.1	500.85 µg/L	500.85 ppb	14:33:53
1	Ti 334.940†	215578.5	209854.9	495.04 µg/L	495.04 ppb	14:33:27
1	Tl 190.801†	343.5	357.5	501.58 µg/L	501.58 ppb	14:33:53
1	U 409.014†	5760.4	5654.7	490.92 µg/L	490.92 ppb	14:33:33
1	V 292.402†	48652.6	47422.4	494.15 µg/L	494.15 ppb	14:33:33
1	Zn 213.857†	20719.0	19662.6	489.26 µg/L	489.26 ppb	14:33:33
2	Sc RADIAL	59496.9	59496.9	103 %		14:32:33
2	Al 396.153Radial†	6838.7	6693.9	4910.7 µg/L	4910.7 ppb	14:32:33
2	Ca 317.933Radial†	5600.4	5267.6	4878.9 µg/L	4878.9 ppb	14:32:53
2	Fe 238.204 Radial†	600.2	568.2	4892.2 µg/L	4892.2 ppb	14:32:53
2	K 766.490 Radial†	7381.6	7023.7	4940.8 µg/L	4940.8 ppb	14:32:33
2	Mg 279.077 IEC†	557.2	530.1	4992.7 µg/L	4992.7 ppb	14:32:53
2	Na 589.592 Radial†	31808.9	30462.8	9889.3 µg/L	9889.3 ppb	14:32:33
2	Sr 421.552†	50089.6	48828.1	493.73 µg/L	493.73 ppb	14:32:33
2	Sc 361.383	2075976.3	2075976.3	101.54 %		14:34:00
2	Y 371.029	1408477.1	1408477.1	100.25 %		14:34:00
2	Ag 328.068†	63287.6	62848.6	495.43 µg/L	495.43 ppb	14:34:05
2	As 188.979†	269.6	264.0	506.99 µg/L	506.99 ppb	14:34:25
2	B 249.677†	11857.4	11380.3	492.27 µg/L	492.27 ppb	14:34:05
2	Ba 233.527†	19640.6	19359.8	498.55 µg/L	498.55 ppb	14:34:05
2	Be 313.107†	786159.3	777168.9	497.17 µg/L	497.17 ppb	14:34:00
2	Cd 226.502†	18494.3	18350.9	495.61 µg/L	495.61 ppb	14:34:05
2	Co 228.616†	10495.7	10341.0	500.20 µg/L	500.20 ppb	14:34:05
2	Cr 267.716†	23657.9	23330.2	496.34 µg/L	496.34 ppb	14:34:05
2	Cu 324.752†	76004.7	72311.1	496.19 µg/L	496.19 ppb	14:34:05
2	Mn 257.610†	149925.9	147882.0	500.48 µg/L	500.48 ppb	14:34:00
2	Mo 202.031†	4957.7	4889.2	503.31 µg/L	503.31 ppb	14:34:25
2	Ni 231.604†	9850.8	9394.2	501.11 µg/L	501.11 ppb	14:34:05
2	P 214.914†	1249.1	1208.6	2501.7 µg/L	2501.7 ppb	14:34:25
2	Pb 220.353†	2061.5	1936.7	502.50 µg/L	502.50 ppb	14:34:25

2	S 181.975 Axial†	249.9	232.3	1001.5 µg/L	1001.5 ppb	14:34:25
2	Sb 206.836†	548.7	520.2	499.88 µg/L	499.88 ppb	14:34:25
2	Se 196.026†	336.1	315.1	487.70 µg/L	487.70 ppb	14:34:25
2	SiO2†	27302.7	25542.9	5386.0 µg/L	5386.0 ppb	14:34:05
2	Si 251.611†	31982.7	31181.7	2524.4 µg/L	2524.4 ppb	14:34:05
2	Sn 189.927†	1146.9	1126.4	501.84 µg/L	501.84 ppb	14:34:25
2	Ti 334.940†	214903.2	211503.8	498.93 µg/L	498.93 ppb	14:34:00
2	Tl 190.801†	341.1	358.9	503.51 µg/L	503.51 ppb	14:34:25
2	U 409.014†	5867.5	5821.9	505.48 µg/L	505.48 ppb	14:34:05
2	V 292.402†	48813.3	48102.9	501.20 µg/L	501.20 ppb	14:34:05
2	Zn 213.857†	20781.0	19946.1	496.31 µg/L	496.31 ppb	14:34:05
3	Sc RADIAL	59828.0	59828.0	103 %		14:32:58
3	Al 396.153Radial†	6870.3	6687.7	4907.4 µg/L	4907.4 ppb	14:32:58
3	Ca 317.933Radial†	5619.0	5255.5	4867.7 µg/L	4867.7 ppb	14:33:19
3	Fe 238.204 Radial†	608.5	573.1	4933.4 µg/L	4933.4 ppb	14:33:19
3	K 766.490 Radial†	7360.6	6963.5	4898.4 µg/L	4898.4 ppb	14:32:58
3	Mg 279.077 IEC†	559.9	529.7	4988.0 µg/L	4988.0 ppb	14:33:19
3	Na 589.592 Radial†	31858.4	30339.1	9849.1 µg/L	9849.1 ppb	14:32:58
3	Sr 421.552†	50190.3	48655.4	491.99 µg/L	491.99 ppb	14:32:58
3	Sc 361.383	2064756.5	2064756.5	101.00 %		14:34:32
3	Y 371.029	1403607.3	1403607.3	99.902 %		14:34:32
3	Ag 328.068†	61150.3	61071.0	481.33 µg/L	481.33 ppb	14:34:38
3	As 188.979†	242.9	239.0	459.15 µg/L	459.15 ppb	14:34:58
3	B 249.677†	11309.7	10901.4	471.40 µg/L	471.40 ppb	14:34:38
3	Ba 233.527†	18544.2	18379.4	473.29 µg/L	473.29 ppb	14:34:38
3	Be 313.107†	758274.1	753765.5	482.20 µg/L	482.20 ppb	14:34:32
3	Cd 226.502†	17455.0	17420.9	470.46 µg/L	470.46 ppb	14:34:38
3	Co 228.616†	9870.0	9777.7	472.90 µg/L	472.90 ppb	14:34:38
3	Cr 267.716†	21791.6	21608.9	459.73 µg/L	459.73 ppb	14:34:38
3	Cu 324.752†	71459.0	68216.9	468.14 µg/L	468.14 ppb	14:34:38
3	Mn 257.610†	144772.3	143581.5	485.94 µg/L	485.94 ppb	14:34:32
3	Mo 202.031†	4310.6	4275.0	440.11 µg/L	440.11 ppb	14:34:58
3	Ni 231.604†	9211.8	8814.3	470.17 µg/L	470.17 ppb	14:34:38
3	P 214.914†	1102.7	1070.2	2211.9 µg/L	2211.9 ppb	14:34:58
3	Pb 220.353†	1863.0	1751.2	454.29 µg/L	454.29 ppb	14:34:58
3	S 181.975 Axial†	233.8	217.7	938.46 µg/L	938.46 ppb	14:34:58
3	Sb 206.836†	498.5	473.4	454.53 µg/L	454.53 ppb	14:34:58
3	Se 196.026†	306.2	287.3	445.38 µg/L	445.38 ppb	14:34:58
3	SiO2†	26104.8	24502.9	5166.7 µg/L	5166.7 ppb	14:34:38
3	Si 251.611†	30554.1	29938.4	2423.8 µg/L	2423.8 ppb	14:34:38
3	Sn 189.927†	990.8	978.0	435.73 µg/L	435.73 ppb	14:34:58
3	Ti 334.940†	206416.9	204251.2	481.81 µg/L	481.81 ppb	14:34:32
3	Tl 190.801†	315.9	335.8	471.36 µg/L	471.36 ppb	14:34:58
3	U 409.014†	5380.1	5370.7	466.22 µg/L	466.22 ppb	14:34:38
3	V 292.402†	45604.7	45187.1	470.58 µg/L	470.58 ppb	14:34:38
3	Zn 213.857†	19543.2	18831.7	468.57 µg/L	468.57 ppb	14:34:38

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2079861.7	101.73 %	0.850			0.84%
Sc RADIAL	59616.6	103 %	0.3			0.31%
Y 371.029	1412946.2	100.57 %	0.869			0.86%
Ag 328.068†	61998.5	488.70 µg/L	7.075	488.70 ppb	7.075	1.45%
QC value within limits for Ag 328.068 Recovery = 97.74%						
Al 396.153Radial†	6680.8	4901.5 µg/L	13.16	4901.5 ppb	13.16	0.27%
QC value within limits for Al 396.153Radial Recovery = 98.03%						
As 188.979†	255.0	489.76 µg/L	26.577	489.76 ppb	26.577	5.43%
QC value within limits for As 188.979 Recovery = 97.95%						
B 249.677†	11156.2	482.50 µg/L	10.498	482.50 ppb	10.498	2.18%
QC value within limits for B 249.677 Recovery = 96.50%						
Ba 233.527†	18943.3	487.82 µg/L	13.050	487.82 ppb	13.050	2.68%
QC value within limits for Ba 233.527 Recovery = 97.56%						
Be 313.107†	768105.9	491.37 µg/L	8.036	491.37 ppb	8.036	1.64%
QC value within limits for Be 313.107 Recovery = 98.27%						
Ca 317.933Radial†	5267.4	4878.7 µg/L	10.97	4878.7 ppb	10.97	0.22%
QC value within limits for Ca 317.933Radial Recovery = 97.57%						
Cd 226.502†	17938.8	484.47 µg/L	12.820	484.47 ppb	12.820	2.65%
QC value within limits for Cd 226.502 Recovery = 96.89%						
Co 228.616†	10127.4	489.85 µg/L	14.801	489.85 ppb	14.801	3.02%

QC value within limits for Co 228.616 Recovery = 97.97%							
Cr 267.716†	22649.1	481.85 µg/L	19.466	481.85 ppb	19.466	4.04%	
QC value within limits for Cr 267.716 Recovery = 96.37%							
Cu 324.752†	70635.3	484.71 µg/L	14.702	484.71 ppb	14.702	3.03%	
QC value within limits for Cu 324.752 Recovery = 96.94%							
Fe 238.204 Radial†	571.3	4918.7 µg/L	22.99	4918.7 ppb	22.99	0.47%	
QC value within limits for Fe 238.204 Radial Recovery = 98.37%							
K 766.490 Radial†	6981.0	4910.7 µg/L	26.17	4910.7 ppb	26.17	0.53%	
QC value within limits for K 766.490 Radial Recovery = 98.21%							
Mg 279.077 IEC†	529.6	4987.1 µg/L	6.05	4987.1 ppb	6.05	0.12%	
QC value within limits for Mg 279.077 IEC Recovery = 99.74%							
Mn 257.610†	146208.0	494.82 µg/L	7.785	494.82 ppb	7.785	1.57%	
QC value within limits for Mn 257.610 Recovery = 98.96%							
Mo 202.031†	4675.1	481.28 µg/L	35.685	481.28 ppb	35.685	7.41%	
QC value within limits for Mo 202.031 Recovery = 96.26%							
Na 589.592 Radial†	30360.5	9856.1 µg/L	30.34	9856.1 ppb	30.34	0.31%	
QC value within limits for Na 589.592 Radial Recovery = 98.56%							
Ni 231.604†	9143.1	487.71 µg/L	15.877	487.71 ppb	15.877	3.26%	
QC value within limits for Ni 231.604 Recovery = 97.54%							
P 214.914†	1160.1	2400.4 µg/L	163.42	2400.4 ppb	163.42	6.81%	
QC value within limits for P 214.914 Recovery = 96.02%							
Pb 220.353†	1872.2	485.77 µg/L	27.277	485.77 ppb	27.277	5.62%	
QC value within limits for Pb 220.353 Recovery = 97.15%							
S 181.975 Axial†	228.1	983.43 µg/L	39.201	983.43 ppb	39.201	3.99%	
QC value within limits for S 181.975 Axial Recovery = 98.34%							
Sb 206.836†	504.3	484.46 µg/L	25.923	484.46 ppb	25.923	5.35%	
QC value within limits for Sb 206.836 Recovery = 96.89%							
Se 196.026†	308.9	478.27 µg/L	29.329	478.27 ppb	29.329	6.13%	
QC value within limits for Se 196.026 Recovery = 95.65%							
SiO2†	25066.7	5285.6 µg/L	110.81	5285.6 ppb	110.81	2.10%	
QC value within limits for SiO2 Recovery = 98.84%							
Si 251.611†	30620.1	2479.0 µg/L	51.03	2479.0 ppb	51.03	2.06%	
QC value within limits for Si 251.611 Recovery = 99.16%							
Sn 189.927†	1076.2	479.47 µg/L	37.884	479.47 ppb	37.884	7.90%	
QC value within limits for Sn 189.927 Recovery = 95.89%							
Sr 421.552†	48630.1	491.73 µg/L	2.142	491.73 ppb	2.142	0.44%	
QC value within limits for Sr 421.552 Recovery = 98.35%							
Ti 334.940†	208536.6	491.93 µg/L	8.974	491.93 ppb	8.974	1.82%	
QC value within limits for Ti 334.940 Recovery = 98.39%							
Tl 190.801†	350.7	492.15 µg/L	18.031	492.15 ppb	18.031	3.66%	
QC value within limits for Tl 190.801 Recovery = 98.43%							
U 409.014†	5615.8	487.54 µg/L	19.845	487.54 ppb	19.845	4.07%	
QC value within limits for U 409.014 Recovery = 97.51%							
V 292.402†	46904.1	488.64 µg/L	16.034	488.64 ppb	16.034	3.28%	
QC value within limits for V 292.402 Recovery = 97.73%							
Zn 213.857†	19480.1	484.71 µg/L	14.421	484.71 ppb	14.421	2.98%	
QC value within limits for Zn 213.857 Recovery = 96.94%							
All analyte(s) passed QC.							

Sequence No.: 13  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/17/2010 14:35:06  
 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	57815.5	57815.5	99.6 %		14:35:38
1	Al 396.153Radial†	25.1	48.1	35.339 µg/L	35.339 ppb	14:35:38
1	Ca 317.933Radial†	198.1	3.5	3.2124 µg/L	3.2124 ppb	14:35:58
1	Fe 238.204 Radial†	19.4	2.2	19.026 µg/L	19.026 ppb	14:35:58
1	K 766.490 Radial†	169.5	-6.8	-4.7497 µg/L	-4.7497 ppb	14:35:38
1	Mg 279.077 IEC†	13.5	0.1	1.1937 µg/L	1.1937 ppb	14:35:58
1	Na 589.592 Radial†	531.6	-32.5	-10.543 µg/L	-10.543 ppb	14:35:38
1	Sr 421.552†	45.1	12.0	0.1210 µg/L	0.1210 ppb	14:35:38
1	Sc 361.383	2059932.3	2059932.3	100.76 %		14:36:56
1	Y 371.029	1405795.7	1405795.7	100.06 %		14:36:56
1	Ag 328.068†	-602.1	-73.9	-0.5760 µg/L	-0.5760 ppb	14:37:02
1	As 188.979†	0.4	-1.1	-2.0360 µg/L	-2.0360 ppb	14:37:22
1	B 249.677†	325.7	26.5	1.1422 µg/L	1.1422 ppb	14:37:22
1	Ba 233.527†	-20.2	-2.1	-0.0529 µg/L	-0.0529 ppb	14:37:22
1	Be 313.107†	-3245.8	-253.8	-0.1626 µg/L	-0.1626 ppb	14:37:02
1	Cd 226.502†	-131.5	7.4	0.1971 µg/L	0.1971 ppb	14:37:22
1	Co 228.616†	-17.9	-12.7	-0.6164 µg/L	-0.6164 ppb	14:37:22
1	Cr 267.716†	-26.6	5.8	0.1230 µg/L	0.1230 ppb	14:37:22
1	Cu 324.752†	2540.3	-16.4	-0.1097 µg/L	-0.1097 ppb	14:37:02
1	Mn 257.610†	-135.3	102.4	0.3486 µg/L	0.3486 ppb	14:37:22
1	Mo 202.031†	-6.7	0.2	0.0204 µg/L	0.0204 ppb	14:37:22
1	Ni 231.604†	288.2	-20.8	-1.1088 µg/L	-1.1088 ppb	14:37:22
1	P 214.914†	35.1	13.3	28.029 µg/L	28.029 ppb	14:37:22
1	Pb 220.353†	93.9	-0.3	-0.1003 µg/L	-0.1003 ppb	14:37:22
1	S 181.975 Axial†	15.7	1.8	7.8463 µg/L	7.8463 ppb	14:37:22
1	Sb 206.836†	26.1	5.7	5.4751 µg/L	5.4751 ppb	14:37:22
1	Se 196.026†	18.4	2.4	3.7805 µg/L	3.7805 ppb	14:37:22
1	SiO2†	1421.4	66.2	13.949 µg/L	13.949 ppb	14:37:02
1	Si 251.611†	365.5	48.2	3.9054 µg/L	3.9054 ppb	14:37:22
1	Sn 189.927†	-2.9	-5.9	-2.6487 µg/L	-2.6487 ppb	14:37:22
1	Ti 334.940†	327.2	194.2	0.4583 µg/L	0.4583 ppb	14:37:02
1	Tl 190.801†	-24.9	-1.8	-2.4377 µg/L	-2.4377 ppb	14:37:22
1	U 409.014†	88.9	131.9	11.473 µg/L	11.473 ppb	14:37:02
1	V 292.402†	-13.4	18.7	0.2073 µg/L	0.2073 ppb	14:37:02
1	Zn 213.857†	493.5	-29.1	-0.7251 µg/L	-0.7251 ppb	14:37:22
2	Sc RADIAL	58228.2	58228.2	100 %		14:36:03
2	Al 396.153Radial†	-20.0	2.9	2.1211 µg/L	2.1211 ppb	14:36:03
2	Ca 317.933Radial†	193.6	-2.5	-2.3070 µg/L	-2.3070 ppb	14:36:23
2	Fe 238.204 Radial†	19.9	2.5	21.758 µg/L	21.758 ppb	14:36:23
2	K 766.490 Radial†	164.9	-12.5	-8.7684 µg/L	-8.7684 ppb	14:36:03
2	Mg 279.077 IEC†	9.6	-3.8	-35.996 µg/L	-35.996 ppb	14:36:23
2	Na 589.592 Radial†	533.0	-34.9	-11.335 µg/L	-11.335 ppb	14:36:03
2	Sr 421.552†	72.2	38.7	0.3910 µg/L	0.3910 ppb	14:36:03
2	Sc 361.383	2052973.8	2052973.8	100.42 %		14:37:28
2	Y 371.029	1400103.1	1400103.1	99.653 %		14:37:28
2	Ag 328.068†	-613.8	-87.6	-0.6838 µg/L	-0.6838 ppb	14:37:33
2	As 188.979†	-1.6	-3.1	-5.9816 µg/L	-5.9816 ppb	14:37:53
2	B 249.677†	292.9	-5.0	-0.2304 µg/L	-0.2304 ppb	14:37:53
2	Ba 233.527†	-19.8	-1.8	-0.0455 µg/L	-0.0455 ppb	14:37:53
2	Be 313.107†	-3318.9	-337.4	-0.2161 µg/L	-0.2161 ppb	14:37:33
2	Cd 226.502†	-135.6	3.0	0.0768 µg/L	0.0768 ppb	14:37:53
2	Co 228.616†	-14.7	-9.6	-0.4658 µg/L	-0.4658 ppb	14:37:53
2	Cr 267.716†	-29.8	2.5	0.0537 µg/L	0.0537 ppb	14:37:53
2	Cu 324.752†	2505.7	-42.3	-0.2870 µg/L	-0.2870 ppb	14:37:33
2	Mn 257.610†	-129.0	108.1	0.3698 µg/L	0.3698 ppb	14:37:53
2	Mo 202.031†	2.9	9.8	1.0084 µg/L	1.0084 ppb	14:37:53
2	Ni 231.604†	293.5	-14.5	-0.7757 µg/L	-0.7757 ppb	14:37:53
2	P 214.914†	32.3	10.6	22.379 µg/L	22.379 ppb	14:37:53
2	Pb 220.353†	90.5	-3.4	-0.8858 µg/L	-0.8858 ppb	14:37:53



2	S 181.975 Axial†	14.3	0.4	1.7610 µg/L	1.7610 ppb	14:37:53
2	Sb 206.836†	26.8	6.5	6.2412 µg/L	6.2412 ppb	14:37:53
2	Se 196.026†	20.3	4.3	6.6720 µg/L	6.6720 ppb	14:37:53
2	SiO2†	1392.9	42.6	8.9724 µg/L	8.9724 ppb	14:37:33
2	Si 251.611†	372.9	56.9	4.6032 µg/L	4.6032 ppb	14:37:53
2	Sn 189.927†	-3.6	-6.7	-2.9898 µg/L	-2.9898 ppb	14:37:53
2	Ti 334.940†	336.3	204.3	0.4849 µg/L	0.4849 ppb	14:37:33
2	Tl 190.801†	-24.5	-1.5	-2.0165 µg/L	-2.0165 ppb	14:37:53
2	U 409.014†	-36.1	7.8	0.6746 µg/L	0.6746 ppb	14:37:33
2	V 292.402†	-29.5	2.7	0.0393 µg/L	0.0393 ppb	14:37:33
2	Zn 213.857†	498.8	-22.2	-0.5507 µg/L	-0.5507 ppb	14:37:53
3	Sc RADIAL	58043.7	58043.7	100 %		14:36:29
3	Al 396.153Radial†	-31.5	-8.6	-6.3014 µg/L	-6.3014 ppb	14:36:29
3	Ca 317.933Radial†	193.5	-2.0	-1.8189 µg/L	-1.8189 ppb	14:36:49
3	Fe 238.204 Radial†	16.9	-0.4	-3.1214 µg/L	-3.1214 ppb	14:36:49
3	K 766.490 Radial†	165.2	-11.7	-8.2301 µg/L	-8.2301 ppb	14:36:29
3	Mg 279.077 IEC†	13.6	0.1	1.1753 µg/L	1.1753 ppb	14:36:49
3	Na 589.592 Radial†	448.7	-117.5	-38.129 µg/L	-38.129 ppb	14:36:29
3	Sr 421.552†	55.3	22.0	0.2221 µg/L	0.2221 ppb	14:36:29
3	Sc 361.383	2074244.3	2074244.3	101.46 %		14:37:59
3	Y 371.029	1415307.0	1415307.0	100.74 %		14:37:59
3	Ag 328.068†	-615.5	-83.0	-0.6487 µg/L	-0.6487 ppb	14:38:04
3	As 188.979†	-2.1	-3.5	-6.8128 µg/L	-6.8128 ppb	14:38:24
3	B 249.677†	301.8	0.7	0.0330 µg/L	0.0330 ppb	14:38:24
3	Ba 233.527†	-18.3	-0.1	-0.0015 µg/L	-0.0015 ppb	14:38:24
3	Be 313.107†	-3235.5	-221.4	-0.1417 µg/L	-0.1417 ppb	14:38:04
3	Cd 226.502†	-125.7	14.1	0.3797 µg/L	0.3797 ppb	14:38:24
3	Co 228.616†	-17.4	-12.1	-0.5874 µg/L	-0.5874 ppb	14:38:24
3	Cr 267.716†	-27.8	4.8	0.1012 µg/L	0.1012 ppb	14:38:24
3	Cu 324.752†	2549.5	-24.7	-0.1698 µg/L	-0.1698 ppb	14:38:04
3	Mn 257.610†	-128.0	110.5	0.3730 µg/L	0.3730 ppb	14:38:24
3	Mo 202.031†	-2.4	4.5	0.4600 µg/L	0.4600 ppb	14:38:24
3	Ni 231.604†	298.1	-12.9	-0.6896 µg/L	-0.6896 ppb	14:38:24
3	P 214.914†	30.3	8.3	17.524 µg/L	17.524 ppb	14:38:24
3	Pb 220.353†	93.4	-1.4	-0.3671 µg/L	-0.3671 ppb	14:38:24
3	S 181.975 Axial†	10.7	-3.3	-14.119 µg/L	-14.119 ppb	14:38:24
3	Sb 206.836†	25.9	5.3	5.1059 µg/L	5.1059 ppb	14:38:24
3	Se 196.026†	21.1	4.9	7.4740 µg/L	7.4740 ppb	14:38:24
3	SiO2†	1398.3	33.7	7.1082 µg/L	7.1082 ppb	14:38:04
3	Si 251.611†	389.1	69.0	5.5851 µg/L	5.5851 ppb	14:38:24
3	Sn 189.927†	-2.6	-5.6	-2.5017 µg/L	-2.5017 ppb	14:38:24
3	Ti 334.940†	201.5	68.0	0.1604 µg/L	0.1604 ppb	14:38:04
3	Tl 190.801†	-22.6	0.6	0.8906 µg/L	0.8906 ppb	14:38:24
3	U 409.014†	-42.7	1.6	0.1376 µg/L	0.1376 ppb	14:38:04
3	V 292.402†	-19.7	12.6	0.1334 µg/L	0.1334 ppb	14:38:04
3	Zn 213.857†	479.6	-46.1	-1.1527 µg/L	-1.1527 ppb	14:38:24

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2062383.5	100.88 %	0.530			0.53%
Sc RADIAL	58029.1	100.0 %	0.36			0.36%
Y 371.029	1407068.6	100.15 %	0.547			0.55%
Ag 328.068†	-81.5	-0.6362 µg/L	0.05495	-0.6362 ppb	0.05495	8.64%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	14.1	10.386 µg/L	22.0163	10.386 ppb	22.0163	211.98%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-2.6	-4.9435 µg/L	2.55202	-4.9435 ppb	2.55202	51.62%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	7.4	0.3149 µg/L	0.72842	0.3149 ppb	0.72842	231.30%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-1.3	-0.0333 µg/L	0.02778	-0.0333 ppb	0.02778	83.44%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-270.9	-0.1735 µg/L	0.03838	-0.1735 ppb	0.03838	22.13%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.3	-0.3045 µg/L	3.05549	-0.3045 ppb	3.05549	>999.9%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	8.1	0.2178 µg/L	0.15249	0.2178 ppb	0.15249	70.00%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-11.5	-0.5565 µg/L	0.07995	-0.5565 ppb	0.07995	14.37%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	4.4	0.0926 µg/L	0.03542	0.0926 ppb	0.03542	38.24%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-27.8	-0.1888 µg/L	0.09016	-0.1888 ppb	0.09016	47.75%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.5	12.554 µg/L	13.6440	12.554 ppb	13.6440	108.68%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-10.3	-7.2494 µg/L	2.18143	-7.2494 ppb	2.18143	30.09%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-1.2	-11.209 µg/L	21.4662	-11.209 ppb	21.4662	191.51%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	107.0	0.3638 µg/L	0.01328	0.3638 ppb	0.01328	3.65%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	4.8	0.4963 µg/L	0.49503	0.4963 ppb	0.49503	99.75%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-61.6	-20.002 µg/L	15.7030	-20.002 ppb	15.7030	78.51%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-16.1	-0.8580 µg/L	0.22140	-0.8580 ppb	0.22140	25.80%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	10.7	22.644 µg/L	5.2574	22.644 ppb	5.2574	23.22%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-1.7	-0.4511 µg/L	0.39943	-0.4511 ppb	0.39943	88.55%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-0.3	-1.5038 µg/L	11.34067	-1.5038 ppb	11.34067	754.11%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	5.9	5.6074 µg/L	0.57911	5.6074 ppb	0.57911	10.33%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	3.9	5.9755 µg/L	1.94279	5.9755 ppb	1.94279	32.51%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	47.5	10.010 µg/L	3.5363	10.010 ppb	3.5363	35.33%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	58.0	4.6979 µg/L	0.84387	4.6979 ppb	0.84387	17.96%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-6.1	-2.7134 µg/L	0.25037	-2.7134 ppb	0.25037	9.23%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	24.2	0.2447 µg/L	0.13641	0.2447 ppb	0.13641	55.75%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	155.5	0.3679 µg/L	0.18015	0.3679 ppb	0.18015	48.97%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-0.9	-1.1879 µg/L	1.81228	-1.1879 ppb	1.81228	152.57%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	47.1	4.0949 µg/L	6.39485	4.0949 ppb	6.39485	156.17%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	11.4	0.1266 µg/L	0.08423	0.1266 ppb	0.08423	66.50%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-32.5	-0.8095 µg/L	0.30974	-0.8095 ppb	0.30974	38.26%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

Sequence No.: 14

Sample ID: 245797011|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 317

Date Collected: 2/17/2010 14:38:32

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797011|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58475.3	58475.3	101 %		14:39:09
1	Al 396.153Radial†	62929.2	62481.6	45933 µg/L	45933 ppb	14:39:09
1	Ca 317.933Radial†	23895.2	23521.1	21785 µg/L	21785 ppb	14:39:09
1	Fe 238.204 Radial†	8445.7	8365.3	71869 µg/L	71869 ppb	14:39:29
1	K 766.490 Radial†	14209.2	13926.1	9796.3 µg/L	9796.3 ppb	14:39:09
1	Mg 279.077 IEC†	1073.0	1051.5	9820.1 µg/L	9820.1 ppb	14:39:29
1	Na 589.592 Radial†	1681.6	1102.8	358.02 µg/L	358.02 ppb	14:39:09
1	Sr 421.552†	17591.9	17427.1	176.22 µg/L	176.22 ppb	14:39:09
1	Sc 361.383	2035488.5	2035488.5	99.564 %		14:40:29
1	Y 371.029	1412933.9	1412933.9	100.57 %		14:40:29
1	Ag 328.068†	-1275.7	-757.7	-0.5288 µg/L	-0.5288 ppb	14:40:34
1	As 188.979†	8.3	6.9	16.300 µg/L	16.300 ppb	14:40:54
1	B 249.677†	1000.9	708.5	-6.6507 µg/L	-6.6507 ppb	14:40:34
1	Ba 233.527†	28404.5	28546.8	734.05 µg/L	734.05 ppb	14:40:34
1	Be 313.107†	27913.8	31003.6	19.051 µg/L	19.051 ppb	14:40:34
1	Cd 226.502†	321.4	460.8	4.3687 µg/L	4.3687 ppb	14:40:54
1	Co 228.616†	850.4	859.2	37.279 µg/L	37.279 ppb	14:40:54
1	Cr 267.716†	2679.9	2723.8	57.995 µg/L	57.995 ppb	14:40:54
1	Cu 324.752†	137511.3	135575.7	939.03 µg/L	939.03 ppb	14:40:34
1	Mn 257.610†	748110.0	751621.6	2550.6 µg/L	2550.6 ppb	14:40:29
1	Mo 202.031†	19.6	26.6	5.4644 µg/L	5.4644 ppb	14:40:54
1	Ni 231.604†	1140.8	839.1	45.690 µg/L	45.690 ppb	14:40:54
1	P 214.914†	830.2	812.3	1570.1 µg/L	1570.1 ppb	14:40:54
1	Pb 220.353†	3144.0	3064.2	792.70 µg/L	792.70 ppb	14:40:54
1	S 181.975 Axial†	375.1	362.9	1564.4 µg/L	1564.4 ppb	14:40:54
1	Sb 206.836†	47.7	27.8	24.049 µg/L	24.049 ppb	14:40:54
1	Se 196.026†	-22.4	-38.4	123.12 µg/L	123.12 ppb	14:40:54
1	SiO2†	290231.6	290157.7	61183 µg/L	61183 ppb	14:40:29
1	Si 251.611†	349971.3	351188.9	28432 µg/L	28432 ppb	14:40:29
1	Sn 189.927†	9.8	6.8	-3.5928 µg/L	-3.5928 ppb	14:40:54
1	Ti 334.940†	875182.6	878883.3	2074.1 µg/L	2074.1 ppb	14:40:29
1	Tl 190.801†	-49.1	-26.4	3.9011 µg/L	3.9011 ppb	14:40:54
1	U 409.014†	3591.3	3650.7	306.26 µg/L	306.26 ppb	14:40:34
1	V 292.402†	12766.9	12854.9	141.25 µg/L	141.25 ppb	14:40:34
1	Zn 213.857†	18619.7	18182.4	449.97 µg/L	449.97 ppb	14:40:34
2	Sc RADIAL	59131.8	59131.8	102 %		14:39:34
2	Al 396.153Radial†	63786.1	62629.2	46042 µg/L	46042 ppb	14:39:34
2	Ca 317.933Radial†	24039.8	23399.7	21673 µg/L	21673 ppb	14:39:34
2	Fe 238.204 Radial†	8376.1	8204.0	70483 µg/L	70483 ppb	14:39:54
2	K 766.490 Radial†	14296.9	13855.6	9746.7 µg/L	9746.7 ppb	14:39:34
2	Mg 279.077 IEC†	1068.8	1035.6	9672.0 µg/L	9672.0 ppb	14:39:54
2	Na 589.592 Radial†	1661.5	1064.7	345.63 µg/L	345.63 ppb	14:39:34
2	Sr 421.552†	17767.9	17405.9	176.00 µg/L	176.00 ppb	14:39:34
2	Sc 361.383	2050019.6	2050019.6	100.27 %		14:41:01
2	Y 371.029	1421731.8	1421731.8	101.19 %		14:41:01
2	Ag 328.068†	-1348.0	-820.7	-1.1250 µg/L	-1.1250 ppb	14:41:06
2	As 188.979†	18.5	16.9	35.544 µg/L	35.544 ppb	14:41:27
2	B 249.677†	1012.0	712.4	-5.7592 µg/L	-5.7592 ppb	14:41:06
2	Ba 233.527†	28309.8	28250.2	726.42 µg/L	726.42 ppb	14:41:06
2	Be 313.107†	27774.3	30665.7	18.834 µg/L	18.834 ppb	14:41:06
2	Cd 226.502†	304.9	442.1	4.0201 µg/L	4.0201 ppb	14:41:27
2	Co 228.616†	848.5	851.2	36.892 µg/L	36.892 ppb	14:41:27
2	Cr 267.716†	2669.1	2694.0	57.360 µg/L	57.360 ppb	14:41:27
2	Cu 324.752†	136514.8	133603.0	925.32 µg/L	925.32 ppb	14:41:06
2	Mn 257.610†	754954.8	753121.6	2555.5 µg/L	2555.5 ppb	14:41:01
2	Mo 202.031†	18.4	25.2	5.2736 µg/L	5.2736 ppb	14:41:27
2	Ni 231.604†	1138.2	828.3	45.099 µg/L	45.099 ppb	14:41:27
2	P 214.914†	827.9	804.0	1555.2 µg/L	1555.2 ppb	14:41:27
2	Pb 220.353†	3150.6	3048.5	788.71 µg/L	788.71 ppb	14:41:27

2	S 181.975 Axial†	369.8	355.0	1530.2 µg/L	1530.2 ppb	14:41:27
2	Sb 206.836†	50.3	30.0	26.192 µg/L	26.192 ppb	14:41:27
2	Se 196.026†	-25.2	-41.0	115.46 µg/L	115.46 ppb	14:41:27
2	SiO2†	292661.6	290514.8	61258 µg/L	61258 ppb	14:41:01
2	Si 251.611†	353054.6	351772.2	28479 µg/L	28479 ppb	14:41:01
2	Sn 189.927†	4.0	0.9	-6.0829 µg/L	-6.0829 ppb	14:41:27
2	Ti 334.940†	882009.6	879460.9	2075.5 µg/L	2075.5 ppb	14:41:01
2	Tl 190.801†	-37.2	-14.2	20.738 µg/L	20.738 ppb	14:41:27
2	U 409.014†	3574.6	3608.5	302.79 µg/L	302.79 ppb	14:41:06
2	V 292.402†	12624.4	12621.8	138.68 µg/L	138.68 ppb	14:41:06
2	Zn 213.857†	18508.8	17939.2	443.98 µg/L	443.98 ppb	14:41:06
3	Sc RADIAL	59373.5	59373.5	102 %		14:39:59
3	Al 396.153Radial†	63630.1	62221.9	45742 µg/L	45742 ppb	14:39:59
3	Ca 317.933Radial†	23930.5	23196.9	21485 µg/L	21485 ppb	14:39:59
3	Fe 238.204 Radial†	8433.4	8226.5	70677 µg/L	70677 ppb	14:40:20
3	K 766.490 Radial†	14287.4	13789.1	9699.9 µg/L	9699.9 ppb	14:39:59
3	Mg 279.077 IEC†	1072.5	1035.0	9665.4 µg/L	9665.4 ppb	14:40:20
3	Na 589.592 Radial†	1671.6	1067.9	346.67 µg/L	346.67 ppb	14:39:59
3	Sr 421.552†	17711.4	17279.8	174.73 µg/L	174.73 ppb	14:39:59
3	Sc 361.383	2039294.4	2039294.4	99.750 %		14:41:34
3	Y 371.029	1414233.1	1414233.1	100.66 %		14:41:34
3	Ag 328.068†	-1254.4	-733.9	-0.4457 µg/L	-0.4457 ppb	14:41:39
3	As 188.979†	11.5	10.1	22.392 µg/L	22.392 ppb	14:41:59
3	B 249.677†	996.4	702.1	-6.3099 µg/L	-6.3099 ppb	14:41:39
3	Ba 233.527†	27859.7	27947.4	718.64 µg/L	718.64 ppb	14:41:39
3	Be 313.107†	27205.3	30241.0	18.567 µg/L	18.567 ppb	14:41:39
3	Cd 226.502†	287.2	425.9	3.5587 µg/L	3.5587 ppb	14:41:59
3	Co 228.616†	821.6	828.6	35.824 µg/L	35.824 ppb	14:41:59
3	Cr 267.716†	2575.9	2614.6	55.670 µg/L	55.670 ppb	14:41:59
3	Cu 324.752†	134620.1	132419.5	917.23 µg/L	917.23 ppb	14:41:39
3	Mn 257.610†	746182.2	748286.7	2539.2 µg/L	2539.2 ppb	14:41:34
3	Mo 202.031†	19.9	26.8	5.4402 µg/L	5.4402 ppb	14:41:59
3	Ni 231.604†	1100.6	796.6	43.410 µg/L	43.410 ppb	14:41:59
3	P 214.914†	806.8	787.3	1520.5 µg/L	1520.5 ppb	14:41:59
3	Pb 220.353†	3082.9	2997.1	775.38 µg/L	775.38 ppb	14:41:59
3	S 181.975 Axial†	366.1	353.2	1522.5 µg/L	1522.5 ppb	14:41:59
3	Sb 206.836†	47.7	27.6	23.970 µg/L	23.970 ppb	14:41:59
3	Se 196.026†	-17.4	-33.3	127.85 µg/L	127.85 ppb	14:41:59
3	SiO2†	289780.9	289161.8	60973 µg/L	60973 ppb	14:41:34
3	Si 251.611†	349521.7	350082.1	28342 µg/L	28342 ppb	14:41:34
3	Sn 189.927†	5.6	2.5	-5.3976 µg/L	-5.3976 ppb	14:41:59
3	Ti 334.940†	872247.7	874300.5	2063.3 µg/L	2063.3 ppb	14:41:34
3	Tl 190.801†	-48.4	-25.6	4.7109 µg/L	4.7109 ppb	14:41:59
3	U 409.014†	3494.2	3546.6	297.39 µg/L	297.39 ppb	14:41:39
3	V 292.402†	12380.3	12443.4	136.86 µg/L	136.86 ppb	14:41:39
3	Zn 213.857†	18338.0	17865.1	442.13 µg/L	442.13 ppb	14:41:39

Mean Data: 245797011|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	2041600.8	99.863 %		0.3686			0.37%
Sc RADIAL	58993.5	102 %		0.8			0.79%
Y 371.029	1416299.6	100.81 %		0.338			0.34%
Ag 328.068†	-770.7	-0.6998 µg/L		0.37053	-0.6998 ppb	0.37053	52.95%
Al 396.153Radial†	62444.2	45906 µg/L		151.6	45906 ppb	151.6	0.33%
As 188.979†	11.3	24.745 µg/L		9.8356	24.745 ppb	9.8356	39.75%
B 249.677†	707.7	-6.2400 µg/L		0.44984	-6.2400 ppb	0.44984	7.21%
Ba 233.527†	28248.1	726.37 µg/L		7.708	726.37 ppb	7.708	1.06%
Be 313.107†	30636.8	18.817 µg/L		0.2424	18.817 ppb	0.2424	1.29%
Ca 317.933Radial†	23372.6	21648 µg/L		151.7	21648 ppb	151.7	0.70%
Cd 226.502†	442.9	3.9825 µg/L		0.40630	3.9825 ppb	0.40630	10.20%
Co 228.616†	846.3	36.665 µg/L		0.7537	36.665 ppb	0.7537	2.06%
Cr 267.716†	2677.4	57.008 µg/L		1.2018	57.008 ppb	1.2018	2.11%
Cu 324.752†	133866.0	927.19 µg/L		11.017	927.19 ppb	11.017	1.19%
Fe 238.204 Radial†	8265.3	71010 µg/L		750.7	71010 ppb	750.7	1.06%
K 766.490 Radial†	13857.0	9747.6 µg/L		48.18	9747.6 ppb	48.18	0.49%
Mg 279.077 IEC†	1040.7	9719.1 µg/L		87.48	9719.1 ppb	87.48	0.90%
Mn 257.610†	751009.9	2548.4 µg/L		8.38	2548.4 ppb	8.38	0.33%
Mo 202.031†	26.2	5.3927 µg/L		0.10387	5.3927 ppb	0.10387	1.93%
Na 589.592 Radial†	1078.5	350.11 µg/L		6.874	350.11 ppb	6.874	1.96%

Ni 231.604†	821.3	44.733 µg/L	1.1836	44.733 ppb	1.1836	2.65%
P 214.914†	801.2	1548.6 µg/L	25.42	1548.6 ppb	25.42	1.64%
Pb 220.353†	3036.6	785.60 µg/L	9.068	785.60 ppb	9.068	1.15%
S 181.975 Axial†	357.0	1539.0 µg/L	22.34	1539.0 ppb	22.34	1.45%
Sb 206.836†	28.4	24.737 µg/L	1.2609	24.737 ppb	1.2609	5.10%
Se 196.026†	-37.6	122.14 µg/L	6.250	122.14 ppb	6.250	5.12%
SiO2†	289944.7	61138 µg/L	147.9	61138 ppb	147.9	0.24%
Si 251.611†	351014.4	28418 µg/L	69.5	28418 ppb	69.5	0.24%
Sn 189.927†	3.4	-5.0244 µg/L	1.28631	-5.0244 ppb	1.28631	25.60%
Sr 421.552†	17370.9	175.65 µg/L	0.806	175.65 ppb	0.806	0.46%
Ti 334.940†	877548.2	2071.0 µg/L	6.67	2071.0 ppb	6.67	0.32%
Tl 190.801†	-22.1	9.7832 µg/L	9.49542	9.7832 ppb	9.49542	97.06%
U 409.014†	3601.9	302.14 µg/L	4.471	302.14 ppb	4.471	1.48%
V 292.402†	12640.0	138.93 µg/L	2.206	138.93 ppb	2.206	1.59%
Zn 213.857†	17995.6	445.36 µg/L	4.100	445.36 ppb	4.100	0.92%

Sequence No.: 15

Sample ID: 245797012|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 318

Date Collected: 2/17/2010 14:42:08

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797012|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58495.7	58495.7	101 %		14:42:40
1	Al 396.153Radial†	45667.1	45332.7	33326 µg/L	33326 ppb	14:42:40
1	Ca 317.933Radial†	12506.2	12213.0	11312 µg/L	11312 ppb	14:43:00
1	Fe 238.204 Radial†	10467.7	10368.6	89081 µg/L	89081 ppb	14:43:00
1	K 766.490 Radial†	8325.4	8083.4	5686.2 µg/L	5686.2 ppb	14:42:40
1	Mg 279.077 IEC†	900.0	879.5	8182.8 µg/L	8182.8 ppb	14:43:00
1	Na 589.592 Radial†	5888.8	5276.2	1713.0 µg/L	1713.0 ppb	14:42:40
1	Sr 421.552†	10156.0	10043.6	101.55 µg/L	101.55 ppb	14:42:40
1	Sc 361.383	2072427.9	2072427.9	101.37 %		14:44:00
1	Y 371.029	1466686.3	1466686.3	104.39 %		14:44:00
1	Ag 328.068†	-1632.8	-1087.1	-2.4285 µg/L	-2.4285 ppb	14:44:05
1	As 188.979†	10.4	8.1	21.437 µg/L	21.437 ppb	14:44:25
1	B 249.677†	849.2	541.0	-22.605 µg/L	-22.605 ppb	14:44:05
1	Ba 233.527†	21973.9	21694.7	557.80 µg/L	557.80 ppb	14:44:05
1	Be 313.107†	7024.1	9896.7	5.8809 µg/L	5.8809 ppb	14:44:05
1	Cd 226.502†	104.7	241.3	-3.3933 µg/L	-3.3933 ppb	14:44:25
1	Co 228.616†	1945.6	1924.3	90.713 µg/L	90.713 ppb	14:44:25
1	Cr 267.716†	11643.8	11518.6	244.94 µg/L	244.94 ppb	14:44:05
1	Cu 324.752†	9191.9	6530.1	57.129 µg/L	57.129 ppb	14:44:05
1	Mn 257.610†	557603.8	550299.0	1872.2 µg/L	1872.2 ppb	14:44:00
1	Mo 202.031†	38.2	44.6	7.9697 µg/L	7.9697 ppb	14:44:25
1	Ni 231.604†	3264.2	2913.3	156.61 µg/L	156.61 ppb	14:44:25
1	P 214.914†	215.2	190.7	334.86 µg/L	334.86 ppb	14:44:25
1	Pb 220.353†	267.0	169.9	42.595 µg/L	42.595 ppb	14:44:25
1	S 181.975 Axial†	60.6	46.0	198.34 µg/L	198.34 ppb	14:44:25
1	Sb 206.836†	30.7	10.1	5.9914 µg/L	5.9914 ppb	14:44:25
1	Se 196.026†	-26.0	-41.5	169.70 µg/L	169.70 ppb	14:44:25
1	SiO2†	257059.6	252238.5	53187 µg/L	53187 ppb	14:44:00
1	Si 251.611†	309850.5	305345.4	24720 µg/L	24720 ppb	14:44:00
1	Sn 189.927†	10.9	7.6	-5.1851 µg/L	-5.1851 ppb	14:44:25
1	Ti 334.940†	510287.0	503255.0	1187.4 µg/L	1187.4 ppb	14:44:00
1	Tl 190.801†	-42.9	-19.4	4.7946 µg/L	4.7946 ppb	14:44:25
1	U 409.014†	-1715.0	-1648.1	-156.44 µg/L	-156.44 ppb	14:44:00
1	V 292.402†	6938.2	6876.4	81.708 µg/L	81.708 ppb	14:44:05
1	Zn 213.857†	16886.1	16138.9	398.97 µg/L	398.97 ppb	14:44:05
2	Sc RADIAL	58819.3	58819.3	101 %		14:43:05
2	Al 396.153Radial†	45698.3	45114.2	33166 µg/L	33166 ppb	14:43:05
2	Ca 317.933Radial†	12341.9	11982.5	11098 µg/L	11098 ppb	14:43:25
2	Fe 238.204 Radial†	10283.9	10130.1	87032 µg/L	87032 ppb	14:43:25
2	K 766.490 Radial†	8252.4	7965.9	5603.6 µg/L	5603.6 ppb	14:43:05
2	Mg 279.077 IEC†	892.9	867.6	8073.1 µg/L	8073.1 ppb	14:43:25
2	Na 589.592 Radial†	5905.5	5260.9	1707.9 µg/L	1707.9 ppb	14:43:05
2	Sr 421.552†	10173.3	10004.8	101.17 µg/L	101.17 ppb	14:43:05
2	Sc 361.383	2065696.1	2065696.1	101.04 %		14:44:33
2	Y 371.029	1461587.5	1461587.5	104.03 %		14:44:33
2	Ag 328.068†	-1691.9	-1150.8	-3.0503 µg/L	-3.0503 ppb	14:44:38
2	As 188.979†	9.9	8.3	20.424 µg/L	20.424 ppb	14:44:58
2	B 249.677†	870.9	565.1	-20.486 µg/L	-20.486 ppb	14:44:38
2	Ba 233.527†	22085.3	21875.6	562.45 µg/L	562.45 ppb	14:44:38
2	Be 313.107†	6997.2	9892.6	5.8798 µg/L	5.8798 ppb	14:44:38
2	Cd 226.502†	94.3	231.3	-3.4326 µg/L	-3.4326 ppb	14:44:58
2	Co 228.616†	1928.9	1914.1	90.225 µg/L	90.225 ppb	14:44:58
2	Cr 267.716†	11672.3	11584.2	246.34 µg/L	246.34 ppb	14:44:38
2	Cu 324.752†	9204.4	6571.9	57.132 µg/L	57.132 ppb	14:44:38
2	Mn 257.610†	553115.0	547649.1	1863.0 µg/L	1863.0 ppb	14:44:33
2	Mo 202.031†	31.6	38.1	7.2295 µg/L	7.2295 ppb	14:44:58
2	Ni 231.604†	3216.3	2876.4	154.62 µg/L	154.62 ppb	14:44:58
2	P 214.914†	211.9	188.2	331.08 µg/L	331.08 ppb	14:44:58
2	Pb 220.353†	258.8	162.6	40.767 µg/L	40.767 ppb	14:44:58

2	S 181.975 Axial†	60.7	46.3	199.43 µg/L	199.43 ppb	14:44:58
2	Sb 206.836†	35.5	15.0	10.644 µg/L	10.644 ppb	14:44:58
2	Se 196.026†	-34.9	-50.4	150.74 µg/L	150.74 ppb	14:44:58
2	SiO2†	255655.7	251675.5	53069 µg/L	53069 ppb	14:44:33
2	Si 251.611†	307943.1	304453.8	24648 µg/L	24648 ppb	14:44:33
2	Sn 189.927†	9.1	5.9	-5.7399 µg/L	-5.7399 ppb	14:44:58
2	Ti 334.940†	506934.1	501577.2	1183.5 µg/L	1183.5 ppb	14:44:33
2	Tl 190.801†	-46.8	-23.4	-1.0804 µg/L	-1.0804 ppb	14:44:58
2	U 409.014†	-1582.5	-1522.4	-145.21 µg/L	-145.21 ppb	14:44:33
2	V 292.402†	7005.3	6965.2	82.389 µg/L	82.389 ppb	14:44:38
2	Zn 213.857†	16910.8	16217.6	401.06 µg/L	401.06 ppb	14:44:38
3	Sc RADIAL	58826.2	58826.2	101 %		14:43:30
3	Al 396.153Radial†	45572.3	44984.7	33070 µg/L	33070 ppb	14:43:30
3	Ca 317.933Radial†	12335.8	11975.1	11091 µg/L	11091 ppb	14:43:50
3	Fe 238.204 Radial†	10279.1	10124.1	86981 µg/L	86981 ppb	14:43:50
3	K 766.490 Radial†	8308.0	8019.9	5641.5 µg/L	5641.5 ppb	14:43:30
3	Mg 279.077 IEC†	888.6	863.3	8032.3 µg/L	8032.3 ppb	14:43:50
3	Na 589.592 Radial†	5892.3	5247.2	1703.4 µg/L	1703.4 ppb	14:43:30
3	Sr 421.552†	10163.3	9993.8	101.05 µg/L	101.05 ppb	14:43:30
3	Sc 361.383	2083188.2	2083188.2	101.90 %		14:45:06
3	Y 371.029	1473350.3	1473350.3	104.87 %		14:45:06
3	Ag 328.068†	-1677.3	-1122.4	-2.8541 µg/L	-2.8541 ppb	14:45:11
3	As 188.979†	10.1	8.4	20.629 µg/L	20.629 ppb	14:45:31
3	B 249.677†	867.9	555.0	-20.915 µg/L	-20.915 ppb	14:45:11
3	Ba 233.527†	21401.9	21021.4	540.49 µg/L	540.49 ppb	14:45:11
3	Be 313.107†	6815.8	9656.4	5.7373 µg/L	5.7373 ppb	14:45:11
3	Cd 226.502†	75.5	212.1	-3.9564 µg/L	-3.9564 ppb	14:45:31
3	Co 228.616†	1817.4	1788.6	84.196 µg/L	84.196 ppb	14:45:31
3	Cr 267.716†	11247.8	11070.5	235.42 µg/L	235.42 ppb	14:45:11
3	Cu 324.752†	8981.3	6276.5	55.100 µg/L	55.100 ppb	14:45:11
3	Mn 257.610†	548287.3	538314.8	1831.4 µg/L	1831.4 ppb	14:45:06
3	Mo 202.031†	29.6	36.0	7.0056 µg/L	7.0056 ppb	14:45:31
3	Ni 231.604†	3052.1	2688.5	144.59 µg/L	144.59 ppb	14:45:31
3	P 214.914†	199.0	173.7	300.83 µg/L	300.83 ppb	14:45:31
3	Pb 220.353†	251.6	153.4	38.385 µg/L	38.385 ppb	14:45:31
3	S 181.975 Axial†	61.4	46.4	200.11 µg/L	200.11 ppb	14:45:31
3	Sb 206.836†	31.3	10.6	6.5728 µg/L	6.5728 ppb	14:45:31
3	Se 196.026†	-30.1	-45.4	158.26 µg/L	158.26 ppb	14:45:31
3	SiO2†	253788.2	247718.2	52234 µg/L	52234 ppb	14:45:06
3	Si 251.611†	305816.3	299807.5	24272 µg/L	24272 ppb	14:45:06
3	Sn 189.927†	3.2	0.1	-8.3538 µg/L	-8.3538 ppb	14:45:31
3	Ti 334.940†	501394.8	491928.3	1160.7 µg/L	1160.7 ppb	14:45:06
3	Tl 190.801†	-34.4	-10.8	16.136 µg/L	16.136 ppb	14:45:31
3	U 409.014†	-1565.6	-1492.8	-142.62 µg/L	-142.62 ppb	14:45:06
3	V 292.402†	6726.3	6633.1	78.941 µg/L	78.941 ppb	14:45:11
3	Zn 213.857†	16467.3	15641.8	386.68 µg/L	386.68 ppb	14:45:11

Mean Data: 245797012|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2073770.7	101.44 %	0.432			0.43%
Sc RADIAL	58713.7	101 %	0.3			0.32%
Y 371.029	1467208.0	104.43 %	0.420			0.40%
Ag 328.068†	-1120.1	-2.7776 µg/L	0.31787	-2.7776 ppb	0.31787	11.44%
Al 396.153Radial†	45143.8	33187 µg/L	129.3	33187 ppb	129.3	0.39%
As 188.979†	8.5	20.830 µg/L	0.5359	20.830 ppb	0.5359	2.57%
B 249.677†	553.7	-21.335 µg/L	1.1203	-21.335 ppb	1.1203	5.25%
Ba 233.527†	21530.6	553.58 µg/L	11.574	553.58 ppb	11.574	2.09%
Be 313.107†	9815.2	5.8326 µg/L	0.08257	5.8326 ppb	0.08257	1.42%
Ca 317.933Radial†	12056.9	11167 µg/L	125.2	11167 ppb	125.2	1.12%
Cd 226.502†	228.2	-3.5941 µg/L	0.31438	-3.5941 ppb	0.31438	8.75%
Co 228.616†	1875.6	88.378 µg/L	3.6301	88.378 ppb	3.6301	4.11%
Cr 267.716†	11391.1	242.23 µg/L	5.944	242.23 ppb	5.944	2.45%
Cu 324.752†	6459.5	56.454 µg/L	1.1723	56.454 ppb	1.1723	2.08%
Fe 238.204 Radial†	10207.6	87698 µg/L	1198.2	87698 ppb	1198.2	1.37%
K 766.490 Radial†	8023.1	5643.8 µg/L	41.34	5643.8 ppb	41.34	0.73%
Mg 279.077 IEC†	870.2	8096.1 µg/L	77.85	8096.1 ppb	77.85	0.96%
Mn 257.610†	545421.0	1855.6 µg/L	21.39	1855.6 ppb	21.39	1.15%
Mo 202.031†	39.5	7.4016 µg/L	0.50457	7.4016 ppb	0.50457	6.82%
Na 589.592 Radial†	5261.6	1708.1 µg/L	4.77	1708.1 ppb	4.77	0.28%

Ni 231.604†	2826.0	151.94 µg/L	6.442	151.94 ppb	6.442	4.24%
P 214.914†	184.2	322.26 µg/L	18.654	322.26 ppb	18.654	5.79%
Pb 220.353†	162.0	40.582 µg/L	2.1110	40.582 ppb	2.1110	5.20%
S 181.975 Axial†	46.2	199.29 µg/L	0.893	199.29 ppb	0.893	0.45%
Sb 206.836†	11.9	7.7360 µg/L	2.53490	7.7360 ppb	2.53490	32.77%
Se 196.026†	-45.8	159.57 µg/L	9.548	159.57 ppb	9.548	5.98%
SiO2†	250544.1	52830 µg/L	519.4	52830 ppb	519.4	0.98%
Si 251.611†	303202.3	24547 µg/L	240.7	24547 ppb	240.7	0.98%
Sn 189.927†	4.5	-6.4262 µg/L	1.69217	-6.4262 ppb	1.69217	26.33%
Sr 421.552†	10014.0	101.26 µg/L	0.262	101.26 ppb	0.262	0.26%
Ti 334.940†	498920.1	1177.2 µg/L	14.43	1177.2 ppb	14.43	1.23%
Tl 190.801†	-17.9	6.6168 µg/L	8.75176	6.6168 ppb	8.75176	132.27%
U 409.014†	-1554.4	-148.09 µg/L	7.347	-148.09 ppb	7.347	4.96%
V 292.402†	6824.9	81.013 µg/L	1.8260	81.013 ppb	1.8260	2.25%
Zn 213.857†	15999.4	395.57 µg/L	7.769	395.57 ppb	7.769	1.96%



Sequence No.: 16

Sample ID: 245797013|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 319

Date Collected: 2/17/2010 14:45:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797013|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59227.4	59227.4	102 %		14:46:11
1	Al 396.153Radial†	62938.7	61697.8	45357 µg/L	45357 ppb	14:46:11
1	Ca 317.933Radial†	17403.5	16858.6	15615 µg/L	15615 ppb	14:46:11
1	Fe 238.204 Radial†	10761.6	10528.2	90452 µg/L	90452 ppb	14:46:31
1	K 766.490 Radial†	11321.1	10916.9	7679.5 µg/L	7679.5 ppb	14:46:11
1	Mg 279.077 IEC†	1026.3	992.3	9242.8 µg/L	9242.8 ppb	14:46:31
1	Na 589.592 Radial†	2319.2	1706.4	553.97 µg/L	553.97 ppb	14:46:11
1	Sr 421.552†	14529.3	14204.3	143.63 µg/L	143.63 ppb	14:46:11
1	Sc 361.383	2057555.6	2057555.6	100.64 %		14:47:31
1	Y 371.029	1440205.7	1440205.7	102.51 %		14:47:31
1	Ag 328.068†	-1695.3	-1160.8	-2.4432 µg/L	-2.4432 ppb	14:47:37
1	As 188.979†	11.2	9.6	22.929 µg/L	22.929 ppb	14:47:57
1	B 249.677†	853.5	551.3	-23.032 µg/L	-23.032 ppb	14:47:37
1	Ba 233.527†	25028.1	24886.0	639.97 µg/L	639.97 ppb	14:47:37
1	Be 313.107†	15214.4	18084.7	10.672 µg/L	10.672 ppb	14:47:37
1	Cd 226.502†	203.2	339.8	-0.9599 µg/L	-0.9599 ppb	14:47:57
1	Co 228.616†	818.0	817.8	34.672 µg/L	34.672 ppb	14:47:57
1	Cr 267.716†	6831.0	6819.5	145.08 µg/L	145.08 ppb	14:47:37
1	Cu 324.752†	41684.3	38880.2	279.00 µg/L	279.00 ppb	14:47:37
1	Mn 257.610†	751219.4	746652.6	2536.3 µg/L	2536.3 ppb	14:47:31
1	Mo 202.031†	32.7	39.3	7.4829 µg/L	7.4829 ppb	14:47:57
1	Ni 231.604†	1855.9	1537.2	83.216 µg/L	83.216 ppb	14:47:57
1	P 214.914†	411.1	386.9	727.36 µg/L	727.36 ppb	14:47:57
1	Pb 220.353†	922.6	823.2	212.14 µg/L	212.14 ppb	14:47:57
1	S 181.975 Axial†	148.4	133.7	576.31 µg/L	576.31 ppb	14:47:57
1	Sb 206.836†	44.2	23.8	19.806 µg/L	19.806 ppb	14:47:57
1	Se 196.026†	-30.7	-46.3	164.02 µg/L	164.02 ppb	14:47:57
1	SiO2†	255516.2	252537.9	53250 µg/L	53250 ppb	14:47:31
1	Si 251.611†	307844.7	305561.9	24738 µg/L	24738 ppb	14:47:31
1	Sn 189.927†	-15.9	-18.9	-17.046 µg/L	-17.046 ppb	14:47:57
1	Ti 334.940†	1008405.2	1001826.7	2364.3 µg/L	2364.3 ppb	14:47:31
1	Tl 190.801†	-46.5	-23.3	13.523 µg/L	13.523 ppb	14:47:57
1	U 409.014†	-60.2	-16.1	-14.926 µg/L	-14.926 ppb	14:47:31
1	V 292.402†	13939.0	13881.9	153.88 µg/L	153.88 ppb	14:47:37
1	Zn 213.857†	15996.8	15375.7	379.69 µg/L	379.69 ppb	14:47:37
2	Sc RADIAL	59299.1	59299.1	102 %		14:46:36
2	Al 396.153Radial†	63443.0	62116.8	45665 µg/L	45665 ppb	14:46:36
2	Ca 317.933Radial†	17440.9	16874.6	15629 µg/L	15629 ppb	14:46:36
2	Fe 238.204 Radial†	10717.5	10472.3	89971 µg/L	89971 ppb	14:46:56
2	K 766.490 Radial†	11362.7	10944.2	7698.6 µg/L	7698.6 ppb	14:46:36
2	Mg 279.077 IEC†	1024.5	989.3	9215.0 µg/L	9215.0 ppb	14:46:56
2	Na 589.592 Radial†	2332.8	1717.0	557.40 µg/L	557.40 ppb	14:46:36
2	Sr 421.552†	14606.9	14263.0	144.22 µg/L	144.22 ppb	14:46:36
2	Sc 361.383	2044198.0	2044198.0	99.990 %		14:48:04
2	Y 371.029	1431052.1	1431052.1	101.86 %		14:48:04
2	Ag 328.068†	-1712.0	-1188.5	-2.6918 µg/L	-2.6918 ppb	14:48:10
2	As 188.979†	8.3	6.8	17.442 µg/L	17.442 ppb	14:48:30
2	B 249.677†	827.8	531.1	-23.661 µg/L	-23.661 ppb	14:48:10
2	Ba 233.527†	24877.6	24898.1	640.28 µg/L	640.28 ppb	14:48:10
2	Be 313.107†	15176.0	18145.0	10.712 µg/L	10.712 ppb	14:48:10
2	Cd 226.502†	206.2	344.2	-0.7874 µg/L	-0.7874 ppb	14:48:30
2	Co 228.616†	814.0	819.1	34.739 µg/L	34.739 ppb	14:48:30
2	Cr 267.716†	6770.0	6802.8	144.73 µg/L	144.73 ppb	14:48:10
2	Cu 324.752†	41505.0	38971.5	279.56 µg/L	279.56 ppb	14:48:10
2	Mn 257.610†	744774.2	745084.1	2530.9 µg/L	2530.9 ppb	14:48:04
2	Mo 202.031†	32.2	39.1	7.4392 µg/L	7.4392 ppb	14:48:30
2	Ni 231.604†	1868.1	1561.5	84.508 µg/L	84.508 ppb	14:48:30
2	P 214.914†	410.0	388.5	731.20 µg/L	731.20 ppb	14:48:30
2	Pb 220.353†	941.3	847.9	218.57 µg/L	218.57 ppb	14:48:30

2	S 181.975 Axial†	154.0	140.2	604.47 µg/L	604.47 ppb	14:48:30
2	Sb 206.836†	41.7	21.6	17.695 µg/L	17.695 ppb	14:48:30
2	Se 196.026†	-33.1	-49.0	158.70 µg/L	158.70 ppb	14:48:30
2	SiO2†	253325.8	252006.2	53138 µg/L	53138 ppb	14:48:04
2	Si 251.611†	305520.6	305236.2	24711 µg/L	24711 ppb	14:48:04
2	Sn 189.927†	-18.9	-22.0	-18.371 µg/L	-18.371 ppb	14:48:30
2	Ti 334.940†	1001323.7	1001291.7	2363.0 µg/L	2363.0 ppb	14:48:04
2	Tl 190.801†	-44.8	-21.9	15.384 µg/L	15.384 ppb	14:48:30
2	U 409.014†	-44.4	-0.7	-13.521 µg/L	-13.521 ppb	14:48:04
2	V 292.402†	13828.3	13861.7	153.62 µg/L	153.62 ppb	14:48:10
2	Zn 213.857†	15897.2	15379.9	379.81 µg/L	379.81 ppb	14:48:10
3	Sc RADIAL	58955.5	58955.5	102 %		14:47:02
3	Al 396.153Radial†	63062.8	62104.3	45656 µg/L	45656 ppb	14:47:02
3	Ca 317.933Radial†	17299.8	16835.1	15593 µg/L	15593 ppb	14:47:02
3	Fe 238.204 Radial†	10736.3	10552.0	90656 µg/L	90656 ppb	14:47:22
3	K 766.490 Radial†	11364.7	11011.0	7745.6 µg/L	7745.6 ppb	14:47:02
3	Mg 279.077 IEC†	1022.9	993.6	9254.5 µg/L	9254.5 ppb	14:47:22
3	Na 589.592 Radial†	2332.0	1729.5	561.47 µg/L	561.47 ppb	14:47:02
3	Sr 421.552†	14489.1	14230.3	143.89 µg/L	143.89 ppb	14:47:02
3	Sc 361.383	2049174.4	2049174.4	100.23 %		14:48:37
3	Y 371.029	1432416.4	1432416.4	101.95 %		14:48:37
3	Ag 328.068†	-1777.8	-1250.0	-3.1224 µg/L	-3.1224 ppb	14:48:43
3	As 188.979†	10.8	9.3	22.266 µg/L	22.266 ppb	14:49:03
3	B 249.677†	865.5	566.7	-22.470 µg/L	-22.470 ppb	14:48:43
3	Ba 233.527†	25003.4	24963.1	641.95 µg/L	641.95 ppb	14:48:43
3	Be 313.107†	15105.2	18037.5	10.646 µg/L	10.646 ppb	14:48:43
3	Cd 226.502†	196.8	334.3	-1.1355 µg/L	-1.1355 ppb	14:49:03
3	Co 228.616†	787.8	791.0	33.394 µg/L	33.394 ppb	14:49:03
3	Cr 267.716†	6797.5	6813.9	144.96 µg/L	144.96 ppb	14:48:43
3	Cu 324.752†	41603.4	38968.9	279.64 µg/L	279.64 ppb	14:48:43
3	Mn 257.610†	743913.8	742416.9	2522.0 µg/L	2522.0 ppb	14:48:37
3	Mo 202.031†	33.5	40.3	7.5927 µg/L	7.5927 ppb	14:49:03
3	Ni 231.604†	1807.3	1496.3	81.033 µg/L	81.033 ppb	14:49:03
3	P 214.914†	389.9	367.4	686.10 µg/L	686.10 ppb	14:49:03
3	Pb 220.353†	918.5	822.9	212.06 µg/L	212.06 ppb	14:49:03
3	S 181.975 Axial†	145.2	131.1	564.95 µg/L	564.95 ppb	14:49:03
3	Sb 206.836†	42.7	22.5	18.555 µg/L	18.555 ppb	14:49:03
3	Se 196.026†	-34.2	-50.0	158.94 µg/L	158.94 ppb	14:49:03
3	SiO2†	253864.1	251928.0	53122 µg/L	53122 ppb	14:48:37
3	Si 251.611†	306001.7	304974.1	24690 µg/L	24690 ppb	14:48:37
3	Sn 189.927†	-14.6	-17.7	-16.536 µg/L	-16.536 ppb	14:49:03
3	Ti 334.940†	1000575.1	998112.9	2355.5 µg/L	2355.5 ppb	14:48:37
3	Tl 190.801†	-49.9	-26.8	8.5911 µg/L	8.5911 ppb	14:49:03
3	U 409.014†	52.5	96.1	-5.1942 µg/L	-5.1942 ppb	14:48:37
3	V 292.402†	13974.0	13973.5	154.86 µg/L	154.86 ppb	14:48:43
3	Zn 213.857†	16032.2	15476.0	382.20 µg/L	382.20 ppb	14:48:43

Mean Data: 245797013|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2050309.3	100.29 %	0.330			0.33%
Sc RADIAL	59160.7	102 %	0.3			0.31%
Y 371.029	1434558.1	102.11 %	0.351			0.34%
Ag 328.068†	-1199.8	-2.7525 µg/L	0.34364	-2.7525 ppb	0.34364	12.48%
Al 396.153Radial†	61973.0	45559 µg/L	175.2	45559 ppb	175.2	0.38%
As 188.979†	8.6	20.879 µg/L	2.9953	20.879 ppb	2.9953	14.35%
B 249.677†	549.7	-23.054 µg/L	0.5957	-23.054 ppb	0.5957	2.58%
Ba 233.527†	24915.8	640.73 µg/L	1.067	640.73 ppb	1.067	0.17%
Be 313.107†	18089.1	10.677 µg/L	0.0332	10.677 ppb	0.0332	0.31%
Ca 317.933Radial†	16856.1	15612 µg/L	18.4	15612 ppb	18.4	0.12%
Cd 226.502†	339.4	-0.9609 µg/L	0.17401	-0.9609 ppb	0.17401	18.11%
Co 228.616†	809.3	34.268 µg/L	0.7581	34.268 ppb	0.7581	2.21%
Cr 267.716†	6812.1	144.92 µg/L	0.181	144.92 ppb	0.181	0.12%
Cu 324.752†	38940.2	279.40 µg/L	0.347	279.40 ppb	0.347	0.12%
Fe 238.204 Radial†	10517.5	90359 µg/L	351.5	90359 ppb	351.5	0.39%
K 766.490 Radial†	10957.3	7707.9 µg/L	34.04	7707.9 ppb	34.04	0.44%
Mg 279.077 IEC†	991.7	9237.4 µg/L	20.31	9237.4 ppb	20.31	0.22%
Mn 257.610†	744717.9	2529.7 µg/L	7.22	2529.7 ppb	7.22	0.29%
Mo 202.031†	39.6	7.5049 µg/L	0.07909	7.5049 ppb	0.07909	1.05%
Na 589.592 Radial†	1717.7	557.61 µg/L	3.752	557.61 ppb	3.752	0.67%

Ni 231.604†	1531.7	82.919 µg/L	1.7562	82.919 ppb	1.7562	2.12%
P 214.914†	380.9	714.89 µg/L	25.005	714.89 ppb	25.005	3.50%
Pb 220.353†	831.3	214.25 µg/L	3.739	214.25 ppb	3.739	1.75%
S 181.975 Axial†	135.0	581.91 µg/L	20.345	581.91 ppb	20.345	3.50%
Sb 206.836†	22.6	18.685 µg/L	1.0618	18.685 ppb	1.0618	5.68%
Se 196.026†	-48.4	160.55 µg/L	3.008	160.55 ppb	3.008	1.87%
SiO2†	252157.4	53170 µg/L	70.0	53170 ppb	70.0	0.13%
Si 251.611†	305257.4	24713 µg/L	23.8	24713 ppb	23.8	0.10%
Sn 189.927†	-19.5	-17.318 µg/L	0.9469	-17.318 ppb	0.9469	5.47%
Sr 421.552†	14232.5	143.91 µg/L	0.297	143.91 ppb	0.297	0.21%
Ti 334.940†	1000410.4	2361.0 µg/L	4.74	2361.0 ppb	4.74	0.20%
Tl 190.801†	-24.0	12.500 µg/L	3.5104	12.500 ppb	3.5104	28.08%
U 409.014†	26.4	-11.214 µg/L	5.2602	-11.214 ppb	5.2602	46.91%
V 292.402†	13905.7	154.12 µg/L	0.654	154.12 ppb	0.654	0.42%
Zn 213.857†	15410.5	380.57 µg/L	1.416	380.57 ppb	1.416	0.37%

Sequence No.: 17

Sample ID: 245797014|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 320

Date Collected: 2/17/2010 14:49:11

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797014|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58869.4	58869.4	101 %		14:49:43
1	Al 396.153Radial†	52881.9	52158.0	38344 µg/L	38344 ppb	14:49:43
1	Ca 317.933Radial†	17323.7	16883.6	15638 µg/L	15638 ppb	14:49:43
1	Fe 238.204 Radial†	8239.7	8106.0	69642 µg/L	69642 ppb	14:50:03
1	K 766.490 Radial†	13917.4	13544.0	9527.5 µg/L	9527.5 ppb	14:49:43
1	Mg 279.077 IEC†	991.1	963.7	8995.9 µg/L	8995.9 ppb	14:50:03
1	Na 589.592 Radial†	1517.7	930.1	301.95 µg/L	301.95 ppb	14:49:43
1	Sr 421.552†	14595.1	14355.6	145.16 µg/L	145.16 ppb	14:49:43
1	Sc 361.383	2036800.9	2036800.9	99.628 %		14:51:03
1	Y 371.029	1409503.0	1409503.0	100.32 %		14:51:03
1	Ag 328.068†	-1404.8	-886.3	-1.7213 µg/L	-1.7213 ppb	14:51:08
1	As 188.979†	15.0	13.6	29.315 µg/L	29.315 ppb	14:51:28
1	B 249.677†	966.8	673.6	-7.0147 µg/L	-7.0147 ppb	14:51:08
1	Ba 233.527†	26943.1	27061.6	695.86 µg/L	695.86 ppb	14:51:08
1	Be 313.107†	11372.2	14382.2	8.4070 µg/L	8.4070 ppb	14:51:08
1	Cd 226.502†	201.4	340.1	1.3516 µg/L	1.3516 ppb	14:51:28
1	Co 228.616†	665.1	672.5	28.206 µg/L	28.206 ppb	14:51:28
1	Cr 267.716†	2383.4	2424.5	51.627 µg/L	51.627 ppb	14:51:28
1	Cu 324.752†	20128.6	17666.1	130.74 µg/L	130.74 ppb	14:51:08
1	Mn 257.610†	594538.4	596993.0	2027.5 µg/L	2027.5 ppb	14:51:03
1	Mo 202.031†	15.1	22.0	4.9151 µg/L	4.9151 ppb	14:51:28
1	Ni 231.604†	943.4	640.1	35.048 µg/L	35.048 ppb	14:51:28
1	P 214.914†	478.0	458.2	907.91 µg/L	907.91 ppb	14:51:28
1	Pb 220.353†	829.0	738.6	190.72 µg/L	190.72 ppb	14:51:28
1	S 181.975 Axial†	202.3	189.2	815.61 µg/L	815.61 ppb	14:51:28
1	Sb 206.836†	26.7	6.6	4.4482 µg/L	4.4482 ppb	14:51:28
1	Se 196.026†	-21.9	-37.9	120.26 µg/L	120.26 ppb	14:51:28
1	SiO2†	250828.7	250419.9	52804 µg/L	52804 ppb	14:51:03
1	Si 251.611†	302323.5	303136.8	24541 µg/L	24541 ppb	14:51:03
1	Sn 189.927†	-21.6	-24.8	-17.494 µg/L	-17.494 ppb	14:51:28
1	Ti 334.940†	883026.5	886190.1	2091.4 µg/L	2091.4 ppb	14:51:03
1	Tl 190.801†	-46.1	-23.4	5.5945 µg/L	5.5945 ppb	14:51:28
1	U 409.014†	1334.1	1382.7	109.65 µg/L	109.65 ppb	14:51:08
1	V 292.402†	12114.4	12191.6	133.93 µg/L	133.93 ppb	14:51:08
1	Zn 213.857†	10980.5	10502.6	259.02 µg/L	259.02 ppb	14:51:08
2	Sc RADIAL	58716.8	58716.8	101 %		14:50:08
2	Al 396.153Radial†	53303.1	52709.8	38749 µg/L	38749 ppb	14:50:08
2	Ca 317.933Radial†	17367.9	16971.7	15719 µg/L	15719 ppb	14:50:08
2	Fe 238.204 Radial†	8332.1	8218.6	70609 µg/L	70609 ppb	14:50:28
2	K 766.490 Radial†	14030.7	13691.6	9631.3 µg/L	9631.3 ppb	14:50:08
2	Mg 279.077 IEC†	1005.8	980.8	9155.5 µg/L	9155.5 ppb	14:50:28
2	Na 589.592 Radial†	1507.4	923.8	299.91 µg/L	299.91 ppb	14:50:08
2	Sr 421.552†	14673.6	14470.6	146.32 µg/L	146.32 ppb	14:50:08
2	Sc 361.383	2048516.4	2048516.4	100.20 %		14:51:35
2	Y 371.029	1415177.3	1415177.3	100.73 %		14:51:35
2	Ag 328.068†	-1404.1	-877.6	-1.5948 µg/L	-1.5948 ppb	14:51:40
2	As 188.979†	8.0	6.5	15.865 µg/L	15.865 ppb	14:52:01
2	B 249.677†	958.4	659.7	-8.1216 µg/L	-8.1216 ppb	14:51:40
2	Ba 233.527†	26957.5	26921.3	692.25 µg/L	692.25 ppb	14:51:40
2	Be 313.107†	11315.6	14260.4	8.3267 µg/L	8.3267 ppb	14:51:40
2	Cd 226.502†	190.4	328.0	0.9142 µg/L	0.9142 ppb	14:52:01
2	Co 228.616†	673.8	677.5	28.430 µg/L	28.430 ppb	14:52:01
2	Cr 267.716†	2388.6	2416.0	51.447 µg/L	51.447 ppb	14:52:01
2	Cu 324.752†	20131.2	17553.1	130.10 µg/L	130.10 ppb	14:51:40
2	Mn 257.610†	600298.8	599328.9	2035.5 µg/L	2035.5 ppb	14:51:35
2	Mo 202.031†	3.4	10.3	3.7405 µg/L	3.7405 ppb	14:52:01
2	Ni 231.604†	936.6	627.9	34.410 µg/L	34.410 ppb	14:52:01
2	P 214.914†	472.8	450.3	890.69 µg/L	890.69 ppb	14:52:01
2	Pb 220.353†	837.0	741.8	191.53 µg/L	191.53 ppb	14:52:01

2	S 181.975 Axial†	199.6	185.3	799.00 µg/L	799.00 ppb	14:52:01
2	Sb 206.836†	35.5	15.3	12.689 µg/L	12.689 ppb	14:52:01
2	Se 196.026†	-16.5	-32.3	131.16 µg/L	131.16 ppb	14:52:01
2	SiO2†	253027.6	251174.6	52963 µg/L	52963 ppb	14:51:35
2	Si 251.611†	304903.0	303975.7	24609 µg/L	24609 ppb	14:51:35
2	Sn 189.927†	-14.9	-18.0	-14.525 µg/L	-14.525 ppb	14:52:01
2	Ti 334.940†	890826.3	888905.3	2097.8 µg/L	2097.8 ppb	14:51:35
2	Tl 190.801†	-45.8	-22.7	6.6915 µg/L	6.6915 ppb	14:52:01
2	U 409.014†	1318.2	1359.2	107.47 µg/L	107.47 ppb	14:51:40
2	V 292.402†	12139.6	12147.3	133.58 µg/L	133.58 ppb	14:51:40
2	Zn 213.857†	10952.7	10411.9	256.70 µg/L	256.70 ppb	14:51:40
3	Sc RADIAL	58949.3	58949.3	102 %		14:50:33
3	Al 396.153Radial†	53735.2	52927.6	38910 µg/L	38910 ppb	14:50:33
3	Ca 317.933Radial†	17474.6	17009.1	15754 µg/L	15754 ppb	14:50:33
3	Fe 238.204 Radial†	8300.6	8155.0	70063 µg/L	70063 ppb	14:50:54
3	K 766.490 Radial†	14014.3	13620.8	9581.5 µg/L	9581.5 ppb	14:50:33
3	Mg 279.077 IEC†	1000.5	971.6	9069.4 µg/L	9069.4 ppb	14:50:54
3	Na 589.592 Radial†	1501.9	912.5	296.23 µg/L	296.23 ppb	14:50:33
3	Sr 421.552†	14771.9	14510.2	146.72 µg/L	146.72 ppb	14:50:33
3	Sc 361.383	2038638.5	2038638.5	99.718 %		14:52:08
3	Y 371.029	1410368.4	1410368.4	100.38 %		14:52:08
3	Ag 328.068†	-1434.8	-915.2	-1.9370 µg/L	-1.9370 ppb	14:52:13
3	As 188.979†	7.9	6.5	15.676 µg/L	15.676 ppb	14:52:33
3	B 249.677†	915.9	621.7	-9.4894 µg/L	-9.4894 ppb	14:52:13
3	Ba 233.527†	26383.0	26475.6	680.79 µg/L	680.79 ppb	14:52:13
3	Be 313.107†	11040.6	14039.4	8.1923 µg/L	8.1923 ppb	14:52:13
3	Cd 226.502†	185.6	324.1	0.8705 µg/L	0.8705 ppb	14:52:33
3	Co 228.616†	652.9	659.7	27.610 µg/L	27.610 ppb	14:52:33
3	Cr 267.716†	2305.4	2344.1	49.916 µg/L	49.916 ppb	14:52:33
3	Cu 324.752†	19748.4	17266.6	128.06 µg/L	128.06 ppb	14:52:13
3	Mn 257.610†	591485.2	593393.2	2015.4 µg/L	2015.4 ppb	14:52:08
3	Mo 202.031†	5.2	12.1	3.9046 µg/L	3.9046 ppb	14:52:33
3	Ni 231.604†	937.6	633.4	34.698 µg/L	34.698 ppb	14:52:33
3	P 214.914†	447.0	426.6	841.64 µg/L	841.64 ppb	14:52:33
3	Pb 220.353†	817.3	726.1	187.50 µg/L	187.50 ppb	14:52:33
3	S 181.975 Axial†	198.0	184.8	796.63 µg/L	796.63 ppb	14:52:33
3	Sb 206.836†	26.0	5.9	3.7605 µg/L	3.7605 ppb	14:52:33
3	Se 196.026†	-19.9	-35.9	124.37 µg/L	124.37 ppb	14:52:33
3	SiO2†	250054.9	249417.0	52592 µg/L	52592 ppb	14:52:08
3	Si 251.611†	301501.6	302039.1	24453 µg/L	24453 ppb	14:52:08
3	Sn 189.927†	-7.7	-10.8	-11.303 µg/L	-11.303 ppb	14:52:33
3	Ti 334.940†	878682.1	881034.5	2079.2 µg/L	2079.2 ppb	14:52:08
3	Tl 190.801†	-38.5	-15.7	16.169 µg/L	16.169 ppb	14:52:33
3	U 409.014†	1303.6	1351.0	106.82 µg/L	106.82 ppb	14:52:13
3	V 292.402†	11883.3	11948.9	131.47 µg/L	131.47 ppb	14:52:13
3	Zn 213.857†	10837.6	10349.3	255.16 µg/L	255.16 ppb	14:52:13

## Mean Data: 245797014|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2041318.6	99.849 %	0.3082			0.31%
Sc RADIAL	58845.2	101 %	0.2			0.20%
Y 371.029	1411682.9	100.48 %	0.218			0.22%
Ag 328.068†	-893.0	-1.7511 µg/L	0.17303	-1.7511 ppb	0.17303	9.88%
Al 396.153Radial†	52598.5	38668 µg/L	291.6	38668 ppb	291.6	0.75%
As 188.979†	8.9	20.285 µg/L	7.8203	20.285 ppb	7.8203	38.55%
B 249.677†	651.7	-8.2086 µg/L	1.23965	-8.2086 ppb	1.23965	15.10%
Ba 233.527†	26819.5	689.64 µg/L	7.868	689.64 ppb	7.868	1.14%
Be 313.107†	14227.3	8.3087 µg/L	0.10850	8.3087 ppb	0.10850	1.31%
Ca 317.933Radial†	16954.8	15704 µg/L	59.7	15704 ppb	59.7	0.38%
Cd 226.502†	330.7	1.0454 µg/L	0.26603	1.0454 ppb	0.26603	25.45%
Co 228.616†	669.9	28.082 µg/L	0.4236	28.082 ppb	0.4236	1.51%
Cr 267.716†	2394.9	50.997 µg/L	0.9402	50.997 ppb	0.9402	1.84%
Cu 324.752†	17495.3	129.63 µg/L	1.399	129.63 ppb	1.399	1.08%
Fe 238.204 Radial†	8159.9	70104 µg/L	484.8	70104 ppb	484.8	0.69%
K 766.490 Radial†	13618.8	9580.1 µg/L	51.92	9580.1 ppb	51.92	0.54%
Mg 279.077 IEC†	972.0	9073.6 µg/L	79.85	9073.6 ppb	79.85	0.88%
Mn 257.610†	596571.7	2026.1 µg/L	10.14	2026.1 ppb	10.14	0.50%
Mo 202.031†	14.8	4.1867 µg/L	0.63607	4.1867 ppb	0.63607	15.19%
Na 589.592 Radial†	922.2	299.36 µg/L	2.901	299.36 ppb	2.901	0.97%

Ni 231.604†	633.8	34.719 µg/L	0.3197	34.719 ppb	0.3197	0.92%
P 214.914†	445.0	880.08 µg/L	34.389	880.08 ppb	34.389	3.91%
Pb 220.353†	735.5	189.91 µg/L	2.134	189.91 ppb	2.134	1.12%
S 181.975 Axial†	186.4	803.74 µg/L	10.340	803.74 ppb	10.340	1.29%
Sb 206.836†	9.3	6.9661 µg/L	4.96855	6.9661 ppb	4.96855	71.33%
Se 196.026†	-35.3	125.26 µg/L	5.504	125.26 ppb	5.504	4.39%
SiO2†	250337.1	52786 µg/L	185.9	52786 ppb	185.9	0.35%
Si 251.611†	303050.6	24535 µg/L	78.6	24535 ppb	78.6	0.32%
Sn 189.927†	-17.9	-14.441 µg/L	3.0960	-14.441 ppb	3.0960	21.44%
Sr 421.552†	14445.5	146.07 µg/L	0.812	146.07 ppb	0.812	0.56%
Ti 334.940†	885376.6	2089.4 µg/L	9.43	2089.4 ppb	9.43	0.45%
Tl 190.801†	-20.6	9.4851 µg/L	5.81454	9.4851 ppb	5.81454	61.30%
U 409.014†	1364.3	107.98 µg/L	1.482	107.98 ppb	1.482	1.37%
V 292.402†	12096.0	133.00 µg/L	1.331	133.00 ppb	1.331	1.00%
Zn 213.857†	10421.3	256.96 µg/L	1.943	256.96 ppb	1.943	0.76%

Sequence No.: 18

Sample ID: 245797015|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 321

Date Collected: 2/17/2010 14:52:41

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797015|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59205.4	59205.4	102 %		14:53:13
1	Al 396.153Radial†	62194.2	60990.8	44837 µg/L	44837 ppb	14:53:13
1	Ca 317.933Radial†	17978.9	17429.0	16143 µg/L	16143 ppb	14:53:13
1	Fe 238.204 Radial†	8681.7	8493.3	72969 µg/L	72969 ppb	14:53:33
1	K 766.490 Radial†	13575.9	13131.3	9237.2 µg/L	9237.2 ppb	14:53:13
1	Mg 279.077 IEC†	1042.7	1008.7	9416.0 µg/L	9416.0 ppb	14:53:33
1	Na 589.592 Radial†	1700.8	1101.1	357.45 µg/L	357.45 ppb	14:53:13
1	Sr 421.552†	14609.8	14288.4	144.48 µg/L	144.48 ppb	14:53:13
1	Sc 361.383	2058213.7	2058213.7	100.68 %		14:54:33
1	Y 371.029	1425619.7	1425619.7	101.47 %		14:54:33
1	Ag 328.068†	-1480.8	-947.2	-1.9720 µg/L	-1.9720 ppb	14:54:38
1	As 188.979†	9.3	7.7	18.211 µg/L	18.211 ppb	14:54:58
1	B 249.677†	960.4	657.2	-9.4056 µg/L	-9.4056 ppb	14:54:38
1	Ba 233.527†	25574.2	25420.6	653.68 µg/L	653.68 ppb	14:54:38
1	Be 313.107†	29805.8	32573.3	20.079 µg/L	20.079 ppb	14:54:38
1	Cd 226.502†	261.0	397.2	2.5394 µg/L	2.5394 ppb	14:54:58
1	Co 228.616†	674.6	675.0	28.495 µg/L	28.495 ppb	14:54:58
1	Cr 267.716†	4113.7	4118.3	87.641 µg/L	87.641 ppb	14:54:38
1	Cu 324.752†	79759.9	76687.0	535.64 µg/L	535.64 ppb	14:54:38
1	Mn 257.610†	611003.5	607139.2	2062.2 µg/L	2062.2 ppb	14:54:33
1	Mo 202.031†	23.5	30.2	5.8840 µg/L	5.8840 ppb	14:54:58
1	Ni 231.604†	1349.8	1033.9	56.121 µg/L	56.121 ppb	14:54:58
1	P 214.914†	551.0	525.7	1007.0 µg/L	1007.0 ppb	14:54:58
1	Pb 220.353†	1398.0	1295.1	334.11 µg/L	334.11 ppb	14:54:58
1	S 181.975 Axial†	200.6	185.5	799.49 µg/L	799.49 ppb	14:54:58
1	Sb 206.836†	30.2	9.9	7.0957 µg/L	7.0957 ppb	14:54:58
1	Se 196.026†	-21.6	-37.3	129.74 µg/L	129.74 ppb	14:54:58
1	SiO2†	278299.3	275086.9	58005 µg/L	58005 ppb	14:54:33
1	Si 251.611†	335551.1	332984.4	26958 µg/L	26958 ppb	14:54:33
1	Sn 189.927†	1.1	-2.0	-7.6358 µg/L	-7.6358 ppb	14:54:58
1	Ti 334.940†	858046.0	852156.3	2011.0 µg/L	2011.0 ppb	14:54:33
1	Tl 190.801†	-49.6	-26.3	2.4795 µg/L	2.4795 ppb	14:54:58
1	U 409.014†	7019.9	7016.4	599.24 µg/L	599.24 ppb	14:54:38
1	V 292.402†	12482.6	12430.9	137.39 µg/L	137.39 ppb	14:54:38
1	Zn 213.857†	16154.2	15526.9	384.00 µg/L	384.00 ppb	14:54:38
2	Sc RADIAL	58667.3	58667.3	101 %		14:53:38
2	Al 396.153Radial†	62512.6	61865.1	45480 µg/L	45480 ppb	14:53:38
2	Ca 317.933Radial†	17935.9	17548.1	16253 µg/L	16253 ppb	14:53:38
2	Fe 238.204 Radial†	8736.5	8625.6	74105 µg/L	74105 ppb	14:53:58
2	K 766.490 Radial†	13652.0	13328.8	9376.1 µg/L	9376.1 ppb	14:53:38
2	Mg 279.077 IEC†	1051.2	1026.5	9582.1 µg/L	9582.1 ppb	14:53:58
2	Na 589.592 Radial†	1706.3	1121.8	364.19 µg/L	364.19 ppb	14:53:38
2	Sr 421.552†	14585.6	14395.9	145.57 µg/L	145.57 ppb	14:53:38
2	Sc 361.383	2050565.2	2050565.2	100.30 %		14:55:05
2	Y 371.029	1420174.6	1420174.6	101.08 %		14:55:05
2	Ag 328.068†	-1442.1	-914.1	-1.6365 µg/L	-1.6365 ppb	14:55:11
2	As 188.979†	11.5	10.0	22.676 µg/L	22.676 ppb	14:55:31
2	B 249.677†	911.0	611.5	-11.980 µg/L	-11.980 ppb	14:55:11
2	Ba 233.527†	25496.5	25437.8	654.13 µg/L	654.13 ppb	14:55:11
2	Be 313.107†	29720.2	32598.4	20.101 µg/L	20.101 ppb	14:55:11
2	Cd 226.502†	269.2	406.3	2.6584 µg/L	2.6584 ppb	14:55:31
2	Co 228.616†	656.1	659.2	27.758 µg/L	27.758 ppb	14:55:31
2	Cr 267.716†	4103.5	4123.4	87.749 µg/L	87.749 ppb	14:55:11
2	Cu 324.752†	79339.7	76563.5	534.96 µg/L	534.96 ppb	14:55:11
2	Mn 257.610†	605639.1	604054.6	2051.9 µg/L	2051.9 ppb	14:55:05
2	Mo 202.031†	15.0	21.8	5.0621 µg/L	5.0621 ppb	14:55:31
2	Ni 231.604†	1372.6	1061.7	57.621 µg/L	57.621 ppb	14:55:31
2	P 214.914†	548.1	524.9	1004.6 µg/L	1004.6 ppb	14:55:31
2	Pb 220.353†	1391.8	1294.1	333.85 µg/L	333.85 ppb	14:55:31

2	S 181.975 Axial†	203.2	188.8	813.68 µg/L	813.68 ppb	14:55:31
2	Sb 206.836†	32.8	12.6	9.6634 µg/L	9.6634 ppb	14:55:31
2	Se 196.026†	-20.1	-35.9	134.80 µg/L	134.80 ppb	14:55:31
2	SiO2†	275180.6	273008.7	57567 µg/L	57567 ppb	14:55:05
2	Si 251.611†	331926.4	330613.9	26766 µg/L	26766 ppb	14:55:05
2	Sn 189.927†	3.7	0.6	-6.5890 µg/L	-6.5890 ppb	14:55:31
2	Ti 334.940†	848419.4	845737.7	1995.8 µg/L	1995.8 ppb	14:55:05
2	Tl 190.801†	-45.7	-22.7	7.5975 µg/L	7.5975 ppb	14:55:31
2	U 409.014†	6951.8	6974.6	595.43 µg/L	595.43 ppb	14:55:11
2	V 292.402†	12502.4	12496.9	138.19 µg/L	138.19 ppb	14:55:11
2	Zn 213.857†	16088.0	15520.8	383.78 µg/L	383.78 ppb	14:55:11
3	Sc RADIAL	59457.5	59457.5	102 %		14:54:04
3	Al 396.153Radial†	62829.6	61352.6	45103 µg/L	45103 ppb	14:54:04
3	Ca 317.933Radial†	18117.8	17489.9	16199 µg/L	16199 ppb	14:54:04
3	Fe 238.204 Radial†	8700.4	8475.4	72815 µg/L	72815 ppb	14:54:24
3	K 766.490 Radial†	13669.2	13166.0	9261.5 µg/L	9261.5 ppb	14:54:04
3	Mg 279.077 IEC†	1045.8	1007.4	9403.5 µg/L	9403.5 ppb	14:54:24
3	Na 589.592 Radial†	1679.2	1072.9	348.31 µg/L	348.31 ppb	14:54:04
3	Sr 421.552†	14664.3	14280.9	144.40 µg/L	144.40 ppb	14:54:04
3	Sc 361.383	2036783.9	2036783.9	99.628 %		14:55:38
3	Y 371.029	1410528.4	1410528.4	100.39 %		14:55:38
3	Ag 328.068†	-1420.2	-901.9	-1.6243 µg/L	-1.6243 ppb	14:55:43
3	As 188.979†	9.9	8.5	19.734 µg/L	19.734 ppb	14:56:03
3	B 249.677†	926.9	633.6	-10.349 µg/L	-10.349 ppb	14:55:43
3	Ba 233.527†	25303.0	25415.5	653.55 µg/L	653.55 ppb	14:55:43
3	Be 313.107†	29181.7	32258.4	19.884 µg/L	19.884 ppb	14:55:43
3	Cd 226.502†	252.4	391.3	2.3959 µg/L	2.3959 ppb	14:56:03
3	Co 228.616†	658.4	665.9	28.086 µg/L	28.086 ppb	14:56:03
3	Cr 267.716†	4065.2	4112.6	87.521 µg/L	87.521 ppb	14:55:43
3	Cu 324.752†	78895.4	76652.8	535.39 µg/L	535.39 ppb	14:55:43
3	Mn 257.610†	600246.7	602727.5	2047.3 µg/L	2047.3 ppb	14:55:38
3	Mo 202.031†	19.5	26.5	5.4910 µg/L	5.4910 ppb	14:56:03
3	Ni 231.604†	1337.2	1035.4	56.199 µg/L	56.199 ppb	14:56:03
3	P 214.914†	536.9	517.3	989.58 µg/L	989.58 ppb	14:56:03
3	Pb 220.353†	1379.7	1291.4	333.16 µg/L	333.16 ppb	14:56:03
3	S 181.975 Axial†	195.7	182.6	787.24 µg/L	787.24 ppb	14:56:03
3	Sb 206.836†	47.6	27.6	24.077 µg/L	24.077 ppb	14:56:03
3	Se 196.026†	-20.0	-35.9	131.36 µg/L	131.36 ppb	14:56:03
3	SiO2†	273653.8	273332.5	57635 µg/L	57635 ppb	14:55:38
3	Si 251.611†	330043.2	330962.7	26794 µg/L	26794 ppb	14:55:38
3	Sn 189.927†	3.4	0.3	-6.5785 µg/L	-6.5785 ppb	14:56:03
3	Ti 334.940†	842002.8	845020.4	1994.2 µg/L	1994.2 ppb	14:55:38
3	Tl 190.801†	-45.1	-22.3	7.8182 µg/L	7.8182 ppb	14:56:03
3	U 409.014†	6938.3	7007.9	598.51 µg/L	598.51 ppb	14:55:43
3	V 292.402†	12389.3	12467.6	137.74 µg/L	137.74 ppb	14:55:43
3	Zn 213.857†	16012.7	15553.8	384.68 µg/L	384.68 ppb	14:55:43

## Mean Data: 245797015|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2048520.9	100.20 %	0.531			0.53%
Sc RADIAL	59110.1	102 %	0.7			0.68%
Y 371.029	1418774.2	100.98 %	0.544			0.54%
Ag 328.068†	-921.1	-1.7443 µg/L	0.19731	-1.7443 ppb	0.19731	11.31%
Al 396.153Radial†	61402.8	45140 µg/L	323.0	45140 ppb	323.0	0.72%
As 188.979†	8.7	20.207 µg/L	2.2699	20.207 ppb	2.2699	11.23%
B 249.677†	634.1	-10.578 µg/L	1.3026	-10.578 ppb	1.3026	12.31%
Ba 233.527†	25424.6	653.79 µg/L	0.300	653.79 ppb	0.300	0.05%
Be 313.107†	32476.7	20.021 µg/L	0.1194	20.021 ppb	0.1194	0.60%
Ca 317.933Radial†	17489.0	16198 µg/L	55.2	16198 ppb	55.2	0.34%
Cd 226.502†	398.3	2.5312 µg/L	0.13147	2.5312 ppb	0.13147	5.19%
Co 228.616†	666.7	28.113 µg/L	0.3694	28.113 ppb	0.3694	1.31%
Cr 267.716†	4118.1	87.637 µg/L	0.1144	87.637 ppb	0.1144	0.13%
Cu 324.752†	76634.5	535.33 µg/L	0.348	535.33 ppb	0.348	0.06%
Fe 238.204 Radial†	8531.4	73296 µg/L	704.6	73296 ppb	704.6	0.96%
K 766.490 Radial†	13208.7	9291.6 µg/L	74.16	9291.6 ppb	74.16	0.80%
Mg 279.077 IEC†	1014.2	9467.2 µg/L	99.66	9467.2 ppb	99.66	1.05%
Mn 257.610†	604640.4	2053.8 µg/L	7.64	2053.8 ppb	7.64	0.37%
Mo 202.031†	26.2	5.4791 µg/L	0.41106	5.4791 ppb	0.41106	7.50%
Na 589.592 Radial†	1098.6	356.65 µg/L	7.967	356.65 ppb	7.967	2.23%



Ni 231.604†	1043.7	56.647 µg/L	0.8446	56.647 ppb	0.8446	1.49%
P 214.914†	522.6	1000.4 µg/L	9.43	1000.4 ppb	9.43	0.94%
Pb 220.353†	1293.5	333.71 µg/L	0.492	333.71 ppb	0.492	0.15%
S 181.975 Axial†	185.6	800.14 µg/L	13.236	800.14 ppb	13.236	1.65%
Sb 206.836†	16.7	13.612 µg/L	9.1531	13.612 ppb	9.1531	67.24%
Se 196.026†	-36.4	131.97 µg/L	2.586	131.97 ppb	2.586	1.96%
SiO2†	273809.3	57736 µg/L	235.8	57736 ppb	235.8	0.41%
Si 251.611†	331520.3	26839 µg/L	103.6	26839 ppb	103.6	0.39%
Sn 189.927†	-0.4	-6.9344 µg/L	0.60740	-6.9344 ppb	0.60740	8.76%
Sr 421.552†	14321.7	144.82 µg/L	0.651	144.82 ppb	0.651	0.45%
Ti 334.940†	847638.1	2000.3 µg/L	9.28	2000.3 ppb	9.28	0.46%
Tl 190.801†	-23.8	5.9651 µg/L	3.02062	5.9651 ppb	3.02062	50.64%
U 409.014†	6999.6	597.73 µg/L	2.021	597.73 ppb	2.021	0.34%
V 292.402†	12465.1	137.77 µg/L	0.402	137.77 ppb	0.402	0.29%
Zn 213.857†	15533.8	384.16 µg/L	0.470	384.16 ppb	0.470	0.12%

Sequence No.: 19

Sample ID: 245797016|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 322

Date Collected: 2/17/2010 14:56:11

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797016|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58674.4	58674.4	101 %		14:56:43
1	Al 396.153Radial†	27037.2	26766.9	19677 µg/L	19677 ppb	14:56:43
1	Ca 317.933Radial†	8279.2	7994.0	7404.1 µg/L	7404.1 ppb	14:56:43
1	Fe 238.204 Radial†	11075.3	10937.9	93974 µg/L	93974 ppb	14:56:43
1	K 766.490 Radial†	5965.5	5724.0	4026.5 µg/L	4026.5 ppb	14:56:43
1	Mg 279.077 IEC†	392.4	374.7	3426.4 µg/L	3426.4 ppb	14:57:03
1	Na 589.592 Radial†	5593.2	4966.4	1612.3 µg/L	1612.3 ppb	14:56:43
1	Sr 421.552†	6281.6	6180.2	62.492 µg/L	62.492 ppb	14:56:43
1	Sc 361.383	2050472.2	2050472.2	100.30 %		14:58:03
1	Y 371.029	1469727.7	1469727.7	104.61 %		14:58:03
1	Ag 328.068†	-1730.1	-1201.3	-3.1318 µg/L	-3.1318 ppb	14:58:08
1	As 188.979†	5.8	4.3	13.323 µg/L	13.323 ppb	14:58:29
1	B 249.677†	1083.5	783.6	-14.771 µg/L	-14.771 ppb	14:58:08
1	Ba 233.527†	11011.6	10996.9	282.78 µg/L	282.78 ppb	14:58:08
1	Be 313.107†	5756.9	8707.4	4.8349 µg/L	4.8349 ppb	14:58:08
1	Cd 226.502†	110.6	248.2	-3.8203 µg/L	-3.8203 ppb	14:58:29
1	Co 228.616†	3564.3	3558.8	168.31 µg/L	168.31 ppb	14:58:29
1	Cr 267.716†	7272.3	7282.9	154.88 µg/L	154.88 ppb	14:58:08
1	Cu 324.752†	8985.4	6421.2	57.064 µg/L	57.064 ppb	14:58:08
1	Mn 257.610†	626933.4	625313.2	2126.7 µg/L	2126.7 ppb	14:58:03
1	Mo 202.031†	59.6	66.3	10.395 µg/L	10.395 ppb	14:58:29
1	Ni 231.604†	2077.9	1764.9	95.263 µg/L	95.263 ppb	14:58:29
1	P 214.914†	322.4	299.9	557.27 µg/L	557.27 ppb	14:58:29
1	Pb 220.353†	236.3	142.1	34.474 µg/L	34.474 ppb	14:58:29
1	S 181.975 Axial†	68.6	54.5	235.13 µg/L	235.13 ppb	14:58:29
1	Sb 206.836†	25.9	5.7	3.1372 µg/L	3.1372 ppb	14:58:29
1	Se 196.026†	-30.4	-46.2	181.33 µg/L	181.33 ppb	14:58:29
1	SiO2†	170720.5	168870.4	35608 µg/L	35608 ppb	14:58:08
1	Si 251.611†	207803.9	206874.0	16748 µg/L	16748 ppb	14:58:03
1	Sn 189.927†	5.2	2.1	-8.7210 µg/L	-8.7210 ppb	14:58:29
1	Ti 334.940†	822646.6	820079.6	1935.6 µg/L	1935.6 ppb	14:58:03
1	Tl 190.801†	-49.5	-26.4	2.3109 µg/L	2.3109 ppb	14:58:29
1	U 409.014†	-1865.2	-1816.0	-171.48 µg/L	-171.48 ppb	14:58:03
1	V 292.402†	5132.7	5149.5	64.305 µg/L	64.305 ppb	14:58:08
1	Zn 213.857†	15481.7	14917.0	368.66 µg/L	368.66 ppb	14:58:08
2	Sc RADIAL	58579.2	58579.2	101 %		14:57:08
2	Al 396.153Radial†	27194.3	26966.0	19824 µg/L	19824 ppb	14:57:08
2	Ca 317.933Radial†	8304.9	8032.8	7440.0 µg/L	7440.0 ppb	14:57:08
2	Fe 238.204 Radial†	11141.5	11021.4	94691 µg/L	94691 ppb	14:57:08
2	K 766.490 Radial†	6000.6	5768.3	4057.7 µg/L	4057.7 ppb	14:57:08
2	Mg 279.077 IEC†	395.6	378.5	3461.2 µg/L	3461.2 ppb	14:57:28
2	Na 589.592 Radial†	5594.2	4976.4	1615.5 µg/L	1615.5 ppb	14:57:08
2	Sr 421.552†	6318.4	6226.7	62.963 µg/L	62.963 ppb	14:57:08
2	Sc 361.383	2054264.4	2054264.4	100.48 %		14:58:36
2	Y 371.029	1472423.3	1472423.3	104.80 %		14:58:36
2	Ag 328.068†	-1700.6	-1168.7	-2.8307 µg/L	-2.8307 ppb	14:58:41
2	As 188.979†	8.9	7.4	19.281 µg/L	19.281 ppb	14:59:01
2	B 249.677†	1005.8	704.2	-18.591 µg/L	-18.591 ppb	14:58:41
2	Ba 233.527†	10999.1	10964.2	281.94 µg/L	281.94 ppb	14:58:41
2	Be 313.107†	5614.7	8555.3	4.7325 µg/L	4.7325 ppb	14:58:41
2	Cd 226.502†	86.6	224.1	-4.5506 µg/L	-4.5506 ppb	14:59:01
2	Co 228.616†	3624.3	3611.9	170.85 µg/L	170.85 ppb	14:59:01
2	Cr 267.716†	7269.1	7266.4	154.53 µg/L	154.53 ppb	14:58:41
2	Cu 324.752†	9121.7	6540.3	57.979 µg/L	57.979 ppb	14:58:41
2	Mn 257.610†	633269.8	630465.2	2144.2 µg/L	2144.2 ppb	14:58:36
2	Mo 202.031†	58.6	65.2	10.308 µg/L	10.308 ppb	14:59:01
2	Ni 231.604†	2120.1	1803.2	97.312 µg/L	97.312 ppb	14:59:01
2	P 214.914†	333.5	310.3	578.65 µg/L	578.65 ppb	14:59:01
2	Pb 220.353†	239.1	144.4	35.060 µg/L	35.060 ppb	14:59:01

2	S 181.975 Axial†	63.9	49.8	214.61 µg/L	214.61 ppb	14:59:01
2	Sb 206.836†	31.1	10.8	8.0018 µg/L	8.0018 ppb	14:59:01
2	Se 196.026†	-24.3	-40.0	192.58 µg/L	192.58 ppb	14:59:01
2	SiO2†	170610.9	168447.1	35519 µg/L	35519 ppb	14:58:41
2	Si 251.611†	209654.1	208332.8	16866 µg/L	16866 ppb	14:58:36
2	Sn 189.927†	4.6	1.5	-9.0495 µg/L	-9.0495 ppb	14:59:01
2	Ti 334.940†	829841.1	825725.4	1948.9 µg/L	1948.9 ppb	14:58:36
2	Tl 190.801†	-47.2	-24.0	5.9375 µg/L	5.9375 ppb	14:59:01
2	U 409.014†	-1834.6	-1782.1	-168.64 µg/L	-168.64 ppb	14:58:36
2	V 292.402†	5156.0	5163.4	64.533 µg/L	64.533 ppb	14:58:41
2	Zn 213.857†	15449.0	14856.0	367.09 µg/L	367.09 ppb	14:58:41
3	Sc RADIAL	58542.6	58542.6	101 %		14:57:34
3	Al 396.153Radial†	27076.9	26866.4	19751 µg/L	19751 ppb	14:57:34
3	Ca 317.933Radial†	8250.7	7984.2	7395.0 µg/L	7395.0 ppb	14:57:34
3	Fe 238.204 Radial†	11066.5	10953.8	94111 µg/L	94111 ppb	14:57:34
3	K 766.490 Radial†	5958.3	5730.0	4030.8 µg/L	4030.8 ppb	14:57:34
3	Mg 279.077 IEC†	397.0	380.1	3476.8 µg/L	3476.8 ppb	14:57:54
3	Na 589.592 Radial†	5557.8	4943.7	1604.9 µg/L	1604.9 ppb	14:57:34
3	Sr 421.552†	6264.5	6177.2	62.462 µg/L	62.462 ppb	14:57:34
3	Sc 361.383	2041153.9	2041153.9	99.841 %		14:59:09
3	Y 371.029	1462882.4	1462882.4	104.12 %		14:59:09
3	Ag 328.068†	-1729.2	-1208.3	-3.1773 µg/L	-3.1773 ppb	14:59:14
3	As 188.979†	5.6	4.2	13.079 µg/L	13.079 ppb	14:59:34
3	B 249.677†	1049.8	754.7	-16.095 µg/L	-16.095 ppb	14:59:14
3	Ba 233.527†	10942.0	10977.4	282.28 µg/L	282.28 ppb	14:59:14
3	Be 313.107†	5685.8	8662.4	4.8006 µg/L	4.8006 ppb	14:59:14
3	Cd 226.502†	97.6	235.7	-4.1765 µg/L	-4.1765 ppb	14:59:34
3	Co 228.616†	3469.2	3479.8	164.45 µg/L	164.45 ppb	14:59:34
3	Cr 267.716†	7198.2	7241.8	154.00 µg/L	154.00 ppb	14:59:14
3	Cu 324.752†	9030.2	6506.9	57.670 µg/L	57.670 ppb	14:59:14
3	Mn 257.610†	628532.6	629768.5	2141.8 µg/L	2141.8 ppb	14:59:09
3	Mo 202.031†	59.7	66.7	10.439 µg/L	10.439 ppb	14:59:34
3	Ni 231.604†	2011.9	1708.3	92.246 µg/L	92.246 ppb	14:59:34
3	P 214.914†	311.3	290.2	536.61 µg/L	536.61 ppb	14:59:34
3	Pb 220.353†	242.4	149.3	36.336 µg/L	36.336 ppb	14:59:34
3	S 181.975 Axial†	69.5	55.8	240.59 µg/L	240.59 ppb	14:59:34
3	Sb 206.836†	23.8	3.7	1.2189 µg/L	1.2189 ppb	14:59:34
3	Se 196.026†	-33.7	-49.6	176.47 µg/L	176.47 ppb	14:59:34
3	SiO2†	170852.2	169779.4	35800 µg/L	35800 ppb	14:59:14
3	Si 251.611†	209106.4	209124.4	16930 µg/L	16930 ppb	14:59:09
3	Sn 189.927†	3.1	-0.0	-9.6634 µg/L	-9.6634 ppb	14:59:34
3	Ti 334.940†	824967.8	826148.8	1949.9 µg/L	1949.9 ppb	14:59:09
3	Tl 190.801†	-49.4	-26.5	2.3543 µg/L	2.3543 ppb	14:59:34
3	U 409.014†	-1810.1	-1769.3	-167.44 µg/L	-167.44 ppb	14:59:09
3	V 292.402†	5118.4	5158.6	64.417 µg/L	64.417 ppb	14:59:14
3	Zn 213.857†	15525.5	15031.3	371.53 µg/L	371.53 ppb	14:59:14

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Mean Data: 245797016|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2048630.2	100.21 %	0.330			0.33%
Sc RADIAL	58598.7	101 %	0.1			0.12%
Y 371.029	1468344.5	104.51 %	0.350			0.33%
Ag 328.068†	-1192.8	-3.0466 µg/L	0.18834	-3.0466 ppb	0.18834	6.18%
Al 396.153Radial†	26866.4	19751 µg/L	73.2	19751 ppb	73.2	0.37%
As 188.979†	5.3	15.228 µg/L	3.5123	15.228 ppb	3.5123	23.06%
B 249.677†	747.5	-16.486 µg/L	1.9401	-16.486 ppb	1.9401	11.77%
Ba 233.527†	10979.5	282.33 µg/L	0.422	282.33 ppb	0.422	0.15%
Be 313.107†	8641.7	4.7893 µg/L	0.05214	4.7893 ppb	0.05214	1.09%
Ca 317.933Radial†	8003.6	7413.0 µg/L	23.80	7413.0 ppb	23.80	0.32%
Cd 226.502†	236.0	-4.1824 µg/L	0.36518	-4.1824 ppb	0.36518	8.73%
Co 228.616†	3550.1	167.87 µg/L	3.222	167.87 ppb	3.222	1.92%
Cr 267.716†	7263.7	154.47 µg/L	0.440	154.47 ppb	0.440	0.28%
Cu 324.752†	6489.5	57.571 µg/L	0.4658	57.571 ppb	0.4658	0.81%
Fe 238.204 Radial†	10971.0	94259 µg/L	380.6	94259 ppb	380.6	0.40%
K 766.490 Radial†	5740.8	4038.3 µg/L	16.90	4038.3 ppb	16.90	0.42%
Mg 279.077 IEC†	377.8	3454.8 µg/L	25.80	3454.8 ppb	25.80	0.75%
Mn 257.610†	628515.7	2137.6 µg/L	9.49	2137.6 ppb	9.49	0.44%
Mo 202.031†	66.1	10.381 µg/L	0.0670	10.381 ppb	0.0670	0.65%
Na 589.592 Radial†	4962.2	1610.9 µg/L	5.43	1610.9 ppb	5.43	0.34%

Ni 231.604†	1758.8	94.940 µg/L	2.5483	94.940 ppb	2.5483	2.68%
P 214.914†	300.1	557.51 µg/L	21.024	557.51 ppb	21.024	3.77%
Pb 220.353†	145.3	35.290 µg/L	0.9524	35.290 ppb	0.9524	2.70%
S 181.975 Axial†	53.4	230.11 µg/L	13.700	230.11 ppb	13.700	5.95%
Sb 206.836†	6.7	4.1193 µg/L	3.49645	4.1193 ppb	3.49645	84.88%
Se 196.026†	-45.3	183.46 µg/L	8.266	183.46 ppb	8.266	4.51%
SiO2†	169032.3	35642 µg/L	143.5	35642 ppb	143.5	0.40%
Si 251.611†	208110.4	16848 µg/L	92.4	16848 ppb	92.4	0.55%
Sn 189.927†	1.2	-9.1446 µg/L	0.47837	-9.1446 ppb	0.47837	5.23%
Sr 421.552†	6194.7	62.639 µg/L	0.2807	62.639 ppb	0.2807	0.45%
Ti 334.940†	823984.6	1944.8 µg/L	8.00	1944.8 ppb	8.00	0.41%
Tl 190.801†	-25.6	3.5342 µg/L	2.08139	3.5342 ppb	2.08139	58.89%
U 409.014†	-1789.1	-169.19 µg/L	2.076	-169.19 ppb	2.076	1.23%
V 292.402†	5157.2	64.418 µg/L	0.1139	64.418 ppb	0.1139	0.18%
Zn 213.857†	14934.7	369.09 µg/L	2.252	369.09 ppb	2.252	0.61%

Sequence No.: 20

Sample ID: 245797017|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 323

Date Collected: 2/17/2010 14:59:42

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797017|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59965.9	59965.9	103 %		15:00:14
1	Al 396.153Radial†	62559.5	60571.2	44529 µg/L	44529 ppb	15:00:14
1	Ca 317.933Radial†	14040.6	13393.8	12405 µg/L	12405 ppb	15:00:34
1	Fe 238.204 Radial†	8405.5	8118.1	69745 µg/L	69745 ppb	15:00:34
1	K 766.490 Radial†	10569.9	10053.2	7071.9 µg/L	7071.9 ppb	15:00:14
1	Mg 279.077 IEC†	1065.8	1018.1	9507.9 µg/L	9507.9 ppb	15:00:34
1	Na 589.592 Radial†	3541.8	2861.8	929.03 µg/L	929.03 ppb	15:00:14
1	Sr 421.552†	12394.6	11962.8	120.96 µg/L	120.96 ppb	15:00:14
1	Sc 361.383	2080238.7	2080238.7	101.75 %		15:01:34
1	Y 371.029	1473834.7	1473834.7	104.90 %		15:01:34
1	Ag 328.068†	-1553.7	-1003.2	-2.9021 µg/L	-2.9021 ppb	15:01:40
1	As 188.979†	12.0	10.3	23.222 µg/L	23.222 ppb	15:02:00
1	B 249.677†	745.1	435.5	-17.355 µg/L	-17.355 ppb	15:01:40
1	Ba 233.527†	23342.6	22958.4	590.31 µg/L	590.31 ppb	15:01:40
1	Be 313.107†	8411.7	11234.4	6.8261 µg/L	6.8261 ppb	15:01:40
1	Cd 226.502†	80.2	216.8	-1.9676 µg/L	-1.9676 ppb	15:02:00
1	Co 228.616†	892.2	881.8	40.715 µg/L	40.715 ppb	15:02:00
1	Cr 267.716†	3895.7	3860.7	82.137 µg/L	82.137 ppb	15:01:40
1	Cu 324.752†	6751.8	4097.9	37.776 µg/L	37.776 ppb	15:01:40
1	Mn 257.610†	524634.8	515832.7	1753.1 µg/L	1753.1 ppb	15:01:34
1	Mo 202.031†	2.1	8.9	3.5674 µg/L	3.5674 ppb	15:02:00
1	Ni 231.604†	1406.1	1075.1	58.267 µg/L	58.267 ppb	15:02:00
1	P 214.914†	235.1	209.5	395.00 µg/L	395.00 ppb	15:02:00
1	Pb 220.353†	309.9	211.1	54.622 µg/L	54.622 ppb	15:02:00
1	S 181.975 Axial†	65.5	50.6	217.95 µg/L	217.95 ppb	15:02:00
1	Sb 206.836†	29.2	8.6	6.2024 µg/L	6.2024 ppb	15:02:00
1	Se 196.026†	-23.1	-38.5	119.99 µg/L	119.99 ppb	15:02:00
1	SiO2†	281735.6	275537.2	58100 µg/L	58100 ppb	15:01:34
1	Si 251.611†	339477.0	333313.8	26985 µg/L	26985 ppb	15:01:34
1	Sn 189.927†	-1.3	-4.4	-8.3349 µg/L	-8.3349 ppb	15:02:00
1	Ti 334.940†	411380.2	404162.1	953.46 µg/L	953.46 ppb	15:01:34
1	Tl 190.801†	-40.3	-16.7	4.3806 µg/L	4.3806 ppb	15:02:00
1	U 409.014†	-1356.0	-1288.9	-122.58 µg/L	-122.58 ppb	15:01:34
1	V 292.402†	8288.5	8177.7	92.454 µg/L	92.454 ppb	15:01:40
1	Zn 213.857†	7227.5	6584.2	160.84 µg/L	160.84 ppb	15:01:40
2	Sc RADIAL	59231.9	59231.9	102 %		15:00:39
2	Al 396.153Radial†	62618.7	61379.5	45123 µg/L	45123 ppb	15:00:39
2	Ca 317.933Radial†	14020.3	13542.3	12543 µg/L	12543 ppb	15:00:59
2	Fe 238.204 Radial†	8397.7	8211.2	70545 µg/L	70545 ppb	15:00:59
2	K 766.490 Radial†	10612.1	10221.4	7190.2 µg/L	7190.2 ppb	15:00:39
2	Mg 279.077 IEC†	1060.7	1025.9	9580.3 µg/L	9580.3 ppb	15:00:59
2	Na 589.592 Radial†	3540.0	2902.5	942.25 µg/L	942.25 ppb	15:00:39
2	Sr 421.552†	12433.3	12149.4	122.85 µg/L	122.85 ppb	15:00:39
2	Sc 361.383	2072650.2	2072650.2	101.38 %		15:02:07
2	Y 371.029	1466606.1	1466606.1	104.39 %		15:02:07
2	Ag 328.068†	-1538.9	-994.2	-2.7743 µg/L	-2.7743 ppb	15:02:13
2	As 188.979†	9.4	7.7	18.329 µg/L	18.329 ppb	15:02:33
2	B 249.677†	748.0	441.0	-17.531 µg/L	-17.531 ppb	15:02:13
2	Ba 233.527†	23483.2	23181.1	596.04 µg/L	596.04 ppb	15:02:13
2	Be 313.107†	8399.7	11252.7	6.8376 µg/L	6.8376 ppb	15:02:13
2	Cd 226.502†	77.2	214.1	-2.1315 µg/L	-2.1315 ppb	15:02:33
2	Co 228.616†	885.3	878.2	40.538 µg/L	40.538 ppb	15:02:33
2	Cr 267.716†	3972.4	3950.5	84.046 µg/L	84.046 ppb	15:02:13
2	Cu 324.752†	6749.4	4119.8	38.037 µg/L	38.037 ppb	15:02:13
2	Mn 257.610†	522601.1	515714.5	1752.8 µg/L	1752.8 ppb	15:02:07
2	Mo 202.031†	9.2	15.9	4.3212 µg/L	4.3212 ppb	15:02:33
2	Ni 231.604†	1394.0	1068.2	57.907 µg/L	57.907 ppb	15:02:33
2	P 214.914†	227.7	203.0	380.82 µg/L	380.82 ppb	15:02:33
2	Pb 220.353†	302.0	204.4	52.878 µg/L	52.878 ppb	15:02:33

2	S 181.975 Axial†	63.0	48.4	208.56 µg/L	208.56 ppb	15:02:33
2	Sb 206.836†	33.0	12.4	9.8217 µg/L	9.8217 ppb	15:02:33
2	Se 196.026†	-12.0	-27.7	138.51 µg/L	138.51 ppb	15:02:33
2	SiO2†	280058.3	274896.5	57965 µg/L	57965 ppb	15:02:07
2	Si 251.611†	337490.9	332576.3	26925 µg/L	26925 ppb	15:02:07
2	Sn 189.927†	-3.4	-6.4	-9.3099 µg/L	-9.3099 ppb	15:02:33
2	Ti 334.940†	410142.4	404421.4	954.06 µg/L	954.06 ppb	15:02:07
2	Tl 190.801†	-42.2	-18.7	1.7520 µg/L	1.7520 ppb	15:02:33
2	U 409.014†	-1313.2	-1251.6	-119.45 µg/L	-119.45 ppb	15:02:07
2	V 292.402†	8362.1	8280.1	93.616 µg/L	93.616 ppb	15:02:13
2	Zn 213.857†	7242.5	6625.0	161.82 µg/L	161.82 ppb	15:02:13
3	Sc RADIAL	59456.6	59456.6	102 %		15:01:05
3	Al 396.153Radial†	62628.0	61156.7	44959 µg/L	44959 ppb	15:01:05
3	Ca 317.933Radial†	14062.7	13531.8	12533 µg/L	12533 ppb	15:01:25
3	Fe 238.204 Radial†	8393.3	8175.8	70241 µg/L	70241 ppb	15:01:25
3	K 766.490 Radial†	10536.4	10108.1	7110.5 µg/L	7110.5 ppb	15:01:05
3	Mg 279.077 IEC†	1061.9	1023.1	9554.4 µg/L	9554.4 ppb	15:01:25
3	Na 589.592 Radial†	3535.7	2885.2	936.62 µg/L	936.62 ppb	15:01:05
3	Sr 421.552†	12419.1	12089.4	122.24 µg/L	122.24 ppb	15:01:05
3	Sc 361.383	2084604.6	2084604.6	101.97 %		15:02:40
3	Y 371.029	1474300.5	1474300.5	104.93 %		15:02:40
3	Ag 328.068†	-1409.2	-858.4	-1.7528 µg/L	-1.7528 ppb	15:02:46
3	As 188.979†	11.5	9.8	22.291 µg/L	22.291 ppb	15:03:06
3	B 249.677†	721.1	410.5	-18.706 µg/L	-18.706 ppb	15:02:46
3	Ba 233.527†	22716.9	22296.7	573.30 µg/L	573.30 ppb	15:02:46
3	Be 313.107†	7917.2	10732.1	6.5126 µg/L	6.5126 ppb	15:02:46
3	Cd 226.502†	59.1	195.9	-2.5914 µg/L	-2.5914 ppb	15:03:06
3	Co 228.616†	823.8	812.9	37.421 µg/L	37.421 ppb	15:03:06
3	Cr 267.716†	3746.8	3706.7	78.861 µg/L	78.861 ppb	15:02:46
3	Cu 324.752†	6656.5	3990.6	37.109 µg/L	37.109 ppb	15:02:46
3	Mn 257.610†	516166.8	506448.2	1721.4 µg/L	1721.4 ppb	15:02:40
3	Mo 202.031†	12.9	19.5	4.6727 µg/L	4.6727 ppb	15:03:06
3	Ni 231.604†	1337.7	1005.1	54.537 µg/L	54.537 ppb	15:03:06
3	P 214.914†	227.5	201.5	378.01 µg/L	378.01 ppb	15:03:06
3	Pb 220.353†	297.0	197.8	51.176 µg/L	51.176 ppb	15:03:06
3	S 181.975 Axial†	62.6	47.6	205.24 µg/L	205.24 ppb	15:03:06
3	Sb 206.836†	22.7	2.1	0.0215 µg/L	0.0215 ppb	15:03:06
3	Se 196.026†	-20.2	-35.6	125.65 µg/L	125.65 ppb	15:03:06
3	SiO2†	277745.6	271044.2	57153 µg/L	57153 ppb	15:02:40
3	Si 251.611†	334518.7	327752.4	26534 µg/L	26534 ppb	15:02:40
3	Sn 189.927†	-8.1	-11.0	-11.320 µg/L	-11.320 ppb	15:03:06
3	Ti 334.940†	403138.8	395233.0	932.38 µg/L	932.38 ppb	15:02:40
3	Tl 190.801†	-35.6	-12.0	10.698 µg/L	10.698 ppb	15:03:06
3	U 409.014†	-1329.7	-1260.3	-120.17 µg/L	-120.17 ppb	15:02:40
3	V 292.402†	8070.6	7947.0	90.141 µg/L	90.141 ppb	15:02:46
3	Zn 213.857†	7032.1	6377.6	155.66 µg/L	155.66 ppb	15:02:46

## Mean Data: 245797017|948065|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2079164.5	101.70 %	0.296			0.29%
Sc RADIAL	59551.5	103 %	0.6			0.63%
Y 371.029	1471580.4	104.74 %	0.307			0.29%
Ag 328.068†	-951.9	-2.4764 µg/L	0.62994	-2.4764 ppb	0.62994	25.44%
Al 396.153Radial†	61035.8	44870 µg/L	306.9	44870 ppb	306.9	0.68%
As 188.979†	9.3	21.281 µg/L	2.5985	21.281 ppb	2.5985	12.21%
B 249.677†	429.0	-17.864 µg/L	0.7345	-17.864 ppb	0.7345	4.11%
Ba 233.527†	22812.1	586.55 µg/L	11.827	586.55 ppb	11.827	2.02%
Be 313.107†	11073.1	6.7254 µg/L	0.18437	6.7254 ppb	0.18437	2.74%
Ca 317.933Radial†	13489.3	12494 µg/L	76.7	12494 ppb	76.7	0.61%
Cd 226.502†	208.9	-2.2302 µg/L	0.32338	-2.2302 ppb	0.32338	14.50%
Co 228.616†	857.7	39.558 µg/L	1.8524	39.558 ppb	1.8524	4.68%
Cr 267.716†	3839.3	81.681 µg/L	2.6221	81.681 ppb	2.6221	3.21%
Cu 324.752†	4069.4	37.641 µg/L	0.4785	37.641 ppb	0.4785	1.27%
Fe 238.204 Radial†	8168.3	70177 µg/L	403.8	70177 ppb	403.8	0.58%
K 766.490 Radial†	10127.6	7124.2 µg/L	60.31	7124.2 ppb	60.31	0.85%
Mg 279.077 IEC†	1022.4	9547.5 µg/L	36.70	9547.5 ppb	36.70	0.38%
Mn 257.610†	512665.1	1742.4 µg/L	18.20	1742.4 ppb	18.20	1.04%
Mo 202.031†	14.8	4.1871 µg/L	0.56475	4.1871 ppb	0.56475	13.49%
Na 589.592 Radial†	2883.1	935.97 µg/L	6.637	935.97 ppb	6.637	0.71%

Ni 231.604†	1049.5	56.903 µg/L	2.0574	56.903 ppb	2.0574	3.62%
P 214.914†	204.7	384.61 µg/L	9.106	384.61 ppb	9.106	2.37%
Pb 220.353†	204.4	52.892 µg/L	1.7230	52.892 ppb	1.7230	3.26%
S 181.975 Axial†	48.8	210.58 µg/L	6.593	210.58 ppb	6.593	3.13%
Sb 206.836†	7.7	5.3485 µg/L	4.95556	5.3485 ppb	4.95556	92.65%
Se 196.026†	-34.0	128.05 µg/L	9.492	128.05 ppb	9.492	7.41%
SiO2†	273826.0	57739 µg/L	512.5	57739 ppb	512.5	0.89%
Si 251.611†	331214.2	26815 µg/L	244.5	26815 ppb	244.5	0.91%
Sn 189.927†	-7.3	-9.6549 µg/L	1.52205	-9.6549 ppb	1.52205	15.76%
Sr 421.552†	12067.2	122.02 µg/L	0.963	122.02 ppb	0.963	0.79%
Ti 334.940†	401272.2	946.63 µg/L	12.349	946.63 ppb	12.349	1.30%
Tl 190.801†	-15.8	5.6103 µg/L	4.59817	5.6103 ppb	4.59817	81.96%
U 409.014†	-1267.0	-120.73 µg/L	1.639	-120.73 ppb	1.639	1.36%
V 292.402†	8135.0	92.070 µg/L	1.7689	92.070 ppb	1.7689	1.92%
Zn 213.857†	6528.9	159.44 µg/L	3.314	159.44 ppb	3.314	2.08%

Sequence No.: 21

Sample ID: 245797018|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 324

Date Collected: 2/17/2010 15:03:14

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797018|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57360.8	57360.8	98.8 %		15:03:46
1	Al 396.153Radial†	45085.4	45640.6	33553 µg/L	33553 ppb	15:03:46
1	Ca 317.933Radial†	23153.3	23231.3	21517 µg/L	21517 ppb	15:03:46
1	Fe 238.204 Radial†	5991.6	6045.1	51936 µg/L	51936 ppb	15:04:06
1	K 766.490 Radial†	8905.8	8834.1	6214.3 µg/L	6214.3 ppb	15:03:46
1	Mg 279.077 IEC†	771.7	767.4	7166.8 µg/L	7166.8 ppb	15:04:06
1	Na 589.592 Radial†	2070.4	1528.7	496.26 µg/L	496.26 ppb	15:03:46
1	Sr 421.552†	14176.6	14310.6	144.70 µg/L	144.70 ppb	15:03:46
1	Sc 361.383	2083059.8	2083059.8	101.89 %		15:05:06
1	Y 371.029	1439789.0	1439789.0	102.48 %		15:05:06
1	Ag 328.068†	-816.5	-277.7	1.5476 µg/L	1.5476 ppb	15:05:11
1	As 188.979†	3.6	2.1	5.8723 µg/L	5.8723 ppb	15:05:31
1	B 249.677†	818.4	506.5	-5.0123 µg/L	-5.0123 ppb	15:05:11
1	Ba 233.527†	25361.7	24909.0	640.42 µg/L	640.42 ppb	15:05:11
1	Be 313.107†	12911.3	15639.3	9.5310 µg/L	9.5310 ppb	15:05:11
1	Cd 226.502†	152.5	287.6	1.9413 µg/L	1.9413 ppb	15:05:31
1	Co 228.616†	790.9	781.3	35.220 µg/L	35.220 ppb	15:05:31
1	Cr 267.716†	3035.4	3011.2	64.066 µg/L	64.066 ppb	15:05:31
1	Cu 324.752†	37031.1	33806.3	238.88 µg/L	238.88 ppb	15:05:11
1	Mn 257.610†	708215.1	695307.6	2357.6 µg/L	2357.6 ppb	15:05:06
1	Mo 202.031†	9.7	16.4	3.6640 µg/L	3.6640 ppb	15:05:31
1	Ni 231.604†	1105.6	778.4	42.194 µg/L	42.194 ppb	15:05:31
1	P 214.914†	549.0	517.2	1033.9 µg/L	1033.9 ppb	15:05:31
1	Pb 220.353†	768.7	660.9	170.72 µg/L	170.72 ppb	15:05:31
1	S 181.975 Axial†	221.4	203.5	877.12 µg/L	877.12 ppb	15:05:31
1	Sb 206.836†	32.6	11.8	8.7613 µg/L	8.7613 ppb	15:05:31
1	Se 196.026†	-7.9	-23.6	93.567 µg/L	93.567 ppb	15:05:31
1	SiO2†	234652.4	228952.9	48277 µg/L	48277 ppb	15:05:06
1	Si 251.611†	282700.4	277139.1	22437 µg/L	22437 ppb	15:05:06
1	Sn 189.927†	-9.2	-12.1	-10.186 µg/L	-10.186 ppb	15:05:31
1	Ti 334.940†	541131.4	530957.6	1253.1 µg/L	1253.1 ppb	15:05:06
1	Tl 190.801†	-39.7	-16.0	6.4381 µg/L	6.4381 ppb	15:05:31
1	U 409.014†	2087.7	2092.6	173.51 µg/L	173.51 ppb	15:05:11
1	V 292.402†	6708.3	6615.8	74.553 µg/L	74.553 ppb	15:05:11
1	Zn 213.857†	13027.4	12266.8	303.97 µg/L	303.97 ppb	15:05:11
2	Sc RADIAL	58227.9	58227.9	100 %		15:04:11
2	Al 396.153Radial†	45821.0	45694.5	33592 µg/L	33592 ppb	15:04:11
2	Ca 317.933Radial†	23600.1	23327.7	21606 µg/L	21606 ppb	15:04:11
2	Fe 238.204 Radial†	6004.4	5967.6	51270 µg/L	51270 ppb	15:04:31
2	K 766.490 Radial†	9121.0	8914.4	6270.8 µg/L	6270.8 ppb	15:04:11
2	Mg 279.077 IEC†	772.0	756.1	7061.6 µg/L	7061.6 ppb	15:04:31
2	Na 589.592 Radial†	2066.6	1493.7	484.92 µg/L	484.92 ppb	15:04:11
2	Sr 421.552†	14493.0	14412.4	145.73 µg/L	145.73 ppb	15:04:11
2	Sc 361.383	2074619.8	2074619.8	101.48 %		15:05:38
2	Y 371.029	1432686.9	1432686.9	101.97 %		15:05:38
2	Ag 328.068†	-743.8	-209.3	2.0492 µg/L	2.0492 ppb	15:05:43
2	As 188.979†	8.1	6.5	14.295 µg/L	14.295 ppb	15:06:04
2	B 249.677†	830.5	521.6	-4.0060 µg/L	-4.0060 ppb	15:05:43
2	Ba 233.527†	25492.0	25138.6	646.33 µg/L	646.33 ppb	15:05:43
2	Be 313.107†	12916.4	15695.8	9.5674 µg/L	9.5674 ppb	15:05:43
2	Cd 226.502†	131.6	267.7	1.4791 µg/L	1.4791 ppb	15:06:04
2	Co 228.616†	782.4	776.0	34.966 µg/L	34.966 ppb	15:06:04
2	Cr 267.716†	3047.3	3035.1	64.575 µg/L	64.575 ppb	15:06:04
2	Cu 324.752†	37128.3	34049.8	240.45 µg/L	240.45 ppb	15:05:43
2	Mn 257.610†	703025.0	693020.8	2349.8 µg/L	2349.8 ppb	15:05:38
2	Mo 202.031†	14.8	21.5	4.1580 µg/L	4.1580 ppb	15:06:04
2	Ni 231.604†	1123.8	800.6	43.374 µg/L	43.374 ppb	15:06:04
2	P 214.914†	557.6	527.9	1056.8 µg/L	1056.8 ppb	15:06:04
2	Pb 220.353†	770.6	665.8	172.02 µg/L	172.02 ppb	15:06:04



2	S 181.975 Axial†	222.1	205.1	884.15 µg/L	884.15 ppb	15:06:04
2	Sb 206.836†	35.3	14.7	11.454 µg/L	11.454 ppb	15:06:04
2	Se 196.026†	-12.5	-28.2	84.864 µg/L	84.864 ppb	15:06:04
2	SiO2†	233183.1	228441.8	48170 µg/L	48170 ppb	15:05:38
2	Si 251.611†	280894.3	276488.1	22384 µg/L	22384 ppb	15:05:38
2	Sn 189.927†	-9.4	-12.4	-10.269 µg/L	-10.269 ppb	15:06:04
2	Ti 334.940†	538676.4	530699.0	1252.5 µg/L	1252.5 ppb	15:05:38
2	Tl 190.801†	-43.9	-20.3	0.3913 µg/L	0.3913 ppb	15:06:04
2	U 409.014†	2201.2	2212.8	184.05 µg/L	184.05 ppb	15:05:43
2	V 292.402†	6800.7	6733.7	75.704 µg/L	75.704 ppb	15:05:43
2	Zn 213.857†	13100.0	12390.4	307.09 µg/L	307.09 ppb	15:05:43
3	Sc RADIAL	57927.9	57927.9	99.8 %		15:04:36
3	Al 396.153Radial†	46390.1	46501.2	34185 µg/L	34185 ppb	15:04:36
3	Ca 317.933Radial†	23878.4	23728.4	21977 µg/L	21977 ppb	15:04:36
3	Fe 238.204 Radial†	5870.3	5864.2	50382 µg/L	50382 ppb	15:04:57
3	K 766.490 Radial†	9177.3	9017.9	6343.6 µg/L	6343.6 ppb	15:04:36
3	Mg 279.077 IEC†	751.7	739.7	6907.9 µg/L	6907.9 ppb	15:04:57
3	Na 589.592 Radial†	2095.9	1533.7	497.90 µg/L	497.90 ppb	15:04:36
3	Sr 421.552†	14593.5	14587.9	147.51 µg/L	147.51 ppb	15:04:36
3	Sc 361.383	2081804.4	2081804.4	101.83 %		15:06:11
3	Y 371.029	1439204.0	1439204.0	102.44 %		15:06:11
3	Ag 328.068†	-773.4	-235.9	1.7757 µg/L	1.7757 ppb	15:06:16
3	As 188.979†	10.9	9.3	19.589 µg/L	19.589 ppb	15:06:36
3	B 249.677†	815.2	503.8	-4.3209 µg/L	-4.3209 ppb	15:06:16
3	Ba 233.527†	25175.9	24741.5	636.12 µg/L	636.12 ppb	15:06:16
3	Be 313.107†	12726.4	15465.3	9.4213 µg/L	9.4213 ppb	15:06:16
3	Cd 226.502†	131.8	267.4	1.5710 µg/L	1.5710 ppb	15:06:36
3	Co 228.616†	758.3	749.7	33.702 µg/L	33.702 ppb	15:06:36
3	Cr 267.716†	2920.7	2900.4	61.709 µg/L	61.709 ppb	15:06:36
3	Cu 324.752†	36669.8	33473.3	236.38 µg/L	236.38 ppb	15:06:16
3	Mn 257.610†	706149.6	693698.4	2352.0 µg/L	2352.0 ppb	15:06:11
3	Mo 202.031†	21.0	27.5	4.7400 µg/L	4.7400 ppb	15:06:36
3	Ni 231.604†	1090.8	764.4	41.431 µg/L	41.431 ppb	15:06:36
3	P 214.914†	538.1	506.9	1013.8 µg/L	1013.8 ppb	15:06:36
3	Pb 220.353†	749.9	642.9	166.15 µg/L	166.15 ppb	15:06:36
3	S 181.975 Axial†	218.0	200.3	863.48 µg/L	863.48 ppb	15:06:36
3	Sb 206.836†	32.6	11.8	8.7340 µg/L	8.7340 ppb	15:06:36
3	Se 196.026†	-0.5	-16.3	100.53 µg/L	100.53 ppb	15:06:36
3	SiO2†	234440.3	228883.4	48263 µg/L	48263 ppb	15:06:11
3	Si 251.611†	282397.0	277008.5	22426 µg/L	22426 ppb	15:06:11
3	Sn 189.927†	-5.0	-8.0	-8.2407 µg/L	-8.2407 ppb	15:06:36
3	Ti 334.940†	538941.7	529127.6	1248.8 µg/L	1248.8 ppb	15:06:11
3	Tl 190.801†	-42.5	-18.8	2.3402 µg/L	2.3402 ppb	15:06:36
3	U 409.014†	2164.9	2169.7	180.40 µg/L	180.40 ppb	15:06:16
3	V 292.402†	6678.7	6590.7	74.122 µg/L	74.122 ppb	15:06:16
3	Zn 213.857†	12987.0	12234.8	303.26 µg/L	303.26 ppb	15:06:16

Mean Data: 245797018|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2079828.0	101.73 %		0.223			0.22%
Sc RADIAL	57838.9	99.7 %		0.76			0.76%
Y 371.029	1437226.6	102.30 %		0.281			0.27%
Ag 328.068†	-241.0	1.7908 µg/L		0.25117	1.7908 ppb	0.25117	14.03%
Al 396.153Radial†	45945.4	33777 µg/L		354.4	33777 ppb	354.4	1.05%
As 188.979†	5.9	13.252 µg/L		6.9178	13.252 ppb	6.9178	52.20%
B 249.677†	510.6	-4.4464 µg/L		0.51472	-4.4464 ppb	0.51472	11.58%
Ba 233.527†	24929.7	640.96 µg/L		5.126	640.96 ppb	5.126	0.80%
Be 313.107†	15600.1	9.5066 µg/L		0.07606	9.5066 ppb	0.07606	0.80%
Ca 317.933Radial†	23429.1	21700 µg/L		244.2	21700 ppb	244.2	1.13%
Cd 226.502†	274.2	1.6638 µg/L		0.24465	1.6638 ppb	0.24465	14.70%
Co 228.616†	769.0	34.629 µg/L		0.8130	34.629 ppb	0.8130	2.35%
Cr 267.716†	2982.3	63.450 µg/L		1.5289	63.450 ppb	1.5289	2.41%
Cu 324.752†	33776.5	238.57 µg/L		2.054	238.57 ppb	2.054	0.86%
Fe 238.204 Radial†	5959.0	51196 µg/L		779.8	51196 ppb	779.8	1.52%
K 766.490 Radial†	8922.1	6276.2 µg/L		64.83	6276.2 ppb	64.83	1.03%
Mg 279.077 IEC†	754.4	7045.4 µg/L		130.20	7045.4 ppb	130.20	1.85%
Mn 257.610†	694008.9	2353.2 µg/L		4.03	2353.2 ppb	4.03	0.17%
Mo 202.031†	21.8	4.1874 µg/L		0.53857	4.1874 ppb	0.53857	12.86%
Na 589.592 Radial†	1518.7	493.03 µg/L		7.066	493.03 ppb	7.066	1.43%

Ni 231.604†	781.1	42.333 µg/L	0.9787	42.333 ppb	0.9787	2.31%
P 214.914†	517.3	1034.9 µg/L	21.51	1034.9 ppb	21.51	2.08%
Pb 220.353†	656.5	169.63 µg/L	3.080	169.63 ppb	3.080	1.82%
S 181.975 Axial†	203.0	874.92 µg/L	10.509	874.92 ppb	10.509	1.20%
Sb 206.836†	12.8	9.6496 µg/L	1.56231	9.6496 ppb	1.56231	16.19%
Se 196.026†	-22.7	92.988 µg/L	7.8501	92.988 ppb	7.8501	8.44%
SiO2†	228759.4	48237 µg/L	58.4	48237 ppb	58.4	0.12%
Si 251.611†	276878.6	22416 µg/L	27.9	22416 ppb	27.9	0.12%
Sn 189.927†	-10.8	-9.5651 µg/L	1.14776	-9.5651 ppb	1.14776	12.00%
Sr 421.552†	14437.0	145.98 µg/L	1.418	145.98 ppb	1.418	0.97%
Ti 334.940†	530261.4	1251.5 µg/L	2.32	1251.5 ppb	2.32	0.19%
Tl 190.801†	-18.4	3.0565 µg/L	3.08636	3.0565 ppb	3.08636	100.98%
U 409.014†	2158.4	179.32 µg/L	5.355	179.32 ppb	5.355	2.99%
V 292.402†	6646.8	74.793 µg/L	0.8181	74.793 ppb	0.8181	1.09%
Zn 213.857†	12297.3	304.77 µg/L	2.040	304.77 ppb	2.040	0.67%

Sequence No.: 22

Sample ID: 245797019|948065|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 325

Date Collected: 2/17/2010 15:06:44

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245797019|948065|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58935.0	58935.0	102 %		15:07:16
1	Al 396.153Radial†	17343.5	17102.4	12573 µg/L	12573 ppb	15:07:16
1	Ca 317.933Radial†	3243.8	2999.0	2777.7 µg/L	2777.7 ppb	15:07:36
1	Fe 238.204 Radial†	7139.4	7013.5	60256 µg/L	60256 ppb	15:07:16
1	K 766.490 Radial†	5028.0	4774.6	3358.7 µg/L	3358.7 ppb	15:07:16
1	Mg 279.077 IEC†	228.7	211.8	1929.2 µg/L	1929.2 ppb	15:07:36
1	Na 589.592 Radial†	6434.5	5770.4	1873.3 µg/L	1873.3 ppb	15:07:16
1	Sr 421.552†	2140.7	2074.8	20.979 µg/L	20.979 ppb	15:07:16
1	Sc 361.383	2057769.4	2057769.4	100.65 %		15:08:36
1	Y 371.029	1458526.1	1458526.1	103.81 %		15:08:36
1	Ag 328.068†	-1301.2	-769.1	-2.1110 µg/L	-2.1110 ppb	15:08:41
1	As 188.979†	7.3	5.7	14.353 µg/L	14.353 ppb	15:09:01
1	B 249.677†	586.8	286.2	-18.705 µg/L	-18.705 ppb	15:08:41
1	Ba 233.527†	6497.2	6473.0	166.42 µg/L	166.42 ppb	15:08:41
1	Be 313.107†	3851.5	6794.0	3.7947 µg/L	3.7947 ppb	15:08:41
1	Cd 226.502†	49.8	187.5	-1.6203 µg/L	-1.6203 ppb	15:08:41
1	Co 228.616†	889.0	888.2	39.988 µg/L	39.988 ppb	15:09:01
1	Cr 267.716†	9149.2	9121.9	193.95 µg/L	193.95 ppb	15:08:41
1	Cu 324.752†	3768.3	1206.2	16.641 µg/L	16.641 ppb	15:08:41
1	Mn 257.610†	569870.8	566404.7	1923.1 µg/L	1923.1 ppb	15:08:36
1	Mo 202.031†	50.6	57.1	8.1701 µg/L	8.1701 ppb	15:09:01
1	Ni 231.604†	2675.0	2350.9	126.27 µg/L	126.27 ppb	15:08:41
1	P 214.914†	150.7	128.1	224.20 µg/L	224.20 ppb	15:09:01
1	Pb 220.353†	200.8	106.0	26.028 µg/L	26.028 ppb	15:09:01
1	S 181.975 Axial†	24.5	10.6	45.613 µg/L	45.613 ppb	15:09:01
1	Sb 206.836†	33.6	13.2	10.308 µg/L	10.308 ppb	15:09:01
1	Se 196.026†	-14.3	-30.1	116.32 µg/L	116.32 ppb	15:09:01
1	SiO2†	161053.4	158662.4	33456 µg/L	33456 ppb	15:08:41
1	Si 251.611†	194948.2	193367.1	15655 µg/L	15655 ppb	15:08:36
1	Sn 189.927†	16.9	13.7	-0.0968 µg/L	-0.0968 ppb	15:09:01
1	Ti 334.940†	619240.2	615086.1	1451.8 µg/L	1451.8 ppb	15:08:36
1	Tl 190.801†	-41.2	-17.9	4.5980 µg/L	4.5980 ppb	15:09:01
1	U 409.014†	-1518.1	-1464.5	-135.94 µg/L	-135.94 ppb	15:08:36
1	V 292.402†	1631.0	1652.5	24.459 µg/L	24.459 ppb	15:08:41
1	Zn 213.857†	10083.3	9498.9	234.50 µg/L	234.50 ppb	15:08:41
2	Sc RADIAL	58853.9	58853.9	101 %		15:07:41
2	Al 396.153Radial†	17500.8	17281.1	12704 µg/L	12704 ppb	15:07:41
2	Ca 317.933Radial†	3268.3	3027.5	2804.1 µg/L	2804.1 ppb	15:08:01
2	Fe 238.204 Radial†	7244.8	7127.2	61232 µg/L	61232 ppb	15:07:41
2	K 766.490 Radial†	5123.6	4875.7	3429.8 µg/L	3429.8 ppb	15:07:41
2	Mg 279.077 IEC†	223.4	206.8	1881.1 µg/L	1881.1 ppb	15:08:01
2	Na 589.592 Radial†	6489.6	5833.5	1893.8 µg/L	1893.8 ppb	15:07:41
2	Sr 421.552†	2191.4	2127.7	21.514 µg/L	21.514 ppb	15:07:41
2	Sc 361.383	2070641.2	2070641.2	101.28 %		15:09:09
2	Y 371.029	1467777.6	1467777.6	104.47 %		15:09:09
2	Ag 328.068†	-1311.9	-771.6	-2.0640 µg/L	-2.0640 ppb	15:09:14
2	As 188.979†	6.8	5.3	13.545 µg/L	13.545 ppb	15:09:34
2	B 249.677†	604.8	300.4	-18.602 µg/L	-18.602 ppb	15:09:14
2	Ba 233.527†	6500.7	6436.3	165.48 µg/L	165.48 ppb	15:09:14
2	Be 313.107†	3832.9	6751.9	3.7662 µg/L	3.7662 ppb	15:09:14
2	Cd 226.502†	25.3	162.9	-2.3947 µg/L	-2.3947 ppb	15:09:14
2	Co 228.616†	896.2	889.8	40.058 µg/L	40.058 ppb	15:09:34
2	Cr 267.716†	9128.7	9045.2	192.32 µg/L	192.32 ppb	15:09:14
2	Cu 324.752†	3742.3	1157.3	16.442 µg/L	16.442 ppb	15:09:14
2	Mn 257.610†	576525.5	569455.6	1933.6 µg/L	1933.6 ppb	15:09:09
2	Mo 202.031†	52.9	59.1	8.4060 µg/L	8.4060 ppb	15:09:34
2	Ni 231.604†	2676.4	2335.7	125.47 µg/L	125.47 ppb	15:09:14
2	P 214.914†	149.7	126.2	219.47 µg/L	219.47 ppb	15:09:34
2	Pb 220.353†	186.5	90.6	22.004 µg/L	22.004 ppb	15:09:34

2	S 181.975 Axial†	20.7	6.7	28.784 µg/L	28.784 ppb	15:09:34
2	Sb 206.836†	30.1	9.5	6.7843 µg/L	6.7843 ppb	15:09:34
2	Se 196.026†	-20.1	-35.7	110.47 µg/L	110.47 ppb	15:09:34
2	SiO2†	159759.3	156390.1	32977 µg/L	32977 ppb	15:09:14
2	Si 251.611†	196580.6	193774.8	15688 µg/L	15688 ppb	15:09:09
2	Sn 189.927†	22.4	19.0	2.1452 µg/L	2.1452 ppb	15:09:34
2	Ti 334.940†	624917.3	616866.9	1456.0 µg/L	1456.0 ppb	15:09:09
2	Tl 190.801†	-40.5	-17.1	6.0331 µg/L	6.0331 ppb	15:09:34
2	U 409.014†	-1520.6	-1457.6	-135.48 µg/L	-135.48 ppb	15:09:09
2	V 292.402†	1712.3	1722.6	25.295 µg/L	25.295 ppb	15:09:14
2	Zn 213.857†	10044.3	9398.1	231.93 µg/L	231.93 ppb	15:09:14
3	Sc RADIAL	58585.7	58585.7	101 %		15:08:06
3	Al 396.153Radial†	17365.7	17226.3	12664 µg/L	12664 ppb	15:08:06
3	Ca 317.933Radial†	3246.8	3021.0	2798.1 µg/L	2798.1 ppb	15:08:26
3	Fe 238.204 Radial†	7165.9	7081.7	60842 µg/L	60842 ppb	15:08:06
3	K 766.490 Radial†	5086.8	4862.4	3420.4 µg/L	3420.4 ppb	15:08:06
3	Mg 279.077 IEC†	220.3	204.8	1862.6 µg/L	1862.6 ppb	15:08:26
3	Na 589.592 Radial†	6407.1	5781.1	1876.7 µg/L	1876.7 ppb	15:08:06
3	Sr 421.552†	2178.6	2125.0	21.487 µg/L	21.487 ppb	15:08:06
3	Sc 361.383	2073975.3	2073975.3	101.45 %		15:09:42
3	Y 371.029	1470202.0	1470202.0	104.64 %		15:09:42
3	Ag 328.068†	-1343.9	-801.1	-2.3226 µg/L	-2.3226 ppb	15:09:47
3	As 188.979†	-1.5	-3.0	-2.3835 µg/L	-2.3835 ppb	15:10:07
3	B 249.677†	575.3	270.4	-19.707 µg/L	-19.707 ppb	15:09:47
3	Ba 233.527†	6411.2	6337.8	162.95 µg/L	162.95 ppb	15:09:47
3	Be 313.107†	3689.6	6604.5	3.6779 µg/L	3.6779 ppb	15:09:47
3	Cd 226.502†	65.4	202.5	-1.2827 µg/L	-1.2827 ppb	15:09:47
3	Co 228.616†	859.4	852.1	38.265 µg/L	38.265 ppb	15:10:07
3	Cr 267.716†	8984.2	8888.3	188.99 µg/L	188.99 ppb	15:09:47
3	Cu 324.752†	3768.2	1176.9	16.521 µg/L	16.521 ppb	15:09:47
3	Mn 257.610†	571680.0	563764.1	1914.3 µg/L	1914.3 ppb	15:09:42
3	Mo 202.031†	48.3	54.5	7.9210 µg/L	7.9210 ppb	15:10:07
3	Ni 231.604†	2670.7	2325.8	124.94 µg/L	124.94 ppb	15:09:47
3	P 214.914†	142.3	118.7	203.79 µg/L	203.79 ppb	15:10:07
3	Pb 220.353†	191.2	95.0	23.164 µg/L	23.164 ppb	15:10:07
3	S 181.975 Axial†	19.6	5.6	23.952 µg/L	23.952 ppb	15:10:07
3	Sb 206.836†	29.0	8.5	5.7991 µg/L	5.7991 ppb	15:10:07
3	Se 196.026†	-13.7	-29.4	119.08 µg/L	119.08 ppb	15:10:07
3	SiO2†	158828.5	155219.1	32730 µg/L	32730 ppb	15:09:47
3	Si 251.611†	195353.0	192252.7	15564 µg/L	15564 ppb	15:09:42
3	Sn 189.927†	21.2	17.8	1.6523 µg/L	1.6523 ppb	15:10:07
3	Ti 334.940†	619048.8	610090.2	1440.0 µg/L	1440.0 ppb	15:09:42
3	Tl 190.801†	-42.9	-19.3	2.6723 µg/L	2.6723 ppb	15:10:07
3	U 409.014†	-1567.2	-1501.1	-139.21 µg/L	-139.21 ppb	15:09:42
3	V 292.402†	1672.1	1680.3	24.797 µg/L	24.797 ppb	15:09:47
3	Zn 213.857†	10010.4	9348.8	230.72 µg/L	230.72 ppb	15:09:47

Mean Data: 245797019|948065|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2067462.0	101.13 %	%	0.419			0.41%
Sc RADIAL	58791.5	101 %	%	0.3			0.31%
Y 371.029	1465501.9	104.31 %	%	0.439			0.42%
Ag 328.068†	-780.6	-2.1659 µg/L	µg/L	0.13776	-2.1659 ppb	0.13776	6.36%
Al 396.153Radial†	17203.3	12647 µg/L	µg/L	67.3	12647 ppb	67.3	0.53%
As 188.979†	2.7	8.5049 µg/L	µg/L	9.43826	8.5049 ppb	9.43826	110.97%
B 249.677†	285.7	-19.005 µg/L	µg/L	0.6104	-19.005 ppb	0.6104	3.21%
Ba 233.527†	6415.7	164.95 µg/L	µg/L	1.797	164.95 ppb	1.797	1.09%
Be 313.107†	6716.8	3.7463 µg/L	µg/L	0.06087	3.7463 ppb	0.06087	1.62%
Ca 317.933Radial†	3015.8	2793.3 µg/L	µg/L	13.87	2793.3 ppb	13.87	0.50%
Cd 226.502†	184.3	-1.7659 µg/L	µg/L	0.57013	-1.7659 ppb	0.57013	32.29%
Co 228.616†	876.7	39.437 µg/L	µg/L	1.0155	39.437 ppb	1.0155	2.57%
Cr 267.716†	9018.5	191.76 µg/L	µg/L	2.532	191.76 ppb	2.532	1.32%
Cu 324.752†	1180.1	16.535 µg/L	µg/L	0.1005	16.535 ppb	0.1005	0.61%
Fe 238.204 Radial†	7074.1	60776 µg/L	µg/L	491.5	60776 ppb	491.5	0.81%
K 766.490 Radial†	4837.6	3403.0 µg/L	µg/L	38.63	3403.0 ppb	38.63	1.14%
Mg 279.077 IEC†	207.8	1891.0 µg/L	µg/L	34.36	1891.0 ppb	34.36	1.82%
Mn 257.610†	566541.5	1923.6 µg/L	µg/L	9.66	1923.6 ppb	9.66	0.50%
Mo 202.031†	56.9	8.1657 µg/L	µg/L	0.24251	8.1657 ppb	0.24251	2.97%
Na 589.592 Radial†	5795.0	1881.3 µg/L	µg/L	10.96	1881.3 ppb	10.96	0.58%

Ni 231.604†	2337.5	125.56 µg/L	0.668	125.56 ppb	0.668	0.53%
P 214.914†	124.3	215.82 µg/L	10.680	215.82 ppb	10.680	4.95%
Pb 220.353†	97.2	23.732 µg/L	2.0714	23.732 ppb	2.0714	8.73%
S 181.975 Axial†	7.6	32.783 µg/L	11.3706	32.783 ppb	11.3706	34.68%
Sb 206.836†	10.4	7.6306 µg/L	2.37070	7.6306 ppb	2.37070	31.07%
Se 196.026†	-31.7	115.29 µg/L	4.400	115.29 ppb	4.400	3.82%
SiO2†	156757.2	33054 µg/L	369.2	33054 ppb	369.2	1.12%
Si 251.611†	193131.5	15636 µg/L	63.8	15636 ppb	63.8	0.41%
Sn 189.927†	16.8	1.2336 µg/L	1.17818	1.2336 ppb	1.17818	95.51%
Sr 421.552†	2109.1	21.327 µg/L	0.3013	21.327 ppb	0.3013	1.41%
Ti 334.940†	614014.4	1449.3 µg/L	8.29	1449.3 ppb	8.29	0.57%
Tl 190.801†	-18.1	4.4345 µg/L	1.68634	4.4345 ppb	1.68634	38.03%
U 409.014†	-1474.4	-136.88 µg/L	2.035	-136.88 ppb	2.035	1.49%
V 292.402†	1685.1	24.850 µg/L	0.4203	24.850 ppb	0.4203	1.69%
Zn 213.857†	9415.3	232.38 µg/L	1.930	232.38 ppb	1.930	0.83%

Sequence No.: 23

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/17/2010 15:10:15

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	57951.6	57951.6	99.9 %		15:10:50
1	Al 396.153Radial†	6617.8	6650.5	4878.5 µg/L	4878.5 ppb	15:10:50
1	Ca 317.933Radial†	5449.8	5262.6	4874.2 µg/L	4874.2 ppb	15:11:10
1	Fe 238.204 Radial†	597.0	580.7	4999.6 µg/L	4999.6 ppb	15:11:10
1	K 766.490 Radial†	7170.4	7004.2	4927.1 µg/L	4927.1 ppb	15:10:50
1	Mg 279.077 IEC†	550.4	537.8	5065.4 µg/L	5065.4 ppb	15:11:10
1	Na 589.592 Radial†	30958.9	30438.9	9881.6 µg/L	9881.6 ppb	15:10:50
1	Sr 421.552†	47914.1	47952.3	484.88 µg/L	484.88 ppb	15:10:50
1	Sc 361.383	2051353.4	2051353.4	100.34 %		15:12:10
1	Y 371.029	1397323.3	1397323.3	99.455 %		15:12:10
1	Ag 328.068†	63344.9	63653.9	501.79 µg/L	501.79 ppb	15:12:15
1	As 188.979†	278.5	276.1	530.30 µg/L	530.30 ppb	15:12:35
1	B 249.677†	11853.1	11516.2	498.13 µg/L	498.13 ppb	15:12:15
1	Ba 233.527†	19743.4	19694.5	507.17 µg/L	507.17 ppb	15:12:15
1	Be 313.107†	799172.0	799430.3	511.41 µg/L	511.41 ppb	15:12:10
1	Cd 226.502†	18648.0	18722.7	505.65 µg/L	505.65 ppb	15:12:15
1	Co 228.616†	10589.6	10558.7	510.73 µg/L	510.73 ppb	15:12:15
1	Cr 267.716†	23844.0	23795.4	506.24 µg/L	506.24 ppb	15:12:15
1	Cu 324.752†	76096.1	73300.5	502.99 µg/L	502.99 ppb	15:12:15
1	Mn 257.610†	152436.9	152156.8	514.95 µg/L	514.95 ppb	15:12:10
1	Mo 202.031†	5053.2	5043.0	519.14 µg/L	519.14 ppb	15:12:35
1	Ni 231.604†	9876.9	9536.7	508.71 µg/L	508.71 ppb	15:12:15
1	P 214.914†	1267.4	1241.6	2570.8 µg/L	2570.8 ppb	15:12:35
1	Pb 220.353†	2095.6	1995.0	517.66 µg/L	517.66 ppb	15:12:35
1	S 181.975 Axial†	257.2	242.6	1045.6 µg/L	1045.6 ppb	15:12:35
1	Sb 206.836†	558.0	536.0	515.15 µg/L	515.15 ppb	15:12:35
1	Se 196.026†	360.6	343.5	531.14 µg/L	531.14 ppb	15:12:35
1	SiO2†	27364.4	25927.1	5467.0 µg/L	5467.0 ppb	15:12:15
1	Si 251.611†	31935.7	31512.9	2551.2 µg/L	2551.2 ppb	15:12:15
1	Sn 189.927†	1175.9	1168.8	520.74 µg/L	520.74 ppb	15:12:35
1	Ti 334.940†	217700.5	216831.9	511.50 µg/L	511.50 ppb	15:12:10
1	Tl 190.801†	348.2	369.9	519.04 µg/L	519.04 ppb	15:12:35
1	U 409.014†	5882.2	5906.0	512.77 µg/L	512.77 ppb	15:12:15
1	V 292.402†	48972.3	48838.4	508.94 µg/L	508.94 ppb	15:12:15
1	Zn 213.857†	20860.4	20270.8	504.40 µg/L	504.40 ppb	15:12:15
2	Sc RADIAL	60100.1	60100.1	104 %		15:11:16
2	Al 396.153Radial†	6747.8	6539.1	4796.8 µg/L	4796.8 ppb	15:11:16
2	Ca 317.933Radial†	5551.2	5165.3	4784.2 µg/L	4784.2 ppb	15:11:36
2	Fe 238.204 Radial†	601.8	563.9	4855.4 µg/L	4855.4 ppb	15:11:36
2	K 766.490 Radial†	7324.6	6896.4	4851.3 µg/L	4851.3 ppb	15:11:16
2	Mg 279.077 IEC†	554.6	522.1	4917.5 µg/L	4917.5 ppb	15:11:36
2	Na 589.592 Radial†	31601.6	29951.2	9723.2 µg/L	9723.2 ppb	15:11:16
2	Sr 421.552†	49390.7	47662.7	481.95 µg/L	481.95 ppb	15:11:16
2	Sc 361.383	2075685.0	2075685.0	101.53 %		15:12:42
2	Y 371.029	1412156.4	1412156.4	100.51 %		15:12:42
2	Ag 328.068†	63968.9	63528.4	500.80 µg/L	500.80 ppb	15:12:48
2	As 188.979†	275.3	269.7	517.94 µg/L	517.94 ppb	15:13:08
2	B 249.677†	11936.8	11460.1	495.77 µg/L	495.77 ppb	15:12:48
2	Ba 233.527†	19952.3	19669.6	506.53 µg/L	506.53 ppb	15:12:48
2	Be 313.107†	799437.2	790355.3	505.60 µg/L	505.60 ppb	15:12:42
2	Cd 226.502†	18880.1	18733.5	505.96 µg/L	505.96 ppb	15:12:48
2	Co 228.616†	10686.3	10530.3	509.35 µg/L	509.35 ppb	15:12:48
2	Cr 267.716†	24151.6	23819.8	506.76 µg/L	506.76 ppb	15:12:48
2	Cu 324.752†	76776.3	73081.5	501.47 µg/L	501.47 ppb	15:12:48
2	Mn 257.610†	152433.3	150372.3	508.90 µg/L	508.90 ppb	15:12:42
2	Mo 202.031†	5003.4	4934.9	508.01 µg/L	508.01 ppb	15:13:08
2	Ni 231.604†	10014.2	9556.5	509.76 µg/L	509.76 ppb	15:12:48
2	P 214.914†	1268.9	1228.2	2542.7 µg/L	2542.7 ppb	15:13:08
2	Pb 220.353†	2070.8	1946.1	504.94 µg/L	504.94 ppb	15:13:08

2	S 181.975 Axial†	254.5	236.9	1021.2 µg/L	1021.2 ppb	15:13:08
2	Sb 206.836†	561.3	532.7	511.82 µg/L	511.82 ppb	15:13:08
2	Se 196.026†	347.7	326.6	505.17 µg/L	505.17 ppb	15:13:08
2	SiO2†	27714.2	25952.0	5472.3 µg/L	5472.3 ppb	15:12:48
2	Si 251.611†	32480.7	31676.6	2564.5 µg/L	2564.5 ppb	15:12:48
2	Sn 189.927†	1163.2	1142.6	509.06 µg/L	509.06 ppb	15:13:08
2	Ti 334.940†	217615.1	214204.5	505.31 µg/L	505.31 ppb	15:12:42
2	Tl 190.801†	346.6	364.3	511.16 µg/L	511.16 ppb	15:13:08
2	U 409.014†	5879.5	5834.6	506.59 µg/L	506.59 ppb	15:12:48
2	V 292.402†	49573.4	48858.2	509.03 µg/L	509.03 ppb	15:12:48
2	Zn 213.857†	21207.5	20369.0	506.87 µg/L	506.87 ppb	15:12:48
3	Sc RADIAL	59831.4	59831.4	103 %		15:11:41
3	Al 396.153Radial†	6776.2	6596.0	4839.9 µg/L	4839.9 ppb	15:11:41
3	Ca 317.933Radial†	5534.8	5173.5	4791.7 µg/L	4791.7 ppb	15:12:01
3	Fe 238.204 Radial†	597.3	562.1	4839.8 µg/L	4839.8 ppb	15:12:01
3	K 766.490 Radial†	7410.1	7011.1	4931.9 µg/L	4931.9 ppb	15:11:41
3	Mg 279.077 IEC†	549.2	519.3	4890.1 µg/L	4890.1 ppb	15:12:01
3	Na 589.592 Radial†	31731.6	30214.3	9808.6 µg/L	9808.6 ppb	15:11:41
3	Sr 421.552†	49686.9	48164.3	487.02 µg/L	487.02 ppb	15:11:41
3	Sc 361.383	2065367.0	2065367.0	101.03 %		15:13:15
3	Y 371.029	1404981.2	1404981.2	100.00 %		15:13:15
3	Ag 328.068†	61551.4	61450.2	484.31 µg/L	484.31 ppb	15:13:20
3	As 188.979†	246.6	242.6	465.98 µg/L	465.98 ppb	15:13:40
3	B 249.677†	11444.7	11031.8	477.12 µg/L	477.12 ppb	15:13:20
3	Ba 233.527†	18817.3	18644.2	480.11 µg/L	480.11 ppb	15:13:20
3	Be 313.107†	761133.7	756374.2	483.87 µg/L	483.87 ppb	15:13:15
3	Cd 226.502†	17730.3	17688.2	477.70 µg/L	477.70 ppb	15:13:20
3	Co 228.616†	9996.8	9900.3	478.84 µg/L	478.84 ppb	15:13:20
3	Cr 267.716†	22152.8	21960.1	467.20 µg/L	467.20 ppb	15:13:20
3	Cu 324.752†	71956.6	68688.5	471.36 µg/L	471.36 ppb	15:13:20
3	Mn 257.610†	145180.4	143943.1	487.16 µg/L	487.16 ppb	15:13:15
3	Mo 202.031†	4339.8	4302.6	442.95 µg/L	442.95 ppb	15:13:40
3	Ni 231.604†	9348.5	8946.8	477.24 µg/L	477.24 ppb	15:13:20
3	P 214.914†	1119.9	1086.9	2246.8 µg/L	2246.8 ppb	15:13:40
3	Pb 220.353†	1877.7	1765.1	457.91 µg/L	457.91 ppb	15:13:40
3	S 181.975 Axial†	233.3	217.1	936.04 µg/L	936.04 ppb	15:13:40
3	Sb 206.836†	496.8	471.6	452.74 µg/L	452.74 ppb	15:13:40
3	Se 196.026†	319.1	300.0	464.62 µg/L	464.62 ppb	15:13:40
3	SiO2†	26434.6	24821.8	5234.0 µg/L	5234.0 ppb	15:13:20
3	Si 251.611†	30745.2	30118.6	2438.4 µg/L	2438.4 ppb	15:13:20
3	Sn 189.927†	994.6	981.4	437.25 µg/L	437.25 ppb	15:13:40
3	Ti 334.940†	206691.1	204462.1	482.32 µg/L	482.32 ppb	15:13:15
3	Tl 190.801†	318.0	337.8	474.10 µg/L	474.10 ppb	15:13:40
3	U 409.014†	5341.8	5331.3	462.81 µg/L	462.81 ppb	15:13:20
3	V 292.402†	46031.7	45596.5	474.82 µg/L	474.82 ppb	15:13:20
3	Zn 213.857†	19814.4	19094.4	475.12 µg/L	475.12 ppb	15:13:20

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2064135.1	100.97 %	0.597			0.59%
Sc RADIAL	59294.4	102 %	2.0			1.97%
Y 371.029	1404820.3	99.989 %	0.5280			0.53%
Ag 328.068†	62877.5	495.64 µg/L	9.817	495.64 ppb	9.817	1.98%
QC value within limits for Ag 328.068 Recovery = 99.13%						
Al 396.153Radial†	6595.2	4838.4 µg/L	40.85	4838.4 ppb	40.85	0.84%
QC value within limits for Al 396.153Radial Recovery = 96.77%						
As 188.979†	262.8	504.74 µg/L	34.132	504.74 ppb	34.132	6.76%
QC value within limits for As 188.979 Recovery = 100.95%						
B 249.677†	11336.0	490.34 µg/L	11.509	490.34 ppb	11.509	2.35%
QC value within limits for B 249.677 Recovery = 98.07%						
Ba 233.527†	19336.1	497.93 µg/L	15.440	497.93 ppb	15.440	3.10%
QC value within limits for Ba 233.527 Recovery = 99.59%						
Be 313.107†	782053.3	500.29 µg/L	14.519	500.29 ppb	14.519	2.90%
QC value within limits for Be 313.107 Recovery = 100.06%						
Ca 317.933Radial†	5200.5	4816.7 µg/L	49.95	4816.7 ppb	49.95	1.04%
QC value within limits for Ca 317.933Radial Recovery = 96.33%						
Cd 226.502†	18381.5	496.44 µg/L	16.230	496.44 ppb	16.230	3.27%
QC value within limits for Cd 226.502 Recovery = 99.29%						
Co 228.616†	10329.8	499.64 µg/L	18.029	499.64 ppb	18.029	3.61%

QC value within limits for Co 228.616 Recovery = 99.93%							
Cr 267.716†	23191.8	493.40 µg/L	22.692	493.40 ppb	22.692	4.60%	
QC value within limits for Cr 267.716 Recovery = 98.68%							
Cu 324.752†	71690.2	491.94 µg/L	17.836	491.94 ppb	17.836	3.63%	
QC value within limits for Cu 324.752 Recovery = 98.39%							
Fe 238.204 Radial†	568.9	4898.3 µg/L	88.11	4898.3 ppb	88.11	1.80%	
QC value within limits for Fe 238.204 Radial Recovery = 97.97%							
K 766.490 Radial†	6970.6	4903.4 µg/L	45.23	4903.4 ppb	45.23	0.92%	
QC value within limits for K 766.490 Radial Recovery = 98.07%							
Mg 279.077 IEC†	526.4	4957.7 µg/L	94.28	4957.7 ppb	94.28	1.90%	
QC value within limits for Mg 279.077 IEC Recovery = 99.15%							
Mn 257.610†	148824.0	503.67 µg/L	14.613	503.67 ppb	14.613	2.90%	
QC value within limits for Mn 257.610 Recovery = 100.73%							
Mo 202.031†	4760.2	490.04 µg/L	41.155	490.04 ppb	41.155	8.40%	
QC value within limits for Mo 202.031 Recovery = 98.01%							
Na 589.592 Radial†	30201.5	9804.5 µg/L	79.25	9804.5 ppb	79.25	0.81%	
QC value within limits for Na 589.592 Radial Recovery = 98.04%							
Ni 231.604†	9346.6	498.57 µg/L	18.478	498.57 ppb	18.478	3.71%	
QC value within limits for Ni 231.604 Recovery = 99.71%							
P 214.914†	1185.6	2453.4 µg/L	179.49	2453.4 ppb	179.49	7.32%	
QC value within limits for P 214.914 Recovery = 98.14%							
Pb 220.353†	1902.0	493.50 µg/L	31.472	493.50 ppb	31.472	6.38%	
QC value within limits for Pb 220.353 Recovery = 98.70%							
S 181.975 Axial†	232.2	1001.0 µg/L	57.52	1001.0 ppb	57.52	5.75%	
QC value within limits for S 181.975 Axial Recovery = 100.10%							
Sb 206.836†	513.4	493.24 µg/L	35.110	493.24 ppb	35.110	7.12%	
QC value within limits for Sb 206.836 Recovery = 98.65%							
Se 196.026†	323.4	500.31 µg/L	33.521	500.31 ppb	33.521	6.70%	
QC value within limits for Se 196.026 Recovery = 100.06%							
SiO2†	25567.0	5391.1 µg/L	136.10	5391.1 ppb	136.10	2.52%	
QC value within limits for SiO2 Recovery = 100.81%							
Si 251.611†	31102.7	2518.0 µg/L	69.32	2518.0 ppb	69.32	2.75%	
QC value within limits for Si 251.611 Recovery = 100.72%							
Sn 189.927†	1097.6	489.02 µg/L	45.210	489.02 ppb	45.210	9.25%	
QC value within limits for Sn 189.927 Recovery = 97.80%							
Sr 421.552†	47926.5	484.62 µg/L	2.546	484.62 ppb	2.546	0.53%	
QC value within limits for Sr 421.552 Recovery = 96.92%							
Ti 334.940†	211832.8	499.71 µg/L	15.378	499.71 ppb	15.378	3.08%	
QC value within limits for Ti 334.940 Recovery = 99.94%							
Tl 190.801†	357.3	501.43 µg/L	24.000	501.43 ppb	24.000	4.79%	
QC value within limits for Tl 190.801 Recovery = 100.29%							
U 409.014†	5690.6	494.06 µg/L	27.238	494.06 ppb	27.238	5.51%	
QC value within limits for U 409.014 Recovery = 98.81%							
V 292.402†	47764.4	497.60 µg/L	19.724	497.60 ppb	19.724	3.96%	
QC value within limits for V 292.402 Recovery = 99.52%							
Zn 213.857†	19911.4	495.46 µg/L	17.658	495.46 ppb	17.658	3.56%	
QC value within limits for Zn 213.857 Recovery = 99.09%							
All analyte(s) passed QC.							



Sequence No.: 24

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/17/2010 15:13:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	59234.1	59234.1	102 %		15:14:20
1	Al 396.153Radial†	13.7	36.3	26.699 µg/L	26.699 ppb	15:14:20
1	Ca 317.933Radial†	200.2	0.8	0.7250 µg/L	0.7250 ppb	15:14:40
1	Fe 238.204 Radial†	17.4	-0.2	-1.7942 µg/L	-1.7942 ppb	15:14:40
1	K 766.490 Radial†	162.2	-18.0	-12.644 µg/L	-12.644 ppb	15:14:20
1	Mg 279.077 IEC†	11.7	-2.0	-18.502 µg/L	-18.502 ppb	15:14:40
1	Na 589.592 Radial†	477.2	-98.6	-32.005 µg/L	-32.005 ppb	15:14:20
1	Sr 421.552†	46.1	11.9	0.1200 µg/L	0.1200 ppb	15:14:20
1	Sc 361.383	2090483.3	2090483.3	102.25 %		15:15:38
1	Y 371.029	1427833.7	1427833.7	101.63 %		15:15:38
1	Ag 328.068†	-546.8	-11.1	-0.0871 µg/L	-0.0871 ppb	15:15:44
1	As 188.979†	-3.3	-4.7	-9.0074 µg/L	-9.0074 ppb	15:16:04
1	B 249.677†	304.0	0.6	0.0262 µg/L	0.0262 ppb	15:16:04
1	Ba 233.527†	-17.8	0.6	0.0150 µg/L	0.0150 ppb	15:16:04
1	Be 313.107†	-3161.9	-124.7	-0.0800 µg/L	-0.0800 ppb	15:15:44
1	Cd 226.502†	-135.9	5.0	0.1345 µg/L	0.1345 ppb	15:16:04
1	Co 228.616†	-13.7	-8.3	-0.4043 µg/L	-0.4043 ppb	15:16:04
1	Cr 267.716†	-28.0	4.8	0.1024 µg/L	0.1024 ppb	15:16:04
1	Cu 324.752†	2547.8	-45.9	-0.3147 µg/L	-0.3147 ppb	15:15:44
1	Mn 257.610†	-144.6	95.1	0.3222 µg/L	0.3222 ppb	15:16:04
1	Mo 202.031†	-0.4	6.5	0.6693 µg/L	0.6693 ppb	15:16:04
1	Ni 231.604†	295.5	-17.8	-0.9483 µg/L	-0.9483 ppb	15:16:04
1	P 214.914†	30.3	8.0	16.978 µg/L	16.978 ppb	15:16:04
1	Pb 220.353†	93.0	-2.6	-0.6677 µg/L	-0.6677 ppb	15:16:04
1	S 181.975 Axial†	15.1	1.0	4.2403 µg/L	4.2403 ppb	15:16:04
1	Sb 206.836†	21.8	1.2	1.1478 µg/L	1.1478 ppb	15:16:04
1	Se 196.026†	8.3	-7.7	-11.706 µg/L	-11.706 ppb	15:16:04
1	SiO2†	1392.4	17.2	3.6210 µg/L	3.6210 ppb	15:15:44
1	Si 251.611†	376.5	53.7	4.3472 µg/L	4.3472 ppb	15:16:04
1	Sn 189.927†	-2.3	-5.3	-2.3725 µg/L	-2.3725 ppb	15:16:04
1	Ti 334.940†	344.2	206.0	0.4878 µg/L	0.4878 ppb	15:15:44
1	Tl 190.801†	-20.0	3.4	4.6689 µg/L	4.6689 ppb	15:16:04
1	U 409.014†	-98.4	-52.5	-4.5711 µg/L	-4.5711 ppb	15:15:44
1	V 292.402†	-39.0	-6.1	-0.0621 µg/L	-0.0621 ppb	15:15:44
1	Zn 213.857†	501.1	-28.8	-0.7151 µg/L	-0.7151 ppb	15:16:04
2	Sc RADIAL	59219.7	59219.7	102 %		15:14:45
2	Al 396.153Radial†	10.8	33.5	24.586 µg/L	24.586 ppb	15:14:45
2	Ca 317.933Radial†	199.0	-0.4	-0.3815 µg/L	-0.3815 ppb	15:15:05
2	Fe 238.204 Radial†	17.9	0.3	2.6125 µg/L	2.6125 ppb	15:15:05
2	K 766.490 Radial†	127.0	-52.4	-36.880 µg/L	-36.880 ppb	15:14:45
2	Mg 279.077 IEC†	9.9	-3.7	-34.683 µg/L	-34.683 ppb	15:15:05
2	Na 589.592 Radial†	513.4	-63.0	-20.455 µg/L	-20.455 ppb	15:14:45
2	Sr 421.552†	54.4	20.0	0.2024 µg/L	0.2024 ppb	15:14:45
2	Sc 361.383	2092408.3	2092408.3	102.35 %		15:16:10
2	Y 371.029	1428694.2	1428694.2	101.69 %		15:16:10
2	Ag 328.068†	-544.2	-8.1	-0.0630 µg/L	-0.0630 ppb	15:16:15
2	As 188.979†	-2.3	-3.7	-7.1297 µg/L	-7.1297 ppb	15:16:35
2	B 249.677†	311.7	7.8	0.3386 µg/L	0.3386 ppb	15:16:35
2	Ba 233.527†	-29.5	-10.8	-0.2783 µg/L	-0.2783 ppb	15:16:35
2	Be 313.107†	-3155.9	-115.9	-0.0744 µg/L	-0.0744 ppb	15:16:15
2	Cd 226.502†	-148.8	-7.4	-0.2009 µg/L	-0.2009 ppb	15:16:35
2	Co 228.616†	-15.4	-10.0	-0.4838 µg/L	-0.4838 ppb	15:16:35
2	Cr 267.716†	-28.5	4.3	0.0917 µg/L	0.0917 ppb	15:16:35
2	Cu 324.752†	2498.4	-96.5	-0.6608 µg/L	-0.6608 ppb	15:16:15
2	Mn 257.610†	-155.7	84.4	0.2872 µg/L	0.2872 ppb	15:16:35
2	Mo 202.031†	2.8	9.6	0.9891 µg/L	0.9891 ppb	15:16:35
2	Ni 231.604†	299.2	-14.5	-0.7722 µg/L	-0.7722 ppb	15:16:35
2	P 214.914†	25.7	3.5	7.4285 µg/L	7.4285 ppb	15:16:35
2	Pb 220.353†	98.5	2.7	0.7102 µg/L	0.7102 ppb	15:16:35

2	S 181.975 Axial†	13.9	-0.2	-0.9295 µg/L	-0.9295 ppb	15:16:35
2	Sb 206.836†	21.0	0.4	0.3632 µg/L	0.3632 ppb	15:16:35
2	Se 196.026†	8.8	-7.2	-10.991 µg/L	-10.991 ppb	15:16:35
2	SiO2†	1366.5	-9.3	-1.9715 µg/L	-1.9715 ppb	15:16:15
2	Si 251.611†	349.2	26.7	2.1644 µg/L	2.1644 ppb	15:16:35
2	Sn 189.927†	-1.1	-4.2	-1.8548 µg/L	-1.8548 ppb	15:16:35
2	Ti 334.940†	330.9	192.7	0.4575 µg/L	0.4575 ppb	15:16:15
2	Tl 190.801†	-27.3	-3.7	-5.1033 µg/L	-5.1033 ppb	15:16:35
2	U 409.014†	-34.7	9.7	0.8470 µg/L	0.8470 ppb	15:16:15
2	V 292.402†	-30.9	1.9	0.0282 µg/L	0.0282 ppb	15:16:15
2	Zn 213.857†	492.1	-38.1	-0.9480 µg/L	-0.9480 ppb	15:16:35
3	Sc RADIAL	59080.8	59080.8	102 %		15:15:11
3	Al 396.153Radial†	-20.1	3.2	2.3224 µg/L	2.3224 ppb	15:15:11
3	Ca 317.933Radial†	196.9	-2.0	-1.8598 µg/L	-1.8598 ppb	15:15:31
3	Fe 238.204 Radial†	18.5	0.9	7.8034 µg/L	7.8034 ppb	15:15:31
3	K 766.490 Radial†	176.1	-3.9	-2.7393 µg/L	-2.7393 ppb	15:15:11
3	Mg 279.077 IEC†	10.1	-3.5	-32.810 µg/L	-32.810 ppb	15:15:31
3	Na 589.592 Radial†	483.0	-91.7	-29.755 µg/L	-29.755 ppb	15:15:11
3	Sr 421.552†	7.9	-25.5	-0.2580 µg/L	-0.2580 ppb	15:15:11
3	Sc 361.383	2089995.1	2089995.1	102.23 %		15:16:41
3	Y 371.029	1427034.5	1427034.5	101.57 %		15:16:41
3	Ag 328.068†	-587.7	-51.2	-0.3990 µg/L	-0.3990 ppb	15:16:46
3	As 188.979†	-1.1	-2.5	-4.8969 µg/L	-4.8969 ppb	15:17:06
3	B 249.677†	291.0	-12.1	-0.5298 µg/L	-0.5298 ppb	15:17:06
3	Ba 233.527†	-22.8	-4.3	-0.1104 µg/L	-0.1104 ppb	15:17:06
3	Be 313.107†	-3272.0	-233.1	-0.1492 µg/L	-0.1492 ppb	15:16:46
3	Cd 226.502†	-142.0	-1.0	-0.0277 µg/L	-0.0277 ppb	15:17:06
3	Co 228.616†	-17.5	-12.1	-0.5849 µg/L	-0.5849 ppb	15:17:06
3	Cr 267.716†	-23.2	9.5	0.2013 µg/L	0.2013 ppb	15:17:06
3	Cu 324.752†	2536.9	-56.0	-0.3825 µg/L	-0.3825 ppb	15:16:46
3	Mn 257.610†	-152.1	87.8	0.2993 µg/L	0.2993 ppb	15:17:06
3	Mo 202.031†	-4.5	2.5	0.2531 µg/L	0.2531 ppb	15:17:06
3	Ni 231.604†	292.6	-20.5	-1.0962 µg/L	-1.0962 ppb	15:17:06
3	P 214.914†	28.9	6.7	14.197 µg/L	14.197 ppb	15:17:06
3	Pb 220.353†	92.0	-3.5	-0.9171 µg/L	-0.9171 ppb	15:17:06
3	S 181.975 Axial†	19.1	4.8	20.828 µg/L	20.828 ppb	15:17:06
3	Sb 206.836†	18.1	-2.4	-2.3410 µg/L	-2.3410 ppb	15:17:06
3	Se 196.026†	8.8	-7.3	-11.063 µg/L	-11.063 ppb	15:17:06
3	SiO2†	1412.4	37.1	7.8275 µg/L	7.8275 ppb	15:16:46
3	Si 251.611†	383.6	60.8	4.9183 µg/L	4.9183 ppb	15:17:06
3	Sn 189.927†	-0.2	-3.3	-1.4810 µg/L	-1.4810 ppb	15:17:06
3	Ti 334.940†	197.6	62.7	0.1505 µg/L	0.1505 ppb	15:16:46
3	Tl 190.801†	-23.3	0.1	0.1664 µg/L	0.1664 ppb	15:17:06
3	U 409.014†	13.6	57.0	4.9582 µg/L	4.9582 ppb	15:16:46
3	V 292.402†	-16.4	16.0	0.1733 µg/L	0.1733 ppb	15:16:46
3	Zn 213.857†	496.2	-33.5	-0.8327 µg/L	-0.8327 ppb	15:17:06

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2090962.2	102.28 %	0.062			0.06%
Sc RADIAL	59178.2	102 %	0.1			0.14%
Y 371.029	1427854.1	101.63 %	0.059			0.06%
Ag 328.068†	-23.4	-0.1831 µg/L	0.18741	-0.1831 ppb	0.18741	102.38%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	24.3	17.869 µg/L	13.5053	17.869 ppb	13.5053	75.58%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-3.6	-7.0113 µg/L	2.05783	-7.0113 ppb	2.05783	29.35%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-1.2	-0.0550 µg/L	0.43987	-0.0550 ppb	0.43987	799.78%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-4.8	-0.1246 µg/L	0.14718	-0.1246 ppb	0.14718	118.13%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-157.9	-0.1012 µg/L	0.04168	-0.1012 ppb	0.04168	41.20%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.5	-0.5055 µg/L	1.29685	-0.5055 ppb	1.29685	256.57%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-1.1	-0.0314 µg/L	0.16776	-0.0314 ppb	0.16776	534.70%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-10.1	-0.4910 µg/L	0.09049	-0.4910 ppb	0.09049	18.43%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	6.2	0.1318 µg/L	0.06045	0.1318 ppb	0.06045	45.86%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-66.1	-0.4527 µg/L	0.18339	-0.4527 ppb	0.18339	40.51%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	0.3	2.8739 µg/L	4.80412	2.8739 ppb	4.80412	167.16%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-24.8	-17.421 µg/L	17.5642	-17.421 ppb	17.5642	100.82%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	-3.0	-28.665 µg/L	8.8512	-28.665 ppb	8.8512	30.88%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	89.1	0.3029 µg/L	0.01777	0.3029 ppb	0.01777	5.87%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	6.2	0.6372 µg/L	0.36908	0.6372 ppb	0.36908	57.92%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	-84.4	-27.405 µg/L	6.1231	-27.405 ppb	6.1231	22.34%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-17.6	-0.9389 µg/L	0.16216	-0.9389 ppb	0.16216	17.27%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	6.1	12.868 µg/L	4.9117	12.868 ppb	4.9117	38.17%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-1.1	-0.2915 µg/L	0.87645	-0.2915 ppb	0.87645	300.63%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	1.9	8.0463 µg/L	11.36719	8.0463 ppb	11.36719	141.27%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	-0.3	-0.2767 µg/L	1.83031	-0.2767 ppb	1.83031	661.59%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-7.4	-11.253 µg/L	0.3936	-11.253 ppb	0.3936	3.50%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		15.0	3.1590 µg/L	4.91583	3.1590 ppb	4.91583	155.61%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	47.1	3.8100 µg/L	1.45342	3.8100 ppb	1.45342	38.15%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	-4.3	-1.9028 µg/L	0.44770	-1.9028 ppb	0.44770	23.53%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	2.1	0.0215 µg/L	0.24553	0.0215 ppb	0.24553	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	153.8	0.3653 µg/L	0.18663	0.3653 ppb	0.18663	51.09%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-0.1	-0.0894 µg/L	4.89113	-0.0894 ppb	4.89113	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	4.7	0.4114 µg/L	4.77958	0.4114 ppb	4.77958	>999.9%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	3.9	0.0465 µg/L	0.11877	0.0465 ppb	0.11877	255.53%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-33.5	-0.8319 µg/L	0.11642	-0.8319 ppb	0.11642	13.99%
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: Friday, February 12, 2010 10:18:56

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.319

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		1288.1		1288.058		41.465		3.2
Mg	24.0		14429.9		14429.886		284.936		2.0
Co	58.9		44038.8		44038.783		525.856		1.2
Rh	102.9		94668.0		94668.039		343.034		0.4
In	114.9		131263.0		131262.952		1490.538		1.1
Pb	208.0		44782.7		44782.687		416.543		0.9
[> Ba	137.9		108764.6		108764.609		1148.682		1.1
[ Ba++	69.0		1110.0		0.010		0.000		1.6
[> Ce	139.9		126796.2		126796.223		410.096		0.3
[ CeO	155.9		2967.6		0.023		0.000		1.2
Bkgd	220.0		3.4		3.400		1.851		54.4

### 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	4.5	1121.7
Co	59	17	4.8	34804.3
In	115	17	5.3	96253.2

## 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	601	2060	0.667
Be	9.0	9.0	2042	2045	0.716
Mg	24.0	24.0	5680	2065	0.694
Mg	25.0	25.0	5943	2080	0.729
Mg	26.0	25.9	6159	2085	0.675
Co	58.9	58.8	14163	2140	0.673
Rh	102.9	102.9	24874	2230	0.669
In	114.9	114.9	27784	2255	0.683
Ce	139.9	139.9	33848	2310	0.639
Pb	206.0	206.0	49936	2500	0.623
Pb	207.0	207.0	50113	2375	0.600
Pb	208.0	208.0	50436	2570	0.595
U	238.1	238.0	57683	2510	0.639

## ICPMS#4 - Summary Report

Sample ID: Blank  
 Sample Date/Time: Friday, February 12, 2010 22:01:43  
 Sample Type:  
 Sample Description:  
 Number of Replicates: 3  
 Batch ID:  
 Method File: c:\elandata\Method\6020.mth  
 Dataset File: C:\elandata\Dataset\100212\Blank.135

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L			11
Be	9		ug/L			2
B	11		ug/L			168
Na	23		ug/L			12005
Mg	24		ug/L			333
Al	27		ug/L			1333
P	31		ug/L			1512
K	39		ug/L			227808
Ca	43		ug/L			121
> Sc	45		ug/L			186466
Ti	47		ug/L			62
V	51		ug/L			1186
Cr	52		ug/L			-161
Cr	53		ug/L			40736
Mn	55		ug/L			388
Fe	57		ug/L			4896
Co	59		ug/L			29
Ni	60		ug/L			48
Cu	63		ug/L			126
Cu	65		ug/L			69
Zn	66		ug/L			280
Zn	67		ug/L			1986
Zn	68		ug/L			376
> Ge	74		ug/L			186933
As	75		ug/L			-293
Se	77		ug/L			3607
Se	82		ug/L			25
Kr	83		ug/L			36
Sr	88		ug/L			62
Y	89		ug/L			17
Zr	90		ug/L			326
Mo	98		ug/L			35
Ag	107		ug/L			34
Cd	111		ug/L			10
Cd	114		ug/L			20
> In	115		ug/L			138650
Sn	120		ug/L			212
Sb	121		ug/L			280
Sb	123		ug/L			215
Ba	135		ug/L			10
Ba	137		ug/L			14
Ho	165		ug/L			2
> Lu	175		ug/L			115315
Tl	205		ug/L			1186
Pb	208		ug/L			227
Th	232		ug/L			447
U	238		ug/L			46

## 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	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
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					
Zr	90					
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					
Th	232					
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: Blank

Report Date/Time: Friday, February 12, 2010 22:04:28

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## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Friday, February 12, 2010 22:07:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\Standard 1.136

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	2.144	3732	0.019
Be	9	10.000	ug/L	2.912	935	0.005
B	11	20.000	ug/L	3.047	2219	0.010
Na	23	1000.000	ug/L	8.944	1452691	7.348
Mg	24	1000.000	ug/L	4.838	926487	4.727
Al	27	1000.000	ug/L	1.078	1279881	6.527
P	31	1000.000	ug/L	0.451	78805	0.394
K	39	1000.000	ug/L	2.743	2839648	13.275
Ca	43	1000.000	ug/L	1.029	5811	0.029
> Sc	45		ug/L		195877	195877.085
Ti	47	10.000	ug/L	3.051	2574	0.013
V	51	10.000	ug/L	1.833	33136	0.163
Cr	52	10.000	ug/L	2.917	22979	0.118
Cr	53		ug/L		66842	0.123
Mn	55	10.000	ug/L	2.804	42855	0.217
Fe	57	1000.000	ug/L	3.955	92477	0.446
Co	59	10.000	ug/L	1.527	32696	0.167
Ni	60	10.000	ug/L	2.714	6892	0.035
Cu	63		ug/L		15148	0.077
Cu	65	10.000	ug/L	0.979	7552	0.038
Zn	66	10.000	ug/L	1.864	4437	0.022
Zn	67		ug/L		3594	0.008
Zn	68		ug/L		3437	0.016
> Ge	74		ug/L		188570	188570.277
As	75	10.000	ug/L	12.967	4460	0.025
Se	77		ug/L		6488	0.015
Se	82	10.000	ug/L	2.600	610	0.003
Kr	83		ug/L		32	-0.000
Sr	88	10.000	ug/L	1.700	82573	0.603
Y	89		ug/L		24	0.000
Zr	90	10.000	ug/L	2.045	42368	0.307
Mo	98	10.000	ug/L	1.786	17170	0.125
Ag	107	10.000	ug/L	1.098	30937	0.226
Cd	111	10.000	ug/L	1.778	7231	0.053
Cd	114		ug/L		17824	0.130
> In	115		ug/L		136873	136873.020
Sn	120	10.000	ug/L	1.117	32354	0.235
Sb	121	10.000	ug/L	2.970	21720	0.157
Sb	123		ug/L		16638	0.120
Ba	135		ug/L		7041	0.061
Ba	137	10.000	ug/L	0.546	12076	0.105
Ho	165		ug/L		3	0.000
> Lu	175		ug/L		115161	115161.136
Tl	205	10.000	ug/L	2.385	16281	0.131
Pb	208	10.000	ug/L	1.529	70915	0.614
Th	232	10.000	ug/L	2.805	83821	0.724
U	238	10.000	ug/L	1.203	87772	0.762

Sample ID: Standard 1

Report Date/Time: Friday, February 12, 2010 22:10:33

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	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				
	Zr	90				
	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				
	Th	232				
	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: Standard 2

Sample Date/Time: Friday, February 12, 2010 22:13:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\Standard 2.137

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	99.958	ug/L	1.583	38990	0.182
Be	9	99.938	ug/L	0.809	9592	0.045
B	11	199.966	ug/L	2.176	22109	0.102
Na	23	10000.977	ug/L	10.349	15880411	74.212
Mg	24	9992.085	ug/L	9.711	9354344	43.771
Al	27	10003.008	ug/L	5.057	14396352	67.314
P	31	10001.220	ug/L	1.714	855177	3.991
K	39	10001.189	ug/L	13.522	28980331	134.365
Ca	43	9997.227	ug/L	1.488	60502	0.282
Sc	45		ug/L		213840	213840.150
Ti	47	99.997	ug/L	1.408	27369	0.128
V	51	99.974	ug/L	1.103	340607	1.587
Cr	52	99.974	ug/L	1.222	246086	1.152
Cr	53		ug/L		90304	0.204
Mn	55	99.980	ug/L	0.860	454885	2.125
Fe	57	9996.914	ug/L	1.942	930508	4.325
Co	59	99.967	ug/L	0.861	345245	1.614
Ni	60	99.978	ug/L	0.882	73116	0.342
Cu	63		ug/L		160461	0.750
Cu	65	99.950	ug/L	0.625	77787	0.363
Zn	66	100.051	ug/L	1.035	46720	0.232
Zn	67		ug/L		10215	0.040
Zn	68		ug/L		33746	0.167
Ge	74		ug/L		199893	199892.561
As	75	100.099	ug/L	1.947	55726	0.280
Se	77		ug/L		10849	0.035
Se	82	100.061	ug/L	3.229	6635	0.033
Kr	83		ug/L		38	0.000
Sr	88	100.000	ug/L	1.709	854556	6.028
Y	89		ug/L		88	0.000
Zr	90	99.998	ug/L	1.034	434776	3.065
Mo	98	100.030	ug/L	1.092	183085	1.291
Ag	107	100.006	ug/L	1.672	321977	2.271
Cd	111	100.040	ug/L	0.517	77991	0.550
Cd	114		ug/L		187039	1.319
In	115		ug/L		141761	141760.523
Sn	120	99.975	ug/L	0.743	324963	2.291
Sb	121	99.996	ug/L	5.586	221522	1.561
Sb	123		ug/L		171009	1.205
Ba	135		ug/L		73972	0.625
Ba	137	100.018	ug/L	0.938	126243	1.066
Ho	165		ug/L		4	0.000
Lu	175		ug/L		118378	118378.012
Tl	205	100.006	ug/L	1.886	157374	1.319
Pb	208	99.950	ug/L	1.940	691603	5.841
Th	232	99.963	ug/L	1.969	826541	6.979
U	238	99.942	ug/L	1.832	851608	7.195

Sample ID: Standard 2

Report Date/Time: Friday, February 12, 2010 22:16:40

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	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				
	Zr	90				
	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				
	Th	232				
	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: Friday, February 12, 2010 22:20:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 1.138

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	50.801	ug/L	1.589	20002	0.093
Be	9	50.887	ug/L	1.322	4930	0.023
B	11	106.903	ug/L	1.832	12018	0.055
Na	23	4915.642	ug/L	3.974	7883452	36.476
Mg	24	5754.950	ug/L	4.567	5440530	25.210
Al	27	5261.121	ug/L	4.539	7638754	35.404
P	31	4935.854	ug/L	2.070	426745	1.970
K	39	4761.232	ug/L	12.648	14052276	63.967
Ca	43	5072.691	ug/L	2.481	31044	0.143
> Sc	45		ug/L		215783	215782.762
Ti	47	51.541	ug/L	1.879	14268	0.066
V	51	51.559	ug/L	2.391	177965	0.818
Cr	52	52.402	ug/L	0.634	130076	0.604
Cr	53		ug/L		86130	0.181
Mn	55	51.009	ug/L	2.602	234349	1.084
Fe	57	4934.264	ug/L	3.297	466168	2.135
Co	59	49.093	ug/L	3.518	171069	0.793
Ni	60	51.004	ug/L	5.029	37654	0.174
Cu	63		ug/L		81504	0.377
Cu	65	50.111	ug/L	3.125	39382	0.182
Zn	66	50.387	ug/L	0.365	24150	0.117
Zn	67		ug/L		6924	0.023
Zn	68		ug/L		17801	0.085
> Ge	74		ug/L		203888	203888.011
As	75	47.808	ug/L	1.317	26976	0.134
Se	77		ug/L		9226	0.026
Se	82	47.266	ug/L	2.430	3211	0.016
Kr	83		ug/L		33	-0.000
Sr	88	51.922	ug/L	1.967	443020	3.130
Y	89		ug/L		38	0.000
Zr	90	49.123	ug/L	0.810	213431	1.505
Mo	98	50.259	ug/L	1.357	91877	0.649
Ag	107	50.869	ug/L	1.367	163565	1.155
Cd	111	50.088	ug/L	1.387	38991	0.275
Cd	114		ug/L		93486	0.660
> In	115		ug/L		141546	141545.736
Sn	120	51.928	ug/L	0.885	168629	1.190
Sb	121	54.901	ug/L	0.593	121583	0.857
Sb	123		ug/L		93054	0.656
Ba	135		ug/L		37244	0.321
Ba	137	51.405	ug/L	0.253	63626	0.548
Ho	165		ug/L		15	0.000
> Lu	175		ug/L		116064	116064.107
Tl	205	47.751	ug/L	1.857	74312	0.630
Pb	208	51.093	ug/L	1.423	346775	2.986
Th	232	51.229	ug/L	1.873	415591	3.577
U	238	52.410	ug/L	0.648	437952	3.773

Sample ID: QC Std 1

Report Date/Time: Friday, February 12, 2010 22:22:46

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	101.602			
	Be	9	101.774			
	B	11	106.903			
	Na	23	98.313			
	Mg	24	115.099			
	Al	27	104.181			
	P	31	98.717			
	K	39	95.225			
	Ca	43	101.454			
>	Sc	45		115.7		
	Ti	47	103.082			
	V	51	103.119			
	Cr	52	104.804			
	Cr	53				
	Mn	55	102.017			
	Fe	57	98.685			
	Co	59	98.187			
	Ni	60	102.008			
	Cu	63				
	Cu	65	100.222			
	Zn	66	100.775			
	Zn	67				
	Zn	68				
>	Ge	74		109.1		
	As	75	95.615			
	Se	77				
	Se	82	94.533			
	Kr	83				
	Sr	88	103.844			
	Y	89				
	Zr	90	98.245			
	Mo	98	100.517			
	Ag	107	101.739			
	Cd	111	100.175			
	Cd	114				
>	In	115		102.1		
	Sn	120	103.857			
	Sb	121	109.802			
	Sb	123				
	Ba	135				
	Ba	137	102.810			
	Ho	165				
>	Lu	175		100.6		
	Tl	205	95.501			
	Pb	208	102.185			
	Th	232	102.457			
	U	238	104.820			

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
 QC Std 1 Mg 24ICV is out of limits ( +/- 10%)

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Friday, February 12, 2010 22:26:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 2.139

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.054	ug/L	38.774	31	0.000
Be	9	0.046	ug/L	40.453	6	0.000
B	11	3.887	ug/L	8.652	583	0.002
Na	23	4.715	ug/L	63.230	20014	0.035
Mg	24	2.616	ug/L	90.885	2667	0.011
Al	27	2.138	ug/L	111.873	4334	0.014
P	31	4.310	ug/L	29.492	1981	0.002
K	39	10.080	ug/L	35.640	273599	0.135
Ca	43	3.928	ug/L	78.336	153	0.000
> Sc	45		ug/L		201541	201540.848
Ti	47	0.075	ug/L	29.972	86	0.000
V	51	-0.032	ug/L	1739.208	1174	-0.001
Cr	52	0.395	ug/L	12.606	743	0.005
Cr	53		ug/L		48657	0.023
Mn	55	0.043	ug/L	39.045	603	0.001
Fe	57	4.535	ug/L	16.551	5686	0.002
Co	59	0.028	ug/L	47.443	124	0.000
Ni	60	0.046	ug/L	37.523	84	0.000
Cu	63		ug/L		197	0.000
Cu	65	0.047	ug/L	75.726	109	0.000
Zn	66	0.044	ug/L	10.374	312	0.000
Zn	67		ug/L		2256	0.001
Zn	68		ug/L		437	0.000
> Ge	74		ug/L		194702	194702.239
As	75	-0.394	ug/L	99.503	-519	-0.001
Se	77		ug/L		4285	0.003
Se	82	-0.167	ug/L	73.357	16	-0.000
Kr	83		ug/L		38	0.000
Sr	88	0.031	ug/L	46.273	326	0.002
Y	89		ug/L		19	0.000
Zr	90	0.149	ug/L	25.798	971	0.005
Mo	98	0.070	ug/L	8.901	163	0.001
Ag	107	0.044	ug/L	24.115	176	0.001
Cd	111	0.037	ug/L	47.838	39	0.000
Cd	114		ug/L		79	0.000
> In	115		ug/L		140801	140800.533
Sn	120	0.241	ug/L	11.014	993	0.006
Sb	121	0.619	ug/L	8.474	1645	0.010
Sb	123		ug/L		1273	0.007
Ba	135		ug/L		42	0.000
Ba	137	0.037	ug/L	34.604	59	0.000
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		115083	115083.170
Tl	205	0.531	ug/L	18.545	1990	0.007
Pb	208	0.049	ug/L	35.566	558	0.003
Th	232	0.140	ug/L	11.411	1573	0.010
U	238	0.043	ug/L	44.094	407	0.003

Sample ID: QC Std 2

Report Date/Time: Friday, February 12, 2010 22:28:57

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		108.1			
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		104.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		101.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.8			
Tl	205					
Pb	208					
Th	232					
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 3

Sample Date/Time: Friday, February 12, 2010 22:32:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 3.140

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.831	ug/L	2.311	4290	0.022
Be	9	0.636	ug/L	22.423	58	0.000
B	11	17.736	ug/L	1.322	1981	0.009
Na	23	259.310	ug/L	4.692	394378	1.924
Mg	24	21.096	ug/L	27.593	18679	0.092
Al	27	34.473	ug/L	5.897	47412	0.232
P	31	58.447	ug/L	2.580	6233	0.023
K	39	322.774	ug/L	7.485	1102390	4.336
Ca	43	224.408	ug/L	5.232	1385	0.006
Sc	45		ug/L		198298	198297.779
Ti	47	9.272	ug/L	1.056	2413	0.012
V	51	11.061	ug/L	4.697	36066	0.176
Cr	52	11.470	ug/L	1.902	26029	0.132
Cr	53		ug/L		58537	0.077
Mn	55	5.774	ug/L	3.171	24747	0.123
Fe	57	115.230	ug/L	6.550	15089	0.050
Co	59	1.136	ug/L	0.555	3670	0.018
Ni	60	2.233	ug/L	0.405	1565	0.008
Cu	63		ug/L		1854	0.009
Cu	65	1.198	ug/L	4.733	937	0.004
Zn	66	11.157	ug/L	3.970	5333	0.026
Zn	67		ug/L		3258	0.006
Zn	68		ug/L		4142	0.019
Ge	74		ug/L		194781	194780.901
As	75	5.415	ug/L	11.744	2652	0.015
Se	77		ug/L		5302	0.008
Se	82	5.982	ug/L	3.615	411	0.002
Kr	83		ug/L		32	-0.000
Sr	88	10.856	ug/L	2.514	92667	0.654
Y	89		ug/L		16	-0.000
Zr	90	1.648	ug/L	4.584	7485	0.051
Mo	98	0.563	ug/L	0.922	1065	0.007
Ag	107	1.034	ug/L	1.761	3359	0.023
Cd	111	1.062	ug/L	1.096	837	0.006
Cd	114		ug/L		2065	0.014
In	115		ug/L		141544	141543.718
Sn	120	5.305	ug/L	2.080	17418	0.122
Sb	121	2.879	ug/L	7.848	6648	0.045
Sb	123		ug/L		5129	0.035
Ba	135		ug/L		1631	0.014
Ba	137	2.121	ug/L	2.437	2620	0.023
Ho	165		ug/L		4	0.000
Lu	175		ug/L		115257	115256.901
Tl	205	1.150	ug/L	3.908	2935	0.015
Pb	208	2.234	ug/L	0.178	15272	0.131
Th	232	1.099	ug/L	3.136	9293	0.077
U	238	0.247	ug/L	4.067	2100	0.018

Sample ID: QC Std 3

Report Date/Time: Friday, February 12, 2010 22:35:05

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	118.307			
	Be	9	127.214			
	B	11	118.243			
	Na	23	103.724			
	Mg	24	140.641			
	Al	27	114.909			
	P	31	116.895			
	K	39	107.591			
	Ca	43	112.204			
>	Sc	45		106.3		
	Ti	47	92.721			
	V	51	110.613			
	Cr	52	114.696			
	Cr	53				
	Mn	55	115.484			
	Fe	57	115.230			
	Co	59	113.631			
	Ni	60	111.657			
	Cu	63				
	Cu	65	119.827			
	Zn	66	111.574			
	Zn	67				
	Zn	68				
>	Ge	74		104.2		
	As	75	108.305			
	Se	77				
	Se	82	119.645			
	Kr	83				
	Sr	88	108.562			
	Y	89				
	Zr	90	82.424			
	Mo	98	112.613			
	Ag	107	103.437			
	Cd	111	106.226			
	Cd	114				
>	In	115		102.1		
	Sn	120	106.093			
	Sb	121	95.957			
	Sb	123				
	Ba	135				
	Ba	137	106.050			
	Ho	165				
>	Lu	175		99.9		
	Tl	205	115.036			
	Pb	208	111.675			
	Th	232	109.936			
	U	238	123.744			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	Mg	24CRDL is out of limits

### QC Action

QC Action Line: Continue

Sample ID: QC Std 3

Report Date/Time: Friday, February 12, 2010 22:35:05

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## ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Friday, February 12, 2010 22:38:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 4.141

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.076	ug/L	6.644	44	0.000
Be	9	0.046	ug/L	12.219	7	0.000
B	11	1.533	ug/L	13.124	378	0.001
Na	23	96145.456	ug/L	6.135	159733278	713.443
Mg	24	102393.277	ug/L	3.198	100449333	448.546
Al	27	105352.318	ug/L	2.019	158757013	708.959
P	31	95768.628	ug/L	0.806	8558992	38.220
K	39	S	ug/L	S	S	S
Ca	43	96853.102	ug/L	1.192	612498	2.735
Sc	45		ug/L		223901	223900.956
Ti	47	1822.369	ug/L	1.001	520949	2.326
V	51	-0.069	ug/L	726.469	1171	-0.001
Cr	52	5.364	ug/L	2.102	13642	0.062
Cr	53		ug/L		68440	0.087
Mn	55	5.206	ug/L	0.581	25241	0.111
Fe	57	89164.487	ug/L	0.465	8642444	38.574
Co	59	0.245	ug/L	5.313	922	0.004
Ni	60	4.221	ug/L	2.475	3287	0.014
Cu	63		ug/L		4804	0.021
Cu	65	2.861	ug/L	4.832	2411	0.010
Zn	66	4.324	ug/L	1.482	2136	0.010
Zn	67		ug/L		3974	0.011
Zn	68		ug/L		813	0.002
Ge	74		ug/L		185125	185124.964
As	75	0.415	ug/L	343.838	-77	0.001
Se	77		ug/L		8598	0.027
Se	82	0.719	ug/L	128.972	69	0.000
Kr	83		ug/L		126	0.000
Sr	88	2.898	ug/L	2.358	22791	0.175
Y	89		ug/L		252	0.002
Zr	90	1.044	ug/L	51.060	4456	0.032
Mo	98	2089.905	ug/L	1.673	3510978	26.979
Ag	107	0.117	ug/L	1.014	378	0.003
Cd	111	0.316	ug/L	42.196	234	0.002
Cd	114		ug/L		5159	0.039
In	115		ug/L		130159	130159.223
Sn	120	0.620	ug/L	7.593	2046	0.014
Sb	121	0.387	ug/L	19.921	1048	0.006
Sb	123		ug/L		843	0.005
Ba	135		ug/L		547	0.005
Ba	137	0.763	ug/L	2.162	889	0.008
Ho	165		ug/L		2681	0.025
Lu	175		ug/L		107781	107780.808
Tl	205	0.046	ug/L	17.238	1174	0.001
Pb	208	0.197	ug/L	3.825	1452	0.012
Th	232	0.243	ug/L	44.349	2251	0.017
U	238	0.000	ug/L	85.507	44	0.000

Sample ID: QC Std 4

Report Date/Time: Friday, February 12, 2010 22:41:12

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Diff	Dup. Rel.	% Diff
Li	7										
Be	9										
B	11										
Na	23		96.145								
Mg	24		102.393								
Al	27		105.352								
P	31		95.769								
K	39		S								
Ca	43		96.853								
> Sc	45				120.1						
Ti	47		91.118								
V	51										
Cr	52		162.550								
Cr	53										
Mn	55		89.753								
Fe	57		89.164								
Co	59		104.376								
Ni	60		127.520								
Cu	63										
Cu	65		85.665								
Zn	66		115.004								
Zn	67										
Zn	68										
> Ge	74				99.0						
As	75										
Se	77										
Se	82										
Kr	83										
Sr	88		97.907								
Y	89										
Zr	90										
Mo	98		104.495								
Ag	107										
Cd	111		71.059								
Cd	114										
> In	115				93.9						
Sn	120										
Sb	121										
Sb	123										
Ba	135										
Ba	137		95.561								
Ho	165										
> Lu	175				93.5						
Tl	205										
Pb	208		104.190								
Th	232										
U	238										

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	K	39	ICSA is out of limits
Sc 45 Int Std for QC Sc		45	

## QC Action

QC Action Line: Continue

Sample ID: QC Std 4

Report Date/Time: Friday, February 12, 2010 22:41:12

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## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Friday, February 12, 2010 22:44:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 5.142

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	17.424	ug/L	1.666	6955	0.032
Be	9	16.880	ug/L	2.787	1657	0.008
B	11	17.194	ug/L	4.094	2121	0.009
Na	23	103698.042	ug/L	12.368	167842424	769.486
Mg	24	109380.657	ug/L	8.489	104649942	479.155
Al	27	103804.809	ug/L	4.114	152601331	698.545
P	31	97963.624	ug/L	2.549	8540951	39.096
K	39	86601.514	ug/L	11.907	254239709	1163.483
Ca	43	97058.751	ug/L	0.770	598987	2.741
Sc	45		ug/L		218525	218524.616
Ti	47	1860.031	ug/L	1.981	518725	2.374
V	51	20.681	ug/L	2.169	73105	0.328
Cr	52	25.018	ug/L	2.880	62759	0.288
Cr	53		ug/L		63525	0.072
Mn	55	24.024	ug/L	4.644	111931	0.511
Fe	57	94006.774	ug/L	6.174	8881147	40.668
Co	59	18.265	ug/L	5.479	64418	0.295
Ni	60	22.077	ug/L	6.166	16523	0.075
Cu	63		ug/L		33028	0.151
Cu	65	20.258	ug/L	3.359	16164	0.074
Zn	66	21.748	ug/L	1.941	9667	0.050
Zn	67		ug/L		4880	0.016
Zn	68		ug/L		6296	0.032
Ge	74		ug/L		185998	185998.267
As	75	20.066	ug/L	3.073	10159	0.056
Se	77		ug/L		7676	0.022
Se	82	19.329	ug/L	3.890	1213	0.006
Kr	83		ug/L		111	0.000
Sr	88	23.581	ug/L	2.219	186264	1.421
Y	89		ug/L		234	0.002
Zr	90	21.357	ug/L	3.127	86036	0.655
Mo	98	2101.782	ug/L	3.002	3553819	27.132
Ag	107	18.652	ug/L	2.307	55519	0.424
Cd	111	18.740	ug/L	1.699	13509	0.103
Cd	114		ug/L		37267	0.284
In	115		ug/L		131018	131017.829
Sn	120	20.793	ug/L	0.323	62623	0.476
Sb	121	22.395	ug/L	0.906	46062	0.350
Sb	123		ug/L		35375	0.268
Ba	135		ug/L		14552	0.137
Ba	137	21.812	ug/L	1.530	24791	0.233
Ho	165		ug/L		2669	0.025
Lu	175		ug/L		106529	106529.171
Tl	205	17.065	ug/L	1.921	25082	0.225
Pb	208	18.736	ug/L	0.731	116851	1.095
Th	232	19.135	ug/L	1.604	142736	1.336
U	238	19.201	ug/L	1.821	147273	1.382

Sample ID: QC Std 5

Report Date/Time: Friday, February 12, 2010 22:47:21

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	87.119			
	Be	9	84.399			
	B	11	85.968			
	Na	23	103.698			
	Mg	24	109.381			
	Al	27	103.805			
	P	31	97.964			
	K	39	86.602			
	Ca	43	97.059			
>	Sc	45		117.2		
	Ti	47	93.002			
	V	51	103.406			
	Cr	52	107.375			
	Cr	53				
	Mn	55	93.116			
	Fe	57	94.007			
	Co	59	90.265			
	Ni	60	94.711			
	Cu	63				
	Cu	65	86.797			
[	Zn	66	91.534			
	Zn	67				
	Zn	68				
>	Ge	74		99.5		
	As	75	100.332			
	Se	77				
	Se	82	96.646			
	Kr	83				
[	Sr	88	102.707			
	Y	89				
	Zr	90	106.784			
	Mo	98	105.089			
	Ag	107	93.262			
	Cd	111	91.664			
	Cd	114				
>	In	115		94.5		
	Sn	120	103.967			
	Sb	121	111.975			
	Sb	123				
[	Ba	135				
	Ba	137	104.877			
	Ho	165				
>	Lu	175		92.4		
	Tl	205	85.327			
	Pb	208	92.803			
	Th	232	95.674			
	U	238	96.004			

## 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: Friday, February 12, 2010 22:50:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 6.143

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	46.708	ug/L	1.133	19479	0.085
Be	9	46.230	ug/L	1.579	4743	0.021
B	11	93.789	ug/L	2.335	11190	0.048
Na	23	5035.359	ug/L	2.112	8553935	37.365
Mg	24	5645.057	ug/L	3.777	5651702	24.729
Al	27	5058.039	ug/L	1.762	7779925	34.038
P	31	4995.574	ug/L	1.228	457526	1.994
K	39	4993.025	ug/L	8.038	15604794	67.081
Ca	43	4924.458	ug/L	1.196	31932	0.139
Sc	45		ug/L		228541	228540.965
Ti	47	55.445	ug/L	0.927	16251	0.071
V	51	49.809	ug/L	3.588	182068	0.790
Cr	52	50.989	ug/L	2.670	134027	0.587
Cr	53		ug/L		81595	0.139
Mn	55	48.800	ug/L	0.683	237528	1.037
Fe	57	4768.313	ug/L	0.892	477414	2.063
Co	59	47.791	ug/L	0.918	176416	0.772
Ni	60	50.113	ug/L	1.608	39199	0.171
Cu	63		ug/L		86026	0.376
Cu	65	49.608	ug/L	0.473	41302	0.180
Zn	66	49.292	ug/L	1.179	24372	0.114
Zn	67		ug/L		7017	0.023
Zn	68		ug/L		18178	0.084
Ge	74		ug/L		210269	210268.568
As	75	48.547	ug/L	1.875	28255	0.136
Se	77		ug/L		9479	0.026
Se	82	47.970	ug/L	1.809	3360	0.016
Kr	83		ug/L		35	-0.000
Sr	88	50.804	ug/L	2.165	445770	3.062
Y	89		ug/L		78	0.000
Zr	90	48.270	ug/L	2.941	215633	1.479
Mo	98	49.667	ug/L	1.665	93345	0.641
Ag	107	50.281	ug/L	1.073	166216	1.142
Cd	111	49.382	ug/L	0.702	39529	0.272
Cd	114		ug/L		95596	0.657
In	115		ug/L		145544	145544.082
Sn	120	51.566	ug/L	2.653	172169	1.182
Sb	121	52.881	ug/L	3.699	120426	0.825
Sb	123		ug/L		91454	0.627
Ba	135		ug/L		38551	0.347
Ba	137	55.090	ug/L	0.757	65305	0.587
Ho	165		ug/L		12	0.000
Lu	175		ug/L		111160	111160.265
Tl	205	47.856	ug/L	2.726	71331	0.631
Pb	208	50.558	ug/L	0.504	328664	2.955
Th	232	50.123	ug/L	0.530	389463	3.500
U	238	51.078	ug/L	1.186	408781	3.677

Sample ID: QC Std 6

Report Date/Time: Friday, February 12, 2010 22:53:30

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	93.416				
	Be	9	92.459				
	B	11	93.789				
	Na	23	100.707				
	Mg	24	112.901				
	Al	27	100.159				
	P	31	99.911				
	K	39	99.860				
	Ca	43	98.489				
>	Sc	45		122.6			
	Ti	47	110.890				
	V	51	99.619				
	Cr	52	101.977				
	Cr	53					
	Mn	55	97.600				
	Fe	57	95.366				
	Co	59	95.582				
	Ni	60	100.226				
	Cu	63					
	Cu	65	99.216				
	Zn	66	98.585				
	Zn	67					
	Zn	68					
>	Ge	74		112.5			
	As	75	97.093				
	Se	77					
	Se	82	95.939				
	Kr	83					
	Sr	88	101.609				
	Y	89					
	Zr	90	96.539				
	Mo	98	99.333				
	Ag	107	100.562				
	Cd	111	98.763				
	Cd	114					
>	In	115		105.0			
	Sn	120	103.132				
	Sb	121	105.762				
	Sb	123					
	Ba	135					
	Ba	137	110.180				
	Ho	165					
>	Lu	175		96.4			
	Tl	205	95.712				
	Pb	208	101.117				
	Th	232	100.247				
	U	238	102.156				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mg	24	CCV is out of limits ( +/- 10%)
Sc 45 Int Std for QC Sc		45	
QC Std 6	Ti	47	CCV is out of limits ( +/- 10%)
QC Std 6	Ba	137	CCV is out of limits ( +/- 10%)

Sample ID: QC Std 6

Report Date/Time: Friday, February 12, 2010 22:53:30

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## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Friday, February 12, 2010 22:56:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 7.144

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.003	ug/L	394.296	14	0.000
Be	9	0.000	ug/L	7201.742	2	0.000
B	11	2.159	ug/L	16.838	443	0.001
Na	23	0.284	ug/L	1170.795	14675	0.002
Mg	24	2.016	ug/L	79.670	2334	0.009
Al	27	1.402	ug/L	221.051	3668	0.009
P	31	2.874	ug/L	64.154	2040	0.001
K	39	1.055	ug/L	510.150	272583	0.014
Ca	43	-0.197	ug/L	2043.096	141	-0.000
> Sc	45		ug/L		220497	220496.552
Ti	47	0.793	ug/L	7.568	296	0.001
V	51	0.102	ug/L	522.039	1764	0.002
Cr	52	0.384	ug/L	18.747	784	0.004
Cr	53		ug/L		48657	0.002
Mn	55	0.012	ug/L	38.886	515	0.000
Fe	57	12.232	ug/L	24.487	6955	0.005
Co	59	0.010	ug/L	48.052	70	0.000
Ni	60	0.017	ug/L	19.895	70	0.000
Cu	63		ug/L		160	0.000
Cu	65	0.006	ug/L	179.007	86	0.000
Zn	66	-0.012	ug/L	444.374	309	-0.000
Zn	67		ug/L		2260	0.000
Zn	68		ug/L		426	0.000
> Ge	74		ug/L		210095	210095.258
As	75	-0.285	ug/L	177.873	-494	-0.001
Se	77		ug/L		4820	0.004
Se	82	-0.147	ug/L	68.320	18	-0.000
Kr	83		ug/L		46	0.000
Sr	88	0.010	ug/L	25.538	160	0.001
Y	89		ug/L		17	-0.000
Zr	90	0.095	ug/L	23.919	798	0.003
Mo	98	0.134	ug/L	2.634	300	0.002
Ag	107	0.017	ug/L	22.226	95	0.000
Cd	111	0.009	ug/L	84.441	18	0.000
Cd	114		ug/L		42	0.000
> In	115		ug/L		151383	151382.950
Sn	120	0.172	ug/L	16.534	827	0.004
Sb	121	0.524	ug/L	21.701	1543	0.008
Sb	123		ug/L		1201	0.006
Ba	135		ug/L		17	0.000
Ba	137	0.016	ug/L	22.371	34	0.000
Ho	165		ug/L		3	0.000
> Lu	175		ug/L		117476	117475.656
Tl	205	0.428	ug/L	21.210	1871	0.006
Pb	208	0.010	ug/L	19.658	299	0.001
Th	232	0.060	ug/L	21.170	943	0.004
U	238	0.014	ug/L	23.896	165	0.001

Sample ID: QC Std 7

Report Date/Time: Friday, February 12, 2010 22:59:41

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		118.3			
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		112.4			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		109.2			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.9			
Tl	205					
Pb	208					
Th	232					
L 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: Friday, February 12, 2010 22:59:41

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## ICPMS#4 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Friday, February 12, 2010 23:03:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 10.145

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	879.459	ug/L	2.249	362640	1.604
Be	9	841.070	ug/L	2.324	85346	0.377
B	11	1.809	ug/L	20.318	413	0.001
Na	23	50207.612	ug/L	3.206	84301328	372.563
Mg	24	54803.180	ug/L	9.510	54333957	240.072
Al	27	57991.576	ug/L	11.828	88264531	390.249
P	31	24340.065	ug/L	2.669	2198995	9.714
K	39	50975.663	ug/L	3.385	155198697	684.853
Ca	43	49727.449	ug/L	1.238	317723	1.404
Sc	45		ug/L		226164	226164.196
Ti	47	43.445	ug/L	2.138	12619	0.055
V	51	995.680	ug/L	0.799	3575484	15.801
Cr	52	974.931	ug/L	0.527	2540143	11.232
Cr	53		ug/L		361077	1.378
Mn	55	940.073	ug/L	1.457	4518837	19.981
Fe	57	47540.555	ug/L	1.815	4656423	20.567
Co	59	899.200	ug/L	1.958	3283551	14.522
Ni	60	877.913	ug/L	2.783	678411	3.000
Cu	63		ug/L		1423411	6.295
Cu	65	865.139	ug/L	2.305	711241	3.145
Zn	66	2196.402	ug/L	1.735	996460	5.098
Zn	67		ug/L		161044	0.814
Zn	68		ug/L		721020	3.688
Ge	74		ug/L		195437	195436.527
As	75	892.562	ug/L	1.531	488125	2.499
Se	77		ug/L		27909	0.124
Se	82	437.916	ug/L	0.845	28297	0.145
Kr	83		ug/L		62	0.000
Sr	88	1045.561	ug/L	3.853	8165448	63.026
Y	89		ug/L		284	0.002
Zr	90	538.540	ug/L	1.874	2139119	16.504
Mo	98	1023.269	ug/L	2.050	1711862	13.209
Ag	107	245.746	ug/L	1.485	723292	5.581
Cd	111	956.067	ug/L	0.478	681430	5.257
Cd	114		ug/L		1616555	12.471
In	115		ug/L		129625	129625.034
Sn	120	1113.674	ug/L	2.726	3306803	25.518
Sb	121	262.666	ug/L	5.713	531338	4.100
Sb	123		ug/L		410290	3.166
Ba	135		ug/L		694244	6.571
Ba	137	1033.683	ug/L	0.563	1164395	11.021
Ho	165		ug/L		96	0.001
Lu	175		ug/L		105648	105648.299
Tl	205	480.948	ug/L	0.707	671364	6.345
Pb	208	4861.707	ug/L	0.894	30016414	284.132
Th	232	2400.801	ug/L	1.493	17707863	167.625
U	238	4890.056	ug/L	1.265	37187998	352.030

Sample ID: QC Std 10

Report Date/Time: Friday, February 12, 2010 23:05:47

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	87.946				
Be	9	84.107				
B	11					
Na	23	100.415				
Mg	24	109.606				
Al	27	115.983				
P	31	97.360				
K	39	101.951				
Ca	43	99.455				
> Sc	45		121.3			
Ti	47					
V	51	99.568				
Cr	52	97.493				
Cr	53					
Mn	55	94.007				
Fe	57	95.081				
Co	59	89.920				
Ni	60	87.791				
Cu	63					
Cu	65	86.514				
Zn	66	87.856				
Zn	67					
Zn	68					
> Ge	74		104.5			
As	75	89.256				
Se	77					
Se	82	87.583				
Kr	83					
Sr	88	104.556				
Y	89					
Zr	90	107.708				
Mo	98	102.327				
Ag	107	98.298				
Cd	111	95.607				
Cd	114					
> In	115		93.5			
Sn	120	111.367				
Sb	121	105.066				
Sb	123					
Ba	135					
Ba	137	103.368				
Ho	165					
> Lu	175		91.6			
Tl	205	96.190				
Pb	208	97.234				
Th	232	96.032				
U	238	97.801				

## 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	Be	9	9LRS is out of limits ( +/- 10%)
QC Std 10	Al	27	27LRS is out of limits ( +/- 10%)
Sc 45 Int Std for QC Sc	Sc	45	
QC Std 10	Co	59	59LRS is out of limits ( +/- 10%)
QC Std 10	Ni	60	60LRS is out of limits ( +/- 10%)

Sample ID: QC Std 10

Report Date/Time: Friday, February 12, 2010 23:05:47

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QC Std 10	Cu	65LRS is out of limits ( +/- 10%)
QC Std 10	Zn	66LRS is out of limits ( +/- 10%)
QC Std 10	As	75LRS is out of limits ( +/- 10%)
QC Std 10	Se	82LRS is out of limits ( +/- 10%)
QC Std 10	Sn	120LRS is out of limits ( +/- 10%)

## QC Action

QC Action Line: Continue



## ICPMS#4 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Friday, February 12, 2010 23:09:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 11.146

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	46.285	ug/L	0.879	20075	0.084
Be	9	44.695	ug/L	1.316	4770	0.020
B	11	97.438	ug/L	0.842	12083	0.050
Na	23	4893.336	ug/L	9.285	8647644	36.311
Mg	24	5602.878	ug/L	2.777	5832910	24.544
Al	27	5562.051	ug/L	2.244	8896883	37.429
P	31	5189.720	ug/L	0.882	494165	2.071
K	39	5294.585	ug/L	6.571	17197120	71.132
Ca	43	5061.039	ug/L	2.175	34117	0.143
Sc	45		ug/L		237660	237659.976
Ti	47	52.397	ug/L	1.408	15976	0.067
V	51	50.630	ug/L	0.600	192473	0.803
Cr	52	51.825	ug/L	0.869	141685	0.597
Cr	53		ug/L		81772	0.126
Mn	55	49.905	ug/L	0.571	252585	1.061
Fe	57	4873.316	ug/L	1.000	507273	2.108
Co	59	48.428	ug/L	0.681	185901	0.782
Ni	60	50.290	ug/L	0.797	40909	0.172
Cu	63		ug/L		88275	0.371
Cu	65	49.535	ug/L	1.054	42889	0.180
Zn	66	50.282	ug/L	1.266	25289	0.117
Zn	67		ug/L		7218	0.023
Zn	68		ug/L		18805	0.086
Ge	74		ug/L		213957	213956.599
As	75	48.419	ug/L	2.232	28675	0.136
Se	77		ug/L		9145	0.023
Se	82	47.413	ug/L	3.501	3380	0.016
Kr	83		ug/L		37	-0.000
Sr	88	51.400	ug/L	1.702	457089	3.098
Y	89		ug/L		43	0.000
Zr	90	53.549	ug/L	4.110	242394	1.641
Mo	98	50.270	ug/L	0.892	95765	0.649
Ag	107	50.614	ug/L	0.627	169600	1.149
Cd	111	49.706	ug/L	1.194	40327	0.273
Cd	114		ug/L		97769	0.663
In	115		ug/L		147522	147521.905
Sn	120	56.217	ug/L	0.489	190252	1.288
Sb	121	57.218	ug/L	1.752	132042	0.893
Sb	123		ug/L		101425	0.686
Ba	135		ug/L		39891	0.350
Ba	137	55.993	ug/L	1.426	68083	0.597
Ho	165		ug/L		8	0.000
Lu	175		ug/L		114017	114017.370
Tl	205	49.326	ug/L	0.386	75366	0.651
Pb	208	50.550	ug/L	1.824	337012	2.954
Th	232	50.448	ug/L	2.319	401977	3.522
U	238	50.147	ug/L	1.273	411611	3.610

Sample ID: QC Std 11

Report Date/Time: Friday, February 12, 2010 23:11:54

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	92.569				
Be	9	89.391				
B	11	97.438				
Na	23	97.867				
Mg	24	112.058				
Al	27	110.140				
P	31	103.794				
K	39	105.892				
Ca	43	101.221				
> Sc	45		127.5			
Ti	47	104.795				
V	51	101.260				
Cr	52	103.650				
Cr	53					
Mn	55	99.810				
Fe	57	97.466				
Co	59	96.855				
Ni	60	100.580				
Cu	63					
Cu	65	99.070				
Zn	66	100.565				
Zn	67					
Zn	68					
> Ge	74		114.5			
As	75	96.837				
Se	77					
Se	82	94.825				
Kr	83					
Sr	88	102.799				
Y	89					
Zr	90	107.098				
Mo	98	100.540				
Ag	107	101.228				
Cd	111	99.411				
Cd	114					
> In	115		106.4			
Sn	120	112.435				
Sb	121	114.436				
Sb	123					
Ba	135					
Ba	137	111.987				
Ho	165					
> Lu	175		98.9			
Tl	205	98.651				
Pb	208	101.099				
Th	232	100.896				
U	238	100.294				

## QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 11	Be	9CCV is out of limits ( +/- 10%)
QC Std 11	Mg	24CCV is out of limits ( +/- 10%)
QC Std 11	Al	27CCV is out of limits ( +/- 10%)
Sc 45 Int Std for QC Sc		45
QC Std 11	Sn	120CCV is out of limits ( +/- 10%)
QC Std 11	Sb	121CCV is out of limits ( +/- 10%)

Sample ID: QC Std 11

Report Date/Time: Friday, February 12, 2010 23:11:54

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QC Std 11

Ba

137CCV is out of limits ( +/- 10%)

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Friday, February 12, 2010 23:15:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 12.147

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.110	ug/L	24.190	60	0.000
Be	9	0.047	ug/L	92.975	7	0.000
B	11	1.868	ug/L	16.658	435	0.001
Na	23	2.098	ug/L	97.961	18679	0.016
Mg	24	4.802	ug/L	11.732	5334	0.021
Al	27	3.387	ug/L	67.408	7002	0.023
P	31	4.624	ug/L	30.248	2326	0.002
K	39	3.663	ug/L	163.718	297065	0.049
Ca	43	-1.094	ug/L	242.687	144	-0.000
> Sc	45		ug/L		233734	233733.611
Ti	47	0.228	ug/L	3.291	146	0.000
V	51	0.006	ug/L	8177.797	1515	0.000
Cr	52	0.448	ug/L	14.949	1006	0.005
Cr	53		ug/L		50306	-0.003
Mn	55	0.048	ug/L	32.772	727	0.001
Fe	57	7.857	ug/L	24.455	6931	0.003
Co	59	0.042	ug/L	24.583	194	0.001
Ni	60	0.058	ug/L	28.683	107	0.000
Cu	63		ug/L		279	0.001
Cu	65	0.066	ug/L	12.622	142	0.000
Zn	66	0.161	ug/L	18.554	407	0.000
Zn	67		ug/L		2457	0.001
Zn	68		ug/L		539	0.000
> Ge	74		ug/L		216988	216988.433
As	75	-0.351	ug/L	100.125	-553	-0.001
Se	77		ug/L		4853	0.003
Se	82	-0.089	ug/L	74.265	23	-0.000
Kr	83		ug/L		39	-0.000
Sr	88	0.049	ug/L	33.266	528	0.003
Y	89		ug/L		19	-0.000
Zr	90	0.197	ug/L	20.373	1291	0.006
Mo	98	0.178	ug/L	1.164	392	0.002
Ag	107	0.046	ug/L	0.822	197	0.001
Cd	111	0.057	ug/L	41.136	59	0.000
Cd	114		ug/L		141	0.001
> In	115		ug/L		153655	153654.946
Sn	120	0.883	ug/L	4.942	3346	0.020
Sb	121	1.009	ug/L	5.637	2730	0.016
Sb	123		ug/L		2061	0.012
Ba	135		ug/L		53	0.000
Ba	137	0.063	ug/L	19.050	91	0.001
Ho	165		ug/L		6	0.000
> Lu	175		ug/L		114664	114664.500
Tl	205	0.761	ug/L	15.047	2330	0.010
Pb	208	0.257	ug/L	9.169	1951	0.015
Th	232	0.259	ug/L	4.430	2515	0.018
U	238	0.181	ug/L	32.166	1543	0.013

Sample ID: QC Std 12

Report Date/Time: Friday, February 12, 2010 23:18:05

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			125.3		
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			116.1		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			110.8		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			99.4		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 Sc 45 Int Std for QC Sc 45

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 1202030959

Sample Date/Time: Friday, February 12, 2010 23:21:29

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\1202030959.148

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.046	ug/L	24.376	35	0.000
Be	9	-0.002	ug/L	944.203	2	-0.000
B	11	0.285	ug/L	34.457	256	0.000
Na	23	4.783	ug/L	86.701	24355	0.035
Mg	24	1.153	ug/L	47.724	1667	0.005
Al	27	2.788	ug/L	90.754	6335	0.019
P	31	30.029	ug/L	17.857	4903	0.012
K	39	2.306	ug/L	79.191	305908	0.031
Ca	43	9.823	ug/L	50.153	226	0.000
> Sc	45		ug/L		244213	244213.269
Ti	47	1.032	ug/L	58.706	402	0.001
V	51	0.874	ug/L	281.554	4882	0.014
Cr	52	0.915	ug/L	4.962	2363	0.011
Cr	53		ug/L		52234	-0.005
Mn	55	0.273	ug/L	2.822	1927	0.006
Fe	57	31.335	ug/L	2.055	9722	0.014
Co	59	0.010	ug/L	25.530	77	0.000
Ni	60	0.259	ug/L	5.436	279	0.001
Cu	63		ug/L		563	0.002
Cu	65	0.236	ug/L	2.038	299	0.001
Zn	66	0.609	ug/L	11.341	632	0.001
Zn	67		ug/L		2436	0.001
Zn	68		ug/L		726	0.001
> Ge	74		ug/L		216839	216839.473
As	75	-0.564	ug/L	111.275	-683	-0.002
Se	77		ug/L		5045	0.004
Se	82	0.027	ug/L	439.427	31	0.000
Kr	83		ug/L		33	-0.000
Sr	88	0.051	ug/L	2.606	540	0.003
Y	89		ug/L		40	0.000
Zr	90	1.258	ug/L	35.135	6236	0.039
Mo	98	0.239	ug/L	18.623	510	0.003
Ag	107	0.021	ug/L	21.457	112	0.000
Cd	111	0.018	ug/L	132.010	26	0.000
Cd	114		ug/L		58	0.000
> In	115		ug/L		153176	153175.909
Sn	120	0.741	ug/L	2.236	2836	0.017
Sb	121	0.683	ug/L	10.635	1941	0.011
Sb	123		ug/L		1458	0.008
Ba	135		ug/L		68	0.000
Ba	137	0.079	ug/L	3.283	113	0.001
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		116959	116959.102
Tl	205	0.539	ug/L	15.190	2033	0.007
Pb	208	0.123	ug/L	9.693	1067	0.007
Th	232	0.329	ug/L	26.738	3130	0.023
U	238	0.047	ug/L	13.342	443	0.003

Sample ID: 1202030959

Report Date/Time: Friday, February 12, 2010 23:24:12

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		131.0			
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		116.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		110.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.4			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 Sc 45 Int Std for sanSc 45

## QC Action

QC Action Line: Continue

Sample ID: 1202030959

Report Date/Time: Friday, February 12, 2010 23:24:12

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## ICPMS#4 - Summary Report

Sample ID: 1202030964

Sample Date/Time: Friday, February 12, 2010 23:27:37

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 948067|40|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\1202030964.149

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	2.250	ug/L	3.957	1001	0.004
Be	9	16.860	ug/L	0.926	1823	0.008
B	11	33.882	ug/L	2.137	4396	0.017
Na	23	226.913	ug/L	3.959	420783	1.684
Mg	24	1010.808	ug/L	2.115	1066031	4.428
Al	27	3042.478	ug/L	12.513	4931681	20.474
P	31	192.493	ug/L	3.693	20434	0.077
K	39	1126.862	ug/L	5.488	3936031	15.139
Ca	43	2447.532	ug/L	1.637	16785	0.069
> Sc	45		ug/L		240631	240630.559
Ti	47	113.264	ug/L	0.446	34872	0.145
V	51	30.572	ug/L	3.004	118305	0.485
Cr	52	60.199	ug/L	0.852	166681	0.694
Cr	53		ug/L		92593	0.166
Mn	55	134.947	ug/L	1.513	690735	2.868
Fe	57	3975.853	ug/L	2.896	420237	1.720
Co	59	23.707	ug/L	1.523	92165	0.383
Ni	60	34.064	ug/L	3.694	28071	0.116
Cu	63		ug/L		77209	0.320
Cu	65	42.941	ug/L	1.378	37652	0.156
Zn	66	138.518	ug/L	0.987	71378	0.321
Zn	67		ug/L		14193	0.054
Zn	68		ug/L		52289	0.235
> Ge	74		ug/L		221005	221005.499
As	75	26.161	ug/L	7.619	15847	0.073
Se	77		ug/L		11259	0.032
Se	82	68.765	ug/L	1.609	5050	0.023
Kr	83		ug/L		49	0.000
Sr	88	56.644	ug/L	0.382	518447	3.414
Y	89		ug/L		24449	0.161
Zr	90	1.997	ug/L	1.603	9647	0.061
Mo	98	12.885	ug/L	0.485	25291	0.166
Ag	107	6.787	ug/L	2.272	23435	0.154
Cd	111	14.614	ug/L	1.241	12210	0.080
Cd	114		ug/L		29512	0.194
> In	115		ug/L		151816	151815.876
Sn	120	8.442	ug/L	0.433	29601	0.193
Sb	121	16.432	ug/L	0.920	39245	0.256
Sb	123		ug/L		29800	0.195
Ba	135		ug/L		38286	0.324
Ba	137	51.452	ug/L	0.883	64837	0.549
Ho	165		ug/L		891	0.008
> Lu	175		ug/L		118168	118167.912
Tl	205	30.285	ug/L	2.602	48432	0.400
Pb	208	20.668	ug/L	0.335	142965	1.208
Th	232	2.021	ug/L	1.954	17133	0.141
U	238	0.440	ug/L	1.261	3794	0.032

Sample ID: 1202030964

Report Date/Time: Friday, February 12, 2010 23:30:21

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			129.0		
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			118.2		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			109.5		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			102.5		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sanSc	Ti	45	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 1202030964

Report Date/Time: Friday, February 12, 2010 23:30:21

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## ICPMS#4 - Summary Report

Sample ID: 245797001

Sample Date/Time: Friday, February 12, 2010 23:33:45

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797001.150

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	39.442	ug/L	2.091	22411	0.072
Be	9	2.440	ug/L	7.789	344	0.001
B	11	11.251	ug/L	1.250	2076	0.006
Na	23	1749.458	ug/L	8.911	4061172	12.982
Mg	24	9241.800	ug/L	8.022	12601825	40.485
Al	27	53386.882	ug/L	10.674	111894405	359.262
P	31	158.682	ug/L	0.548	22241	0.063
K	39	7065.040	ug/L	3.414	29935727	94.918
Ca	43	19147.370	ug/L	0.567	168549	0.541
Sc	45		ug/L		311346	311345.666
Ti	47	478.519	ug/L	2.665	190276	0.611
V	51	54.066	ug/L	2.861	269093	0.858
Cr	52	33.589	ug/L	2.359	120201	0.387
Cr	53		ug/L		59228	-0.028
Mn	55	609.754	ug/L	1.601	4035700	12.960
Fe	57	43431.552	ug/L	2.046	5857916	18.789
Co	59	29.931	ug/L	1.307	150539	0.483
Ni	60	30.288	ug/L	1.445	32310	0.104
Cu	63		ug/L		64741	0.207
Cu	65	28.115	ug/L	0.974	31940	0.102
Zn	66	126.584	ug/L	0.355	61949	0.294
Zn	67		ug/L		13237	0.052
Zn	68		ug/L		48456	0.229
Ge	74		ug/L		209787	209786.605
As	75	11.552	ug/L	2.361	6458	0.032
Se	77		ug/L		4595	0.003
Se	82	3.074	ug/L	19.000	242	0.001
Kr	83		ug/L		118	0.000
Sr	88	125.677	ug/L	2.066	1130988	7.576
Y	89		ug/L		578009	3.871
Zr	90	82.669	ug/L	1.472	378631	2.534
Mo	98	3.514	ug/L	0.905	6812	0.045
Ag	107	0.469	ug/L	0.582	1627	0.011
Cd	111	0.739	ug/L	13.644	618	0.004
Cd	114		ug/L		216	0.001
In	115		ug/L		149297	149297.083
Sn	120	0.829	ug/L	2.239	3064	0.019
Sb	121	0.470	ug/L	0.952	1396	0.007
Sb	123		ug/L		1072	0.006
Ba	135		ug/L		369448	3.051
Ba	137	481.517	ug/L	1.569	621744	5.134
Ho	165		ug/L		20609	0.170
Lu	175		ug/L		121123	121123.005
Tl	205	0.747	ug/L	21.623	2437	0.010
Pb	208	32.806	ug/L	2.654	232392	1.917
Th	232	32.971	ug/L	1.770	279229	2.302
U	238	2.446	ug/L	2.738	21374	0.176

Sample ID: 245797001

Report Date/Time: Friday, February 12, 2010 23:36:29

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			167.0		
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			112.2		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			107.7		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			105.0		
Tl	205					
Pb	208					
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)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_

### QC Action

Sample ID: 245797001

Report Date/Time: Friday, February 12, 2010 23:36:29

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QC Action Line: Continue

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Sample ID: 245797001

Report Date/Time: Friday, February 12, 2010 23:36:29

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# ICPMS#4 - Summary Report

Sample ID: 1202030960

Sample Date/Time: Friday, February 12, 2010 23:39:54

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\1202030960.151

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	39.731	ug/L	4.010	22047	0.072
Be	9	2.556	ug/L	5.589	351	0.001
B	11	11.391	ug/L	3.704	2051	0.006
Na	23	1745.139	ug/L	12.224	3947665	12.950
Mg	24	9189.286	ug/L	9.007	12236555	40.255
Al	27	54805.124	ug/L	5.604	112092975	368.806
P	31	159.036	ug/L	5.492	21765	0.063
K	39	6577.844	ug/L	1.595	27281850	88.373
Ca	43	18034.035	ug/L	3.554	155101	0.509
Sc	45		ug/L		304371	304371.420
Ti	47	447.336	ug/L	0.909	173862	0.571
V	51	52.362	ug/L	2.476	254752	0.831
Cr	52	31.474	ug/L	3.409	109998	0.363
Cr	53		ug/L		55298	-0.036
Mn	55	517.221	ug/L	4.760	3342263	10.994
Fe	57	41106.010	ug/L	3.741	5414882	17.783
Co	59	23.707	ug/L	4.154	116440	0.383
Ni	60	28.355	ug/L	4.360	29537	0.097
Cu	63		ug/L		54382	0.178
Cu	65	24.201	ug/L	2.874	26872	0.088
Zn	66	118.103	ug/L	1.851	57693	0.274
Zn	67		ug/L		12451	0.049
Zn	68		ug/L		44990	0.213
Ge	74		ug/L		209371	209370.543
As	75	10.759	ug/L	4.703	5976	0.030
Se	77		ug/L		4336	0.001
Se	82	3.266	ug/L	16.321	254	0.001
Kr	83		ug/L		101	0.000
Sr	88	121.552	ug/L	1.889	1090310	7.327
Y	89		ug/L		523670	3.519
Zr	90	78.173	ug/L	1.509	356821	2.396
Mo	98	2.874	ug/L	1.281	5560	0.037
Ag	107	0.441	ug/L	6.152	1527	0.010
Cd	111	0.563	ug/L	25.243	470	0.003
Cd	114		ug/L		212	0.001
In	115		ug/L		148824	148824.343
Sn	120	0.655	ug/L	3.188	2462	0.015
Sb	121	0.285	ug/L	2.216	963	0.004
Sb	123		ug/L		781	0.004
Ba	135		ug/L		347228	2.877
Ba	137	453.782	ug/L	1.344	583970	4.838
Ho	165		ug/L		18659	0.155
Lu	175		ug/L		120698	120697.963
Tl	205	0.295	ug/L	8.439	1711	0.004
Pb	208	31.101	ug/L	0.826	219612	1.818
Th	232	28.326	ug/L	0.967	239165	1.978
U	238	2.405	ug/L	0.803	20944	0.173

Sample ID: 1202030960

Report Date/Time: Friday, February 12, 2010 23:42:39

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		163.2			
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		112.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		107.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.7			
Tl	205					
Pb	208					
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)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

Sample ID: 1202030960

Report Date/Time: Friday, February 12, 2010 23:42:39

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QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 1202030962

Sample Date/Time: Friday, February 12, 2010 23:46:04

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 948067|2|sk|

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\1202030962.152

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	60.760	ug/L	1.698	33697	0.111
Be	9	17.899	ug/L	1.140	2445	0.008
B	11	46.528	ug/L	0.821	7525	0.024
Na	23	2372.163	ug/L	1.927	5371781	17.603
Mg	24	9671.453	ug/L	3.428	12887193	42.367
Al	27	57428.579	ug/L	2.512	117553661	386.461
P	31	814.841	ug/L	2.388	101292	0.325
K	39	7678.908	ug/L	3.767	31740363	103.165
Ca	43	19274.506	ug/L	3.050	165597	0.544
Sc	45		ug/L		304030	304030.496
Ti	47	520.367	ug/L	1.050	202032	0.664
V	51	73.317	ug/L	0.356	355686	1.164
Cr	52	51.266	ug/L	0.640	179287	0.591
Cr	53		ug/L		63051	-0.011
Mn	55	674.824	ug/L	2.732	4359277	14.343
Fe	57	41760.778	ug/L	2.763	5498202	18.066
Co	59	41.482	ug/L	0.873	203698	0.670
Ni	60	45.472	ug/L	2.341	47307	0.155
Cu	63		ug/L		92377	0.303
Cu	65	41.497	ug/L	2.415	45962	0.151
Zn	66	141.978	ug/L	1.827	69432	0.330
Zn	67		ug/L		14413	0.058
Zn	68		ug/L		53641	0.254
Ge	74		ug/L		209763	209762.927
As	75	43.055	ug/L	0.699	24962	0.121
Se	77		ug/L		4749	0.003
Se	82	10.574	ug/L	6.063	761	0.003
Kr	83		ug/L		115	0.000
Sr	88	139.442	ug/L	0.636	1252859	8.405
Y	89		ug/L		544795	3.655
Zr	90	140.990	ug/L	1.341	644334	4.321
Mo	98	25.160	ug/L	1.751	48445	0.325
Ag	107	21.880	ug/L	1.937	74089	0.497
Cd	111	5.234	ug/L	2.026	4300	0.029
Cd	114		ug/L		8648	0.058
In	115		ug/L		149044	149043.784
Sn	120	8.428	ug/L	0.226	29011	0.193
Sb	121	32.169	ug/L	0.530	75138	0.502
Sb	123		ug/L		57452	0.384
Ba	135		ug/L		356905	2.928
Ba	137	463.990	ug/L	0.713	603082	4.947
Ho	165		ug/L		19908	0.163
Lu	175		ug/L		121902	121901.804
Tl	205	42.112	ug/L	2.063	68979	0.556
Pb	208	119.268	ug/L	0.880	849906	6.970
Th	232	49.363	ug/L	0.851	420599	3.447
U	238	24.659	ug/L	0.603	216436	1.775

Sample ID: 1202030962

Report Date/Time: Friday, February 12, 2010 23:48:48

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		163.0			
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		112.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		107.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.7			
Tl	205					
Pb	208					
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)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

Sample ID: 1202030962

Report Date/Time: Friday, February 12, 2010 23:48:48

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QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 1202030963

Sample Date/Time: Friday, February 12, 2010 23:52:14

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\1202030963.153

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.062	ug/L	1.075	31389	0.102
Be	9	17.814	ug/L	5.351	2455	0.008
B	11	48.219	ug/L	1.588	7860	0.025
Na	23	2362.806	ug/L	10.456	5400818	17.533
Mg	24	9642.925	ug/L	5.231	12967096	42.242
Al	27	51694.372	ug/L	5.381	106731575	347.873
P	31	819.516	ug/L	1.765	102861	0.327
K	39	7871.119	ug/L	13.583	32801913	105.748
Ca	43	19242.243	ug/L	0.338	166945	0.543
> Sc	45		ug/L		306863	306862.957
Ti	47	487.715	ug/L	1.281	191154	0.623
V	51	67.310	ug/L	1.057	329758	1.068
Cr	52	48.334	ug/L	1.003	170612	0.557
Cr	53		ug/L		61388	-0.018
Mn	55	594.666	ug/L	1.232	3879513	12.640
Fe	57	38258.732	ug/L	1.009	5087296	16.551
Co	59	38.148	ug/L	0.689	189106	0.616
Ni	60	43.993	ug/L	1.609	46220	0.150
Cu	63		ug/L		90169	0.293
Cu	65	39.989	ug/L	0.251	44727	0.145
Zn	66	133.727	ug/L	0.628	65799	0.310
Zn	67		ug/L		13669	0.054
Zn	68		ug/L		50781	0.239
> Ge	74		ug/L		210983	210983.121
As	75	42.801	ug/L	3.557	24951	0.120
Se	77		ug/L		4615	0.003
Se	82	10.448	ug/L	3.608	757	0.003
Kr	83		ug/L		113	0.000
Sr	88	139.240	ug/L	2.169	1259223	8.393
Y	89		ug/L		537837	3.585
Zr	90	137.094	ug/L	2.675	630584	4.201
Mo	98	25.858	ug/L	1.056	50125	0.334
Ag	107	22.707	ug/L	2.521	77392	0.516
Cd	111	5.299	ug/L	2.264	4382	0.029
Cd	114		ug/L		8783	0.058
> In	115		ug/L		150048	150048.020
Sn	120	9.549	ug/L	1.537	33053	0.219
Sb	121	36.807	ug/L	0.939	86500	0.575
Sb	123		ug/L		66091	0.439
Ba	135		ug/L		354085	2.898
Ba	137	459.453	ug/L	0.814	598442	4.899
Ho	165		ug/L		19134	0.157
> Lu	175		ug/L		122174	122173.948
Tl	205	43.747	ug/L	0.313	71765	0.577
Pb	208	115.117	ug/L	1.697	821998	6.728
Th	232	48.180	ug/L	2.120	411322	3.364
U	238	24.782	ug/L	3.017	217907	1.784

Sample ID: 1202030963

Report Date/Time: Friday, February 12, 2010 23:54:59

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			164.6		
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			112.9		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			108.2		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			105.9		
Tl	205					
Pb	208					
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)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

Sample ID: 1202030963

Report Date/Time: Friday, February 12, 2010 23:54:59

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QC Action Line: Continue

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Sample ID: 1202030963

Report Date/Time: Friday, February 12, 2010 23:54:59

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## ICPMS#4 - Summary Report

Sample ID: 1202030961

Sample Date/Time: Friday, February 12, 2010 23:58:25

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 948067|10|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\1202030961.154

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.415	ug/L	0.487	4694	0.019
Be	9	0.643	ug/L	7.302	73	0.000
B	11	4.257	ug/L	2.173	760	0.002
Na	23	401.744	ug/L	7.988	750639	2.981
Mg	24	2994.185	ug/L	18.317	3226079	13.116
Al	27	13829.974	ug/L	2.384	22934878	93.068
P	31	51.836	ug/L	3.321	7094	0.021
K	39	1623.540	ug/L	4.577	5672661	21.812
Ca	43	4911.282	ug/L	1.787	34325	0.139
> Sc	45		ug/L		246382	246381.569
Ti	47	123.122	ug/L	1.539	38801	0.157
V	51	13.411	ug/L	5.441	54005	0.213
Cr	52	8.523	ug/L	0.934	23976	0.098
Cr	53		ug/L		59679	0.024
Mn	55	156.525	ug/L	1.465	820190	3.327
Fe	57	11191.687	ug/L	1.911	1199172	4.842
Co	59	8.030	ug/L	1.024	31988	0.130
Ni	60	8.208	ug/L	1.299	6974	0.028
Cu	63		ug/L		14176	0.057
Cu	65	7.683	ug/L	2.031	6972	0.028
Zn	66	28.162	ug/L	1.712	14212	0.065
Zn	67		ug/L		5087	0.013
Zn	68		ug/L		11232	0.051
> Ge	74		ug/L		212518	212517.758
As	75	1.466	ug/L	67.116	543	0.004
Se	77		ug/L		5567	0.007
Se	82	1.485	ug/L	29.669	133	0.000
Kr	83		ug/L		42	0.000
Sr	88	26.995	ug/L	0.895	239906	1.627
Y	89		ug/L		120962	0.821
Zr	90	16.888	ug/L	2.326	76627	0.518
Mo	98	0.755	ug/L	1.288	1473	0.010
Ag	107	0.094	ug/L	7.577	350	0.002
Cd	111	0.124	ug/L	4.263	111	0.001
Cd	114		ug/L		58	0.000
> In	115		ug/L		147399	147399.173
Sn	120	0.271	ug/L	8.424	1139	0.006
Sb	121	0.254	ug/L	5.347	882	0.004
Sb	123		ug/L		642	0.003
Ba	135		ug/L		76331	0.646
Ba	137	103.071	ug/L	0.487	129779	1.099
Ho	165		ug/L		4235	0.036
> Lu	175		ug/L		118082	118081.523
Tl	205	0.199	ug/L	49.872	1525	0.003
Pb	208	7.211	ug/L	1.598	49997	0.421
Th	232	7.072	ug/L	0.847	58762	0.494
U	238	0.532	ug/L	2.217	4568	0.038

Sample ID: 1202030961

Report Date/Time: Saturday, February 13, 2010 00:01:10

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					132.1
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					113.7
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					106.3
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					102.4
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte  
Sc 45 Int Std for samSc  
Ti

MassOut of Limits Message  
45  
47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: Continue

Sample ID: 1202030961

Report Date/Time: Saturday, February 13, 2010 00:01:10

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 00:04:34

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 6.155

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	47.000	ug/L	0.739	20065	0.086
Be	9	45.589	ug/L	2.719	4787	0.020
B	11	92.989	ug/L	2.036	11361	0.048
Na	23	4767.043	ug/L	3.824	8292605	35.374
Mg	24	5582.314	ug/L	3.146	5721617	24.454
Al	27	5167.743	ug/L	2.968	8138283	34.776
P	31	4981.337	ug/L	0.880	466977	1.988
K	39	5046.162	ug/L	5.618	16135569	67.795
Ca	43	5006.663	ug/L	0.881	33227	0.141
Sc	45		ug/L		233920	233920.316
Ti	47	49.672	ug/L	2.867	14906	0.063
V	51	50.884	ug/L	0.581	190387	0.808
Cr	52	52.740	ug/L	1.808	141896	0.608
Cr	53		ug/L		82040	0.132
Mn	55	50.802	ug/L	1.843	253034	1.080
Fe	57	4930.304	ug/L	1.630	505118	2.133
Co	59	49.306	ug/L	0.515	186307	0.796
Ni	60	50.984	ug/L	1.069	40823	0.174
Cu	63		ug/L		89488	0.382
Cu	65	50.898	ug/L	1.742	43378	0.185
Zn	66	49.976	ug/L	0.030	25729	0.116
Zn	67		ug/L		7023	0.021
Zn	68		ug/L		18852	0.084
Ge	74		ug/L		218982	218982.003
As	75	48.935	ug/L	3.671	29650	0.137
Se	77		ug/L		9428	0.024
Se	82	46.319	ug/L	5.080	3378	0.015
Kr	83		ug/L		40	-0.000
Sr	88	50.710	ug/L	2.329	461997	3.057
Y	89		ug/L		93	0.000
Zr	90	50.108	ug/L	1.403	232438	1.536
Mo	98	49.921	ug/L	1.415	97435	0.644
Ag	107	50.901	ug/L	1.204	174762	1.156
Cd	111	49.113	ug/L	1.513	40828	0.270
Cd	114		ug/L		98335	0.650
In	115		ug/L		151165	151164.745
Sn	120	51.227	ug/L	0.985	177682	1.174
Sb	121	51.836	ug/L	3.174	122658	0.809
Sb	123		ug/L		93583	0.617
Ba	135		ug/L		39837	0.349
Ba	137	55.093	ug/L	1.634	67051	0.587
Ho	165		ug/L		11	0.000
Lu	175		ug/L		114132	114132.259
Tl	205	49.278	ug/L	3.417	75358	0.650
Pb	208	50.828	ug/L	1.607	339233	2.971
Th	232	50.866	ug/L	2.751	405730	3.551
U	238	51.610	ug/L	2.287	424046	3.715

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 00:07:18

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	94.001				
	Be	9	91.178				
	B	11	92.989				
	Na	23	95.341				
	Mg	24	111.646				
	Al	27	102.332				
	P	31	99.627				
	K	39	100.923				
	Ca	43	100.133				
>	Sc	45		125.4			
	Ti	47	99.345				
	V	51	101.769				
	Cr	52	105.480				
	Cr	53					
	Mn	55	101.605				
	Fe	57	98.606				
	Co	59	98.612				
	Ni	60	101.969				
	Cu	63					
	Cu	65	101.797				
[	Zn	66	99.952				
	Zn	67					
	Zn	68					
>	Ge	74		117.1			
	As	75	97.871				
	Se	77					
	Se	82	92.637				
	Kr	83					
[	Sr	88	101.421				
	Y	89					
	Zr	90	100.215				
	Mo	98	99.842				
	Ag	107	101.803				
	Cd	111	98.226				
	Cd	114					
>	In	115		109.0			
	Sn	120	102.454				
	Sb	121	103.673				
	Sb	123					
[	Ba	135					
	Ba	137	110.186				
	Ho	165					
>	Lu	175		99.0			
	Tl	205	98.557				
	Pb	208	101.656				
	Th	232	101.731				
	U	238	103.221				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mg		24CCV is out of limits ( +/- 10%)
Sc 45 Int Std for QC Sc		45	
QC Std 6	Ba		137CCV is out of limits ( +/- 10%)

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 00:10:44

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 7.156

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.043	ug/L	9.419	30	0.000
Be	9	0.007	ug/L	449.735	3	0.000
B	11	1.785	ug/L	49.013	404	0.001
Na	23	-4.434	ug/L	0.430	7002	-0.033
Mg	24	1.306	ug/L	120.522	1667	0.006
Al	27	0.722	ug/L	108.330	2667	0.005
P	31	0.911	ug/L	71.601	1884	0.000
K	39	4.537	ug/L	257.938	285177	0.061
Ca	43	0.238	ug/L	2078.477	145	0.000
> Sc	45		ug/L		222413	222412.546
Ti	47	0.119	ug/L	35.900	108	0.000
V	51	-0.548	ug/L	39.504	-517	-0.009
Cr	52	0.415	ug/L	33.043	872	0.005
Cr	53		ug/L		47961	-0.003
Mn	55	0.021	ug/L	50.328	560	0.000
Fe	57	11.099	ug/L	5.751	6907	0.005
Co	59	0.010	ug/L	25.263	71	0.000
Ni	60	0.028	ug/L	11.557	79	0.000
Cu	63		ug/L		171	0.000
Cu	65	0.015	ug/L	82.849	94	0.000
Zn	66	0.011	ug/L	334.794	332	0.000
Zn	67		ug/L		2263	-0.000
Zn	68		ug/L		454	0.000
> Ge	74		ug/L		217561	217561.324
As	75	-0.297	ug/L	60.848	-522	-0.001
Se	77		ug/L		4459	0.001
Se	82	0.100	ug/L	86.210	37	0.000
Kr	83		ug/L		35	-0.000
Sr	88	0.012	ug/L	34.862	179	0.001
Y	89		ug/L		24	0.000
Zr	90	0.120	ug/L	16.393	924	0.004
Mo	98	0.048	ug/L	7.656	135	0.001
Ag	107	0.014	ug/L	36.256	86	0.000
Cd	111	0.013	ug/L	40.388	22	0.000
Cd	114		ug/L		46	0.000
> In	115		ug/L		153088	153088.289
Sn	120	0.180	ug/L	6.224	866	0.004
Sb	121	0.520	ug/L	14.531	1551	0.008
Sb	123		ug/L		1133	0.006
Ba	135		ug/L		28	0.000
Ba	137	0.017	ug/L	43.411	35	0.000
Ho	165		ug/L		6	0.000
> Lu	175		ug/L		117599	117598.889
Tl	205	0.058	ug/L	125.510	1300	0.001
Pb	208	0.032	ug/L	6.413	449	0.002
Th	232	0.064	ug/L	19.845	981	0.004
U	238	0.017	ug/L	18.336	190	0.001

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 00:13:29

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			119.3		
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			116.4		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			110.4		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			102.0		
Tl	205					
Pb	208					
Th	232					
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 00:13:29

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## ICPMS#4 - Summary Report

Sample ID: 245797002

Sample Date/Time: Saturday, February 13, 2010 00:16:54

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797002.157

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	35.282	ug/L	1.108	18210	0.064
Be	9	4.550	ug/L	4.150	580	0.002
B	11	9.452	ug/L	2.457	1625	0.005
Na	23	988.264	ug/L	7.480	2092355	7.333
Mg	24	6143.651	ug/L	0.399	7610749	26.913
Al	27	41053.315	ug/L	4.314	78137442	276.265
P	31	206.058	ug/L	0.127	25547	0.082
K	39	4659.453	ug/L	2.888	18046360	62.599
Ca	43	6124.687	ug/L	0.660	49090	0.173
> Sc	45		ug/L		282777	282776.832
Ti	47	590.526	ug/L	0.481	213260	0.754
V	51	41.288	ug/L	1.297	187086	0.655
Cr	52	30.324	ug/L	2.290	98535	0.349
Cr	53		ug/L		50754	-0.039
Mn	55	736.966	ug/L	0.601	4430131	15.664
Fe	57	38642.248	ug/L	0.969	4734757	16.717
Co	59	22.330	ug/L	0.565	102015	0.361
Ni	60	27.239	ug/L	1.230	26397	0.093
Cu	63		ug/L		281842	0.996
Cu	65	134.747	ug/L	1.018	138628	0.490
Zn	66	153.039	ug/L	1.605	72828	0.355
Zn	67		ug/L		14043	0.058
Zn	68		ug/L		55341	0.269
> Ge	74		ug/L		204193	204192.762
As	75	8.060	ug/L	3.743	4287	0.023
Se	77		ug/L		3754	-0.001
Se	82	2.775	ug/L	19.210	215	0.001
Kr	83		ug/L		150	0.001
Sr	88	82.752	ug/L	1.757	735545	4.988
Y	89		ug/L		1064889	7.222
Zr	90	110.401	ug/L	0.562	499305	3.383
Mo	98	2.000	ug/L	2.835	3843	0.026
Ag	107	0.852	ug/L	1.935	2890	0.019
Cd	111	1.086	ug/L	6.683	891	0.006
Cd	114		ug/L		503	0.003
> In	115		ug/L		147465	147464.790
Sn	120	1.406	ug/L	1.532	4975	0.032
Sb	121	1.220	ug/L	2.496	3106	0.019
Sb	123		ug/L		2439	0.015
Ba	135		ug/L		300513	2.356
Ba	137	374.234	ug/L	1.856	508970	3.990
Ho	165		ug/L		38215	0.300
> Lu	175		ug/L		127592	127591.758
Tl	205	0.246	ug/L	13.321	1726	0.003
Pb	208	93.632	ug/L	1.601	698267	5.472
Th	232	29.982	ug/L	1.173	267563	2.093
U	238	81.887	ug/L	1.835	752008	5.895

Sample ID: 245797002

Report Date/Time: Saturday, February 13, 2010 00:19:37

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		151.7			
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		109.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		106.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		110.6			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for samSc		45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797002

Report Date/Time: Saturday, February 13, 2010 00:19:37

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## ICPMS#4 - Summary Report

Sample ID: 245797003

Sample Date/Time: Saturday, February 13, 2010 00:23:02

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797003.158

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	13.189	ug/L	3.772	5649	0.024
Be	9	1.659	ug/L	0.512	177	0.001
B	11	1.484	ug/L	13.245	390	0.001
Na	23	1795.031	ug/L	7.288	3134639	13.320
Mg	24	986.159	ug/L	1.370	1013408	4.320
Al	27	12081.161	ug/L	3.908	19062756	81.299
P	31	185.561	ug/L	0.846	19261	0.074
K	39	3194.504	ug/L	9.708	10348460	42.918
Ca	43	1630.355	ug/L	2.535	10942	0.046
> Sc	45		ug/L		234445	234444.773
Ti	47	490.097	ug/L	0.724	146738	0.626
V	51	13.788	ug/L	1.562	52781	0.219
Cr	52	14.814	ug/L	0.926	39803	0.171
Cr	53		ug/L		39737	-0.049
Mn	55	1001.808	ug/L	3.837	4989665	21.294
Fe	57	32236.934	ug/L	3.105	3274195	13.946
Co	59	43.023	ug/L	4.498	162815	0.695
Ni	60	17.003	ug/L	3.391	13677	0.058
Cu	63		ug/L		52495	0.223
Cu	65	30.783	ug/L	3.796	26309	0.112
Zn	66	99.417	ug/L	0.407	45873	0.231
Zn	67		ug/L		8871	0.034
Zn	68		ug/L		34236	0.171
> Ge	74		ug/L		197517	197517.065
As	75	3.769	ug/L	16.260	1776	0.011
Se	77		ug/L		3208	-0.003
Se	82	1.849	ug/L	16.057	147	0.001
Kr	83		ug/L		99	0.000
Sr	88	15.087	ug/L	1.238	129931	0.909
Y	89		ug/L		790287	5.534
Zr	90	107.497	ug/L	2.730	470710	3.294
Mo	98	2.686	ug/L	1.179	4988	0.035
Ag	107	0.558	ug/L	2.054	1843	0.013
Cd	111	1.153	ug/L	6.273	916	0.006
Cd	114		ug/L		599	0.004
> In	115		ug/L		142796	142796.453
Sn	120	3.759	ug/L	1.366	12519	0.086
Sb	121	0.539	ug/L	0.443	1490	0.008
Sb	123		ug/L		1138	0.006
Ba	135		ug/L		89832	0.710
Ba	137	112.490	ug/L	0.592	151624	1.199
Ho	165		ug/L		28558	0.226
> Lu	175		ug/L		126411	126411.499
Tl	205	-0.169	ug/L	3.862	1019	-0.002
Pb	208	29.235	ug/L	0.979	216230	1.709
Th	232	23.580	ug/L	1.951	208569	1.646
U	238	7.019	ug/L	1.312	63920	0.505

Sample ID: 245797003

Report Date/Time: Saturday, February 13, 2010 00:25:46

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			125.7		
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			105.7		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			103.0		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			109.6		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for samSc		45	
	Ti	47	Sample is out of limits (over linear range)_
	Mn	55	Sample is out of limits (over linear range)

## QC Action

Sample ID: 245797003

Report Date/Time: Saturday, February 13, 2010 00:25:46

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QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 245797004

Sample Date/Time: Saturday, February 13, 2010 00:29:11

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797004.159

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	22.998	ug/L	1.921	9316	0.042
Be	9	13.881	ug/L	3.062	1384	0.006
B	11	6.399	ug/L	1.896	928	0.003
Na	23	413.548	ug/L	7.822	694887	3.069
Mg	24	3005.146	ug/L	4.659	2920736	13.164
Al	27	22876.872	ug/L	2.508	34154104	153.948
P	31	221.600	ug/L	1.614	21419	0.088
K	39	3318.727	ug/L	1.949	10162688	44.587
Ca	43	2984.374	ug/L	0.849	18840	0.084
Sc	45		ug/L		221840	221840.076
Ti	47	392.268	ug/L	0.733	111155	0.501
V	51	25.544	ug/L	1.162	91337	0.405
Cr	52	17.762	ug/L	1.496	45202	0.205
Cr	53		ug/L		40096	-0.038
Mn	55	388.961	ug/L	1.755	1834500	8.267
Fe	57	16605.935	ug/L	1.637	1599563	7.184
Co	59	12.814	ug/L	1.312	45942	0.207
Ni	60	15.012	ug/L	0.878	11438	0.051
Cu	63		ug/L		1101590	4.965
Cu	65	668.644	ug/L	0.494	539362	2.431
Zn	66	109.598	ug/L	1.031	48583	0.254
Zn	67		ug/L		9490	0.039
Zn	68		ug/L		36621	0.191
Ge	74		ug/L		189867	189866.621
As	75	4.750	ug/L	10.777	2228	0.013
Se	77		ug/L		3123	-0.003
Se	82	1.612	ug/L	10.410	127	0.001
Kr	83		ug/L		53	0.000
Sr	88	29.548	ug/L	0.257	244710	1.781
Y	89		ug/L		244006	1.776
Zr	90	36.530	ug/L	2.451	154077	1.120
Mo	98	1.492	ug/L	0.468	2681	0.019
Ag	107	0.966	ug/L	0.307	3046	0.022
Cd	111	0.879	ug/L	4.307	674	0.005
Cd	114		ug/L		1105	0.008
In	115		ug/L		137354	137354.412
Sn	120	2.780	ug/L	1.172	8958	0.064
Sb	121	8.128	ug/L	0.639	17703	0.127
Sb	123		ug/L		13630	0.098
Ba	135		ug/L		115733	0.955
Ba	137	150.294	ug/L	0.843	194250	1.602
Ho	165		ug/L		9565	0.079
Lu	175		ug/L		121206	121205.561
Tl	205	-0.143	ug/L	20.811	1018	-0.002
Pb	208	342.873	ug/L	1.058	2428902	20.039
Th	232	15.113	ug/L	1.490	128363	1.055
U	238	334.573	ug/L	0.970	2919241	24.086

Sample ID: 245797004

Report Date/Time: Saturday, February 13, 2010 00:31:55

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		119.0			
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		101.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.1			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797004

Report Date/Time: Saturday, February 13, 2010 00:31:55

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## ICPMS#4 - Summary Report

Sample ID: 245797005

Sample Date/Time: Saturday, February 13, 2010 00:35:21

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797005.160

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	20.626	ug/L	1.045	8516	0.038
Be	9	3.843	ug/L	4.455	392	0.002
B	11	5.774	ug/L	4.970	873	0.003
Na	23	572.895	ug/L	7.523	975666	4.251
Mg	24	3326.587	ug/L	5.129	3293140	14.573
Al	27	23293.854	ug/L	1.528	35444812	156.754
P	31	359.804	ug/L	3.147	34284	0.144
K	39	3976.972	ug/L	7.353	12367064	53.430
Ca	43	3434.110	ug/L	0.532	22072	0.097
Sc	45		ug/L		226083	226082.591
Ti	47	459.206	ug/L	0.110	132600	0.586
V	51	30.320	ug/L	3.022	110245	0.481
Cr	52	17.161	ug/L	1.082	44497	0.198
Cr	53		ug/L		38884	-0.046
Mn	55	690.107	ug/L	1.832	3315948	14.668
Fe	57	22337.263	ug/L	1.875	2190185	9.663
Co	59	28.642	ug/L	2.416	104579	0.463
Ni	60	15.534	ug/L	2.514	12058	0.053
Cu	63		ug/L		528192	2.336
Cu	65	316.713	ug/L	0.903	260381	1.151
Zn	66	177.402	ug/L	2.407	77385	0.412
Zn	67		ug/L		13732	0.063
Zn	68		ug/L		58043	0.308
Ge	74		ug/L		187333	187332.969
As	75	7.103	ug/L	3.759	3433	0.020
Se	77		ug/L		3039	-0.003
Se	82	2.233	ug/L	5.546	163	0.001
Kr	83		ug/L		62	0.000
Sr	88	33.166	ug/L	0.734	273925	1.999
Y	89		ug/L		269288	1.966
Zr	90	41.566	ug/L	1.376	174808	1.274
Mo	98	2.011	ug/L	2.152	3592	0.026
Ag	107	1.084	ug/L	0.450	3405	0.025
Cd	111	28.010	ug/L	1.966	21105	0.154
Cd	114		ug/L		50496	0.368
In	115		ug/L		136989	136989.156
Sn	120	1.837	ug/L	2.050	5976	0.042
Sb	121	2.193	ug/L	2.400	4967	0.034
Sb	123		ug/L		3745	0.026
Ba	135		ug/L		133555	1.116
Ba	137	176.764	ug/L	1.279	225476	1.885
Ho	165		ug/L		10526	0.088
Lu	175		ug/L		119625	119624.969
Tl	205	-0.189	ug/L	12.933	932	-0.002
Pb	208	129.497	ug/L	1.260	905537	7.568
Th	232	17.284	ug/L	0.434	144820	1.207
U	238	142.704	ug/L	1.291	1228994	10.273

Sample ID: 245797005

Report Date/Time: Saturday, February 13, 2010 00:38:05

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		121.2			
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		100.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.7			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797005

Report Date/Time: Saturday, February 13, 2010 00:38:05

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## ICPMS#4 - Summary Report

Sample ID: 245797006

Sample Date/Time: Saturday, February 13, 2010 00:41:31

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797006.161

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	13.093	ug/L	7.851	5081	0.024
Be	9	1.053	ug/L	10.963	102	0.000
B	11	2.711	ug/L	11.250	487	0.001
Na	23	978.638	ug/L	5.814	1558517	7.262
Mg	24	1810.965	ug/L	13.586	1680719	7.933
Al	27	12937.549	ug/L	11.300	18467045	87.062
P	31	139.321	ug/L	9.746	13519	0.056
K	39	2197.289	ug/L	10.984	6520243	29.520
Ca	43	2604.408	ug/L	9.544	15739	0.074
> Sc	45		ug/L		212879	212878.982
Ti	47	418.756	ug/L	5.305	113635	0.535
V	51	20.375	ug/L	3.410	70104	0.323
Cr	52	16.572	ug/L	4.738	40385	0.191
Cr	53		ug/L		37305	-0.043
Mn	55	577.906	ug/L	7.469	2607797	12.283
Fe	57	21916.519	ug/L	7.669	2019981	9.481
Co	59	40.917	ug/L	5.134	140438	0.661
Ni	60	15.478	ug/L	6.483	11289	0.053
Cu	63		ug/L		24651	0.115
Cu	65	15.595	ug/L	5.988	12120	0.057
Zn	66	68.804	ug/L	6.516	28179	0.160
Zn	67		ug/L		6100	0.024
Zn	68		ug/L		21415	0.120
> Ge	74		ug/L		175238	175237.556
As	75	4.815	ug/L	19.194	2093	0.013
Se	77		ug/L		2814	-0.003
Se	82	1.302	ug/L	21.687	99	0.000
Kr	83		ug/L		74	0.000
Sr	88	21.053	ug/L	3.574	168434	1.269
Y	89		ug/L		427778	3.226
Zr	90	81.413	ug/L	4.503	331229	2.495
Mo	98	1.695	ug/L	1.823	2938	0.022
Ag	107	0.392	ug/L	7.232	1214	0.009
Cd	111	0.698	ug/L	13.244	518	0.004
Cd	114		ug/L		226	0.002
> In	115		ug/L		132821	132820.982
Sn	120	2.533	ug/L	5.179	7901	0.058
Sb	121	0.326	ug/L	4.365	945	0.005
Sb	123		ug/L		753	0.004
Ba	135		ug/L		68515	0.588
Ba	137	93.049	ug/L	9.107	115549	0.992
Ho	165		ug/L		14953	0.128
> Lu	175		ug/L		116944	116944.407
Tl	205	-0.337	ug/L	7.705	682	-0.004
Pb	208	16.833	ug/L	7.574	114876	0.984
Th	232	20.488	ug/L	7.862	167139	1.431
U	238	3.773	ug/L	6.341	31716	0.272

Sample ID: 245797006

Report Date/Time: Saturday, February 13, 2010 00:44:16

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			114.2		
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			93.7		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			95.8		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			101.4		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797006

Report Date/Time: Saturday, February 13, 2010 00:44:16

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## ICPMS#4 - Summary Report

Sample ID: 245797007

Sample Date/Time: Saturday, February 13, 2010 00:47:42

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797007.162

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	32.800	ug/L	0.827	14729	0.060
Be	9	2.308	ug/L	6.511	257	0.001
B	11	9.857	ug/L	4.787	1465	0.005
Na	23	357.075	ug/L	9.096	667654	2.650
Mg	24	6756.318	ug/L	4.147	7281150	29.597
Al	27	42462.040	ug/L	2.651	70293912	285.745
P	31	184.549	ug/L	4.528	20112	0.074
K	39	6396.591	ug/L	10.807	21443322	85.938
Ca	43	4866.902	ug/L	2.105	33969	0.137
Sc	45		ug/L		246009	246009.256
Ti	47	659.515	ug/L	0.856	207192	0.842
V	51	61.670	ug/L	1.303	242333	0.979
Cr	52	31.550	ug/L	3.098	89202	0.363
Cr	53		ug/L		43121	-0.043
Mn	55	465.889	ug/L	3.891	2436437	9.903
Fe	57	33578.729	ug/L	3.551	3579870	14.527
Co	59	17.447	ug/L	4.657	69348	0.282
Ni	60	20.712	ug/L	5.531	17476	0.071
Cu	63		ug/L		59234	0.240
Cu	65	32.691	ug/L	2.747	29328	0.119
Zn	66	81.534	ug/L	1.606	36141	0.189
Zn	67		ug/L		8025	0.032
Zn	68		ug/L		27618	0.144
Ge	74		ug/L		189479	189478.852
As	75	7.858	ug/L	4.126	3872	0.022
Se	77		ug/L		2880	-0.004
Se	82	0.518	ug/L	53.156	58	0.000
Kr	83		ug/L		68	0.000
Sr	88	55.719	ug/L	2.293	462288	3.359
Y	89		ug/L		216106	1.570
Zr	90	37.966	ug/L	3.177	160439	1.164
Mo	98	1.255	ug/L	1.914	2264	0.016
Ag	107	0.253	ug/L	5.913	824	0.006
Cd	111	0.395	ug/L	14.595	309	0.002
Cd	114		ug/L		296	0.002
In	115		ug/L		137627	137627.393
Sn	120	0.483	ug/L	3.160	1733	0.011
Sb	121	0.379	ug/L	1.862	1091	0.006
Sb	123		ug/L		823	0.004
Ba	135		ug/L		162262	1.380
Ba	137	220.535	ug/L	0.636	276439	2.351
Ho	165		ug/L		8863	0.075
Lu	175		ug/L		117562	117562.290
Tl	205	0.113	ug/L	53.310	1384	0.001
Pb	208	50.266	ug/L	1.932	345584	2.938
Th	232	27.870	ug/L	1.624	229200	1.946
U	238	9.656	ug/L	0.551	81768	0.695

Sample ID: 245797007

Report Date/Time: Saturday, February 13, 2010 00:50:27

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		131.9			
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		101.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.9			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for samSc	Ti	45	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797007

Report Date/Time: Saturday, February 13, 2010 00:50:27

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 00:53:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 6.163

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.040	ug/L	1.611	19849	0.095
Be	9	51.497	ug/L	0.253	4833	0.023
B	11	101.625	ug/L	1.396	11074	0.052
Na	23	4864.157	ug/L	1.386	7557449	36.094
Mg	24	5080.464	ug/L	4.858	4651489	22.256
Al	27	5043.432	ug/L	2.170	7095788	33.939
P	31	4923.360	ug/L	0.703	412410	1.965
K	39	5132.858	ug/L	4.310	14662668	68.959
Ca	43	5046.283	ug/L	1.587	29933	0.143
> Sc	45		ug/L		209053	209052.774
Ti	47	51.024	ug/L	2.548	13688	0.065
V	51	50.295	ug/L	0.999	168172	0.798
Cr	52	52.188	ug/L	1.448	125536	0.601
Cr	53		ug/L		67134	0.103
Mn	55	51.466	ug/L	1.291	229109	1.094
Fe	57	5009.328	ug/L	1.357	458484	2.167
Co	59	49.714	ug/L	2.378	167842	0.803
Ni	60	51.801	ug/L	1.709	37062	0.177
Cu	63		ug/L		80926	0.386
Cu	65	52.383	ug/L	2.650	39890	0.190
Zn	66	50.916	ug/L	0.662	23558	0.118
Zn	67		ug/L		6284	0.021
Zn	68		ug/L		17283	0.086
> Ge	74		ug/L		196832	196832.141
As	75	48.393	ug/L	1.889	26372	0.136
Se	77		ug/L		7582	0.019
Se	82	48.321	ug/L	4.043	3168	0.016
Kr	83		ug/L		30	-0.000
Sr	88	51.380	ug/L	1.080	437061	3.097
Y	89		ug/L		113	0.001
Zr	90	49.392	ug/L	1.330	213953	1.514
Mo	98	50.200	ug/L	0.756	91474	0.648
Ag	107	50.247	ug/L	0.509	161034	1.141
Cd	111	49.885	ug/L	1.214	38713	0.274
Cd	114		ug/L		92647	0.656
> In	115		ug/L		141102	141102.496
Sn	120	50.918	ug/L	1.042	164826	1.167
Sb	121	51.728	ug/L	2.973	114258	0.807
Sb	123		ug/L		86897	0.614
Ba	135		ug/L		37010	0.319
Ba	137	50.780	ug/L	2.133	62765	0.541
Ho	165		ug/L		13	0.000
> Lu	175		ug/L		115900	115900.122
Tl	205	49.590	ug/L	1.477	77023	0.654
Pb	208	51.913	ug/L	1.163	351829	3.034
Th	232	52.649	ug/L	2.156	426427	3.676
U	238	54.298	ug/L	2.835	452982	3.909

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 00:56:36

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	104.081			
	Be	9	102.994			
	B	11	101.625			
	Na	23	97.283			
	Mg	24	101.609			
	Al	27	99.870			
	P	31	98.467			
	K	39	102.657			
	Ca	43	100.926			
>	Sc	45		112.1		
	Ti	47	102.048			
	V	51	100.589			
	Cr	52	104.375			
	Cr	53				
	Mn	55	102.932			
	Fe	57	100.187			
	Co	59	99.427			
	Ni	60	103.602			
	Cu	63				
[	Cu	65	104.765			
[	Zn	66	101.831			
	Zn	67				
	Zn	68				
>	Ge	74		105.3		
	As	75	96.787			
	Se	77				
	Se	82	96.643			
[	Kr	83				
[	Sr	88	102.761			
	Y	89				
	Zr	90	98.784			
	Mo	98	100.400			
	Ag	107	100.495			
	Cd	111	99.771			
	Cd	114				
>	In	115		101.8		
	Sn	120	101.837			
	Sb	121	103.455			
[	Sb	123				
[	Ba	135				
	Ba	137	101.560			
	Ho	165				
>	Lu	175		100.5		
	Tl	205	99.179			
	Pb	208	103.826			
	Th	232	105.298			
[	U	238	108.596			

### 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 01:00:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 7.164

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.028	ug/L	39.619	22	0.000
Be	9	0.006	ug/L	100.168	2	0.000
B	11	1.739	ug/L	19.429	360	0.001
Na	23	-1.288	ug/L	187.468	11005	-0.010
Mg	24	1.104	ug/L	157.910	1333	0.005
Al	27	0.182	ug/L	625.318	1667	0.001
P	31	0.886	ug/L	152.776	1696	0.000
K	39	-3.888	ug/L	116.892	234580	-0.052
Ca	43	-5.832	ug/L	32.424	97	-0.000
> Sc	45		ug/L		200616	200616.093
Ti	47	0.087	ug/L	4.507	89	0.000
V	51	-0.504	ug/L	22.397	-324	-0.008
Cr	52	0.299	ug/L	10.659	517	0.003
Cr	53		ug/L		39478	-0.022
Mn	55	0.018	ug/L	47.305	494	0.000
Fe	57	5.814	ug/L	15.891	5773	0.003
Co	59	0.006	ug/L	58.977	50	0.000
Ni	60	0.020	ug/L	54.331	66	0.000
Cu	63		ug/L		157	0.000
Cu	65	0.027	ug/L	22.865	94	0.000
Zn	66	-0.043	ug/L	147.603	281	-0.000
Zn	67		ug/L		1987	-0.001
Zn	68		ug/L		391	-0.000
> Ge	74		ug/L		201032	201032.065
As	75	0.071	ug/L	575.446	-276	0.000
Se	77		ug/L		3544	-0.002
Se	82	-0.076	ug/L	321.474	22	-0.000
Kr	83		ug/L		34	-0.000
Sr	88	0.011	ug/L	17.226	156	0.001
Y	89		ug/L		26	0.000
Zr	90	0.108	ug/L	15.855	812	0.003
Mo	98	0.041	ug/L	24.277	112	0.001
Ag	107	0.015	ug/L	26.652	85	0.000
Cd	111	0.002	ug/L	457.140	12	0.000
Cd	114		ug/L		41	0.000
> In	115		ug/L		143469	143469.164
Sn	120	0.159	ug/L	10.608	744	0.004
Sb	121	0.491	ug/L	16.200	1392	0.008
Sb	123		ug/L		1040	0.006
Ba	135		ug/L		23	0.000
Ba	137	0.015	ug/L	50.644	33	0.000
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		116978	116977.962
Tl	205	-0.168	ug/L	45.427	945	-0.002
Pb	208	0.025	ug/L	2.386	403	0.001
Th	232	0.065	ug/L	21.986	982	0.005
U	238	0.015	ug/L	8.858	170	0.001

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 01:02:47

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		107.6			
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		107.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		103.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.4			
Tl	205					
Pb	208					
Th	232					
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 01:02:47

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## ICPMS#4 - Summary Report

Sample ID: 245797008

Sample Date/Time: Saturday, February 13, 2010 01:06:13

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797008.165

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	14.502	ug/L	3.864	5574	0.026
Be	9	8.350	ug/L	4.731	791	0.004
B	11	6.307	ug/L	4.450	870	0.003
Na	23	399.572	ug/L	12.693	637017	2.965
Mg	24	2789.004	ug/L	10.341	2569734	12.218
Al	27	17468.551	ug/L	10.374	24722011	117.553
P	31	323.998	ug/L	1.039	28926	0.129
K	39	3081.478	ug/L	5.535	8980055	41.399
Ca	43	3587.758	ug/L	2.765	21457	0.101
> Sc	45		ug/L		210486	210486.009
Ti	47	381.526	ug/L	1.818	102544	0.487
V	51	19.764	ug/L	1.406	67340	0.314
Cr	52	12.885	ug/L	1.576	31053	0.148
Cr	53		ug/L		37555	-0.040
Mn	55	597.793	ug/L	1.334	2674298	12.706
Fe	57	14915.961	ug/L	3.318	1363184	6.453
Co	59	5.360	ug/L	3.721	18239	0.087
Ni	60	11.150	ug/L	3.593	8069	0.038
Cu	63		ug/L		72561	0.344
Cu	65	46.422	ug/L	1.728	35592	0.169
Zn	66	101.801	ug/L	0.788	42720	0.236
Zn	67		ug/L		8290	0.036
Zn	68		ug/L		31554	0.174
> Ge	74		ug/L		179648	179647.513
As	75	4.884	ug/L	14.443	2177	0.014
Se	77		ug/L		2928	-0.003
Se	82	0.604	ug/L	31.995	60	0.000
Kr	83		ug/L		49	0.000
Sr	88	30.266	ug/L	1.351	242739	1.824
Y	89		ug/L		213378	1.604
Zr	90	31.512	ug/L	3.053	128758	0.966
Mo	98	1.067	ug/L	2.019	1866	0.014
Ag	107	0.333	ug/L	3.816	1037	0.008
Cd	111	1.307	ug/L	5.246	965	0.007
Cd	114		ug/L		1873	0.014
> In	115		ug/L		133031	133030.627
Sn	120	1.364	ug/L	1.219	4361	0.031
Sb	121	1.041	ug/L	6.976	2429	0.016
Sb	123		ug/L		1840	0.012
Ba	135		ug/L		99131	0.832
Ba	137	131.925	ug/L	0.419	167681	1.407
Ho	165		ug/L		7925	0.066
> Lu	175		ug/L		119198	119198.413
Tl	205	-0.190	ug/L	16.941	928	-0.003
Pb	208	50.510	ug/L	0.912	352098	2.952
Th	232	12.464	ug/L	2.645	104190	0.870
U	238	101.906	ug/L	2.176	874462	7.336

Sample ID: 245797008

Report Date/Time: Saturday, February 13, 2010 01:08:59

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		112.9			
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		96.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.4			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797008

Report Date/Time: Saturday, February 13, 2010 01:08:59

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## ICPMS#4 - Summary Report

Sample ID: 245797009

Sample Date/Time: Saturday, February 13, 2010 01:12:23

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797009.166

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	15.449	ug/L	4.164	6019	0.028
Be	9	1.426	ug/L	10.259	138	0.001
B	11	2.835	ug/L	6.104	502	0.001
Na	23	1816.623	ug/L	5.702	2887827	13.480
Mg	24	1549.811	ug/L	9.539	1448282	6.789
Al	27	13075.206	ug/L	6.611	18764900	87.988
P	31	171.070	ug/L	5.196	16288	0.068
K	39	3735.402	ug/L	9.506	10962169	50.185
Ca	43	2327.878	ug/L	2.212	14154	0.066
> Sc	45		ug/L		213222	213221.573
Ti	47	433.264	ug/L	0.736	117994	0.553
V	51	17.345	ug/L	4.169	60050	0.275
Cr	52	10.543	ug/L	3.474	25711	0.121
Cr	53		ug/L		34427	-0.057
Mn	55	922.102	ug/L	2.335	4179157	19.599
Fe	57	17582.694	ug/L	1.343	1627398	7.606
Co	59	36.323	ug/L	0.431	125108	0.587
Ni	60	15.647	ug/L	0.645	11458	0.053
Cu	63		ug/L		32132	0.150
Cu	65	20.244	ug/L	1.116	15772	0.074
Zn	66	89.711	ug/L	1.166	36970	0.208
Zn	67		ug/L		7535	0.032
Zn	68		ug/L		28020	0.157
> Ge	74		ug/L		176296	176295.999
As	75	7.274	ug/L	5.896	3316	0.020
Se	77		ug/L		2815	-0.003
Se	82	0.493	ug/L	101.740	53	0.000
Kr	83		ug/L		90	0.000
Sr	88	21.426	ug/L	2.643	171141	1.292
Y	89		ug/L		708675	5.350
Zr	90	92.782	ug/L	7.664	376804	2.843
Mo	98	2.866	ug/L	0.916	4936	0.037
Ag	107	0.453	ug/L	2.643	1394	0.010
Cd	111	0.958	ug/L	13.853	707	0.005
Cd	114		ug/L		471	0.003
> In	115		ug/L		132488	132488.319
Sn	120	3.189	ug/L	1.105	9883	0.073
Sb	121	0.516	ug/L	3.654	1335	0.008
Sb	123		ug/L		981	0.006
Ba	135		ug/L		114314	0.915
Ba	137	144.270	ug/L	1.054	192233	1.538
Ho	165		ug/L		27448	0.220
> Lu	175		ug/L		124969	124968.845
Tl	205	-0.343	ug/L	1.828	721	-0.005
Pb	208	29.914	ug/L	0.998	218712	1.748
Th	232	27.291	ug/L	1.740	238576	1.905
U	238	8.154	ug/L	2.216	73399	0.587

Sample ID: 245797009

Report Date/Time: Saturday, February 13, 2010 01:15:07

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45		114.3		
	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		94.3		
	As	75				
	Se	77				
	Se	82				
	Kr	83				
[	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115		95.6		
	Sn	120				
	Sb	121				
	Sb	123				
[	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175		108.4		
	Tl	205				
	Pb	208				
	Th	232				
	U	238				

## QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
	Ti	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: 245797010

Sample Date/Time: Saturday, February 13, 2010 01:18:32

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797010.167

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	41.739	ug/L	1.590	20119	0.076
Be	9	3.642	ug/L	7.590	434	0.002
B	11	11.906	ug/L	4.448	1850	0.006
Na	23	411.216	ug/L	8.539	822414	3.051
Mg	24	8722.197	ug/L	3.739	10097726	38.209
Al	27	57220.582	ug/L	6.606	101767316	385.061
P	31	231.030	ug/L	2.524	26500	0.092
K	39	6640.478	ug/L	5.115	23884888	89.214
Ca	43	8517.821	ug/L	2.706	63723	0.241
> Sc	45		ug/L		264180	264179.813
Ti	47	593.961	ug/L	1.094	200379	0.758
V	51	65.955	ug/L	1.392	278209	1.047
Cr	52	37.485	ug/L	1.891	113859	0.432
Cr	53		ug/L		47117	-0.040
Mn	55	540.687	ug/L	3.485	3036017	11.492
Fe	57	44299.189	ug/L	3.383	5069433	19.164
Co	59	18.997	ug/L	2.306	81078	0.307
Ni	60	28.826	ug/L	2.110	26089	0.099
Cu	63		ug/L		91429	0.345
Cu	65	46.714	ug/L	1.810	44961	0.170
Zn	66	124.759	ug/L	1.374	54781	0.290
Zn	67		ug/L		11144	0.049
Zn	68		ug/L		42154	0.222
> Ge	74		ug/L		188187	188186.549
As	75	10.851	ug/L	3.365	5420	0.030
Se	77		ug/L		3126	-0.003
Se	82	1.415	ug/L	30.570	113	0.000
Kr	83		ug/L		91	0.000
Sr	88	95.723	ug/L	1.220	789567	5.770
Y	89		ug/L		426711	3.119
Zr	90	78.648	ug/L	1.924	330004	2.410
Mo	98	2.033	ug/L	1.506	3625	0.026
Ag	107	0.511	ug/L	4.304	1622	0.012
Cd	111	0.878	ug/L	14.105	670	0.005
Cd	114		ug/L		669	0.005
> In	115		ug/L		136821	136820.935
Sn	120	0.522	ug/L	3.582	1847	0.012
Sb	121	0.447	ug/L	4.871	1232	0.007
Sb	123		ug/L		973	0.006
Ba	135		ug/L		264338	2.196
Ba	137	348.173	ug/L	2.193	446860	3.712
Ho	165		ug/L		15664	0.130
> Lu	175		ug/L		120400	120400.280
Tl	205	0.023	ug/L	126.017	1275	0.000
Pb	208	45.170	ug/L	1.806	317987	2.640
Th	232	29.331	ug/L	1.838	246968	2.048
U	238	22.461	ug/L	1.814	194674	1.617

Sample ID: 245797010

Report Date/Time: Saturday, February 13, 2010 01:21:16

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		141.7			
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		100.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.4			
Tl	205					
Pb	208					
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)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

# ICPMS#4 - Summary Report

Sample ID: 245797011

Sample Date/Time: Saturday, February 13, 2010 01:24:42

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797011.168

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	24.633	ug/L	0.483	12204	0.045
Be	9	8.369	ug/L	3.303	1021	0.004
B	11	13.708	ug/L	3.886	2151	0.007
Na	23	316.651	ug/L	4.558	655406	2.350
Mg	24	6094.451	ug/L	2.695	7241198	26.697
Al	27	37395.875	ug/L	8.049	68208923	251.652
P	31	637.743	ug/L	1.243	71261	0.255
K	39	7278.636	ug/L	20.525	26857230	97.788
Ca	43	10668.405	ug/L	2.237	81914	0.301
> Sc	45		ug/L		271315	271314.691
Ti	47	728.137	ug/L	0.962	252237	0.929
V	51	51.951	ug/L	2.984	225425	0.824
Cr	52	28.102	ug/L	0.897	87597	0.324
Cr	53		ug/L		46543	-0.047
Mn	55	1050.538	ug/L	1.483	6057965	22.329
Fe	57	27882.898	ug/L	1.524	3279234	12.062
Co	59	16.276	ug/L	0.458	71353	0.263
Ni	60	23.739	ug/L	1.129	22080	0.081
Cu	63		ug/L		792409	2.920
Cu	65	394.497	ug/L	0.377	389237	1.434
Zn	66	187.341	ug/L	2.130	88409	0.435
Zn	67		ug/L		16190	0.069
Zn	68		ug/L		66791	0.328
> Ge	74		ug/L		202692	202691.568
As	75	9.149	ug/L	2.154	4873	0.026
Se	77		ug/L		3547	-0.002
Se	82	1.107	ug/L	29.331	101	0.000
Kr	83		ug/L		72	0.000
Sr	88	103.023	ug/L	1.026	888606	6.210
Y	89		ug/L		376639	2.632
Zr	90	50.042	ug/L	2.470	219703	1.534
Mo	98	2.558	ug/L	1.594	4760	0.033
Ag	107	1.059	ug/L	2.759	3477	0.024
Cd	111	3.240	ug/L	0.587	2560	0.018
Cd	114		ug/L		5567	0.039
> In	115		ug/L		143104	143104.315
Sn	120	2.428	ug/L	2.621	8178	0.056
Sb	121	3.894	ug/L	0.241	8988	0.061
Sb	123		ug/L		6800	0.046
Ba	135		ug/L		288143	2.375
Ba	137	378.209	ug/L	0.914	489209	4.033
Ho	165		ug/L		14111	0.116
> Lu	175		ug/L		121318	121317.520
Tl	205	-0.009	ug/L	149.554	1234	-0.000
Pb	208	390.218	ug/L	0.804	2766890	22.805
Th	232	21.242	ug/L	1.384	180400	1.483
U	238	223.876	ug/L	2.015	1955362	16.117

Sample ID: 245797011

Report Date/Time: Saturday, February 13, 2010 01:27:26

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			145.5		
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			108.4		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			103.2		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			105.2		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for samSc		45	
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

## QC Action

Sample ID: 245797011

Report Date/Time: Saturday, February 13, 2010 01:27:26

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QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 245797012

Sample Date/Time: Saturday, February 13, 2010 01:30:52

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797012.169

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	24.503	ug/L	3.873	12582	0.045
Be	9	1.692	ug/L	3.980	216	0.001
B	11	4.978	ug/L	4.631	972	0.003
Na	23	750.956	ug/L	8.057	1584452	5.572
Mg	24	4507.955	ug/L	13.987	5553250	19.748
Al	27	24977.291	ug/L	5.672	47259749	168.082
P	31	125.478	ug/L	2.438	16371	0.050
K	39	3683.127	ug/L	2.648	14266245	49.482
Ca	43	4519.833	ug/L	3.022	36078	0.128
Sc	45		ug/L		281325	281325.262
Ti	47	534.346	ug/L	2.624	191933	0.682
V	51	34.759	ug/L	4.652	156900	0.552
Cr	52	27.110	ug/L	3.306	87594	0.312
Cr	53		ug/L		46530	-0.053
Mn	55	762.943	ug/L	2.908	4561288	16.216
Fe	57	34584.569	ug/L	2.261	4215525	14.962
Co	59	37.081	ug/L	3.248	168457	0.599
Ni	60	30.039	ug/L	4.556	28940	0.103
Cu	63		ug/L		51745	0.183
Cu	65	24.880	ug/L	3.679	25541	0.090
Zn	66	130.167	ug/L	1.190	63587	0.302
Zn	67		ug/L		12245	0.048
Zn	68		ug/L		47716	0.226
Ge	74		ug/L		209427	209427.273
As	75	6.380	ug/L	4.545	3411	0.018
Se	77		ug/L		3565	-0.002
Se	82	0.920	ug/L	10.189	92	0.000
Kr	83		ug/L		111	0.000
Sr	88	45.275	ug/L	1.041	402224	2.729
Y	89		ug/L		689408	4.678
Zr	90	90.142	ug/L	0.971	407439	2.762
Mo	98	3.435	ug/L	1.675	6571	0.044
Ag	107	0.433	ug/L	2.470	1487	0.010
Cd	111	0.775	ug/L	12.130	639	0.004
Cd	114		ug/L		150	0.001
In	115		ug/L		147360	147360.325
Sn	120	4.857	ug/L	1.645	16627	0.111
Sb	121	0.269	ug/L	6.890	918	0.004
Sb	123		ug/L		708	0.003
Ba	135		ug/L		203390	1.603
Ba	137	253.555	ug/L	0.285	343126	2.703
Ho	165		ug/L		25815	0.203
Lu	175		ug/L		126916	126916.221
Tl	205	-0.263	ug/L	10.791	865	-0.003
Pb	208	16.579	ug/L	0.971	123221	0.969
Th	232	25.241	ug/L	2.435	224156	1.762
U	238	2.552	ug/L	1.408	23370	0.184

Sample ID: 245797012

Report Date/Time: Saturday, February 13, 2010 01:33:37

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		150.9			
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		112.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		106.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		110.1			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Sc 45 Int Std for samSc	Ti	45 47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 245797012

Report Date/Time: Saturday, February 13, 2010 01:33:37

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## ICPMS#4 - Summary Report

Sample ID: 245797013

Sample Date/Time: Saturday, February 13, 2010 01:37:02

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797013.170

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	26.503	ug/L	1.887	12732	0.048
Be	9	3.897	ug/L	6.916	462	0.002
B	11	7.891	ug/L	2.906	1302	0.004
Na	23	426.739	ug/L	8.100	849598	3.167
Mg	24	5390.317	ug/L	4.088	6212449	23.613
Al	27	34469.705	ug/L	4.405	61060390	231.961
P	31	288.495	ug/L	3.174	32428	0.115
K	39	5310.349	ug/L	11.334	19107911	71.344
Ca	43	6189.657	ug/L	1.664	46177	0.175
Sc	45		ug/L		263163	263162.881
Ti	47	671.586	ug/L	0.381	225684	0.857
V	51	46.564	ug/L	1.466	196109	0.739
Cr	52	27.269	ug/L	1.808	82427	0.314
Cr	53		ug/L		44683	-0.049
Mn	55	983.986	ug/L	1.791	5503487	20.915
Fe	57	30886.392	ug/L	1.956	3522449	13.362
Co	59	13.353	ug/L	1.751	56781	0.216
Ni	60	22.786	ug/L	2.117	20558	0.078
Cu	63		ug/L		189219	0.718
Cu	65	96.557	ug/L	3.119	92449	0.351
Zn	66	145.329	ug/L	3.200	68032	0.337
Zn	67		ug/L		12873	0.053
Zn	68		ug/L		51408	0.254
Ge	74		ug/L		200849	200848.528
As	75	8.202	ug/L	1.172	4298	0.023
Se	77		ug/L		3208	-0.003
Se	82	1.004	ug/L	29.071	94	0.000
Kr	83		ug/L		84	0.000
Sr	88	70.987	ug/L	3.244	613710	4.279
Y	89		ug/L		487073	3.396
Zr	90	75.563	ug/L	3.272	332429	2.316
Mo	98	2.081	ug/L	4.343	3890	0.027
Ag	107	0.685	ug/L	4.795	2267	0.016
Cd	111	1.488	ug/L	11.915	1182	0.008
Cd	114		ug/L		1841	0.013
In	115		ug/L		143489	143488.636
Sn	120	1.230	ug/L	1.068	4265	0.028
Sb	121	1.122	ug/L	1.777	2804	0.018
Sb	123		ug/L		2179	0.014
Ba	135		ug/L		228747	1.890
Ba	137	296.972	ug/L	0.885	383244	3.166
Ho	165		ug/L		17347	0.143
Lu	175		ug/L		121034	121034.454
Tl	205	-0.199	ug/L	4.227	928	-0.003
Pb	208	98.148	ug/L	1.559	694449	5.736
Th	232	25.918	ug/L	1.657	219480	1.810
U	238	60.493	ug/L	1.661	527093	4.355

Sample ID: 245797013

Report Date/Time: Saturday, February 13, 2010 01:39:48

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		141.1			
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		107.4			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		103.5			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.0			
Tl	205					
Pb	208					
Th	232					
L U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Sc 45 Int Std for sarrSc	Ti	45 47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 245797013

Report Date/Time: Saturday, February 13, 2010 01:39:48

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 01:43:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 6.171

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	47.770	ug/L	1.380	19830	0.087
Be	9	48.789	ug/L	4.618	4981	0.022
B	11	94.027	ug/L	3.805	11164	0.048
Na	23	4715.968	ug/L	3.674	7971882	34.995
Mg	24	5779.682	ug/L	2.385	5761568	25.319
Al	27	4945.819	ug/L	0.876	7573598	33.282
P	31	4913.077	ug/L	1.533	447823	1.961
K	39	5092.190	ug/L	9.344	15830373	68.413
Ca	43	5022.647	ug/L	2.678	32417	0.142
Sc	45		ug/L		227500	227499.928
Ti	47	51.329	ug/L	1.804	14982	0.066
V	51	50.245	ug/L	2.097	182799	0.797
Cr	52	51.186	ug/L	0.194	133960	0.590
Cr	53		ug/L		73434	0.104
Mn	55	50.421	ug/L	1.834	244324	1.072
Fe	57	4937.103	ug/L	1.146	491856	2.136
Co	59	48.908	ug/L	0.516	179734	0.790
Ni	60	50.759	ug/L	0.807	39528	0.173
Cu	63		ug/L		85787	0.376
Cu	65	50.218	ug/L	0.652	41616	0.183
Zn	66	50.451	ug/L	3.092	24968	0.117
Zn	67		ug/L		6579	0.021
Zn	68		ug/L		18347	0.085
Ge	74		ug/L		210588	210587.621
As	75	48.188	ug/L	0.172	28087	0.135
Se	77		ug/L		8108	0.019
Se	82	48.013	ug/L	2.938	3368	0.016
Kr	83		ug/L		39	-0.000
Sr	88	52.217	ug/L	3.343	455466	3.148
Y	89		ug/L		125	0.001
Zr	90	49.597	ug/L	3.679	220251	1.520
Mo	98	50.188	ug/L	3.322	93773	0.648
Ag	107	50.801	ug/L	3.124	166959	1.154
Cd	111	50.005	ug/L	2.476	39796	0.275
Cd	114		ug/L		94890	0.656
In	115		ug/L		144713	144712.632
Sn	120	51.446	ug/L	0.759	170803	1.179
Sb	121	52.029	ug/L	4.723	117782	0.812
Sb	123		ug/L		89733	0.619
Ba	135		ug/L		38308	0.337
Ba	137	52.909	ug/L	0.412	64083	0.564
Ho	165		ug/L		15	0.000
Lu	175		ug/L		113570	113570.460
Tl	205	48.829	ug/L	1.483	74328	0.644
Pb	208	51.196	ug/L	0.504	340028	2.992
Th	232	51.711	ug/L	1.505	410477	3.611
U	238	53.104	ug/L	0.962	434199	3.823

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 01:45:57

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	95.540				
Be	9	97.579				
B	11	94.027				
Na	23	94.319				
Mg	24	115.594				
Al	27	97.937				
P	31	98.262				
K	39	101.844				
Ca	43	100.453				
> Sc	45		122.0			
Ti	47	102.657				
V	51	100.490				
Cr	52	102.372				
Cr	53					
Mn	55	100.842				
Fe	57	98.742				
Co	59	97.815				
Ni	60	101.518				
Cu	63					
Cu	65	100.435				
Zn	66	100.903				
Zn	67					
Zn	68					
> Ge	74		112.7			
As	75	96.375				
Se	77					
Se	82	96.026				
Kr	83					
Sr	88	104.434				
Y	89					
Zr	90	99.194				
Mo	98	100.376				
Ag	107	101.602				
Cd	111	100.009				
Cd	114					
> In	115		104.4			
Sn	120	102.892				
Sb	121	104.059				
Sb	123					
Ba	135					
Ba	137	105.819				
Ho	165					
> Lu	175		98.5			
Tl	205	97.657				
Pb	208	102.393				
Th	232	103.422				
U	238	106.207				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mg		24CCV is out of limits ( +/- 10%)
Sc 45 Int Std for QC Sc		45	

## QC Action

QC Action Line: Continue

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 01:45:57

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 01:49:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 7.172

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.022	ug/L	68.673	21	0.000
Be	9	0.014	ug/L	39.335	3	0.000
B	11	1.511	ug/L	62.189	363	0.001
Na	23	-0.807	ug/L	265.332	12673	-0.006
Mg	24	0.297	ug/L	205.585	667	0.001
Al	27	3.051	ug/L	59.748	6001	0.021
P	31	2.442	ug/L	28.708	1969	0.001
K	39	5.263	ug/L	231.062	280077	0.071
Ca	43	-2.333	ug/L	67.642	126	-0.000
> Sc	45		ug/L		216862	216861.521
Ti	47	0.172	ug/L	10.372	120	0.000
V	51	-0.603	ug/L	182.062	-684	-0.010
Cr	52	0.373	ug/L	15.624	745	0.004
Cr	53		ug/L		43035	-0.020
Mn	55	0.023	ug/L	13.123	557	0.000
Fe	57	7.528	ug/L	33.551	6399	0.003
Co	59	0.010	ug/L	28.029	69	0.000
Ni	60	0.027	ug/L	68.353	76	0.000
Cu	63		ug/L		167	0.000
Cu	65	0.015	ug/L	69.417	92	0.000
Zn	66	-0.030	ug/L	171.922	298	-0.000
Zn	67		ug/L		2146	-0.000
Zn	68		ug/L		410	-0.000
> Ge	74		ug/L		208742	208741.595
As	75	-0.955	ug/L	45.683	-885	-0.003
Se	77		ug/L		3825	-0.001
Se	82	-0.004	ug/L	3042.834	28	-0.000
Kr	83		ug/L		32	-0.000
Sr	88	0.013	ug/L	14.640	184	0.001
Y	89		ug/L		25	0.000
Zr	90	0.119	ug/L	18.755	883	0.004
Mo	98	0.040	ug/L	26.626	113	0.001
Ag	107	0.015	ug/L	15.591	85	0.000
Cd	111	0.004	ug/L	112.910	14	0.000
Cd	114		ug/L		46	0.000
> In	115		ug/L		147571	147570.871
Sn	120	0.151	ug/L	17.690	736	0.003
Sb	121	0.499	ug/L	17.116	1447	0.008
Sb	123		ug/L		1084	0.006
Ba	135		ug/L		24	0.000
Ba	137	0.023	ug/L	33.933	42	0.000
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		113644	113644.370
Tl	205	-0.273	ug/L	26.777	760	-0.004
Pb	208	0.028	ug/L	11.404	409	0.002
Th	232	0.070	ug/L	11.960	994	0.005
U	238	0.018	ug/L	18.039	194	0.001

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 01:52:08

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		116.3			
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		111.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		106.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.6			
Tl	205					
Pb	208					
Th	232					
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 01:52:08

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## ICPMS#4 - Summary Report

Sample ID: 245797014

Sample Date/Time: Saturday, February 13, 2010 01:55:34

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797014.173

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	21.323	ug/L	2.001	9622	0.039
Be	9	3.380	ug/L	10.938	377	0.002
B	11	10.933	ug/L	3.960	1607	0.006
Na	23	272.885	ug/L	12.032	515883	2.025
Mg	24	5230.844	ug/L	2.134	5661690	22.914
Al	27	29338.340	ug/L	9.903	48749026	197.430
P	31	444.640	ug/L	1.184	45856	0.177
K	39	5824.642	ug/L	1.426	19638686	78.254
Ca	43	7432.730	ug/L	1.485	52031	0.210
Sc	45		ug/L		247104	247104.453
Ti	47	580.035	ug/L	0.859	183040	0.740
V	51	41.125	ug/L	0.758	162834	0.653
Cr	52	21.010	ug/L	1.733	59596	0.242
Cr	53		ug/L		43361	-0.043
Mn	55	824.275	ug/L	2.398	4328964	17.520
Fe	57	22223.419	ug/L	2.134	2381769	9.614
Co	59	11.946	ug/L	1.078	47707	0.193
Ni	60	16.518	ug/L	4.046	14014	0.056
Cu	63		ug/L		144131	0.583
Cu	65	78.058	ug/L	1.714	70211	0.284
Zn	66	127.016	ug/L	2.107	57531	0.295
Zn	67		ug/L		11299	0.048
Zn	68		ug/L		43979	0.224
Ge	74		ug/L		194201	194201.271
As	75	7.006	ug/L	7.120	3507	0.020
Se	77		ug/L		3191	-0.003
Se	82	0.630	ug/L	22.300	67	0.000
Kr	83		ug/L		70	0.000
Sr	88	75.439	ug/L	1.185	625362	4.547
Y	89		ug/L		283940	2.065
Zr	90	40.532	ug/L	1.971	171116	1.242
Mo	98	1.373	ug/L	1.655	2473	0.018
Ag	107	0.344	ug/L	1.982	1107	0.008
Cd	111	2.093	ug/L	2.059	1593	0.012
Cd	114		ug/L		3291	0.024
In	115		ug/L		137514	137513.636
Sn	120	0.978	ug/L	3.559	3290	0.022
Sb	121	1.172	ug/L	2.447	2793	0.018
Sb	123		ug/L		2162	0.014
Ba	135		ug/L		238893	2.048
Ba	137	325.826	ug/L	0.505	405219	3.474
Ho	165		ug/L		10694	0.092
Lu	175		ug/L		116644	116643.822
Tl	205	-0.075	ug/L	16.367	1084	-0.001
Pb	208	88.632	ug/L	0.892	604399	5.180
Th	232	18.719	ug/L	1.211	152897	1.307
U	238	110.286	ug/L	0.418	926150	7.939

Sample ID: 245797014

Report Date/Time: Saturday, February 13, 2010 01:58:19

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		132.5			
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		103.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.2			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
Sc 45 Int Std for sanSc	Ti	45 47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 245797014

Report Date/Time: Saturday, February 13, 2010 01:58:19

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## ICPMS#4 - Summary Report

Sample ID: 245797015

Sample Date/Time: Saturday, February 13, 2010 02:01:46

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797015.174

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	26.403	ug/L	1.745	12031	0.048
Be	9	4.617	ug/L	7.145	519	0.002
B	11	11.609	ug/L	3.254	1710	0.006
Na	23	232.315	ug/L	7.306	446569	1.724
Mg	24	6303.828	ug/L	1.654	6893050	27.615
Al	27	37192.024	ug/L	3.733	62450382	250.280
P	31	531.638	ug/L	1.847	54972	0.212
K	39	5859.179	ug/L	3.708	19957151	78.718
Ca	43	9135.886	ug/L	0.856	64546	0.258
> Sc	45		ug/L		249581	249580.989
Ti	47	557.209	ug/L	0.770	177617	0.711
V	51	45.530	ug/L	2.549	181951	0.723
Cr	52	27.629	ug/L	1.053	79230	0.318
Cr	53		ug/L		44753	-0.039
Mn	55	720.536	ug/L	2.863	3822491	15.315
Fe	57	25824.104	ug/L	4.468	2794799	11.172
Co	59	11.771	ug/L	2.348	47485	0.190
Ni	60	21.029	ug/L	2.167	18001	0.072
Cu	63		ug/L		379182	1.519
Cu	65	206.671	ug/L	2.347	187605	0.751
Zn	66	159.260	ug/L	1.949	73129	0.370
Zn	67		ug/L		13754	0.059
Zn	68		ug/L		54271	0.273
> Ge	74		ug/L		197051	197050.707
As	75	8.002	ug/L	9.148	4108	0.022
Se	77		ug/L		3238	-0.003
Se	82	0.541	ug/L	25.293	62	0.000
Kr	83		ug/L		85	0.000
Sr	88	84.663	ug/L	0.622	717447	5.103
Y	89		ug/L		318908	2.269
Zr	90	51.697	ug/L	1.861	223037	1.584
Mo	98	1.876	ug/L	3.769	3439	0.024
Ag	107	0.525	ug/L	3.164	1709	0.012
Cd	111	2.583	ug/L	4.515	2007	0.014
Cd	114		ug/L		4024	0.028
> In	115		ug/L		140573	140573.099
Sn	120	1.148	ug/L	2.004	3915	0.026
Sb	121	1.407	ug/L	2.640	3372	0.022
Sb	123		ug/L		2587	0.017
Ba	135		ug/L		222855	1.897
Ba	137	300.230	ug/L	0.568	376130	3.201
Ho	165		ug/L		11981	0.102
> Lu	175		ug/L		117498	117498.433
Tl	205	-0.162	ug/L	11.483	958	-0.002
Pb	208	150.127	ug/L	0.423	1031125	8.774
Th	232	18.479	ug/L	1.304	152040	1.290
U	238	163.970	ug/L	1.309	1386949	11.804

Sample ID: 245797015

Report Date/Time: Saturday, February 13, 2010 02:04:31

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			133.8		
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			105.4		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			101.4		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			101.9		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sarSc	Ti	45	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797015

Report Date/Time: Saturday, February 13, 2010 02:04:31

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## ICPMS#4 - Summary Report

Sample ID: 245797016

Sample Date/Time: Saturday, February 13, 2010 02:07:56

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797016.175

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	16.453	ug/L	6.514	7091	0.030
Be	9	1.307	ug/L	10.657	140	0.001
B	11	2.875	ug/L	9.492	561	0.001
Na	23	1009.839	ug/L	3.957	1786335	7.493
Mg	24	1819.339	ug/L	6.134	1880912	7.970
Al	27	12902.354	ug/L	10.744	20552034	86.825
P	31	179.521	ug/L	4.934	18828	0.072
K	39	2266.079	ug/L	3.441	7480614	30.445
Ca	43	3527.696	ug/L	3.267	23682	0.100
Sc	45		ug/L		236498	236497.907
Ti	47	425.123	ug/L	4.312	128198	0.543
V	51	18.935	ug/L	5.678	72413	0.300
Cr	52	18.220	ug/L	4.100	49356	0.210
Cr	53		ug/L		40117	-0.049
Mn	55	725.901	ug/L	5.380	3641561	15.429
Fe	57	26187.720	ug/L	5.494	2679587	11.329
Co	59	70.938	ug/L	5.775	270343	1.146
Ni	60	19.063	ug/L	4.220	15448	0.065
Cu	63		ug/L		35165	0.148
Cu	65	20.039	ug/L	6.569	17273	0.073
Zn	66	88.640	ug/L	1.267	40258	0.206
Zn	67		ug/L		8114	0.031
Zn	68		ug/L		30088	0.153
Ge	74		ug/L		194312	194311.609
As	75	4.610	ug/L	7.884	2202	0.013
Se	77		ug/L		3053	-0.004
Se	82	1.194	ug/L	15.068	103	0.000
Kr	83		ug/L		92	0.000
Sr	88	33.063	ug/L	3.418	275890	1.993
Y	89		ug/L		626980	4.530
Zr	90	94.573	ug/L	3.394	401446	2.898
Mo	98	3.293	ug/L	7.416	5915	0.043
Ag	107	0.479	ug/L	5.041	1540	0.011
Cd	111	0.870	ug/L	28.920	671	0.005
Cd	114		ug/L		226	0.001
In	115		ug/L		138483	138482.605
Sn	120	4.342	ug/L	2.723	13984	0.099
Sb	121	0.302	ug/L	1.520	932	0.005
Sb	123		ug/L		715	0.004
Ba	135		ug/L		99825	0.845
Ba	137	133.637	ug/L	1.081	168430	1.425
Ho	165		ug/L		23845	0.202
Lu	175		ug/L		118208	118208.289
Tl	205	-0.430	ug/L	7.490	545	-0.006
Pb	208	17.561	ug/L	1.982	121532	1.026
Th	232	23.026	ug/L	2.226	190461	1.608
U	238	4.127	ug/L	1.755	35163	0.297

Sample ID: 245797016

Report Date/Time: Saturday, February 13, 2010 02:10:41

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			126.8		
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			103.9		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			99.9		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			102.5		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sanSc		45	
	Ti		47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797016

Report Date/Time: Saturday, February 13, 2010 02:10:41

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## ICPMS#4 - Summary Report

Sample ID: 245797017

Sample Date/Time: Saturday, February 13, 2010 02:14:06

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797017.176

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	26.511	ug/L	0.644	12105	0.048
Be	9	2.244	ug/L	4.948	254	0.001
B	11	6.699	ug/L	5.234	1084	0.003
Na	23	615.504	ug/L	5.899	1158605	4.567
Mg	24	5423.327	ug/L	14.943	5941350	23.758
Al	27	35528.037	ug/L	6.474	59769682	239.083
P	31	146.566	ug/L	4.633	16653	0.058
K	39	4336.148	ug/L	3.624	14876636	58.256
Ca	43	4524.181	ug/L	0.810	32110	0.128
Sc	45		ug/L		250077	250077.449
Ti	47	525.639	ug/L	2.097	167883	0.671
V	51	34.782	ug/L	2.696	139614	0.552
Cr	52	20.683	ug/L	0.697	59372	0.238
Cr	53		ug/L		40302	-0.057
Mn	55	596.556	ug/L	0.401	3171400	12.680
Fe	57	20907.908	ug/L	1.538	2268338	9.045
Co	59	26.576	ug/L	1.217	107365	0.429
Ni	60	19.743	ug/L	1.425	16938	0.067
Cu	63		ug/L		27819	0.111
Cu	65	15.076	ug/L	2.288	13799	0.055
Zn	66	59.977	ug/L	0.786	27795	0.139
Zn	67		ug/L		6612	0.023
Zn	68		ug/L		22082	0.110
Ge	74		ug/L		197532	197532.336
As	75	7.330	ug/L	2.470	3745	0.021
Se	77		ug/L		3157	-0.003
Se	82	0.944	ug/L	35.851	89	0.000
Kr	83		ug/L		92	0.000
Sr	88	49.246	ug/L	0.393	412258	2.969
Y	89		ug/L		587120	4.228
Zr	90	68.284	ug/L	0.656	290926	2.093
Mo	98	1.492	ug/L	1.752	2711	0.019
Ag	107	0.328	ug/L	3.374	1070	0.007
Cd	111	0.753	ug/L	15.805	584	0.004
Cd	114		ug/L		208	0.001
In	115		ug/L		138860	138859.773
Sn	120	0.933	ug/L	1.806	3181	0.021
Sb	121	0.229	ug/L	2.339	776	0.004
Sb	123		ug/L		587	0.003
Ba	135		ug/L		184158	1.514
Ba	137	238.152	ug/L	1.188	308916	2.539
Ho	165		ug/L		22591	0.186
Lu	175		ug/L		121674	121673.679
Tl	205	-0.323	ug/L	10.364	734	-0.004
Pb	208	20.428	ug/L	0.771	145494	1.194
Th	232	26.170	ug/L	2.061	222751	1.827
U	238	4.235	ug/L	1.697	37142	0.305

Sample ID: 245797017

Report Date/Time: Saturday, February 13, 2010 02:16:51

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		134.1			
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		105.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.5			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sanSc	Ti	45	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797017

Report Date/Time: Saturday, February 13, 2010 02:16:51

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# ICPMS#4 - Summary Report

Sample ID: 245797018

Sample Date/Time: Saturday, February 13, 2010 02:20:16

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797018.177

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	16.725	ug/L	3.355	7235	0.031
Be	9	4.194	ug/L	5.567	448	0.002
B	11	9.338	ug/L	4.667	1347	0.005
Na	23	361.117	ug/L	8.427	649483	2.680
Mg	24	4003.957	ug/L	4.025	4154950	17.540
Al	27	22492.801	ug/L	2.899	35841952	151.363
P	31	447.654	ug/L	2.967	44219	0.179
K	39	3694.874	ug/L	15.773	12041965	49.640
Ca	43	9811.252	ug/L	1.677	65765	0.277
Sc	45		ug/L		236831	236830.902
Ti	47	392.216	ug/L	1.991	118632	0.501
V	51	28.528	ug/L	1.660	108714	0.453
Cr	52	17.598	ug/L	1.190	47806	0.203
Cr	53		ug/L		39599	-0.051
Mn	55	962.132	ug/L	2.307	4843811	20.450
Fe	57	16340.502	ug/L	0.390	1680395	7.069
Co	59	15.083	ug/L	0.865	57724	0.244
Ni	60	15.369	ug/L	0.559	12502	0.053
Cu	63		ug/L		177277	0.748
Cu	65	101.611	ug/L	1.457	87582	0.369
Zn	66	124.936	ug/L	2.899	56213	0.290
Zn	67		ug/L		10935	0.046
Zn	68		ug/L		42824	0.220
Ge	74		ug/L		192905	192905.106
As	75	6.637	ug/L	13.426	3281	0.019
Se	77		ug/L		3078	-0.003
Se	82	0.681	ug/L	15.750	70	0.000
Kr	83		ug/L		53	0.000
Sr	88	73.957	ug/L	1.320	608114	4.458
Y	89		ug/L		233056	1.708
Zr	90	34.335	ug/L	2.737	143813	1.052
Mo	98	1.497	ug/L	1.704	2671	0.019
Ag	107	0.587	ug/L	3.816	1853	0.013
Cd	111	2.075	ug/L	5.372	1565	0.011
Cd	114		ug/L		3530	0.026
In	115		ug/L		136415	136414.973
Sn	120	1.415	ug/L	1.233	4633	0.032
Sb	121	1.092	ug/L	0.390	2602	0.017
Sb	123		ug/L		2043	0.013
Ba	135		ug/L		221310	1.855
Ba	137	297.607	ug/L	0.552	378538	3.173
Ho	165		ug/L		8704	0.073
Lu	175		ug/L		119288	119288.187
Tl	205	-0.373	ug/L	5.811	641	-0.005
Pb	208	80.012	ug/L	0.836	558014	4.676
Th	232	11.726	ug/L	0.633	98127	0.819
U	238	130.170	ug/L	0.841	1117927	9.371

Sample ID: 245797018

Report Date/Time: Saturday, February 13, 2010 02:23:01

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		127.0			
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		103.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.4			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)...

## QC Action

QC Action Line: Continue

Sample ID: 245797018

Report Date/Time: Saturday, February 13, 2010 02:23:01

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## ICPMS#4 - Summary Report

Sample ID: 245797019

Sample Date/Time: Saturday, February 13, 2010 02:26:27

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\245797019.178

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	13.631	ug/L	3.254	5633	0.025
Be	9	1.276	ug/L	10.290	131	0.001
B	11	0.673	ug/L	18.849	282	0.000
Na	23	1275.260	ug/L	20.848	2150410	9.463
Mg	24	1107.356	ug/L	3.191	1098051	4.851
Al	27	9161.821	ug/L	3.533	13937158	61.654
P	31	97.349	ug/L	1.362	10622	0.039
K	39	2075.715	ug/L	4.270	6586590	27.887
Ca	43	1427.659	ug/L	3.004	9260	0.040
> Sc	45		ug/L		226160	226160.463
Ti	47	432.885	ug/L	1.374	125020	0.553
V	51	7.588	ug/L	4.877	28687	0.120
Cr	52	11.171	ug/L	1.815	28901	0.129
Cr	53		ug/L		35220	-0.063
Mn	55	834.743	ug/L	2.837	4011403	17.743
Fe	57	11424.694	ug/L	2.930	1123264	4.942
Co	59	14.999	ug/L	2.358	54794	0.242
Ni	60	22.581	ug/L	4.817	17498	0.077
Cu	63		ug/L		11696	0.051
Cu	65	6.931	ug/L	3.640	5779	0.025
Zn	66	56.094	ug/L	0.599	24012	0.130
Zn	67		ug/L		5258	0.018
Zn	68		ug/L		18195	0.098
> Ge	74		ug/L		182338	182337.510
As	75	3.995	ug/L	7.488	1754	0.011
Se	77		ug/L		2788	-0.004
Se	82	2.012	ug/L	9.553	146	0.001
Kr	83		ug/L		83	0.000
Sr	88	11.355	ug/L	3.002	92503	0.684
Y	89		ug/L		589622	4.365
Zr	90	83.949	ug/L	1.841	347866	2.573
Mo	98	1.794	ug/L	3.349	3163	0.023
Ag	107	0.356	ug/L	3.625	1127	0.008
Cd	111	0.706	ug/L	7.399	534	0.004
Cd	114		ug/L		89	0.001
> In	115		ug/L		135083	135082.575
Sn	120	7.375	ug/L	0.230	23034	0.169
Sb	121	0.297	ug/L	7.498	900	0.005
Sb	123		ug/L		710	0.004
Ba	135		ug/L		66429	0.546
Ba	137	86.247	ug/L	0.744	111849	0.920
Ho	165		ug/L		23465	0.193
> Lu	175		ug/L		121615	121615.042
Tl	205	-0.483	ug/L	4.911	477	-0.006
Pb	208	12.752	ug/L	1.211	90867	0.745
Th	232	23.047	ug/L	1.418	196154	1.609
U	238	2.832	ug/L	1.883	24840	0.204

Sample ID: 245797019

Report Date/Time: Saturday, February 13, 2010 02:29:12

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		121.3			
	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		97.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
[	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.4			
	Sn	120					
	Sb	121					
	Sb	123					
[	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		105.5			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sarSc		45	
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

Sample ID: 245797019

Report Date/Time: Saturday, February 13, 2010 02:29:12

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 02:32:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 6.179

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.722	ug/L	2.062	19192	0.094
Be	9	51.959	ug/L	2.207	4744	0.023
B	11	100.094	ug/L	3.581	10616	0.051
Na	23	4783.079	ug/L	0.930	7231447	35.493
Mg	24	5576.870	ug/L	7.737	4965393	24.430
Al	27	5087.237	ug/L	6.820	6957720	34.234
P	31	4945.550	ug/L	2.298	403126	1.974
K	39	4766.415	ug/L	4.528	13284311	64.036
Ca	43	5078.474	ug/L	2.856	29304	0.143
Sc	45		ug/L		203409	203408.895
Ti	47	51.218	ug/L	3.715	13367	0.065
V	51	51.125	ug/L	2.637	166292	0.811
Cr	52	51.272	ug/L	2.209	119983	0.591
Cr	53		ug/L		65333	0.103
Mn	55	50.819	ug/L	4.348	220159	1.080
Fe	57	5027.978	ug/L	3.953	447752	2.175
Co	59	49.639	ug/L	1.989	163085	0.802
Ni	60	51.022	ug/L	2.960	35532	0.174
Cu	63		ug/L		76998	0.378
Cu	65	51.015	ug/L	2.893	37811	0.185
Zn	66	50.454	ug/L	0.980	22875	0.117
Zn	67		ug/L		6019	0.021
Zn	68		ug/L		16843	0.085
Ge	74		ug/L		192879	192879.282
As	75	48.317	ug/L	2.993	25785	0.135
Se	77		ug/L		7108	0.018
Se	82	48.678	ug/L	2.606	3129	0.016
Kr	83		ug/L		33	-0.000
Sr	88	52.049	ug/L	0.588	428288	3.137
Y	89		ug/L		148	0.001
Zr	90	51.335	ug/L	0.765	215000	1.573
Mo	98	50.475	ug/L	0.747	88973	0.652
Ag	107	50.710	ug/L	1.344	157232	1.152
Cd	111	49.843	ug/L	0.717	37418	0.274
Cd	114		ug/L		90327	0.662
In	115		ug/L		136478	136478.392
Sn	120	51.583	ug/L	1.137	161506	1.182
Sb	121	52.055	ug/L	3.894	111226	0.813
Sb	123		ug/L		85024	0.621
Ba	135		ug/L		36036	0.316
Ba	137	50.487	ug/L	3.072	61346	0.538
Ho	165		ug/L		12	0.000
Lu	175		ug/L		113958	113957.559
Tl	205	49.583	ug/L	0.931	75709	0.654
Pb	208	51.869	ug/L	0.763	345657	3.031
Th	232	53.519	ug/L	0.996	426233	3.737
U	238	54.880	ug/L	1.848	450202	3.951

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 02:35:22

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	103.445				
Be	9	103.918				
B	11	100.094				
Na	23	95.662				
Mg	24	111.537				
Al	27	100.737				
P	31	98.911				
K	39	95.328				
Ca	43	101.569				
> Sc	45		109.1			
Ti	47	102.435				
V	51	102.251				
Cr	52	102.544				
Cr	53					
Mn	55	101.638				
Fe	57	100.560				
Co	59	99.278				
Ni	60	102.045				
Cu	63					
Cu	65	102.031				
Zn	66	100.908				
Zn	67					
Zn	68					
> Ge	74		103.2			
As	75	96.634				
Se	77					
Se	82	97.357				
Kr	83					
Sr	88	104.097				
Y	89					
Zr	90	102.670				
Mo	98	100.950				
Ag	107	101.421				
Cd	111	99.686				
Cd	114					
> In	115		98.4			
Sn	120	103.166				
Sb	121	104.109				
Sb	123					
Ba	135					
Ba	137	100.974				
Ho	165					
> Lu	175		98.8			
Tl	205	99.167				
Pb	208	103.738				
Th	232	107.037				
U	238	109.761				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
 QC Std 6 Mg 24CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 02:38:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100212\QC Std 7.180

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.024	ug/L	77.951	20	0.000
Be	9	0.025	ug/L	46.561	4	0.000
B	11	1.473	ug/L	20.203	328	0.001
Na	23	-0.527	ug/L	571.632	12006	-0.004
Mg	24	1.897	ug/L	60.978	2000	0.008
Al	27	0.951	ug/L	242.258	2667	0.006
P	31	0.458	ug/L	114.996	1641	0.000
K	39	3.167	ug/L	202.225	250177	0.043
Ca	43	-3.721	ug/L	24.053	107	-0.000
> Sc	45		ug/L		197959	197959.230
Ti	47	0.117	ug/L	33.856	95	0.000
V	51	-0.529	ug/L	53.408	-407	-0.008
Cr	52	0.251	ug/L	55.858	400	0.003
Cr	53		ug/L		38860	-0.022
Mn	55	0.026	ug/L	48.806	520	0.001
Fe	57	7.698	ug/L	46.134	5855	0.003
Co	59	0.013	ug/L	12.855	73	0.000
Ni	60	0.026	ug/L	43.575	69	0.000
Cu	63		ug/L		158	0.000
Cu	65	0.005	ug/L	276.361	76	0.000
Zn	66	-0.023	ug/L	239.048	286	-0.000
Zn	67		ug/L		1903	-0.001
Zn	68		ug/L		395	-0.000
> Ge	74		ug/L		198122	198122.385
As	75	-1.166	ug/L	31.401	-957	-0.003
Se	77		ug/L		3377	-0.002
Se	82	-0.155	ug/L	129.289	17	-0.000
Kr	83		ug/L		38	-0.000
Sr	88	0.014	ug/L	6.816	182	0.001
Y	89		ug/L		24	0.000
Zr	90	0.132	ug/L	19.892	913	0.004
Mo	98	0.038	ug/L	23.623	106	0.000
Ag	107	0.014	ug/L	50.415	80	0.000
Cd	111	0.009	ug/L	77.543	17	0.000
Cd	114		ug/L		44	0.000
> In	115		ug/L		143004	143003.806
Sn	120	0.159	ug/L	12.769	740	0.004
Sb	121	0.501	ug/L	23.858	1406	0.008
Sb	123		ug/L		1093	0.006
Ba	135		ug/L		24	0.000
Ba	137	0.017	ug/L	30.997	34	0.000
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		114530	114530.129
Tl	205	-0.343	ug/L	22.001	659	-0.005
Pb	208	0.016	ug/L	13.939	332	0.001
Th	232	0.083	ug/L	26.682	1108	0.006
U	238	0.022	ug/L	14.404	226	0.002

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 02:41:33

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		106.2			
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		106.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		103.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.3			
Tl	205					
Pb	208					
Th	232					
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 02:41:33

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## 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: Sunday, February 14, 2010 00:40:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\Blank.204

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		27	
Be	9		ug/L		3	
B	11		ug/L		170	
Na	23		ug/L		11338	
Mg	24		ug/L		3001	
Al	27		ug/L		4334	
P	31		ug/L		2664	
K	39		ug/L		296042	
Ca	43		ug/L		135	
> Sc	45		ug/L		189992	
Ti	47		ug/L		113	
V	51		ug/L		-624	
Cr	52		ug/L		-564	
Cr	53		ug/L		63369	
Mn	55		ug/L		703	
Fe	57		ug/L		7051	
Co	59		ug/L		87	
Ni	60		ug/L		37	
Cu	63		ug/L		107	
Cu	65		ug/L		67	
Zn	66		ug/L		112	
Zn	67		ug/L		2910	
Zn	68		ug/L		324	
> Ge	74		ug/L		195945	
As	75		ug/L		-402	
Se	77		ug/L		5411	
Se	82		ug/L		36	
Kr	83		ug/L		31	
Sr	88		ug/L		169	
Y	89		ug/L		17	
Zr	90		ug/L		570	
Mo	98		ug/L		83	
Ag	107		ug/L		75	
Cd	111		ug/L		20	
Cd	114		ug/L		47	
> In	115		ug/L		124800	
Sn	120		ug/L		247	
Sb	121		ug/L		503	
Sb	123		ug/L		384	
Ba	135		ug/L		20	
Ba	137		ug/L		31	
Ho	165		ug/L		3	
> Lu	175		ug/L		123684	
Tl	205		ug/L		1005	
Pb	208		ug/L		492	
Th	232		ug/L		849	
U	238		ug/L		272	

Sample ID: Blank

Report Date/Time: Sunday, February 14, 2010 00:43:14

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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	0.9999
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	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	0.9999
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	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				
	Zr	90				
	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				
	Th	232				
	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: Blank

Report Date/Time: Sunday, February 14, 2010 00:43:14

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## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Sunday, February 14, 2010 00:46:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\Standard 1.205

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	4.703	3851	0.020
Be	9	10.000	ug/L	0.623	948	0.005
B	11	20.000	ug/L	7.078	2256	0.011
Na	23	1000.000	ug/L	4.210	1421042	7.270
Mg	24	1000.000	ug/L	10.745	1076306	5.538
Al	27	1000.000	ug/L	7.799	1494349	7.676
P	31	1000.000	ug/L	2.358	90806	0.454
K	39	1000.000	ug/L	10.303	3413471	16.038
Ca	43	1000.000	ug/L	0.918	6809	0.034
> Sc	45		ug/L		193934	193933.772
Ti	47	10.000	ug/L	2.279	3024	0.015
V	51	10.000	ug/L	6.636	36832	0.193
Cr	52	10.000	ug/L	1.112	26854	0.141
Cr	53		ug/L		69799	0.026
Mn	55	10.000	ug/L	2.054	49873	0.254
Fe	57	1000.000	ug/L	0.891	107951	0.520
Co	59	10.000	ug/L	0.867	37615	0.194
Ni	60	10.000	ug/L	1.458	7893	0.041
Cu	63		ug/L		17333	0.089
Cu	65	10.000	ug/L	1.432	8452	0.043
Zn	66	10.000	ug/L	1.874	4833	0.024
Zn	67		ug/L		3708	0.004
Zn	68		ug/L		3680	0.017
> Ge	74		ug/L		198347	198346.513
As	75	10.000	ug/L	2.247	5139	0.028
Se	77		ug/L		6131	0.003
Se	82	10.000	ug/L	1.892	652	0.003
Kr	83		ug/L		30	-0.000
Sr	88	10.000	ug/L	1.065	82928	0.658
Y	89		ug/L		23	0.000
Zr	90	10.000	ug/L	0.597	40795	0.320
Mo	98	10.000	ug/L	1.420	16605	0.131
Ag	107	10.000	ug/L	0.839	29102	0.231
Cd	111	10.000	ug/L	0.339	6975	0.055
Cd	114		ug/L		16849	0.134
> In	115		ug/L		125814	125813.658
Sn	120	10.000	ug/L	0.951	29475	0.232
Sb	121	10.000	ug/L	6.173	19544	0.151
Sb	123		ug/L		15063	0.117
Ba	135		ug/L		6864	0.055
Ba	137	10.000	ug/L	0.798	11705	0.094
Ho	165		ug/L		3	0.000
> Lu	175		ug/L		124480	124479.893
Tl	205	10.000	ug/L	1.486	38334	0.300
Pb	208	10.000	ug/L	0.666	82800	0.661
Th	232	10.000	ug/L	1.927	104214	0.830
U	238	10.000	ug/L	0.813	115358	0.925

Sample ID: Standard 1

Report Date/Time: Sunday, February 14, 2010 00:49:20

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	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				
	Zr	90				
	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				
	Th	232				
	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: Sunday, February 14, 2010 00:49:20

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## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Sunday, February 14, 2010 00:52:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\Standard 2.206

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	99.942	ug/L	1.083	38384	0.186
Be	9	99.941	ug/L	2.351	9470	0.046
B	11	199.968	ug/L	4.253	21955	0.106
Na	23	10009.934	ug/L	2.073	16640604	80.802
Mg	24	9991.981	ug/L	6.038	10548607	51.229
Al	27	9996.782	ug/L	1.360	15303639	74.341
P	31	9998.281	ug/L	0.955	921918	4.466
K	39	10002.225	ug/L	11.304	34075001	164.066
Ca	43	9995.406	ug/L	1.040	67805	0.329
Sc	45		ug/L		205803	205802.554
Ti	47	99.989	ug/L	3.606	30653	0.148
V	51	99.973	ug/L	2.799	386544	1.882
Cr	52	99.971	ug/L	1.621	282198	1.374
Cr	53		ug/L		109548	0.199
Mn	55	99.970	ug/L	1.429	507017	2.460
Fe	57	9996.175	ug/L	1.417	1037099	5.002
Co	59	99.960	ug/L	2.052	382857	1.860
Ni	60	99.961	ug/L	1.679	80270	0.390
Cu	63		ug/L		175344	0.851
Cu	65	99.944	ug/L	0.970	84296	0.409
Zn	66	99.972	ug/L	1.274	48201	0.231
Zn	67		ug/L		11258	0.039
Zn	68		ug/L		35178	0.168
Ge	74		ug/L		207793	207793.476
As	75	99.985	ug/L	1.675	56779	0.275
Se	77		ug/L		11863	0.029
Se	82	99.996	ug/L	3.248	6454	0.031
Kr	83		ug/L		34	0.000
Sr	88	100.008	ug/L	0.562	858341	6.632
Y	89		ug/L		96	0.001
Zr	90	100.009	ug/L	2.418	418248	3.228
Mo	98	100.023	ug/L	2.853	174092	1.345
Ag	107	99.979	ug/L	0.763	292471	2.260
Cd	111	99.987	ug/L	1.632	70617	0.546
Cd	114		ug/L		169135	1.307
In	115		ug/L		129400	129399.803
Sn	120	99.998	ug/L	1.708	300155	2.318
Sb	121	100.049	ug/L	6.076	206564	1.592
Sb	123		ug/L		159380	1.228
Ba	135		ug/L		69593	0.566
Ba	137	100.029	ug/L	2.123	118695	0.966
Ho	165		ug/L		6	0.000
Lu	175		ug/L		122882	122882.468
Tl	205	99.998	ug/L	0.373	368674	2.992
Pb	208	99.979	ug/L	0.974	795963	6.474
Th	232	100.018	ug/L	0.183	1039931	8.456
U	238	99.984	ug/L	1.174	1118692	9.102

Sample ID: Standard 2

Report Date/Time: Sunday, February 14, 2010 00:55:26

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	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				
	Zr	90				
	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				
	Th	232				
	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 2

Report Date/Time: Sunday, February 14, 2010 00:55:26

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## ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Sunday, February 14, 2010 00:58:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 1.207

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.512	ug/L	1.293	20239	0.096
Be	9	51.968	ug/L	1.494	5037	0.024
B	11	103.910	ug/L	2.214	11754	0.055
Na	23	4724.914	ug/L	4.587	8035216	38.140
Mg	24	5092.353	ug/L	7.664	5499030	26.108
Al	27	5243.114	ug/L	6.110	8210346	38.990
P	31	5085.761	ug/L	1.380	480846	2.272
K	39	5475.615	ug/L	16.300	19213630	89.816
Ca	43	4966.806	ug/L	1.765	34522	0.163
Sc	45		ug/L		210407	210406.711
Ti	47	50.357	ug/L	2.842	15843	0.075
V	51	50.462	ug/L	3.595	199128	0.950
Cr	52	51.020	ug/L	2.279	146917	0.701
Cr	53		ug/L		98843	0.136
Mn	55	51.626	ug/L	2.393	268035	1.270
Fe	57	5038.189	ug/L	2.504	538234	2.521
Co	59	49.568	ug/L	2.851	194118	0.922
Ni	60	51.090	ug/L	3.080	41957	0.199
Cu	63		ug/L		89498	0.425
Cu	65	50.828	ug/L	1.392	43865	0.208
Zn	66	52.409	ug/L	1.362	25670	0.121
Zn	67		ug/L		7759	0.022
Zn	68		ug/L		18513	0.086
Ge	74		ug/L		210593	210593.369
As	75	48.578	ug/L	0.883	27737	0.134
Se	77		ug/L		10005	0.020
Se	82	49.630	ug/L	2.117	3266	0.015
Kr	83		ug/L		34	0.000
Sr	88	51.448	ug/L	1.367	442980	3.412
Y	89		ug/L		42	0.000
Zr	90	49.716	ug/L	2.231	208865	1.605
Mo	98	49.912	ug/L	1.938	87191	0.671
Ag	107	50.700	ug/L	1.269	148806	1.146
Cd	111	50.459	ug/L	1.164	35756	0.275
Cd	114		ug/L		86859	0.669
In	115		ug/L		129792	129791.804
Sn	120	51.030	ug/L	0.888	153761	1.183
Sb	121	51.060	ug/L	6.102	106000	0.813
Sb	123		ug/L		80825	0.620
Ba	135		ug/L		35242	0.290
Ba	137	50.883	ug/L	2.050	59805	0.491
Ho	165		ug/L		7	0.000
Lu	175		ug/L		121701	121701.494
Tl	205	49.482	ug/L	1.312	181161	1.481
Pb	208	51.122	ug/L	2.061	403249	3.310
Th	232	51.427	ug/L	1.993	529870	4.348
U	238	53.665	ug/L	2.918	594624	4.885

Sample ID: QC Std 1

Report Date/Time: Sunday, February 14, 2010 01:01:33

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	103.025				
Be	9	103.937				
B	11	103.910				
Na	23	94.498				
Mg	24	101.847				
Al	27	103.824				
P	31	101.715				
K	39	109.512				
Ca	43	99.336				
> Sc	45		110.7			
Ti	47	100.714				
V	51	100.923				
Cr	52	102.041				
Cr	53					
Mn	55	103.252				
Fe	57	100.764				
Co	59	99.135				
Ni	60	102.180				
Cu	63					
Cu	65	101.656				
Zn	66	104.817				
Zn	67					
Zn	68					
> Ge	74		107.5			
As	75	97.156				
Se	77					
Se	82	99.261				
Kr	83					
Sr	88	102.896				
Y	89					
Zr	90	99.433				
Mo	98	99.824				
Ag	107	101.401				
Cd	111	100.918				
Cd	114					
> In	115		104.0			
Sn	120	102.061				
Sb	121	102.120				
Sb	123					
Ba	135					
Ba	137	101.765				
Ho	165					
> Lu	175		98.4			
Tl	205	98.964				
Pb	208	102.245				
Th	232	102.855				
U	238	107.330				

## 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: Sunday, February 14, 2010 01:01:33

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## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Sunday, February 14, 2010 01:04:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 2.208

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.002	ug/L	1535.232	28	-0.000
Be	9	0.013	ug/L	256.608	4	0.000
B	11	3.694	ug/L	14.694	566	0.002
Na	23	3.004	ug/L	52.852	16677	0.024
Mg	24	0.846	ug/L	2.742	4001	0.004
Al	27	0.087	ug/L	3567.078	4668	0.001
P	31	-0.741	ug/L	329.671	2721	-0.000
K	39	-4.096	ug/L	78.315	296380	-0.067
Ca	43	0.581	ug/L	84.511	145	0.000
Sc	45		ug/L		198752	198752.037
Ti	47	0.011	ug/L	102.975	121	0.000
V	51	0.709	ug/L	131.473	1984	0.013
Cr	52	0.585	ug/L	7.307	1008	0.008
Cr	53		ug/L		71229	0.025
Mn	55	0.020	ug/L	25.745	832	0.000
Fe	57	6.361	ug/L	42.244	8008	0.003
Co	59	0.005	ug/L	118.800	110	0.000
Ni	60	0.022	ug/L	28.861	56	0.000
Cu	63		ug/L		125	0.000
Cu	65	0.013	ug/L	131.390	81	0.000
Zn	66	-0.000	ug/L	5714.779	118	-0.000
Zn	67		ug/L		3132	0.000
Zn	68		ug/L		346	0.000
Ge	74		ug/L		206162	206161.745
As	75	-0.471	ug/L	120.344	-692	-0.001
Se	77		ug/L		6388	0.003
Se	82	-0.061	ug/L	43.829	34	-0.000
Kr	83		ug/L		33	0.000
Sr	88	0.007	ug/L	17.525	237	0.000
Y	89		ug/L		22	0.000
Zr	90	0.188	ug/L	18.060	1372	0.006
Mo	98	0.057	ug/L	26.620	184	0.001
Ag	107	0.018	ug/L	50.913	129	0.000
Cd	111	0.004	ug/L	20.922	23	0.000
Cd	114		ug/L		57	0.000
In	115		ug/L		128904	128903.741
Sn	120	0.250	ug/L	2.789	1001	0.006
Sb	121	1.131	ug/L	20.127	2839	0.018
Sb	123		ug/L		2210	0.014
Ba	135		ug/L		26	0.000
Ba	137	0.005	ug/L	187.677	37	0.000
Ho	165		ug/L		4	0.000
Lu	175		ug/L		125139	125139.360
Tl	205	0.219	ug/L	18.639	1838	0.007
Pb	208	0.000	ug/L	34625.781	498	0.000
Th	232	0.148	ug/L	27.338	2420	0.012
U	238	0.013	ug/L	5.354	420	0.001

Sample ID: QC Std 2

Report Date/Time: Sunday, February 14, 2010 01:07:44

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45				104.6
	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				105.2
	As	75				
	Se	77				
	Se	82				
	Kr	83				
	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115				103.3
	Sn	120				
	Sb	121				
	Sb	123				
	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175				101.2
	Tl	205				
	Pb	208				
	Th	232				
	U	238				

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Sunday, February 14, 2010 01:07:44

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## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Sunday, February 14, 2010 01:11:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 3.209

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.844	ug/L	1.192	4343	0.022
Be	9	0.640	ug/L	15.015	61	0.000
B	11	17.532	ug/L	4.389	1987	0.009
Na	23	271.280	ug/L	17.526	439447	2.190
Mg	24	20.903	ug/L	22.074	24021	0.107
Al	27	39.473	ug/L	4.722	61800	0.294
P	31	54.911	ug/L	3.321	7531	0.025
K	39	299.391	ug/L	0.976	1263876	4.911
Ca	43	219.260	ug/L	1.837	1547	0.007
Sc	45		ug/L		195372	195371.831
Ti	47	9.091	ug/L	0.976	2751	0.013
V	51	11.564	ug/L	4.607	41887	0.218
Cr	52	11.355	ug/L	0.944	29915	0.156
Cr	53		ug/L		73938	0.045
Mn	55	5.691	ug/L	0.754	28085	0.140
Fe	57	118.554	ug/L	3.622	18842	0.059
Co	59	1.134	ug/L	1.730	4213	0.021
Ni	60	2.313	ug/L	2.288	1800	0.009
Cu	63		ug/L		2098	0.010
Cu	65	1.198	ug/L	3.045	1027	0.005
Zn	66	11.426	ug/L	2.896	5456	0.026
Zn	67		ug/L		3983	0.005
Zn	68		ug/L		4219	0.019
Ge	74		ug/L		201921	201921.402
As	75	5.353	ug/L	9.005	2561	0.015
Se	77		ug/L		6546	0.005
Se	82	5.247	ug/L	2.105	364	0.002
Kr	83		ug/L		33	0.000
Sr	88	11.039	ug/L	1.673	93710	0.732
Y	89		ug/L		16	-0.000
Zr	90	1.891	ug/L	5.004	8382	0.061
Mo	98	0.527	ug/L	2.395	990	0.007
Ag	107	1.052	ug/L	2.183	3115	0.024
Cd	111	1.109	ug/L	3.930	793	0.006
Cd	114		ug/L		1894	0.014
In	115		ug/L		127766	127765.855
Sn	120	5.483	ug/L	1.684	16486	0.127
Sb	121	3.257	ug/L	7.211	7140	0.052
Sb	123		ug/L		5513	0.040
Ba	135		ug/L		1481	0.012
Ba	137	2.175	ug/L	0.912	2586	0.021
Ho	165		ug/L		3	0.000
Lu	175		ug/L		121706	121705.505
Tl	205	1.093	ug/L	1.399	4968	0.033
Pb	208	2.217	ug/L	4.110	17948	0.144
Th	232	1.092	ug/L	6.955	12061	0.092
U	238	0.231	ug/L	5.745	2822	0.021

Sample ID: QC Std 3

Report Date/Time: Sunday, February 14, 2010 01:13:51

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	118.442				
	Be	9	128.091				
	B	11	116.882				
	Na	23	108.512				
	Mg	24	139.356				
	Al	27	131.576				
	P	31	109.822				
	K	39	99.797				
	Ca	43	109.630				
>	Sc	45		102.8			
	Ti	47	90.911				
	V	51	115.640				
	Cr	52	113.551				
	Cr	53					
	Mn	55	113.828				
	Fe	57	118.554				
	Co	59	113.442				
	Ni	60	115.637				
	Cu	63					
	Cu	65	119.771				
	Zn	66	114.262				
	Zn	67					
	Zn	68					
>	Ge	74		103.1			
	As	75	107.053				
	Se	77					
	Se	82	104.942				
	Kr	83					
	Sr	88	110.385				
	Y	89					
	Zr	90	94.531				
	Mo	98	105.382				
	Ag	107	105.249				
	Cd	111	110.913				
	Cd	114					
>	In	115		102.4			
	Sn	120	109.651				
	Sb	121	108.568				
	Sb	123					
	Ba	135					
	Ba	137	108.764				
	Ho	165					
>	Lu	175		98.4			
	Tl	205	109.280				
	Pb	208	110.846				
	Th	232	109.157				
	U	238	115.361				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mg	24	24CRDL is out of limits
QC Std 3	Al	27	27CRDL is out of limits

## QC Action

QC Action Line: Continue

Sample ID: QC Std 3

Report Date/Time: Sunday, February 14, 2010 01:13:51

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## ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Sunday, February 14, 2010 01:17:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 4.210

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.052	ug/L	24.445	48	0.000
Be	9	0.074	ug/L	111.149	10	0.000
B	11	1.542	ug/L	5.870	342	0.001
Na	23	104604.003	ug/L	1.007	169024617	844.378
Mg	24	104634.112	ug/L	2.784	107389469	536.456
Al	27	113629.235	ug/L	11.089	169097144	844.998
P	31	101434.729	ug/L	2.059	9069880	45.305
K	39	75867.220	ug/L	12.659	249432193	1244.444
Ca	43	96115.940	ug/L	0.809	632848	3.161
Sc	45		ug/L		200149	200149.414
Ti	47	1840.030	ug/L	0.896	546553	2.730
V	51	0.504	ug/L	177.856	1236	0.009
Cr	52	4.256	ug/L	3.033	11117	0.059
Cr	53		ug/L		72311	0.028
Mn	55	5.373	ug/L	0.420	27203	0.132
Fe	57	94855.763	ug/L	0.609	9508021	47.469
Co	59	0.276	ug/L	0.424	1118	0.005
Ni	60	4.984	ug/L	1.476	3930	0.019
Cu	63		ug/L		5642	0.028
Cu	65	3.237	ug/L	1.267	2724	0.013
Zn	66	5.301	ug/L	6.720	2472	0.012
Zn	67		ug/L		4206	0.007
Zn	68		ug/L		853	0.003
Ge	74		ug/L		192569	192568.589
As	75	-0.662	ug/L	89.667	-744	-0.002
Se	77		ug/L		8883	0.019
Se	82	-1.279	ug/L	34.047	-41	-0.000
Kr	83		ug/L		125	0.000
Sr	88	2.732	ug/L	1.009	23556	0.181
Y	89		ug/L		242	0.002
Zr	90	0.877	ug/L	50.786	4248	0.028
Mo	98	2034.246	ug/L	1.867	3529282	27.351
Ag	107	0.085	ug/L	3.313	327	0.002
Cd	111	0.382	ug/L	77.806	290	0.002
Cd	114		ug/L		5032	0.039
In	115		ug/L		129045	129045.419
Sn	120	0.441	ug/L	3.738	1575	0.010
Sb	121	0.294	ug/L	14.306	1124	0.005
Sb	123		ug/L		859	0.004
Ba	135		ug/L		542	0.005
Ba	137	0.773	ug/L	4.241	862	0.007
Ho	165		ug/L		2703	0.024
Lu	175		ug/L		111788	111788.473
Tl	205	-0.042	ug/L	9.053	766	-0.001
Pb	208	0.167	ug/L	2.366	1656	0.011
Th	232	0.204	ug/L	45.658	2698	0.017
U	238	-0.016	ug/L	6.189	80	-0.001

Sample ID: QC Std 4

Report Date/Time: Sunday, February 14, 2010 01:19:59

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Diff	Dup. Rel.	% Diff
Li	7										
Be	9										
B	11										
Na	23		104.604								
Mg	24		104.634								
Al	27		113.629								
P	31		101.435								
K	39		75.867								
Ca	43		96.116								
> Sc	45					105.3					
Ti	47		92.002								
V	51										
Cr	52		128.978								
Cr	53										
Mn	55		92.635								
Fe	57		94.856								
Co	59		117.277								
Ni	60		150.570								
Cu	63										
Cu	65		96.923								
Zn	66		140.977								
Zn	67										
Zn	68										
> Ge	74					98.3					
As	75										
Se	77										
Se	82										
Kr	83										
Sr	88		92.299								
Y	89										
Zr	90										
Mo	98		101.712								
Ag	107										
Cd	111		85.970								
Cd	114										
> In	115					103.4					
Sn	120										
Sb	121										
Sb	123										
Ba	135										
Ba	137		96.894								
Ho	165										
> Lu	175					90.4					
Tl	205										
Pb	208		88.503								
Th	232										
U	238										

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 QC Std 4 K 39ICSA is out of limits

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Sunday, February 14, 2010 01:23:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 5.211

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Li	7	16.970 ug/L	1.723	6236	0.032
	Be	9	17.543 ug/L	1.918	1588	0.008
	B	11	19.152 ug/L	3.977	2163	0.010
	Na	23	117461.094 ug/L	2.635	186003101	948.162
	Mg	24	107034.665 ug/L	1.022	107663422	548.764
	Al	27	111100.778 ug/L	4.800	162146586	826.195
	P	31	102199.931 ug/L	0.246	8958869	45.647
	K	39	92365.098 ug/L	5.784	297399923	1515.057
	Ca	43	95137.940 ug/L	0.801	614067	3.129
>	Sc	45	ug/L		196204	196204.334
	Ti	47	1831.365 ug/L	0.714	533251	2.717
	V	51	20.332 ug/L	5.222	74412	0.383
	Cr	52	22.919 ug/L	1.461	61223	0.315
	Cr	53	ug/L		69553	0.021
	Mn	55	23.394 ug/L	1.361	113659	0.576
	Fe	57	92183.706 ug/L	2.212	9057211	46.132
	Co	59	18.749 ug/L	2.577	68522	0.349
	Ni	60	23.109 ug/L	2.422	17717	0.090
	Cu	63	ug/L		34804	0.177
[	Cu	65	20.879 ug/L	1.869	16843	0.085
	Zn	66	22.074 ug/L	0.650	9802	0.051
	Zn	67	ug/L		5242	0.013
	Zn	68	ug/L		6371	0.032
>	Ge	74	ug/L		189701	189700.799
	As	75	19.773 ug/L	3.495	9939	0.054
	Se	77	ug/L		8335	0.016
	Se	82	20.084 ug/L	5.246	1211	0.006
[	Kr	83	ug/L		108	0.000
	Sr	88	21.973 ug/L	0.961	188114	1.457
	Y	89	ug/L		228	0.002
	Zr	90	20.474 ug/L	0.729	85815	0.661
	Mo	98	2034.955 ug/L	1.209	3529030	27.360
	Ag	107	18.391 ug/L	2.092	53684	0.416
	Cd	111	19.148 ug/L	1.002	13497	0.104
	Cd	114	ug/L		37276	0.289
>	In	115	ug/L		128982	128981.815
	Sn	120	20.454 ug/L	0.144	61398	0.474
	Sb	121	21.982 ug/L	0.313	45638	0.350
[	Sb	123	ug/L		34882	0.267
	Ba	135	ug/L		14488	0.129
	Ba	137	22.834 ug/L	0.686	24664	0.220
	Ho	165	ug/L		2744	0.025
>	Lu	175	ug/L		111757	111756.554
	Tl	205	16.700 ug/L	0.774	56754	0.500
	Pb	208	17.819 ug/L	0.354	129384	1.154
	Th	232	18.274 ug/L	0.425	173427	1.545
[	U	238	18.356 ug/L	0.676	186984	1.671

Sample ID: QC Std 5

Report Date/Time: Sunday, February 14, 2010 01:26:07

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	84.848				
Be	9	87.714				
B	11	95.758				
Na	23	117.461				
Mg	24	107.035				
Al	27	111.101				
P	31	102.200				
K	39	92.365				
Ca	43	95.138				
> Sc	45		103.3			
Ti	47	91.568				
V	51	101.660				
Cr	52	98.364				
Cr	53					
Mn	55	90.674				
Fe	57	92.184				
Co	59	92.655				
Ni	60	99.138				
Cu	63					
Cu	65	89.457				
Zn	66	92.902				
Zn	67					
Zn	68					
> Ge	74		96.8			
As	75	98.863				
Se	77					
Se	82	100.422				
Kr	83					
Sr	88	95.702				
Y	89					
Zr	90	102.369				
Mo	98	101.748				
Ag	107	91.956				
Cd	111	93.661				
Cd	114					
> In	115		103.4			
Sn	120	102.268				
Sb	121	109.909				
Sb	123					
Ba	135					
Ba	137	109.788				
Ho	165					
> Lu	175		90.4			
Tl	205	83.501				
Pb	208	88.261				
Th	232	91.371				
U	238	91.779				

## 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: Sunday, February 14, 2010 01:26:07

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 01:29:32

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.212

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	44.935	ug/L	0.998	18316	0.084
Be	9	45.521	ug/L	2.358	4576	0.021
B	11	94.545	ug/L	1.177	11110	0.050
Na	23	5406.309	ug/L	6.310	9537199	43.640
Mg	24	5385.285	ug/L	1.351	6028387	27.610
Al	27	5487.425	ug/L	6.437	8908505	40.807
P	31	5223.516	ug/L	0.816	512183	2.333
K	39	4560.852	ug/L	4.789	16665966	74.811
Ca	43	5035.159	ug/L	1.144	36295	0.166
Sc	45		ug/L		218221	218220.590
Ti	47	55.948	ug/L	1.092	18245	0.083
V	51	49.424	ug/L	2.802	202275	0.930
Cr	52	50.022	ug/L	0.847	149404	0.688
Cr	53		ug/L		97303	0.112
Mn	55	49.815	ug/L	1.184	268315	1.226
Fe	57	4969.277	ug/L	1.798	550761	2.487
Co	59	49.612	ug/L	0.779	201543	0.923
Ni	60	51.728	ug/L	0.703	44065	0.202
Cu	63		ug/L		94405	0.432
Cu	65	51.298	ug/L	0.601	45916	0.210
Zn	66	49.972	ug/L	0.592	25913	0.116
Zn	67		ug/L		7806	0.020
Zn	68		ug/L		19076	0.084
Ge	74		ug/L		222909	222908.874
As	75	48.247	ug/L	1.899	29163	0.133
Se	77		ug/L		10580	0.020
Se	82	48.665	ug/L	2.537	3390	0.015
Kr	83		ug/L		35	0.000
Sr	88	49.635	ug/L	1.324	460483	3.292
Y	89		ug/L		120	0.001
Zr	90	49.265	ug/L	3.198	222987	1.590
Mo	98	51.051	ug/L	2.581	96068	0.686
Ag	107	51.105	ug/L	0.993	161604	1.155
Cd	111	50.085	ug/L	1.527	38242	0.273
Cd	114		ug/L		92078	0.658
In	115		ug/L		139857	139857.473
Sn	120	50.812	ug/L	2.512	164953	1.178
Sb	121	49.543	ug/L	5.707	110845	0.788
Sb	123		ug/L		84581	0.602
Ba	135		ug/L		37813	0.320
Ba	137	56.084	ug/L	2.161	63940	0.541
Ho	165		ug/L		13	0.000
Lu	175		ug/L		118044	118044.216
Tl	205	46.419	ug/L	1.704	164924	1.389
Pb	208	49.191	ug/L	0.217	376451	3.185
Th	232	48.686	ug/L	1.901	486694	4.116
U	238	49.722	ug/L	0.184	534561	4.526

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 01:32:17

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	89.870				
	Be	9	91.042				
	B	11	94.545				
	Na	23	108.126				
	Mg	24	107.706				
	Al	27	108.662				
	P	31	104.470				
	K	39	91.217				
	Ca	43	100.703				
>	Sc	45		114.9			
	Ti	47	111.896				
	V	51	98.848				
	Cr	52	100.043				
	Cr	53					
	Mn	55	99.630				
	Fe	57	99.386				
	Co	59	99.224				
	Ni	60	103.455				
	Cu	63					
	Cu	65	102.597				
	Zn	66	99.944				
	Zn	67					
	Zn	68					
>	Ge	74		113.8			
	As	75	96.495				
	Se	77					
	Se	82	97.330				
	Kr	83					
	Sr	88	99.270				
	Y	89					
	Zr	90	98.529				
	Mo	98	102.102				
	Ag	107	102.211				
	Cd	111	100.170				
	Cd	114					
>	In	115		112.1			
	Sn	120	101.625				
	Sb	121	99.087				
	Sb	123					
	Ba	135					
	Ba	137	112.168				
	Ho	165					
>	Lu	175		95.4			
	Tl	205	92.839				
	Pb	208	98.383				
	Th	232	97.372				
	U	238	99.443				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	7CCV is out of limits ( +/- 10%)
QC Std 6	Ti	47	47CCV is out of limits ( +/- 10%)
QC Std 6	Ba	137	137CCV is out of limits ( +/- 10%)

## QC Action

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 01:32:17

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QC Action Line: Continue



## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 01:35:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.213

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.019	ug/L	28.081	38	0.000
Be	9	0.006	ug/L	156.164	4	0.000
B	11	2.029	ug/L	7.479	421	0.001
Na	23	8.477	ug/L	20.688	27360	0.068
Mg	24	-0.646	ug/L	84.483	2667	-0.003
Al	27	-0.370	ug/L	528.063	4334	-0.003
P	31	-1.222	ug/L	153.462	2884	-0.001
K	39	7.751	ug/L	36.271	360493	0.127
Ca	43	-1.656	ug/L	221.167	140	-0.000
Sc	45		ug/L		213967	213966.909
Ti	47	0.843	ug/L	7.039	395	0.001
V	51	-0.292	ug/L	89.012	-1891	-0.005
Cr	52	0.190	ug/L	51.224	-78	0.003
Cr	53		ug/L		74405	0.014
Mn	55	0.008	ug/L	43.608	835	0.000
Fe	57	11.871	ug/L	31.890	9206	0.006
Co	59	0.005	ug/L	44.194	119	0.000
Ni	60	0.012	ug/L	17.115	52	0.000
Cu	63		ug/L		136	0.000
Cu	65	-0.003	ug/L	180.425	73	-0.000
Zn	66	-0.018	ug/L	43.660	119	-0.000
Zn	67		ug/L		3388	0.000
Zn	68		ug/L		392	0.000
Ge	74		ug/L		223732	223732.476
As	75	0.081	ug/L	432.819	-407	0.000
Se	77		ug/L		7392	0.005
Se	82	-0.036	ug/L	96.567	39	-0.000
Kr	83		ug/L		37	0.000
Sr	88	0.005	ug/L	74.646	238	0.000
Y	89		ug/L		22	0.000
Zr	90	0.141	ug/L	23.827	1294	0.005
Mo	98	0.101	ug/L	22.899	286	0.001
Ag	107	0.007	ug/L	89.289	107	0.000
Cd	111	0.003	ug/L	210.433	24	0.000
Cd	114		ug/L		51	-0.000
In	115		ug/L		142093	142093.461
Sn	120	0.185	ug/L	14.352	890	0.004
Sb	121	0.754	ug/L	22.339	2276	0.012
Sb	123		ug/L		1724	0.009
Ba	135		ug/L		24	0.000
Ba	137	0.010	ug/L	53.793	41	0.000
Ho	165		ug/L		3	0.000
Lu	175		ug/L		119802	119802.468
Tl	205	0.158	ug/L	19.868	1539	0.005
Pb	208	-0.004	ug/L	19.629	448	-0.000
Th	232	0.080	ug/L	32.465	1639	0.007
U	238	0.008	ug/L	42.372	349	0.001

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 01:38:28

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		112.6			
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		114.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		113.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.9			
Tl	205					
Pb	208					
Th	232					
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: Sunday, February 14, 2010 01:38:28

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## ICPMS#4 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Sunday, February 14, 2010 01:41:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 10.214

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	872.083	ug/L	1.594	322398	1.626
Be	9	903.298	ug/L	2.508	82417	0.416
B	11	0.865	ug/L	19.153	268	0.000
Na	23	59197.786	ug/L	5.251	94690952	477.853
Mg	24	58758.360	ug/L	1.433	59721694	301.252
Al	27	57414.460	ug/L	7.007	84598219	426.960
P	31	26986.677	ug/L	3.511	2391518	12.053
K	39	54228.190	ug/L	9.951	176850318	889.500
Ca	43	49397.296	ug/L	0.531	322244	1.625
> Sc	45		ug/L		198269	198268.694
Ti	47	43.842	ug/L	1.397	13014	0.065
V	51	1019.658	ug/L	2.352	3803524	19.192
Cr	52	982.568	ug/L	2.238	2676667	13.507
Cr	53		ug/L		382727	1.597
Mn	55	938.606	ug/L	1.441	4579313	23.097
Fe	57	48035.009	ug/L	1.095	4772761	24.038
Co	59	937.271	ug/L	1.662	3457162	17.440
Ni	60	904.459	ug/L	1.531	699387	3.527
Cu	63		ug/L		1483284	7.481
Cu	65	904.288	ug/L	2.564	734022	3.703
Zn	66	2194.434	ug/L	1.612	999825	5.080
Zn	67		ug/L		163079	0.814
Zn	68		ug/L		725956	3.687
> Ge	74		ug/L		196779	196778.723
As	75	919.446	ug/L	0.530	497769	2.532
Se	77		ug/L		28379	0.117
Se	82	471.886	ug/L	0.952	28714	0.146
Kr	83		ug/L		65	0.000
Sr	88	998.301	ug/L	1.832	8241638	66.202
Y	89		ug/L		311	0.002
Zr	90	541.082	ug/L	0.633	2174529	17.463
Mo	98	1028.944	ug/L	1.386	1722275	13.834
Ag	107	246.344	ug/L	0.631	693183	5.567
Cd	111	990.324	ug/L	0.567	672764	5.404
Cd	114		ug/L		1584478	12.727
> In	115		ug/L		124491	124491.074
Sn	120	1128.536	ug/L	1.308	3256261	26.155
Sb	121	260.824	ug/L	6.653	517137	4.150
Sb	123		ug/L		396246	3.180
Ba	135		ug/L		693398	6.192
Ba	137	1086.504	ug/L	1.084	1174624	10.490
Ho	165		ug/L		116	0.001
> Lu	175		ug/L		111982	111981.981
Tl	205	439.127	ug/L	0.510	1472255	13.139
Pb	208	4663.153	ug/L	0.604	33810739	301.934
Th	232	2295.831	ug/L	1.129	21735827	194.100
U	238	4661.282	ug/L	1.013	47517287	424.327

Sample ID: QC Std 10

Report Date/Time: Sunday, February 14, 2010 01:44:34

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	87.208				
Be	9	90.330				
B	11					
Na	23	118.396				
Mg	24	117.517				
Al	27	114.829				
P	31	107.947				
K	39	108.456				
Ca	43	98.795				
> Sc	45		104.4			
Ti	47					
V	51	101.966				
Cr	52	98.257				
Cr	53					
Mn	55	93.861				
Fe	57	96.070				
Co	59	93.727				
Ni	60	90.446				
Cu	63					
Cu	65	90.429				
Zn	66	87.777				
Zn	67					
Zn	68					
> Ge	74		100.4			
As	75	91.945				
Se	77					
Se	82	94.377				
Kr	83					
Sr	88	99.830				
Y	89					
Zr	90	108.216				
Mo	98	102.894				
Ag	107	98.538				
Cd	111	99.032				
Cd	114					
> In	115		99.8			
Sn	120	112.854				
Sb	121	104.330				
Sb	123					
Ba	135					
Ba	137	108.650				
Ho	165					
> Lu	175		90.5			
Tl	205	87.825				
Pb	208	93.263				
Th	232	91.833				
U	238	93.226				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	Li	7LRS is out of limits ( +/- 10%)
QC Std 10	Na	23LRS is out of limits ( +/- 10%)
QC Std 10	Mg	24LRS is out of limits ( +/- 10%)
QC Std 10	Al	27LRS is out of limits ( +/- 10%)
QC Std 10	Zn	66LRS is out of limits ( +/- 10%)
QC Std 10	Sn	120LRS is out of limits ( +/- 10%)

Sample ID: QC Std 10

Report Date/Time: Sunday, February 14, 2010 01:44:34

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QC Std 10

TI

205LRS is out of limits ( +/- 10%)

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Sunday, February 14, 2010 01:47:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 11.215

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	46.489	ug/L	1.797	18373	0.087
Be	9	46.976	ug/L	2.203	4578	0.022
B	11	95.649	ug/L	4.199	10895	0.051
Na	23	5914.425	ug/L	12.140	10116611	47.742
Mg	24	5920.198	ug/L	5.876	6425048	30.353
Al	27	5709.817	ug/L	4.242	8987630	42.461
P	31	5480.262	ug/L	1.577	520799	2.448
K	39	5226.763	ug/L	10.385	18470561	85.734
Ca	43	5098.004	ug/L	0.812	35625	0.168
> Sc	45		ug/L		211571	211571.345
Ti	47	53.071	ug/L	2.142	16787	0.079
V	51	50.701	ug/L	0.985	201210	0.954
Cr	52	51.319	ug/L	0.886	148623	0.705
Cr	53		ug/L		94094	0.111
Mn	55	51.218	ug/L	1.079	267430	1.260
Fe	57	5082.817	ug/L	0.910	545982	2.544
Co	59	51.097	ug/L	2.055	201228	0.951
Ni	60	52.693	ug/L	2.524	43513	0.205
Cu	63		ug/L		94642	0.447
Cu	65	52.344	ug/L	1.604	45420	0.214
Zn	66	50.476	ug/L	0.671	25721	0.117
Zn	67		ug/L		8045	0.022
Zn	68		ug/L		19350	0.087
> Ge	74		ug/L		219069	219068.860
As	75	48.754	ug/L	2.885	28971	0.134
Se	77		ug/L		9888	0.018
Se	82	49.934	ug/L	3.063	3417	0.015
Kr	83		ug/L		36	0.000
Sr	88	49.913	ug/L	1.207	467265	3.310
Y	89		ug/L		41	0.000
Zr	90	54.022	ug/L	5.687	246571	1.743
Mo	98	50.445	ug/L	1.895	95791	0.678
Ag	107	50.750	ug/L	0.977	161934	1.147
Cd	111	50.849	ug/L	1.839	39172	0.277
Cd	114		ug/L		93806	0.664
> In	115		ug/L		141117	141117.119
Sn	120	55.529	ug/L	1.683	181876	1.287
Sb	121	54.129	ug/L	4.053	122151	0.861
Sb	123		ug/L		94364	0.665
Ba	135		ug/L		38644	0.329
Ba	137	57.408	ug/L	0.737	65161	0.554
Ho	165		ug/L		11	0.000
> Lu	175		ug/L		117523	117522.676
Tl	205	47.879	ug/L	0.169	169323	1.433
Pb	208	50.275	ug/L	1.371	382984	3.255
Th	232	50.234	ug/L	1.543	499848	4.247
U	238	50.441	ug/L	1.151	539838	4.592

Sample ID: QC Std 11

Report Date/Time: Sunday, February 14, 2010 01:50:41

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	92.978				
Be	9	93.953				
B	11	95.649				
Na	23	118.289				
Mg	24	118.404				
Al	27	113.066				
P	31	109.605				
K	39	104.535				
Ca	43	101.960				
> Sc	45		111.4			
Ti	47	106.142				
V	51	101.403				
Cr	52	102.638				
Cr	53					
Mn	55	102.437				
Fe	57	101.656				
Co	59	102.194				
Ni	60	105.386				
Cu	63					
Cu	65	104.688				
Zn	66	100.951				
Zn	67					
Zn	68					
> Ge	74		111.8			
As	75	97.508				
Se	77					
Se	82	99.868				
Kr	83					
Sr	88	99.827				
Y	89					
Zr	90	108.043				
Mo	98	100.891				
Ag	107	101.501				
Cd	111	101.697				
Cd	114					
> In	115		113.1			
Sn	120	111.058				
Sb	121	108.258				
Sb	123					
Ba	135					
Ba	137	114.816				
Ho	165					
> Lu	175		95.0			
Tl	205	95.758				
Pb	208	100.551				
Th	232	100.467				
U	238	100.883				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 11	Na	23CCV is out of limits ( +/- 10%)
QC Std 11	Mg	24CCV is out of limits ( +/- 10%)
QC Std 11	Al	27CCV is out of limits ( +/- 10%)
QC Std 11	Sn	120CCV is out of limits ( +/- 10%)
QC Std 11	Ba	137CCV is out of limits ( +/- 10%)

Sample ID: QC Std 11

Report Date/Time: Sunday, February 14, 2010 01:50:41

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## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Sunday, February 14, 2010 01:54:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\1100213\QC Std 12.216

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.043	ug/L	67.882	49	0.000
Be	9	0.002	ug/L	1075.129	4	0.000
B	11	1.792	ug/L	33.522	401	0.001
Na	23	5.307	ug/L	102.028	22353	0.043
Mg	24	0.521	ug/L	357.856	4001	0.003
Al	27	1.269	ug/L	171.624	7002	0.009
P	31	0.221	ug/L	927.329	3077	0.000
K	39	4.046	ug/L	68.215	354346	0.066
Ca	43	-1.387	ug/L	105.096	145	-0.000
> Sc	45		ug/L		218083	218082.577
Ti	47	0.111	ug/L	49.492	165	0.000
V	51	-0.063	ug/L	2013.063	-946	-0.001
Cr	52	0.342	ug/L	26.196	380	0.005
Cr	53		ug/L		72787	0.000
Mn	55	0.000	ug/L	9602.870	807	0.000
Fe	57	5.360	ug/L	52.127	8678	0.003
Co	59	0.006	ug/L	18.634	124	0.000
Ni	60	0.026	ug/L	57.059	65	0.000
Cu	63		ug/L		182	0.000
Cu	65	0.030	ug/L	20.169	104	0.000
Zn	66	0.102	ug/L	22.455	183	0.000
Zn	67		ug/L		3556	0.001
Zn	68		ug/L		465	0.000
> Ge	74		ug/L		225935	225934.884
As	75	-0.421	ug/L	21.653	-725	-0.001
Se	77		ug/L		7026	0.003
Se	82	-0.053	ug/L	317.564	38	-0.000
Kr	83		ug/L		45	0.000
Sr	88	0.007	ug/L	44.198	264	0.000
Y	89		ug/L		19	-0.000
Zr	90	0.299	ug/L	15.509	2026	0.010
Mo	98	0.169	ug/L	10.141	418	0.002
Ag	107	0.023	ug/L	11.408	161	0.001
Cd	111	0.009	ug/L	141.681	30	0.000
Cd	114		ug/L		70	0.000
> In	115		ug/L		142666	142665.698
Sn	120	1.157	ug/L	8.764	4106	0.027
Sb	121	1.883	ug/L	13.636	4845	0.030
Sb	123		ug/L		3803	0.024
Ba	135		ug/L		22	0.000
Ba	137	0.012	ug/L	24.130	43	0.000
Ho	165		ug/L		5	0.000
> Lu	175		ug/L		118924	118924.491
Tl	205	0.314	ug/L	17.911	2084	0.009
Pb	208	0.151	ug/L	11.349	1633	0.010
Th	232	0.257	ug/L	16.047	3398	0.022
U	238	0.055	ug/L	8.443	858	0.005

Sample ID: QC Std 12

Report Date/Time: Sunday, February 14, 2010 01:56:52

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		114.8			
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		115.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		114.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.2			
Tl	205					
Pb	208					
Th	232					
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 12

Report Date/Time: Sunday, February 14, 2010 01:56:52

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## ICPMS#4 - Summary Report

Sample ID: 1202030959

Sample Date/Time: Sunday, February 14, 2010 02:00:16

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\1202030959.217

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.005	ug/L	455.263	35	0.000
Be	9	-0.006	ug/L	444.828	3	-0.000
B	11	0.288	ug/L	112.471	238	0.000
Na	23	8.068	ug/L	39.413	28362	0.065
Mg	24	-1.933	ug/L	51.386	1333	-0.010
Al	27	2.656	ug/L	47.206	9670	0.020
P	31	25.358	ug/L	23.717	5761	0.011
K	39	0.330	ug/L	1616.566	355374	0.005
Ca	43	11.359	ug/L	39.886	246	0.000
> Sc	45		ug/L		227309	227308.763
Ti	47	1.048	ug/L	49.450	488	0.002
V	51	0.667	ug/L	70.590	2107	0.013
Cr	52	1.155	ug/L	7.601	2933	0.016
Cr	53		ug/L		56735	-0.084
Mn	55	0.246	ug/L	2.040	2220	0.006
Fe	57	29.535	ug/L	5.120	11796	0.015
Co	59	-0.002	ug/L	80.529	95	-0.000
Ni	60	0.318	ug/L	4.487	327	0.001
Cu	63		ug/L		646	0.002
Cu	65	0.276	ug/L	3.451	338	0.001
Zn	66	0.999	ug/L	4.929	659	0.002
Zn	67		ug/L		2872	-0.002
Zn	68		ug/L		758	0.002
> Ge	74		ug/L		228601	228600.625
As	75	-0.088	ug/L	540.225	-528	-0.000
Se	77		ug/L		5226	-0.005
Se	82	0.033	ug/L	382.340	44	0.000
Kr	83		ug/L		37	0.000
Sr	88	0.042	ug/L	2.543	605	0.003
Y	89		ug/L		47	0.000
Zr	90	1.081	ug/L	29.951	5741	0.035
Mo	98	0.211	ug/L	24.152	509	0.003
Ag	107	0.010	ug/L	18.514	121	0.000
Cd	111	0.024	ug/L	44.637	42	0.000
Cd	114		ug/L		68	0.000
> In	115		ug/L		145536	145535.662
Sn	120	0.638	ug/L	8.707	2440	0.015
Sb	121	0.532	ug/L	6.870	1819	0.008
Sb	123		ug/L		1433	0.007
Ba	135		ug/L		76	0.000
Ba	137	0.082	ug/L	1.843	128	0.001
Ho	165		ug/L		6	0.000
> Lu	175		ug/L		122678	122678.149
Tl	205	0.165	ug/L	17.937	1603	0.005
Pb	208	0.100	ug/L	9.169	1279	0.006
Th	232	0.297	ug/L	26.983	3918	0.025
U	238	0.032	ug/L	13.845	628	0.003

Sample ID: 1202030959

Report Date/Time: Sunday, February 14, 2010 02:02:59

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		119.6			
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		116.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		116.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.2			
Tl	205					
Pb	208					
Th	232					
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: 1202030964

Sample Date/Time: Sunday, February 14, 2010 02:06:24

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 948067[40]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\1202030964.218

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	2.209	ug/L	2.590	984	0.004
Be	9	17.754	ug/L	0.960	1890	0.008
B	11	35.183	ug/L	1.279	4504	0.019
Na	23	305.233	ug/L	12.935	582054	2.464
Mg	24	1043.300	ug/L	9.950	1238820	5.349
Al	27	3284.262	ug/L	5.142	5644225	24.423
P	31	202.175	ug/L	3.306	24078	0.090
K	39	1014.828	ug/L	5.610	4201323	16.646
Ca	43	2499.626	ug/L	1.864	19141	0.082
> Sc	45		ug/L		230850	230849.686
Ti	47	117.357	ug/L	2.774	40343	0.174
V	51	32.072	ug/L	2.198	138618	0.604
Cr	52	59.923	ug/L	0.959	189477	0.824
Cr	53		ug/L		102380	0.110
Mn	55	135.618	ug/L	0.766	771303	3.337
Fe	57	4066.841	ug/L	1.340	478376	2.035
Co	59	24.238	ug/L	0.663	104213	0.451
Ni	60	35.161	ug/L	1.841	31697	0.137
Cu	63		ug/L		86412	0.374
Cu	65	44.420	ug/L	1.335	42069	0.182
Zn	66	144.125	ug/L	1.919	76728	0.334
Zn	67		ug/L		15588	0.053
Zn	68		ug/L		56079	0.243
> Ge	74		ug/L		229580	229579.678
As	75	26.640	ug/L	2.354	16370	0.073
Se	77		ug/L		12035	0.025
Se	82	71.978	ug/L	1.963	5146	0.022
Kr	83		ug/L		47	0.000
Sr	88	56.190	ug/L	0.471	541340	3.726
Y	89		ug/L		25500	0.175
Zr	90	1.982	ug/L	1.491	9951	0.064
Mo	98	13.093	ug/L	0.038	25661	0.176
Ag	107	6.990	ug/L	2.440	23026	0.158
Cd	111	15.141	ug/L	2.306	12020	0.083
Cd	114		ug/L		29164	0.200
> In	115		ug/L		145231	145230.735
Sn	120	8.382	ug/L	0.514	28499	0.194
Sb	121	16.319	ug/L	0.757	38300	0.260
Sb	123		ug/L		29045	0.197
Ba	135		ug/L		37276	0.306
Ba	137	53.881	ug/L	2.188	63451	0.520
Ho	165		ug/L		893	0.007
> Lu	175		ug/L		121932	121932.403
Tl	205	27.978	ug/L	1.127	103075	0.837
Pb	208	20.757	ug/L	0.390	164359	1.344
Th	232	2.015	ug/L	2.032	21609	0.170
U	238	0.431	ug/L	1.684	5053	0.039

Sample ID: 1202030964

Report Date/Time: Sunday, February 14, 2010 02:09:07

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		121.5			
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		117.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		116.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.6			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc	Ti	45	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 1202030964

Report Date/Time: Sunday, February 14, 2010 02:09:07

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 02:12:32

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.219

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	44.400	ug/L	0.213	18539	0.083
Be	9	45.318	ug/L	1.956	4665	0.021
B	11	94.912	ug/L	1.231	11425	0.050
Na	23	5328.081	ug/L	4.822	9632228	43.009
Mg	24	5309.096	ug/L	4.321	6086887	27.220
Al	27	5502.711	ug/L	7.928	9144328	40.921
P	31	5182.178	ug/L	1.297	520584	2.315
K	39	5026.941	ug/L	6.718	18789019	82.456
Ca	43	4938.142	ug/L	1.255	36468	0.162
Sc	45		ug/L		223528	223528.064
Ti	47	51.569	ug/L	2.244	17232	0.077
V	51	49.964	ug/L	1.281	209494	0.940
Cr	52	50.362	ug/L	1.087	154079	0.692
Cr	53		ug/L		98570	0.108
Mn	55	49.438	ug/L	2.987	272675	1.217
Fe	57	4837.824	ug/L	2.421	549326	2.421
Co	59	49.097	ug/L	0.236	204306	0.914
Ni	60	50.726	ug/L	0.776	44265	0.198
Cu	63		ug/L		95630	0.427
Cu	65	50.629	ug/L	1.939	46415	0.207
Zn	66	49.834	ug/L	1.121	26169	0.115
Zn	67		ug/L		8006	0.021
Zn	68		ug/L		19326	0.084
Ge	74		ug/L		225717	225717.137
As	75	49.203	ug/L	3.549	30120	0.135
Se	77		ug/L		10456	0.019
Se	82	48.520	ug/L	3.023	3424	0.015
Kr	83		ug/L		40	0.000
Sr	88	49.783	ug/L	1.065	475190	3.301
Y	89		ug/L		156	0.001
Zr	90	49.269	ug/L	1.349	229455	1.590
Mo	98	49.821	ug/L	1.812	96470	0.670
Ag	107	50.394	ug/L	1.860	163957	1.139
Cd	111	49.680	ug/L	1.383	39026	0.271
Cd	114		ug/L		94253	0.655
In	115		ug/L		143890	143889.750
Sn	120	50.844	ug/L	0.933	169837	1.178
Sb	121	48.759	ug/L	5.783	112249	0.776
Sb	123		ug/L		85558	0.591
Ba	135		ug/L		38450	0.320
Ba	137	56.547	ug/L	1.380	65570	0.546
Ho	165		ug/L		17	0.000
Lu	175		ug/L		120060	120059.935
Tl	205	47.165	ug/L	1.552	170402	1.411
Pb	208	48.777	ug/L	0.855	379652	3.158
Th	232	47.763	ug/L	1.247	485644	4.038
U	238	48.894	ug/L	1.728	534637	4.451

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 02:15:16

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Diff	Dup. Rel.	% Diff
Li	7		88.801								
Be	9		90.635								
B	11		94.912								
Na	23		106.562								
Mg	24		106.182								
Al	27		108.965								
P	31		103.644								
K	39		100.539								
Ca	43		98.763								
> Sc	45								117.7		
Ti	47		103.137								
V	51		99.927								
Cr	52		100.724								
Cr	53										
Mn	55		98.876								
Fe	57		96.756								
Co	59		98.194								
Ni	60		101.453								
Cu	63										
Cu	65		101.258								
Zn	66		99.667								
Zn	67										
Zn	68										
> Ge	74								115.2		
As	75		98.406								
Se	77										
Se	82		97.040								
Kr	83										
Sr	88		99.565								
Y	89										
Zr	90		98.538								
Mo	98		99.642								
Ag	107		100.788								
Cd	111		99.361								
Cd	114										
> In	115								115.3		
Sn	120		101.688								
Sb	121		97.519								
Sb	123										
Ba	135										
Ba	137		113.094								
Ho	165										
> Lu	175								97.1		
Tl	205		94.330								
Pb	208		97.553								
Th	232		95.526								
U	238		97.788								

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Ba	137CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 02:15:16

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 02:18:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.220

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.001	ug/L	2132.203	32	0.000
Be	9	0.005	ug/L	339.095	4	0.000
B	11	2.205	ug/L	23.401	455	0.001
Na	23	1.952	ug/L	32.019	16676	0.016
Mg	24	-0.435	ug/L	348.970	3000	-0.002
Al	27	-0.231	ug/L	994.978	4668	-0.002
P	31	-1.756	ug/L	80.972	2926	-0.001
K	39	7.994	ug/L	83.941	373502	0.131
Ca	43	-1.378	ug/L	95.818	147	-0.000
Sc	45		ug/L		221047	221047.281
Ti	47	-0.030	ug/L	182.273	121	-0.000
V	51	0.005	ug/L	19634.077	-715	0.000
Cr	52	0.450	ug/L	15.416	712	0.006
Cr	53		ug/L		75358	0.007
Mn	55	0.007	ug/L	89.362	858	0.000
Fe	57	10.432	ug/L	34.465	9357	0.005
Co	59	0.005	ug/L	74.905	122	0.000
Ni	60	0.014	ug/L	69.764	55	0.000
Cu	63		ug/L		154	0.000
Cu	65	0.018	ug/L	64.640	95	0.000
Zn	66	-0.020	ug/L	147.519	122	-0.000
Zn	67		ug/L		3497	0.000
Zn	68		ug/L		455	0.000
Ge	74		ug/L		231726	231726.475
As	75	-0.687	ug/L	109.989	-909	-0.002
Se	77		ug/L		7246	0.004
Se	82	-0.121	ug/L	9.653	34	-0.000
Kr	83		ug/L		42	0.000
Sr	88	0.008	ug/L	25.473	271	0.001
Y	89		ug/L		18	-0.000
Zr	90	0.175	ug/L	13.149	1485	0.006
Mo	98	0.045	ug/L	20.252	184	0.001
Ag	107	0.012	ug/L	18.793	127	0.000
Cd	111	-0.001	ug/L	668.251	22	-0.000
Cd	114		ug/L		60	0.000
In	115		ug/L		145239	145239.453
Sn	120	0.319	ug/L	11.136	1361	0.007
Sb	121	0.676	ug/L	21.260	2149	0.011
Sb	123		ug/L		1678	0.008
Ba	135		ug/L		24	0.000
Ba	137	0.012	ug/L	41.373	43	0.000
Ho	165		ug/L		3	0.000
Lu	175		ug/L		119617	119616.891
Tl	205	0.296	ug/L	18.567	2031	0.009
Pb	208	0.041	ug/L	7.621	797	0.003
Th	232	0.135	ug/L	23.044	2187	0.011
U	238	0.014	ug/L	18.367	418	0.001

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 02:21:27

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		116.3			
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		118.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		116.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.7			
Tl	205					
Pb	208					
Th	232					
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: 245797001

Sample Date/Time: Sunday, February 14, 2010 02:24:52

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797001.221

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	38.185	ug/L	3.249	21646	0.071
Be	9	2.408	ug/L	4.912	341	0.001
B	11	10.991	ug/L	2.930	2035	0.006
Na	23	1921.223	ug/L	1.688	4723725	15.508
Mg	24	9682.495	ug/L	2.811	15067400	49.642
Al	27	52101.292	ug/L	0.586	117563722	387.449
P	31	159.843	ug/L	3.802	25912	0.071
K	39	5961.147	ug/L	6.416	30147353	97.780
Ca	43	18681.546	ug/L	0.994	186641	0.614
> Sc	45		ug/L		303409	303409.223
Ti	47	469.622	ug/L	0.500	211609	0.697
V	51	53.781	ug/L	1.783	306118	1.012
Cr	52	32.744	ug/L	2.528	135654	0.450
Cr	53		ug/L		65722	-0.117
Mn	55	604.925	ug/L	0.841	4517551	14.886
Fe	57	43977.787	ug/L	0.355	6688802	22.008
Co	59	30.191	ug/L	1.040	170579	0.562
Ni	60	30.548	ug/L	2.467	36202	0.119
Cu	63		ug/L		70752	0.233
Cu	65	27.888	ug/L	1.522	34755	0.114
Zn	66	130.625	ug/L	1.001	65825	0.302
Zn	67		ug/L		14412	0.051
Zn	68		ug/L		51823	0.237
> Ge	74		ug/L		217272	217272.279
As	75	11.310	ug/L	6.844	6321	0.031
Se	77		ug/L		4905	-0.005
Se	82	1.958	ug/L	7.077	171	0.001
Kr	83		ug/L		113	0.000
Sr	88	127.022	ug/L	0.810	1177271	8.423
Y	89		ug/L		598710	4.284
Zr	90	87.369	ug/L	2.300	394680	2.820
Mo	98	3.599	ug/L	1.362	6855	0.048
Ag	107	0.473	ug/L	2.501	1577	0.011
Cd	111	0.723	ug/L	26.648	573	0.004
Cd	114		ug/L		229	0.001
> In	115		ug/L		139739	139739.226
Sn	120	0.730	ug/L	2.708	2641	0.017
Sb	121	0.430	ug/L	7.019	1520	0.007
Sb	123		ug/L		1222	0.006
Ba	135		ug/L		361836	2.877
Ba	137	507.946	ug/L	3.140	616766	4.904
Ho	165		ug/L		21423	0.170
> Lu	175		ug/L		125815	125814.652
Tl	205	0.553	ug/L	0.790	3105	0.017
Pb	208	33.299	ug/L	2.395	271681	2.156
Th	232	33.239	ug/L	3.088	354280	2.810
U	238	2.448	ug/L	2.080	28301	0.223

Sample ID: 245797001

Report Date/Time: Sunday, February 14, 2010 02:27:36

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		159.7			
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		110.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		112.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.7			
Ti	205					
Pb	208					
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)
Lu 175 Int Std for sa	Sc	45	
	Ti	47	Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 1202030960

Sample Date/Time: Sunday, February 14, 2010 02:31:01

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\1202030960.222

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	38.003	ug/L	1.622	21364	0.071
Be	9	2.546	ug/L	3.381	357	0.001
B	11	10.751	ug/L	3.935	1980	0.006
Na	23	1737.310	ug/L	6.920	4235382	14.024
Mg	24	9527.904	ug/L	3.984	14702130	48.849
Al	27	54579.138	ug/L	11.835	122131231	405.875
P	31	151.981	ug/L	1.878	24640	0.068
K	39	6016.204	ug/L	9.718	30147353	98.683
Ca	43	17485.561	ug/L	1.615	173251	0.575
> Sc	45		ug/L		300893	300892.667
Ti	47	438.808	ug/L	1.573	196069	0.651
V	51	51.483	ug/L	1.600	290552	0.969
Cr	52	30.609	ug/L	1.246	125698	0.421
Cr	53		ug/L		61469	-0.129
Mn	55	508.516	ug/L	2.195	3766096	12.513
Fe	57	40642.703	ug/L	2.706	6130473	20.339
Co	59	23.879	ug/L	1.463	133818	0.444
Ni	60	28.229	ug/L	2.014	33181	0.110
Cu	63		ug/L		60076	0.199
Cu	65	23.675	ug/L	0.303	29276	0.097
Zn	66	120.205	ug/L	1.131	61150	0.278
Zn	67		ug/L		13583	0.047
Zn	68		ug/L		48677	0.220
> Ge	74		ug/L		219310	219310.154
As	75	10.578	ug/L	3.647	5937	0.029
Se	77		ug/L		4520	-0.007
Se	82	2.368	ug/L	6.651	201	0.001
Kr	83		ug/L		111	0.000
Sr	88	124.118	ug/L	0.767	1148704	8.231
Y	89		ug/L		547311	3.922
Zr	90	81.336	ug/L	1.136	366945	2.625
Mo	98	2.982	ug/L	2.959	5686	0.040
Ag	107	0.458	ug/L	0.810	1529	0.010
Cd	111	0.743	ug/L	7.367	588	0.004
Cd	114		ug/L		192	0.001
> In	115		ug/L		139538	139538.357
Sn	120	0.582	ug/L	4.980	2160	0.013
Sb	121	0.200	ug/L	7.859	1006	0.003
Sb	123		ug/L		778	0.002
Ba	135		ug/L		340143	2.664
Ba	137	467.845	ug/L	0.579	576713	4.517
Ho	165		ug/L		19453	0.152
> Lu	175		ug/L		127675	127674.598
Tl	205	0.446	ug/L	7.604	2743	0.013
Pb	208	30.690	ug/L	1.227	254215	1.987
Th	232	27.790	ug/L	1.468	300843	2.349
U	238	2.369	ug/L	1.663	27814	0.216

Sample ID: 1202030960

Report Date/Time: Sunday, February 14, 2010 02:33:46

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		158.4			
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		111.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		111.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.2			
Ti	205					
Pb	208					
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)
Lu 175 Int Std for saSc		45	
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 1202030962

Sample Date/Time: Sunday, February 14, 2010 02:37:11

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\1202030962.223

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	57.422	ug/L	0.839	32264	0.107
Be	9	18.254	ug/L	0.741	2533	0.008
B	11	45.782	ug/L	3.435	7558	0.024
Na	23	2397.092	ug/L	3.515	5840314	19.350
Mg	24	10407.674	ug/L	8.636	16071893	53.360
Al	27	58306.209	ug/L	2.385	130471901	433.591
P	31	835.890	ug/L	0.723	116568	0.373
K	39	7434.409	ug/L	6.362	37153428	121.946
Ca	43	18749.694	ug/L	1.338	185778	0.617
> Sc	45		ug/L		300937	300936.918
Ti	47	512.476	ug/L	0.779	229003	0.760
V	51	71.452	ug/L	2.127	403761	1.345
Cr	52	49.200	ug/L	1.132	202653	0.676
Cr	53		ug/L		70160	-0.100
Mn	55	648.880	ug/L	1.417	4805945	15.967
Fe	57	40674.150	ug/L	0.913	6136253	20.355
Co	59	40.545	ug/L	0.283	227168	0.754
Ni	60	45.409	ug/L	1.837	53347	0.177
Cu	63		ug/L		102144	0.339
Cu	65	40.857	ug/L	1.925	50447	0.167
Zn	66	144.366	ug/L	1.218	73928	0.334
Zn	67		ug/L		15591	0.056
Zn	68		ug/L		57655	0.259
> Ge	74		ug/L		220850	220850.015
As	75	44.700	ug/L	2.076	26730	0.123
Se	77		ug/L		4964	-0.005
Se	82	10.071	ug/L	5.432	728	0.003
Kr	83		ug/L		113	0.000
Sr	88	141.646	ug/L	0.599	1327185	9.393
Y	89		ug/L		572777	4.055
Zr	90	146.811	ug/L	1.544	669964	4.738
Mo	98	25.642	ug/L	1.620	48795	0.345
Ag	107	22.712	ug/L	1.448	72596	0.513
Cd	111	5.421	ug/L	3.030	4200	0.030
Cd	114		ug/L		8403	0.059
> In	115		ug/L		141279	141278.953
Sn	120	8.427	ug/L	0.287	27872	0.195
Sb	121	32.315	ug/L	1.132	73220	0.514
Sb	123		ug/L		56300	0.395
Ba	135		ug/L		346826	2.699
Ba	137	476.356	ug/L	1.487	591053	4.599
Ho	165		ug/L		20357	0.158
> Lu	175		ug/L		128514	128514.089
Tl	205	40.502	ug/L	2.038	156791	1.212
Pb	208	118.247	ug/L	0.698	984454	7.656
Th	232	48.910	ug/L	0.382	532306	4.135
U	238	24.365	ug/L	0.677	285317	2.218

Sample ID: 1202030962

Report Date/Time: Sunday, February 14, 2010 02:39:55

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		158.4			
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		112.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		113.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.9			
Tl	205					
Pb	208					
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)
Lu 175 Int Std for sa	Sc	45	
	Ti	47	Sample is out of limits (over linear range)

## QC Action

Sample ID: 1202030962

Report Date/Time: Sunday, February 14, 2010 02:39:55

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QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 1202030963  
 Sample Date/Time: Sunday, February 14, 2010 02:43:21  
 Sample Type:  
 Sample Description: LANL 6020 MSD  
 Number of Replicates: 3  
 Batch ID: 948067|2|skj  
 Method File: c:\elandata\Method\6020.mth  
 Dataset File: C:\elandata\Dataset\100213\1202030963.224

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	54.494	ug/L	1.557	30564	0.102
Be	9	18.577	ug/L	0.992	2573	0.009
B	11	46.132	ug/L	1.473	7600	0.024
Na	23	2604.776	ug/L	8.352	6336575	21.026
Mg	24	9131.655	ug/L	5.807	14062907	46.818
Al	27	52131.011	ug/L	10.036	116372197	387.670
P	31	838.936	ug/L	1.811	116758	0.375
K	39	7127.299	ug/L	11.935	35561138	116.908
Ca	43	18480.557	ug/L	0.965	182784	0.608
> Sc	45		ug/L		300384	300384.434
Ti	47	476.420	ug/L	0.476	212527	0.707
V	51	65.117	ug/L	0.951	367186	1.226
Cr	52	46.595	ug/L	1.801	191517	0.641
Cr	53		ug/L		69471	-0.102
Mn	55	587.475	ug/L	0.224	4343663	14.456
Fe	57	38311.907	ug/L	0.498	5770205	19.173
Co	59	38.244	ug/L	1.703	213905	0.712
Ni	60	44.336	ug/L	1.232	51994	0.173
Cu	63		ug/L		99377	0.330
Cu	65	39.255	ug/L	1.331	48388	0.161
Zn	66	137.316	ug/L	1.674	70506	0.318
Zn	67		ug/L		14836	0.052
Zn	68		ug/L		54918	0.246
> Ge	74		ug/L		221429	221428.926
As	75	44.373	ug/L	0.903	26599	0.122
Se	77		ug/L		4719	-0.006
Se	82	10.475	ug/L	4.365	757	0.003
Kr	83		ug/L		109	0.000
Sr	88	140.440	ug/L	1.280	1312280	9.313
Y	89		ug/L		557704	3.958
Zr	90	144.146	ug/L	0.661	656045	4.652
Mo	98	26.690	ug/L	0.435	50653	0.359
Ag	107	23.425	ug/L	0.605	74669	0.529
Cd	111	5.535	ug/L	2.943	4276	0.030
Cd	114		ug/L		8683	0.061
> In	115		ug/L		140888	140888.443
Sn	120	9.604	ug/L	1.129	31638	0.223
Sb	121	36.926	ug/L	0.566	83353	0.588
Sb	123		ug/L		63849	0.450
Ba	135		ug/L		348605	2.721
Ba	137	477.735	ug/L	0.447	590922	4.612
Ho	165		ug/L		19923	0.155
> Lu	175		ug/L		128110	128109.505
Tl	205	42.506	ug/L	0.899	163986	1.272
Pb	208	115.495	ug/L	0.676	958496	7.478
Th	232	48.047	ug/L	0.825	521253	4.062
U	238	24.956	ug/L	1.176	291295	2.272

## 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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		158.1			
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		113.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		112.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.6			
Tl	205					
Pb	208					
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)
Lu 175 Int Std for sa	Sc	45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

Sample ID: 1202030963

Report Date/Time: Sunday, February 14, 2010 02:46:06

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QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 1202030961

Sample Date/Time: Sunday, February 14, 2010 02:49:32

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 948067|10|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\1202030961.225

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.262	ug/L	3.933	4616	0.019
Be	9	0.716	ug/L	6.861	83	0.000
B	11	4.290	ug/L	4.937	758	0.002
Na	23	440.359	ug/L	2.790	865462	3.555
Mg	24	2364.946	ug/L	6.509	2907894	12.125
Al	27	14821.693	ug/L	12.429	26412120	110.221
P	31	44.723	ug/L	5.725	8138	0.020
K	39	1500.536	ug/L	6.252	6266324	24.613
Ca	43	4901.864	ug/L	2.572	38771	0.161
> Sc	45		ug/L		239436	239436.006
Ti	47	123.857	ug/L	1.253	44146	0.184
V	51	13.952	ug/L	3.807	62103	0.263
Cr	52	8.709	ug/L	1.534	27949	0.120
Cr	53		ug/L		68224	-0.049
Mn	55	159.327	ug/L	1.151	939576	3.921
Fe	57	11424.972	ug/L	1.050	1377809	5.717
Co	59	8.290	ug/L	1.012	37047	0.154
Ni	60	8.327	ug/L	0.492	7823	0.032
Cu	63		ug/L		15974	0.066
Cu	65	7.836	ug/L	1.189	7767	0.032
Zn	66	29.560	ug/L	1.466	15540	0.068
Zn	67		ug/L		5824	0.011
Zn	68		ug/L		12387	0.053
> Ge	74		ug/L		225221	225221.175
As	75	2.265	ug/L	28.109	941	0.006
Se	77		ug/L		5937	-0.001
Se	82	0.950	ug/L	35.956	108	0.000
Kr	83		ug/L		47	0.000
Sr	88	27.166	ug/L	0.526	246835	1.802
Y	89		ug/L		124033	0.906
Zr	90	17.651	ug/L	1.568	78618	0.570
Mo	98	0.746	ug/L	2.987	1465	0.010
Ag	107	0.085	ug/L	13.099	346	0.002
Cd	111	0.138	ug/L	68.077	125	0.001
Cd	114		ug/L		67	0.000
> In	115		ug/L		136918	136918.354
Sn	120	0.221	ug/L	2.975	973	0.005
Sb	121	0.144	ug/L	23.305	865	0.002
Sb	123		ug/L		644	0.002
Ba	135		ug/L		73642	0.604
Ba	137	106.321	ug/L	0.519	125247	1.026
Ho	165		ug/L		4344	0.036
> Lu	175		ug/L		121992	121991.905
Tl	205	0.512	ug/L	20.106	2857	0.015
Pb	208	7.378	ug/L	0.746	58764	0.478
Th	232	7.253	ug/L	1.423	75651	0.613
U	238	0.529	ug/L	0.586	6142	0.048

Sample ID: 1202030961

Report Date/Time: Sunday, February 14, 2010 02:52:17

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		126.0			
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		114.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		109.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.6			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc		45	
	Ti	47	Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 1202030961

Report Date/Time: Sunday, February 14, 2010 02:52:17

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 02:55:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.226

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	45.357	ug/L	0.814	19259	0.085
Be	9	45.288	ug/L	1.472	4742	0.021
B	11	94.336	ug/L	1.067	11548	0.050
Na	23	4786.812	ug/L	6.401	8798086	38.640
Mg	24	5276.571	ug/L	5.108	6149668	27.053
Al	27	5369.625	ug/L	7.038	9074512	39.931
P	31	5128.738	ug/L	1.603	523957	2.291
K	39	4684.943	ug/L	4.799	17833645	76.847
Ca	43	4956.505	ug/L	0.347	37222	0.163
> Sc	45		ug/L		227334	227333.579
Ti	47	51.331	ug/L	1.826	17454	0.076
V	51	51.059	ug/L	2.159	217671	0.961
Cr	52	50.771	ug/L	2.629	157955	0.698
Cr	53		ug/L		97537	0.096
Mn	55	50.212	ug/L	2.441	281668	1.236
Fe	57	4955.934	ug/L	3.176	572044	2.480
Co	59	49.310	ug/L	3.675	208630	0.918
Ni	60	50.718	ug/L	0.906	45007	0.198
Cu	63		ug/L		96712	0.425
Cu	65	50.835	ug/L	0.900	47397	0.208
Zn	66	50.407	ug/L	1.775	26914	0.117
Zn	67		ug/L		7771	0.019
Zn	68		ug/L		20021	0.086
> Ge	74		ug/L		229524	229524.111
As	75	48.346	ug/L	0.887	30086	0.133
Se	77		ug/L		10290	0.017
Se	82	49.084	ug/L	0.636	3522	0.015
Kr	83		ug/L		36	-0.000
Sr	88	51.770	ug/L	2.071	478880	3.433
Y	89		ug/L		141	0.001
Zr	90	52.357	ug/L	1.651	236224	1.690
Mo	98	51.330	ug/L	2.700	96317	0.690
Ag	107	51.388	ug/L	0.688	162012	1.161
Cd	111	50.102	ug/L	2.100	38142	0.273
Cd	114		ug/L		91135	0.653
> In	115		ug/L		139433	139433.035
Sn	120	50.084	ug/L	3.219	162118	1.161
Sb	121	48.307	ug/L	8.542	107758	0.769
Sb	123		ug/L		82132	0.586
Ba	135		ug/L		37597	0.311
Ba	137	54.845	ug/L	1.476	64060	0.529
Ho	165		ug/L		13	0.000
> Lu	175		ug/L		120931	120930.919
Tl	205	47.780	ug/L	0.763	173864	1.430
Pb	208	49.284	ug/L	0.779	386379	3.191
Th	232	48.732	ug/L	1.541	499067	4.120
U	238	50.296	ug/L	1.062	553955	4.579

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 02:58:26

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	90.715				
Be	9	90.577				
B	11	94.336				
Na	23	95.736				
Mg	24	105.531				
Al	27	106.329				
P	31	102.575				
K	39	93.699				
Ca	43	99.130				
> Sc	45		119.7			
Ti	47	102.661				
V	51	102.117				
Cr	52	101.542				
Cr	53					
Mn	55	100.425				
Fe	57	99.119				
Co	59	98.621				
Ni	60	101.436				
Cu	63					
Cu	65	101.670				
Zn	66	100.814				
Zn	67					
Zn	68					
> Ge	74		117.1			
As	75	96.692				
Se	77					
Se	82	98.168				
Kr	83					
Sr	88	103.540				
Y	89					
Zr	90	104.713				
Mo	98	102.660				
Ag	107	102.777				
Cd	111	100.205				
Cd	114					
> In	115		111.7			
Sn	120	100.168				
Sb	121	96.613				
Sb	123					
Ba	135					
Ba	137	109.690				
Ho	165					
> Lu	175		97.8			
Tl	205	95.559				
Pb	208	98.568				
Th	232	97.464				
U	238	100.591				

### 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: Sunday, February 14, 2010 03:01:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.227

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.022	ug/L	28.616	42	0.000
Be	9	0.017	ug/L	136.478	5	0.000
B	11	1.587	ug/L	29.835	390	0.001
Na	23	1.615	ug/L	125.744	16343	0.013
Mg	24	1.000	ug/L	270.282	4668	0.005
Al	27	1.524	ug/L	59.242	7669	0.011
P	31	-1.269	ug/L	38.484	3021	-0.001
K	39	2.185	ug/L	253.687	357766	0.036
Ca	43	-0.916	ug/L	672.317	152	-0.000
> Sc	45		ug/L		224495	224494.881
Ti	47	0.031	ug/L	144.106	144	0.000
V	51	0.430	ug/L	216.962	1127	0.008
Cr	52	0.440	ug/L	7.219	689	0.006
Cr	53		ug/L		71254	-0.016
Mn	55	-0.001	ug/L	1404.087	827	-0.000
Fe	57	13.130	ug/L	15.838	9805	0.007
Co	59	0.001	ug/L	350.636	105	0.000
Ni	60	0.006	ug/L	65.537	49	0.000
Cu	63		ug/L		156	0.000
Cu	65	0.006	ug/L	95.823	85	0.000
Zn	66	0.006	ug/L	167.203	134	0.000
Zn	67		ug/L		3279	-0.000
Zn	68		ug/L		387	0.000
> Ge	74		ug/L		228386	228385.725
As	75	-0.707	ug/L	50.428	-913	-0.002
Se	77		ug/L		6522	0.001
Se	82	0.009	ug/L	2380.789	43	0.000
Kr	83		ug/L		39	0.000
Sr	88	0.008	ug/L	34.215	266	0.001
Y	89		ug/L		27	0.000
Zr	90	0.173	ug/L	15.293	1448	0.006
Mo	98	0.042	ug/L	46.825	174	0.001
Ag	107	0.011	ug/L	84.893	122	0.000
Cd	111	-0.005	ug/L	130.643	18	-0.000
Cd	114		ug/L		55	0.000
> In	115		ug/L		142555	142554.714
Sn	120	0.204	ug/L	9.627	955	0.005
Sb	121	0.651	ug/L	22.969	2052	0.010
Sb	123		ug/L		1596	0.008
Ba	135		ug/L		29	0.000
Ba	137	0.009	ug/L	72.864	41	0.000
Ho	165		ug/L		3	0.000
> Lu	175		ug/L		122235	122234.938
Tl	205	0.266	ug/L	19.055	1965	0.008
Pb	208	0.021	ug/L	17.794	650	0.001
Th	232	0.088	ug/L	30.596	1745	0.007
U	238	0.014	ug/L	12.461	422	0.001

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 03:04:37

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		118.2			
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		116.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		114.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.8			
Tl	205					
Pb	208					
Th	232					
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: Sunday, February 14, 2010 03:04:37

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## ICPMS#4 - Summary Report

Sample ID: 245797002

Sample Date/Time: Sunday, February 14, 2010 03:08:02

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797002.228

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	34.701	ug/L	2.856	18622	0.065
Be	9	4.671	ug/L	4.747	622	0.002
B	11	9.077	ug/L	2.895	1636	0.005
Na	23	957.073	ug/L	7.958	2235817	7.726
Mg	24	5930.732	ug/L	9.500	8737951	30.407
Al	27	41431.833	ug/L	7.994	88470672	308.106
P	31	201.098	ug/L	4.087	29816	0.090
K	39	4822.830	ug/L	22.126	23141278	79.108
Ca	43	6124.111	ug/L	1.177	58034	0.201
> Sc	45		ug/L		287114	287113.746
Ti	47	567.878	ug/L	0.488	242096	0.843
V	51	41.173	ug/L	2.145	221541	0.775
Cr	52	29.519	ug/L	0.609	115651	0.406
Cr	53		ug/L		58405	-0.130
Mn	55	728.735	ug/L	1.243	5150010	17.933
Fe	57	38027.962	ug/L	0.629	5474500	19.031
Co	59	21.965	ug/L	1.636	117470	0.409
Ni	60	26.859	ug/L	0.869	30129	0.105
Cu	63		ug/L		314128	1.094
Cu	65	129.800	ug/L	0.626	152705	0.532
Zn	66	159.376	ug/L	2.084	79433	0.369
Zn	67		ug/L		15728	0.058
Zn	68		ug/L		60542	0.280
> Ge	74		ug/L		215019	215018.591
As	75	7.958	ug/L	3.396	4273	0.022
Se	77		ug/L		3855	-0.010
Se	82	2.365	ug/L	7.162	197	0.001
Kr	83		ug/L		148	0.001
Sr	88	84.857	ug/L	1.036	758183	5.627
Y	89		ug/L		1100139	8.167
Zr	90	114.487	ug/L	0.281	498343	3.695
Mo	98	2.086	ug/L	2.675	3867	0.028
Ag	107	0.881	ug/L	3.880	2763	0.020
Cd	111	1.129	ug/L	15.886	850	0.006
Cd	114		ug/L		490	0.003
> In	115		ug/L		134707	134706.982
Sn	120	1.359	ug/L	0.863	4511	0.032
Sb	121	1.150	ug/L	2.115	3009	0.018
Sb	123		ug/L		2316	0.014
Ba	135		ug/L		289638	2.136
Ba	137	375.871	ug/L	2.804	492166	3.629
Ho	165		ug/L		39317	0.290
> Lu	175		ug/L		135679	135678.521
Tl	205	0.472	ug/L	5.108	3020	0.014
Pb	208	95.675	ug/L	1.925	840884	6.195
Th	232	30.186	ug/L	1.629	347131	2.552
U	238	82.590	ug/L	1.722	1020164	7.518

Sample ID: 245797002

Report Date/Time: Sunday, February 14, 2010 03:10:46

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		151.1			
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		109.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		107.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		109.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc	Ti	45	47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 245797002

Report Date/Time: Sunday, February 14, 2010 03:10:46

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## ICPMS#4 - Summary Report

Sample ID: 245797003

Sample Date/Time: Sunday, February 14, 2010 03:14:10

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797003.229

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	12.853	ug/L	2.409	5664	0.024
Be	9	1.503	ug/L	10.810	166	0.001
B	11	1.455	ug/L	16.641	392	0.001
Na	23	2055.069	ug/L	3.574	3912020	16.589
Mg	24	968.068	ug/L	11.261	1168119	4.963
Al	27	13700.647	ug/L	6.755	23929778	101.884
P	31	182.113	ug/L	3.879	22401	0.081
K	39	3040.527	ug/L	4.731	12094768	49.874
Ca	43	1611.953	ug/L	1.623	12623	0.053
> Sc	45		ug/L		235005	235005.235
Ti	47	489.103	ug/L	1.158	170664	0.726
V	51	13.479	ug/L	2.551	58837	0.254
Cr	52	14.431	ug/L	0.567	45917	0.198
Cr	53		ug/L		44330	-0.145
Mn	55	1008.573	ug/L	2.931	5830814	24.819
Fe	57	32245.421	ug/L	2.326	3799583	16.137
Co	59	43.283	ug/L	1.423	189338	0.805
Ni	60	17.088	ug/L	2.342	15701	0.067
Cu	63		ug/L		59618	0.253
Cu	65	30.196	ug/L	0.912	29137	0.124
Zn	66	102.709	ug/L	0.509	48710	0.238
Zn	67		ug/L		9743	0.033
Zn	68		ug/L		36872	0.179
> Ge	74		ug/L		204376	204375.933
As	75	3.898	ug/L	3.311	1774	0.011
Se	77		ug/L		3163	-0.012
Se	82	1.678	ug/L	32.017	143	0.001
Kr	83		ug/L		102	0.000
Sr	88	15.091	ug/L	1.687	131512	1.001
Y	89		ug/L		794733	6.055
Zr	90	110.386	ug/L	1.610	468148	3.563
Mo	98	2.704	ug/L	2.270	4859	0.036
Ag	107	0.565	ug/L	2.356	1754	0.013
Cd	111	1.224	ug/L	3.933	897	0.007
Cd	114		ug/L		564	0.004
> In	115		ug/L		131247	131246.523
Sn	120	3.694	ug/L	0.755	11497	0.086
Sb	121	0.456	ug/L	2.387	1481	0.007
Sb	123		ug/L		1134	0.006
Ba	135		ug/L		86818	0.628
Ba	137	111.148	ug/L	1.090	148350	1.073
Ho	165		ug/L		30236	0.219
> Lu	175		ug/L		138227	138226.707
Tl	205	0.143	ug/L	8.784	1712	0.004
Pb	208	28.849	ug/L	1.077	258718	1.868
Th	232	22.839	ug/L	1.418	267814	1.931
U	238	6.838	ug/L	1.295	86340	0.623

Sample ID: 245797003

Report Date/Time: Sunday, February 14, 2010 03:16:54

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		123.7			
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		104.3			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		105.2			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		111.8			
Ti	205					
Pb	208					
Th	232					
L U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
Lu 175 Int Std for saSc		45
	Ti	47Sample is out of limits (over linear range)_
	Mn	55Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 245797004

Sample Date/Time: Sunday, February 14, 2010 03:20:19

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797004.230

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	24.659	ug/L	4.821	9956	0.046
Be	9	14.195	ug/L	10.292	1412	0.007
B	11	6.688	ug/L	3.874	957	0.004
Na	23	461.770	ug/L	5.215	817410	3.727
Mg	24	3595.832	ug/L	3.058	3989437	18.436
Al	27	23190.052	ug/L	8.539	37334425	172.452
P	31	229.209	ug/L	2.999	25135	0.102
K	39	3039.931	ug/L	13.069	11078024	49.864
Ca	43	3077.343	ug/L	4.801	22000	0.101
> Sc	45		ug/L		216083	216082.886
Ti	47	398.098	ug/L	3.090	127674	0.591
V	51	26.331	ug/L	4.638	106274	0.496
Cr	52	17.771	ug/L	3.271	52102	0.244
Cr	53		ug/L		43771	-0.131
Mn	55	415.308	ug/L	3.869	2207022	10.220
Fe	57	16805.382	ug/L	4.775	1823185	8.410
Co	59	13.069	ug/L	4.019	52594	0.243
Ni	60	15.651	ug/L	3.263	13221	0.061
Cu	63		ug/L		1239924	5.745
Cu	65	688.127	ug/L	5.474	608123	2.818
Zn	66	116.006	ug/L	3.418	52596	0.269
Zn	67		ug/L		10450	0.039
Zn	68		ug/L		39588	0.201
> Ge	74		ug/L		195519	195519.182
As	75	5.462	ug/L	12.195	2543	0.015
Se	77		ug/L		3100	-0.012
Se	82	1.524	ug/L	12.967	128	0.000
Kr	83		ug/L		54	0.000
Sr	88	29.502	ug/L	2.890	246666	1.956
Y	89		ug/L		243858	1.935
Zr	90	37.958	ug/L	3.392	154914	1.225
Mo	98	1.480	ug/L	3.868	2590	0.020
Ag	107	0.980	ug/L	2.836	2867	0.022
Cd	111	0.838	ug/L	14.582	595	0.005
Cd	114		ug/L		1047	0.008
> In	115		ug/L		126017	126016.935
Sn	120	2.773	ug/L	3.159	8347	0.064
Sb	121	8.095	ug/L	2.047	16738	0.129
Sb	123		ug/L		13102	0.101
Ba	135		ug/L		110972	0.844
Ba	137	148.762	ug/L	0.193	188789	1.436
Ho	165		ug/L		10045	0.076
> Lu	175		ug/L		131426	131426.094
Tl	205	0.235	ug/L	1.872	1990	0.007
Pb	208	343.203	ug/L	0.661	2921036	22.222
Th	232	14.692	ug/L	1.093	164146	1.242
U	238	327.698	ug/L	1.943	3920695	29.831

Sample ID: 245797004

Report Date/Time: Sunday, February 14, 2010 03:23:04

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## Calibration

Analyte	Mass Curve 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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45		113.7			
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		99.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115		101.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175		106.3			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: 245797005

Sample Date/Time: Sunday, February 14, 2010 03:26:29

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797005.231

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	21.561	ug/L	1.979	8820	0.040
Be	9	4.132	ug/L	2.013	419	0.002
B	11	5.498	ug/L	5.633	831	0.003
Na	23	609.449	ug/L	6.269	1087584	4.920
Mg	24	3050.714	ug/L	4.065	3422982	15.641
Al	27	23132.275	ug/L	8.967	37632306	172.022
P	31	356.214	ug/L	1.803	37843	0.159
K	39	3258.021	ug/L	5.006	12016812	53.441
Ca	43	3444.942	ug/L	0.277	24926	0.113
> Sc	45		ug/L		218634	218634.433
Ti	47	462.485	ug/L	0.308	150160	0.686
V	51	29.903	ug/L	1.160	122344	0.563
Cr	52	16.979	ug/L	1.453	50374	0.233
Cr	53		ug/L		43422	-0.135
Mn	55	706.584	ug/L	1.791	3801624	17.387
Fe	57	22779.712	ug/L	1.743	2499821	11.400
Co	59	29.660	ug/L	2.007	120733	0.552
Ni	60	16.359	ug/L	1.441	13989	0.064
Cu	63		ug/L		612097	2.800
Cu	65	331.331	ug/L	2.355	296601	1.357
Zn	66	188.875	ug/L	1.011	84847	0.437
Zn	67		ug/L		15229	0.064
Zn	68		ug/L		62435	0.320
> Ge	74		ug/L		193811	193810.829
As	75	7.164	ug/L	4.272	3425	0.020
Se	77		ug/L		2989	-0.012
Se	82	2.149	ug/L	13.466	164	0.001
Kr	83		ug/L		53	0.000
Sr	88	33.171	ug/L	0.646	275957	2.200
Y	89		ug/L		275539	2.198
Zr	90	43.252	ug/L	0.143	175580	1.396
Mo	98	2.064	ug/L	1.920	3562	0.028
Ag	107	1.097	ug/L	1.793	3185	0.025
Cd	111	29.303	ug/L	2.203	20063	0.160
Cd	114		ug/L		48158	0.384
> In	115		ug/L		125371	125371.364
Sn	120	1.865	ug/L	1.731	5666	0.043
Sb	121	2.125	ug/L	2.096	4744	0.034
Sb	123		ug/L		3619	0.026
Ba	135		ug/L		129204	0.994
Ba	137	176.261	ug/L	1.353	221062	1.702
Ho	165		ug/L		11062	0.085
> Lu	175		ug/L		129897	129897.274
Tl	205	0.210	ug/L	6.668	1871	0.006
Pb	208	129.719	ug/L	0.854	1091457	8.399
Th	232	16.937	ug/L	1.483	186873	1.432
U	238	138.973	ug/L	1.606	1643424	12.651

Sample ID: 245797005

Report Date/Time: Sunday, February 14, 2010 03:29:13

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		115.1			
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		98.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.0			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

### QC Action

QC Action Line: No QC out of limits detected



# ICPMS#4 - Summary Report

Sample ID: 245797006

Sample Date/Time: Sunday, February 14, 2010 03:32:39

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797006.232

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	12.862	ug/L	3.287	5142	0.024
Be 9	1.018	ug/L	8.030	103	0.000
B 11	2.725	ug/L	7.168	498	0.001
Na 23	934.180	ug/L	5.746	1620211	7.541
Mg 24	1721.138	ug/L	4.477	1884120	8.824
Al 27	12759.400	ug/L	10.266	20255912	94.885
P 31	125.615	ug/L	7.359	14942	0.056
K 39	2001.799	ug/L	5.982	7334485	32.835
Ca 43	2530.064	ug/L	1.676	17888	0.083
> Sc 45		ug/L		213180	213179.586
Ti 47	405.537	ug/L	0.935	128417	0.602
V 51	20.216	ug/L	3.316	80406	0.381
Cr 52	16.129	ug/L	2.746	46637	0.222
Cr 53		ug/L		41810	-0.137
Mn 55	575.876	ug/L	1.017	3021498	14.171
Fe 57	22444.650	ug/L	1.465	2401965	11.232
Co 59	40.538	ug/L	3.217	160837	0.754
Ni 60	15.626	ug/L	3.961	13027	0.061
Cu 63		ug/L		27649	0.129
Cu 65	15.450	ug/L	3.214	13558	0.063
Zn 66	70.135	ug/L	0.568	31264	0.162
Zn 67		ug/L		6805	0.021
Zn 68		ug/L		23069	0.119
> Ge 74		ug/L		191883	191883.001
As 75	4.572	ug/L	6.715	2022	0.013
Se 77		ug/L		2885	-0.013
Se 82	1.645	ug/L	6.872	133	0.001
Kr 83		ug/L		62	0.000
Sr 88	20.320	ug/L	0.253	169759	1.348
Y 89		ug/L		428303	3.403
Zr 90	80.482	ug/L	0.490	327468	2.597
Mo 98	1.613	ug/L	0.632	2812	0.022
Ag 107	0.368	ug/L	2.906	1124	0.008
Cd 111	0.623	ug/L	23.698	448	0.003
Cd 114		ug/L		209	0.001
> In 115		ug/L		125855	125855.051
Sn 120	2.438	ug/L	2.112	7361	0.057
Sb 121	0.211	ug/L	1.793	931	0.003
Sb 123		ug/L		730	0.003
Ba 135		ug/L		65524	0.493
Ba 137	87.222	ug/L	0.883	112011	0.842
Ho 165		ug/L		15520	0.117
> Lu 175		ug/L		132974	132974.010
Tl 205	0.040	ug/L	48.241	1240	0.001
Pb 208	15.821	ug/L	1.166	136747	1.024
Th 232	18.569	ug/L	0.724	209667	1.570
U 238	3.461	ug/L	2.321	42185	0.315

Sample ID: 245797006

Report Date/Time: Sunday, February 14, 2010 03:35:24

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		112.2			
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		97.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		107.5			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797006

Report Date/Time: Sunday, February 14, 2010 03:35:24

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 03:38:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.233

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.825	ug/L	3.008	19115	0.100
Be	9	53.395	ug/L	2.224	4679	0.025
B	11	100.267	ug/L	1.645	10263	0.053
Na	23	4698.173	ug/L	3.383	7223511	37.924
Mg	24	5505.530	ug/L	4.654	5374895	28.227
Al	27	5021.595	ug/L	2.211	7115013	37.343
P	31	5018.718	ug/L	0.984	429376	2.242
K	39	4708.877	ug/L	3.282	14994062	77.239
Ca	43	4990.387	ug/L	0.962	31378	0.164
> Sc	45		ug/L		190316	190315.653
Ti	47	51.229	ug/L	0.465	14580	0.076
V	51	51.765	ug/L	1.770	184855	0.974
Cr	52	51.039	ug/L	0.483	132976	0.702
Cr	53		ug/L		76226	0.067
Mn	55	52.584	ug/L	1.586	246896	1.294
Fe	57	5195.259	ug/L	2.823	501654	2.600
Co	59	51.119	ug/L	2.138	181079	0.951
Ni	60	51.967	ug/L	0.740	38603	0.203
Cu	63		ug/L		82145	0.431
Cu	65	51.206	ug/L	0.849	39968	0.210
Zn	66	50.714	ug/L	1.201	23336	0.117
Zn	67		ug/L		6475	0.018
Zn	68		ug/L		17244	0.086
> Ge	74		ug/L		197813	197812.565
As	75	47.795	ug/L	1.992	25623	0.132
Se	77		ug/L		7460	0.010
Se	82	49.433	ug/L	2.210	3057	0.015
Kr	83		ug/L		32	0.000
Sr	88	49.873	ug/L	1.009	411970	3.307
Y	89		ug/L		176	0.001
Zr	90	49.077	ug/L	1.154	197817	1.584
Mo	98	49.291	ug/L	0.423	82602	0.663
Ag	107	49.646	ug/L	0.125	139786	1.122
Cd	111	49.472	ug/L	0.484	33631	0.270
Cd	114		ug/L		81286	0.652
> In	115		ug/L		124519	124519.334
Sn	120	50.290	ug/L	0.508	145384	1.166
Sb	121	48.588	ug/L	5.746	96878	0.773
Sb	123		ug/L		74727	0.597
Ba	135		ug/L		34031	0.272
Ba	137	48.458	ug/L	2.140	58444	0.468
Ho	165		ug/L		15	0.000
> Lu	175		ug/L		124845	124845.453
Tl	205	48.475	ug/L	1.166	182099	1.450
Pb	208	50.170	ug/L	0.170	406049	3.248
Th	232	50.557	ug/L	1.269	534428	4.274
U	238	52.375	ug/L	3.022	595356	4.768

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 03:41:33

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	107.650				
Be	9	106.791				
B	11	100.267				
Na	23	93.963				
Mg	24	110.111				
Al	27	99.438				
P	31	100.374				
K	39	94.178				
Ca	43	99.808				
> Sc	45		100.2			
Ti	47	102.458				
V	51	103.531				
Cr	52	102.079				
Cr	53					
Mn	55	105.167				
Fe	57	103.905				
Co	59	102.238				
Ni	60	103.933				
Cu	63					
Cu	65	102.411				
Zn	66	101.429				
Zn	67					
Zn	68					
> Ge	74		101.0			
As	75	95.590				
Se	77					
Se	82	98.866				
Kr	83					
Sr	88	99.746				
Y	89					
Zr	90	98.153				
Mo	98	98.581				
Ag	107	99.292				
Cd	111	98.945				
Cd	114					
> In	115		99.8			
Sn	120	100.580				
Sb	121	97.175				
Sb	123					
Ba	135					
Ba	137	96.916				
Ho	165					
> Lu	175		100.9			
Tl	205	96.951				
Pb	208	100.341				
Th	232	101.114				
U	238	104.749				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
 QC Std 6 Mg 24CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

# ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 03:44:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.234

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	-0.010	ug/L	52.282	24	-0.000
Be 9	0.008	ug/L	446.065	4	0.000
B 11	1.659	ug/L	21.337	334	0.001
Na 23	1.342	ug/L	222.322	13340	0.011
Mg 24	-0.653	ug/L	249.037	2334	-0.003
Al 27	1.200	ug/L	233.138	6002	0.009
P 31	-1.448	ug/L	107.488	2521	-0.001
K 39	-5.879	ug/L	60.633	275639	-0.096
Ca 43	-2.303	ug/L	178.783	119	-0.000
> Sc 45		ug/L		188488	188488.096
Ti 47	0.044	ug/L	75.664	124	0.000
V 51	-0.535	ug/L	80.128	-2519	-0.010
Cr 52	0.095	ug/L	15.214	-314	0.001
Cr 53		ug/L		56520	-0.034
Mn 55	0.002	ug/L	786.494	707	0.000
Fe 57	9.026	ug/L	23.435	7847	0.005
Co 59	0.004	ug/L	78.614	101	0.000
Ni 60	0.011	ug/L	66.289	45	0.000
Cu 63		ug/L		130	0.000
Cu 65	0.017	ug/L	62.679	80	0.000
Zn 66	-0.003	ug/L	588.256	113	-0.000
Zn 67		ug/L		2666	-0.002
Zn 68		ug/L		303	-0.000
> Ge 74		ug/L		200212	200212.228
As 75	0.091	ug/L	549.451	-361	0.000
Se 77		ug/L		4745	-0.004
Se 82	-0.147	ug/L	81.271	28	-0.000
Kr 83		ug/L		32	0.000
Sr 88	0.006	ug/L	36.793	227	0.000
Y 89		ug/L		17	-0.000
Zr 90	0.164	ug/L	12.282	1261	0.005
Mo 98	0.035	ug/L	41.920	145	0.000
Ag 107	0.008	ug/L	31.061	99	0.000
Cd 111	0.000	ug/L	2196.318	20	0.000
Cd 114		ug/L		59	0.000
> In 115		ug/L		127921	127920.816
Sn 120	0.188	ug/L	26.311	810	0.004
Sb 121	0.662	ug/L	29.638	1864	0.011
Sb 123		ug/L		1413	0.008
Ba 135		ug/L		14	-0.000
Ba 137	0.011	ug/L	13.029	44	0.000
Ho 165		ug/L		3	0.000
> Lu 175		ug/L		124416	124415.722
Tl 205	0.090	ug/L	55.815	1346	0.003
Pb 208	0.011	ug/L	47.204	584	0.001
Th 232	0.091	ug/L	27.016	1812	0.008
U 238	0.012	ug/L	15.286	413	0.001

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 03:47:44

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		99.2			
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		102.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		102.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.6			
Tl	205					
Pb	208					
Th	232					
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: Sunday, February 14, 2010 03:47:44

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## ICPMS#4 - Summary Report

Sample ID: 245797007

Sample Date/Time: Sunday, February 14, 2010 03:51:10

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797007.235

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	33.534	ug/L	1.665	15132	0.063
Be	9	2.455	ug/L	1.399	277	0.001
B	11	10.283	ug/L	2.913	1529	0.005
Na	23	358.235	ug/L	9.211	712788	2.892
Mg	24	6226.967	ug/L	1.149	7710628	31.925
Al	27	42467.758	ug/L	3.291	76257549	315.809
P	31	178.859	ug/L	1.489	22673	0.080
K	39	6014.968	ug/L	7.642	24202805	98.663
Ca	43	4771.433	ug/L	0.854	38057	0.157
Sc	45		ug/L		241422	241421.860
Ti	47	640.127	ug/L	0.841	229448	0.950
V	51	59.103	ug/L	1.152	267759	1.112
Cr	52	30.521	ug/L	1.453	100559	0.420
Cr	53		ug/L		50397	-0.125
Mn	55	469.703	ug/L	1.226	2791653	11.558
Fe	57	33342.481	ug/L	0.239	4037273	16.686
Co	59	17.664	ug/L	0.425	79459	0.329
Ni	60	21.332	ug/L	3.680	20130	0.083
Cu	63		ug/L		67004	0.277
Cu	65	33.159	ug/L	1.276	32863	0.136
Zn	66	85.829	ug/L	0.877	39014	0.199
Zn	67		ug/L		8939	0.031
Zn	68		ug/L		29913	0.151
Ge	74		ug/L		195793	195793.288
As	75	8.689	ug/L	6.856	4285	0.024
Se	77		ug/L		3088	-0.012
Se	82	1.073	ug/L	36.984	101	0.000
Kr	83		ug/L		64	0.000
Sr	88	56.555	ug/L	0.939	465121	3.750
Y	89		ug/L		220183	1.776
Zr	90	40.449	ug/L	2.184	162404	1.305
Mo	98	1.264	ug/L	0.379	2189	0.017
Ag	107	0.250	ug/L	6.038	775	0.006
Cd	111	0.428	ug/L	7.231	309	0.002
Cd	114		ug/L		291	0.002
In	115		ug/L		123973	123972.520
Sn	120	0.483	ug/L	5.684	1633	0.011
Sb	121	0.489	ug/L	5.007	1464	0.008
Sb	123		ug/L		1152	0.006
Ba	135		ug/L		159467	1.245
Ba	137	220.233	ug/L	2.568	272403	2.126
Ho	165		ug/L		9216	0.072
Lu	175		ug/L		128139	128138.544
Tl	205	0.522	ug/L	1.616	3040	0.016
Pb	208	49.137	ug/L	1.744	408102	3.182
Th	232	26.956	ug/L	1.159	292909	2.279
U	238	9.384	ug/L	2.361	109713	0.854

Sample ID: 245797007

Report Date/Time: Sunday, February 14, 2010 03:53:55

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		127.1			
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		99.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.6			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc		45	
	Ti		47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797007

Report Date/Time: Sunday, February 14, 2010 03:53:55

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# ICPMS#4 - Summary Report

Sample ID: 245797008

Sample Date/Time: Sunday, February 14, 2010 03:57:21

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797008.236

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	14.797	ug/L	2.206	5771	0.028
Be	9	8.447	ug/L	7.270	812	0.004
B	11	5.927	ug/L	2.803	839	0.003
Na	23	392.015	ug/L	4.470	670727	3.164
Mg	24	2569.684	ug/L	2.643	2745235	13.175
Al	27	16557.352	ug/L	10.443	25617770	123.128
P	31	317.306	ug/L	1.409	32409	0.142
K	39	2937.182	ug/L	8.077	10344908	48.178
Ca	43	3487.573	ug/L	1.413	24017	0.115
Sc	45		ug/L		208113	208113.148
Ti	47	380.088	ug/L	1.654	117496	0.564
V	51	20.542	ug/L	2.661	79790	0.387
Cr	52	12.761	ug/L	1.026	35888	0.175
Cr	53		ug/L		40605	-0.138
Mn	55	582.056	ug/L	2.572	2980954	14.323
Fe	57	14535.834	ug/L	2.416	1521293	7.274
Co	59	5.243	ug/L	2.527	20393	0.098
Ni	60	11.179	ug/L	2.686	9112	0.044
Cu	63		ug/L		80523	0.386
Cu	65	45.761	ug/L	1.771	39065	0.187
Zn	66	103.906	ug/L	2.179	45978	0.241
Zn	67		ug/L		9207	0.033
Zn	68		ug/L		35085	0.182
Ge	74		ug/L		190743	190743.493
As	75	5.555	ug/L	2.606	2527	0.015
Se	77		ug/L		2832	-0.013
Se	82	0.982	ug/L	4.855	93	0.000
Kr	83		ug/L		48	0.000
Sr	88	29.519	ug/L	1.022	241800	1.958
Y	89		ug/L		211210	1.711
Zr	90	32.013	ug/L	1.975	128088	1.033
Mo	98	1.012	ug/L	2.874	1761	0.014
Ag	107	0.321	ug/L	7.305	968	0.007
Cd	111	1.274	ug/L	4.177	878	0.007
Cd	114		ug/L		1793	0.014
In	115		ug/L		123441	123441.495
Sn	120	1.283	ug/L	1.128	3914	0.030
Sb	121	0.763	ug/L	2.439	1996	0.012
Sb	123		ug/L		1516	0.009
Ba	135		ug/L		97029	0.740
Ba	137	131.660	ug/L	1.465	166760	1.271
Ho	165		ug/L		8296	0.063
Lu	175		ug/L		131173	131172.780
Tl	205	0.096	ug/L	12.306	1444	0.003
Pb	208	49.011	ug/L	0.403	416781	3.173
Th	232	11.848	ug/L	1.534	132287	1.002
U	238	96.574	ug/L	1.954	1153421	8.791

Sample ID: 245797008

Report Date/Time: Sunday, February 14, 2010 04:00:07

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45	109.5			
	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	97.3			
	As	75				
	Se	77				
	Se	82				
	Kr	83				
[	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115	98.9			
	Sn	120				
	Sb	121				
	Sb	123				
[	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175	106.1			
	Tl	205				
	Pb	208				
	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#4 - Summary Report

Sample ID: 245797009

Sample Date/Time: Sunday, February 14, 2010 04:03:31

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797009.237

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	15.438	ug/L	1.593	6268	0.029
Be	9	1.319	ug/L	3.416	135	0.001
B	11	2.484	ug/L	6.781	479	0.001
Na	23	1831.669	ug/L	7.715	3216462	14.785
Mg	24	1400.535	ug/L	3.663	1559460	7.181
Al	27	14172.582	ug/L	14.502	22837547	105.394
P	31	165.018	ug/L	3.385	19010	0.074
K	39	3759.197	ug/L	11.792	13697009	61.662
Ca	43	2346.004	ug/L	0.908	16873	0.077
Sc	45		ug/L		216681	216681.435
Ti	47	430.746	ug/L	1.696	138610	0.639
V	51	17.534	ug/L	2.019	70798	0.330
Cr	52	10.364	ug/L	2.093	30224	0.142
Cr	53		ug/L		37896	-0.159
Mn	55	917.085	ug/L	2.651	4890428	22.567
Fe	57	17357.088	ug/L	3.583	1889946	8.686
Co	59	36.488	ug/L	1.345	147209	0.679
Ni	60	15.679	ug/L	0.521	13292	0.061
Cu	63		ug/L		37532	0.173
Cu	65	20.630	ug/L	1.970	18380	0.084
Zn	66	94.653	ug/L	0.811	41365	0.219
Zn	67		ug/L		8415	0.030
Zn	68		ug/L		31181	0.164
Ge	74		ug/L		188289	188289.301
As	75	7.744	ug/L	7.768	3628	0.021
Se	77		ug/L		2768	-0.013
Se	82	0.865	ug/L	26.590	85	0.000
Kr	83		ug/L		81	0.000
Sr	88	21.038	ug/L	0.774	173436	1.395
Y	89		ug/L		714463	5.753
Zr	90	93.188	ug/L	2.750	374160	3.008
Mo	98	2.809	ug/L	1.560	4771	0.038
Ag	107	0.466	ug/L	2.183	1384	0.011
Cd	111	1.028	ug/L	20.946	717	0.006
Cd	114		ug/L		456	0.003
In	115		ug/L		124205	124204.855
Sn	120	3.232	ug/L	1.220	9551	0.075
Sb	121	0.366	ug/L	6.455	1223	0.006
Sb	123		ug/L		937	0.004
Ba	135		ug/L		111249	0.825
Ba	137	146.301	ug/L	1.400	190569	1.412
Ho	165		ug/L		28934	0.214
Lu	175		ug/L		134909	134909.075
Tl	205	0.049	ug/L	14.186	1294	0.001
Pb	208	29.855	ug/L	2.135	261286	1.933
Th	232	26.728	ug/L	2.936	305745	2.260
U	238	8.110	ug/L	1.951	99882	0.738

Sample ID: 245797009

Report Date/Time: Sunday, February 14, 2010 04:06:15

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		114.0			
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		96.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		109.1			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797009

Report Date/Time: Sunday, February 14, 2010 04:06:15

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# ICPMS#4 - Summary Report

Sample ID: 245797010

Sample Date/Time: Sunday, February 14, 2010 04:09:40

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797010.238

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	41.586	ug/L	1.655	21271	0.078
Be	9	3.527	ug/L	10.082	449	0.002
B	11	11.602	ug/L	4.521	1926	0.006
Na	23	385.278	ug/L	2.756	867943	3.110
Mg	24	8533.761	ug/L	3.148	11986859	43.752
Al	27	59241.667	ug/L	9.333	120542532	440.548
P	31	217.391	ug/L	3.024	30427	0.097
K	39	6332.770	ug/L	3.335	28873521	103.876
Ca	43	8268.680	ug/L	0.744	74665	0.272
> Sc	45		ug/L		273811	273811.222
Ti	47	576.892	ug/L	1.370	234560	0.856
V	51	63.084	ug/L	2.496	324231	1.187
Cr	52	35.268	ug/L	2.625	131946	0.485
Cr	53		ug/L		51671	-0.145
Mn	55	543.788	ug/L	0.601	3665125	13.381
Fe	57	44287.168	ug/L	2.359	6080065	22.163
Co	59	19.121	ug/L	1.988	97567	0.356
Ni	60	28.655	ug/L	1.299	30654	0.112
Cu	63		ug/L		104800	0.382
Cu	65	45.469	ug/L	0.773	51082	0.186
Zn	66	129.966	ug/L	1.026	60632	0.301
Zn	67		ug/L		12495	0.047
Zn	68		ug/L		46884	0.231
> Ge	74		ug/L		201127	201126.717
As	75	11.262	ug/L	3.539	5825	0.031
Se	77		ug/L		3134	-0.012
Se	82	1.725	ug/L	4.686	144	0.001
Kr	83		ug/L		93	0.000
Sr	88	98.127	ug/L	1.529	828608	6.507
Y	89		ug/L		446071	3.504
Zr	90	82.312	ug/L	0.781	338770	2.657
Mo	98	2.041	ug/L	3.183	3577	0.027
Ag	107	0.501	ug/L	1.539	1518	0.011
Cd	111	0.936	ug/L	14.961	670	0.005
Cd	114		ug/L		651	0.005
> In	115		ug/L		127311	127311.078
Sn	120	0.497	ug/L	1.719	1719	0.012
Sb	121	0.343	ug/L	4.366	1209	0.005
Sb	123		ug/L		951	0.004
Ba	135		ug/L		260571	1.955
Ba	137	345.337	ug/L	1.187	444467	3.334
Ho	165		ug/L		16635	0.125
> Lu	175		ug/L		133305	133305.414
Tl	205	0.454	ug/L	3.444	2895	0.014
Pb	208	44.399	ug/L	0.727	383754	2.875
Th	232	28.677	ug/L	0.371	324106	2.424
U	238	21.953	ug/L	0.703	266691	1.998

Sample ID: 245797010

Report Date/Time: Sunday, February 14, 2010 04:12:25

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		144.1			
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		102.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		102.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		107.8			
Tl	205					
Pb	208					
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)
Lu 175 Int Std for sa	Sc	45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

Sample ID: 245797010

Report Date/Time: Sunday, February 14, 2010 04:12:25

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QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 245797011

Sample Date/Time: Sunday, February 14, 2010 04:15:50

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797011.239

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	25.498	ug/L	0.474	13244	0.048
Be	9	8.377	ug/L	1.193	1075	0.004
B	11	14.170	ug/L	3.513	2330	0.007
Na	23	334.153	ug/L	14.716	767811	2.697
Mg	24	6047.707	ug/L	3.770	8609535	31.006
Al	27	39482.427	ug/L	6.173	81619408	293.609
P	31	643.065	ug/L	3.819	83637	0.287
K	39	6784.475	ug/L	12.059	31315032	111.285
Ca	43	10548.001	ug/L	4.290	96525	0.347
> Sc	45		ug/L		277728	277728.207
Ti	47	705.806	ug/L	0.879	290979	1.047
V	51	51.539	ug/L	3.713	268506	0.970
Cr	52	27.557	ug/L	2.310	104349	0.379
Cr	53		ug/L		50411	-0.152
Mn	55	1058.968	ug/L	2.431	7235004	26.059
Fe	57	28060.346	ug/L	1.291	3909331	14.042
Co	59	16.542	ug/L	1.388	85597	0.308
Ni	60	24.082	ug/L	2.691	26125	0.094
Cu	63		ug/L		927532	3.340
Cu	65	403.713	ug/L	0.313	459241	1.653
Zn	66	197.343	ug/L	1.586	99705	0.457
Zn	67		ug/L		18191	0.069
Zn	68		ug/L		74277	0.339
> Ge	74		ug/L		218003	218003.481
As	75	9.908	ug/L	4.645	5501	0.027
Se	77		ug/L		3614	-0.011
Se	82	0.963	ug/L	11.844	105	0.000
Kr	83		ug/L		91	0.000
Sr	88	104.215	ug/L	0.721	939407	6.911
Y	89		ug/L		396497	2.917
Zr	90	52.521	ug/L	0.291	230978	1.695
Mo	98	2.636	ug/L	1.873	4907	0.035
Ag	107	1.072	ug/L	2.882	3376	0.024
Cd	111	3.462	ug/L	3.254	2589	0.019
Cd	114		ug/L		5459	0.040
> In	115		ug/L		135897	135896.799
Sn	120	2.407	ug/L	3.239	7849	0.056
Sb	121	3.807	ug/L	0.968	8780	0.061
Sb	123		ug/L		6810	0.047
Ba	135		ug/L		291237	2.125
Ba	137	374.696	ug/L	0.522	495742	3.617
Ho	165		ug/L		15283	0.112
> Lu	175		ug/L		137033	137033.487
Tl	205	0.436	ug/L	7.729	2900	0.013
Pb	208	381.692	ug/L	1.055	3387058	24.714
Th	232	20.786	ug/L	0.381	241748	1.757
U	238	230.875	ug/L	0.726	2880345	21.017

Sample ID: 245797011

Report Date/Time: Sunday, February 14, 2010 04:18:34

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		146.2			
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		111.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		108.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		110.8			
Ti	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for sa	Sc	45	
	Ti	47	Sample is out of limits (over linear range)_
	Mn	55	Sample is out of limits (over linear range)

## QC Action

Sample ID: 245797011

Report Date/Time: Sunday, February 14, 2010 04:18:34

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QC Action Line: Continue

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Sample ID: 245797011

Report Date/Time: Sunday, February 14, 2010 04:18:34

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 04:21:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.240

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	48.764	ug/L	1.820	21038	0.091
Be	9	48.871	ug/L	1.437	5200	0.022
B	11	92.458	ug/L	1.623	11509	0.049
Na	23	4661.292	ug/L	10.139	8703057	37.627
Mg	24	4916.979	ug/L	3.996	5825776	25.209
Al	27	5217.080	ug/L	4.203	8969012	38.797
P	31	4906.713	ug/L	2.655	509664	2.192
K	39	4975.350	ug/L	0.932	19213630	81.610
Ca	43	5026.838	ug/L	0.510	38363	0.165
Sc	45		ug/L		231034	231033.700
Ti	47	53.534	ug/L	1.624	18487	0.079
V	51	50.363	ug/L	1.365	218258	0.948
Cr	52	50.703	ug/L	1.617	160343	0.697
Cr	53		ug/L		85885	0.038
Mn	55	54.568	ug/L	4.361	310970	1.343
Fe	57	5124.444	ug/L	3.070	600899	2.564
Co	59	50.185	ug/L	1.551	215815	0.934
Ni	60	51.072	ug/L	2.221	46062	0.199
Cu	63		ug/L		101791	0.440
Cu	65	51.839	ug/L	1.818	49117	0.212
Zn	66	51.413	ug/L	0.767	27543	0.119
Zn	67		ug/L		7115	0.016
Zn	68		ug/L		20091	0.086
Ge	74		ug/L		230309	230309.342
As	75	48.200	ug/L	2.642	30097	0.133
Se	77		ug/L		9086	0.012
Se	82	47.189	ug/L	2.765	3400	0.015
Kr	83		ug/L		32	-0.000
Sr	88	52.112	ug/L	1.033	478585	3.456
Y	89		ug/L		1538	0.011
Zr	90	50.482	ug/L	1.307	226187	1.629
Mo	98	51.342	ug/L	1.057	95653	0.690
Ag	107	51.077	ug/L	1.748	159879	1.154
Cd	111	50.270	ug/L	1.245	37997	0.274
Cd	114		ug/L		90468	0.653
In	115		ug/L		138442	138442.180
Sn	120	50.482	ug/L	1.262	162255	1.170
Sb	121	48.423	ug/L	6.935	107263	0.771
Sb	123		ug/L		81482	0.585
Ba	135		ug/L		38219	0.298
Ba	137	52.858	ug/L	1.148	65379	0.510
Ho	165		ug/L		60	0.000
Lu	175		ug/L		128059	128058.707
Tl	205	47.685	ug/L	0.911	183747	1.427
Pb	208	50.684	ug/L	1.553	420753	3.282
Th	232	49.558	ug/L	0.536	537410	4.190
U	238	51.748	ug/L	1.818	603560	4.711

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 04:24:44

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	97.528				
Be	9	97.742				
B	11	92.458				
Na	23	93.226				
Mg	24	98.340				
Al	27	103.309				
P	31	98.134				
K	39	99.507				
Ca	43	100.537				
> Sc	45		121.6			
Ti	47	107.068				
V	51	100.727				
Cr	52	101.407				
Cr	53					
Mn	55	109.136				
Fe	57	102.489				
Co	59	100.370				
Ni	60	102.144				
Cu	63					
Cu	65	103.678				
Zn	66	102.827				
Zn	67					
Zn	68					
> Ge	74		117.5			
As	75	96.401				
Se	77					
Se	82	94.379				
Kr	83					
Sr	88	104.224				
Y	89					
Zr	90	100.964				
Mo	98	102.685				
Ag	107	102.154				
Cd	111	100.540				
Cd	114					
> In	115		110.9			
Sn	120	100.964				
Sb	121	96.845				
Sb	123					
Ba	135					
Ba	137	105.717				
Ho	165					
> Lu	175		103.5			
Tl	205	95.370				
Pb	208	101.368				
Th	232	99.115				
U	238	103.497				

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 Lu 175 Int Std for QcSc 45

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 04:28:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.241

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.093	ug/L	42.115	71	0.000
Be	9	0.128	ug/L	88.827	17	0.000
B	11	2.091	ug/L	32.081	447	0.001
Na	23	12.589	ug/L	29.013	36046	0.102
Mg	24	15.616	ug/L	79.280	21354	0.080
Al	27	23.478	ug/L	35.569	44072	0.175
P	31	9.029	ug/L	95.974	4035	0.004
K	39	6.679	ug/L	186.845	372842	0.110
Ca	43	8.642	ug/L	52.541	222	0.000
> Sc	45		ug/L		223764	223763.526
Ti	47	0.379	ug/L	22.471	258	0.001
V	51	0.005	ug/L	6178.638	-706	0.000
Cr	52	0.695	ug/L	13.878	1472	0.010
Cr	53		ug/L		63112	-0.051
Mn	55	0.399	ug/L	25.001	3022	0.010
Fe	57	28.612	ug/L	41.737	11499	0.014
Co	59	0.107	ug/L	59.340	548	0.002
Ni	60	0.118	ug/L	56.562	147	0.000
Cu	63		ug/L		567	0.002
Cu	65	0.211	ug/L	47.811	272	0.001
Zn	66	0.172	ug/L	59.236	224	0.000
Zn	67		ug/L		2660	-0.003
Zn	68		ug/L		395	0.000
> Ge	74		ug/L		230289	230288.983
As	75	-0.118	ug/L	234.883	-546	-0.000
Se	77		ug/L		5692	-0.003
Se	82	0.004	ug/L	7981.241	43	0.000
Kr	83		ug/L		35	-0.000
Sr	88	0.131	ug/L	48.438	1425	0.009
Y	89		ug/L		113	0.001
Zr	90	0.345	ug/L	36.058	2227	0.011
Mo	98	0.229	ug/L	61.052	532	0.003
Ag	107	0.102	ug/L	55.848	414	0.002
Cd	111	0.099	ug/L	36.397	99	0.001
Cd	114		ug/L		235	0.001
> In	115		ug/L		141364	141364.432
Sn	120	0.545	ug/L	35.578	2071	0.013
Sb	121	3.621	ug/L	56.129	8767	0.058
Sb	123		ug/L		6713	0.044
Ba	135		ug/L		165	0.001
Ba	137	0.194	ug/L	33.117	274	0.002
Ho	165		ug/L		5	0.000
> Lu	175		ug/L		128673	128672.541
Tl	205	0.404	ug/L	62.746	2606	0.012
Pb	208	0.186	ug/L	38.820	2069	0.012
Th	232	0.235	ug/L	51.021	3451	0.020
U	238	0.171	ug/L	39.508	2296	0.016

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 04:30:55

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		117.8			
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		117.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		113.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.0			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Mg	24CCB is out of limits ( +/- PQL)
QC Std 7	Sb	121CCB is out of limits ( +/- PQL)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 04:30:55

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## ICPMS#4 - Summary Report

Sample ID: 245797012

Sample Date/Time: Sunday, February 14, 2010 04:34:20

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797012.242

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	24.588	ug/L	1.247	13247	0.046
Be	9	1.813	ug/L	6.426	245	0.001
B	11	5.297	ug/L	2.501	1065	0.003
Na	23	865.270	ug/L	7.425	2030880	6.985
Mg	24	4182.570	ug/L	8.560	6189619	21.444
Al	27	26660.551	ug/L	5.098	57093868	198.260
P	31	117.848	ug/L	3.692	19192	0.053
K	39	3418.860	ug/L	12.565	16573083	56.079
Ca	43	4386.189	ug/L	1.062	41760	0.144
Sc	45		ug/L		288060	288059.830
Ti	47	525.586	ug/L	0.940	224825	0.780
V	51	35.195	ug/L	0.303	189870	0.662
Cr	52	26.637	ug/L	2.676	104578	0.366
Cr	53		ug/L		54410	-0.145
Mn	55	782.274	ug/L	3.552	5543115	19.250
Fe	57	35599.898	ug/L	3.549	5139737	17.815
Co	59	37.597	ug/L	3.596	201536	0.700
Ni	60	30.174	ug/L	3.154	33937	0.118
Cu	63		ug/L		60802	0.211
Cu	65	25.242	ug/L	3.065	29863	0.103
Zn	66	137.498	ug/L	2.307	72251	0.318
Zn	67		ug/L		13956	0.047
Zn	68		ug/L		53782	0.236
Ge	74		ug/L		226631	226631.066
As	75	6.554	ug/L	7.505	3628	0.018
Se	77		ug/L		3876	-0.011
Se	82	1.235	ug/L	34.864	128	0.000
Kr	83		ug/L		98	0.000
Sr	88	45.637	ug/L	1.122	427714	3.026
Y	89		ug/L		731942	5.182
Zr	90	95.415	ug/L	0.781	435672	3.079
Mo	98	3.553	ug/L	0.697	6842	0.048
Ag	107	0.450	ug/L	2.531	1523	0.010
Cd	111	0.771	ug/L	15.972	617	0.004
Cd	114		ug/L		147	0.001
In	115		ug/L		141271	141271.440
Sn	120	5.066	ug/L	2.281	16865	0.117
Sb	121	0.685	ug/L	27.237	2109	0.011
Sb	123		ug/L		1611	0.008
Ba	135		ug/L		205426	1.426
Ba	137	251.417	ug/L	2.234	349590	2.427
Ho	165		ug/L		29069	0.202
Lu	175		ug/L		144032	144031.931
Tl	205	0.362	ug/L	23.116	2729	0.011
Pb	208	16.499	ug/L	0.236	154441	1.068
Th	232	24.852	ug/L	1.200	303587	2.101
U	238	2.529	ug/L	1.693	33472	0.230

Sample ID: 245797012

Report Date/Time: Sunday, February 14, 2010 04:37:05

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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	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		151.6			
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		115.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		113.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		116.5			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc		45	
	Ti		47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797012

Report Date/Time: Sunday, February 14, 2010 04:37:05

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## ICPMS#4 - Summary Report

Sample ID: 245797013

Sample Date/Time: Sunday, February 14, 2010 04:40:31

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797013.243

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	27.062	ug/L	0.872	13815	0.050
Be	9	3.866	ug/L	6.419	490	0.002
B	11	8.358	ug/L	1.896	1451	0.004
Na	23	452.619	ug/L	14.424	1012707	3.654
Mg	24	5058.983	ug/L	1.406	7084246	25.937
Al	27	34024.743	ug/L	7.192	69108404	253.023
P	31	286.081	ug/L	1.196	38704	0.128
K	39	4956.388	ug/L	10.756	22610515	81.299
Ca	43	6287.006	ug/L	2.053	56632	0.207
> Sc	45		ug/L		272977	272977.302
Ti	47	660.397	ug/L	1.266	267629	0.980
V	51	46.315	ug/L	0.646	237062	0.872
Cr	52	26.706	ug/L	0.432	99399	0.367
Cr	53		ug/L		49283	-0.153
Mn	55	977.416	ug/L	1.386	6566071	24.052
Fe	57	31207.134	ug/L	0.803	4273019	15.617
Co	59	13.618	ug/L	0.582	69294	0.253
Ni	60	23.548	ug/L	2.088	25119	0.092
Cu	63		ug/L		225392	0.825
Cu	65	97.505	ug/L	0.694	109091	0.399
Zn	66	151.113	ug/L	1.320	77257	0.350
Zn	67		ug/L		14428	0.051
Zn	68		ug/L		58109	0.262
> Ge	74		ug/L		220491	220491.445
As	75	9.002	ug/L	11.031	5011	0.025
Se	77		ug/L		3321	-0.013
Se	82	0.896	ug/L	18.786	104	0.000
Kr	83		ug/L		86	0.000
Sr	88	70.372	ug/L	1.209	646783	4.667
Y	89		ug/L		516989	3.731
Zr	90	79.440	ug/L	1.755	355865	2.564
Mo	98	2.134	ug/L	2.933	4066	0.029
Ag	107	0.709	ug/L	2.496	2305	0.016
Cd	111	1.627	ug/L	10.637	1252	0.009
Cd	114		ug/L		1792	0.013
> In	115		ug/L		138563	138562.580
Sn	120	1.299	ug/L	2.555	4446	0.030
Sb	121	1.187	ug/L	1.911	3177	0.019
Sb	123		ug/L		2425	0.014
Ba	135		ug/L		233756	1.686
Ba	137	297.196	ug/L	1.012	397726	2.869
Ho	165		ug/L		19434	0.140
> Lu	175		ug/L		138611	138610.955
Tl	205	0.321	ug/L	18.273	2455	0.010
Pb	208	97.233	ug/L	1.055	873166	6.296
Th	232	25.239	ug/L	1.615	296711	2.134
U	238	58.925	ug/L	1.673	743776	5.364

Sample ID: 245797013

Report Date/Time: Sunday, February 14, 2010 04:43:16

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		143.7			
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		112.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		111.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		112.1			
Ti	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc		45	
	Ti	47	Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 245797013

Report Date/Time: Sunday, February 14, 2010 04:43:16

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# ICPMS#4 - Summary Report

Sample ID: 245797014

Sample Date/Time: Sunday, February 14, 2010 04:46:42

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797014.244

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	22.055	ug/L	2.766	10807	0.041
Be 9	3.324	ug/L	4.533	405	0.002
B 11	10.764	ug/L	1.987	1726	0.006
Na 23	298.613	ug/L	9.646	647086	2.410
Mg 24	5140.385	ug/L	2.539	6905892	26.355
Al 27	31298.291	ug/L	8.513	60966322	232.748
P 31	437.027	ug/L	1.105	54794	0.195
K 39	5468.565	ug/L	10.391	23884347	89.700
Ca 43	7421.928	ug/L	1.878	64111	0.244
> Sc 45		ug/L		261911	261910.588
Ti 47	572.674	ug/L	1.336	222698	0.850
V 51	40.841	ug/L	2.524	200434	0.769
Cr 52	20.941	ug/L	1.773	74803	0.288
Cr 53		ug/L		45069	-0.161
Mn 55	840.541	ug/L	2.457	5418019	20.684
Fe 57	22842.155	ug/L	1.374	3003361	11.431
Co 59	12.267	ug/L	1.541	59896	0.228
Ni 60	16.957	ug/L	1.142	17372	0.066
Cu 63		ug/L		171481	0.654
Cu 65	78.070	ug/L	0.616	83825	0.320
Zn 66	131.039	ug/L	2.368	65771	0.303
Zn 67		ug/L		12856	0.045
Zn 68		ug/L		51003	0.234
> Ge 74		ug/L		216434	216433.718
As 75	7.707	ug/L	0.363	4150	0.021
Se 77		ug/L		3237	-0.013
Se 82	0.743	ug/L	20.658	89	0.000
Kr 83		ug/L		68	0.000
Sr 88	75.478	ug/L	1.112	673155	5.005
Y 89		ug/L		305556	2.272
Zr 90	42.050	ug/L	0.852	183087	1.357
Mo 98	1.400	ug/L	2.188	2620	0.019
Ag 107	0.347	ug/L	5.385	1136	0.008
Cd 111	2.176	ug/L	5.318	1617	0.012
Cd 114		ug/L		3292	0.024
> In 115		ug/L		134466	134465.538
Sn 120	0.905	ug/L	5.495	3083	0.021
Sb 121	0.906	ug/L	1.821	2481	0.014
Sb 123		ug/L		1914	0.011
Ba 135		ug/L		249668	1.822
Ba 137	321.202	ug/L	0.770	424965	3.101
Ho 165		ug/L		12044	0.088
> Lu 175		ug/L		137033	137033.163
Tl 205	0.283	ug/L	5.923	2272	0.008
Pb 208	88.155	ug/L	0.517	782712	5.708
Th 232	18.353	ug/L	1.255	213554	1.552
U 238	108.247	ug/L	1.171	1350550	9.854

Sample ID: 245797014

Report Date/Time: Sunday, February 14, 2010 04:49:28

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		137.9			
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		110.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		107.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		110.8			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc	Ti	45	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 245797014

Report Date/Time: Sunday, February 14, 2010 04:49:28

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## ICPMS#4 - Summary Report

Sample ID: 245797015

Sample Date/Time: Sunday, February 14, 2010 04:52:54

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\245797015.245

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	27.224 ug/L	1.170	13307	0.051
	Be	9	4.949 ug/L	3.159	600	0.002
	B	11	12.248 ug/L	0.298	1928	0.006
	Na	23	237.200 ug/L	8.833	516924	1.915
	Mg	24	5429.746 ug/L	6.523	7274016	27.838
	Al	27	31872.080 ug/L	8.730	61959259	237.015
	P	31	530.813 ug/L	1.695	65656	0.237
	K	39	6366.840 ug/L	2.779	27705842	104.435
	Ca	43	9054.550 ug/L	2.879	78017	0.298
>	Sc	45	ug/L		261436	261436.113
	Ti	47	557.403 ug/L	2.606	216292	0.827
	V	51	44.427 ug/L	3.495	217634	0.836
	Cr	52	27.154 ug/L	2.974	96761	0.373
	Cr	53	ug/L		48183	-0.149
	Mn	55	746.215 ug/L	1.616	4800485	18.363
	Fe	57	26937.815 ug/L	1.760	3533228	13.481
	Co	59	12.028 ug/L	2.359	58607	0.224
	Ni	60	21.243 ug/L	2.661	21703	0.083
	Cu	63	ug/L		454824	1.740
	Cu	65	206.184 ug/L	2.851	220712	0.844
	Zn	66	166.164 ug/L	3.754	83962	0.385
	Zn	67	ug/L		15462	0.056
	Zn	68	ug/L		62724	0.286
>	Ge	74	ug/L		218053	218052.786
	As	75	8.438 ug/L	3.539	4622	0.023
	Se	77	ug/L		3327	-0.012
	Se	82	0.750 ug/L	36.045	91	0.000
	Kr	83	ug/L		68	0.000
	Sr	88	85.145 ug/L	1.434	774050	5.646
	Y	89	ug/L		345199	2.519
	Zr	90	53.646 ug/L	1.446	237897	1.731
	Mo	98	1.886 ug/L	4.263	3567	0.025
	Ag	107	0.513 ug/L	1.501	1670	0.012
	Cd	111	2.663 ug/L	2.137	2013	0.015
	Cd	114	ug/L		4037	0.029
>	In	115	ug/L		137052	137052.410
	Sn	120	1.167 ug/L	0.361	3977	0.027
	Sb	121	1.286 ug/L	4.675	3358	0.020
	Sb	123	ug/L		2571	0.016
	Ba	135	ug/L		230862	1.699
	Ba	137	297.915 ug/L	3.072	390897	2.876
	Ho	165	ug/L		13364	0.098
>	Lu	175	ug/L		135943	135943.235
	Tl	205	0.265 ug/L	8.459	2184	0.008
	Pb	208	149.362 ug/L	1.901	1314973	9.671
	Th	232	18.047 ug/L	1.755	208322	1.526
	U	238	158.640 ug/L	0.896	1963325	14.441

Sample ID: 245797015

Report Date/Time: Sunday, February 14, 2010 04:55:40

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		137.6			
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		111.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		109.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		109.9			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for saSc	Ti	45	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 04:59:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.246

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	49.317	ug/L	1.100	21406	0.092
Be	9	48.987	ug/L	1.643	5244	0.023
B	11	93.961	ug/L	2.798	11761	0.050
Na	23	4781.285	ug/L	14.656	8986824	38.595
Mg	24	4994.390	ug/L	3.044	5955618	25.606
Al	27	5437.477	ug/L	2.677	9401871	40.436
P	31	4879.849	ug/L	1.936	509845	2.180
K	39	5028.981	ug/L	6.911	19532088	82.490
Ca	43	5022.108	ug/L	1.211	38553	0.165
> Sc	45		ug/L		232422	232421.508
Ti	47	53.431	ug/L	0.224	18564	0.079
V	51	50.113	ug/L	5.117	218453	0.943
Cr	52	50.343	ug/L	2.654	160143	0.692
Cr	53		ug/L		86284	0.038
Mn	55	53.721	ug/L	1.954	308072	1.322
Fe	57	5086.745	ug/L	2.414	600190	2.546
Co	59	49.343	ug/L	2.200	213475	0.918
Ni	60	50.757	ug/L	1.107	46051	0.198
Cu	63		ug/L		101307	0.435
Cu	65	51.649	ug/L	2.250	49236	0.211
Zn	66	52.029	ug/L	1.637	27943	0.120
Zn	67		ug/L		7239	0.016
Zn	68		ug/L		20169	0.086
> Ge	74		ug/L		230932	230931.525
As	75	48.546	ug/L	3.324	30402	0.134
Se	77		ug/L		9131	0.012
Se	82	48.677	ug/L	4.946	3513	0.015
Kr	83		ug/L		30	-0.000
Sr	88	52.842	ug/L	0.752	486360	3.504
Y	89		ug/L		1435	0.010
Zr	90	50.639	ug/L	2.722	227373	1.634
Mo	98	51.140	ug/L	1.537	95488	0.688
Ag	107	51.104	ug/L	1.977	160305	1.155
Cd	111	50.007	ug/L	1.115	37881	0.273
Cd	114		ug/L		91033	0.656
> In	115		ug/L		138746	138746.248
Sn	120	50.552	ug/L	0.361	162828	1.172
Sb	121	48.961	ug/L	5.931	108689	0.779
Sb	123		ug/L		83433	0.598
Ba	135		ug/L		38046	0.296
Ba	137	52.899	ug/L	1.811	65678	0.511
Ho	165		ug/L		61	0.000
> Lu	175		ug/L		128568	128568.093
Tl	205	47.586	ug/L	1.968	184053	1.424
Pb	208	50.608	ug/L	1.549	421728	3.277
Th	232	50.524	ug/L	2.956	549888	4.272
U	238	52.096	ug/L	2.356	609842	4.742

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 05:01:49

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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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	98.635			
	Be	9	97.973			
	B	11	93.961			
	Na	23	95.626			
	Mg	24	99.888			
	Al	27	107.673			
	P	31	97.597			
	K	39	100.580			
	Ca	43	100.442			
>	Sc	45		122.3		
	Ti	47	106.861			
	V	51	100.225			
	Cr	52	100.686			
	Cr	53				
	Mn	55	107.441			
	Fe	57	101.735			
	Co	59	98.685			
	Ni	60	101.513			
	Cu	63				
	Cu	65	103.298			
[	Zn	66	104.058			
	Zn	67				
	Zn	68				
>	Ge	74		117.9		
	As	75	97.093			
	Se	77				
	Se	82	97.354			
	Kr	83				
[	Sr	88	105.683			
	Y	89				
	Zr	90	101.277			
	Mo	98	102.280			
	Ag	107	102.208			
	Cd	111	100.014			
	Cd	114				
>	In	115		111.2		
	Sn	120	101.104			
	Sb	121	97.922			
	Sb	123				
[	Ba	135				
	Ba	137	105.798			
	Ho	165				
>	Lu	175		103.9		
	Tl	205	95.172			
	Pb	208	101.217			
	Th	232	101.049			
	U	238	104.191			

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
 Lu 175 Int Std for Q(Sc) 45

## QC Action

QC Action Line: Continue

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 05:01:49

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 05:05:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.247

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.078	ug/L	68.147	65	0.000
Be	9	0.062	ug/L	63.587	10	0.000
B	11	1.986	ug/L	32.078	441	0.001
Na	23	7.220	ug/L	99.847	26696	0.058
Mg	24	12.134	ug/L	25.704	17678	0.062
Al	27	28.633	ug/L	18.374	53435	0.213
P	31	8.006	ug/L	101.069	3990	0.004
K	39	5.306	ug/L	103.102	373151	0.087
Ca	43	12.587	ug/L	40.492	255	0.000
> Sc	45		ug/L		226867	226867.259
Ti	47	0.686	ug/L	3.814	365	0.001
V	51	0.516	ug/L	43.747	1452	0.010
Cr	52	0.687	ug/L	31.072	1465	0.009
Cr	53		ug/L		63199	-0.055
Mn	55	0.651	ug/L	9.896	4474	0.016
Fe	57	35.543	ug/L	6.723	12455	0.018
Co	59	0.090	ug/L	52.931	484	0.002
Ni	60	0.110	ug/L	58.062	142	0.000
Cu	63		ug/L		589	0.002
Cu	65	0.242	ug/L	19.176	305	0.001
Zn	66	0.181	ug/L	18.265	230	0.000
Zn	67		ug/L		2705	-0.003
Zn	68		ug/L		382	-0.000
> Ge	74		ug/L		232336	232335.812
As	75	-0.084	ug/L	270.837	-529	-0.000
Se	77		ug/L		5727	-0.003
Se	82	0.050	ug/L	22.618	46	0.000
Kr	83		ug/L		37	0.000
Sr	88	0.127	ug/L	31.181	1386	0.008
Y	89		ug/L		251	0.002
Zr	90	0.348	ug/L	35.194	2243	0.011
Mo	98	0.204	ug/L	68.028	484	0.003
Ag	107	0.076	ug/L	54.734	330	0.002
Cd	111	0.062	ug/L	45.963	70	0.000
Cd	114		ug/L		181	0.001
> In	115		ug/L		141859	141858.564
Sn	120	0.543	ug/L	37.523	2068	0.013
Sb	121	3.710	ug/L	58.797	8970	0.059
Sb	123		ug/L		6880	0.045
Ba	135		ug/L		228	0.002
Ba	137	0.304	ug/L	13.230	410	0.003
Ho	165		ug/L		13	0.000
> Lu	175		ug/L		128869	128869.280
Tl	205	0.374	ug/L	64.085	2488	0.011
Pb	208	0.167	ug/L	23.958	1902	0.011
Th	232	0.217	ug/L	57.440	3245	0.018
U	238	0.195	ug/L	21.942	2564	0.018

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 05:08:00

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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	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	
Zr	90Linear Thru Zero	1.0000
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
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			119.4		
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			118.6		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			113.7		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			104.2		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
QC Std 7	Sb	121CCB is out of limits ( +/- PQL)

## QC Action

QC Action Line: Continue

## Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Monday, February 15, 2010 10:23:14

### Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.322

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	1273.5	1273.457	32.442	2.5
Mg	24.0	16319.5	16319.517	146.321	0.9
Co	58.9	46747.8	46747.764	239.185	0.5
Rh	102.9	88809.0	88809.012	862.537	1.0
In	114.9	127527.5	127527.510	960.845	0.8
Pb	208.0	53547.2	53547.180	666.520	1.2
[> Ba	137.9	100876.4	100876.398	806.090	0.8
[ Ba++	69.0	1172.5	0.012	0.000	2.5
[> Ce	139.9	116041.6	116041.600	560.284	0.5
[ CeO	155.9	2791.4	0.024	0.001	2.3
Bkgd	220.0	2.9	2.900	1.294	44.6

### 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	4.5	1058.4
Co	59	17	5.0	30831.6
In	115	17	5.8	90782.9

## 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	607	2060	0.710
Be	9.0	9.1	2052	2045	0.730
Mg	24.0	23.9	5674	2065	0.719
Mg	25.0	25.0	5949	2080	0.753
Mg	26.0	26.0	6166	2085	0.664
Co	58.9	58.9	14182	2140	0.659
Rh	102.9	102.9	24865	2230	0.672
In	114.9	114.9	27789	2255	0.686
Ce	139.9	139.9	33863	2310	0.655
Pb	206.0	205.9	49925	2500	0.623
Pb	207.0	207.0	50113	2375	0.620
Pb	208.0	208.0	50448	2570	0.614
U	238.1	238.1	57689	2510	0.653

## ICPMS#4 - Summary Report

Sample ID: Blank  
Sample Date/Time: Monday, February 15, 2010 14:00:23  
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\100215\Blank.065

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		174651	
[ U 238		ug/L		374	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175					
[ 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: Standard 1

Sample Date/Time: Monday, February 15, 2010 14:02:35

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\100215\Standard 1.066

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		168808	168808.265
[	U 238	10.000	ug/L	1.069	144260	0.853

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Monday, February 15, 2010 14:04:44

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\100215\Standard 2.067

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		171896	171895.745
[	U 238	99.987	ug/L	0.035	1446453	8.413

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 2

Report Date/Time: Monday, February 15, 2010 14:04:54

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## ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Monday, February 15, 2010 14:06:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100215\QC Std 1.068

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		170990	170990.267
[	U	238	52.373 ug/L	0.635	753835	4.406

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		97.9		
[	U	238	104.745			

### 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 2

Sample Date/Time: Monday, February 15, 2010 14:09:06

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\100215\QC Std 2.069

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		169024	169024.074
[	U 238	-0.001	ug/L	158.109	352	-0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			96.8		
[	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

## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Monday, February 15, 2010 14:11:18

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\100215\QC Std 3.070

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu 175		ug/L		168926	168926.311
[	U 238	0.225	ug/L	3.474	3561	0.019

### 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			96.7		
[	U 238	112.526				

### 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 4

Sample Date/Time: Monday, February 15, 2010 14:13:29

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\100215\QC Std 4.071

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		156096	156095.771
[	U	238	ug/L	34.516	283	-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		89.4		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Monday, February 15, 2010 14:15:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100215\QC Std 5.072

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		152241	152240.867
[	U	238	20.323 ug/L	0.757	260632	1.710

### 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		87.2		
[	U	238	101.614			

### 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 6

Sample Date/Time: Monday, February 15, 2010 14:17:52

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\100215\QC Std 6.073

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		164249	164248.853
[	U 238	52.762	ug/L	1.118	729547	4.439

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			94.0		
[	U 238	105.524				

### 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: Monday, February 15, 2010 14:20:06

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\100215\QC Std 7.074

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		164189	164189.002
[	U 238	-0.008	ug/L	11.401	245	-0.001

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		94.0			
[	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

## ICPMS#4 - Summary Report

Sample ID: 245797016

Sample Date/Time: Monday, February 15, 2010 14:26:41

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100215\245797016.077

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		178850	178849.874
[	U 238	4.180	ug/L	0.538	63279	0.352

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		102.4			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: 245797017

Sample Date/Time: Monday, February 15, 2010 14:28:54

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100215\245797017.078

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		174502	174502.060
[	U	238	4.290 ug/L	0.688	63356	0.361

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.9		
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#4 - Summary Report

Sample ID: 245797019

Sample Date/Time: Monday, February 15, 2010 14:33:22

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100215\245797019.080

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		185175	185175.023
[	U	238	3.036 ug/L	0.384	47704	0.255

### 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		106.0		
[	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

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 15, 2010 14:35:35

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\100215\QC Std 6.081

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		169316	169315.518
[	U	238	53.338 ug/L	0.873	760165	4.488

### 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		96.9		
[	U	238	106.676			

### 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: Monday, February 15, 2010 14:35:47

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 15, 2010 14:37:48

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\100215\QC Std 7.082

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		168020	168020.001
[	U	238	ug/L	15.052	304	-0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		96.2		
[	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

## Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Tuesday, February 16, 2010 09:38:01

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.325

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	1246.9	1246.854	41.152	3.3
Mg	24.0	30009.5	30009.510	905.841	3.0
Co	58.9	56760.4	56760.374	1148.037	2.0
Rh	102.9	94473.0	94472.993	1236.601	1.3
In	114.9	124373.5	124373.532	1603.272	1.3
Pb	208.0	55937.5	55937.513	638.534	1.1
[> Ba	137.9	102198.3	102198.281	1371.976	1.3
[ Ba++	69.0	1249.7	0.012	0.000	2.7
[> Ce	139.9	118647.9	118647.922	1389.859	1.2
[ CeO	155.9	3133.0	0.026	0.000	1.4
Bkgd	220.0	1.4	1.400	0.548	39.1

### 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	4.8	1055.4
Co	59	17	5.5	38710.7
In	115	17	6.5	94421.7

## 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	600	2060	0.699
Be	9.0	9.1	2046	2045	0.722
Mg	24.0	24.0	5670	2065	0.676
Mg	25.0	25.0	5945	2080	0.668
Mg	26.0	26.0	6174	2085	0.665
Co	58.9	59.0	14190	2140	0.644
Rh	102.9	102.9	24875	2230	0.651
In	114.9	114.9	27787	2255	0.679
Ce	139.9	139.9	33849	2310	0.657
Pb	206.0	205.9	49926	2500	0.652
Pb	207.0	207.0	50113	2375	0.658
Pb	208.0	207.9	50436	2570	0.646
U	238.1	238.0	57688	2510	0.708

## ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, February 16, 2010 10:18:34

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100216\Blank.014

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		153885	
[	U	238	ug/L		297	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
[	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: Standard 1

Sample Date/Time: Tuesday, February 16, 2010 10:20:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100216\Standard 1.015

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		152952	152951.965
[	U	238	10.000 ug/L	0.507	111944	0.730

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Tuesday, February 16, 2010 10:20:26

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## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, February 16, 2010 10:21:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100216\Standard 2.016

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		151303	151302.867
[	U 238	99.990	ug/L	0.619	1093150	7.223

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, February 16, 2010 10:23:34

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\100216\QC Std 1.017

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		153690	153690.166
[	U	238	52.373 ug/L	0.146	581761	3.783

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.9		
[	U	238	104.746			

### 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 2

Sample Date/Time: Tuesday, February 16, 2010 10:25:16

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\100216\QC Std 2.018

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		153917	153916.925
[	U 238	0.038	ug/L	0.523	725	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		100.0			
[	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: QC Std 2

Report Date/Time: Tuesday, February 16, 2010 10:25:29

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## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, February 16, 2010 10:26:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 3.019

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		154745	154745.495
[	U 238	0.221	ug/L	3.332	2765	0.016

### 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			100.6		
[	U 238	110.343				

### 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 4

Sample Date/Time: Tuesday, February 16, 2010 10:28:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 4.020

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		137436	137435.645
[	U 238	-0.014	ug/L	10.332	124	-0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		89.3			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, February 16, 2010 10:30:21

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\100216\QC Std 5.021

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		135718	135718.357
[	U 238	20.892	ug/L	0.742	205083	1.509

### 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			88.2		
[	U 238	104.458				

### 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 10:30:33

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 10:32:03

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\100216\QC Std 6.022

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ >	Lu 175		ug/L		152306	152306.112
[	U 238	51.529	ug/L	0.816	567230	3.722

### 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			99.0		
[	U 238	103.058				

### 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: Tuesday, February 16, 2010 10:33:46

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\100216\QC Std 7.023

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ >	Lu 175		ug/L		150557	150557.390
[	U 238	0.015	ug/L	12.860	450	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[ >	Lu 175			97.8		
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: 245797018

Sample Date/Time: Tuesday, February 16, 2010 10:38:49

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|10|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100216\245797018.026

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		154795	154794.681
[	U	238	28.431 ug/L	0.540	318216	2.054

### 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		100.6		
[	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: 245797018

Report Date/Time: Tuesday, February 16, 2010 10:39:01

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 10:40:31

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\100216\QC Std 6.027

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		152522	152522.432
[	U	238	51.523 ug/L	0.443	567966	3.722

### 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		99.1		
[	U	238	103.046			

### 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: Tuesday, February 16, 2010 10:42:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 7.028

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		153149	153148.753
[	U 238	0.020	ug/L	4.407	514	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			99.5		
[	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

## Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Wednesday, February 17, 2010 09:59:07

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.326

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	1240.1	1240.054	28.873	2.3
Mg	24.0	20403.6	20403.562	257.222	1.3
Co	58.9	46537.1	46537.082	446.205	1.0
Rh	102.9	83210.5	83210.461	950.635	1.1
In	114.9	116809.9	116809.852	1162.659	1.0
Pb	208.0	53222.0	53221.968	668.146	1.3
[> Ba	137.9	95017.2	95017.249	804.018	0.8
[ Ba++	69.0	970.2	0.010	0.000	2.4
[> Ce	139.9	110856.5	110856.478	851.240	0.8
[ CeO	155.9	2528.6	0.023	0.000	2.0
Bkgd	220.0	1.3	1.300	0.671	51.6

### 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	4.8	986.0
Co	59	17	5.3	32085.0
In	115	17	6.3	87797.3

## 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	602	2060	0.688
Be	9.0	9.1	2061	2045	0.683
Mg	24.0	24.0	5668	2065	0.674
Mg	25.0	24.9	5931	2080	0.659
Mg	26.0	25.9	6161	2085	0.688
Co	58.9	58.9	14188	2140	0.660
Rh	102.9	102.9	24868	2230	0.656
In	114.9	114.9	27780	2255	0.680
Ce	139.9	139.9	33854	2310	0.643
Pb	206.0	206.0	49927	2500	0.595
Pb	207.0	207.0	50113	2375	0.622
Pb	208.0	208.0	50436	2570	0.626
U	238.1	238.1	57694	2510	0.668

## ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Wednesday, February 17, 2010 14:07:39

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\Blank.107

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	ug/L			5
>	Sc	45	ug/L		729746	
	Ni	60	ug/L		35	
	Cu	63	ug/L		164	
L	Cu	65	ug/L		71	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45				
	Ni	60				
	Cu	63				
L	Cu	65				

### 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: Wednesday, February 17, 2010 14:08:01

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## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Wednesday, February 17, 2010 14:09:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\Standard 1.108

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	10.000 ug/L	4.716	1198	0.002
>	Sc	45	ug/L		748973	748973.424
	Ni	60	10.000 ug/L	3.238	8597	0.011
	Cu	63	ug/L		18472	0.024
L	Cu	65	10.000 ug/L	3.792	8913	0.012

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45				
	Ni	60				
	Cu	63				
L	Cu	65				

### 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: Standard 2

Sample Date/Time: Wednesday, February 17, 2010 14:11:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\Standard 2.109

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	99.976 ug/L	1.582	11744	0.016
>	Sc	45	ug/L		754516	754515.653
	Ni	60	99.998 ug/L	1.858	86106	0.114
	Cu	63	ug/L		186141	0.246
L	Cu	65	99.997 ug/L	2.837	88939	0.118

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45				
	Ni	60				
	Cu	63				
L	Cu	65				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 2

Report Date/Time: Wednesday, February 17, 2010 14:11:38

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## ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Wednesday, February 17, 2010 14:13:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 1.110

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	47.869	ug/L	4.175	6050	0.007
Sc	45		ug/L		811605	811605.122
Ni	60	49.465	ug/L	2.101	45836	0.056
Cu	63		ug/L		98344	0.121
Cu	65	48.771	ug/L	2.903	46688	0.057

### 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
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	95.737				
Sc	45		111.2			
Ni	60	98.930				
Cu	63					
Cu	65	97.543				

### 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: Wednesday, February 17, 2010 14:13:27

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## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Wednesday, February 17, 2010 14:14:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 2.111

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.017	ug/L	167.473	7	0.000
>	Sc 45		ug/L		814443	814442.649
	Ni 60	0.027	ug/L	19.280	64	0.000
	Cu 63		ug/L		227	0.000
L	Cu 65	0.028	ug/L	72.302	105	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9				
>	Sc 45	111.6			
	Ni 60				
	Cu 63				
L	Cu 65				

### 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 3

Sample Date/Time: Wednesday, February 17, 2010 14:16:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 3.112

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.504	ug/L	13.565	68	0.000
Sc	45		ug/L		802624	802624.461
Ni	60	2.101	ug/L	2.386	1962	0.002
Cu	63		ug/L		2372	0.003
Cu	65	1.118	ug/L	6.084	1134	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
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	100.866				
Sc	45		110.0			
Ni	60	105.051				
Cu	63					
Cu	65	111.815				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Wednesday, February 17, 2010 14:18:41

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 4.113

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.029 ug/L	65.072	9	0.000
>	Sc	45	ug/L		802754	802754.413
	Ni	60	4.480 ug/L	2.668	4141	0.005
	Cu	63	ug/L		6066	0.007
	Cu	65	2.780 ug/L	4.631	2705	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45		110.0		
	Ni	60	135.339			
	Cu	63				
	Cu	65	83.242			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Wednesday, February 17, 2010 14:19:01

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## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Wednesday, February 17, 2010 14:20:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 5.114

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	16.419 ug/L	5.415	2017	0.003
>	Sc	45	ug/L		787782	787782.203
	Ni	60	22.231 ug/L	3.063	20006	0.025
	Cu	63	ug/L		38771	0.049
	Cu	65	19.912 ug/L	3.889	18541	0.023

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9	82.094			
>	Sc	45		108.0		
	Ni	60	95.373			
	Cu	63				
	Cu	65	85.312			

### 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: Wednesday, February 17, 2010 14:20:52

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 17, 2010 14:22:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 6.115

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	46.418	ug/L	4.595	6009	0.007
>	Sc 45		ug/L		831743	831742.949
	Ni 60	48.686	ug/L	3.239	46223	0.056
	Cu 63		ug/L		98065	0.118
L	Cu 65	48.141	ug/L	4.260	47211	0.057

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9	92.835				
>	Sc 45		114.0			
	Ni 60	97.372				
	Cu 63					
L	Cu 65	96.281				

### 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: Wednesday, February 17, 2010 14:24:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 7.116

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.013	ug/L	10.895	7	0.000
>	Sc 45		ug/L		832592	832591.728
	Ni 60	0.021	ug/L	8.331	59	0.000
	Cu 63		ug/L		199	0.000
L	Cu 65	0.026	ug/L	63.184	106	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[ Be 9					
> Sc 45		114.1			
Ni 60					
Cu 63					
L Cu 65					

### 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: 1202030959

Sample Date/Time: Wednesday, February 17, 2010 14:26:07

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\1202030959.117

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.018 ug/L	43.319	3	-0.000
>	Sc	45	ug/L		849191	849190.895
	Ni	60	0.201 ug/L	2.713	235	0.000
	Cu	63	ug/L		567	0.000
L	Cu	65	0.198 ug/L	5.575	280	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	116.4			
	Ni	60				
	Cu	63				
L	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202030959

Report Date/Time: Wednesday, February 17, 2010 14:26:28

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## ICPMS#4 - Summary Report

Sample ID: 1202030964

Sample Date/Time: Wednesday, February 17, 2010 14:27:57

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 948067|40|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\1202030964.118

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	17.265	ug/L	6.012	2264	0.003
Sc	45		ug/L		841611	841610.877
Ni	60	33.035	ug/L	2.578	31736	0.038
Cu	63		ug/L		86097	0.102
Cu	65	41.766	ug/L	6.914	41414	0.049

### 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
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		115.3			
Ni	60					
Cu	63					
Cu	65					

### 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: 1202030964

Report Date/Time: Wednesday, February 17, 2010 14:28:18

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 17, 2010 14:39:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 6.124

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	46.958	ug/L	4.126	6038	0.007
Sc	45		ug/L		826126	826125.760
Ni	60	47.881	ug/L	2.490	45141	0.055
Cu	63		ug/L		96220	0.116
Cu	65	46.821	ug/L	4.901	45590	0.055

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	93.917				
Sc	45		113.2			
Ni	60	95.763				
Cu	63					
Cu	65	93.643				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 17, 2010 14:39:32

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 17, 2010 14:41:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mtg

Dataset File: C:\elandata\Dataset\100217\QC Std 7.125

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	0.000	ug/L	2363.348	5	0.000
>	Sc 45		ug/L		822825	822824.969
	Ni 60	0.022	ug/L	35.479	60	0.000
	Cu 63		ug/L		191	0.000
L	Cu 65	0.024	ug/L	50.857	102	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
>	Sc 45		112.8			
	Ni 60					
	Cu 63					
L	Cu 65					

### 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: 245797002

Sample Date/Time: Wednesday, February 17, 2010 14:42:56

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797002.126

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	6.251	ug/L	5.305	834	0.001
>	Sc 45		ug/L		852270	852270.200
	Ni 60	33.832	ug/L	3.632	32917	0.039
	Cu 63		ug/L		333203	0.391
L	Cu 65	159.861	ug/L	5.172	160431	0.188

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
>	Sc 45		116.8			
	Ni 60					
	Cu 63					
L	Cu 65					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797002

Report Date/Time: Wednesday, February 17, 2010 14:43:16

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## ICPMS#4 - Summary Report

Sample ID: 245797003

Sample Date/Time: Wednesday, February 17, 2010 14:44:46

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797003.127

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	1.852 ug/L	10.596	234	0.000
>	Sc	45	ug/L		796429	796429.177
	Ni	60	19.362 ug/L	1.410	17627	0.022
	Cu	63	ug/L		66833	0.084
[	Cu	65	33.869 ug/L	3.216	31834	0.040

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	109.1			
	Ni	60				
	Cu	63				
[	Cu	65				

### 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: 245797004

Sample Date/Time: Wednesday, February 17, 2010 14:46:38

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797004.128

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	15.558	ug/L	2.911	1880	0.002
> Sc	45		ug/L		774485	774484.649
Ni	60	17.189	ug/L	0.972	15222	0.020
Cu	63		ug/L		1371791	1.772
Cu	65	725.325	ug/L	4.278	661282	0.854

### 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
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
> Sc	45		106.1			
Ni	60					
Cu	63					
Cu	65					

### 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: 245797004

Report Date/Time: Wednesday, February 17, 2010 14:46:59

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## ICPMS#4 - Summary Report

Sample ID: 245797005

Sample Date/Time: Wednesday, February 17, 2010 14:48:30

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797005.129

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	4.770	ug/L	3.925	562	0.001
> Sc	45		ug/L		750296	750296.230
Ni	60	18.553	ug/L	2.728	15913	0.021
Cu	63		ug/L		680225	0.907
[ Cu	65	371.194	ug/L	4.620	327899	0.437

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[ Be	9				
> Sc	45	102.8			
Ni	60				
Cu	63				
[ Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797005

Report Date/Time: Wednesday, February 17, 2010 14:48:52

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 17, 2010 14:50:22

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 6.130

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	51.366	ug/L	3.159	5913	0.008
Sc	45		ug/L		739487	739487.429
Ni	60	49.276	ug/L	2.147	41584	0.056
Cu	63		ug/L		88295	0.119
Cu	65	48.484	ug/L	5.671	42253	0.057

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9	102.733				
Sc	45		101.3			
Ni	60	98.551				
Cu	63					
Cu	65	96.968				

### 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: Wednesday, February 17, 2010 14:52:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 7.131

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	-0.004	ug/L	613.277	4	-0.000
>	Sc 45		ug/L		745639	745638.563
	Ni 60	0.017	ug/L	51.692	50	0.000
	Cu 63		ug/L		245	0.000
	Cu 65	0.054	ug/L	29.613	120	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
>	Sc 45		102.2			
	Ni 60					
	Cu 63					
	Cu 65					

### 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: 245797006

Sample Date/Time: Wednesday, February 17, 2010 14:54:08

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797006.132

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	1.121 ug/L	9.444	141	0.000
>	Sc	45	ug/L		780781	780781.188
	Ni	60	17.371 ug/L	1.891	15507	0.020
	Cu	63	ug/L		32848	0.042
	Cu	65	16.963 ug/L	3.411	15670	0.020

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	107.0			
	Ni	60				
	Cu	63				
	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797006

Report Date/Time: Wednesday, February 17, 2010 14:54:30

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## ICPMS#4 - Summary Report

Sample ID: 245797007

Sample Date/Time: Wednesday, February 17, 2010 14:56:01

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797007.133

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.778 ug/L	1.839	348	0.000
>	Sc	45	ug/L		792607	792607.075
	Ni	60	24.827 ug/L	2.394	22476	0.028
	Cu	63	ug/L		73912	0.093
L	Cu	65	37.806 ug/L	3.024	35350	0.045

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	108.6			
	Ni	60				
	Cu	63				
L	Cu	65				

### 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: 245797007

Report Date/Time: Wednesday, February 17, 2010 14:56:23

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## ICPMS#4 - Summary Report

Sample ID: 245797008

Sample Date/Time: Wednesday, February 17, 2010 14:57:55

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797008.134

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	9.232	ug/L	3.545	1086	0.001
Sc	45		ug/L		752948	752948.325
Ni	60	12.451	ug/L	4.456	10728	0.014
Cu	63		ug/L		93357	0.124
Cu	65	50.237	ug/L	4.904	44593	0.059

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		103.2			
Ni	60					
Cu	63					
Cu	65					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797008

Report Date/Time: Wednesday, February 17, 2010 14:58:18

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## ICPMS#4 - Summary Report

Sample ID: 245797009

Sample Date/Time: Wednesday, February 17, 2010 14:59:48

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797009.135

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	1.577 ug/L	4.759	190	0.000
>	Sc	45	ug/L		755618	755618.300
	Ni	60	18.448 ug/L	3.115	15922	0.021
	Cu	63	ug/L		43974	0.058
	Cu	65	23.691 ug/L	6.459	21112	0.028

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	103.5			
	Ni	60				
	Cu	63				
	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797009

Report Date/Time: Wednesday, February 17, 2010 15:00:09

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## ICPMS#4 - Summary Report

Sample ID: 245797010

Sample Date/Time: Wednesday, February 17, 2010 15:01:39

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797010.136

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	4.962	ug/L	2.293	631	0.001
Sc	45		ug/L		810305	810305.345
Ni	60	35.672	ug/L	3.409	33003	0.041
Cu	63		ug/L		114158	0.141
Cu	65	57.251	ug/L	3.763	54684	0.067

### 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
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		111.0			
Ni	60					
Cu	63					
Cu	65					

### 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: 245797010

Report Date/Time: Wednesday, February 17, 2010 15:02:01

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 17, 2010 15:03:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 6.137

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	51.460 ug/L	3.852	6061	0.008
>	Sc	45	ug/L		756520	756520.311
	Ni	60	47.978 ug/L	2.501	41433	0.055
	Cu	63	ug/L		88829	0.117
	Cu	65	48.009 ug/L	4.731	42825	0.057

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9	102.921			
>	Sc	45		103.7		
	Ni	60	95.957			
	Cu	63				
	Cu	65	96.017			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 17, 2010 15:03:52

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 17, 2010 15:05:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 7.138

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	-0.010	ug/L	267.531	4	-0.000
>	Sc 45		ug/L		760045	760044.703
	Ni 60	0.016	ug/L	58.999	50	0.000
	Cu 63		ug/L		211	0.000
	Cu 65	0.048	ug/L	34.379	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
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
>	Sc 45		104.2			
	Ni 60					
	Cu 63					
	Cu 65					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 17, 2010 15:05:46

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## ICPMS#4 - Summary Report

Sample ID: 245797011

Sample Date/Time: Wednesday, February 17, 2010 15:07:17

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797011.139

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	10.381 ug/L	5.401	1353	0.002
>	Sc	45	ug/L		833344	833344.101
	Ni	60	28.575 ug/L	3.384	27185	0.033
	Cu	63	ug/L		929226	1.116
L	Cu	65	454.659 ug/L	4.221	445984	0.536

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	114.2			
	Ni	60				
	Cu	63				
L	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797011

Report Date/Time: Wednesday, February 17, 2010 15:07:38

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## ICPMS#4 - Summary Report

Sample ID: 245797012

Sample Date/Time: Wednesday, February 17, 2010 15:09:09

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797012.140

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	2.084	ug/L	7.832	282	0.000
>	Sc 45		ug/L		852113	852113.448
	Ni 60	35.384	ug/L	3.538	34416	0.040
	Cu 63		ug/L		60614	0.071
	Cu 65	29.239	ug/L	5.387	29401	0.034

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
>	Sc 45		116.8			
	Ni 60					
	Cu 63					
	Cu 65					

### 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: 245797013

Sample Date/Time: Wednesday, February 17, 2010 15:11:02

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797013.141

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	4.662	ug/L	6.959	613	0.001
Sc	45		ug/L		838674	838673.635
Ni	60	27.160	ug/L	1.687	26020	0.031
Cu	63		ug/L		227533	0.271
Cu	65	111.263	ug/L	5.171	109901	0.131

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		114.9			
Ni	60					
Cu	63					
Cu	65					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797013

Report Date/Time: Wednesday, February 17, 2010 15:11:25

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## ICPMS#4 - Summary Report

Sample ID: 245797014

Sample Date/Time: Wednesday, February 17, 2010 15:12:56

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797014.142

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.248 ug/L	1.545	537	0.001
>	Sc	45	ug/L		804118	804118.175
	Ni	60	19.585 ug/L	2.397	17999	0.022
	Cu	63	ug/L		176225	0.219
	Cu	65	89.071 ug/L	3.183	84415	0.105

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	110.2			
	Ni	60				
	Cu	63				
	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797014

Report Date/Time: Wednesday, February 17, 2010 15:13:19

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 17, 2010 15:14:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 6.143

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	49.584 ug/L	4.212	5853	0.008
>	Sc	45	ug/L		758163	758163.274
	Ni	60	48.611 ug/L	2.468	42069	0.055
	Cu	63	ug/L		90017	0.119
	Cu	65	47.416 ug/L	4.274	42396	0.056

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9	99.167			
>	Sc	45		103.9		
	Ni	60	97.223			
	Cu	63				
	Cu	65	94.832			

### 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: Wednesday, February 17, 2010 15:16:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 7.144

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.012 ug/L	96.019	6	0.000
>	Sc	45	ug/L		762653	762653.091
	Ni	60	0.022 ug/L	57.586	55	0.000
	Cu	63	ug/L		201	0.000
L	Cu	65	0.027 ug/L	56.669	98	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	104.5			
	Ni	60				
	Cu	63				
L	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 17, 2010 15:17:04

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## ICPMS#4 - Summary Report

Sample ID: 245797015

Sample Date/Time: Wednesday, February 17, 2010 15:18:36

Sample Type:

Sample Description: LANL 602D

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797015.145

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	5.894 ug/L	4.949	744	0.001
>	Sc	45	ug/L		806439	806438.884
	Ni	60	24.698 ug/L	4.169	22760	0.028
	Cu	63	ug/L		466695	0.579
	Cu	65	234.845 ug/L	3.244	223047	0.277

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	110.5			
	Ni	60				
	Cu	63				
	Cu	65				

### 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: 245797015

Report Date/Time: Wednesday, February 17, 2010 15:18:59

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## ICPMS#4 - Summary Report

Sample ID: 245797016

Sample Date/Time: Wednesday, February 17, 2010 15:20:29

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797016.146

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	1.531 ug/L	12.946	198	0.000
>	Sc	45	ug/L		808841	808840.957
	Ni	60	22.412 ug/L	2.752	20717	0.026
	Cu	63	ug/L		46941	0.058
L	Cu	65	23.445 ug/L	4.289	22400	0.028

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	110.8			
	Ni	60				
	Cu	63				
L	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797016

Report Date/Time: Wednesday, February 17, 2010 15:20:51

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## ICPMS#4 - Summary Report

Sample ID: 245797017

Sample Date/Time: Wednesday, February 17, 2010 15:22:21

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797017.147

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.651 ug/L	3.510	342	0.000
>	Sc	45	ug/L		817450	817449.689
	Ni	60	23.276 ug/L	2.596	21739	0.027
	Cu	63	ug/L		35180	0.043
L	Cu	65	17.633 ug/L	4.886	17042	0.021

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	112.0			
	Ni	60				
	Cu	63				
L	Cu	65				

### 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: 245797017

Report Date/Time: Wednesday, February 17, 2010 15:22:43

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## ICPMS#4 - Summary Report

Sample ID: 245797018

Sample Date/Time: Wednesday, February 17, 2010 15:24:14

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797018.148

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	5.132 ug/L	8.701	635	0.001
>	Sc	45	ug/L		789097	789096.706
	Ni	60	18.832 ug/L	2.880	16982	0.021
	Cu	63	ug/L		230229	0.292
	Cu	65	118.981 ug/L	3.752	110605	0.140

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	108.1			
	Ni	60				
	Cu	63				
	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797018

Report Date/Time: Wednesday, February 17, 2010 15:24:36

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## ICPMS#4 - Summary Report

Sample ID: 245797019

Sample Date/Time: Wednesday, February 17, 2010 15:26:08

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797019.149

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be 9	1.549	ug/L	7.479	192	0.000
>	Sc 45		ug/L		776643	776643.085
	Ni 60	27.194	ug/L	2.774	24121	0.031
	Cu 63		ug/L		16123	0.021
	Cu 65	8.486	ug/L	6.331	7831	0.010

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be 9					
>	Sc 45		106.4			
	Ni 60					
	Cu 63					
	Cu 65					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797019

Report Date/Time: Wednesday, February 17, 2010 15:26:30

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 17, 2010 15:28:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 6.150

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	51.671 ug/L	6.574	5830	0.008
>	Sc	45	ug/L		724922	724922.156
	Ni	60	48.662 ug/L	1.542	40272	0.056
	Cu	63	ug/L		85524	0.118
L	Cu	65	48.025 ug/L	4.116	41058	0.057

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9	103.342			
>	Sc	45		99.3		
	Ni	60	97.324			
	Cu	63				
L	Cu	65	96.050			

### 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: Wednesday, February 17, 2010 15:29:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 7.151

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.005 ug/L	325.379	5	0.000
>	Sc	45	ug/L		734170	734169.782
	Ni	60	0.023 ug/L	63.558	54	0.000
	Cu	63	ug/L		189	0.000
	Cu	65	0.041 ug/L	7.971	107	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	100.6			
	Ni	60				
	Cu	63				
	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 17, 2010 15:30:15

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## ICPMS#4 - Summary Report

Sample ID: 245797001

Sample Date/Time: Wednesday, February 17, 2010 15:31:47

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 948067|2|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\245797001.152

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	3.073	ug/L	3.406	397	0.000
Sc	45		ug/L		818256	818256.186
Ni	60	34.285	ug/L	4.058	32020	0.039
Cu	63		ug/L		62547	0.076
Cu	65	31.403	ug/L	4.462	30323	0.037

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		112.1			
Ni	60					
Cu	63					
Cu	65					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245797001

Report Date/Time: Wednesday, February 17, 2010 15:32:08

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## ICPMS#4 - Summary Report

Sample ID: 1202030960

Sample Date/Time: Wednesday, February 17, 2010 15:33:39

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\1202030960.153

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.318 ug/L	5.522	444	0.001
>	Sc	45	ug/L		849403	849402.745
	Ni	60	33.989 ug/L	3.773	32960	0.039
	Cu	63	ug/L		59438	0.070
[	Cu	65	28.410 ug/L	4.175	28484	0.033

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	116.4			
	Ni	60				
	Cu	63				
[	Cu	65				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
------------------	---------	---------------------------

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202030960

Report Date/Time: Wednesday, February 17, 2010 15:34:00

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## ICPMS#4 - Summary Report

Sample ID: 1202030962

Sample Date/Time: Wednesday, February 17, 2010 15:35:31

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\1202030962.154

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be 9	22.832	ug/L	1.167	3040	0.004
>	Sc 45		ug/L		854048	854047.908
	Ni 60	52.223	ug/L	2.983	50903	0.060
	Cu 63		ug/L		96566	0.113
	Cu 65	46.200	ug/L	4.557	46524	0.054

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be 9					
>	Sc 45		117.0			
	Ni 60					
	Cu 63					
	Cu 65					

### 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: 1202030963

Sample Date/Time: Wednesday, February 17, 2010 15:37:24

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 948067[2]skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\1202030963.155

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be 9	23.389	ug/L	4.493	3140	0.004
> Sc 45		ug/L		861958	861958.320
Ni 60	51.026	ug/L	2.449	50191	0.058
Cu 63		ug/L		94497	0.109
Cu 65	44.682	ug/L	4.173	45414	0.053

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be 9					
> Sc 45		118.1			
Ni 60					
Cu 63					
Cu 65					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202030963

Report Date/Time: Wednesday, February 17, 2010 15:37:46

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## ICPMS#4 - Summary Report

Sample ID: 1202030961

Sample Date/Time: Wednesday, February 17, 2010 15:39:17

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 948067|10|skj

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\1202030961.156

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.653	ug/L	20.513	87	0.000
Sc	45		ug/L		803380	803380.290
Ni	60	7.668	ug/L	2.192	7065	0.009
Cu	63		ug/L		15059	0.019
Cu	65	7.537	ug/L	4.072	7205	0.009

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Sc	45		110.1			
Ni	60					
Cu	63					
Cu	65					

### 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: Wednesday, February 17, 2010 15:41:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 6.157

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	48.858 ug/L	3.724	5968	0.008
>	Sc	45	ug/L		784604	784603.597
	Ni	60	47.424 ug/L	2.021	42482	0.054
	Cu	63	ug/L		89783	0.114
L	Cu	65	45.928 ug/L	4.502	42498	0.054

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9	97.717			
>	Sc	45		107.5		
	Ni	60	94.848			
	Cu	63				
L	Cu	65	91.856			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 17, 2010 15:41:31

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 17, 2010 15:43:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be ni cu.mth

Dataset File: C:\elandata\Dataset\100217\QC Std 7.158

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.002 ug/L	623.309	5	0.000
>	Sc	45	ug/L		805543	805543.232
	Ni	60	0.030 ug/L	24.719	66	0.000
	Cu	63	ug/L		191	0.000
	Cu	65	0.015 ug/L	49.347	92	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Be	9				
>	Sc	45	110.4			
	Ni	60				
	Cu	63				
	Cu	65				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

%RSD: 0.9 0.9 0.9273

=====  
 Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 02/16/2010  
 Sample ID: 245688001|i|||

-----  

Repl #	SampleConc µg/L	StndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
--------	--------------------	------------------	--------------------	----------------	------	----------------

=====  
 Element: Hg Seq. No.: 43 AS Loc.: 7 Date: 02/16/2010  
 Sample ID: CCV

-----  

Repl #	SampleConc µg/L	StndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	5.564	5.564	0.0281	0.0305	10:13:29	No
2	5.567	5.567	0.0281	0.0305	10:14:03	No
Mean:	5.566	5.566	0.0281			
SD :	0.0016	0.0016	0.0000			

%RSD:

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 44 AS Loc.: 8 Date: 02/16/2010  
 Sample ID: CCB

-----  

Repl #	SampleConc µg/L	StndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.092	0.092	0.0010	0.0034	10:15:32	No
2	0.097	0.097	0.0011	0.0035	10:16:06	No
Mean:	0.094	0.094	0.0010			
SD :	0.0035	0.0035	0.0000			
%RSD:	3.7	3.7	1.6345			

=====  
 Method Name: SOIL

Method Description: 7471A, ILM04 ANALYST JXL1

Element: Hg

Date: 02/16/2010

Technique: FI-MHS

Calibration Type:

Hg, Calc. Intercept : Linear

Wavelength: 253.7 nm

Sample Info Name: 021610S1.SIF

Results Data Set Name: 021610S2

=====  
 Element: Hg Seq. No.: 45 AS Loc.: 1 Date: 02/16/2010  
 Sample ID: Calib Blank

-----  

Repl #	SampleConc µg/L	StndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1			0.0032	0.0032	10:18:51	No
2			0.0031	0.0031	10:19:26	No
Mean:			0.0031			
SD :			0.0000			
%RSD:			1.1573			

Auto-zero performed.

=====  
 Element: Hg Seq. No.: 46 AS Loc.: 2 Date: 02/16/2010  
 Sample ID: S0.2

-----  

Repl #	SampleConc µg/L	StndConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1			0.0029	0.0060	10:20:48	No
2			0.0029	0.0060	10:21:23	No
Mean:			0.0029			

SD : 0.0000  
 %RSD: 0.5208  
 [Hg] Standard number 1 applied. [0.200]  
 Correlation Coefficient: 1.00000 Slope: 0.01438  
 Intercept : 0.00000

=====

Element: Hg Seq. No.: 47 AS Loc.: 3 Date: 02/16/2010  
 Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0060	0.0092	10:22:47	No
2			0.0061	0.0093	10:23:22	No
Mean:			0.0061			
SD :			0.0001			
%RSD:			1.0905			

[Hg] Standard number 2 applied. [0.500]  
 Correlation Coefficient: 0.99653 Slope: 0.01206  
 Intercept : 0.00017

=====

Element: Hg Seq. No.: 48 AS Loc.: 4 Date: 02/16/2010  
 Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0223	0.0254	10:24:47	No
2			0.0226	0.0257	10:25:22	No
Mean:			0.0224			
SD :			0.0002			
%RSD:			0.9330			

[Hg] Standard number 3 applied. [2.000]  
 Correlation Coefficient: 0.99956 Slope: 0.01105  
 Intercept : 0.00039

=====

Element: Hg Seq. No.: 49 AS Loc.: 5 Date: 02/16/2010  
 Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0545	0.0577	10:26:48	No
2			0.0555	0.0587	10:27:23	No
Mean:			0.0550			
SD :			0.0007			
%RSD:			1.2760			

[Hg] Standard number 4 applied. [5.000]  
 Correlation Coefficient: 0.99993 Slope: 0.01093  
 Intercept : 0.00045

=====

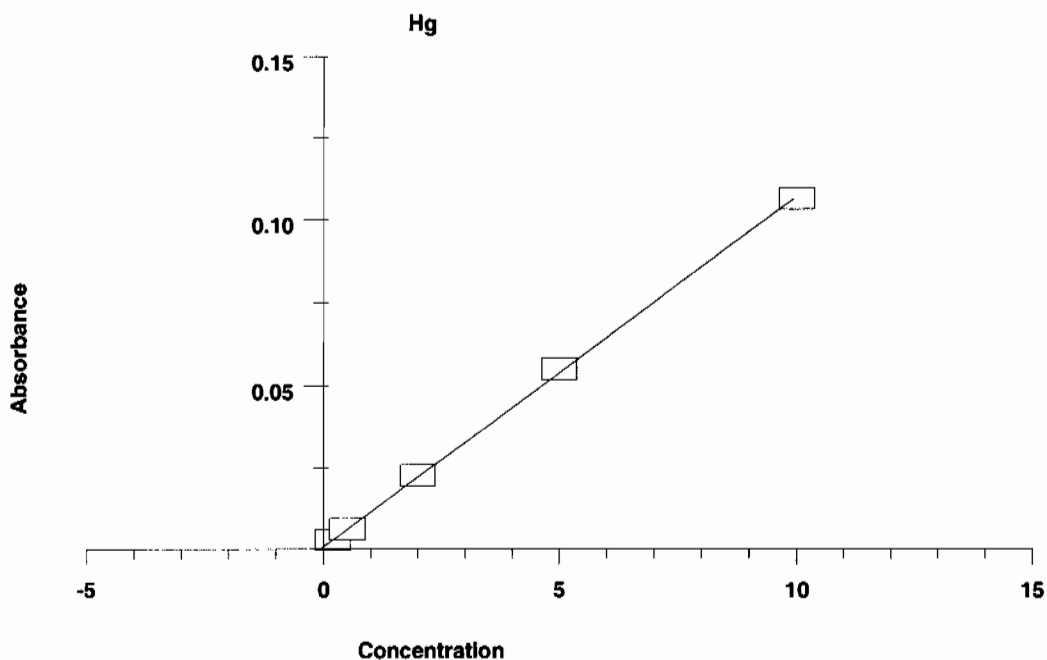
Element: Hg Seq. No.: 50 AS Loc.: 6 Date: 02/16/2010  
 Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1060	0.1091	10:28:49	No
2			0.1066	0.1097	10:29:24	No
Mean:			0.1063			
SD :			0.0004			
%RSD:			0.3772			

[Hg] Standard number 5 applied. [10.00]  
 Correlation Coefficient: 0.99985 Slope: 0.01061  
 Intercept : 0.00081

## Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0031	---	---	---	---
S0.2	0.0029	0.200	0.195	0.0000	0.5
S0.5	0.0061	0.500	0.498	0.0001	1.1
S2.0	0.0224	2.000	2.036	0.0002	0.9
S5.0	0.0550	5.000	5.109	0.0007	1.3
S10	0.1063	10.000	9.938	0.0004	0.4
Correlation Coefficient: 0.99985 Slope: 0.01061 Intercept: 0.0008					



=====  
 Element: Hg Seq. No.: 51 AS Loc.: 9 Date: 02/16/2010  
 Sample ID: ICV

=====  

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.149	5.149	0.0554	0.0586	10:30:53	No
2	5.060	5.060	0.0545	0.0576	10:31:28	No
Mean:	5.104	5.104	0.0550			
SD :	0.0631	0.0631	0.0007			
%RSD:	1.2	1.2	1.2174			

 QC value within specified limits.  
 =====

=====  
 Element: Hg Seq. No.: 52 AS Loc.: 10 Date: 02/16/2010  
 Sample ID: ICB

=====  

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.012	0.012	0.0009	0.0041	10:32:50	No
2	0.014	0.014	0.0010	0.0041	10:33:25	No
Mean:	0.013	0.013	0.0009			
SD :	0.0013	0.0013	0.0000			

 =====

%RSD: 10.1 10.1 1.4456  
QC value within specified limits.

=====  
Element: Hg Seq. No.: 53 AS Loc.: 11 Date: 02/16/2010  
Sample ID: CRDL

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.267	0.267	0.0036	0.0068	10:34:48	No
2	0.268	0.268	0.0036	0.0068	10:35:23	No
Mean:	0.267	0.267	0.0036			
SD :	0.0007	0.0007	0.0000			
%RSD:	0.3	0.3	0.2140			

QC value within specified limits.

=====  
Element: Hg Seq. No.: 54 AS Loc.: 7 Date: 02/16/2010  
Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.777	4.777	0.0515	0.0546	10:36:48	No
2	4.828	4.828	0.0520	0.0552	10:37:24	No
Mean:	4.802	4.802	0.0518			
SD :	0.0364	0.0364	0.0004			
%RSD:	0.8	0.8	0.7458			

QC value within specified limits.

=====  
Element: Hg Seq. No.: 55 AS Loc.: 8 Date: 02/16/2010  
Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.037	0.037	0.0012	0.0043	10:38:52	No
2	0.038	0.038	0.0012	0.0043	10:39:27	No
Mean:	0.038	0.038	0.0012			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.8	0.8	0.2677			

QC value within specified limits.

=====  
Element: Hg Seq. No.: 56 AS Loc.: 37 Date: 02/16/2010  
Sample ID: 1202029993|i||947654|MB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	0.0006	0.0037	10:40:55	No
2	-0.029	-0.029	0.0005	0.0036	10:41:30	No
Mean:	-0.025	-0.025	0.0005			
SD :	0.0060	0.0060	0.0001			
%RSD:	24.3	24.3	11.6617			

=====  
Element: Hg Seq. No.: 57 AS Loc.: 38 Date: 02/16/2010  
Sample ID: 1202029994|i||10||LCS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	3.849	3.849	0.0417	0.0448	10:42:53	No
2	3.831	3.831	0.0415	0.0446	10:43:28	No
Mean:	3.840	3.840	0.0416			
SD :	0.0129	0.0129	0.0001			
%RSD:	0.3	0.3	0.3301			

Mean: 0.276 0.276 0.0037  
 SD : 0.0181 0.0181 0.0002  
 %RSD: 6.6 6.6 5.1554

=====  
 Element: Hg Seq. No.: 64 AS Loc.: 45 Date: 02/16/2010  
 Sample ID: 245688003|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.261	0.261	0.0036	0.0067	10:56:50	No
2	0.270	0.270	0.0037	0.0068	10:57:25	No
Mean:	0.266	0.266	0.0036			
SD :	0.0065	0.0065	0.0001			
%RSD:	2.4	2.4	1.8947			

=====  
 Element: Hg Seq. No.: 65 AS Loc.: 46 Date: 02/16/2010  
 Sample ID: 245688004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.284	0.284	0.0038	0.0070	10:58:51	No
2	0.272	0.272	0.0037	0.0068	10:59:26	No
Mean:	0.278	0.278	0.0038			
SD :	0.0079	0.0079	0.0001			
%RSD:	2.8	2.8	2.2293			

=====  
 Element: Hg Seq. No.: 66 AS Loc.: 7 Date: 02/16/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	4.777	4.777	0.0515	0.0546	11:00:53	No
2	4.776	4.776	0.0515	0.0546	11:01:28	No
Mean:	4.777	4.777	0.0515			
SD :	0.0009	0.0009	0.0000			
%RSD:						

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 67 AS Loc.: 8 Date: 02/16/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.000	0.000	0.0008	0.0039	11:02:56	No
2	-0.008	-0.008	0.0007	0.0039	11:03:30	No
Mean:	-0.004	-0.004	0.0008			
SD :	0.0054	0.0054	0.0001			
%RSD:	143.7	143.7	7.4420			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 68 AS Loc.: 47 Date: 02/16/2010  
 Sample ID: 245688005|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.250	0.250	0.0035	0.0066	11:04:57	No
2	0.243	0.243	0.0034	0.0065	11:05:32	No
Mean:	0.247	0.247	0.0034			
SD :	0.0047	0.0047	0.0001			
%RSD:	1.9	1.9	1.4689			



Mean: 0.471 0.471 0.0058  
 SD : 0.0088 0.0088 0.0001  
 %RSD: 1.9 1.9 1.5999

=====  
 Element: Hg Seq. No.: 75 AS Loc.: 54 Date: 02/16/2010  
 Sample ID: 245688012|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.438	0.438	0.0055	0.0086	11:18:31	No
2	0.428	0.428	0.0053	0.0085	11:19:06	No
Mean:	0.433	0.433	0.0054			
SD :	0.0074	0.0074	0.0001			
%RSD:	1.7	1.7	1.4448			

=====  
 Element: Hg Seq. No.: 76 AS Loc.: 55 Date: 02/16/2010  
 Sample ID: 245688013|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.305	0.305	0.0040	0.0072	11:20:28	No
2	0.295	0.295	0.0039	0.0071	11:21:03	No
Mean:	0.300	0.300	0.0040			
SD :	0.0071	0.0071	0.0001			
%RSD:	2.4	2.4	1.8871			

=====  
 Element: Hg Seq. No.: 77 AS Loc.: 56 Date: 02/16/2010  
 Sample ID: 245688014|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.135	0.135	0.0022	0.0054	11:22:26	No
2	0.142	0.142	0.0023	0.0055	11:23:01	No
Mean:	0.138	0.138	0.0023			
SD :	0.0050	0.0050	0.0001			
%RSD:	3.6	3.6	2.3207			

=====  
 Element: Hg Seq. No.: 78 AS Loc.: 7 Date: 02/16/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.920	4.920	0.0530	0.0561	11:24:26	No
2	4.889	4.889	0.0527	0.0558	11:25:01	No
Mean:	4.904	4.904	0.0529			
SD :	0.0213	0.0213	0.0002			
%RSD:	0.4	0.4	0.4284			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 79 AS Loc.: 8 Date: 02/16/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.043	0.043	0.0013	0.0044	11:26:29	No
2	0.043	0.043	0.0013	0.0044	11:27:04	No
Mean:	0.043	0.043	0.0013			
SD :	0.0005	0.0005	0.0000			
%RSD:	1.1	1.1	0.3837			

QC value within specified limits.

Mean: 2.292 2.292 0.0251  
 SD : 0.0003 0.0003 0.0000  
 %RSD:

=====  
 Element: Hg Seq. No.: 86 AS Loc.: 63 Date: 02/16/2010  
 Sample ID: 1202030033|i|5||SDILT  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.049	-0.049	0.0003	0.0034	11:40:28	No
2	-0.061	-0.061	0.0002	0.0033	11:41:03	No
Mean:	-0.055	-0.055	0.0002			
SD :	0.0084	0.0084	0.0001			
%RSD:	15.2	15.2	40.4041			

=====  
 Element: Hg Seq. No.: 87 AS Loc.: 64 Date: 02/16/2010  
 Sample ID: 245783002|i|||  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.204	0.204	0.0030	0.0061	11:42:23	No
2	0.201	0.201	0.0029	0.0061	11:42:57	No
Mean:	0.202	0.202	0.0030			
SD :	0.0018	0.0018	0.0000			
%RSD:	0.9	0.9	0.6286			

=====  
 Element: Hg Seq. No.: 88 AS Loc.: 65 Date: 02/16/2010  
 Sample ID: 245783003|i|||  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.189	0.189	0.0028	0.0060	11:44:17	No
2	0.184	0.184	0.0028	0.0059	11:44:52	No
Mean:	0.187	0.187	0.0028			
SD :	0.0041	0.0041	0.0000			
%RSD:	2.2	2.2	1.5713			

=====  
 Element: Hg Seq. No.: 89 AS Loc.: 66 Date: 02/16/2010  
 Sample ID: 245783004|i|||  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.175	0.175	0.0027	0.0058	11:46:12	No
2	0.183	0.183	0.0028	0.0059	11:46:46	No
Mean:	0.179	0.179	0.0027			
SD :	0.0058	0.0058	0.0001			
%RSD:	3.2	3.2	2.2798			

=====  
 Element: Hg Seq. No.: 90 AS Loc.: 7 Date: 02/16/2010  
 Sample ID: CCV  
 =====

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.951	4.951	0.0533	0.0565	11:48:10	No
2	4.948	4.948	0.0533	0.0565	11:48:45	No
Mean:	4.950	4.950	0.0533			
SD :	0.0023	0.0023	0.0000			
%RSD:						

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 91 AS Loc.: 8 Date: 02/16/2010  
 =====

Sample ID: CCB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.024	0.024	0.0011	0.0042	11:50:14	No
2	0.015	0.015	0.0010	0.0041	11:50:48	No
Mean:	0.020	0.020	0.0010			
SD :	0.0059	0.0059	0.0001			
%RSD:	30.3	30.3	6.1900			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 92 AS Loc.: 67 Date: 02/16/2010  
 Sample ID: 245783005|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.495	0.495	0.0061	0.0092	11:52:13	No
2	0.491	0.491	0.0060	0.0092	11:52:48	No
Mean:	0.493	0.493	0.0060			
SD :	0.0031	0.0031	0.0000			
%RSD:	0.6	0.6	0.5417			

=====  
 Element: Hg Seq. No.: 93 AS Loc.: 68 Date: 02/16/2010  
 Sample ID: 245783006|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.225	0.225	0.0032	0.0063	11:54:10	No
2	0.197	0.197	0.0029	0.0060	11:54:45	No
Mean:	0.211	0.211	0.0030			
SD :	0.0196	0.0196	0.0002			
%RSD:	9.3	9.3	6.8182			

=====  
 Element: Hg Seq. No.: 94 AS Loc.: 69 Date: 02/16/2010  
 Sample ID: 245783007|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.290	0.290	0.0039	0.0070	11:56:07	No
2	0.282	0.282	0.0038	0.0069	11:56:42	No
Mean:	0.286	0.286	0.0038			
SD :	0.0056	0.0056	0.0001			
%RSD:	2.0	2.0	1.5463			

=====  
 Element: Hg Seq. No.: 95 AS Loc.: 70 Date: 02/16/2010  
 Sample ID: 245783008|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.090	0.090	0.0018	0.0049	11:58:05	No
2	0.087	0.087	0.0017	0.0049	11:58:40	No
Mean:	0.089	0.089	0.0017			
SD :	0.0018	0.0018	0.0000			
%RSD:	2.1	2.1	1.1240			

=====  
 Element: Hg Seq. No.: 96 AS Loc.: 71 Date: 02/16/2010  
 Sample ID: 245783009|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.117	0.117	0.0020	0.0052	12:00:04	No
2	0.116	0.116	0.0020	0.0052	12:00:39	No

Mean: 0.116 0.116 0.0020  
 SD : 0.0007 0.0007 0.0000  
 %RSD: 0.6 0.6 0.3404

=====  
 Element: Hg Seq. No.: 97 AS Loc.: 72 Date: 02/16/2010  
 Sample ID: 245783010|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.181	0.181	0.0027	0.0059	12:02:02	No
2	0.181	0.181	0.0027	0.0059	12:02:37	No
Mean:	0.181	0.181	0.0027			
SD :	0.0002	0.0002	0.0000			
%RSD:	0.1	0.1				

=====  
 Element: Hg Seq. No.: 98 AS Loc.: 73 Date: 02/16/2010  
 Sample ID: 245783011|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.193	0.193	0.0029	0.0060	12:04:01	No
2	0.195	0.195	0.0029	0.0060	12:04:36	No
Mean:	0.194	0.194	0.0029			
SD :	0.0011	0.0011	0.0000			
%RSD:	0.6	0.6	0.3989			

=====  
 Element: Hg Seq. No.: 99 AS Loc.: 74 Date: 02/16/2010  
 Sample ID: 245783012|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.239	0.239	0.0033	0.0065	12:06:01	No
2	0.234	0.234	0.0033	0.0064	12:06:36	No
Mean:	0.236	0.236	0.0033			
SD :	0.0036	0.0036	0.0000			
%RSD:	1.5	1.5	1.1447			

=====  
 Element: Hg Seq. No.: 100 AS Loc.: 75 Date: 02/16/2010  
 Sample ID: 245783013|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.034	-0.034	0.0005	0.0036	12:08:01	No
2	-0.027	-0.027	0.0005	0.0037	12:08:36	No
Mean:	-0.030	-0.030	0.0005			
SD :	0.0044	0.0044	0.0000			
%RSD:	14.6	14.6	9.7338			

=====  
 Element: Hg Seq. No.: 101 AS Loc.: 76 Date: 02/16/2010  
 Sample ID: 245783014|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.275	0.275	0.0037	0.0069	12:10:01	No
2	0.272	0.272	0.0037	0.0068	12:10:36	No
Mean:	0.273	0.273	0.0037			
SD :	0.0022	0.0022	0.0000			
%RSD:	0.8	0.8	0.6184			

=====  
 Element: Hg Seq. No.: 102 AS Loc.: 7 Date: 02/16/2010  
 Sample ID: CCV

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    No        Stored
1      4.912      4.912      0.0529    0.0561    12:12:03  No
2      4.920      4.920      0.0530    0.0562    12:12:38  No
Mean:   4.916      4.916      0.0530
SD :    0.0055      0.0055      0.0001
%RSD:   0.1         0.1         0.1111
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 103      AS Loc.: 8      Date: 02/16/2010
Sample ID: CCB

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    No        Stored
1      -0.019     -0.019     0.0006    0.0037    12:14:06  No
2      -0.015     -0.015     0.0006    0.0038    12:14:41  No
Mean:   -0.017     -0.017     0.0006
SD :    0.0027     0.0027     0.0000
%RSD:   15.9        15.9        4.6220
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 104      AS Loc.: 77     Date: 02/16/2010
Sample ID: 245783015|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    No        Stored
1      0.288      0.288      0.0039    0.0070    12:16:08  No
2      0.283      0.283      0.0038    0.0069    12:16:43  No
Mean:   0.285      0.285      0.0038
SD :    0.0035      0.0035      0.0000
%RSD:   1.2         1.2         0.9737

```

```

=====
Element: Hg      Seq. No.: 105      AS Loc.: 78     Date: 02/16/2010
Sample ID: 245783016|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    No        Stored
1      4.027      4.027      0.0435    0.0467    12:18:04  No
2      3.981      3.981      0.0430    0.0462    12:18:39  No
Mean:   4.004      4.004      0.0433
SD :    0.0330      0.0330      0.0004
%RSD:   0.8         0.8         0.8100

```

```

=====
Element: Hg      Seq. No.: 106      AS Loc.: 79     Date: 02/16/2010
Sample ID: 1202030035|i||947668|MB

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    No        Stored
1      -0.101     -0.101     -0.0003    0.0029    12:19:58  No
2      -0.097     -0.097     -0.0002    0.0029    12:20:33  No
Mean:   -0.099     -0.099     -0.0002
SD :    0.0025      0.0025      0.0000
%RSD:   2.6         2.6        10.9470

```

```

=====
Element: Hg      Seq. No.: 107      AS Loc.: 80     Date: 02/16/2010
Sample ID: 1202030036|i|10||LCS

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    No        Stored
1      3.591      3.591      0.0389    0.0420    12:21:53  No
2      3.644      3.644      0.0395    0.0426    12:22:27  No

```

Mean: 3.617 3.617 0.0392  
 SD : 0.0374 0.0374 0.0004  
 %RSD: 1.0 1.0 1.0122

=====  
 Element: Hg Seq. No.: 108 AS Loc.: 81 Date: 02/16/2010  
 Sample ID: 245797001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.623	0.623	0.0074	0.0106	12:23:47	No
2	0.616	0.616	0.0073	0.0105	12:24:22	No
Mean:	0.620	0.620	0.0074			
SD :	0.0051	0.0051	0.0001			
%RSD:	0.8	0.8	0.7335			

=====  
 Element: Hg Seq. No.: 109 AS Loc.: 82 Date: 02/16/2010  
 Sample ID: 1202030037|i|||DUP

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.620	0.620	0.0074	0.0105	12:25:43	No
2	0.624	0.624	0.0074	0.0106	12:26:18	No
Mean:	0.622	0.622	0.0074			
SD :	0.0029	0.0029	0.0000			
%RSD:	0.5	0.5	0.4151			

=====  
 Element: Hg Seq. No.: 110 AS Loc.: 83 Date: 02/16/2010  
 Sample ID: 1202030038|i|||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.732	2.732	0.0298	0.0329	12:27:39	No
2	2.737	2.737	0.0299	0.0330	12:28:14	No
Mean:	2.734	2.734	0.0298			
SD :	0.0039	0.0039	0.0000			
%RSD:	0.1	0.1	0.1394			

=====  
 Element: Hg Seq. No.: 111 AS Loc.: 84 Date: 02/16/2010  
 Sample ID: 1202030040|i|||MSD

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.724	2.724	0.0297	0.0329	12:29:36	No
2	2.712	2.712	0.0296	0.0327	12:30:10	No
Mean:	2.718	2.718	0.0297			
SD :	0.0084	0.0084	0.0001			
%RSD:	0.3	0.3	0.3016			

=====  
 Element: Hg Seq. No.: 112 AS Loc.: 85 Date: 02/16/2010  
 Sample ID: 1202030039|i|5||SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	0.0006	0.0037	12:31:32	No
2	-0.022	-0.022	0.0006	0.0037	12:32:07	No
Mean:	-0.023	-0.023	0.0006			
SD :	0.0012	0.0012	0.0000			
%RSD:	5.1	5.1	2.2371			

=====  
 Element: Hg Seq. No.: 113 AS Loc.: 86 Date: 02/16/2010  
 Sample ID: 245797002|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.599	0.599	0.0072	0.0103	12:33:29	No
2	0.591	0.591	0.0071	0.0102	12:34:04	No
Mean:	0.595	0.595	0.0071			
SD :	0.0056	0.0056	0.0001			
%RSD:	0.9	0.9	0.8312			

=====  
 Element: Hg Seq. No.: 114 AS Loc.: 7 Date: 02/16/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	4.799	4.799	0.0517	0.0549	12:35:29	No
2	4.854	4.854	0.0523	0.0555	12:36:04	No
Mean:	4.827	4.827	0.0520			
SD :	0.0387	0.0387	0.0004			
%RSD:	0.8	0.8	0.7899			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 115 AS Loc.: 8 Date: 02/16/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.069	-0.069	0.0001	0.0032	12:37:32	No
2	-0.073	-0.073	0.0000	0.0032	12:38:06	No
Mean:	-0.071	-0.071	0.0001			
SD :	0.0022	0.0022	0.0000			
%RSD:	3.1	3.1	43.7209			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 116 AS Loc.: 87 Date: 02/16/2010  
 Sample ID: 245797003|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.072	0.072	0.0016	0.0047	12:39:31	No
2	0.073	0.073	0.0016	0.0047	12:40:06	No
Mean:	0.072	0.072	0.0016			
SD :	0.0004	0.0004	0.0000			
%RSD:	0.5	0.5	0.2594			

=====  
 Element: Hg Seq. No.: 117 AS Loc.: 88 Date: 02/16/2010  
 Sample ID: 245797004|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.064	0.064	0.0015	0.0046	12:41:30	No
2	0.053	0.053	0.0014	0.0045	12:42:05	No
Mean:	0.058	0.058	0.0014			
SD :	0.0080	0.0080	0.0001			
%RSD:	13.6	13.6	5.9274			

=====  
 Element: Hg Seq. No.: 118 AS Loc.: 89 Date: 02/16/2010  
 Sample ID: 245797005|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.152	0.152	0.0024	0.0056	12:43:29	No
2	0.147	0.147	0.0024	0.0055	12:44:04	No

Mean: 0.150 0.150 0.0024  
 SD : 0.0031 0.0031 0.0000  
 %RSD: 2.1 2.1 1.3783

=====  
 Element: Hg Seq. No.: 119 AS Loc.: 90 Date: 02/16/2010  
 Sample ID: 245797006|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.287	0.287	0.0039	0.0070	12:45:28	No
2	0.279	0.279	0.0038	0.0069	12:46:03	No
Mean:	0.283	0.283	0.0038			
SD :	0.0061	0.0061	0.0001			
%RSD:	2.2	2.2	1.6969			

=====  
 Element: Hg Seq. No.: 120 AS Loc.: 91 Date: 02/16/2010  
 Sample ID: 245797007|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.175	0.175	0.0027	0.0058	12:47:29	No
2	0.163	0.163	0.0025	0.0057	12:48:04	No
Mean:	0.169	0.169	0.0026			
SD :	0.0083	0.0083	0.0001			
%RSD:	4.9	4.9	3.3966			

=====  
 Element: Hg Seq. No.: 121 AS Loc.: 92 Date: 02/16/2010  
 Sample ID: 245797008|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.230	0.230	0.0032	0.0064	12:49:27	No
2	0.225	0.225	0.0032	0.0063	12:50:02	No
Mean:	0.227	0.227	0.0032			
SD :	0.0036	0.0036	0.0000			
%RSD:	1.6	1.6	1.1799			

=====  
 Element: Hg Seq. No.: 122 AS Loc.: 93 Date: 02/16/2010  
 Sample ID: 245797009|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.040	0.040	0.0012	0.0044	12:51:21	No
2	0.030	0.030	0.0011	0.0043	12:51:55	No
Mean:	0.035	0.035	0.0012			
SD :	0.0066	0.0066	0.0001			
%RSD:	18.7	18.7	5.9240			

=====  
 Element: Hg Seq. No.: 123 AS Loc.: 94 Date: 02/16/2010  
 Sample ID: 245797010|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.682	0.682	0.0080	0.0112	12:53:15	No
2	0.674	0.674	0.0080	0.0111	12:53:50	No
Mean:	0.678	0.678	0.0080			
SD :	0.0053	0.0053	0.0001			
%RSD:	0.8	0.8	0.7066			

=====  
 Element: Hg Seq. No.: 124 AS Loc.: 95 Date: 02/16/2010  
 Sample ID: 245797011|i|||



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-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    Stored
1      0.233      0.233      0.0033    0.0064    12:55:10  No
2      0.232      0.232      0.0033    0.0064    12:55:45  No
Mean:   0.232      0.232      0.0033
SD  :    0.0008      0.0008      0.0000
%RSD:     0.4        0.4        0.2666
-----

```

```

=====
Element: Hg      Seq. No.: 125      AS Loc.: 96      Date: 02/16/2010
Sample ID: 245797012|i|||
-----

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Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    Stored
1      0.462      0.462      0.0057    0.0089    12:57:05  No
2      0.468      0.468      0.0058    0.0089    12:57:40  No
Mean:   0.465      0.465      0.0057
SD  :    0.0037      0.0037      0.0000
%RSD:     0.8        0.8        0.6892
-----

```

```

=====
Element: Hg      Seq. No.: 126      AS Loc.: 7       Date: 02/16/2010
Sample ID: CCV
-----

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```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    Stored
1      4.850      4.850      0.0523    0.0554    12:59:04  No
2      4.800      4.800      0.0517    0.0549    12:59:39  No
Mean:   4.825      4.825      0.0520
SD  :    0.0352      0.0352      0.0004
%RSD:     0.7        0.7        0.7176
QC value within specified limits.
-----

```

```

=====
Element: Hg      Seq. No.: 127      AS Loc.: 8       Date: 02/16/2010
Sample ID: CCB
-----

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Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    Stored
1      -0.113     -0.113     -0.0004    0.0028    13:01:06  No
2      -0.101     -0.101     -0.0003    0.0029    13:01:41  No
Mean:   -0.107     -0.107     -0.0003
SD  :    0.0080      0.0080      0.0001
%RSD:     7.5        7.5       26.0491
QC value within specified limits.
-----

```

```

=====
Element: Hg      Seq. No.: 128      AS Loc.: 97      Date: 02/16/2010
Sample ID: 245797013|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    Stored
1      0.209      0.209      0.0030    0.0062    13:03:06  No
2      0.205      0.205      0.0030    0.0061    13:03:41  No
Mean:   0.207      0.207      0.0030
SD  :    0.0025      0.0025      0.0000
%RSD:     1.2        1.2        0.8687
-----

```

```

=====
Element: Hg      Seq. No.: 129      AS Loc.: 98      Date: 02/16/2010
Sample ID: 245797014|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L      µg/L      Signal    Height    Stored
1      0.032      0.032      0.0011    0.0043    13:05:03  No
2      0.030      0.030      0.0011    0.0043    13:05:38  No
-----

```

Mean: 0.031 0.031 0.0011  
 SD : 0.0009 0.0009 0.0000  
 %RSD: 2.8 2.8 0.8066

=====  
 Element: Hg Seq. No.: 130 AS Loc.: 99 Date: 02/16/2010  
 Sample ID: 245797015|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.147	0.147	0.0024	0.0055	13:07:00	No
2	0.140	0.140	0.0023	0.0054	13:07:34	No
Mean:	0.144	0.144	0.0023			
SD :	0.0053	0.0053	0.0001			
%RSD:	3.7	3.7	2.4010			

=====  
 Element: Hg Seq. No.: 131 AS Loc.: 100 Date: 02/16/2010  
 Sample ID: 245797016|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.172	0.172	0.0026	0.0058	13:08:56	No
2	0.169	0.169	0.0026	0.0057	13:09:32	No
Mean:	0.171	0.171	0.0026			
SD :	0.0023	0.0023	0.0000			
%RSD:	1.4	1.4	0.9349			

=====  
 Element: Hg Seq. No.: 132 AS Loc.: 101 Date: 02/16/2010  
 Sample ID: 245797017|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.208	0.208	0.0030	0.0061	13:10:54	No
2	0.203	0.203	0.0030	0.0061	13:11:30	No
Mean:	0.205	0.205	0.0030			
SD :	0.0031	0.0031	0.0000			
%RSD:	1.5	1.5	1.0940			

=====  
 Element: Hg Seq. No.: 133 AS Loc.: 102 Date: 02/16/2010  
 Sample ID: 245797018|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.227	0.227	0.0032	0.0064	13:12:53	No
2	0.221	0.221	0.0032	0.0063	13:13:28	No
Mean:	0.224	0.224	0.0032			
SD :	0.0040	0.0040	0.0000			
%RSD:	1.8	1.8	1.3286			

=====  
 Element: Hg Seq. No.: 134 AS Loc.: 103 Date: 02/16/2010  
 Sample ID: 245797019|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.274	0.274	0.0037	0.0069	13:14:52	No
2	0.262	0.262	0.0036	0.0067	13:15:27	No
Mean:	0.268	0.268	0.0037			
SD :	0.0089	0.0089	0.0001			
%RSD:	3.3	3.3	2.5883			

=====  
 Element: Hg Seq. No.: 135 AS Loc.: 7 Date: 02/16/2010  
 Sample ID: CCV

```
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time  Peak
#      µg/L      µg/L      Signal    Height    Stored
1      4.825      4.825      0.0520    0.0551    13:16:52  No
2      4.872      4.872      0.0525    0.0556    13:17:27  No
Mean:   4.848      4.848      0.0523
SD :    0.0330      0.0330      0.0004
%RSD:   0.7        0.7        0.6699
QC value within specified limits.
```

```
=====
Element: Hg      Seq. No.: 136      AS Loc.: 8      Date: 02/16/2010
Sample ID: CCB
```

```
-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time  Peak
#      µg/L      µg/L      Signal    Height    Stored
1      -0.118     -0.118     -0.0004    0.0027    13:18:55  No
2      -0.112     -0.112     -0.0004    0.0028    13:19:30  No
Mean:   -0.115     -0.115     -0.0004
SD :    0.0040      0.0040      0.0000
%RSD:   3.5        3.5       10.2569
QC value within specified limits.
```

# Miscellaneous

# Prep LogBook

Analyst: FGA  
Batch: 948064  
Lab SOP: GL-MA-E-009 REV# 19

Verified by:

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202030958	U1062540-1	.521	g
MS	1202030956	U1100120-01	.25	mL
MS	1202030956	U1100120-06	.25	mL
MSD	1202030957	U1100120-01	.25	mL
MSD	1202030957	U1100120-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202030953		SW846 3050B	08-FEB-2010 14:00	0.546 g	50 mL	91.57509	SOIL
LCS	1202030958		SW846 3050B	08-FEB-2010 14:00	0.521 g	50 mL	95.96929	SOIL
SAMPLE	245797001		SW846 3050B	08-FEB-2010 14:00	0.522 g	50 mL	95.78544	SOIL
DUP	1202030954	245797001	SW846 3050B	08-FEB-2010 14:00	0.515 g	50 mL	97.08738	SOIL
SDILT	1202030955	245797001	SW846 3050B	08-FEB-2010 14:00	0.522 g	50 mL	95.78544	SOIL
MS	1202030956	245797001	SW846 3050B	08-FEB-2010 14:00	0.534 g	50 mL	93.63296	SOIL
MSD	1202030957	245797001	SW846 3050B	08-FEB-2010 14:00	0.528 g	50 mL	94.69697	SOIL
SAMPLE	245797002		SW846 3050B	08-FEB-2010 14:00	0.541 g	50 mL	92.42144	SOIL
SAMPLE	245797003		SW846 3050B	08-FEB-2010 14:00	0.502 g	50 mL	99.60159	SOIL
SAMPLE	245797004		SW846 3050B	08-FEB-2010 14:00	0.518 g	50 mL	96.5251	SOIL
SAMPLE	245797005		SW846 3050B	08-FEB-2010 14:00	0.553 g	50 mL	90.41591	SOIL
SAMPLE	245797006		SW846 3050B	08-FEB-2010 14:00	0.51 g	50 mL	98.03922	SOIL
SAMPLE	245797007		SW846 3050B	08-FEB-2010 14:00	0.515 g	50 mL	97.08738	SOIL
SAMPLE	245797008		SW846 3050B	08-FEB-2010 14:00	0.544 g	50 mL	91.91176	SOIL
SAMPLE	245797009		SW846 3050B	08-FEB-2010 14:00	0.529 g	50 mL	94.51796	SOIL
SAMPLE	245797010		SW846 3050B	08-FEB-2010 14:00	0.504 g	50 mL	99.20635	SOIL
SAMPLE	245797011		SW846 3050B	08-FEB-2010 14:00	0.508 g	50 mL	98.4252	SOIL
SAMPLE	245797012		SW846 3050B	08-FEB-2010 14:00	0.505 g	50 mL	99.00999	SOIL
SAMPLE	245797013		SW846 3050B	08-FEB-2010 14:00	0.515 g	50 mL	97.08738	SOIL
SAMPLE	245797014		SW846 3050B	08-FEB-2010 14:00	0.511 g	50 mL	97.84736	SOIL
SAMPLE	245797015		SW846 3050B	08-FEB-2010 14:00	0.51 g	50 mL	98.03922	SOIL
SAMPLE	245797016		SW846 3050B	08-FEB-2010 14:00	0.534 g	50 mL	93.63296	SOIL
SAMPLE	245797017		SW846 3050B	08-FEB-2010 14:00	0.519 g	50 mL	96.33911	SOIL
SAMPLE	245797018		SW846 3050B	08-FEB-2010 14:00	0.53 g	50 mL	94.33962	SOIL
SAMPLE	245797019		SW846 3050B	08-FEB-2010 14:00	0.518 g	50 mL	96.5251	SOIL

Comments Brown,clumpy soil.

Reagent/Solvent: Lot ID Amount Description  
1265209 10 mL HYDROCHLORIC ACID

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**Prep LogBook**

1264396 1.25 mL Nitric Acid CONC.

# Prep LogBook

Analyst: FGA  
 Batch: 948066  
 Lab SOP: GL-MA-E-009 REV# 19

Verified by:

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202030964	U1062540-MS	.512	g
MS	1202030962	U1091015-A	.5	mL
MS	1202030962	U1091015-B	.5	mL
MSD	1202030963	U1091015-A	.5	mL
MSD	1202030963	U1091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202030959		SW846 3050B	08-FEB-2010 14:00	0.518 g	50 mL	96.5251	SOIL
LCS	1202030964		SW846 3050B	08-FEB-2010 14:00	0.512 g	50 mL	97.65625	SOIL
SAMPLE	245797001		SW846 3050B	08-FEB-2010 14:00	0.506 g	50 mL	98.81423	SOIL
DUP	1202030960	245797001	SW846 3050B	08-FEB-2010 14:00	0.511 g	50 mL	97.84736	SOIL
SDILT	1202030961	245797001	SW846 3050B	08-FEB-2010 14:00	0.506 g	50 mL	98.81423	SOIL
MS	1202030962	245797001	SW846 3050B	08-FEB-2010 14:00	0.511 g	50 mL	97.84736	SOIL
MSD	1202030963	245797001	SW846 3050B	08-FEB-2010 14:00	0.525 g	50 mL	95.2381	SOIL
SAMPLE	245797002		SW846 3050B	08-FEB-2010 14:00	0.537 g	50 mL	93.10987	SOIL
SAMPLE	245797003		SW846 3050B	08-FEB-2010 14:00	0.521 g	50 mL	95.96929	SOIL
SAMPLE	245797004		SW846 3050B	08-FEB-2010 14:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	245797005		SW846 3050B	08-FEB-2010 14:00	0.522 g	50 mL	95.78544	SOIL
SAMPLE	245797006		SW846 3050B	08-FEB-2010 14:00	0.516 g	50 mL	96.89922	SOIL
SAMPLE	245797007		SW846 3050B	08-FEB-2010 14:00	0.551 g	50 mL	90.7441	SOIL
SAMPLE	245797008		SW846 3050B	08-FEB-2010 14:00	0.521 g	50 mL	95.96929	SOIL
SAMPLE	245797009		SW846 3050B	08-FEB-2010 14:00	0.531 g	50 mL	94.16196	SOIL
SAMPLE	245797010		SW846 3050B	08-FEB-2010 14:00	0.506 g	50 mL	98.81423	SOIL
SAMPLE	245797011		SW846 3050B	08-FEB-2010 14:00	0.506 g	50 mL	98.81423	SOIL
SAMPLE	245797012		SW846 3050B	08-FEB-2010 14:00	0.511 g	50 mL	97.84736	SOIL
SAMPLE	245797013		SW846 3050B	08-FEB-2010 14:00	0.541 g	50 mL	92.42144	SOIL
SAMPLE	245797014		SW846 3050B	08-FEB-2010 14:00	0.535 g	50 mL	93.45794	SOIL
SAMPLE	245797015		SW846 3050B	08-FEB-2010 14:00	0.549 g	50 mL	91.07468	SOIL
SAMPLE	245797016		SW846 3050B	08-FEB-2010 14:00	0.518 g	50 mL	96.5251	SOIL
SAMPLE	245797017		SW846 3050B	08-FEB-2010 14:00	0.504 g	50 mL	99.20635	SOIL
SAMPLE	245797018		SW846 3050B	08-FEB-2010 14:00	0.505 g	50 mL	99.0099	SOIL
SAMPLE	245797019		SW846 3050B	08-FEB-2010 14:00	0.515 g	50 mL	97.08738	SOIL

Comments: Brown,clumpy soil.

Reagent/Solvent Lot ID Amount Description  
 1203655-02 1.5 mL Hydrogen Peroxide 30%

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**Prep LogBook**

1264396                      5 mL                      Nitric Acid CONC.



# Prep LogBook

Analyst: TXB3 Verified by: \_\_\_\_\_

Batch: 947667

Lab SOP: GL-MA-E-010 REV# 23

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Type	Sample Id	Lot. Id	Spike Amount	Spike Units
MB	1202030035		SW846 7471A Prep	15-FEB-2010 16:45	LCS	1202030036	U1031809A	.2	g
LCS	1202030036		SW846 7471A Prep	15-FEB-2010 16:45	MS	1202030038	WHG100215-14	.3	mL
SAMPLE	245797001		SW846 7471A Prep	15-FEB-2010 16:45	MSD	1202030040	WHG100215-14	.3	mL
DUP	1202030037	245797001	SW846 7471A Prep	15-FEB-2010 16:45					
MS	1202030038	245797001	SW846 7471A Prep	15-FEB-2010 16:45					
MSD	1202030040	245797001	SW846 7471A Prep	15-FEB-2010 16:45					
SDILT	1202030039	245797001	SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797002		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797003		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797004		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797005		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797006		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797007		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797008		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797009		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797010		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797011		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797012		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797013		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797014		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797015		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797016		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797017		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797018		SW846 7471A Prep	15-FEB-2010 16:45					
SAMPLE	245797019		SW846 7471A Prep	15-FEB-2010 16:45					

Reagent/Solvent Lot ID	Amount	Description
1264796-A	1.125 mL	Hydrochloric Acid Conc.
1257474-1	.375 mL	NITRIC ACID
1264984-C	7.5 mL	5% KMnO4 solution
1255532-C	2 mL	Hg reducing agent

Comments Sample 245797001 is a brown dry rocky soil.  
Digestion Start Date: 15-FEB-10 16:45  
Digestion End Date: 15-FEB-10 17:15

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Prep LogBook

WHG100215-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100215-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG100215-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100215-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100215-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100215-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

### DATA EXCEPTION REPORT

<b>Mo. Day Yr.</b> 17-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> 948067	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 245797(10-1471)</b> <b>Application Issues:</b> Failed Recovery for MS/PS Failed Recovery for MSD/PSD			
<b>Specification and Requirements</b>		<b>DER Disposition:</b>	
<b>Exception Description:</b>  1. Failed Recovery for MS/PS: QC 1202030962MS  2. Failed Recovery for MSD/PSD: QC 1202030963MSD		The matrix spike and matrix spike duplicate recovery failed outside of the control limits for Se and Ni 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:**

Samantha Jacobs 18-FEB-10

**Data Validator/Group Leader:**

Elizabeth Janssen 19-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	<b>Test / Method:</b> SW846 3050B/6010B	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 948065	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 245797(10-1471)</b> <b>Application Issues:</b> Failed Recovery for MS/PS Failed Recovery for MSD/PSD			
<b>Specification and Requirements</b>		<b>DER Disposition:</b>	
<b>Exception Description:</b>  1. Failed Recovery for MS/PS: QC 1202030956MS  2. Failed Recovery for MSD/PSD: QC 1202030957MSD		1. The matrix spike recovery failed outside of the control limits for barium, potassium, and magnesium 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 potassium, manganese, and magnesium 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 18-FEB-10

**Data Validator/Group Leader:**

Eric Lawson 18-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:** UI062540-I      **Opened:** 12-JUN-09      **Amount :** 80 g  
**Name:** ICP SOIL SRM      **Received:** 12-JUN-09      **Lot Number :** D062-540  
**Type:** Source Material      **Expires:** 31-JAN-12  
**Employee:** Bryan Davis  
**Supplier:** ERA  
**Description:** Metals Soil LCS SRM ICP/Hg  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	173 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.7 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Magnesium	4000 mg/kg
Manganese	558 mg/kg	Mercury	8.46 mg/kg
Molybdenum	48.6 mg/kg	Nickel	134 mg/kg
Phosphorous	736 mg/kg	Potassium	4300 mg/kg
Selenium	286 mg/kg	Silica	2591 mg/kg
Silicon	1211 mg/kg	Silver	30.1 mg/kg
Sodium	1020 mg/kg	Strontium	227 mg/kg
Sulfur	385 mg/kg	Thallium	121 mg/kg
Tin	104 mg/kg	Titanium	462 mg/kg
Vanadium	115 mg/kg	Zinc	594 mg/kg

**Serial ID:** UI062540-MS      **Opened:** 12-JUN-09      **Lot Number :** D062-540  
**Name:** ICPMS SOIL SRM      **Received:** 12-JUN-09  
**Type:** Source Material      **Expires:** 31-JAN-12  
**Employee:** Bryan Davis  
**Supplier:** ERA  
**Description:** Metals Soil LCS SRM ICPMS  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	67.4 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.6 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Lithium	10.6 mg/kg
Magnesium	4000 mg/kg	Manganese	558 mg/kg
Mercury	8.46 mg/kg	Molybdenum	48.6 mg/kg
Nickel	134 mg/kg	Phosphorous	755 mg/kg
Potassium	4300 mg/kg	Selenium	286 mg/kg
Silver	30.1 mg/kg	Sodium	1020 mg/kg

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Strontium	227 mg/kg	Thallium	121 mg/kg
Thorium	9.84 mg/kg	Tin	104 mg/kg
Titanium	462 mg/kg	Uranium	2.13 mg/kg
Uranium-235	.0153 mg/kg	Uranium-238	2.11 mg/kg
Vanadium	92.4 mg/kg	Zinc	594 mg/kg
Zirconium	10.6 mg/kg		

**Serial ID:** 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%IN5%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:** Q2SI  
**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:** Q2si  
**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:** 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

**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:** O2si  
**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

Analyte	Concentration	Analyte	Concentration
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:** 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

Analyte	Concentration	Analyte	Concentration
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:** UI100114-49.20      **Opened:** 17-FEB-10      **Amount :** 100 ml  
**Name:** Trace ICP ICSAB      **Received:** 18-JAN-10      **Catalog Number :** 160066-04  
**Type:** Source Material      **Expires:** 18-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:** Q2SI  
**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:** Q2SI  
**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:** Q2SI  
**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:** ICPMSCalSPIKEB      **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:** ICPMSCalSPIKEA      **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:** ICPMSCalSPIKEC      **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:** IHG100215-01      **Opened:** 15-FEB-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 15-FEB-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 16-FEB-10      **Solvent :** 1mL HNO3 + TypeI 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:** IHG100215-02      **Opened:** 15-FEB-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Intermediate      **Expires:** 16-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:** WHG100215-07      **Opened:** 15-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS0.2CRA      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 22-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.	Aliquot	Final Vol.	Final Conc.
IHG100215-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

**Serial ID:** WHG100215-08      **Opened:** 15-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS0.5      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 22-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.	Aliquot	Final Vol.	Final Conc.
IHG100215-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

**Serial ID:** WHG100215-09      **Opened:** 15-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCALS2.0      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 22-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.	Aliquot	Final Vol.	Final Conc.
IHG100215-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

# Standard Logbook

**Serial ID:** WHG100215-10      **Opened:** 15-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL5.0CCV      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 22-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.
IHG100215-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

**Serial ID:** WHG100215-11      **Opened:** 15-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKCAL5.0      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 22-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.
IHG100215-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

**Serial ID:** WHG100215-12      **Opened:** 15-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGWORKS5.0ICV      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 22-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.
IHG100215-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

**Serial ID:** WHG100215-14      **Opened:** 15-FEB-10      **Pipet Id :** Hg1289245  
**Name:** MHGSOILMSSPIKE      **Received:** 15-FEB-10      **Solvent :** 2% HNO3-1257474  
**Type:** Working      **Expires:** 22-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:** WI100217-42      **Opened:** 17-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.1 PPM STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 18-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1270010  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.1 PPM CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100217-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100217-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100217-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100217-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100217-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100217-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100217-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100217-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100217-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100217-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100217-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100217-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

# Standard Logbook

**Serial ID:** WI100217-43      **Opened:** 17-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.5/CCV STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 18-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1270010  
**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:** WI100217-44      **Opened:** 17-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP SCAL 1.0      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 18-FEB-10      **Solvent :** 3%HCL and 1 %HNO3-1270010  
**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:** WI100217-45      **Opened:** 17-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP S-10 STD      **Received:** 22-APR-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 18-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1270010  
**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:** WI100217-46      **Opened:** 17-FEB-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 18-FEB-10      **Solvent :** 3%HCL AND 1%HNO3-1270010  
**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
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.	Aliquot	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:** WI100217-47      **Opened:** 17-FEB-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 18-FEB-10      **Solvent :** 3%HCL &1%HNO3-1270010  
**Employee:** Helen Camello  
**Supplier:** 02sj  
**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
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.	Aliquot	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:** 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.	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
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.	Aliquot	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:** 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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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.	Allquot	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:** 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.	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:** 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.	Aliquot	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.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

# 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:** WMS100212-70      **Opened:** 12-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS LINEAR RANGE ST      **Received:** 12-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 13-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**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.	Alliquot	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:** 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.	Alliquot	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



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** 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.	Aliquot	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  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
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:** WMS100213-70      **Opened:** 13-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS LINEAR RANGE ST      **Received:** 13-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 14-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1266278  
**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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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
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:** 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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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:** 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.	Aliquot	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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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
WMS100215-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100215-05      **Opened:** 15-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **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 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



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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:** 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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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:** 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.	Aliquot	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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
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:** WMS100216-04      **Opened:** 16-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 16-FEB-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 17-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1269792  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

# Standard Logbook

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
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:** WMS100216-04A      **Opened:** 16-FEB-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 16-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 17-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.	Aliquot	Final Vol.	Final Conc.
WMS100216-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100216-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100216-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100216-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100216-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100216-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100216-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100216-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100216-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100216-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100216-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100216-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100216-05      **Opened:** 16-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 16-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expres:** 17-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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

**Serial ID:** WMS100216-06      **Opened:** 16-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 16-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 17-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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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

**Serial ID:** WMS100216-07      **Opened:** 16-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 16-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 17-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.	Aliquot	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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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:** WMS100216-08      **Opened:** 16-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 16-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 17-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
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



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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:** WMS100217-04      **Opened:** 17-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 17-FEB-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 18-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.	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
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

# Standard Logbook

<b>Parent Material</b>	<b>Analyte</b>	<b>Parent Conc.</b>	<b>Aliquot</b>	<b>Final Vol.</b>	<b>Final Conc.</b>
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

<b>Serial ID:</b> <u>WMS100217-04A</u>	<b>Opened:</b> <u>17-FEB-10</u>	<b>Balance Id :</b> <u>4025216</u>
<b>Name:</b> <u>ICPMS Cal Standard 10</u>	<b>Received:</b> <u>17-FEB-10</u>	<b>Pipet Id :</b> <u>3541598</u>
<b>Type:</b> <u>Working</u>	<b>Expires:</b> <u>18-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 Calibration Standard (10 ppb)</u>		
<b>Comments:</b> <u>None</u>		

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100217-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100217-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100217-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100217-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100217-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100217-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100217-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100217-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100217-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100217-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100217-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

**Serial ID:** WMS100217-05      **Opened:** 17-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 17-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 18-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**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
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:** WMS100217-06      **Opened:** 17-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 17-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 18-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:** WMS100217-07      **Opened:** 17-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 17-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 18-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:** WMS100217-08      **Opened:** 17-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 17-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 18-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:** 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:** 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

**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

# Standard Logbook

**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:** 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:** 1264984-C      **Opened:** 04-FEB-10      **Balance Id :** BAL-002  
**Name:** B-KMnO4-MER      **Received:** 04-FEB-10  
**Type:** Reagent/Solvent      **Expires:** 20-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** 5% KMnO4 solution  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

**Serial ID:** 1265209      **Opened:** 04-FEB-10      **Lot Number :** J02039  
**Name:** I-HCL      **Received:** 04-FEB-10      **Preservative\_Id :** 5 none  
**Type:** Reagent/Solvent      **Expires:** 04-FEB-11  
**Employee:** Bryan Davis  
**Supplier:** J.T. BAKER  
**Description:** HYDROCHLORIC ACID  
**Comments:** None



# Standard Logbook

**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:** 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

**Serial ID:** 1270010      **Opened:** 15-FEB-10      **Amount :** 20 L  
**Name:** B-ICP-RINSE SOLN      **Received:** 05-FEB-10      **Lot Number :** H04040+G34050  
**Type:** Reagent/Solvent      **Expires:** 21-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 10-1471**

**Method/Analysis Information**

**Product:**               Cyanide, Total

**Analytical Batch:**   947315 and 947318   **Method:**   SW9012A Cyanide and Total

**Prep Batch :**         947314 and 947317   **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>
245797001	RE15-10-7888
245797002	RE15-10-7890
245797003	RE15-10-7886
245797004	RE15-10-7889
245797005	RE15-10-7885
245797006	RE15-10-7882
245797007	RE15-10-7887
245797008	RE15-10-7881
245797009	RE15-10-7951
245797010	RE15-10-7950
245797011	RE15-10-7947
245797012	RE15-10-7944
245797013	RE15-10-7948
245797014	RE15-10-7941
245797015	RE15-10-7949
245797016	RE15-10-7946
245797017	RE15-10-7942
245797018	RE15-10-7945
245797019	RE15-10-7943
1202029242	Method Blank (MB)
1202029243	245688011(RE15-10-7940) Sample Duplicate (DUP)
1202029244	245688012(RE15-10-7937) Sample Duplicate (DUP)
1202029245	245688011(RE15-10-7940) Matrix Spike (MS)
1202029246	245688012(RE15-10-7937) Matrix Spike (MS)
1202029247	245688011(RE15-10-7940) Matrix Spike Duplicate (MSD)
1202029248	245688012(RE15-10-7937) Matrix Spike Duplicate (MSD)
1202029249	Laboratory Control Sample (LCS)
1202029252	Method Blank (MB)
1202029253	245797007(RE15-10-7887) Sample Duplicate (DUP)
1202029254	245797008(RE15-10-7881) Sample Duplicate (DUP)
1202029255	245797007(RE15-10-7887) Matrix Spike (MS)
1202029256	245797008(RE15-10-7881) Matrix Spike (MS)
1202029257	245797007(RE15-10-7887) Matrix Spike Duplicate (MSD)
1202029258	245797008(RE15-10-7881) Matrix Spike Duplicate (MSD)
1202029259	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 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) Designation**

The following samples were selected for QC analysis: 245688011 (RE15-10-7940), 245688012 (RE15-10-7937)- Batch 947315, 245797007 (RE15-10-7887) and 245797008 (RE15-10-7881)- Batch 947318.

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The spike recovery falls outside of the client specified acceptance limits due to matrix interference: 1202029246 (RE15-10-7937)- Batch 947315.

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

The spike recovery duplicate falls outside of the client specified acceptance limits due to matrix interference: 1202029247 (RE15-10-7940)- Batch 947315. 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. 1202029258 (RE15-10-7881)- Batch 947318.

**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. 1202029243 (RE15-10-7940), 1202029244 (RE15-10-7937)- Batch 947315, 1202029254 (RE15-10-7881) and 245797008 (RE15-10-7881)- Batch 947318.

**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 high concentration: 1202029249 (LCS)- Batch 947315 and 1202029259 (LCS)- Batch 947318.

**Sample Re-analysis**

The following sample was re-analyzed due to instrument failure: 1202029242 (MB)- Batch 947315.

**Miscellaneous Information****Data Exception (DER) Documentation**

The following DERs were generated for this SDG: 788611 1202029246 (RE15-10-7937) and 1202029248 (RE15-10-7937)- Batch 947315. The following DER was generated for this SDG: 788675 1202029258 (RE15-10-7881)- Batch 947318.

**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: 22Feb10



# **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: 10-1471 GEL Work Order: 245797

**The Qualifiers in this report are defined as follows:**

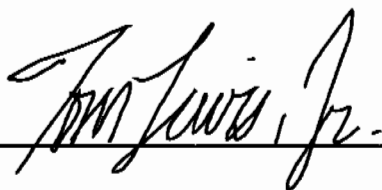
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

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

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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 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7888  
Sample ID: 245797001  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 9.32%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	69.4	255	ug/kg	1	AXC2	02/08/10	1355	947315	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7890  
Sample ID: 245797002  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 9.81%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	73.9	272	ug/kg	1	AXC2	02/08/10	1356	947315	1

### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7886  
Sample ID: 245797003  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 6.53%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	68.6	252	ug/kg	1	AXC2	02/08/10	1357	947315	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7889  
Sample ID: 245797004  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 37.1%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	108	398	ug/kg	1	AXC2	02/08/10	1358	947315	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7885  
Sample ID: 245797005  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 33.1%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	J	154	94.1	346	ug/kg	1	AXC2	02/08/10	1359	947315	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7882  
Sample ID: 245797006  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 12.5%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	77.7	286	ug/kg	1	AXC2	02/08/10	1359	947315	1

### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/04/10	1542	947314

### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	



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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 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7887  
Sample ID: 245797007  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 33%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	87.5	322	ug/kg	1	AXC2	02/08/10	1520	947318	1

### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7881  
Sample ID: 245797008  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 37.1%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	J	298	106	390	ug/kg	1	AXC2	02/08/10	1524	947318	1

### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7951  
Sample ID: 245797009  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 19.3%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	78.0	287	ug/kg	1	AXC2	02/08/10	1527	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7950  
Sample ID: 245797010  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 19.8%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	78.5	289	ug/kg	1	AXC2	02/08/10	1528	947318	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7947  
Sample ID: 245797011  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 36.2%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	122	105	384	ug/kg	1	AXC2	02/08/10	1533	947318	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: **LANL ER Project**

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7944  
Sample ID: 245797012  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 7.21%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	73.3	269	ug/kg	1	AXC2	02/08/10	1534	947318	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	SW846 9012A		

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7948  
Sample ID: 245797013  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 7.88%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	71.0	261	ug/kg	1	AXC2	02/08/10	1534	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7941  
Sample ID: 245797014  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 23.7%

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 "Dry Weight Corrected"</i>											
Cyanide, Total		324	82.5	303	ug/kg	1	AXC2	02/08/10	1535	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	



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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7949  
Sample ID: 245797015  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 40.8%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	115	422	ug/kg	1	AXC2	02/08/10	1536	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7946  
Sample ID: 245797016  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 8.2%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	71.2	262	ug/kg	1	AXC2	02/08/10	1537	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7942  
Sample ID: 245797017  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 10.9%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	70.7	260	ug/kg	1	AXC2	02/08/10	1538	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7945  
Sample ID: 245797018  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 39.1%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	234	103	380	ug/kg	1	AXC2	02/08/10	1539	947318	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 19, 2010

Client SDG: 10-1471

Client Sample ID: RE15-10-7943  
Sample ID: 245797019  
Matrix: R  
Collect Date: 26-JAN-10 12:00  
Receive Date: 29-JAN-10  
Collector: Client  
Moisture: 7.55%

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 "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	65.7	241	ug/kg	1	AXC2	02/08/10	1540	947318	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/05/10	1402	947317

### The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	SW846 9012A		

# **Quality Control Summary**

# GEL LABORATORIES LLC

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## QC Summary

Report Date: February 19, 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: 245797

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Flow Injection Analysis</b>											
Batch	947315										
QC1202029243	245688011	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	02/08/10	13:43
QC1202029244	245688012	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A			02/08/10	13:47
QC1202029249	LCS										
Cyanide, Total	67900				66500	ug/kg	97.9	(32%-157%)		02/08/10	13:28
QC1202029242	MB										
Cyanide, Total			U		250	ug/kg				02/08/10	13:40
QC1202029245	245688011	MS									
Cyanide, Total	4530	U	ND		3920	ug/kg	86.6	(26%-158%)		02/08/10	13:44
QC1202029246	245688012	MS									
Cyanide, Total	6070	U	ND		4200	ug/kg	68.9	(26%-158%)		02/08/10	13:48
QC1202029247	245688011	MSD									
Cyanide, Total	5050	U	ND		3960	ug/kg	0.972	78.4	(0%-30%)	02/08/10	13:45
QC1202029248	245688012	MSD									
Cyanide, Total	5960	U	ND		4260	ug/kg	1.29	71.1	(0%-30%)	02/08/10	13:52
Batch	947318										
QC1202029253	245797007	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	02/08/10	15:21
QC1202029254	245797008	DUP									
Cyanide, Total		J	298	U	ND	ug/kg	200 ^			02/08/10	15:25
QC1202029259	LCS										
Cyanide, Total	67900				72500	ug/kg	107	(32%-157%)		02/08/10	15:16
QC1202029252	MB										
Cyanide, Total			U		250	ug/kg				02/08/10	15:15
QC1202029255	245797007	MS									
Cyanide, Total	7470	U	ND		6230	ug/kg	83.5	(26%-158%)		02/08/10	15:22
QC1202029256	245797008	MS									
Cyanide, Total	7640	J	298		6810	ug/kg	85.2	(26%-158%)		02/08/10	15:25
QC1202029257	245797007	MSD									
Cyanide, Total	7180	U	ND		6060	ug/kg	2.85	84.4	(0%-30%)	02/08/10	15:23
QC1202029258	245797008	MSD									
Cyanide, Total	7360	J	298		5790	ug/kg	16.2	74.7	(0%-30%)	02/08/10	15:26

### 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

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### QC Summary

Workorder: 245797

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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										

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: 19-FEB-2010 11:09

**GEL Laboratories LLC**

**Contract: LANL01004**

**SDG #: 10-1471**

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
<b>ICV</b>	<b>08-FEB-2010 13:22:34</b>	<b>OM_2-8-2010_13-14-40</b>	<b>151</b>	<b>150</b>	<b>101</b>	<b>(90%-110%)</b>	<b>Yes</b>
CCV	08-FEB-2010 13:36:51	OM_2-8-2010_13-14-40	105	100	105	(90%-110%)	Yes
CCV	08-FEB-2010 13:49:17	OM_2-8-2010_13-14-40	105	100	105	(90%-110%)	Yes
CCV	08-FEB-2010 14:01:41	OM_2-8-2010_13-14-40	105	100	105	(90%-110%)	Yes
CCV	08-FEB-2010 15:04:19	OM_2-8-2010_13-14-40	104	100	104	(90%-110%)	Yes
CCV	08-FEB-2010 15:16:55	OM_2-8-2010_13-14-40	104	100	104	(90%-110%)	Yes
CCV	08-FEB-2010 15:29:29	OM_2-8-2010_13-14-40	105	100	105	(90%-110%)	Yes
CCV	08-FEB-2010 15:41:58	OM_2-8-2010_13-14-40	105	100	105	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
<b>ICB</b>	<b>08-FEB-2010 13:24:24</b>	<b>OM_2-8-2010_13-14-40</b>	<b>-1.45</b>	<b>10</b>	<b>Yes</b>
CCB	08-FEB-2010 13:38:42	OM_2-8-2010_13-14-40	-1.4	10	Yes
CCB	08-FEB-2010 13:51:07	OM_2-8-2010_13-14-40	-1.92	10	Yes
CCB	08-FEB-2010 14:03:31	OM_2-8-2010_13-14-40	-1.86	10	Yes
CCB	08-FEB-2010 15:06:09	OM_2-8-2010_13-14-40	-1.82	10	Yes
CCB	08-FEB-2010 15:18:45	OM_2-8-2010_13-14-40	-1.49	10	Yes
CCB	08-FEB-2010 15:31:18	OM_2-8-2010_13-14-40	-1.86	10	Yes
CCB	08-FEB-2010 15:43:48	OM_2-8-2010_13-14-40	-1.82	10	Yes

# Cyanide, Total

# Prep LogBook

Analyst: AXSS  
 Batch: 947314  
 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	Spike Amount	Spike Units
MB	1202029242		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.5 g	25 mL	50		g
LCS	1202029249		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.25 g	25 mL	100		mL
SAMPLE	245682001		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
SAMPLE	245682002		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
SAMPLE	245682003		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.51 g	25 mL	49.01961		mL
SAMPLE	245682004		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.55 g	25 mL	45.45455		mL
SAMPLE	245682005		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
SAMPLE	245682006		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
SAMPLE	245682007		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.51 g	25 mL	49.01961		mL
SAMPLE	245682008		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
SAMPLE	245682009		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.55 g	25 mL	45.45455		mL
SAMPLE	245682010		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.57 g	25 mL	43.85965		mL
SAMPLE	245688011	245688011	SW846 9010B Prep	04-FEB-2010 15:42	>12	0.56 g	25 mL	44.64286		mL
DUP	1202029243		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.54 g	25 mL	46.2963		mL
MS	1202029245	245688011	SW846 9010B Prep	04-FEB-2010 15:42	>12	0.58 g	25 mL	43.10345		mL
MSD	1202029247	245688011	SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
SAMPLE	245688012		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
DUP	1202029244	245688012	SW846 9010B Prep	04-FEB-2010 15:42	>12	0.5 g	25 mL	50		mL
MS	1202029246	245688012	SW846 9010B Prep	04-FEB-2010 15:42	>12	0.54 g	25 mL	46.2963		mL
MSD	1202029248	245688012	SW846 9010B Prep	04-FEB-2010 15:42	>12	0.55 g	25 mL	45.45455		mL
SAMPLE	245688013		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.51 g	25 mL	49.01961		mL
SAMPLE	245688014		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.52 g	25 mL	48.07692		mL
SAMPLE	245797001		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.54 g	25 mL	46.2963		mL
SAMPLE	245797002		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.51 g	25 mL	49.01961		mL
SAMPLE	245797003		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.53 g	25 mL	47.16981		mL
SAMPLE	245797004		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.5 g	25 mL	50		mL
SAMPLE	245797005		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.54 g	25 mL	46.2963		mL
SAMPLE	245797006		SW846 9010B Prep	04-FEB-2010 15:42	>12	0.5 g	25 mL	50		mL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
0912111-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100204-07	.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	

# Prep LogBook

Analyst: AXS5  
 Batch: 947317  
 Lab SOP: GL-GC-E-067 REV# 13

Verified by: \_\_\_\_\_

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202029259	URF1200957-01	.25	g
MS	1202029255	URF1184831-02	.025	mL
MS	1202029256	URF1184831-02	.025	mL
MSD	1202029257	URF1184831-02	.025	mL
MSD	1202029258	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202029252		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.5 g	25 mL	50	SOIL
LCS	1202029259		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.25 g	25 mL	100	SOIL
SAMPLE	245797007		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.58 g	25 mL	43.10345	SOIL
DUP	1202029253	245797007	SW846 9010B Prep	05-FEB-2010 14:02	>12	0.5 g	25 mL	50	SOIL
MS	1202029255	245797007	SW846 9010B Prep	05-FEB-2010 14:02	>12	0.5 g	25 mL	50	SOIL
MSD	1202029257	245797007	SW846 9010B Prep	05-FEB-2010 14:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245797008		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.51 g	25 mL	49.01961	SOIL
DUP	1202029254	245797008	SW846 9010B Prep	05-FEB-2010 14:02	>12	0.53 g	25 mL	47.16981	SOIL
MS	1202029256	245797008	SW846 9010B Prep	05-FEB-2010 14:02	>12	0.52 g	25 mL	48.07692	SOIL
MSD	1202029258	245797008	SW846 9010B Prep	05-FEB-2010 14:02	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	245797009		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	245797010		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	245797011		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	245797012		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245797013		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245797014		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	245797015		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245797016		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245797017		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	245797018		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	245797019		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	245806001		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	245806002		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	245806003		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.58 g	25 mL	43.10345	SOIL
SAMPLE	245806004		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245806005		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245806006		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245806007		SW846 9010B Prep	05-FEB-2010 14:02	>12	0.51 g	25 mL	49.01961	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
0912111-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100205-07	.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	2/8/2010 13:15:25	OM_2-8-2010_13-14-40
150 ppb		1	axc2	2/8/2010 13:16:17	OM_2-8-2010_13-14-40
100 ppb		1	axc2	2/8/2010 13:17:10	OM_2-8-2010_13-14-40
50 ppb		1	axc2	2/8/2010 13:18:03	OM_2-8-2010_13-14-40
10 ppb		1	axc2	2/8/2010 13:18:56	OM_2-8-2010_13-14-40
CRDL 5.0 ppb		1	axc2	2/8/2010 13:19:50	OM_2-8-2010_13-14-40
ICAL-00		1	axc2	2/8/2010 13:20:43	OM_2-8-2010_13-14-40
ICV		1	axc2	2/8/2010 13:22:34	OM_2-8-2010_13-14-40
ICB		1	axc2	2/8/2010 13:24:24	OM_2-8-2010_13-14-40
CRDL		1	axc2	2/8/2010 13:26:14	OM_2-8-2010_13-14-40
1202029242*	947315	1	axc2	2/8/2010 13:28:03	OM_2-8-2010_13-14-40
1202029249	947315	25	axc2	2/8/2010 13:28:57	OM_2-8-2010_13-14-40
245682001	947315	1	axc2	2/8/2010 13:29:50	OM_2-8-2010_13-14-40
245682002	947315	1	axc2	2/8/2010 13:30:43	OM_2-8-2010_13-14-40
245682003	947315	1	axc2	2/8/2010 13:31:36	OM_2-8-2010_13-14-40
245682004	947315	1	axc2	2/8/2010 13:32:29	OM_2-8-2010_13-14-40
245682005	947315	1	axc2	2/8/2010 13:33:21	OM_2-8-2010_13-14-40
245682006	947315	1	axc2	2/8/2010 13:34:14	OM_2-8-2010_13-14-40
245682007	947315	1	axc2	2/8/2010 13:35:07	OM_2-8-2010_13-14-40
245682008	947315	1	axc2	2/8/2010 13:35:58	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010 13:36:51	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010 13:38:42	OM_2-8-2010_13-14-40
1202029242	947315	1	axc2	2/8/2010 13:40:30	OM_2-8-2010_13-14-40
245682009	947315	1	axc2	2/8/2010 13:41:23	OM_2-8-2010_13-14-40
245682010	947315	1	axc2	2/8/2010 13:42:15	OM_2-8-2010_13-14-40
245688011	947315	1	axc2	2/8/2010 13:43:06	OM_2-8-2010_13-14-40
1202029243	947315	1	axc2	2/8/2010 13:43:58	OM_2-8-2010_13-14-40
1202029245	947315	1	axc2	2/8/2010 13:44:50	OM_2-8-2010_13-14-40
1202029247	947315	1	axc2	2/8/2010 13:45:44	OM_2-8-2010_13-14-40
245688012	947315	1	axc2	2/8/2010 13:46:37	OM_2-8-2010_13-14-40
1202029244	947315	1	axc2	2/8/2010 13:47:31	OM_2-8-2010_13-14-40
1202029246	947315	1	axc2	2/8/2010 13:48:24	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010 13:49:17	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010 13:51:07	OM_2-8-2010_13-14-40
1202029248	947315	1	axc2	2/8/2010 13:52:56	OM_2-8-2010_13-14-40
245688013	947315	1	axc2	2/8/2010 13:53:50	OM_2-8-2010_13-14-40
245688014	947315	1	axc2	2/8/2010 13:54:42	OM_2-8-2010_13-14-40
245797001	947315	1	axc2	2/8/2010 13:55:35	OM_2-8-2010_13-14-40
245797002	947315	1	axc2	2/8/2010 13:56:27	OM_2-8-2010_13-14-40
245797003	947315	1	axc2	2/8/2010 13:57:20	OM_2-8-2010_13-14-40
245797004	947315	1	axc2	2/8/2010 13:58:12	OM_2-8-2010_13-14-40
245797005	947315	1	axc2	2/8/2010 13:59:04	OM_2-8-2010_13-14-40
245797006	947315	1	axc2	2/8/2010 13:59:57	OM_2-8-2010_13-14-40
1202029230	947312	1	axc2	2/8/2010 14:00:48	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010 14:01:41	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010 14:03:31	OM_2-8-2010_13-14-40
1202029237	947312	25	axc2	2/8/2010 14:05:20	OM_2-8-2010_13-14-40
245612007	947312	1	axc2	2/8/2010 14:06:13	OM_2-8-2010_13-14-40
1202029231	947312	1	axc2	2/8/2010 14:07:07	OM_2-8-2010_13-14-40
1202029233	947312	1	axc2	2/8/2010 14:08:01	OM_2-8-2010_13-14-40
1202029235	947312	1	axc2	2/8/2010 14:08:54	OM_2-8-2010_13-14-40
245612008	947312	1	axc2	2/8/2010 14:09:48	OM_2-8-2010_13-14-40
1202029232	947312	1	axc2	2/8/2010 14:10:41	OM_2-8-2010_13-14-40
1202029234	947312	1	axc2	2/8/2010 14:11:33	OM_2-8-2010_13-14-40
1202029236	947312	1	axc2	2/8/2010 14:12:26	OM_2-8-2010_13-14-40
245612009	947312	1	axc2	2/8/2010 14:13:19	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010 14:14:12	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010 14:16:04	OM_2-8-2010_13-14-40



245612010	947312	1	axc2	2/8/2010	14:17:52	OM_2-8-2010_13-14-40
245612011	947312	1	axc2	2/8/2010	14:18:45	OM_2-8-2010_13-14-40
245612012	947312	1	axc2	2/8/2010	14:19:37	OM_2-8-2010_13-14-40
245612013	947312	1	axc2	2/8/2010	14:20:29	OM_2-8-2010_13-14-40
245612014	947312	1	axc2	2/8/2010	14:21:22	OM_2-8-2010_13-14-40
245612015	947312	1	axc2	2/8/2010	14:22:13	OM_2-8-2010_13-14-40
245612016	947312	1	axc2	2/8/2010	14:23:07	OM_2-8-2010_13-14-40
245688001	947312	1	axc2	2/8/2010	14:24:02	OM_2-8-2010_13-14-40
245688002	947312	1	axc2	2/8/2010	14:24:55	OM_2-8-2010_13-14-40
245688003	947312	1	axc2	2/8/2010	14:25:50	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	14:26:41	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	14:28:32	OM_2-8-2010_13-14-40
245688004	947312	1	axc2	2/8/2010	14:30:23	OM_2-8-2010_13-14-40
245688005	947312	1	axc2	2/8/2010	14:31:15	OM_2-8-2010_13-14-40
245688006	947312	1	axc2	2/8/2010	14:32:08	OM_2-8-2010_13-14-40
245688007	947312	1	axc2	2/8/2010	14:33:01	OM_2-8-2010_13-14-40
245688008	947312	1	axc2	2/8/2010	14:33:55	OM_2-8-2010_13-14-40
245688009	947312	1	axc2	2/8/2010	14:34:47	OM_2-8-2010_13-14-40
245688010	947312	1	axc2	2/8/2010	14:35:40	OM_2-8-2010_13-14-40
1202033006	948940	1	axc2	2/8/2010	14:36:34	OM_2-8-2010_13-14-40
1202033013	948940	1	axc2	2/8/2010	14:37:26	OM_2-8-2010_13-14-40
245926001	948940	1	axc2	2/8/2010	14:38:19	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	14:39:11	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	14:41:01	OM_2-8-2010_13-14-40
245926002	948940	1	axc2	2/8/2010	14:42:50	OM_2-8-2010_13-14-40
245926003	948940	1	axc2	2/8/2010	14:43:43	OM_2-8-2010_13-14-40
1202033008	948940	1	axc2	2/8/2010	14:44:35	OM_2-8-2010_13-14-40
1202033010	948940	1	axc2	2/8/2010	14:45:29	OM_2-8-2010_13-14-40
1202033012	948940	1	axc2	2/8/2010	14:46:24	OM_2-8-2010_13-14-40
245926004	948940	1	axc2	2/8/2010	14:47:19	OM_2-8-2010_13-14-40
245926005	948940	1	axc2	2/8/2010	14:48:12	OM_2-8-2010_13-14-40
245926006	948940	1	axc2	2/8/2010	14:49:06	OM_2-8-2010_13-14-40
245926007	948940	1	axc2	2/8/2010	14:50:01	OM_2-8-2010_13-14-40
245939001	948940	1	axc2	2/8/2010	14:50:54	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	14:51:47	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	14:53:37	OM_2-8-2010_13-14-40
245939002*	948940	1	axc2	2/8/2010	14:55:27	OM_2-8-2010_13-14-40
245953001*	948940	1	axc2	2/8/2010	14:56:21	OM_2-8-2010_13-14-40
245965001*	948940	1	axc2	2/8/2010	14:57:14	OM_2-8-2010_13-14-40
245975001	948940	1	axc2	2/8/2010	14:58:06	OM_2-8-2010_13-14-40
245981001	948940	1	axc2	2/8/2010	14:59:00	OM_2-8-2010_13-14-40
246000001	948940	1	axc2	2/8/2010	14:59:52	OM_2-8-2010_13-14-40
246004001	948940	1	axc2	2/8/2010	15:00:45	OM_2-8-2010_13-14-40
1202033007	948940	1	axc2	2/8/2010	15:01:38	OM_2-8-2010_13-14-40
1202033009	948940	1	axc2	2/8/2010	15:02:32	OM_2-8-2010_13-14-40
1202033011	948940	1	axc2	2/8/2010	15:03:27	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	15:04:19	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	15:06:09	OM_2-8-2010_13-14-40
245939002	948940	1	axc2	2/8/2010	15:07:59	OM_2-8-2010_13-14-40
245953001	948940	1	axc2	2/8/2010	15:08:53	OM_2-8-2010_13-14-40
245965001	948940	1	axc2	2/8/2010	15:09:46	OM_2-8-2010_13-14-40
246056001	948940	1	axc2	2/8/2010	15:10:41	OM_2-8-2010_13-14-40
246056002	948940	1	axc2	2/8/2010	15:11:35	OM_2-8-2010_13-14-40
246056003	948940	1	axc2	2/8/2010	15:12:29	OM_2-8-2010_13-14-40
246056004	948940	1	axc2	2/8/2010	15:13:23	OM_2-8-2010_13-14-40
246080001	948940	1	axc2	2/8/2010	15:14:17	OM_2-8-2010_13-14-40
1202029252	947318	1	axc2	2/8/2010	15:15:10	OM_2-8-2010_13-14-40
1202029259	947318	25	axc2	2/8/2010	15:16:03	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	15:16:55	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	15:18:45	OM_2-8-2010_13-14-40

245797007	947318	1	axc2	2/8/2010	15:20:34	OM_2-8-2010_13-14-40
1202029253	947318	1	axc2	2/8/2010	15:21:26	OM_2-8-2010_13-14-40
1202029255	947318	1	axc2	2/8/2010	15:22:20	OM_2-8-2010_13-14-40
1202029257	947318	1	axc2	2/8/2010	15:23:14	OM_2-8-2010_13-14-40
245797008	947318	1	axc2	2/8/2010	15:24:08	OM_2-8-2010_13-14-40
1202029254	947318	1	axc2	2/8/2010	15:25:02	OM_2-8-2010_13-14-40
1202029256	947318	1	axc2	2/8/2010	15:25:56	OM_2-8-2010_13-14-40
1202029258	947318	1	axc2	2/8/2010	15:26:50	OM_2-8-2010_13-14-40
245797009	947318	1	axc2	2/8/2010	15:27:43	OM_2-8-2010_13-14-40
245797010	947318	1	axc2	2/8/2010	15:28:36	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	15:29:29	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	15:31:18	OM_2-8-2010_13-14-40
245797011	947318	1	axc2	2/8/2010	15:33:08	OM_2-8-2010_13-14-40
245797012	947318	1	axc2	2/8/2010	15:34:00	OM_2-8-2010_13-14-40
245797013	947318	1	axc2	2/8/2010	15:34:53	OM_2-8-2010_13-14-40
245797014	947318	1	axc2	2/8/2010	15:35:46	OM_2-8-2010_13-14-40
245797015	947318	1	axc2	2/8/2010	15:36:38	OM_2-8-2010_13-14-40
245797016	947318	1	axc2	2/8/2010	15:37:31	OM_2-8-2010_13-14-40
245797017	947318	1	axc2	2/8/2010	15:38:23	OM_2-8-2010_13-14-40
245797018	947318	1	axc2	2/8/2010	15:39:17	OM_2-8-2010_13-14-40
245797019	947318	1	axc2	2/8/2010	15:40:11	OM_2-8-2010_13-14-40
245806001	947318	1	axc2	2/8/2010	15:41:06	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	15:41:58	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	15:43:48	OM_2-8-2010_13-14-40
245806002	947318	1	axc2	2/8/2010	15:45:38	OM_2-8-2010_13-14-40
245806003	947318	1	axc2	2/8/2010	15:46:33	OM_2-8-2010_13-14-40
245806004	947318	1	axc2	2/8/2010	15:47:26	OM_2-8-2010_13-14-40
245806005	947318	1	axc2	2/8/2010	15:48:19	OM_2-8-2010_13-14-40
245806006	947318	1	axc2	2/8/2010	15:49:13	OM_2-8-2010_13-14-40
245806007	947318	1	axc2	2/8/2010	15:50:06	OM_2-8-2010_13-14-40
1202034313	949504	1	axc2	2/8/2010	15:51:00	OM_2-8-2010_13-14-40
1202034315	949504	250	axc2	2/8/2010	15:51:53	OM_2-8-2010_13-14-40
246078001	949504	1	axc2	2/8/2010	15:52:47	OM_2-8-2010_13-14-40
1202034314	949504	1	axc2	2/8/2010	15:53:40	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	15:54:33	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	15:56:23	OM_2-8-2010_13-14-40
246078002	949504	1	axc2	2/8/2010	15:58:12	OM_2-8-2010_13-14-40
246078003	949504	1	axc2	2/8/2010	15:59:05	OM_2-8-2010_13-14-40
246078004	949504	1	axc2	2/8/2010	15:59:58	OM_2-8-2010_13-14-40
CCV		1	axc2	2/8/2010	16:00:51	OM_2-8-2010_13-14-40
CCB		1	axc2	2/8/2010	16:02:41	OM_2-8-2010_13-14-40

Original Run Filename: OM\_2-8-2010\_13-14-40.OMN created 2/8/2010 13:14:40  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_2-8-2010\_13-14-40.OMN last modified 2/8/2010 16:03:46  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M  
 Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE					
			Conc. (ug/L)	Area (Vs)				
WCN100208-01	1	S1	200	8.74	2/8/2010@13:15:25			200 ppb
WCN100208-02	1	S2	150	6.63	2/8/2010@13:16:17			150 ppb
WCN100208-03	1	S3	100	4.52	2/8/2010@13:17:10			100 ppb
WCN100208-04	1	S4	50.0	2.28	2/8/2010@13:18:03			50 ppb
WCN100208-05	1	S5	10.0	0.511	2/8/2010@13:18:56			10 ppb
WCN100208-06	1	S6	5.00	0.321	2/8/2010@13:19:50			CRDL 5.0 ppb
WCN100208-08	1	S7	0.00	0.00906	2/8/2010@13:20:43			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99989 > 0.99500					
Message			Pass					
Action			Continue					
WCN100208-07	1	S8	151	6.65	2/8/2010@13:22:34			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			0.6 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			0.6 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100208-08	1	S7	-1.45	0.0181	2/8/2010@13:24:24			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.45 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.45 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100208-06	1	S6	5.53	0.322	2/8/2010@13:26:14			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.53 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.53 > 2.50					
Message			CRDL Passed					
Action			Continue					
1202029242 947315 MB	1	1	441	19.3	2/8/2010@13:28:03			
1202029249  LCS	1	2	26.6	1.24	2/8/2010@13:28:57		25.00	
245682001	1	3	-0.713	0.0500	2/8/2010@13:29:50			
245682002	1	4	-0.651	0.0528	2/8/2010@13:30:43			
245682003	1	5	0.833	0.117	2/8/2010@13:31:36			
245682004	1	6	-1.86	-1.22e-4	2/8/2010@13:32:29			
245682005	1	7	-0.452	0.0614	2/8/2010@13:33:21			
245682006	1	8	-0.944	0.0400	2/8/2010@13:34:14			
245682007	1	9	-1.19	0.0293	2/8/2010@13:35:07			
245682008	1	10	6.00	0.343	2/8/2010@13:35:58			
WCN100208-03	1	S3	105	4.68	2/8/2010@13:36:51			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			5.4 < 10.0					

			Message	CCV Passed				
			Action	Continue				
			DQM Test: < - Percent Relative Difference					
			Result:	5.4 < 10.0				
			Message	CCV Passed				
			Action	Continue				
WCN100208-08	1	S7		-1.40	0.0203	2/8/2010@13:38:42		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				
1202029242 947315 MB	1	1		-1.06	0.0348	2/8/2010@13:40:30		
245682009	1	11		-0.822	0.0453	2/8/2010@13:41:23		
245682010	1	12		1.86	0.162	2/8/2010@13:42:15		
245688011	1	13		-0.777	0.0473	2/8/2010@13:43:06		
1202029243 DUP	1	14		-2.01	-0.00640	2/8/2010@13:43:58		
1202029245 MS	1	15		86.6	3.85	2/8/2010@13:44:50		
1202029247 MSD	1	16		78.4	3.50	2/8/2010@13:45:44		
245688012	1	17		0.261	0.0925	2/8/2010@13:46:37		
1202029244 DUP	1	18		0.738	0.113	2/8/2010@13:47:31		
1202029246 MS	1	19		69.2	3.10	2/8/2010@13:48:24		
WCN100208-03	1	S3		105	4.67	2/8/2010@13:49:17		CCV
			Known Conc:	100				
			DQM Test: > + Percent Relative Difference					
			Result:	5.2 < 10.0				
			Message	CCV Passed				
			Action	Continue				
			DQM Test: < - Percent Relative Difference					
			Result:	5.2 < 10.0				
			Message	CCV Passed				
			Action	Continue				
WCN100208-08	1	S7		-1.92	-0.00263	2/8/2010@13:51:07		CCB
			Known Conc:	0.00				
			DQM Test: > + Concentration Limit					
			Result:	-1.92 < 5.00				
			Message	CCB Passed				
			Action	Continue				
			DQM Test: < - Concentration Limit					
			Result:	-1.92 > -5.00				
			Message	CCB Passed				
			Action	Continue				
1202029248 MSD	1	20		71.4	3.19	2/8/2010@13:52:56		
245688013	1	21		-1.01	0.0373	2/8/2010@13:53:50		
245688014	1	22		0.338	0.0958	2/8/2010@13:54:42		
245797001	1	23		-0.979	0.0385	2/8/2010@13:55:35		
245797002	1	24		-0.863	0.0435	2/8/2010@13:56:27		
245797003	1	25		-0.309	0.0676	2/8/2010@13:57:20		
245797004	1	26		0.938	0.122	2/8/2010@13:58:12		
245797005	1	27		2.23	0.178	2/8/2010@13:59:04		
245797006	1	28		-0.105	0.0766	2/8/2010@13:59:57		
1202029230 947312 MB	1	29		-1.23	0.0277	2/8/2010@14:00:48		
WCN100208-03	1	S3		105	4.66	2/8/2010@14:01:41		CCV
			Known Conc:	100				
			DQM Test: > + Percent Relative Difference					
			Result:	5.1 < 10.0				
			Message	CCV Passed				
			Action	Continue				
			DQM Test: < - Percent Relative Difference					
			Result:	5.1 < 10.0				
			Message	CCV Passed				
			Action	Continue				
WCN100208-08	1	S7		-1.86	0.00	2/8/2010@14:03:31		CCB
			Known Conc:	0.00				

DQM Test: > + Concentration Limit							
Result:		-1.86 < 5.00					
Message		CCB Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		-1.86 > -5.00					
Message		CCB Passed					
Action		Continue					
1202029237	LCS	1	30	28.0	1.30	2/8/2010@14:05:20	25.00
245612007		1	31	-0.913	0.0414	2/8/2010@14:06:13	
1202029231	DUP	1	32	-1.27	0.0256	2/8/2010@14:07:07	
1202029233	MS	1	33	89.8	3.99	2/8/2010@14:08:01	
1202029235	MSD	1	34	85.3	3.80	2/8/2010@14:08:54	
245612008		1	35	-0.535	0.0578	2/8/2010@14:09:48	
1202029232	DUP	1	36	-1.07	0.0347	2/8/2010@14:10:41	
1202029234	MS	1	37	86.4	3.85	2/8/2010@14:11:33	
1202029236	MSD	1	38	84.8	3.78	2/8/2010@14:12:26	
245612009		1	39	-0.656	0.0526	2/8/2010@14:13:19	
WCN100208-03		1	S3	105	4.65	2/8/2010@14:14:12	CCV
Known Conc:		100					
DQM Test: > + Percent Relative Difference							
Result:		4.9 < 10.0					
Message		CCV Passed					
Action		Continue					
DQM Test: < - Percent Relative Difference							
Result:		4.9 < 10.0					
Message		CCV Passed					
Action		Continue					
WCN100208-08		1	S7	-1.95	-0.00373	2/8/2010@14:16:04	CCB
Known Conc:		0.00					
DQM Test: > + Concentration Limit							
Result:		-1.95 < 5.00					
Message		CCB Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		-1.95 > -5.00					
Message		CCB Passed					
Action		Continue					
245612010		1	40	-0.280	0.0689	2/8/2010@14:17:52	
245612011		1	41	-1.09	0.0336	2/8/2010@14:18:45	
245612012		1	42	-1.19	0.0295	2/8/2010@14:19:37	
245612013		1	43	1.77	0.158	2/8/2010@14:20:29	
245612014		1	44	-0.868	0.0433	2/8/2010@14:21:22	
245612015		1	45	-0.814	0.0457	2/8/2010@14:22:13	
245612016		1	46	-1.07	0.0344	2/8/2010@14:23:07	
245688001		1	47	0.570	0.106	2/8/2010@14:24:02	
245688002		1	48	-0.480	0.0602	2/8/2010@14:24:55	
245688003		1	49	-0.404	0.0635	2/8/2010@14:25:50	
WCN100208-03		1	S3	105	4.64	2/8/2010@14:26:41	CCV
Known Conc:		100					
DQM Test: > + Percent Relative Difference							
Result:		4.6 < 10.0					
Message		CCV Passed					
Action		Continue					
DQM Test: < - Percent Relative Difference							
Result:		4.6 < 10.0					
Message		CCV Passed					
Action		Continue					
WCN100208-08		1	S7	-1.47	0.0172	2/8/2010@14:28:32	CCB
Known Conc:		0.00					
DQM Test: > + Concentration Limit							
Result:		-1.47 < 5.00					
Message		CCB Passed					
Action		Continue					
DQM Test: < - Concentration Limit							
Result:		-1.47 > -5.00					
Message		CCB Passed					
Action		Continue					

245688004	1	50	-0.636	0.0534	2/8/2010@14:30:23		
245688005	1	51	-0.336	0.0665	2/8/2010@14:31:15		
245688006	1	52	1.16	0.131	2/8/2010@14:32:08		
245688007	1	53	-0.543	0.0575	2/8/2010@14:33:01		
245688008	1	54	-1.27	0.0259	2/8/2010@14:33:55		
245688009	1	55	-0.570	0.0563	2/8/2010@14:34:47		
245688010	1	56	-0.384	0.0644	2/8/2010@14:35:40		
1202033006 948940 MB	1	85	-1.45	0.0179	2/8/2010@14:36:34		
1202033013  LCS	1	86	51.4	2.32	2/8/2010@14:37:26		
245926001	1	87	14.3	0.704	2/8/2010@14:38:19		
WCN100208-03	1	S3	105	4.67	2/8/2010@14:39:11		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			5.4 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			5.4 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100208-08	1	S7	-1.57	0.0127	2/8/2010@14:41:01		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.57 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.57 > -5.00				
Message			CCB Passed				
Action			Continue				
245926002	1	88	13.4	0.665	2/8/2010@14:42:50		
245926003	1	89	1.37	0.141	2/8/2010@14:43:43		
1202033008  DUP	1	90	-1.19	0.0293	2/8/2010@14:44:35		
1202033010  MS	1	91	93.6	4.16	2/8/2010@14:45:29		
1202033012  MSD	1	92	94.0	4.18	2/8/2010@14:46:24		
245926004	1	93	-1.04	0.0356	2/8/2010@14:47:19		
245926005	1	94	-1.86	-1.28e-4	2/8/2010@14:48:12		
245926006	1	95	-1.99	-0.00557	2/8/2010@14:49:06		
245926007	1	96	-1.18	0.0298	2/8/2010@14:50:01		
245939001	1	97	-1.20	0.0290	2/8/2010@14:50:54		
WCN100208-03	1	S3	105	4.66	2/8/2010@14:51:47		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			5.0 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			5.0 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100208-08	1	S7	-1.83	0.00132	2/8/2010@14:53:37		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.83 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.83 > -5.00				
Message			CCB Passed				
Action			Continue				
245939002	1	98	81.1	3.62	2/8/2010@14:55:27		
245953001	1	99	-11.0	-0.399	2/8/2010@14:56:21		
245965001	1	100	257	11.3	2/8/2010@14:57:14		
245975001	1	101	-1.84	9.46e-4	2/8/2010@14:58:06		
245981001	1	102	-1.72	0.00598	2/8/2010@14:59:00		
246000001	1	103	-1.86	2.83e-4	2/8/2010@14:59:52		
246004001	1	104	-2.03	-0.00731	2/8/2010@15:00:45		
1202033007  DUP	1	105	-1.87	-2.30e-4	2/8/2010@15:01:38		

1202033009  MS	1	106	96.2	4.27	2/8/2010@15:02:32			
1202033011  MSD	1	107	94.3	4.19	2/8/2010@15:03:27			
WCN100208-03	1	S3	104	4.63	2/8/2010@15:04:19			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			4.5 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			4.5 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100208-08	1	S7	-1.82	0.00202	2/8/2010@15:06:09			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.82 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.82 > -5.00					
Message			CCB Passed					
Action			Continue					
245939002	1	98	-1.86	1.33e-4	2/8/2010@15:07:59			
245953001	1	99	-1.90	-0.00162	2/8/2010@15:08:53			
245965001	1	100	-1.86	-1.03e-4	2/8/2010@15:09:46			
246056001	1	108	-1.29	0.0251	2/8/2010@15:10:41			
246056002	1	109	-2.00	-0.00595	2/8/2010@15:11:35			
246056003	1	110	-1.42	0.0194	2/8/2010@15:12:29			
246056004	1	111	-2.00	-0.00588	2/8/2010@15:13:23			
246080001	1	112	-1.45	0.0179	2/8/2010@15:14:17			
1202029252 947318 MB	1	57	-1.86	-1.18e-4	2/8/2010@15:15:10			
1202029259  LCS	1	58	29.0	1.35	2/8/2010@15:16:03		25.00	
WCN100208-03	1	S3	104	4.62	2/8/2010@15:16:55			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			4.1 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			4.1 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100208-08	1	S7	-1.49	0.0161	2/8/2010@15:18:45			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.49 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.49 > -5.00					
Message			CCB Passed					
Action			Continue					
245797007	1	59	-0.787	0.0468	2/8/2010@15:20:34			
1202029253  DUP	1	60	-0.616	0.0543	2/8/2010@15:21:26			
1202029255  MS	1	61	83.5	3.72	2/8/2010@15:22:20			
1202029257  MSD	1	62	84.4	3.76	2/8/2010@15:23:14			
245797008	1	63	3.82	0.248	2/8/2010@15:24:08			
1202029254  DUP	1	64	1.23	0.135	2/8/2010@15:25:02			
1202029256  MS	1	65	89.1	3.96	2/8/2010@15:25:56			
1202029258  MSD	1	66	78.7	3.51	2/8/2010@15:26:50			
245797009	1	67	-0.647	0.0529	2/8/2010@15:27:43			
245797010	1	68	-0.409	0.0633	2/8/2010@15:28:36			
WCN100208-03	1	S3	105	4.66	2/8/2010@15:29:29			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			5.1 < 10.0					
Message			CCV Passed					
Action			Continue					

DQM Test: < - Percent Relative Difference						
Result:		5.1 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100208-08	1	S7	-1.86	2.47e-4	2/8/2010@15:31:18	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-1.86 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.86 > -5.00				
Message		CCB Passed				
Action		Continue				
245797011	1	69	1.59	0.150	2/8/2010@15:33:08	
245797012	1	70	-0.296	0.0682	2/8/2010@15:34:00	
245797013	1	71	-0.166	0.0739	2/8/2010@15:34:53	
245797014	1	72	5.34	0.314	2/8/2010@15:35:46	
245797015	1	73	0.400	0.0985	2/8/2010@15:36:38	
245797016	1	74	0.789	0.115	2/8/2010@15:37:31	
245797017	1	75	0.157	0.0880	2/8/2010@15:38:23	
245797018	1	76	3.07	0.215	2/8/2010@15:39:17	
245797019	1	77	-0.779	0.0472	2/8/2010@15:40:11	
245806001	1	78	-1.11	0.0326	2/8/2010@15:41:06	
WCN100208-03	1	S3	105	4.65	2/8/2010@15:41:58	CCV
Known Conc:		100				
DQM Test: > + Percent Relative Difference						
Result:		4.9 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		4.9 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100208-08	1	S7	-1.82	0.00186	2/8/2010@15:43:48	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-1.82 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.82 > -5.00				
Message		CCB Passed				
Action		Continue				
245806002	1	79	0.0705	0.0842	2/8/2010@15:45:38	
245806003	1	80	-0.264	0.0696	2/8/2010@15:46:33	
245806004	1	81	-0.767	0.0477	2/8/2010@15:47:26	
245806005	1	82	-0.805	0.0461	2/8/2010@15:48:19	
245806006	1	83	-0.580	0.0559	2/8/2010@15:49:13	
245806007	1	84	0.973	0.124	2/8/2010@15:50:06	
1202034313 949504 MB	1	113	-1.24	0.0270	2/8/2010@15:51:00	
1202034315  LCS	1	114	107	4.74	2/8/2010@15:51:53	250.00
246078001	1	115	-1.01	0.0370	2/8/2010@15:52:47	
1202034314  DUP	1	116	-1.86	1.40e-4	2/8/2010@15:53:40	
WCN100208-03	1	S3	105	4.67	2/8/2010@15:54:33	CCV
Known Conc:		100				
DQM Test: > + Percent Relative Difference						
Result:		5.3 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		5.3 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100208-08	1	S7	-1.93	-0.00287	2/8/2010@15:56:23	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-1.93 < 5.00				



Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.93 > -5.00					
Message			CCB Passed					
Action			Continue					
246078002	1	117	-0.783	0.0470	2/8/2010@15:58:12			
246078003	1	118	-1.88	-6.47e-4	2/8/2010@15:59:05			
246078004	1	119	17.8	0.856	2/8/2010@15:59:58			
WCN100208-03	1	S3	105	4.64	2/8/2010@16:00:51			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			4.6 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			4.6 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100208-08	1	S7	-1.52	0.0147	2/8/2010@16:02:41			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.52 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.52 > -5.00					
Message			CCB Passed					
Action			Continue					

Analyte Properties Table for OM\_2-8-2010\_13-14-40.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

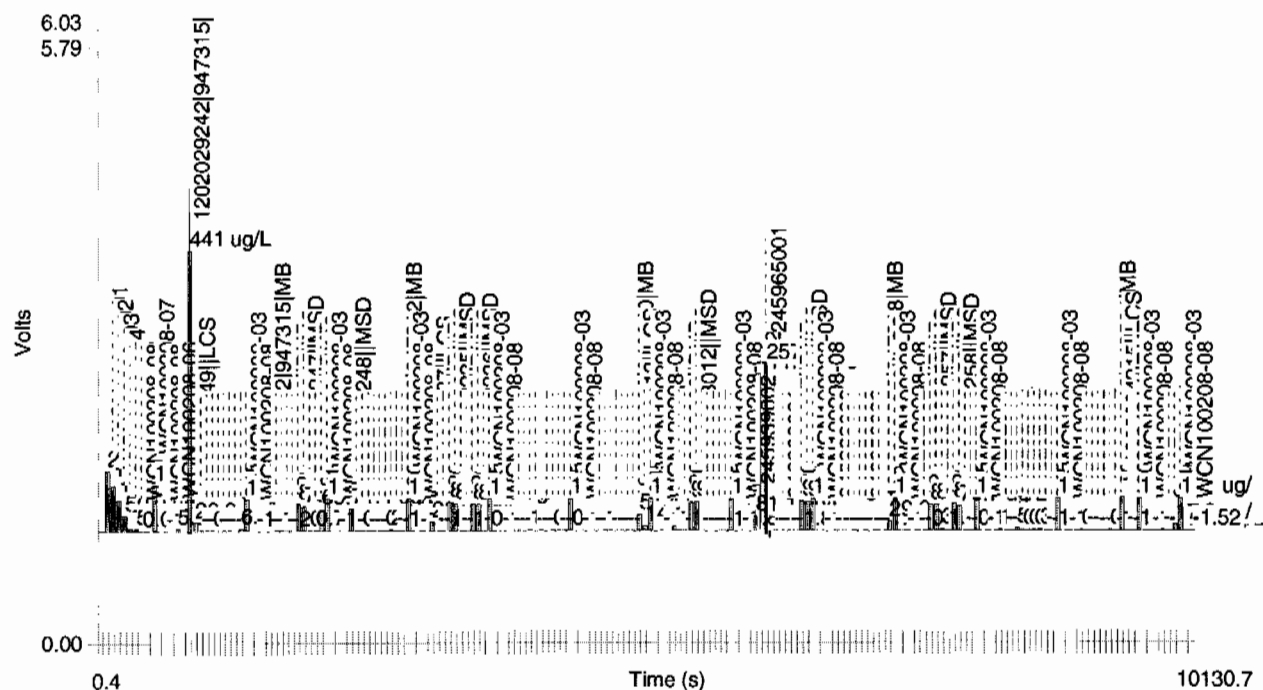
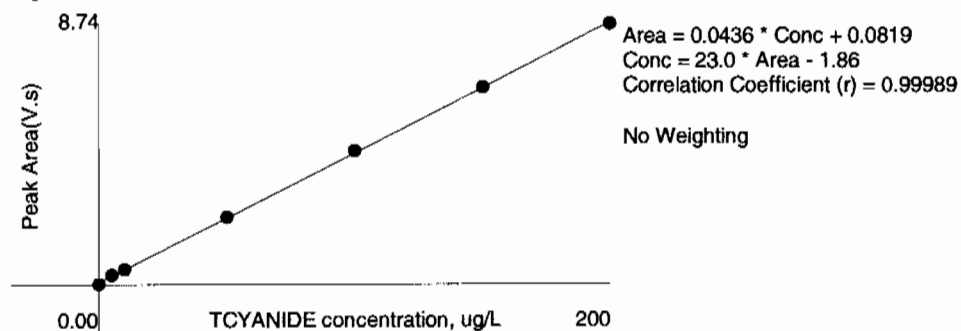


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.74	0.574	0.7	2/8/2010	13:16:28
2	150	1	6.63	0.438	-0.3	2/8/2010	13:17:20
3	100	1	4.52	0.298	-1.8	2/8/2010	13:18:12
4	50.0	1	2.28	0.149	-0.9	2/8/2010	13:19:05
5	10.0	1	0.511	0.0326	1.3	2/8/2010	13:19:59
6	5.00	1	0.321	0.0198	-7.0	2/8/2010	13:20:52
7	0.00	1	0.00906	0.00212		2/8/2010	13:21:47

Figure 1: TCYANIDE



# Miscellaneous

### DATA EXCEPTION REPORT

<b>Mo. Day Yr.</b> 09-FEB-10	<b>Division:</b>	<b>Quality Criteria:</b>	<b>Type:</b>
<b>Instrument Type:</b>	<b>Test / Method:</b> SW846 9012A	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 947315	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 245682(10-1450-1),245688(10-1433),245797(10-1471) <b>Application Issues:</b> Failed Recovery for MS/PS Failed Recovery for MSD/PSD			
<b>Specification and Requirements</b>		<b>DER Disposition:</b>	
<b>Exception Description:</b>  1. Failed Recovery for MS/MSD  QC 1202029246MS  1202029248MSD		1. The matrix spike falls outside of the client specified acceptance limits due to matrix interference. The matrix spike duplicate verified the result with a passing RPD (soil sample).	

**Originator's Name:**

Ashley Earl

09-FEB-10

**Data Validator/Group Leader:**

Elzbieta Szulc

19-FEB-10

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 09-FEB-10	<b>Division:</b>	<b>Quality Criteria:</b>	<b>Type:</b>
<b>Instrument Type:</b>	<b>Test / Method:</b> SW846 9012A	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 947318	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 245797(10-1471),245806(10-1474) <b>Application Issues:</b> Failed Recovery for MSD/PSD			
<b>Specification and Requirements</b>		<b>DER Disposition:</b>	
<b>Exception Description:</b>  1. Failed Recovery for MSD:  QC 1202029258MSD		1. 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(soil sample).	

**Originator's Name:**

Ashley Earl

09-FEB-10

**Data Validator/Group Leader:**

Elzbieta Szulc

16-FEB-10