

Sunday, January 17, 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: 10-1306  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 1/18/2010  
TURNAROUND/REPORT DUE: 2/17/2010  
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	RE15-10-7164	R	1/13/2010	
		1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	

Sunday, January 17, 2010

REQUEST NUMBER: 10-1306

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:6020						
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
SW-846:6850						
		1	RE15-10-7164	R	1/13/2010	
		1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
SW-846:7471A						
		1	RE15-10-7164	R	1/13/2010	

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REQUEST NUMBER: 10-1306

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846.7471A	1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
	SW-846.9012A	1	RE15-10-7164	R	1/13/2010	
		1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	

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REQUEST NUMBER: 10-1306

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	

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Sunday, January 17, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1306C

**LOS ALAMOS**

REQUEST NUMBER: 10-1306

**NATIONAL LABORATORY**

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/17/2010

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
RE15-10-7165	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7171	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7170	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7164	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7167	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7169	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7168	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7166	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7177	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7181	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7178	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7182	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7183	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7184	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7185	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7176	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7180	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7179	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time


 1/17/10 3:00

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: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7164

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:	OBT3		All h
TIME COLLECTED (HH:MM)		0821		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610503			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	2.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	3.9		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		Met+U+CLO4+C N	1 GAL POLY Liter RC 12/16/09	Ice	Y	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1	↓	H3	500 ML POLY	Ice	Y	

SAMPLE DESC: Brown silty sand, some tuff fragments

FTB RE15-10-7234

SAMPLE COMMENTS: NA

LOCATION DESC: 14h-1 below pavement

## FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  33 dpm  
Beta/Gamma  $\leq$  2070 dpmPID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$  ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/14/10 7:48	RECEIVED BY (Printed Name) [Signature] (Signature) [Signature]	Date/Time 1/14/10 7:48
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7165

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:	OBT3		A11h
TIME COLLECTED (HH:MM)		0851		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610503			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	7.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	8.8		SCREEN/PORT DESC:			NA
FIELD MATRIX:	B	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		Met+U+CLO4+C N	1 GAL POLY Liter RC 12/16/09	Ice	Y	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		H3	500 ML POLY	Ice	Y	

SAMPLE DESC:

Brown clay, and silty sand, tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-1 below pavement

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  27 dpmBeta/Gamma  $\leq$  1983 dpmPID  $\frac{\text{Ambient Reading}}{0.0}$  ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

R. Saunders

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/14/10 7:48	RECEIVED BY (Printed Name) Sheri Sherwood (Signature) Sheri Sherwood	Date/Time 1/14/10 7:48
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7166

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:	QBT3		SED
TIME COLLECTED (HH:MM)		1038		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610504	↓		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	SED		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		Met+U+CLO4+CN	1 GAL POLY Liter 12/16/09	Ice	Y	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		H3	500 ML POLY	Ice	Y	

SAMPLE DESC:

moist brown and black sand with roots

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h-20, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 22 dpm

Beta/Gamma = 2070 dpm

PID

COLLECTED BY (PRINT)

JLMCFarlane

REVIEWED BY (PRINT)

R. Saunders

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/14/10 7:48	RECEIVED BY (Printed Name) Sheri Sherwood (Signature) Sheri Sherwood	Date/Time 1/14/10 7:48
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7167

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		1115		SUB-MEDIA:		TUFF 1	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610504	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	1.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	2.2		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	SED		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	y	
1		Met+U+CLO4+C N	1 GAL POLY Liter Re 12/14/09	Ice	y	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	y	
1	✓	H3	500 ML POLY	Ice	y	

SAMPLE DESC:

Black and brown silty clay

SAMPLE COMMENTS: NA

LOCATION DESC: 14h-20, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  22 dpm  
Beta/Gamma  $\leq$  2370 dpm

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

COLLECTED BY (PRINT)

REVIEWED BY (PRINT) R. Saunders

T. McFarlane

RELINQUISHED BY (Printed Name) JOW MARIN (Signature) Jow Marin	Date/Time 1/14/10 7:45	RECEIVED BY (Printed Name) M. Lisa Martin (Signature) M. Lisa Martin	Date/Time 1/14/10 7:45
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7168

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:	QBT3		SED
TIME COLLECTED (HH:MM)		1025		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610505			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	SED		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		Met+U+CLO4+C N	1 GAL POLY Liter RC 12/16/09	Ice		
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice		
1		H3	500 ML POLY	Ice		

SAMPLE DESC: dry silt, roots and small rocks

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-12, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

HE neg

Alpha  $\leq$  22 dpm  
Beta/Gamma  $\leq$  2050 dpmPID  $\frac{\text{Ambient}}{\text{Reading}} \frac{0.0}{0.0}$  ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) MARIN (Signature) Jan R Marin	Date/Time 1/14/10 7:49	RECEIVED BY (Printed Name) Sheri Sherwood (Signature) Sheri Sherwood	Date/Time 1/14/10 7:49
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7169

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/13/2010	MEDIA:		QBT3
TIME COLLECTED (HH:MM)		1035	SUB-MEDIA:		TUFF 1
PRS ID:	15-014(h)	OK	SAMPLE TECH CODE:		HA
LOCATION ID:	15-610505	↓	FIELD QC TYPE:		NA
LOCATION TYPE:	GENERIC	↓	FIELD PREP:		NA
TOP DEPTH:	Q	1.0	SAMPLE USAGE:		INV
BOTTOM DEPTH:	Q	2.1	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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	
1		Met+U+CLO4+C N	1 GAT POLY Liter LC 12/16/09	Ice	Yes	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Yes	
1		H3	500 ML POLY	Ice	Yes	

SAMPLE DESC: pinkish grey weathered tuff

FR: RE15-10-7224

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h 12, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  16 dpm  
Beta/Gamma  $\leq$  2160 dpmPID  $\frac{\text{Ambient Reading}}{20}$  ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) MARIN (Signature) J. R. Marin	Date/Time 1/14/10 7:49	RECEIVED BY (Printed Name) Elizabeth Martin (Signature) [Signature]	Date/Time 1/14/10 7:49
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7170

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:	QBT3		SED
TIME COLLECTED (HH:MM)		1314		SUB-MEDIA:	TUFF.1		NA
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610506			FIELD QC TYPE:	NA		
LOCATION TYPE:	GENERIC			FIELD PREP:	NA		
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		
BOTTOM DEPTH:	0	0.7		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	SED		EXCAVATED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
				WATER FLOWING: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA			
BOREHOLE: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA				BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		Met+U+CLO4+C N	1 GAL POLY Liter LC 12/16/09	Ice	Y	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		H3	500 ML POLY	Ice	Y	

SAMPLE DESC:

Brown clayey silt, roots and rocks

FD RE15-10-7219

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h-14, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 3% dpm

Beta/Gamma = 2300 dpm

HE negative

PID Ambient Reading 0.0 ppm

COLLECTED BY (PRINT)

JL McFarland

REVIEWED BY (PRINT)

R. Saunders

RELINQUISHED BY (Printed Name) MARIN (Signature) J. R. Marin	Date/Time 1/14/10 7:52	RECEIVED BY (Printed Name) Miss White (Signature) [Signature]	Date/Time 1/14/10 7:52
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

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

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7171

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1325		SUB-MEDIA:		TUFF1	
PRS ID:	15-014(h)	ok		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610506	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	1.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	2.1		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		Met+U+CLO4+CN	1 GAE POLY Liter LC 12/14/09	Ice	Y	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Y	
1		H3	500 ML POLY	Ice	Y	

SAMPLE DESC:

Brown sand, few roots and few small rocks

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h-14 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  38 dpmBeta/Gamma  $\leq$  2350 dpmPID  $\frac{\text{Ambient Reading}}{0.0} = 0.0$  ppm

COLLECTED BY (PRINT)

TLMcFarland

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) MARIN (Signature) R. G. Marin	Date/Time 1/14/10 7:52	RECEIVED BY (Printed Name) Sheri Sherwood (Signature) Sheri Sherwood	Date/Time 1/14/10 7:52
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

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

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7176

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/13/2010	MEDIA:		OBT3
TIME COLLECTED (HH:MM)		0850	SUB-MEDIA:		TUFF 1
PRS ID:	15-014(h)	OK	SAMPLE TECH CODE:		HA
LOCATION ID:	15-610509	↓	FIELD QC TYPE:		NA
LOCATION TYPE:	GENERIC	↓	FIELD PREP:		NA
TOP DEPTH:	0	0.0	SAMPLE USAGE:		INV
BOTTOM DEPTH:	0	0.50.12/10 0.50.6	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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	↓	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	↓	
1		H3	500 ML POLY	Ice	↓	
1		Met+U+CLO4+C N	1 GAL POLY Liter RC 12/16/09	Ice	↓	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	

SAMPLE DESC: dark-brown loose topsoil with some roots and pine needles

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-10

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 33 dpm  
Beta/Gamma = 2300 dpmPID  $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0} \text{ ppm}$ 

HE = NEG

COLLECTED BY (PRINT)

R. Saunders

REVIEWED BY (PRINT)

LARRY A. LOPEZ

RELINQUISHED BY (Printed Name) JON MARIN (Signature) J. K. Marin	Date/Time 1/14/10 7:49	RECEIVED BY (Printed Name) [Signature] (Signature) [Signature]	Date/Time 1/14/10 7:49
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7177

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:		QBT3	
TIME COLLECTED (HH:MM)		0930		SUB-MEDIA:		TUFF1	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610509	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	1.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	2.0		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NO	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	yes	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	↓	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	↓	
1		H3	500 ML POLY	Ice	↓	
1		Met+U+CLO4+C N	1 GAL POLY liter Le 12/16/09	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	

SAMPLE DESC: brown silty sand with whiteish grey pumice fragments

SAMPLE COMMENTS: hit pumice at 1.3'

LOCATION DESC: 14h-10

## FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  38 dpm  
Beta/Gamma  $\leq$  2520 dpmPID  $\frac{\text{Ambient } 0.0}{\text{Reading } 0.0}$  ppm

COLLECTED BY (PRINT)

REVIEWED BY (PRINT) T. L. McFarland

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/14/10 7:49	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	Date/Time 1/14/10 7:49
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7178

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA: OBT3		72m 1/13/10 AHH SED	
TIME COLLECTED (HH:MM)		0946		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-014(h)	ok		SAMPLE TECH CODE: HA		ok	
LOCATION ID:	15-610510	↓		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	SED		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAT POLY Liter XC 12/16/09	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Brown sandy silt, few roots and rocks

SAMPLE COMMENTS: NA

LOCATION DESC: 14h - 11, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  44 dpm  
Beta/Gamma  $\leq$  2310 dpm

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

COLLECTED BY (PRINT)

Th McFarlane

REVIEWED BY (PRINT)

Letecy A. Lopez

RELINQUISHED BY (Printed Name) MARIN (Signature) Jen R. Marin	Date/Time 1/14/10 7:50	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	Date/Time 1/14/10 7:50
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7179

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1005		SUB-MEDIA:		TUFF 1	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610510	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	1.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	2.0		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		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	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	↓	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	↓	
1		H3	500 ML POLY	Ice	↓	
1		Met+U+CLO4+C N	1 GAL POLY 6 liter LC 12/16/09	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: brown silty sand, some rock + root

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h-11, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq 27$  dpmBeta/Gamma  $\leq 2120$  dpmPID  $\frac{\text{Ambient Reading}}{0.0} = 0.0$  ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) MARIN (Signature) R. Marin	Date/Time 1/14/10 7:50	RECEIVED BY (Printed Name) Sheri Sherwood (Signature) Sheri Sherwood	Date/Time 1/14/10 7:50
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7180

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA: QBT3		SED	
TIME COLLECTED (HH:MM)		0955		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610511	↓		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	SED		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY Liter AC 12/16/09	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown pebbly sand, roots

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h - 19, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  22 dpm  
Beta/Gamma  $\leq$  2260 dpm

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

COLLECTED BY (PRINT)

TL McFarland

REVIEWED BY (PRINT)

R. Saunders

RELINQUISHED BY (Printed Name) MARIAH	Date/Time 1/14/10	RECEIVED BY (Printed Name) [Signature]	Date/Time 1/14/10
(Signature) [Signature]	7:50	(Signature) [Signature]	7:50
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7182

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA: OBT3		p50113.10 ALLH SED	
TIME COLLECTED (HH:MM)		1120		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610512	↓		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	SED		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		H3	500 ML POLY	Ice	Yes	
1		Met+U+CLO4+C N	1 GAL POLY 6 liter RC 12/16/09	Ice	Yes	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: Moist brown sand with lots of roots

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-13 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  27 dpm  
Beta/Gamma  $\leq$  2540 dpm

HE neg  
PID Ambient Reading 0.0 ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarlane

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) MARIN	1/14/10	(Printed Name) [Signature]	1/14/10
(Signature) [Signature]	7:51	(Signature) [Signature]	7:51
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7183

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		<u>01/13/2010</u>		MEDIA:		<u>OBT3</u>	
TIME COLLECTED (HH:MM)		<u>1157</u>		SUB-MEDIA:		<u>TUFF1</u>	
PRS ID:	<u>15-014(h)</u>	<u>OK</u>		SAMPLE TECH CODE:		<u>HA</u>	
LOCATION ID:	<u>15-610512</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>1.8</u>		SCREEN/PORT DESC:		<u>NA</u>	
FIELD MATRIX:	<u>R</u>	<u>R</u>		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: <u>NA</u>		COMPOSITE TIME INTERVAL: <u>NA</u>		WATER FLOWING: YES/NO/NA			
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>	8260B	125 ML SEPTUM AMBER GLASS	Ice	<u>Yes</u>	
1	<u>↓</u>	8270C+NMED Exp	500 ML AMBER GLASS	Ice	<u>Yes</u>	
1	<u>↓</u>	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	<u>Yes</u>	
1	<u>↓</u>	H3	500 ML POLY	Ice	<u>Yes</u>	
1	<u>↓</u>	Met+U+ClO4+C N	1 <u>GAL</u> POLY <u>Liter</u> <u>xc 12/14/09</u>	Ice	<u>Yes</u>	
1	<u>↓</u>	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	<u>Yes</u>	

SAMPLE DESC:

Pinkish gray tuff

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h-13 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  27 dpmBeta/Gamma  $\leq$  2530 dpmPID  $\frac{\text{Ambient Reading}}{0.6} = \frac{0.0}{0.6}$  ppm

COLLECTED BY (PRINT)

R SaundersREVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) <u>MARIN</u>	<u>1/14/10</u>	(Printed Name) <u>M. B. M. M.</u>	<u>1/14/10</u>
(Signature) <u>[Signature]</u>	<u>7:51</u>	(Signature) <u>[Signature]</u>	<u>7:51</u>
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7181

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/13/2010		MEDIA: OBT3		Allh	
TIME COLLECTED (HH:MM)		1007		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-014(h)	ok		SAMPLE TECH CODE: HA		ok	
LOCATION ID:	15-610511	↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP: NA		↓	
TOP DEPTH:	0	1.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH:	0	1.9		SCREEN/PORT DESC: NA			
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	y	
1		H3	500 ML POLY	Ice	y	
1		Met+U+CLO4+C N	1 GAL POLY liter to 12/12/09	Ice	y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	y	

SAMPLE DESC:

Brown silty sand, rocks and roots

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h-19, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 33 dpm  
Beta/Gamma = 2280 dpm

PID  $\frac{\text{Ambient Reading}}{5.0} = 0.0$  ppm

COLLECTED BY (PRINT)

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) <u>MARIN</u> (Signature) <u>Jim R. Marin</u>	Date/Time <u>1/14/10</u> <u>7:51</u>	RECEIVED BY (Printed Name) <u>Sherrin Sherwood</u> (Signature) <u>Sherrin Sherwood</u>	Date/Time <u>1/14/10</u> <u>7:51</u>
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## DATA VALIDATION COVER SHEET

5121-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1306 VALIDATION DATE: 2/23/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

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

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO      ☐ HIGH EXPLOSIVES      ☐ DIOXIN FURANS      ☒ LCMSMS PERCHLORATES  
☐ TPH-DRO      ☐ METALS      ☐ PCB CONGENERS      ☐ ORGANOCHLORINE  
☐ GENERAL CHEMISTRY      ☐ RADIOCHEMISTRY      ☐ LCMSMS HIGH EXPLOSIVES      PESTICIDES/POLYCHLORINATED BIPHENYLS  
☐ 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):

- The MS/MSD %R calculations were performed incorrectly. The parent sample result was < the MDL and, thus, a result of 0 µg/kg should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentration. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified as a result.


Reviewed by: ETM Level: 1 Date: 2/25/10

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


DATE: 2/23/10

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"/>	1. The Internal Standard (IS) relative retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC1d	R, PERC1d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The sample result is $\leq 5X$ the concentration of the related analyte in the method blank.	U, PERC4	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was $>5X$ .	N/A	J+, PERC4a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is $<0.99$ .	UJ, R, PERC7a	J, PERC7a

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

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

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate 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"/>	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

P perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846/6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7165  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147001  
 Date Filtered: 03-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	.621	2.48	0.621	ug/kg	U	1	03-FEB-10 19:43	per0203043a
	Perchlorate Isotope Ratio						1	03-FEB-10 19:43	per0203043a
14797-73-0	Perchlorate-101	.621	2.48	0.621	ug/kg	U	1	03-FEB-10 19:43	per0203043a
	Perchlorate-O(18)			6.23	ug/kg		1	03-FEB-10 19:43	per0203043a

<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> %Solids  
 Aliquot

LMF  
 2/23/10

## Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 945200Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7171Date Received: 20-JAN-10GEL Job No (SDG): 10-1306GEL Sample ID: 245147002Date Filtered: 03-FEB-10Injection Volume (uL): 20%Solids: 92.2

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.542	2.17	0.542	ug/kg	U	1	03-FEB-10 20:25	per0203049a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:25	per0203049a
14797-73-0	Perchlorate-101	.542	2.17	0.542	ug/kg	U	1	03-FEB-10 20:25	per0203049a
	Perchlorate-O(18)			5.56	ug/kg		1	03-FEB-10 20:25	per0203049a

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

LMF

2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 245200  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7170  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147003  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 %Solids: 77  
 Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.651	2.6	0.686	ug/kg	J	1	03-FEB-10 20:32	per0203050a
	Perchlorate Isotope Ratio			3.4			1	03-FEB-10 20:32	per0203050a
14797-73-0	Perchlorate-101	.651	2.6	0.687	ug/kg	J	1	03-FEB-10 20:32	per0203050a
	Perchlorate-O(18)			6.68	ug/kg		1	03-FEB-10 20:32	per0203050a

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

\*Concentration =

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

LMF  
2/23/10

Form 1

Perchlorate Analysis Data Sheet

Client Sample No.

RE15-10-7164

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147004

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 82

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846/6850 Modified

Matrix: SOIL

Extraction Batch ID: 245200

Extraction Type: Solid Prep

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	.608	2.43	0.608	ug/kg	U	1	03-FEB-10 20:39	per0203051a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:39	per0203051a
14797-73-0	Perchlorate-101	.608	2.43	0.608	ug/kg	U	1	03-FEB-10 20:39	per0203051a
	Perchlorate-O(18)			6.20	ug/kg		1	03-FEB-10 20:39	per0203051a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

LMF  
2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 245200  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7167  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147005  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 %Solids: 78

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	.641	2.56	0.641	ug/kg	U	1	03-FEB-10 20:47	per0203052a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:47	per0203052a
14797-73-0	Perchlorate-101	.641	2.56	0.641	ug/kg	U	1	03-FEB-10 20:47	per0203052a
	Perchlorate-O(18)			6.36	ug/kg		1	03-FEB-10 20:47	per0203052a

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

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

LMF  
 2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7169

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147006

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 21.1

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	.549	2.2	0.549	ug/kg	U	1	03-FEB-10 20:54	per0203053a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:54	per0203053a
14797-73-0	Perchlorate-101	.549	2.2	0.549	ug/kg	U	1	03-FEB-10 20:54	per0203053a
	Perchlorate-O(18)			5.36	ug/kg		1	03-FEB-10 20:54	per0203053a

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

\*Concentration =

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

LMF

2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW346 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7168  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147007  
 Date Filtered: 03-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	.619	2.47	0.895	ug/kg	J	1	03-FEB-10 21:01	per0203054a
	Perchlorate Isotope Ratio			3.45			1	03-FEB-10 21:01	per0203054a
14797-73-0	Perchlorate-101	.619	2.47	0.884	ug/kg	J	1	03-FEB-10 21:01	per0203054a
	Perchlorate-O(18)			6.30	ug/kg		1	03-FEB-10 21:01	per0203054a

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

\*Concentration =

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

LMF  
2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7166  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147008  
 Date Filtered: 03-FEB-10  
 Injection Volume (mL): 20  
 %Solids: 68

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.731	2.92	1.58	ug/kg	J	1	03-FEB-10 21:08	per0203055a
	Perchlorate Isotope Ratio			3.24			1	03-FEB-10 21:08	per0203055a
14797-73-0	Perchlorate-101	.731	2.92	1.66	ug/kg	J	1	03-FEB-10 21:08	per0203055a
	Perchlorate-O(18)			7.53	ug/kg		1	03-FEB-10 21:08	per0203055a

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

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

LMF  
 2/23/10

Form 1

P perchlorate Analysis Data Sheet

Client Sample No.

RE15-10-7177

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147009

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 92.5

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846.6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

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	.54	2.16	1.16	ug/kg	J	1	03-FEB-10 21:15	per0203056a
	Perchlorate Isotope Ratio			3.15			1	03-FEB-10 21:15	per0203056a
14797-73-0	Perchlorate-101	.54	2.16	1.25	ug/kg	J	1	03-FEB-10 21:15	per0203056a
	Perchlorate-O(18)			5.72	ug/kg		1	03-FEB-10 21:15	per0203056a

<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> %Solids Aliquot

LMF  
2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 245200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7181  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147010  
 Date Filtered: 03-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	.569	2.28	0.569	ug/kg	U	1	03-FEB-10 21:22	per0203057a
	Perchlorate Isotope Ratio						1	03-FEB-10 21:22	per0203057a
14797-73-0	Perchlorate-101	.569	2.28	0.569	ug/kg	U	1	03-FEB-10 21:22	per0203057a
	Perchlorate-O(18)			5.65	ug/kg		1	03-FEB-10 21:22	per0203057a

<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

LMF  
 2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 245200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7178  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147011  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 72

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	1.27	ug/kg	J	1	03-FEB-10 21:50	per0203061a
	Perchlorate Isotope Ratio			3.17			1	03-FEB-10 21:50	per0203061a
14797-73-0	Perchlorate-101	.636	2.54	1.37	ug/kg	J	1	03-FEB-10 21:50	per0203061a
	Perchlorate-O(18)			6.52	ug/kg		1	03-FEB-10 21:50	per0203061a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

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 2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 245200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7182  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147012  
 Date Filtered: 03-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	.61	2.44	0.610	ug/kg	U	1	03-FEB-10 21:57	per0203062a
	Perchlorate Isotope Ratio						1	03-FEB-10 21:57	per0203062a
14797-73-0	Perchlorate-101	.61	2.44	0.610	ug/kg	U	1	03-FEB-10 21:57	per0203062a
	Perchlorate-O(18)			6.45	ug/kg		1	03-FEB-10 21:57	per0203062a

<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

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC Client Sample No. RE15-10-7183

Lab Code: GEL Date Received: 20-JAN-10

Instrument: LCMSMS GEL Job No (SDG): 10-1306

Method: SW846.6850 Modified GEL Sample ID: 245147013

Matrix: SOIL Date Filtered: 03-FEB-10

Extraction Batch ID: 245200 Injection Volume (uL): 20

Extraction Type: Solid Prep %Solids: 88

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	.57	2.28	0.570	ug/kg	U	1	03-FEB-10 22:04	per0203063a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:04	per0203063a
14797-73-0	Perchlorate-101	.57	2.28	0.570	ug/kg	U	1	03-FEB-10 22:04	per0203063a
	Perchlorate-O(18)			6.04	ug/kg		1	03-FEB-10 22:04	per0203063a

<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

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2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7184  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147014  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 % Solids: 83

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.604	2.42	0.616	ug/kg	J	1	03-FEB-10 22:11	per0203064a
	Perchlorate Isotope Ratio			3.55			1	03-FEB-10 22:11	per0203064a
14797-73-0	Perchlorate-101	.604	2.42	0.604	ug/kg	U	1	03-FEB-10 22:11	per0203064a
	Perchlorate-O(18)			6.10	ug/kg		1	03-FEB-10 22:11	per0203064a

<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

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 2/23/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7185

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147015

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 20.6

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.552	ug/kg	U	1	03-FEB-10 22:18	per0203065a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:18	per0203065a
14797-73-0	Perchlorate-101	.552	2.21	0.552	ug/kg	U	1	03-FEB-10 22:18	per0203065a
	Perchlorate-O(18)			5.59	ug/kg		1	03-FEB-10 22:18	per0203065a

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

\*Concentration =

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

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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: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7176

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147016

Date Filtered: 03-FEB-10

Injection Volume (mL): 20

%Solids: 95.3

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	524	2.1	1.19	ug/kg	J	1	03-FEB-10 22:25	per0203066a
	Perchlorate Isotope Ratio			3.08			1	03-FEB-10 22:25	per0203066a
14797-73-0	Perchlorate-101	524	2.1	1.32	ug/kg	J	1	03-FEB-10 22:25	per0203066a
	Perchlorate-O(18)			5.54	ug/kg		1	03-FEB-10 22:25	per0203066a

<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

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC Client Sample No. RE15-10-7180  
 Lab Code: GEL Date Received: 20-JAN-10  
 Instrument: LCMSMS GEL Job No (SDG): 10-1306  
 Method: SW846 6850 Modified GEL Sample ID: 245147017  
 Matrix: SOIL Date Filtered: 03-FEB-10  
 Extraction Batch ID: 245200 Injection Volume (mL): 20  
 Extraction Type: Solid Prep % Solids: 87  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.577	2.31	0.577	ug/kg	U	1	03-FEB-10 22:32	per0203067a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:32	per0203067a
14797-73-0	Perchlorate-101	.577	2.31	0.577	ug/kg	U	1	03-FEB-10 22:32	per0203067a
	Perchlorate-O(18)			5.67	ug/kg		1	03-FEB-10 22:32	per0203067a

<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

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 2/23/10

## Perchlorate Analysis Data Sheet

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Lab Name: GEL Laboratories LLCLab Code: GELInstrument: LCMSMSMethod: SW846 6850 ModifiedMatrix: SOILExtraction Batch ID: 945200Extraction Type: Solid PrepSample Volume/Weight: 2.00 gConcentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7172Date Received: 20-JAN-10GEL Job No (SDG): 10-1306GEL Sample ID: 245147018Date Filtered: 03-FEB-10Injection 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	.627	2.51	0.752	ug/kg	J	1	03-FEB-10 22:40	per0203068a
	Perchlorate Isotope Ratio			3.04			1	03-FEB-10 22:40	per0203068a
14797-73-0	Perchlorate-101	.627	2.51	0.841	ug/kg	J	1	03-FEB-10 22:40	per0203068a
	Perchlorate-O(18)			6.28	ug/kg		1	03-FEB-10 22:40	per0203068a

<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

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2/23/10

## DATA VALIDATION COVER SHEET

5118-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1306 VALIDATION DATE: 2/23/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

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

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

## Section II. Completeness Check

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


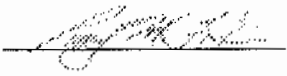
Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):


1. In the MB, Fe and Pb were detected. The results for Pb in samples RE15-10-7166, -7167, -7171, -7176, -7177, -7180 - -7183, and -7185 were detects >5X but ≤50X the MB concentration and, thus, were qualified JJ4a. All other associated sample results were detects >50X the MB concentrations and, thus, were not qualified, based on professional judgment.
2. In the ICB and CCBs, Sb and Tl were detected. The result for Sb in sample -7182 was an ND and, thus, was not qualified. All other associated sample results were detects ≤5X the greatest blank concentrations and, thus, were qualified UJ4b.
3. In the FR blanks (samples RE15-10-7224, -7227, and -7228 from RN 10-1303) associated with all of the field samples, Cr, Fe, K, and Mn were detected. The associated sample results were detects >5X the greatest FR blank concentrations and, thus, were not qualified.
4. The MS %R was < the laboratory's LAL but ≥10% for Se. The associated sample results were NDs and, thus, were qualified UJ4a. The MS %Rs were > the laboratory's UAL for K and Mg. The associated sample results were detects and, thus, were qualified J+, I6b. The MS %Rs were <10% for Mn, < the laboratory's LAL but ≥10% for Ca and Fe, and > the laboratory's UAL for Al. However, the associated parent sample results were >4X the spike concentrations and, thus, no sample results were qualified, based on professional judgment.

Reviewed by: ETM


Level: 1

Date: 2/25/10


DATA VALIDATION COVER SHEET	
5118-1	Records Use only
Data Validation Cover Sheet	 Los Alamos NATIONAL LABORATORY EST. 1945
VALIDATOR'S SIGNATURE:  DATE: 2/23/10	
Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

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

Yes No N/A				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 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. The sample result is $\leq 5X$ the concentration of the related analyte in the method blank.	U, I4	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was $> 5X$ .	N/A	J, I4a
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18. The sample result is $\leq 5X$ the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. The sample result is $\leq 5X$ the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	22. The associated matrix spike recovery was $< 10\%$ . Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	23. The associated matrix spike recovery was $< \text{the LAL}$ 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

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 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: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147001

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7165

LEVEL: Low

DATE RECEIVED 20-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	13100000	ug/Kg		8050	23700	23700	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-36-0	Antimony U,14b	1110	ug/Kg	JN	391	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-38-2	Arsenic	2.06	mg/kg		0.244	1.22	1.22	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-39-3	Barium	174000	ug/Kg		118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-41-7	Beryllium	0.983	mg/kg		0.022	0.11	0.11	2	MS	BAJ	02/16/10 11:38	100216-3	953457
7440-43-9	Cadmium	592	ug/Kg	U	118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-70-2	Calcium	2690000	ug/Kg		9480	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-47-3	Chromium	12800	ug/Kg		178	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-48-4	Cobalt	5790	ug/Kg		178	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-50-8	Copper	7670	ug/Kg		355	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-89-6	Iron	16300000	ug/Kg		9480	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-92-1	Lead	16300	ug/Kg		296	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-95-4	Magnesium J+,16b	2090000	ug/Kg	N	10100	35500	35500	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-96-5	Manganese	362000	ug/Kg		237	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-97-6	Mercury	16.1	ug/kg		4.67	13.7	13.7	1	AV	JXL1	02/03/10 11:25	020310S2-4	945594
7440-02-0	Nickel	9.58	mg/kg	N	0.11	0.439	0.439	2	MS	BAJ	02/16/10 11:38	100216-3	953457
7440-09-7	Potassium J+,16b	1780000	ug/Kg	N	7580	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.22	mg/kg	UN	0.611	1.22	1.22	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-22-4	Silver	1900	ug/Kg		118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-23-5	Sodium	231000	ug/Kg		8290	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-28-0	Thallium U,14b	0.277	mg/kg		0.0733	0.244	0.244	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-61-1	Uranium	0.977	mg/kg		0.0161	0.0489	0.0489	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-62-2	Vanadium	27900	ug/Kg		118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-66-6	Zinc	33200	ug/Kg		391	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.524	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.508	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.542	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.565	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147002

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7171

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 92.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9080000	ug/Kg		7060	20800	20800	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-36-0	Antimony U,14b	830	ug/Kg	JN	343	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-38-2	Arsenic	1.68	mg/kg		0.214	1.07	1.07	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-39-3	Barium	114000	ug/Kg		104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-41-7	Beryllium	0.740	mg/kg		0.0189	0.0943	0.0943	2	MS	BAJ	02/16/10 11:49	100216-3	953457
7440-43-9	Cadmium	519	ug/Kg	U	104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-70-2	Calcium	1790000	ug/Kg		8310	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-47-3	Chromium	12600	ug/Kg		156	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-48-4	Cobalt	6390	ug/Kg		156	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-50-8	Copper	7090	ug/Kg		312	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-89-6	Iron	16200000	ug/Kg		8310	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-92-1	Lead J,14a	12100	ug/Kg		260	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-95-4	Magnesium J+,16b	1680000	ug/Kg	N	8830	31200	31200	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-96-5	Manganese	352000	ug/Kg		208	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-97-6	Mercury	12.1	ug/kg		4.03	11.9	11.9	1	AV	JXL1	02/03/10 11:33	020310S2-4	945594
7440-02-0	Nickel	5.79	mg/kg	N	0.0943	0.377	0.377	2	MS	BAJ	02/16/10 11:49	100216-3	953457
7440-09-7	Potassium J+,16b	1860000	ug/Kg	N	6650	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.07	mg/kg	UN	0.535	1.07	1.07	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-22-4	Silver	397	ug/Kg	J	104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-23-5	Sodium	260000	ug/Kg		7270	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-28-0	Thallium U,14b	0.179	mg/kg	J	0.0642	0.214	0.214	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-61-1	Uranium	1.02	mg/kg		0.0141	0.0428	0.0428	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-62-2	Vanadium	31200	ug/Kg		104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-66-6	Zinc	43500	ug/Kg		343	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.522	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.507	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.549	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.575	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147003

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7170

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 77

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9280000	ug/Kg		8700	25600	25600	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-36-0	Antimony U,14b	836	ug/Kg	JN	422	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-38-2	Arsenic	1.66	mg/kg		0.253	1.26	1.26	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-39-3	Barium	169000	ug/Kg		128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-41-7	Beryllium	0.785	mg/kg		0.024	0.12	0.12	2	MS	BAJ	02/16/10 11:56	100216-3	953457
7440-43-9	Cadmium	640	ug/Kg	U	128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-70-2	Calcium	2980000	ug/Kg		10200	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-47-3	Chromium	10500	ug/Kg		192	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-48-4	Cobalt	4890	ug/Kg		192	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-50-8	Copper	11900	ug/Kg		384	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-89-6	Iron	11700000	ug/Kg		10200	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-92-1	Lead	22400	ug/Kg		320	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-95-4	Magnesium J+,16b	1810000	ug/Kg	N	10900	38400	38400	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-96-5	Manganese	370000	ug/Kg		256	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-97-6	Mercury	38.2	ug/kg		4.92	14.5	14.5	1	AV	JXL1	02/03/10 11:35	020310S2-4	945594
7440-02-0	Nickel	7.21	mg/kg	N	0.12	0.48	0.48	2	MS	BAJ	02/16/10 11:56	100216-3	953457
7440-09-7	Potassium J+,16b	1860000	ug/Kg	N	8190	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.26	mg/kg	UN	0.632	1.26	1.26	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-22-4	Silver	373	ug/Kg	J	128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-23-5	Sodium	84500	ug/Kg		8950	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-28-0	Thallium U,14b	0.165	mg/kg	J	0.0758	0.253	0.253	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-61-1	Uranium	11	mg/kg		0.0167	0.0506	0.0506	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-62-2	Vanadium	24700	ug/Kg		128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-66-6	Zinc	32300	ug/Kg		422	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.509	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.515	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.54	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.543	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147004

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7164

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 82

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10300000	ug/Kg		8120	23900	23900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-36-0	Antimony U,14b	1200	ug/Kg	N	394	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-38-2	Arsenic	1.9	mg/kg		0.241	1.2	1.2	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-39-3	Barium	145000	ug/Kg		119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-41-7	Beryllium	0.851	mg/kg		0.0237	0.118	0.118	2	MS	BAJ	02/16/10 11:58	100216-3	953457
7440-43-9	Cadmium	597	ug/Kg	U	119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-70-2	Calcium	5800000	ug/Kg		9550	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-47-3	Chromium	13600	ug/Kg		179	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-48-4	Cobalt	5010	ug/Kg		179	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-50-8	Copper	7250	ug/Kg		358	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-89-6	Iron	14100000	ug/Kg		9550	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-92-1	Lead	14500	ug/Kg		299	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-95-4	Magnesium J+,16b	1780000	ug/Kg	N	10100	35800	35800	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-96-5	Manganese	361000	ug/Kg		239	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-97-6	Mercury	17.2	ug/kg		4.81	14.1	14.1	1	AV	JXL1	02/03/10 11:40	020310S2-4	945594
7440-02-0	Nickel	8.1	mg/kg	N	0.118	0.474	0.474	2	MS	BAJ	02/16/10 11:58	100216-3	953457
7440-09-7	Potassium J+,16b	1430000	ug/Kg	N	7640	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.2	mg/kg	UN	0.602	1.2	1.2	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-22-4	Silver	7630	ug/Kg		119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-23-5	Sodium	242000	ug/Kg		8360	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-28-0	Thallium U,14b	0.197	mg/kg	J	0.0722	0.241	0.241	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-61-1	Uranium	0.947	mg/kg		0.0159	0.0481	0.0481	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-62-2	Vanadium	24300	ug/Kg		119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-66-6	Zinc	44200	ug/Kg		394	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.509	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.505	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.516	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.513	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147005

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7167

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 78

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11100000	ug/Kg		8720	25600	25600	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-36-0	Antimony U,14b	963	ug/Kg	JN	423	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-38-2	Arsenic	2.12	mg/kg		0.249	1.24	1.24	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-39-3	Barium	163000	ug/Kg		128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-41-7	Beryllium	0.835	mg/kg		0.025	0.125	0.125	2	MS	BAJ	02/16/10 12:00	100216-3	953457
7440-43-9	Cadmium	641	ug/Kg	U	128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-70-2	Calcium	2340000	ug/Kg		10300	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-47-3	Chromium	12400	ug/Kg		192	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-48-4	Cobalt	6690	ug/Kg		192	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-50-8	Copper	8140	ug/Kg		385	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-89-6	Iron	14800000	ug/Kg		10300	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-92-1	Lead J,14a	13400	ug/Kg		320	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-95-4	Magnesium J+,16b	2110000	ug/Kg	N	10900	38500	38500	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-96-5	Manganese	380000	ug/Kg		256	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-97-6	Mercury	10.3	ug/kg	J	4.68	13.8	13.8	1	AV	JXL1	02/03/10 11:41	020310S2-4	945594
7440-02-0	Nickel	7.37	mg/kg	N	0.125	0.501	0.501	2	MS	BAJ	02/16/10 12:00	100216-3	953457
7440-09-7	Potassium J+,16b	1970000	ug/Kg	N	8200	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.24	mg/kg	UN	0.622	1.24	1.24	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-22-4	Silver	641	ug/Kg	U	128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-23-5	Sodium	96700	ug/Kg		8970	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-28-0	Thallium U,14b	0.204	mg/kg	J	0.0747	0.249	0.249	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-61-1	Uranium	0.898	mg/kg		0.0164	0.0498	0.0498	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-62-2	Vanadium	28400	ug/Kg		128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-66-6	Zinc	30800	ug/Kg		423	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.5	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.515	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.559	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.512	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147006

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7169

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 91.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10700000	ug/Kg		7440	21900	21900	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-36-0	Antimony U,14b	817	ug/Kg	JN	361	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-38-2	Arsenic	1.7	mg/kg		0.21	1.05	1.05	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-39-3	Barium	193000	ug/Kg		109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-41-7	Beryllium	0.932	mg/kg		0.0212	0.106	0.106	2	MS	BAJ	02/16/10 12:03	100216-3	953457
7440-43-9	Cadmium	547	ug/Kg	U	109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-70-2	Calcium	2130000	ug/Kg		8750	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-47-3	Chromium	11200	ug/Kg		164	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-48-4	Cobalt	8240	ug/Kg		164	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-50-8	Copper	7200	ug/Kg		328	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-89-6	Iron	14200000	ug/Kg		8750	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-92-1	Lead	14700	ug/Kg		273	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-95-4	Magnesium J+,16b	1830000	ug/Kg	N	9300	32800	32800	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-96-5	Manganese	574000	ug/Kg		219	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-97-6	Mercury	12.8	ug/kg		4.22	12.4	12.4	1	AV	JXL1	02/03/10 11:43	020310S2-4	945594
7440-02-0	Nickel	6.66	mg/kg	N	0.106	0.425	0.425	2	MS	BAJ	02/16/10 12:03	100216-3	953457
7440-09-7	Potassium J+,16b	1870000	ug/Kg	N	7000	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.05	mg/kg	UN	0.525	1.05	1.05	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-22-4	Silver	547	ug/Kg	U	109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-23-5	Sodium	102000	ug/Kg		7660	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-28-0	Thallium U,14b	0.186	mg/kg	J	0.063	0.21	0.21	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-61-1	Uranium	0.974	mg/kg		0.0139	0.042	0.042	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-62-2	Vanadium	30800	ug/Kg		109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-66-6	Zinc	27700	ug/Kg		361	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.502	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.523	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.531	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.517	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147007

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7168

LEVEL: Low

DATE RECEIVED 20-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	10700000	ug/Kg		8380	24600	24600	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-36-0	Antimony U,14b	987	ug/Kg	JN	407	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-38-2	Arsenic	1.52	mg/kg		0.241	1.2	1.2	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-39-3	Barium	195000	ug/Kg		123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-41-7	Beryllium	0.998	mg/kg		0.023	0.115	0.115	2	MS	BAJ	02/16/10 12:05	100216-3	953457
7440-43-9	Cadmium	616	ug/Kg	U	123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-70-2	Calcium	3690000	ug/Kg		9860	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-47-3	Chromium	13100	ug/Kg		185	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-48-4	Cobalt	4870	ug/Kg		185	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-50-8	Copper	8280	ug/Kg		370	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-89-6	Iron	11600000	ug/Kg		9860	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-92-1	Lead	15900	ug/Kg		308	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-95-4	Magnesium J+,16b	1820000	ug/Kg	N	10500	37000	37000	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-96-5	Manganese	393000	ug/Kg		246	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-97-6	Mercury	26.1	ug/kg		5	14.7	14.7	1	AV	JXL1	02/03/10 11:45	020310S2-4	945594
7440-02-0	Nickel	7.46	mg/kg	N	0.115	0.46	0.46	2	MS	BAJ	02/16/10 12:05	100216-3	953457
7440-09-7	Potassium J+,16b	1800000	ug/Kg	N	7890	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.2	mg/kg	UN	0.602	1.2	1.2	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-22-4	Silver	616	ug/Kg	U	123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-23-5	Sodium	84800	ug/Kg		8630	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-28-0	Thallium U,14b	0.153	mg/kg	J	0.0722	0.241	0.241	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-61-1	Uranium	4.86	mg/kg		0.0159	0.0481	0.0481	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-62-2	Vanadium	25200	ug/Kg		123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-66-6	Zinc	30600	ug/Kg		407	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117

## Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.502	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.514	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.505	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.538	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147008

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7166

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 68

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11900000	ug/Kg		9720	28600	28600	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-36-0	Antimony U,14b	1570	ug/Kg	N	472	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-38-2	Arsenic	1.65	mg/kg		0.272	1.36	1.36	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-39-3	Barium	180000	ug/Kg		143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-41-7	Beryllium	0.829	mg/kg		0.0269	0.134	0.134	2	MS	BAJ	02/16/10 12:07	100216-3	953457
7440-43-9	Cadmium	715	ug/Kg	U	143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-70-2	Calcium	3110000	ug/Kg		11400	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-47-3	Chromium	29600	ug/Kg		214	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-48-4	Cobalt	4150	ug/Kg		214	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-50-8	Copper	6470	ug/Kg		429	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-89-6	Iron	11200000	ug/Kg		11400	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-92-1	Lead J,14a	13200	ug/Kg		357	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-95-4	Magnesium J+,16b	1650000	ug/Kg	N	12200	42900	42900	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-96-5	Manganese	292000	ug/Kg		286	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-97-6	Mercury	15.9	ug/kg		5.08	14.9	14.9	1	AV	JXL1	02/03/10 11:46	020310S2-4	945594
7440-02-0	Nickel	8.81	mg/kg	N	0.134	0.537	0.537	2	MS	BAJ	02/16/10 12:07	100216-3	953457
7440-09-7	Potassium J+,16b	2060000	ug/Kg	N	9150	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.36	mg/kg	UN	0.68	1.36	1.36	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-22-4	Silver	715	ug/Kg	U	143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-23-5	Sodium	169000	ug/Kg		10000	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-28-0	Thallium U,14b	0.177	mg/kg	J	0.0816	0.272	0.272	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-61-1	Uranium	2.81	mg/kg		0.018	0.0544	0.0544	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-62-2	Vanadium	21600	ug/Kg		143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-66-6	Zinc	27600	ug/Kg		472	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.511	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.537	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.587	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.544	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147009

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7177

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 92.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9050000	ug/Kg		7320	21500	21500	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-36-0	Antimony U,14b	1120	ug/Kg	N	355	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-38-2	Arsenic	1.15	mg/kg		0.211	1.06	1.06	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-39-3	Barium	177000	ug/Kg		108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-41-7	Beryllium	0.771	mg/kg		0.0214	0.107	0.107	2	MS	BAJ	02/16/10 12:09	100216-3	953457
7440-43-9	Cadmium	538	ug/Kg	U	108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-70-2	Calcium	2350000	ug/Kg		8610	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-47-3	Chromium	10100	ug/Kg		161	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-48-4	Cobalt	3840	ug/Kg		161	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-50-8	Copper	5450	ug/Kg		323	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-89-6	Iron	10800000	ug/Kg		8610	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-92-1	Lead J,14a	10100	ug/Kg		269	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-95-4	Magnesium J+,16b	1530000	ug/Kg	N	9150	32300	32300	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-96-5	Manganese	201000	ug/Kg		215	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-97-6	Mercury	18.3	ug/kg		4.15	12.2	12.2	1	AV	JXL	02/03/10 11:48	020310S2-4	945594
7440-02-0	Nickel	6.8	mg/kg	N	0.107	0.428	0.428	2	MS	BAJ	02/16/10 12:09	100216-3	953457
7440-09-7	Potassium J+,16b	1730000	ug/Kg	N	6890	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.06	mg/kg	UN	0.529	1.06	1.06	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-22-4	Silver	538	ug/Kg	U	108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-23-5	Sodium	138000	ug/Kg		7530	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-28-0	Thallium U,14b	0.189	mg/kg	J	0.0634	0.211	0.211	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-61-1	Uranium	1.21	mg/kg		0.014	0.0423	0.0423	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-62-2	Vanadium	23800	ug/Kg		108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-66-6	Zinc	22300	ug/Kg		355	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.502	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.511	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.531	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.505	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147010

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7181

LEVEL: Low

DATE RECEIVED 20-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	8220000	ug/Kg		7660	22500	22500	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-36-0	Antimony U,14b	799	ug/Kg	JN	372	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-38-2	Arsenic	1.85	mg/kg		0.228	1.14	1.14	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-39-3	Barium	124000	ug/Kg		113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-41-7	Beryllium	0.737	mg/kg		0.0221	0.11	0.11	2	MS	BAJ	02/16/10 12:12	100216-3	953457
7440-43-9	Cadmium	563	ug/Kg	U	113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-70-2	Calcium	2020000	ug/Kg		9020	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-47-3	Chromium	21600	ug/Kg		169	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-48-4	Cobalt	5210	ug/Kg		169	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-50-8	Copper	9580	ug/Kg		338	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-89-6	Iron	13000000	ug/Kg		9020	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-92-1	Lead J,14a	11800	ug/Kg		282	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-95-4	Magnesium J+,16b	1720000	ug/Kg	N	9580	33800	33800	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-96-5	Manganese	313000	ug/Kg		225	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-97-6	Mercury	22	ug/kg		4.59	13.5	13.5	1	AV	JXL1	02/03/10 11:50	020310S2-4	945594
7440-02-0	Nickel	7.98	mg/kg	N	0.11	0.441	0.441	2	MS	BAJ	02/16/10 12:12	100216-3	953457
7440-09-7	Potassium J+,16b	1390000	ug/Kg	N	7210	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.14	mg/kg	UN	0.569	1.14	1.14	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-22-4	Silver	563	ug/Kg	U	113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-23-5	Sodium	150000	ug/Kg		7890	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-28-0	Thallium U,14b	0.150	mg/kg	J	0.0683	0.228	0.228	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-61-1	Uranium	0.581	mg/kg		0.015	0.0455	0.0455	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-62-2	Vanadium	27100	ug/Kg		113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-66-6	Zinc	29800	ug/Kg		372	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.505	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.5	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.506	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.516	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147011

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7178

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8000000	ug/Kg		8340	24500	24500	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-36-0	Antimony U,14b	737	ug/Kg	JN	405	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-38-2	Arsenic	1.74	mg/kg		0.25	1.25	1.25	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-39-3	Barium	138000	ug/Kg		123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-41-7	Beryllium	0.749	mg/kg		0.0245	0.122	0.122	2	MS	BAJ	02/16/10 12:18	100216-3	953457
7440-43-9	Cadmium	613	ug/Kg	U	123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-70-2	Calcium	2240000	ug/Kg		9810	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-47-3	Chromium	12200	ug/Kg		184	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-48-4	Cobalt	4740	ug/Kg		184	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-50-8	Copper	10400	ug/Kg		368	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-89-6	Iron	10900000	ug/Kg		9810	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-92-1	Lead	22900	ug/Kg		306	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-95-4	Magnesium J+,16b	1540000	ug/Kg	N	10400	36800	36800	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-96-5	Manganese	317000	ug/Kg		245	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-97-6	Mercury	119	ug/kg		4.86	14.3	14.3	1	AV	JXL1	02/03/10 11:51	020310S2-4	945594
7440-02-0	Nickel	7.96	mg/kg	N	0.122	0.489	0.489	2	MS	BAJ	02/16/10 12:18	100216-3	953457
7440-09-7	Potassium J+,16b	1560000	ug/Kg	N	7850	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.25	mg/kg	UN	0.626	1.25	1.25	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-22-4	Silver	613	ug/Kg	U	123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-23-5	Sodium	75600	ug/Kg		8580	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-28-0	Thallium U,14b	0.145	mg/kg	J	0.0751	0.25	0.25	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-61-1	Uranium	3.47	mg/kg		0.0165	0.0501	0.0501	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-62-2	Vanadium	23300	ug/Kg		123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-66-6	Zinc	44700	ug/Kg		405	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.519	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.508	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.534	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.52	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147012

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7182

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 82

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9000000	ug/Kg		7930	23300	23300	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-36-0	Antimony	1170	ug/Kg	UN	385	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-38-2	Arsenic	1.59	mg/kg		0.24	1.2	1.2	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-39-3	Barium	144000	ug/Kg		117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-41-7	Beryllium	0.868	mg/kg		0.0218	0.109	0.109	2	MS	BAJ	02/16/10 12:20	100216-3	953457
7440-43-9	Cadmium	583	ug/Kg	U	117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-70-2	Calcium	2470000	ug/Kg		9330	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-47-3	Chromium	7310	ug/Kg		175	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-48-4	Cobalt	3890	ug/Kg		175	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-50-8	Copper	6040	ug/Kg		350	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-89-6	Iron	9210000	ug/Kg		9330	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-92-1	Lead J,14a	12100	ug/Kg		291	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-95-4	Magnesium J+,16b	1460000	ug/Kg	N	9910	35000	35000	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-96-5	Manganese	197000	ug/Kg		233	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-97-6	Mercury	16.9	ug/kg		4.83	14.2	14.2	1	AV	JXL1	02/03/10 11:53	02031052-4	945594
7440-02-0	Nickel	6.63	mg/kg	N	0.109	0.436	0.436	2	MS	BAJ	02/16/10 12:20	100216-3	953457
7440-09-7	Potassium J+,16b	1900000	ug/Kg	N	7460	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.2	mg/kg	UN	0.599	1.2	1.2	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-22-4	Silver	583	ug/Kg	U	117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-23-5	Sodium	133000	ug/Kg		8160	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-28-0	Thallium U,14b	0.147	mg/kg	J	0.0719	0.24	0.24	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-61-1	Uranium	2.38	mg/kg		0.0158	0.0479	0.0479	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-62-2	Vanadium	17500	ug/Kg		117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-66-6	Zinc	24400	ug/Kg		385	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.523	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.509	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.515	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.559	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147013

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7183

LEVEL: Low

DATE RECEIVED 20-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	6140000	ug/Kg		7640	22500	22500	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-36-0	Antimony U,14b	1180	ug/Kg	N	371	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-38-2	Arsenic	1.44	mg/kg		0.225	1.13	1.13	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-39-3	Barium	89400	ug/Kg		112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-41-7	Beryllium	0.573	mg/kg		0.0223	0.111	0.111	2	MS	BAJ	02/16/10 12:23	100216-3	953457
7440-43-9	Cadmium	562	ug/Kg	U	112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-70-2	Calcium	1640000	ug/Kg		8990	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-47-3	Chromium	21100	ug/Kg		169	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-48-4	Cobalt	3190	ug/Kg		169	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-50-8	Copper	3870	ug/Kg		337	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-89-6	Iron	11500000	ug/Kg		8990	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-92-1	Lead J,14a	8560	ug/Kg		281	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-95-4	Magnesium J+,16b	1140000	ug/Kg	N	9550	33700	33700	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-96-5	Manganesec	270000	ug/Kg		225	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-97-6	Mercury	8.85	ug/kg	J	4.59	13.5	13.5	1	AV	JXL1	02/03/10 11:55	020310S2-4	945594
7440-02-0	Nickel	5.55	mg/kg	N	0.111	0.446	0.446	2	MS	BAJ	02/16/10 12:23	100216-3	953457
7440-09-7	Potassium J+,16b	1420000	ug/Kg	N	7190	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.13	mg/kg	UN	0.563	1.13	1.13	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-22-4	Silver	562	ug/Kg	U	112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-23-5	Sodium	144000	ug/Kg		7870	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-28-0	Thallium U,14b	0.0926	mg/kg	J	0.0676	0.225	0.225	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-61-1	Uranium	1.06	mg/kg		0.0149	0.045	0.045	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-62-2	Vanadium	16400	ug/Kg		112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-66-6	Zinc	44600	ug/Kg		371	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.507	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.506	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.506	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.511	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147014

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7184

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 83

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9860000	ug/Kg		8080	23800	23800	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-36-0	Antimony U,14b	575	ug/Kg	JN	392	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-38-2	Arsenic	2.03	mg/kg		0.234	1.17	1.17	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-39-3	Barium	150000	ug/Kg		119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-41-7	Beryllium	0.922	mg/kg		0.0238	0.119	0.119	2	MS	BAJ	02/16/10 12:25	100216-3	953457
7440-43-9	Cadmium	594	ug/Kg	U	119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-70-2	Calcium	2380000	ug/Kg		9510	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-47-3	Chromium	15300	ug/Kg		178	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-48-4	Cobalt	5060	ug/Kg		178	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-50-8	Copper	9780	ug/Kg		357	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-89-6	Iron	12200000	ug/Kg		9510	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-92-1	Lead	30500	ug/Kg		297	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-95-4	Magnesium J+,16b	1740000	ug/Kg	N	10100	35700	35700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-96-5	Manganese	340000	ug/Kg		238	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-97-6	Mercury	185	ug/kg		4.23	12.4	12.4	1	AV	JXLI	02/03/10 12:00	020310S2-4	945594
7440-02-0	Nickel	8.75	mg/kg	N	0.119	0.475	0.475	2	MS	BAJ	02/16/10 12:25	100216-3	953457
7440-09-7	Potassium J+,16b	1560000	ug/Kg	N	7610	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.17	mg/kg	UN	0.586	1.17	1.17	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-22-4	Silver	594	ug/Kg	U	119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-23-5	Sodium	83000	ug/Kg		8320	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-28-0	Thallium U,14b	0.174	mg/kg	J	0.0703	0.234	0.234	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-61-1	Uranium	2.8	mg/kg		0.0155	0.0469	0.0469	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-62-2	Vanadium	25500	ug/Kg		119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-66-6	Zinc	36200	ug/Kg		392	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.508	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.515	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.583	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.508	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147015

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7185

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 90.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10400000	ug/Kg		7420	21800	21800	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-36-0	Antimony U,14b	967	ug/Kg	JN	360	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-38-2	Arsenic	1.54	mg/kg		0.218	1.09	1.09	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-39-3	Barium	132000	ug/Kg		109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-41-7	Beryllium	0.854	mg/kg		0.0208	0.104	0.104	2	MS	BAJ	02/16/10 12:27	100216-3	953457
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-70-2	Calcium	2050000	ug/Kg		8730	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-47-3	Chromium	15500	ug/Kg		164	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-48-4	Cobalt	5170	ug/Kg		164	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-50-8	Copper	6780	ug/Kg		327	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-89-6	Iron	14100000	ug/Kg		8730	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-92-1	Lead J,14a	13600	ug/Kg		273	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-95-4	Magnesium J+,16b	1720000	ug/Kg	N	9270	32700	32700	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-96-5	Manganese	297000	ug/Kg		218	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-97-6	Mercury	36.6	ug/kg		4.21	12.4	12.4	1	AV	JXL1	02/03/10 12:02	02031052-4	945594
7440-02-0	Nickel	7.19	mg/kg	N	0.104	0.415	0.415	2	MS	BAJ	02/16/10 12:27	100216-3	953457
7440-09-7	Potassium J+,16b	1810000	ug/Kg	N	6980	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.09	mg/kg	UN	0.544	1.09	1.09	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-22-4	Silver	545	ug/Kg	U	109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-23-5	Sodium	123000	ug/Kg		7640	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-28-0	Thallium U,14b	0.165	mg/kg	J	0.0653	0.218	0.218	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-61-1	Uranium	1.4	mg/kg		0.0144	0.0435	0.0435	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-62-2	Vanadium	30200	ug/Kg		109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-66-6	Zinc	30600	ug/Kg		360	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.506	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.507	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.535	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.532	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147016

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7176

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 95.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8280000	ug/Kg		7130	21000	21000	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-36-0	Antimony U,14b	1000	ug/Kg	JN	346	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-38-2	Arsenic	1.48	mg/kg		0.194	0.969	0.969	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-39-3	Barium	127000	ug/Kg		105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-41-7	Beryllium	0.750	mg/kg		0.0205	0.103	0.103	2	MS	BAJ	02/16/10 12:29	100216-3	953457
7440-43-9	Cadmium	524	ug/Kg	U	105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-70-2	Calcium	2160000	ug/Kg		8390	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-47-3	Chromium	8140	ug/Kg		157	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-48-4	Cobalt	3590	ug/Kg		157	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-50-8	Copper	6100	ug/Kg		315	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-89-6	Iron	9630000	ug/Kg		8390	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-92-1	Lead J,14a	13300	ug/Kg		262	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-95-4	Magnesium J+,16b	1490000	ug/Kg	N	8920	31500	31500	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-96-5	Manganese	203000	ug/Kg		210	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-97-6	Mercury	15	ug/kg		3.93	11.5	11.5	1	AV	JXL1	02/03/10 12:03	020310S2-4	945594
7440-02-0	Nickel	6.21	mg/kg	N	0.103	0.411	0.411	2	MS	BAJ	02/16/10 12:29	100216-3	953457
7440-09-7	Potassium J+,16b	1880000	ug/Kg	N	6710	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7782-49-2	Selenium UJ,16a	0.969	mg/kg	UN	0.485	0.969	0.969	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-22-4	Silver	524	ug/Kg	U	105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-23-5	Sodium	131000	ug/Kg		7340	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-28-0	Thallium U,14b	0.134	mg/kg	J	0.0582	0.194	0.194	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-61-1	Uranium	3.28	mg/kg		0.0128	0.0388	0.0388	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-62-2	Vanadium	20300	ug/Kg		105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-66-6	Zinc	28500	ug/Kg		346	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.5	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.541	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.545	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.511	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147017

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7180

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8390000	ug/Kg		7830	23000	23000	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-36-0	Antimony U,14b	912	ug/Kg	JN	380	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-38-2	Arsenic	1.52	mg/kg		0.227	1.13	1.13	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-39-3	Barium	119000	ug/Kg		115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-41-7	Beryllium	0.659	mg/kg		0.0222	0.111	0.111	2	MS	BAJ	02/16/10 12:32	100216-3	953457
7440-43-9	Cadmium	576	ug/Kg	U	115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-70-2	Calcium	1970000	ug/Kg		9220	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-47-3	Chromium	10600	ug/Kg		173	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-48-4	Cobalt	3770	ug/Kg		173	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-50-8	Copper	6520	ug/Kg		346	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-89-6	Iron	10600000	ug/Kg		9220	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-92-1	Lead J,14a	11600	ug/Kg		288	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-95-4	Magnesium J+,16b	1340000	ug/Kg	N	9790	34600	34600	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-96-5	Manganese	147000	ug/Kg		230	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-97-6	Mercury	27.7	ug/kg		4.1	12.1	12.1	1	AV	JXL1	02/03/10 12:05	020310S2-4	945594
7440-02-0	Nickel	5.85	mg/kg	N	0.111	0.444	0.444	2	MS	BAJ	02/16/10 12:32	100216-3	953457
7440-09-7	Potassium J+,16b	1270000	ug/Kg	N	7370	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.13	mg/kg	UN	0.567	1.13	1.13	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-22-4	Silver	576	ug/Kg	U	115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-23-5	Sodium	120000	ug/Kg		8060	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-28-0	Thallium U,14b	0.118	mg/kg	J	0.068	0.227	0.227	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-61-1	Uranium	0.624	mg/kg		0.015	0.0454	0.0454	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-62-2	Vanadium	24100	ug/Kg		115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-66-6	Zinc	23900	ug/Kg		380	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.501	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.509	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.574	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.52	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147018

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7179

LEVEL: Low

DATE RECEIVED 20-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	8950000	ug/Kg		8160	24000	24000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-36-0	Antimony U,14b	848	ug/Kg	JN	396	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-38-2	Arsenic	1.58	mg/kg		0.249	1.24	1.24	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-39-3	Barium	139000	ug/Kg		120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-41-7	Beryllium	0.804	mg/kg		0.025	0.125	0.125	2	MS	BAJ	02/16/10 12:34	100216-3	953457
7440-43-9	Cadmium	600	ug/Kg	U	120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-70-2	Calcium	2080000	ug/Kg		9600	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-47-3	Chromium	23200	ug/Kg		180	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-48-4	Cobalt	4890	ug/Kg		180	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-50-8	Copper	12400	ug/Kg		360	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-89-6	Iron	11700000	ug/Kg		9600	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-92-1	Lead	22800	ug/Kg		300	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-95-4	Magnesium J+,16b	1590000	ug/Kg	N	10200	36000	36000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-96-5	Manganese	307000	ug/Kg		240	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-97-6	Mercury	171	ug/kg		4.76	14	14	1	AV	JXL1	02/03/10 12:07	020310S2-4	945594
7440-02-0	Nickel	9.37	mg/kg	N	0.125	0.5	0.5	2	MS	BAJ	02/16/10 12:34	100216-3	953457
7440-09-7	Potassium J+,16b	1540000	ug/Kg	N	7680	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7782-49-2	Selenium UJ,16a	1.24	mg/kg	UN	0.622	1.24	1.24	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-22-4	Silver	600	ug/Kg	U	120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-23-5	Sodium	94500	ug/Kg		8400	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-28-0	Thallium U,14b	0.151	mg/kg	J	0.0747	0.249	0.249	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-61-1	Uranium	3.8	mg/kg		0.0164	0.0498	0.0498	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-62-2	Vanadium	25100	ug/Kg		120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-66-6	Zinc	39800	ug/Kg		396	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.523	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.504	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.538	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.502	g	50	mL	02/15/10	BXA1

LMF  
2/23/10

## DATA VALIDATION COVER SHEET

5120-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1306 VALIDATION DATE: 2/23/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- |   |  |   |   |
|---|--|---|---|
| <input type="checkbox"/> TPH-GRO                                | <input type="checkbox"/> HIGH EXPLOSIVES | <input type="checkbox"/> DIOXIN FURANS          | <input type="checkbox"/> LCMSMS PERCHLORATES                  |
| <input type="checkbox"/> TPH-DRO                                | <input type="checkbox"/> METALS          | <input type="checkbox"/> PCB CONGENERS          | <input type="checkbox"/> ORGANOCHLORINE                       |
| <input checked="" type="checkbox"/> GENERAL CHEMISTRY           | <input type="checkbox"/> RADIOCHEMISTRY  | <input type="checkbox"/> LCMSMS HIGH EXPLOSIVES | <input type="checkbox"/> PESTICIDES/POLYCHLORINATED BIPHENYLS |
| <input type="checkbox"/> OTHER (DESCRIBE): <u>Total CN 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 total CN matrix QC analysis associated with samples RE15-10-7164, -7165, and -7167 -- 7171 were performed on parent samples from another LANL RN. No sample data were qualified as a result.


Reviewed by: ETMLevel: 1Date: 2/25/10VALIDATOR'S SIGNATURE: DATE: 2/23/10

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

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

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

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

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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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7166  
Sample ID: 245147008  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 31.6%

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	139	93.7	345	ug/kg	1	AXC2	01/26/10	0920	944401	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	01/25/10	1602	944400

**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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7177  
Sample ID: 245147009  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 7.46%

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	93.0	70.7	260	ug/kg	1	AXC2	01/26/10	0924	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7181  
Sample ID: 245147010  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 12.1%

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	73.0	268	ug/kg	1	AXC2	01/26/10	0927	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7178  
Sample ID: 245147011  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 21.4%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	188	86.5	318	ug/kg	1	AXC2	01/26/10	1003	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7182  
Sample ID: 245147012  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 18%

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		631	74.0	272	ug/kg	1	AXC2	01/26/10	1004	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7183  
Sample ID: 245147013  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 12.2%

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	207	77.5	285	ug/kg	1	AXC2	01/26/10	1005	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7168  
Sample ID: 245147007  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 19.2%

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		305	79.4	292	ug/kg	1	AXC2	01/27/10	1404	944392	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	01/26/10	1606	944391

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7184  
Sample ID: 245147014  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 17.2%

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	80.5	296	ug/kg	1	AXC2	01/26/10	1006	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7185  
Sample ID: 245147015  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 9.42%

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	68.2	251	ug/kg	1	AXC2	01/26/10	1010	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7176  
Sample ID: 245147016  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 4.66%

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		396	67.3	247	ug/kg	1	AXC2	01/26/10	1008	944401	1

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

**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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7180  
Sample ID: 245147017  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 13.4%

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	75.5	277	ug/kg	1	AXC2	01/26/10	1016	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7179  
Sample ID: 245147018  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 20.3%

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	J	101	73.6	270	ug/kg	1	AXC2	01/26/10	1010	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7165  
Sample ID: 245147001  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 19.4%

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	81.2	298	ug/kg	1	AXC2	01/27/10	1355	944392	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7171  
Sample ID: 245147002  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 7.8%

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	63.6	234	ug/kg	1	AXC2	01/27/10	1356	944392	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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2/23/10

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7170  
Sample ID: 245147003  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 23.2%

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	85.1	313	ug/kg	1	AXC2	01/27/10	1357	944392	1

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

LMF  
2/23/10

# GEL LABORATORIES LLC

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

## Certificate of Analysis

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

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7164  
Sample ID: 245147004  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 17.7%

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	79.5	292	ug/kg	1	AXC2	01/27/10	1401	944392	1
----------------	---	----	------	-----	-------	---	------	----------	------	--------	---

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LMF  
2/23/10

# GEL LABORATORIES LLC

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

## Certificate of Analysis

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

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7167  
Sample ID: 245147005  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 22%

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	87.2	320	ug/kg	1	AXC2	01/27/10	1402	944392	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LMF  
2/23/10

# GEL LABORATORIES LLC

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

## Certificate of Analysis

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

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7169  
Sample ID: 245147006  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 8.93%

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	74.7	275	ug/kg	1	AXC2	01/27/10	1403	944392	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LMF  
2/23/10

Sunday, January 17, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1306C

**LOS ALAMOS**

REQUEST NUMBER: 10-1306

**NATIONAL LABORATORY**

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/17/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245147/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7165	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7171	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7170	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7164	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7167	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7169	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7168	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7166	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7177	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7181	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7178	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7182	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7183	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7184	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7185	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7176	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7180	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7179	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

1/10

3:00

Printed Name

Signature

Greg Tyler

[Signature]

1-20-10

0845

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

Sunday, January 17, 2010

**LOS ALAMOS**  
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

Page 1 of 4  
REQUEST NUMBER: 10-1306

These Samples are on:  
LANL Request Number: 10-1306  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 1/18/2010

TURNAROUND/REPORT DUE: 2/17/2010

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-845:8020	1	RE15-10-7164	R	1/13/2010	
		1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	

Sunday, January 17, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8020	1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
	SW-846:8850	1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
		1	RE15-10-7186	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
	SW-846:7471A	1	RE15-10-7184	R	1/13/2010	

Sunday, January 17, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
	SW-846:9012A	1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
		1	RE15-10-7186	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	

REQUEST NUMBER: 10-1306

Sunday, January 17, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846-8012A	1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	

Final Page of REQUEST NUMBER 10-1306



January 22, 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: 245147  
SDG: 10-1306

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 20, 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: 10-1306  
Enclosures

**Los Alamos National Laboratory (72733-001-09)**  
**LANL ER Project**  
**Work Order #: 245147**  
**SDG: 10-1306**

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# Case Narrative

**Case Narrative for  
Los Alamos National Laboratory (72733-001-09)  
LANL ER Project  
Workorder #: 245147  
SDG # : 10-1306**

**January 22, 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 20, 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>
245147001	RE15-10-7165
245147002	RE15-10-7171
245147003	RE15-10-7170
245147004	RE15-10-7164
245147005	RE15-10-7167
245147006	RE15-10-7169
245147007	RE15-10-7168
245147008	RE15-10-7166
245147009	RE15-10-7177
245147010	RE15-10-7181
245147011	RE15-10-7178
245147012	RE15-10-7182
245147013	RE15-10-7183
245147014	RE15-10-7184
245147015	RE15-10-7185
245147016	RE15-10-7176
245147017	RE15-10-7180
245147018	RE15-10-7179

**Case Narrative**

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

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

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

A handwritten signature in black ink, appearing to read "for Valerie Davis".

Valerie Davis

Project Manager

**List of current GEL Certifications as of 22 January 2010**

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

# **Chain of Custody and Supporting Documentation**

Sunday, January 17, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1306C

**LOS ALAMOS**

REQUEST NUMBER: 10-1306

**NATIONAL LABORATORY**

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/17/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245147/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7165	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7171	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7170	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7164	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7167	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7169	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7168	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7166	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7177	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7181	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7178	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7182	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7183	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7184	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7185	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7176	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7180	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7179	1	POLY	Met+U+CLO4+CN	Ice	R

Relinquished By:


Date

Time

Received By:

Date

Time

  
 Printed Name      Signature

1/17/10      3:00

 Greg Tyler       1-20-10 0845  
 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

Sunday, January 17, 2010

**LOS ALAMOS**

**NATIONAL LABORATORY**

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

Please analyse the enclosed samples  
according to the schedule indicated:

**SHIP DATE: 1/18/2010**

**TURNAROUND/REPORT DUE: 2/17/2010**

**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: 10-1306

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

REQUEST NUMBER: 10-1306

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE15-10-7164	R	1/13/2010	
		1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	

Sunday, January 17, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
	SW-846:6850	1	RE15-10-7164	R	1/13/2010	
		1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
	SW-846:7471A	1	RE15-10-7164	R	1/13/2010	

Sunday, January 17, 2010

REQUEST NUMBER: 10-1306

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	
		1	RE15-10-7179	R	1/13/2010	
		1	RE15-10-7180	R	1/13/2010	
		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	
	SW-846:9012A	1	RE15-10-7164	R	1/13/2010	
		1	RE15-10-7165	R	1/13/2010	
		1	RE15-10-7166	R	1/13/2010	
		1	RE15-10-7167	R	1/13/2010	
		1	RE15-10-7168	R	1/13/2010	
		1	RE15-10-7169	R	1/13/2010	
		1	RE15-10-7170	R	1/13/2010	
		1	RE15-10-7171	R	1/13/2010	
		1	RE15-10-7176	R	1/13/2010	
		1	RE15-10-7177	R	1/13/2010	
		1	RE15-10-7178	R	1/13/2010	

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
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		1	RE15-10-7181	R	1/13/2010	
		1	RE15-10-7182	R	1/13/2010	
		1	RE15-10-7183	R	1/13/2010	
		1	RE15-10-7184	R	1/13/2010	
		1	RE15-10-7185	R	1/13/2010	

Final Page of REQUEST NUMBER 10-1306



Laboratories LLC

## SAMPLE RECEIPT &amp; REVIEW FORM

Client: LANL			SDG/ARCO/Work Order: 10-1306		
Received By: Greg Tyler			Date Received: 1/20/10		
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.		
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 80cpm		
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 2-5                   12-15, 17
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: <b>No time on Chain of Custody.</b>
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:

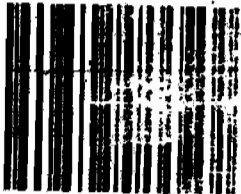
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 7209 7849 5688 3C    7209 7849 5883 4C    7209 7849 5633 17C  
 7209 7849 5850 3C    7209 7849 5747 5C  
 7209 7849 5655 4C    7209 7849 6055 5C  
 7209 7849 5666 4C    7209 7849 5677 12C

PM (or PMA) review: Initials

Date

1/21/10



SHIP DATE: 19JAN10  
ACTNCT: 62.0 LB MAN  
CRD: 0014176/CAFE2449  
BILL SENDER

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PRIORITY OVERNIGHT  
TUE - 19JAN A1



3 of 3  
7209 7849 5644  
MatrN 7209 7849 5622 0201

WED - 20JAN A1  
PRIORITY OVERNIGHT

XX CHSA

29407  
SC-US  
CHS



ORIGIN ID: SAFA (506) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 03

SHIP DATE: 19JAN10  
ACTNCT: 61.0 LB MAN  
CRD: 0014176/CAFE2449

LOS ALAMOS, NM 87545  
UNITED STATES US

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 554-8171  
REF: 000100NR2A0515BYDO

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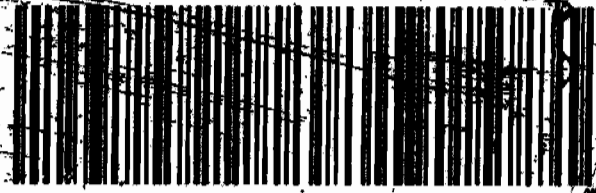


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WED - 20JAN A1  
PRIORITY OVERNIGHT

XX CHSA

29407  
SC-US  
CHS



ORIGIN ID: SAFA (506) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
ACTNCT: 62.0 LB MAN  
CRD: 0014176/CAFE2449  
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 554-8171  
REF: 000100NR2A0515BYDO

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7209 7849 5736  
MatrN 7209 7849 5725 0201

WED - 20JAN A1  
PRIORITY OVERNIGHT

XX CHSA

29407  
SC-US  
CHS

ORIGIN ID: SAFA (506) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
ACTNCT: 61.0 LB MAN  
CRD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 554-8171  
REF: 000100NR3A05529E00

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7209 7849 5840  
MatrN 7209 7849 5830 0201

WED - 20JAN A1  
PRIORITY OVERNIGHT

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LOS ALAMOS NATL LAB  
1900 BLDG 1237 CPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN18  
ACTWGT: 62.0 LB HAN  
CRD: 0014176/CAFE2449  
BILL SENDER

ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1900 BLDG 1237 CPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN18  
ACTWGT: 62.0 LB HAN  
CRD: 0014176/CAFE2449  
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

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GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

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REF: 68010AMR3A05529E00

(843) 556-8171  
REF: 68010AMR3A05529E00

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Matr-N 7209 7849 5677 0201

WED - 20JAN A1  
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CHS



ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1900 BLDG 1237 CPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN18  
ACTWGT: 62.0 LB HAN  
CRD: 0014176/CAFE2449  
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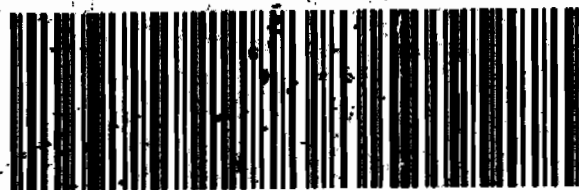
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PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
1900 BLDG 1237 CPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN18  
ACTWGT: 62.0 LB HAN  
CRD: 0014176/CAFE2449  
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GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

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REF: 68010AMR3A05529E00

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PRIORITY OVERNIGHT

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NPSN 8263 7209 7849 5666  
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JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
ACTWT: 54.0 LB MAN  
CAD: 0014176/CAFE2449

BILL SENDER

ORIGIN ID: SAFA (505) 665-9069  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
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CAD: 0014176/CAFE2449

BILL SENDER

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GENERAL ENGINEERING LAB  
2040 SAVAGE RD

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GENERAL ENGINEERING LAB  
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PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 665-9069  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
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ORIGIN ID: SAFA (505) 665-9069  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
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LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
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JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545  
UNITED STATES US

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CNO: 0014176/CPE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-9171  
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WED - 20JAN A1  
PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
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VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

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SHIP DATE: 19JAN10  
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2040 SAVAGE RD

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REF: 68010AMR2A05158YD0

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WED - 20JAN A1  
PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
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2040 SAVAGE RD

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ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
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SHIP DATE: 19JAN10  
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VALERIE DAVIS  
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PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
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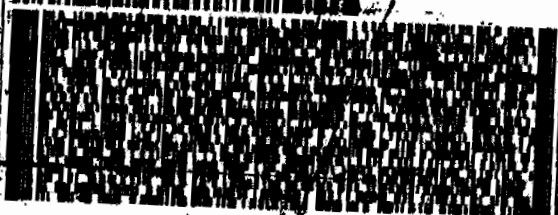
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PRIORITY OVERNIGHT

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

SHIP DATE: 19JAN10  
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LOS ALAMOS, NM 87545  
UNITED STATES US

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VALERIE DAVIS  
GENERAL ENGINEERING LAB  
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REF: 68010AMR3A0352YR00

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PRIORITY OVERNIGHT

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IN ID: SAFA (505) 655-9968  
JOYLENE VALDEZ  
ALAMOS NATL LAB  
BLDG 1237 DPU 63

ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 19JAN10  
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CRD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
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CHARLESTON SC 29407  
(843) 556-8171  
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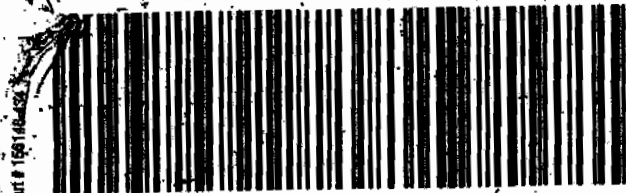
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PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505) 655-9968  
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LOS ALAMOS NATL LAB  
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LOS ALAMOS, NM 87545  
UNITED STATES US

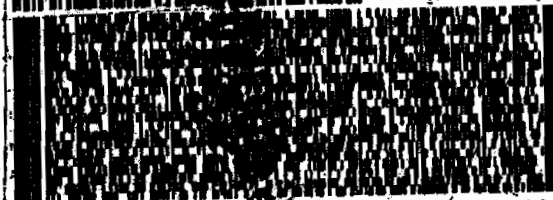
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VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

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2 of 3  
NPSH 7209 7849 5633  
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PRIORITY OVERNIGHT

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# **Data Review Qualifier Flag Definition Sheet**

## Data Review Qualifier Definitions

### Qualifier Explanation

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

# LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS  
Los Alamos National Laboratory (LANL)  
SDG 10-1306**

**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:** 945202

**Prep Batch Number:** 945200

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245147001	RE15-10-7165
245147002	RE15-10-7171
245147003	RE15-10-7170
245147004	RE15-10-7164
245147005	RE15-10-7167
245147006	RE15-10-7169
245147007	RE15-10-7168
245147008	RE15-10-7166
245147009	RE15-10-7177
245147010	RE15-10-7181
245147011	RE15-10-7178
245147012	RE15-10-7182
245147013	RE15-10-7183
245147014	RE15-10-7184

10-1306-PERLCMS

Page 1 of 5

245147015	RE15-10-7185
245147016	RE15-10-7176
245147017	RE15-10-7180
245147018	RE15-10-7179
1202024348	Interference Check Sample (ICS)
1202024344	Method Blank (MB)
1202024345	Laboratory Control Sample (LCS)
1202024346	245147001(RE15-10-7165) Matrix Spike (MS)
1202024347	245147001(RE15-10-7165) 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.

10-1306-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 245147001 (RE15-10-7165) 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. Maus Date: 02/08/10

# SAMPLE DATA SUMMARY

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: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7165  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147001  
 Date Filtered: 03-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	.621	2.48	0.621	ug/kg	U	1	03-FEB-10 19:43	per0203043a
	Perchlorate Isotope Ratio						1	03-FEB-10 19:43	per0203043a
14797-73-0	Perchlorate-101	.621	2.48	0.621	ug/kg	U	1	03-FEB-10 19:43	per0203043a
	Perchlorate-O(18)			6.23	ug/kg		1	03-FEB-10 19:43	per0203043a

<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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7171

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147002

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 92.2

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.542	2.17	0.542	ug/kg	U	1	03-FEB-10 20:25	per0203049a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:25	per0203049a
14797-73-0	Perchlorate-101	.542	2.17	0.542	ug/kg	U	1	03-FEB-10 20:25	per0203049a
	Perchlorate-O(18)			5.56	ug/kg		1	03-FEB-10 20:25	per0203049a

<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: 245200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7170  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147003  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 77

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.651	2.6	0.686	ug/kg	J	1	03-FEB-10 20:32	per0203050a
	Perchlorate Isotope Ratio			3.4			1	03-FEB-10 20:32	per0203050a
14797-73-0	Perchlorate-101	.651	2.6	0.687	ug/kg	J	1	03-FEB-10 20:32	per0203050a
	Perchlorate-O(18)			6.68	ug/kg		1	03-FEB-10 20:32	per0203050a

<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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7164

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147004

Date Filtered: 03-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	.608	2.43	0.608	ug/kg	U	1	03-FEB-10 20:39	per0203051a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:39	per0203051a
14797-73-0	Perchlorate-101	.608	2.43	0.608	ug/kg	U	1	03-FEB-10 20:39	per0203051a
	Perchlorate-O(18)			6.20	ug/kg		1	03-FEB-10 20:39	per0203051a

<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: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7167  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147005  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 78

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.641	2.56	0.641	ug/kg	U	1	03-FEB-10 20:47	per0203052a
	Perchlorate Isotope Ratio								
14797-73-0	Perchlorate-101	.641	2.56	0.641	ug/kg	U	1	03-FEB-10 20:47	per0203052a
	Perchlorate-O(18)			6.36	ug/kg		1	03-FEB-10 20:47	per0203052a

<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: 245200

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7169

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147006

Date Filtered: 03-FEB-10

Injection Volume (nL): 20

%Solids: 91.1

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	.549	2.2	0.549	ug/kg	U	1	03-FEB-10 20:54	per0203053a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:54	per0203053a
14797-73-0	Perchlorate-101	.549	2.2	0.549	ug/kg	U	1	03-FEB-10 20:54	per0203053a
	Perchlorate-O(18)			5.36	ug/kg		1	03-FEB-10 20:54	per0203053a

<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: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7168

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147007

Date Filtered: 03-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	.619	2.47	0.895	ug/kg	J	1	03-FEB-10 21:01	per0203054a
	Perchlorate Isotope Ratio			3.45			1	03-FEB-10 21:01	per0203054a
14797-73-0	Perchlorate-101	.619	2.47	0.884	ug/kg	J	1	03-FEB-10 21:01	per0203054a
	Perchlorate-O(18)			6.30	ug/kg		1	03-FEB-10 21:01	per0203054a

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

\*Concentration =

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

Form 1

Perchlorate Analysis Data Sheet

Client Sample No.

RE15-10-7166

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 245200

Extraction Type: Solid Prep

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147008

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 58

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	.731	2.92	1.58	ug/kg	J	1	03-FEB-10 21:08	per0203055a
	Perchlorate Isotope Ratio			3.24			1	03-FEB-10 21:08	per0203055a
14797-73-0	Perchlorate-101	.731	2.92	1.66	ug/kg	J	1	03-FEB-10 21:08	per0203055a
	Perchlorate-O(18)			7.53	ug/kg		1	03-FEB-10 21:08	per0203055a

<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

## Perchlorate Analysis Data Sheet

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Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846.6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7177Date Received: 20-JAN-10GEL Job No (SDG): 10-1306GEL Sample ID: 245147009Date Filtered: 03-FEB-10Injection Volume (uL): 20%Solids: 92.5

CAS No.	Analyte <sup>A</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.54	2.16	1.16	ug/kg	J	1	03-FEB-10 21:15	per0203056a
	Perchlorate Isotope Ratio			3.15			1	03-FEB-10 21:15	per0203056a
14797-73-0	Perchlorate-101	.54	2.16	1.25	ug/kg	J	1	03-FEB-10 21:15	per0203056a
	Perchlorate-O(18)			5.72	ug/kg		1	03-FEB-10 21:15	per0203056a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7181

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147010

Date Filtered: 03-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	.569	2.28	0.569	ug/kg	U	1	03-FEB-10 21:22	per0203057a
	Perchlorate Isotope Ratio						1	03-FEB-10 21:22	per0203057a
14797-73-0	Perchlorate-101	.569	2.28	0.569	ug/kg	U	1	03-FEB-10 21:22	per0203057a
	Perchlorate-O(18)			5.65	ug/kg		1	03-FEB-10 21:22	per0203057a

<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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7178

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147011

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

% Solids: 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	1.27	ug/kg	J	1	03-FEB-10 21:50	per0203061a
	Perchlorate Isotope Ratio			3.17			1	03-FEB-10 21:50	per0203061a
14797-73-0	Perchlorate-101	.636	2.54	1.37	ug/kg	J	1	03-FEB-10 21:50	per0203061a
	Perchlorate-O(18)			6.52	ug/kg		1	03-FEB-10 21:50	per0203061a

<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: 245200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7182  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147012  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 82

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.61	2.44	0.610	ug/kg	U	1	03-FEB-10 21:57	per0203062a
	Perchlorate Isotope Ratio								
14797-73-0	Perchlorate-101	.61	2.44	0.610	ug/kg	U	1	03-FEB-10 21:57	per0203062a
	Perchlorate-O(18)			6.45	ug/kg		1	03-FEB-10 21:57	per0203062a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X <sup>1</sup> %Solids  
 Aliquot

## Perchlorate Analysis Data Sheet

Lab Name: <u>GEL Laboratories LLC</u>	Client Sample No. <u>RE15-10-7183</u>
Lab Code: <u>GEL</u>	
Instrument: <u>LCMSMS</u>	Date Received: <u>20-JAN-10</u>
Method: <u>SW846/6850 Modified</u>	GEL Job No (SDG): <u>10-1306</u>
Matrix: <u>SOIL</u>	GEL Sample ID: <u>24S147013</u>
Extraction Batch ID: <u>945200</u>	Date Filtered: <u>03-FEB-10</u>
Extraction Type: <u>Solid Prep</u>	Injection Volume (uL): <u>20</u>
Sample Volume/Weight: <u>2.00 g</u>	% Solids: <u>88</u>

**Sample Volume/Weight:** 2.00 g

**Concentrated Extract Volume: 20.0**

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.57	2.28	0.570	ug/kg	U	1	03-FEB-10 22:04	per0203063a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:04	per0203063a
14797-73-0	Perchlorate-101	.57	2.28	0.570	ug/kg	U	1	03-FEB-10 22:04	per0203063a
	Perchlorate-O(18)			6.04	ug/kg		1	03-FEB-10 22:04	per0203063a

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

**\*Concentration =**

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7184

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147014

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 83

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.604	2.42	0.616	ug/kg	J	1	03-FEB-10 22:11	per0203064a
	Perchlorate Isotope Ratio			3.55			1	03-FEB-10 22:11	per0203064a
14797-73-0	Perchlorate-101	.604	2.42	0.604	ug/kg	U	1	03-FEB-10 22:11	per0203064a
	Perchlorate-O(18)			6.10	ug/kg		1	03-FEB-10 22:11	per0203064a

<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 Client Sample No. RE15-10-7185  
 Lab Code: GEL Date Received: 20-JAN-10  
 Instrument: LCMSMS GEL Job No (SDG): 10-1306  
 Method: SW846 6850 Modified GEL Sample ID: 245147015  
 Matrix: SOIL Date Filtered: 03-FEB-10  
 Extraction Batch ID: 245200 Injection Volume (uL): 20  
 Extraction Type: Solid Prep %Solids: 20.6  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.552	ug/kg	U	1	03-FEB-10 22:18	per0203065a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:18	per0203065a
14797-73-0	Perchlorate-101	.552	2.21	0.552	ug/kg	U	1	03-FEB-10 22:18	per0203065a
	Perchlorate-O(18)			5.59	ug/kg		1	03-FEB-10 22:18	per0203065a

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

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

P perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7176

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147016

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 95.3

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.524	2.1	1.19	ug/kg	J	1	03-FEB-10 22:25	per0203066a
	Perchlorate Isotope Ratio			3.08			1	03-FEB-10 22:25	per0203066a
14797-73-0	Perchlorate-101	.524	2.1	1.32	ug/kg	J	1	03-FEB-10 22:25	per0203066a
	Perchlorate-O(18)			5.54	ug/kg		1	03-FEB-10 22:25	per0203066a

<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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7180

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147017

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 87

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.577	2.31	0.577	ug/kg	U	1	03-FEB-10 22:32	per0203067a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:32	per0203067a
14797-73-0	Perchlorate-101	.577	2.31	0.577	ug/kg	U	1	03-FEB-10 22:32	per0203067a
	Perchlorate-O(18)			5.67	ug/kg		1	03-FEB-10 22:32	per0203067a

<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: 245200

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7179

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147018

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 80

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	.627	2.51	0.752	ug/kg	J	1	03-FEB-10 22:40	per0203068a
	Perchlorate Isotope Ratio			3.04			1	03-FEB-10 22:40	per0203068a
14797-73-0	Perchlorate-101	.627	2.51	0.841	ug/kg	J	1	03-FEB-10 22:40	per0203068a
	Perchlorate-O(18)			6.28	ug/kg		1	03-FEB-10 22:40	per0203068a

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

\*Concentration =

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

# QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1306

Extract Batch Code: 945200

Date Filtered: 03-FEB-10

Matrix: SOIL

Sample ID: 1202024345

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.03	ug/kg	101		70 - 130
Perchlorate Isotope Ratio		3.39				-
Perchlorate-101	2.00	2.04	ug/kg	102		70 - 130
Perchlorate-O(18)		4.91	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): 10-1306

Extract Batch Code: 945200

Date Filtered: 03-FEB-10

Matrix: SOIL

Sample ID: 1202024348

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.07	ug/kg	104		70 - 130
Perchlorate Isotope Ratio		3.3				
Perchlorate-101	2.00	2.14	ug/kg	107		70 - 130
Perchlorate-O(18)		4.75	ug/kg			

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203042a

Date: 03-Feb-2010

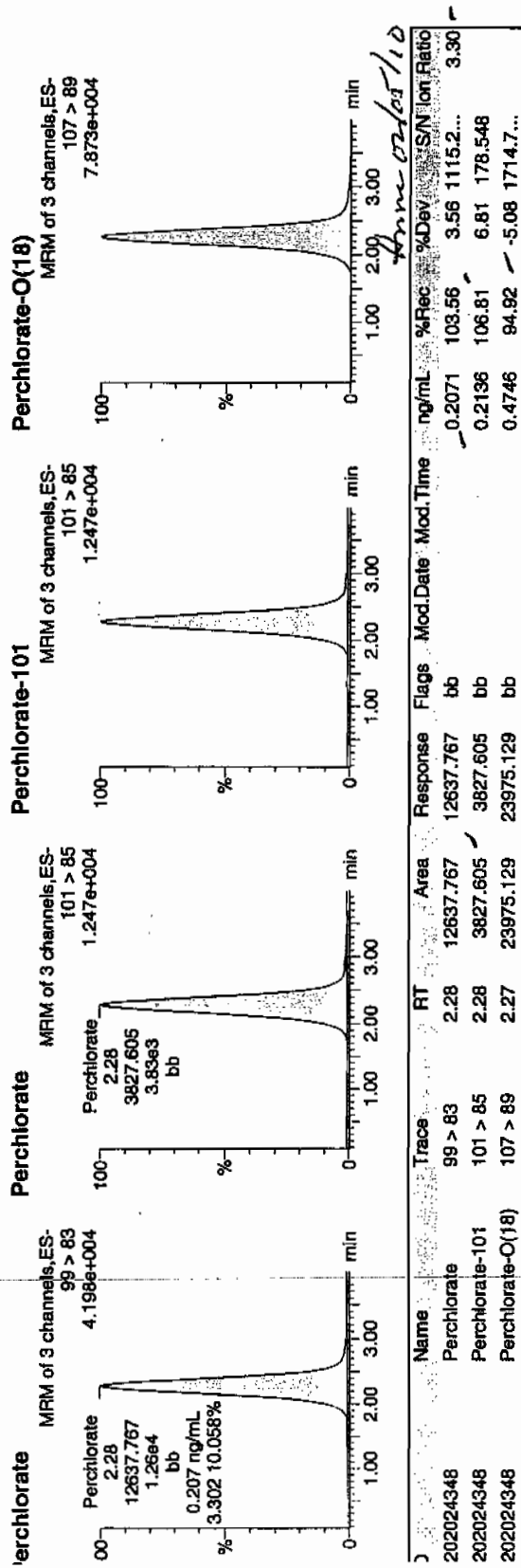
Time: 19:36:20

ID: 1202024348

File: 2:1,C

LANV 1945202 | SUR20 | ICS | 11

02-05-10



Form 6

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1306

Extract Batch Code: 945200

Date Extracted: 03-FEB-10

GEL MS/PS ID: 1202024346

Client ID: RE15-10-7165

GEL MSD/PSD ID: 1202024347

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	2.48	0.0874	ug/kg	2.82	110		2.7	105		4.34		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.21			3.07			0			-
Perchlorate-101	2.48	0.0816	ug/kg	2.99	117		2.99	117		.00623		30	75 - 125
Perchlorate-O(18)	0	6.23	ug/kg	6.50			6.51			.193			-

<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:

Form 4

Perchlorate Initial Calibration Blank

GEL Job No.(SDG): 10-1306

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	0.00	0	NA	03-FEB-10	per0203001a	IPB001
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203001a	IPB001
Perchlorate	0.00	0	NA	03-FEB-10	per0203002a	IPB001
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203002a	IPB001

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020310a.mdb 04 Feb 2010 08:58:49  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020310a.cdb 04 Feb 2010 08:59:03

Name: per0203001a

Date: 03-Feb-2010

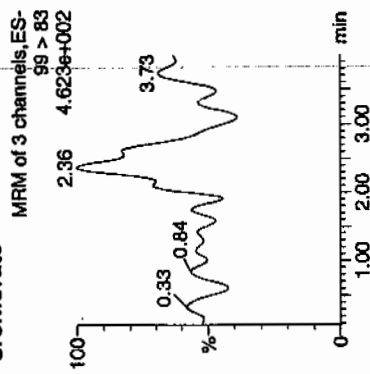
Time: 14:46:33

D: IPB001

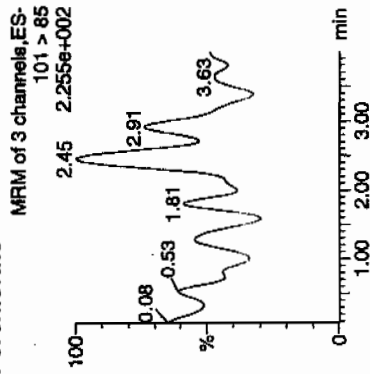
/lal: 1:1,A

02-05-10

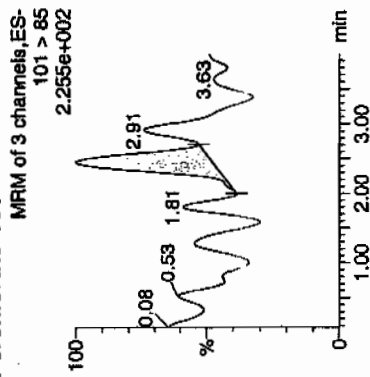
Perchlorate



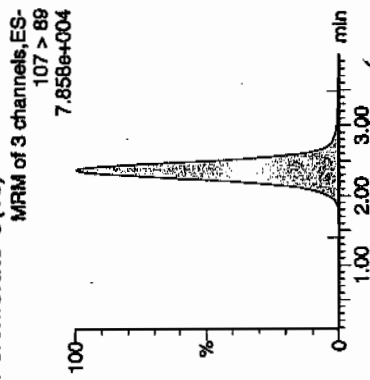
Perchlorate



Perchlorate-101



Perchlorate-O(18)



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB001	Perchlorate	99 > 83											0.00
PB001	Perchlorate-101	101 > 85	2.45	32.707	32.707	bb			0.0018			11.300	
PB001	Perchlorate-O(18)	107 > 89	2.36	24466.113	24466.113	bb			0.4843	96.86	-3.14	6801.1...	

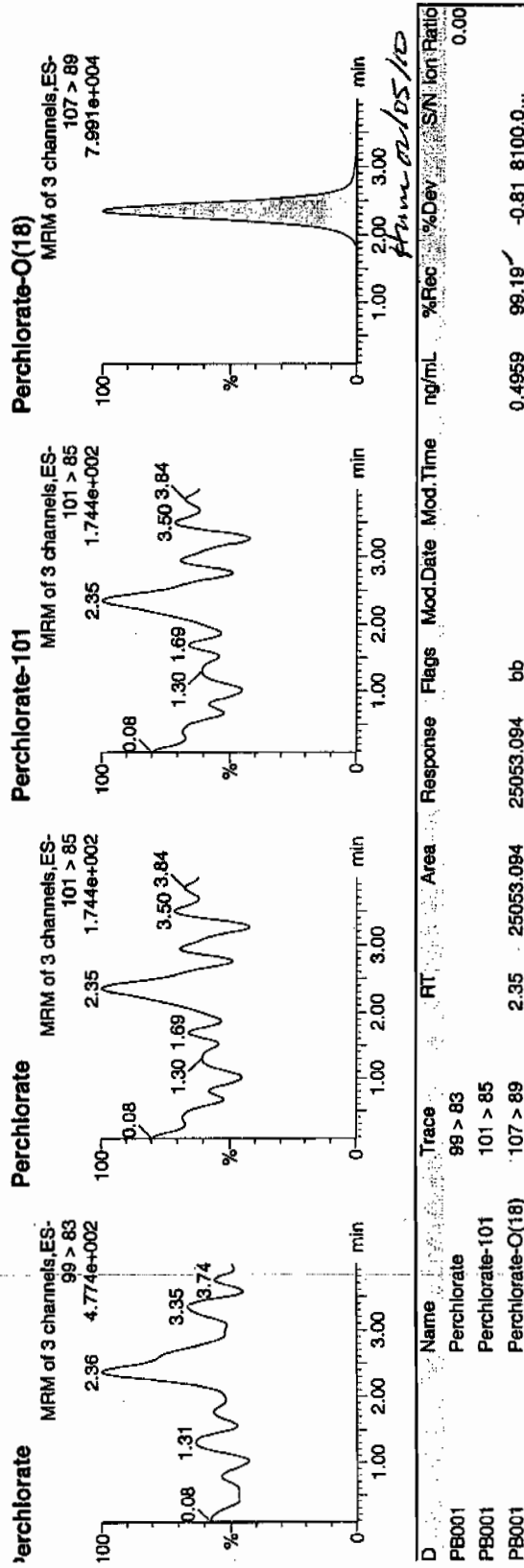
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203002a  
Date: 03-Feb-2010  
Time: 14:53:35  
D: IPB001  
Inlet: 1:1,A

02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB001	Perchlorate	99 > 83											0.00
PB001	Perchlorate-101	101 > 85											
PB001	Perchlorate-O(18)	107 > 89	2.35	25053.094	25053.094	bb			0.4959	99.19	-0.81	8100.0...	

Form 4

Perchlorate Continuing Calibration Blank

GEL Job No.(SDG): 10-1306

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	0.00	0	NA	03-FEB-10	per0203008a	IPB002
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203008a	IPB002
Perchlorate	0.00	0	NA	03-FEB-10	per0203010a	IPB003
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203010a	IPB003
Perchlorate	0.00	0	NA	03-FEB-10	per0203023a	IPB004
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203023a	IPB004
Perchlorate	0.00	0	NA	03-FEB-10	per0203036a	IPB005
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203036a	IPB005
Perchlorate	0.00	0	NA	03-FEB-10	per0203039a	IPB006
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203039a	IPB006
Perchlorate	0.00	0	NA	03-FEB-10	per0203047a	IPB007
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203047a	IPB007
Perchlorate	0.00	0	NA	03-FEB-10	per0203059a	IPB008

Form 4

Perchlorate Continuing Calibration Blank

GEL Job No.(SDG): 10-1306

Lab Name: General Engineering Laboratories

Lab Code: GEL

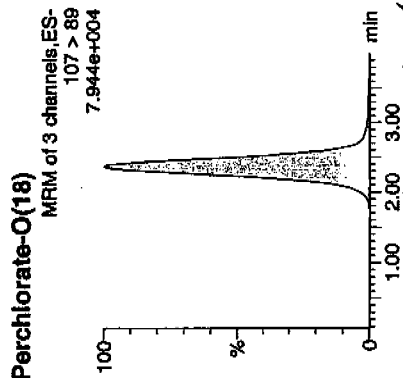
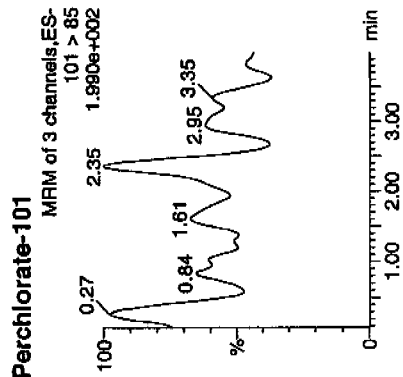
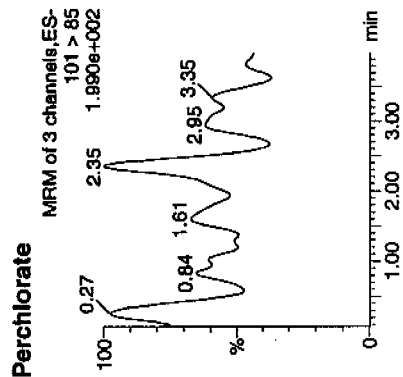
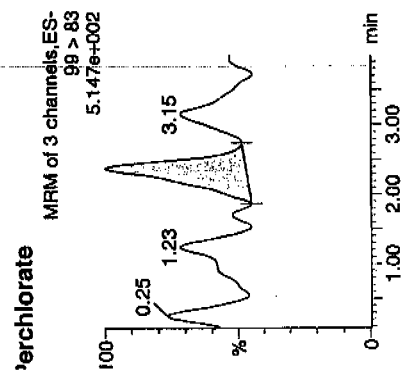
Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203059a	IPB008
Perchlorate	0.00	0	NA	03-FEB-10	per0203070a	IPB009
Perchlorate-101	0.00	0	NA	03-FEB-10	per0203070a	IPB009

**Quantify Sample Report** MassLynx 4.0 SP4  
 The GEL Group, LLC Analyst: Charles W. Wilson  
 Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld  
 Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
 Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203008a  
 Date: 03-Feb-2010  
 Time: 15:35:43  
 Operator: IPB002  
 File: 1:1,A

02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
PB002	Perchlorate	99 > 83	2.36	95.585	95.585	bb			0.0016			8.446	0.00
PB002	Perchlorate-101	101 > 85											
PB002	Perchlorate-O(18)	107 > 89	2.36	24823.512	24823.512	bb			0.4914	98.28	-1.72	3858.6...	

Handwritten note: *Handwritten note: 02-05-10*

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203010a

Date: 03-Feb-2010

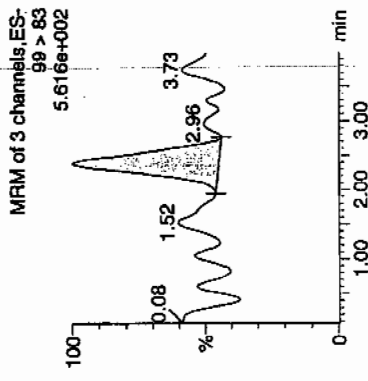
Time: 15:49:48

ID: IPB003

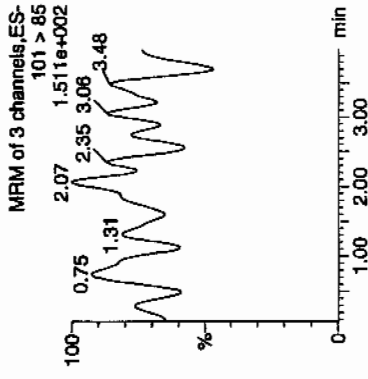
Vial: 1:1,A

02-03-10

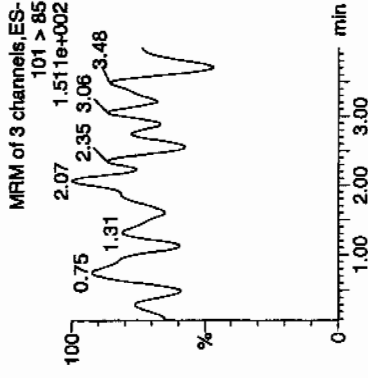
Perchlorate



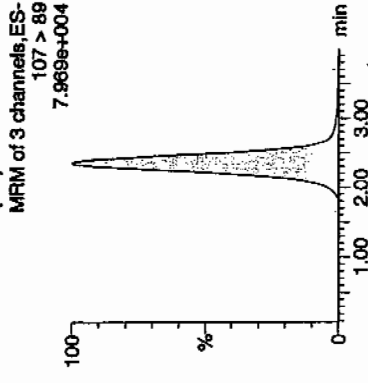
Perchlorate



Perchlorate-101



Perchlorate-O(18)



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB003	Perchlorate	99 > 83	2.38	106.518	106.518	bb			0.0017			7.126	0.00
PB003	Perchlorate-101	101 > 85											
PB003	Perchlorate-O(18)	107 > 89	2.35	24716.473	24716.473	bb			0.4893	97.86	-2.14	1897.6...	

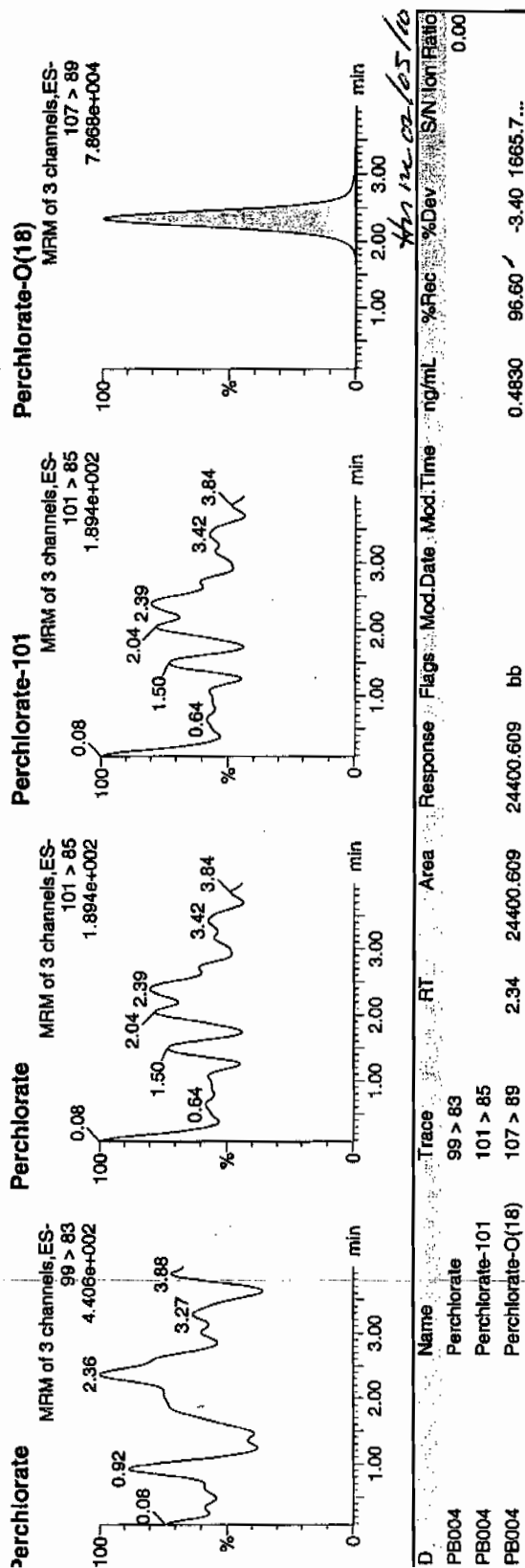
**Quantify Sample Report**  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203023a  
Date: 03-Feb-2010  
Time: 17:21:56  
D: IPB004  
/lat: 1:1,A

0.02  
02-03-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB004	Perchlorate	99 > 83											
PB004	Perchlorate-101	101 > 85											
PB004	Perchlorate-O(18)	107 > 89	2.34	24400.609	24400.609	bb			0.4830	96.60	-3.40	1665.7	0.00

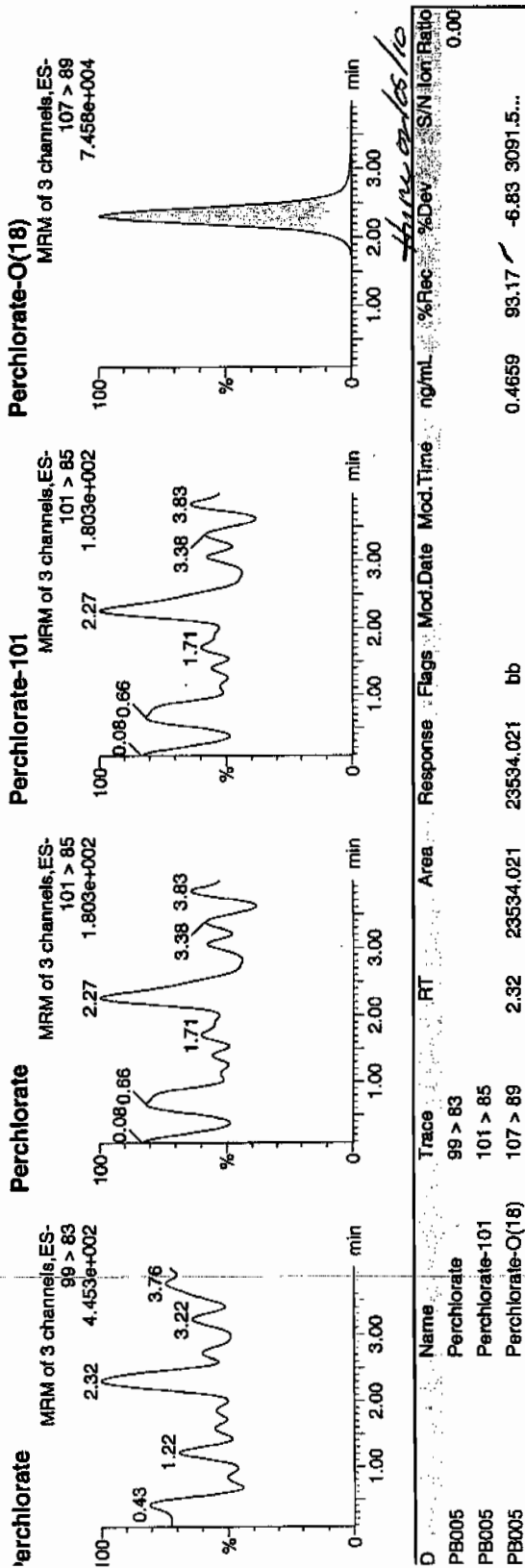
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203036a  
Date: 03-Feb-2010  
Time: 18:53:54  
Job: IPB005  
Label: 1:1,A

WWS  
02-05-10



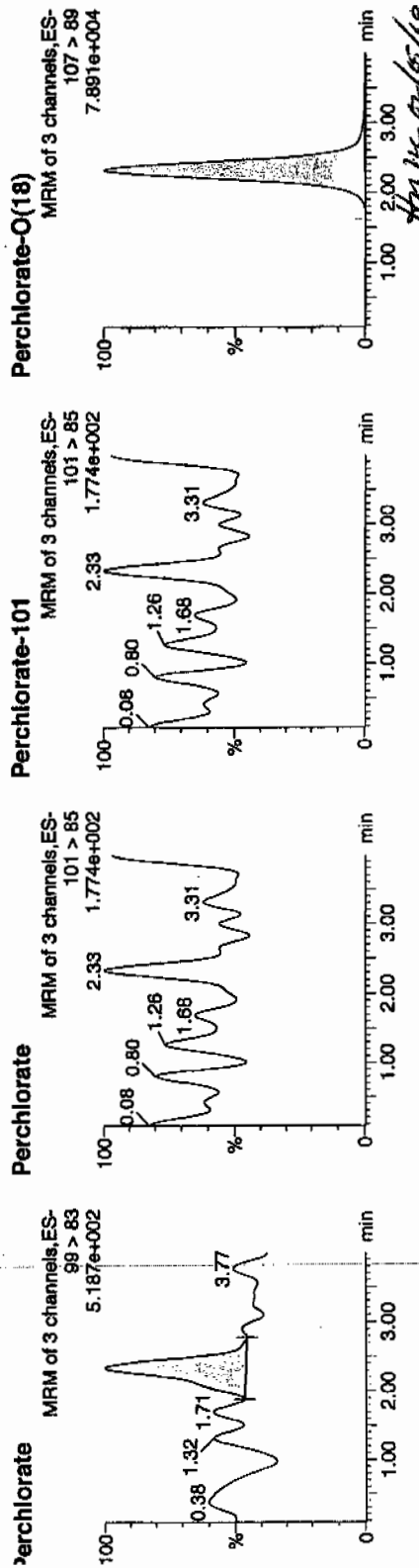
**Quantify Sample Report**  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203039a  
Date: 03-Feb-2010  
Time: 19:15:04  
D: IPB006  
/lat: 1:1,A

02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB006	Perchlorate	99 > 83	2.34	93.367	93.367	bb			0.0015			13.448	0.00
PB006	Perchlorate-101	101 > 85											
PB006	Perchlorate-O(18)	107 > 89	2.33	24607.695	24607.695	bb			0.4871	97.42	-2.58	3518.8...	

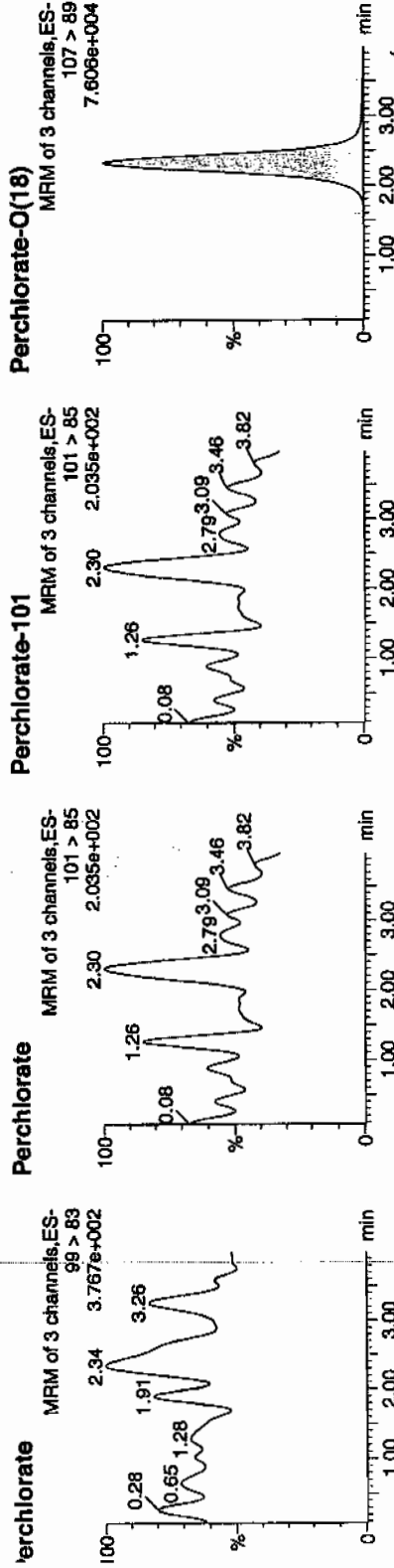
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203047a  
Date: 03-Feb-2010  
Time: 20:11:40  
ID: IPB007  
File: 1:1,A

02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
PB007	Perchlorate	98 > 83											0.00
PB007	Perchlorate-101	101 > 85											
PB007	Perchlorate-O(18)	107 > 89	2.33	23955.617	23955.617	bb			0.4742	94.84	-5.16	5400.0...	

Area: 23955.617

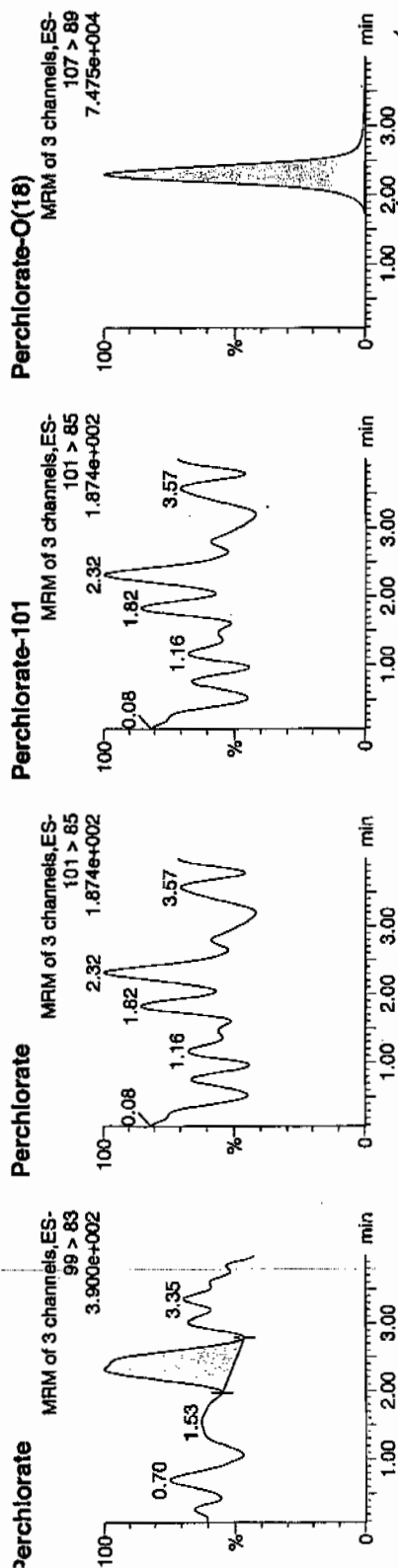
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203059a  
Date: 03-Feb-2010  
Time: 21:36:29  
D: IPB008  
Vial: 1:1A

02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ing/mL	%Rec	%Dev	S/N	Ion Ratio
PB008	Perchlorate	99 > 83	2.32	85.805	85.805	bb			0.0014			9.198	0.00
PB008	Perchlorate-101	101 > 85											
PB008	Perchlorate-O(18)	107 > 89	2.30	23237.664	23237.664	bb			0.4600	92.00	-8.00	5015.2...	

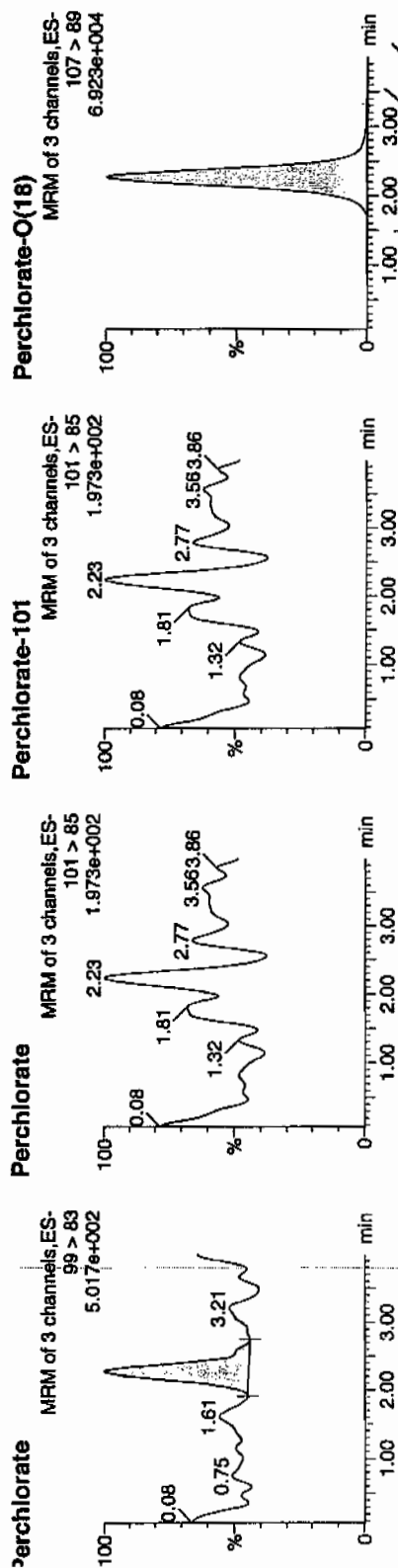
Quantify Sample Report **MassLynx 4.0 SP4**  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203070a  
Date: 03-Feb-2010  
Time: 22:54:19  
D: IPB009  
/tai: 1:1,A

02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB009	Perchlorate	99 > 83	2.28	82,000	82,000	bb			0.0013			3.672	0.00
PB009	Perchlorate-101	101 > 85											
PB009	Perchlorate-O(18)	107 > 89	2.27	21729.313	21729.313	bb			0.4301	86.03	-13.97	3609.0...	

Nairb.ref

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

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

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

Calibration Report - MS1 Static

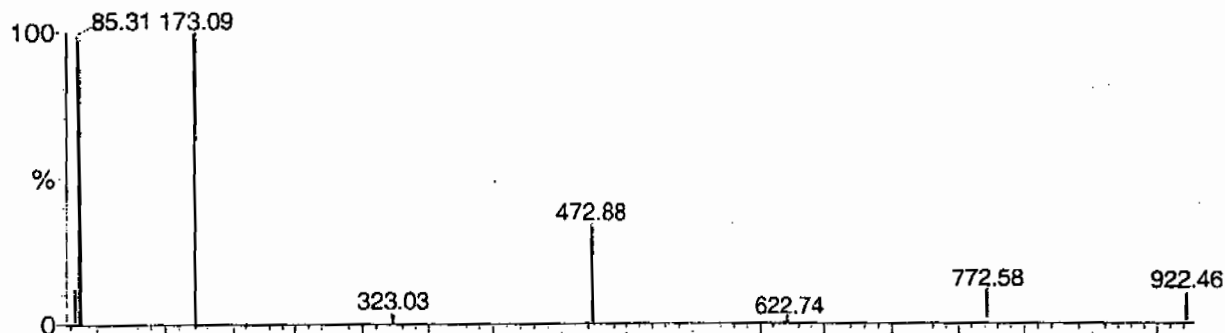
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

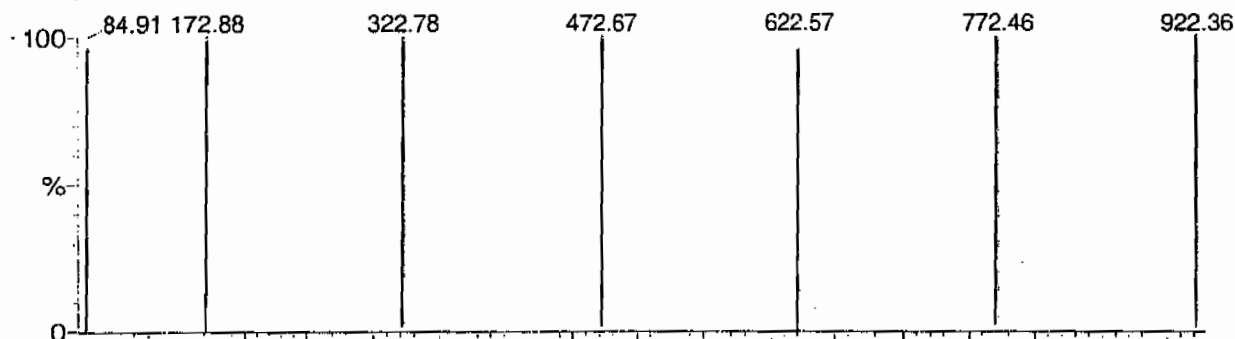
POINTS HIGHLIGHTED BY CURVED 01-07-03

Data file: STATMS1 - Uncalibrated

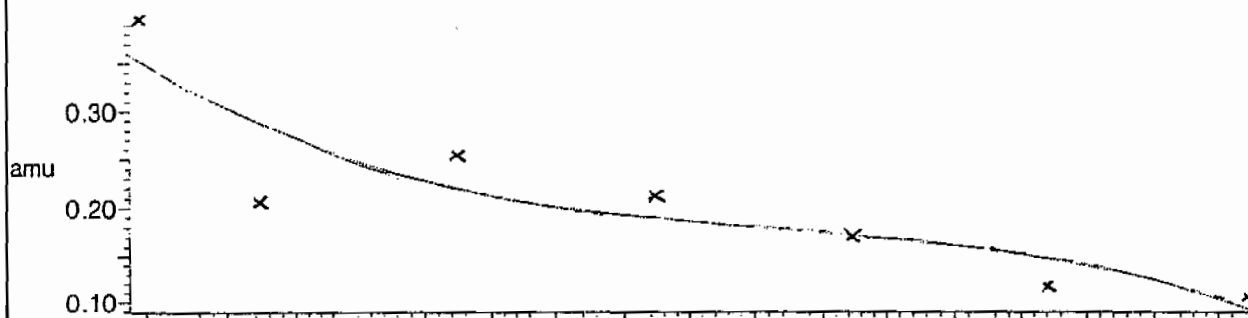
7 matches of 7 tested references



Reference file: Nairb

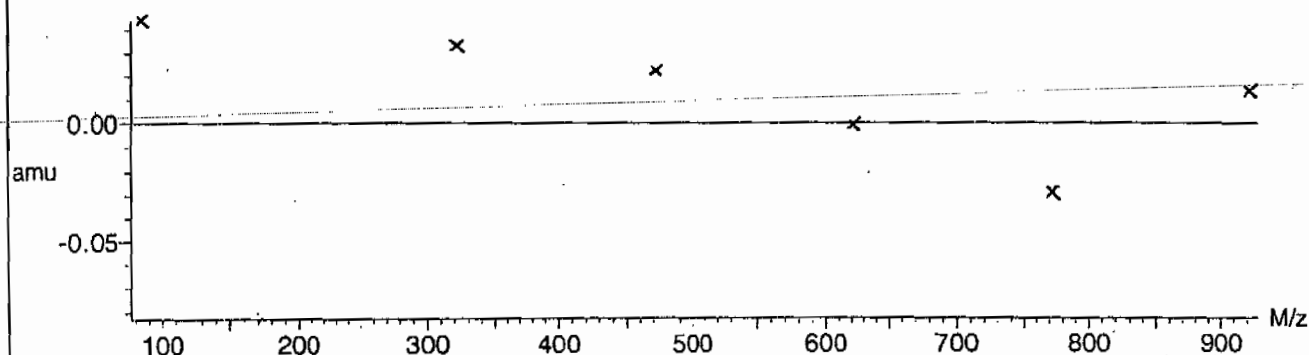


Mass difference (Raw - Ref mass)



Residuals

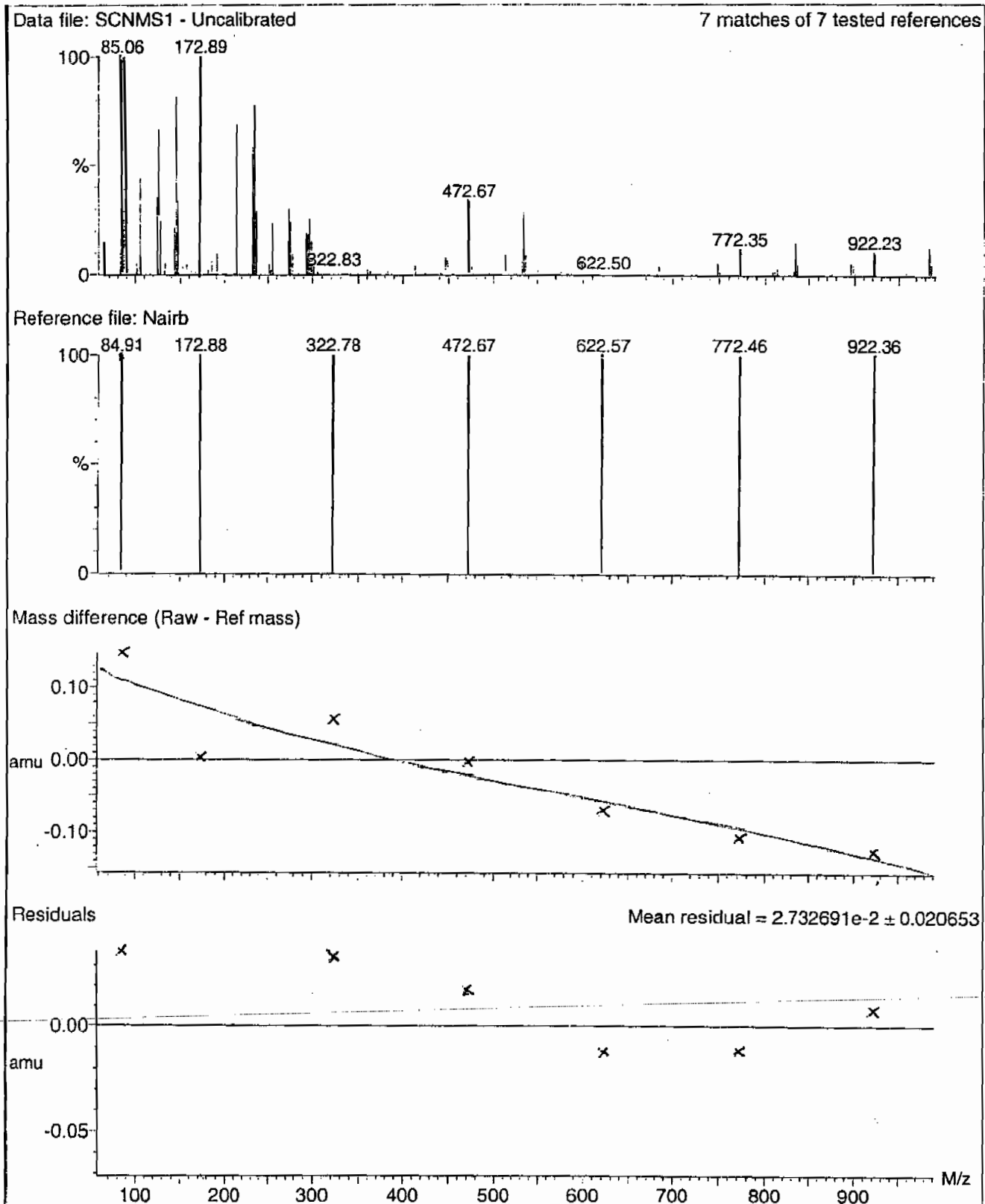
Mean residual =  $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:20:09 2008



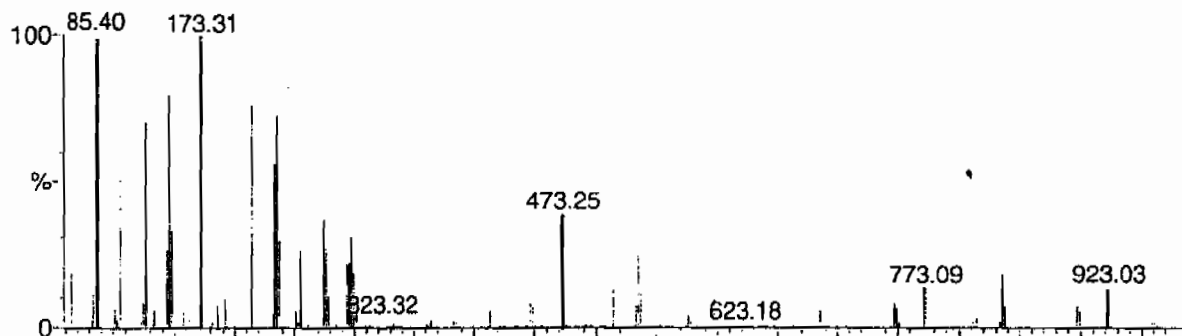
Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

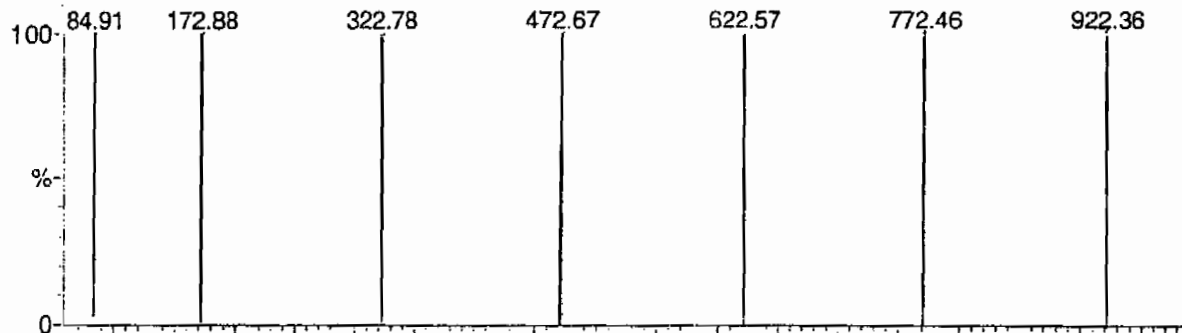
Printed: Tue Jan 08 12:21:04 2008

Data file: FASTMS1 - Uncalibrated

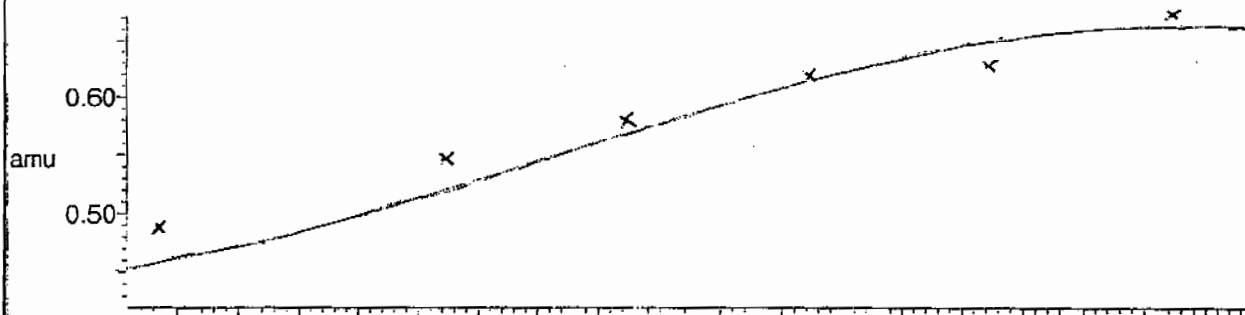
7 matches of 7 tested references



Reference file: Nairb

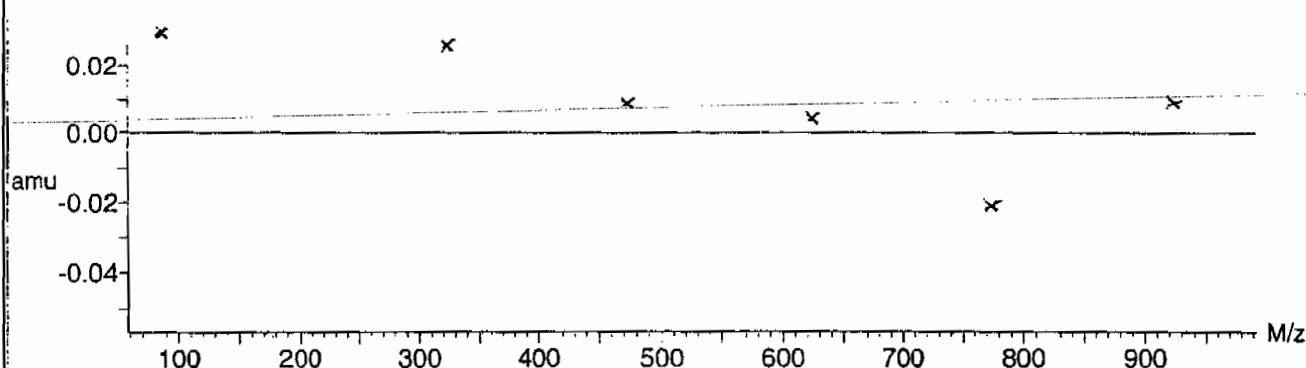


Mass difference (Raw - Ref mass)



Residuals

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



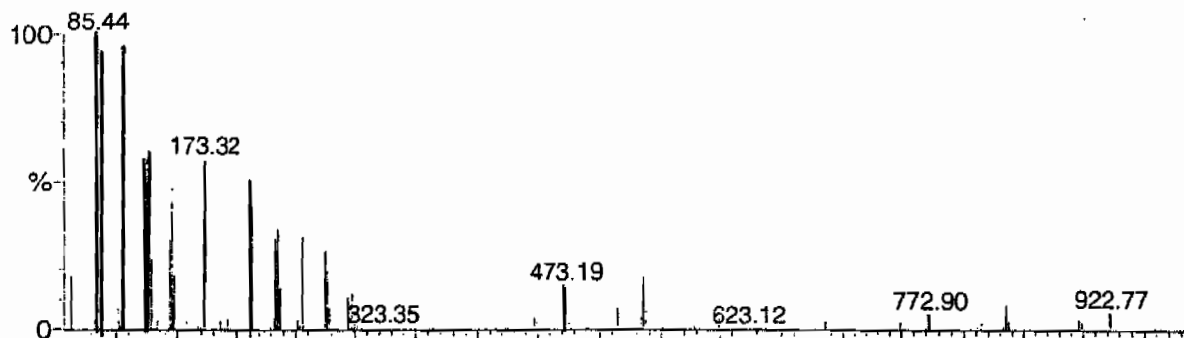
Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

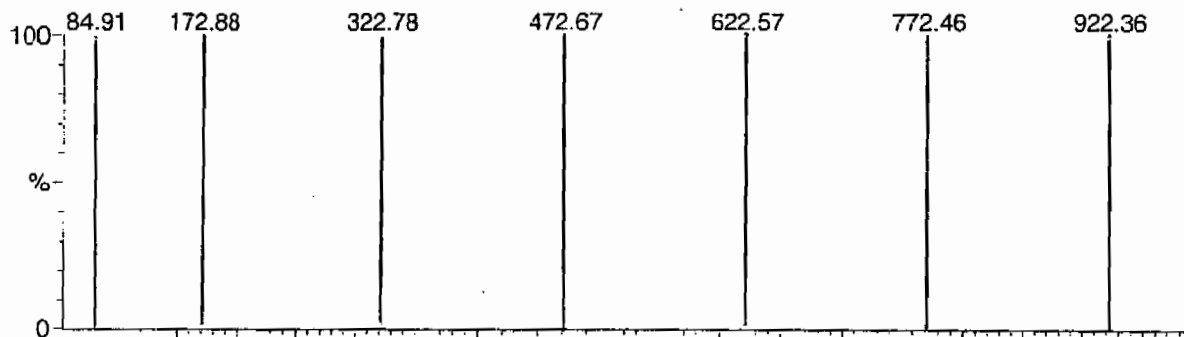
Printed: Tue Jan 08 12:23:51 2008

Data file: FASTMS2 - Uncalibrated

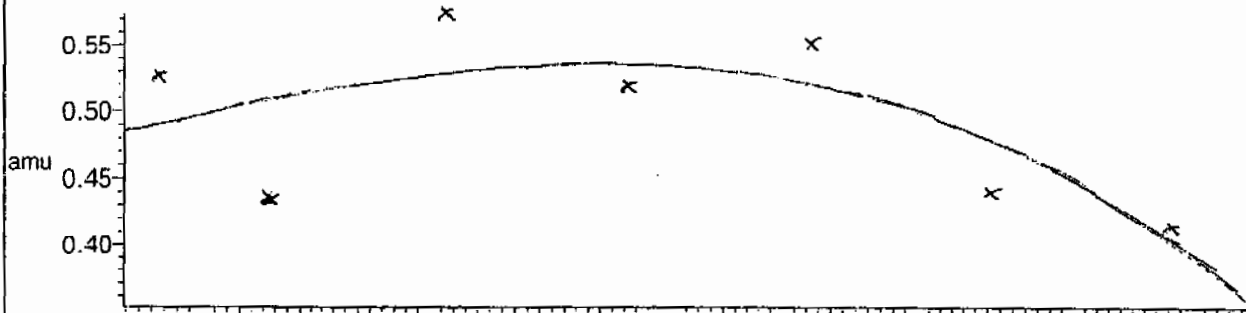
7 matches of 7 tested references



Reference file: Nairb

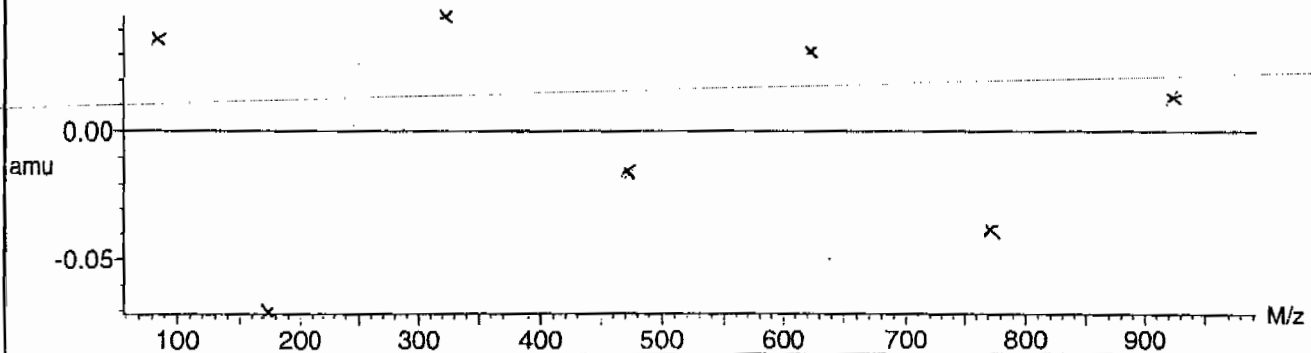


Mass difference (Raw - Ref mass)



Residuals

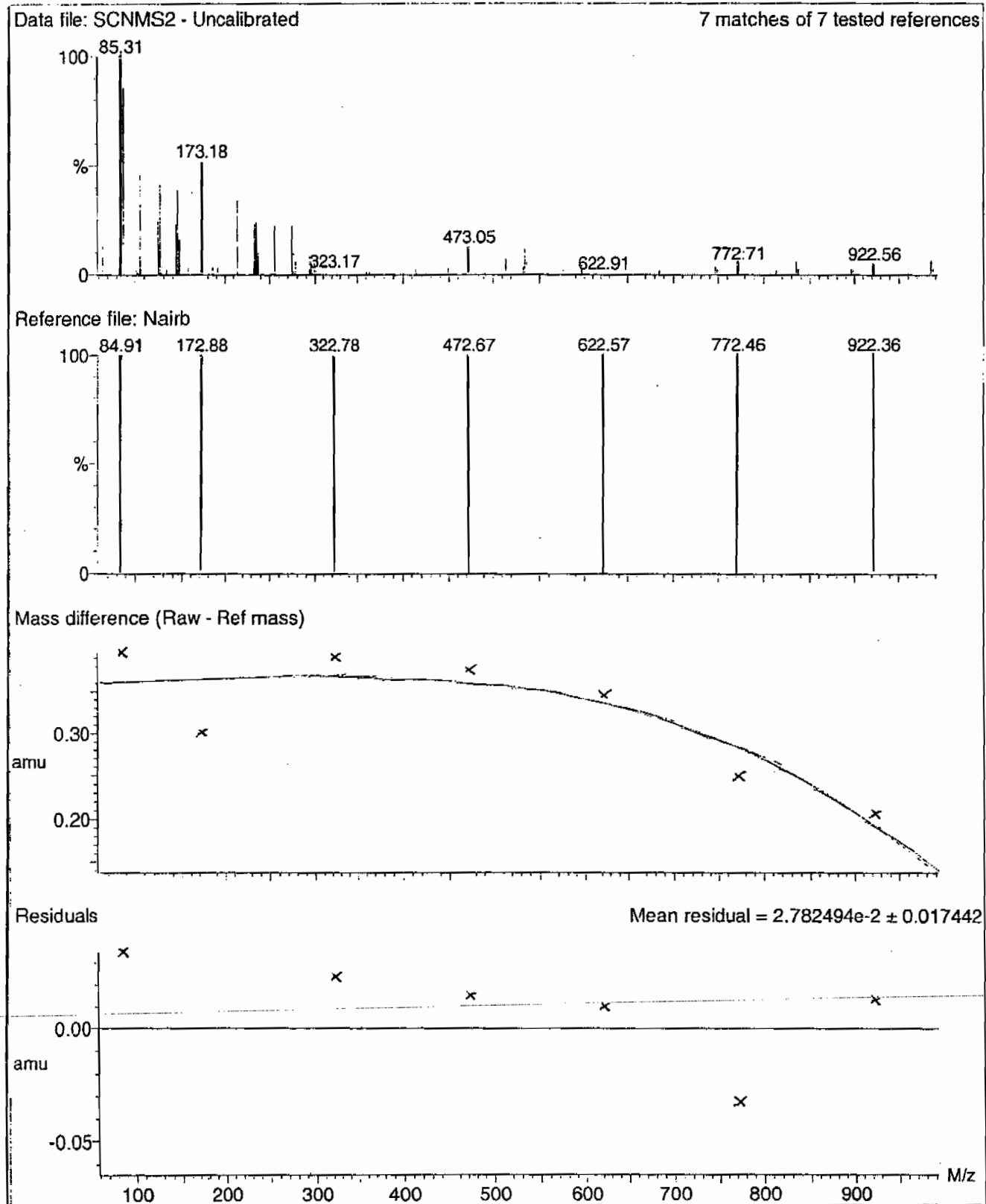
Mean residual =  $3.598289 \times 10^{-2} \pm 0.017899$



Calibration Report - MS2 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:22:56 2008



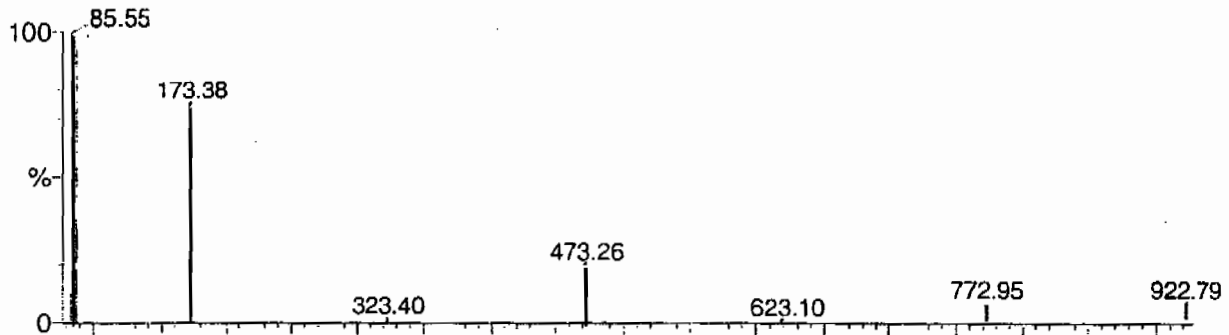
Calibration Report - MS2 Static

Page 1 of 1

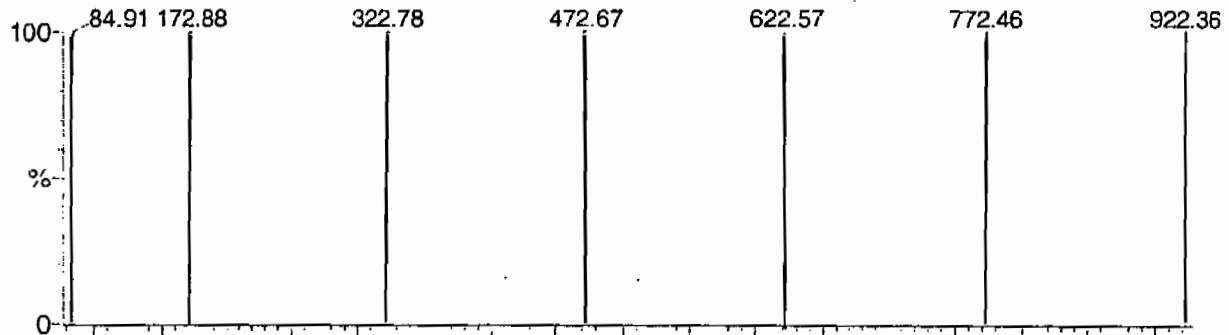
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

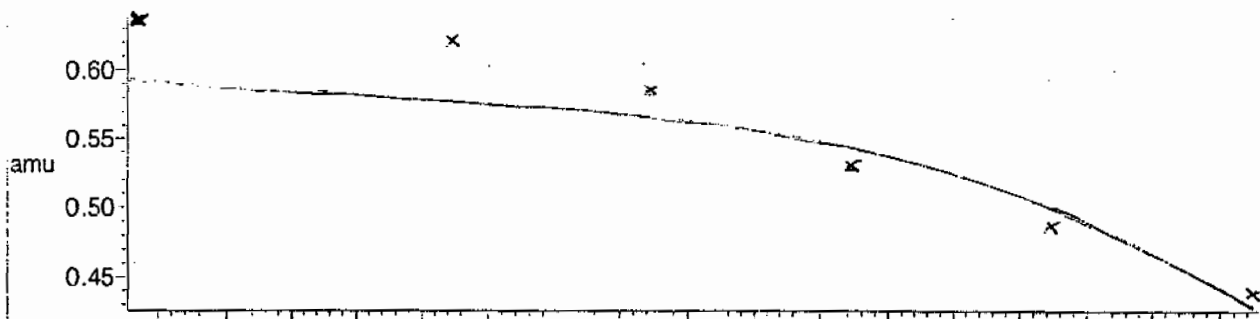
7 matches of 7 tested references



Reference file: Nairb

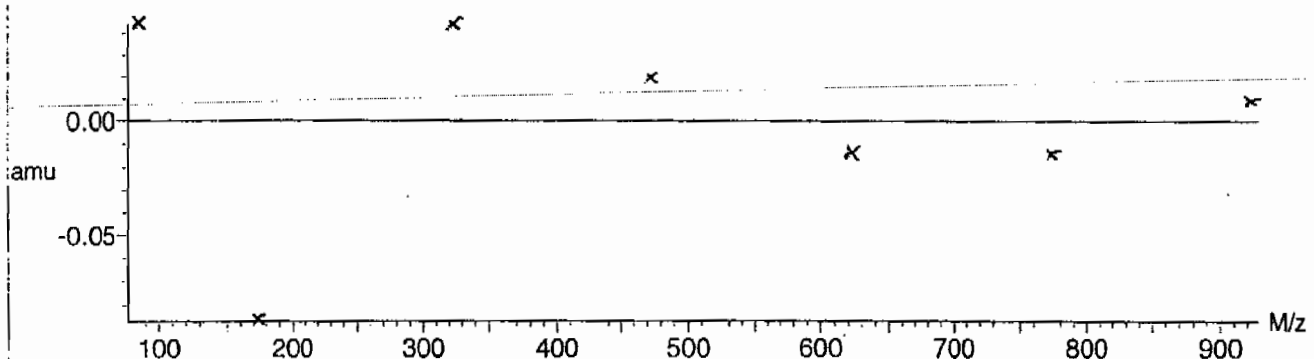


Mass difference (Raw - Ref mass)



Residuals

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



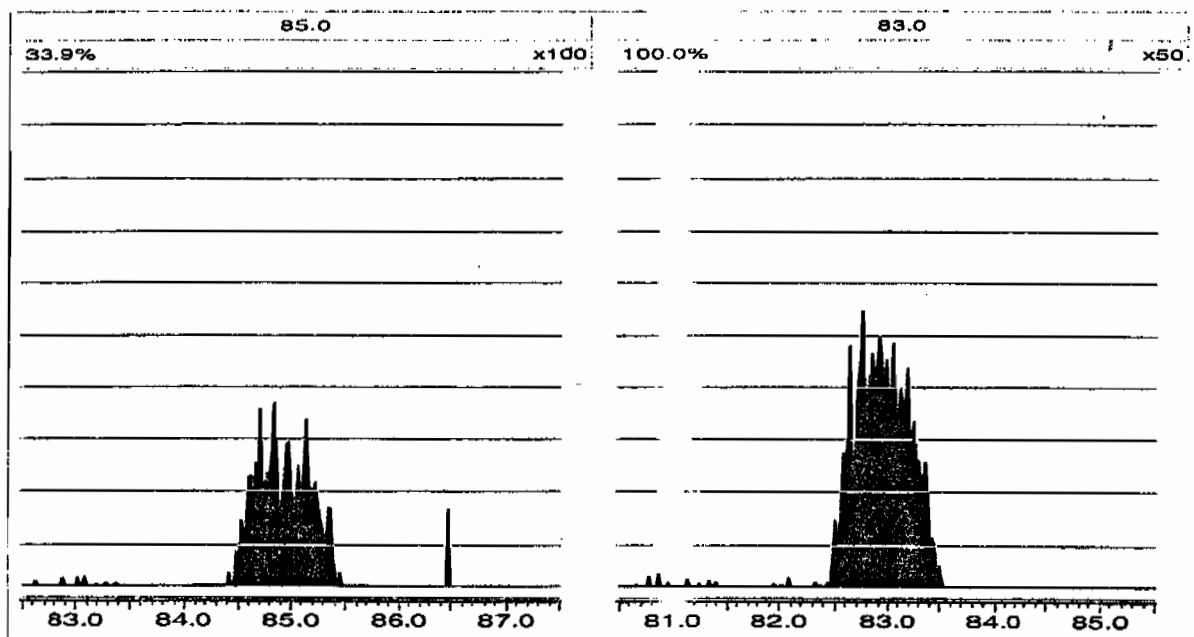
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

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

Printed: Wednesday, February 03, 2010 10:54:02 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS

HP/CL Column: Phenomenex Ion Pac AG-16 2 X 50 mm

GEL Job No.(SDG): 10-1306

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0203006a	03-FEB-10	25052.4				
Lower Area Limit			12526.2				
Upper Area Limit			50104.8				
1202024344	per0203040a	03-FEB-10 19:22	23795.5	2.32	2.32755	1.003	
1202024345	per0203041a	03-FEB-10 19:29	24782.1	2.32	2.32758	1.003	
1202024348	per0203042a	03-FEB-10 19:36	23975.1	2.27	2.27795	1.004	
245147001	per0203043a	03-FEB-10 19:43	25370.1	2.32	2.3276	1.003	
1202024346	per0203044a	03-FEB-10 19:50	26458.8	2.3	2.31517	1.007	
1202024347	per0203045a	03-FEB-10 19:57	26509.9	2.32	2.32747	1.003	
245147002	per0203049a	03-FEB-10 20:25	25910.2	2.32	2.3275	1.003	
245147003	per0203050a	03-FEB-10 20:32	25904.4	2.3	2.32748	1.012	

## Perchlorate RT And Area Summary

GEL Job No.(SDG): 10-1306

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	per0203006a	03-FEB-10	25052.4				
Lower Area Limit			12526.2				
Upper Area Limit			50104.8				
245147004	per0203051a	03-FEB-10 20:39	25762.2	2.32	2.32753	1.003	
245147005	per0203052a	03-FEB-10 20:47	25074.7	2.32	2.32752	1.003	
245147006	per0203053a	03-FEB-10 20:54	24644.9	2.32	2.3275	1.003	
245147007	per0203054a	03-FEB-10 21:01	25718.8	2.3	2.32755	1.012	
245147008	per0203055a	03-FEB-10 21:08	26046.9	2.3	2.31518	1.007	
245147009	per0203056a	03-FEB-10 21:15	26734.2	2.3	2.31517	1.007	
245147010	per0203057a	03-FEB-10 21:22	25094.8	2.3	2.3152	1.007	
245147011	per0203061a	03-FEB-10 21:50	25899.7	2.3	2.3027	1.001	

Perchlorate RT And Area Summary

GEL Job No.(SDG): 10-1306

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	per0203006a	03-FEB-10	25052.4				
Lower Area Limit			12526.2				
Upper Area Limit			50104.8				
245147012	per0203062a	03-FEB-10 21:57	26726.2	2.28	2.29033	1.005	
245147013	per0203063a	03-FEB-10 22:04	26759	2.28	2.2903	1.005	
245147014	per0203064a	03-FEB-10 22:11	25534.4	2.28	2.29025	1.004	
245147015	per0203065a	03-FEB-10 22:18	25571.2	2.28	2.29023	1.004	
245147016	per0203066a	03-FEB-10 22:25	26670.1	2.27	2.2779	1.003	
245147017	per0203067a	03-FEB-10 22:32	24819	2.27	2.27792	1.003	
245147018	per0203068a	03-FEB-10 22:40	25272.1	2.27	2.27793	1.003	

# SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7165

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147001

Date Filtered: 03-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	.621	2.48	0.621	ug/kg	U	1	03-FEB-10 19:43	per0203043a
	Perchlorate Isotope Ratio						1	03-FEB-10 19:43	per0203043a
14797-73-0	Perchlorate-101	.621	2.48	0.621	ug/kg	U	1	03-FEB-10 19:43	per0203043a
	Perchlorate-O(18)			6.23	ug/kg		1	03-FEB-10 19:43	per0203043a

<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\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203043a

Date: 03-Feb-2010

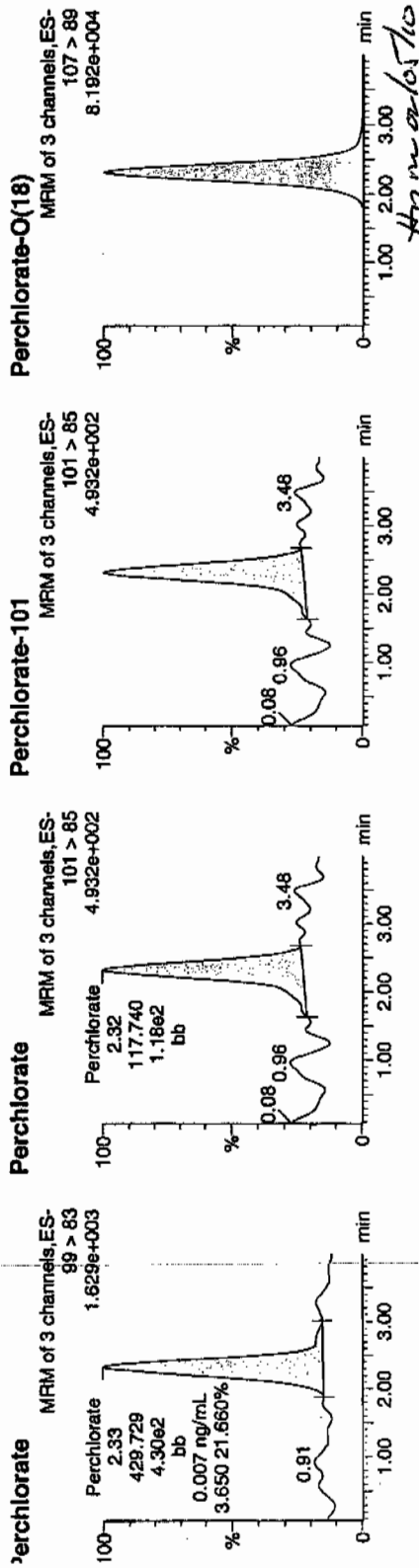
Time: 19:43:22

D: 245147001

/1al: 2:1,D

02-05-10

147001 | 945202 | 5000 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147001	Perchlorate	99 > 83	2.33	429.729	bb			0.0070	46.319		3.65	
45147001	Perchlorate-101	101 > 85	2.32	117.740	bb			0.0066	30.328			
45147001	Perchlorate-O(18)	107 > 89	2.32	25370.115	bb			0.5022	100.44	0.44	2627.9	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7171

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147002

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 92.2

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.542	2.17	0.542	ug/kg	U	1	03-FEB-10 20:25	per0203049a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:25	per0203049a
14797-73-0	Perchlorate-101	.542	2.17	0.542	ug/kg	U	1	03-FEB-10 20:25	per0203049a
	Perchlorate-O(18)			5.56	ug/kg		1	03-FEB-10 20:25	per0203049a

<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: Charliers W. Wilson

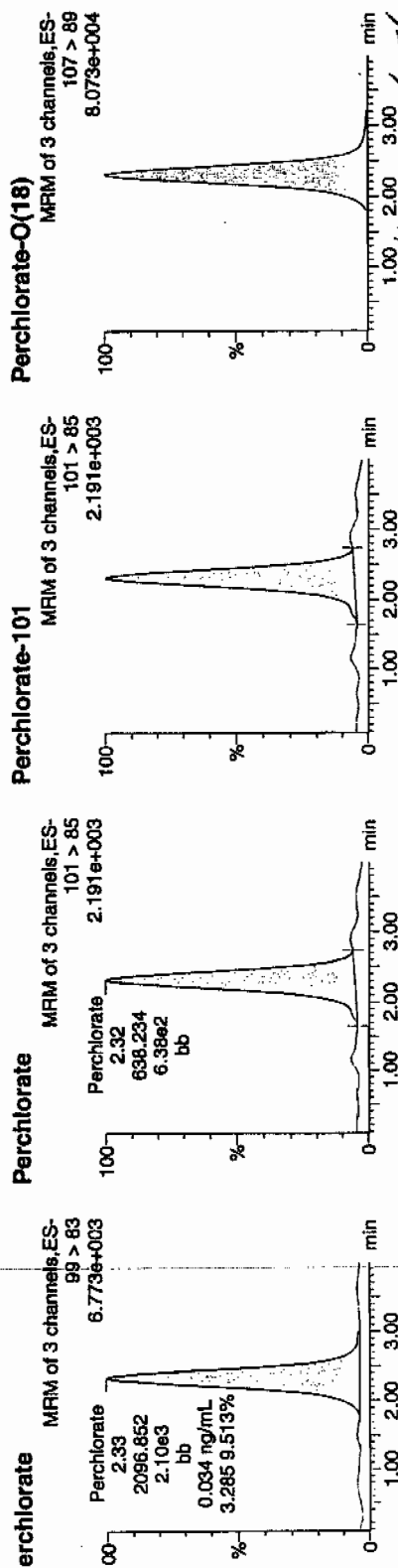
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ast Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
rinted: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

ame: per0203049a  
ate: 03-Feb-2010  
ime: 20:25:44  
): 245147002  
ial: 2:2,A

02-05-10

1945202 | 50720 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147002 Perchlorate	99 > 83	2.33	2096.852	2096.852	bb			0.0344			162.468	3.29
45147002 Perchlorate-101	101 > 85	2.32	638.234	638.234	bb			0.0356			117.362	
45147002 Perchlorate-O(18)	107 > 89	2.32	25910.174	25910.174	bb			0.5129	102.58	2.58	4391.8...	

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: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7170

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147003

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

% Solids: 77

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.651	2.6	0.686	ug/kg	J	1	03-FEB-10 20:32	per0203050a
	Perchlorate Isotope Ratio			3.4			1	03-FEB-10 20:32	per0203050a
14797-73-0	Perchlorate-101	.651	2.6	0.687	ug/kg	J	1	03-FEB-10 20:32	per0203050a
	Perchlorate-O(18)			6.68	ug/kg		1	03-FEB-10 20:32	per0203050a

<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\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203050a

Date: 03-Feb-2010

Time: 20:32:56

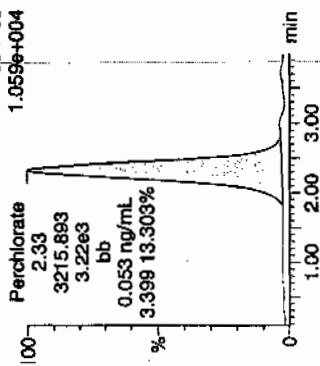
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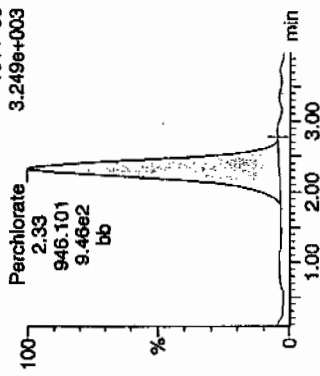
02-05-10

15700-1945202 | 5020 | 11

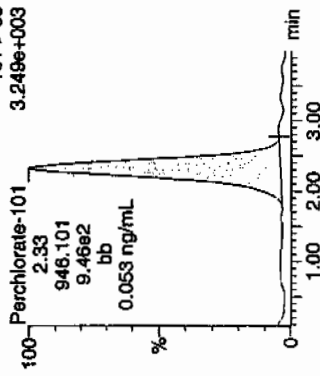
Perchlorate MRM of 3 channels, ES-  
99 > 83 1.059e+004



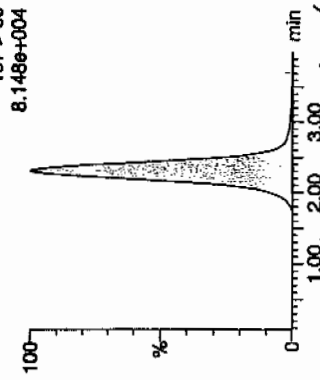
Perchlorate MRM of 3 channels, ES-  
101 > 85 3.249e+003



Perchlorate-101 MRM of 3 channels, ES-  
101 > 85 3.249e+003



Perchlorate-O(18) MRM of 3 channels, ES-  
107 > 89 8.148e+004



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
45147003	Perchlorate	99 > 83	2.33	3215.893	bb			0.0527			249.563	3.40
45147003	Perchlorate-101	101 > 85	2.33	946.101	bb			0.0528			251.834	
45147003	Perchlorate-O(18)	107 > 89	2.30	25904.428	bb			0.5128	102.56	2.56	2579.0...	

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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7164

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147004

Date Filtered: 03-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	.608	2.43	0.608	ug/kg	U	1	03-FEB-10 20:39	per0203051a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:39	per0203051a
14797-73-0	Perchlorate-101	.608	2.43	0.608	ug/kg	U	1	03-FEB-10 20:39	per0203051a
	Perchlorate-O(18)			6.20	ug/kg		1	03-FEB-10 20:39	per0203051a

<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

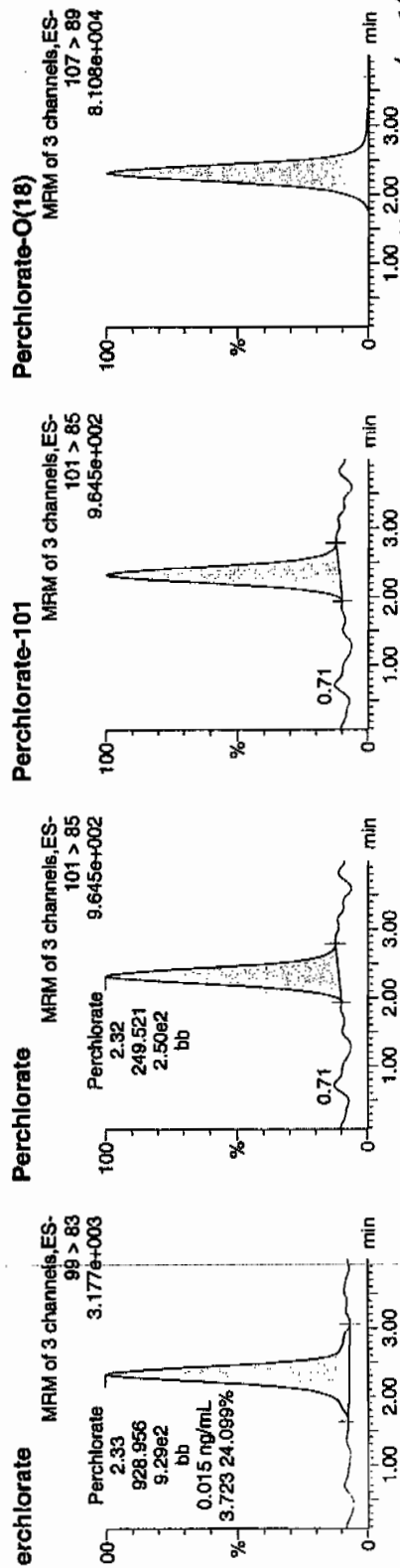
Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203051a  
Date: 03-Feb-2010  
Time: 20:39:59  
File: 245147004  
Label: 2:2,C

02-05-10

LANL | 945207 | 50320 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147004	Perchlorate	99 > 83	2.33	928.956	bb			0.0152	288.455	3.72		
45147004	Perchlorate-101	101 > 85	2.32	249.521	bb			0.0139	33.157			
45147004	Perchlorate-O(18)	107 > 89	2.32	25762.234	bb			0.5100	102.00	2.00	1944.4...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7167  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147005  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 78

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.641	2.56	0.641	ug/kg	U	1	03-FEB-10 20:47	per0203052a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:47	per0203052a
14797-73-0	Perchlorate-101	.641	2.56	0.641	ug/kg	U	1	03-FEB-10 20:47	per0203052a
	Perchlorate-O(18)			6.36	ug/kg		1	03-FEB-10 20:47	per0203052a

<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

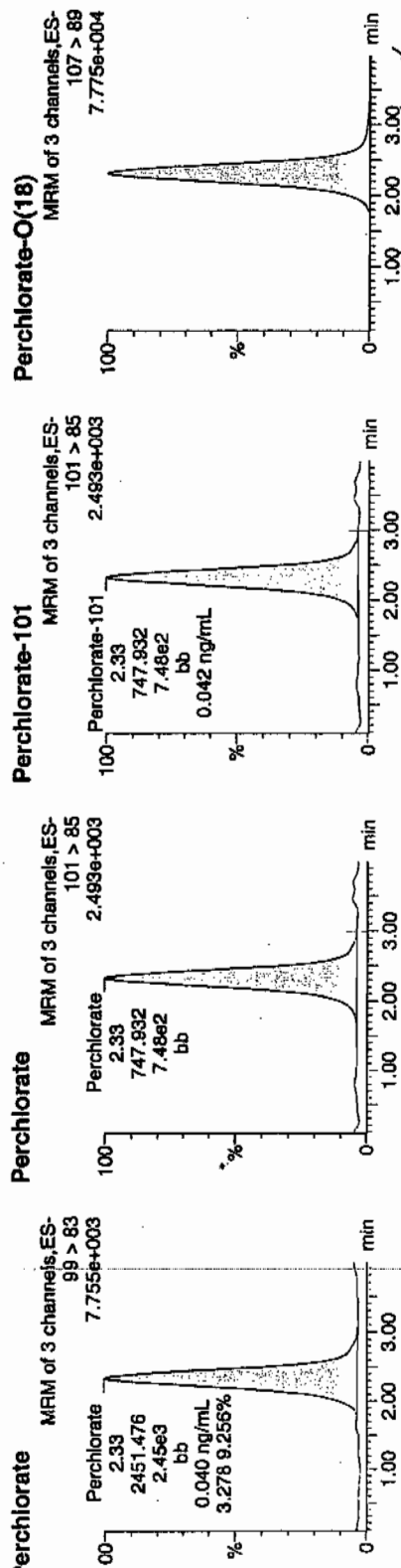
Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203052a  
Date: 03-Feb-2010  
Time: 20:47:01  
ID: 245147005  
File: 2:2.D

02-05-10

LA201945202 | 5020 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147005	Perchlorate	2.33	2451.476	2451.476	bb			0.0402			644.844	3.28
45147005	Perchlorate-101	2.33	747.932	747.932	bb			0.0417			219.806	
45147005	Perchlorate-O(18)	2.32	25074.672	25074.672	bb			0.4984	99.27	-0.73	2881.1...	

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: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7169

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147006

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 91.1

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.549	2.2	0.549	ug/kg	U	1	03-FEB-10 20:54	per0203053a
	Perchlorate Isotope Ratio						1	03-FEB-10 20:54	per0203053a
14797-73-0	Perchlorate-101	.549	2.2	0.549	ug/kg	U	1	03-FEB-10 20:54	per0203053a
	Perchlorate-O(18)			5.36	ug/kg		1	03-FEB-10 20:54	per0203053a

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

\*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203053a

Acquire Date: 03-Feb-2010

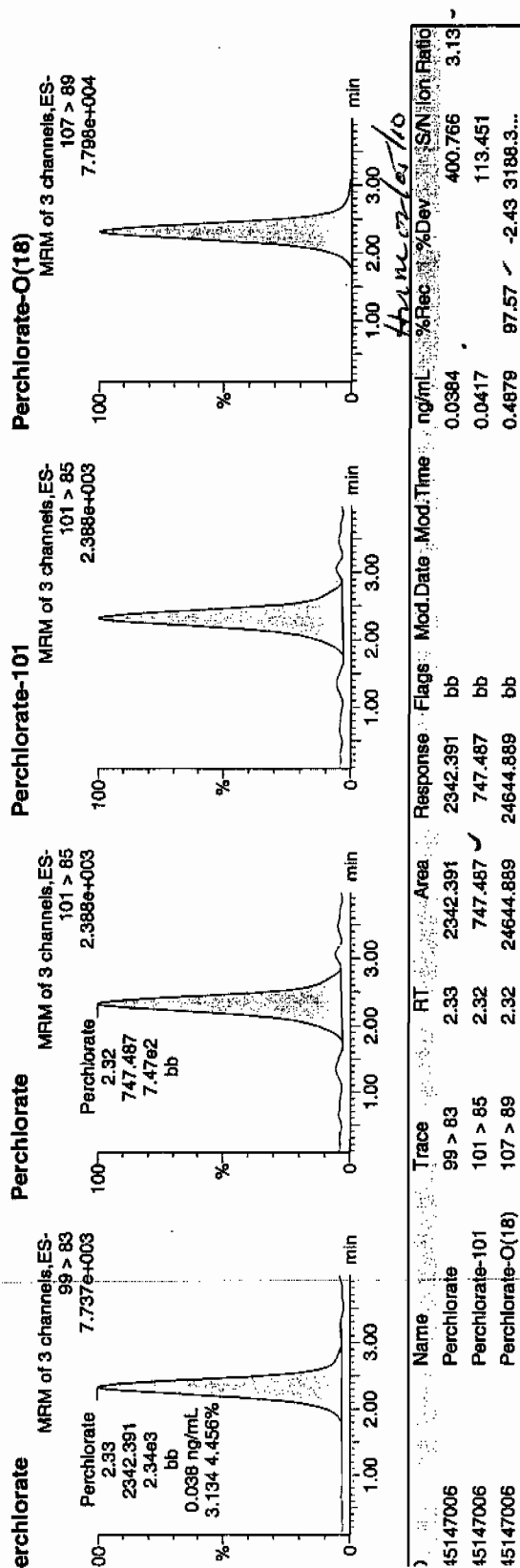
Acquire Time: 20:54:02

Sample ID: 245147006

Label: 2,2,E

02-05-10

LANU | 945202 | 5020 | 11



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: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7168  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147007  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 81

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.619	2.47	0.895	ug/kg	J	1	03-FEB-10 21:01	per0203054a
	Perchlorate Isotope Ratio			3.45			1	03-FEB-10 21:01	per0203054a
14797-73-0	Perchlorate-101	.619	2.47	0.884	ug/kg	J	1	03-FEB-10 21:01	per0203054a
	Perchlorate-O(18)			6.30	ug/kg		1	03-FEB-10 21:01	per0203054a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

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

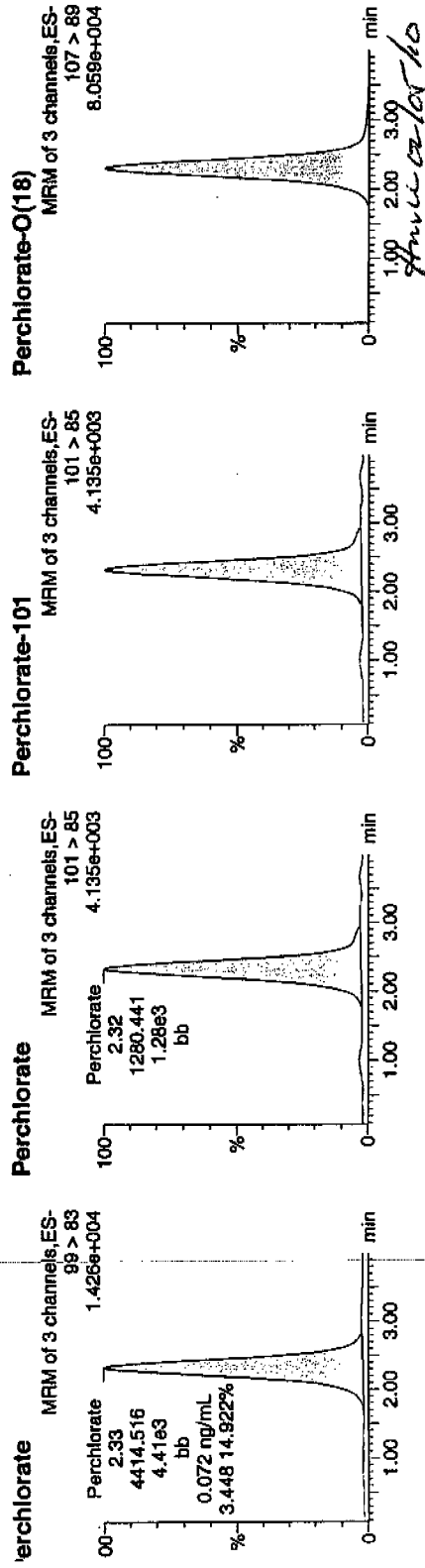
Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203054a  
Date: 03-Feb-2010  
Time: 21:01:03  
ID: 245147007  
Label: 2:2.F

02-05-10

147007 945202 50020111



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147007	Perchlorate	98 > 83	2.33	4414.516	bb			0.0723			806.521	3.45
45147007	Perchlorate-101	101 > 85	2.32	1280.441	bb			0.0715			180.147	
45147007	Perchlorate-O(18)	107 > 89	2.30	25718.764	bb			0.5091	101.82	1.82	6025.7...	

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: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7166

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147008

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 68

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.731	2.92	1.58	ug/kg	J	1	03-FEB-10 21:08	per0203055a
	Perchlorate Isotope Ratio			3.24			1	03-FEB-10 21:08	per0203055a
14797-73-0	Perchlorate-101	.731	2.92	1.66	ug/kg	J	1	03-FEB-10 21:08	per0203055a
	Perchlorate-O(18)			7.53	ug/kg		1	03-FEB-10 21:08	per0203055a

<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: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203055a

Date: 03-Feb-2010

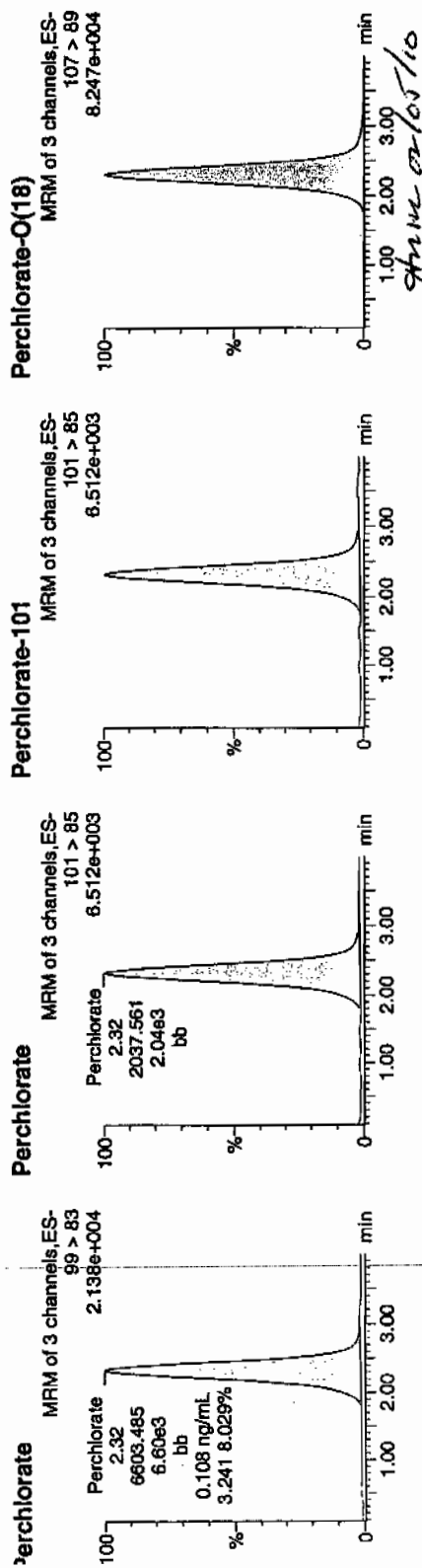
Time: 21:08:04

D: 245147008

Label: 2:3.A

WWD  
02-05-10

LANC | 945202 | 5000 | 11 |



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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7177

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147002

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 92.5

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.54	2.16	1.16	ug/kg	J	1	03-FEB-10 21:15	per0203056a
	Perchlorate Isotope Ratio			3.15			1	03-FEB-10 21:15	per0203056a
14797-73-0	Perchlorate-101	.54	2.16	1.25	ug/kg	J	1	03-FEB-10 21:15	per0203056a
	Perchlorate-O(18)			5.72	ug/kg		1	03-FEB-10 21:15	per0203056a

<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

Sample Name: The GEL Group, LLC Analyst: Charfers W. Wilson  
 Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Sample Date: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
 Sample Time: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203056a

Sample Date: 03-Feb-2010

Sample Time: 21:15:07

Sample ID: 245147009

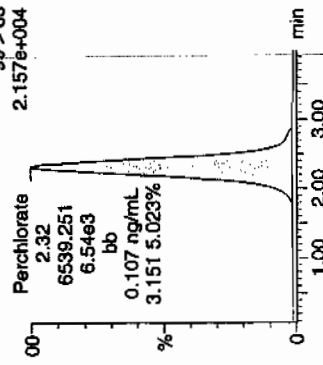
Sample Label: 2:3,B

02-05-10

1945202 | 5025 | 11

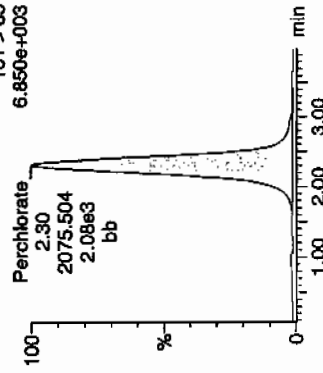
Perchlorate

MRM of 3 channels, ES-  
99 > 83



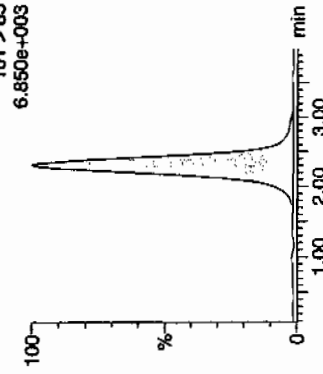
Perchlorate

MRM of 3 channels, ES-  
101 > 85



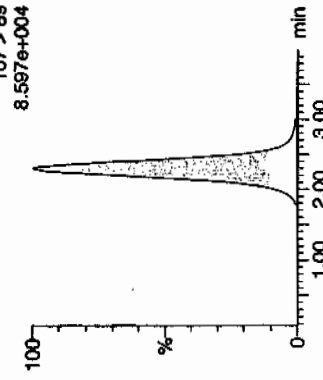
Perchlorate-101

MRM of 3 channels, ES-  
101 > 85



Perchlorate-O(18)

MRM of 3 channels, ES-  
107 > 89



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147009	Perchlorate	2.32	6539.251	6539.251	bb			0.1072	777.477	3.15		
45147009	Perchlorate-101	2.30	2075.504	2075.504	bb			0.1158	341.656			
45147009	Perchlorate-O(18)	2.30	26734.227	26734.227	bb			0.5292	105.84	5.84	8133.6...	

$$\frac{6539.251}{61017.5} \times 100 = 1.16\%$$

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: 945200  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7181  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147010  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 %Solids: 88

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	.569	2.28	0.569	ug/kg	U	1	03-FEB-10 21:22	per0203057a
	Perchlorate Isotope Ratio						1	03-FEB-10 21:22	per0203057a
14797-73-0	Perchlorate-101	.569	2.28	0.569	ug/kg	U	1	03-FEB-10 21:22	per0203057a
	Perchlorate-O(18)			5.65	ug/kg		1	03-FEB-10 21:22	per0203057a

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

Identify Sample Report MassLynx 4.0 SP4

the GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

First Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
 Initiated: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

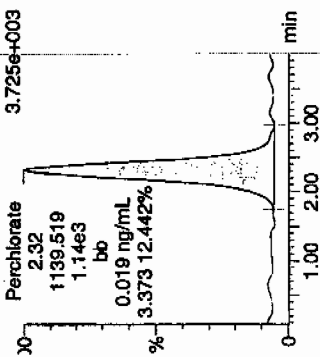
Sample Name: per0203057a  
 Date: 03-Feb-2010  
 Time: 21:22:09  
 File: 245147010  
 Aliot: 2:3,C

02-05-10

LANC | 45202 | 5020 | 11

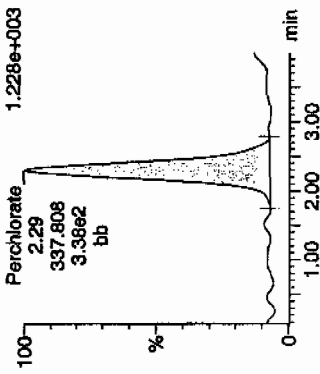
Perchlorate

MRM of 3 channels, ES-  
 99 > 83



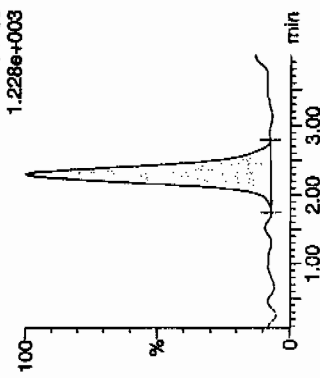
Perchlorate

MRM of 3 channels, ES-  
 101 > 85



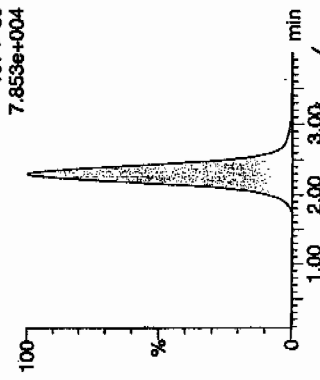
Perchlorate-101

MRM of 3 channels, ES-  
 101 > 85



Perchlorate-O(18)

MRM of 3 channels, ES-  
 107 > 89



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
5147010	Perchlorate	99 > 83	2.32	1139.519	bb			0.0187	✓	145.438	3.37	✓
5147010	Perchlorate-101	101 > 85	2.29	337.808	bb			0.0189	✓	57.920		
5147010	Perchlorate-O(18)	107 > 89	2.30	25094.752	bb			0.4968	99.35	-0.65	5347.2...	

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: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7178

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147011

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.636	2.54	1.27	ug/kg	J	1	03-FEB-10 21:50	per0203061a
	Perchlorate Isotope Ratio			3.17			1	03-FEB-10 21:50	per0203061a
14797-73-0	Perchlorate-101	.636	2.54	1.37	ug/kg	J	1	03-FEB-10 21:50	per0203061a
	Perchlorate-O(18)			6.52	ug/kg		1	03-FEB-10 21:50	per0203061a

<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\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203061a

Date: 03-Feb-2010

Time: 21:50:33

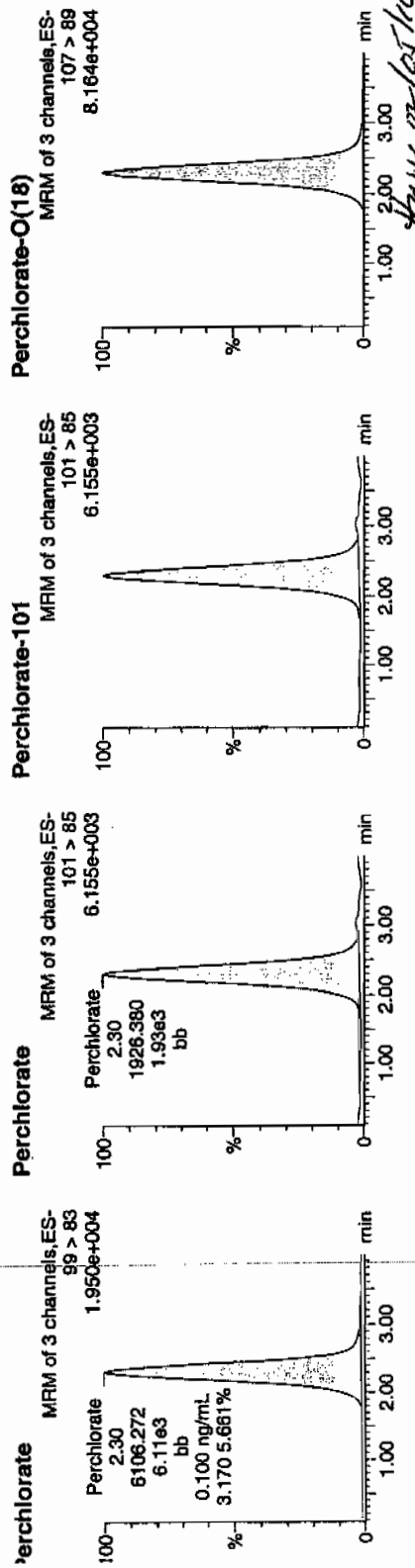
D: 245147011

File: 2:3,D

02-05-10

02-05-10

LAN-1945202/5000/11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
45147011 Perchlorate	99 > 83	2.30	6106.272	6106.272	bb			0.1001			1232.8...	3.17
45147011 Perchlorate-101	101 > 85	2.30	1926.380	1926.380	bb			0.1075			428.421	
45147011 Perchlorate-O(18)	107 > 89	2.30	25899.719	25899.719	bb			0.5127	102.54	2.54	3338.4...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 245200  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7182  
 Date Received: 20-JAN-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 245147012  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 %Solids: 82  
 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	.61	2.44	0.610	ug/kg	U	1	03-FEB-10 21:57	per0203062a
	Perchlorate Isotope Ratio						1	03-FEB-10 21:57	per0203062a
14797-73-0	Perchlorate-101	.61	2.44	0.610	ug/kg	U	1	03-FEB-10 21:57	per0203062a
	Perchlorate-O(18)			6.45	ug/kg		1	03-FEB-10 21:57	per0203062a

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

\*Concentration =

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

Quantify Sample Report MassLynx 4.0 SP4

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re GEL Group, LLC Analyst: Charlers W. Wilson

atset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

ast Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
rinted: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

ame: per0203062a

ate: 03-Feb-2010

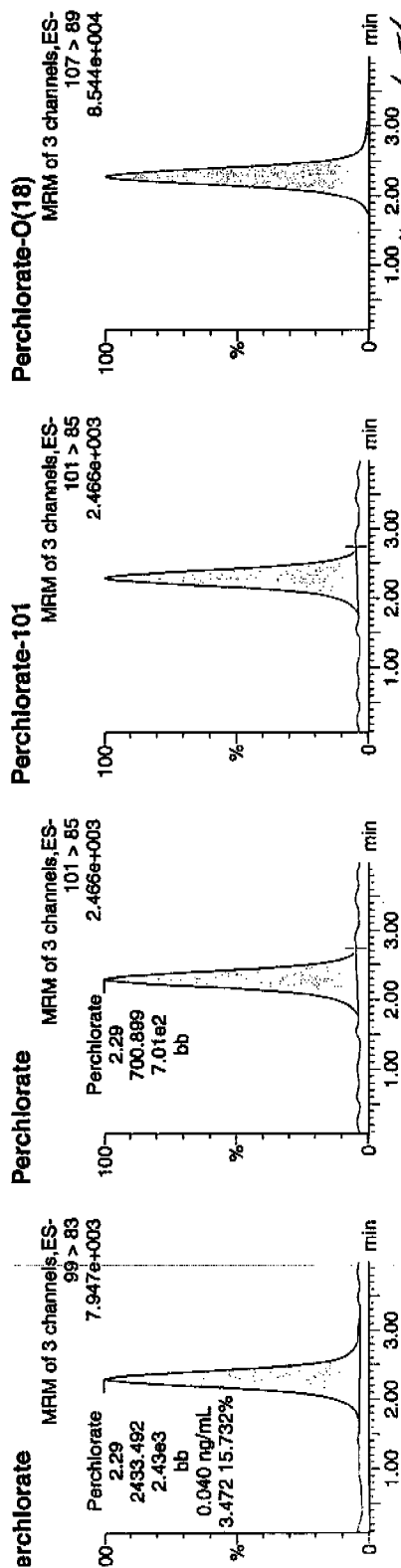
ime: 21:57:45

y: 245147012

lat: 2:3,E

WWS  
02-05-10

LANC | 945202 | 5020 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
5147012	Perchlorate	99 > 83	2.29	2433.492	bb			0.0399			152.124	3.47
5147012	Perchlorate-101	101 > 85	2.29	700.899	bb			0.0391			252.892	
5147012	Perchlorate-O(18)	107 > 89	2.28	26726.195	bb			0.5291	105.81	5.81	16320...	

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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7183

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147013

Date Filtered: 03-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	.57	2.28	0.570	ug/kg	U	1	03-FEB-10 22:04	per0203063a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:04	per0203063a
14797-73-0	Perchlorate-101	.57	2.28	0.570	ug/kg	U	1	03-FEB-10 22:04	per0203063a
	Perchlorate-O(18)			6.04	ug/kg		1	03-FEB-10 22:04	per0203063a

<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

Identify Sample Report MassLynx 4.0 SP4  
he GEL Group, LLC Analyst: Charles W. Wilson

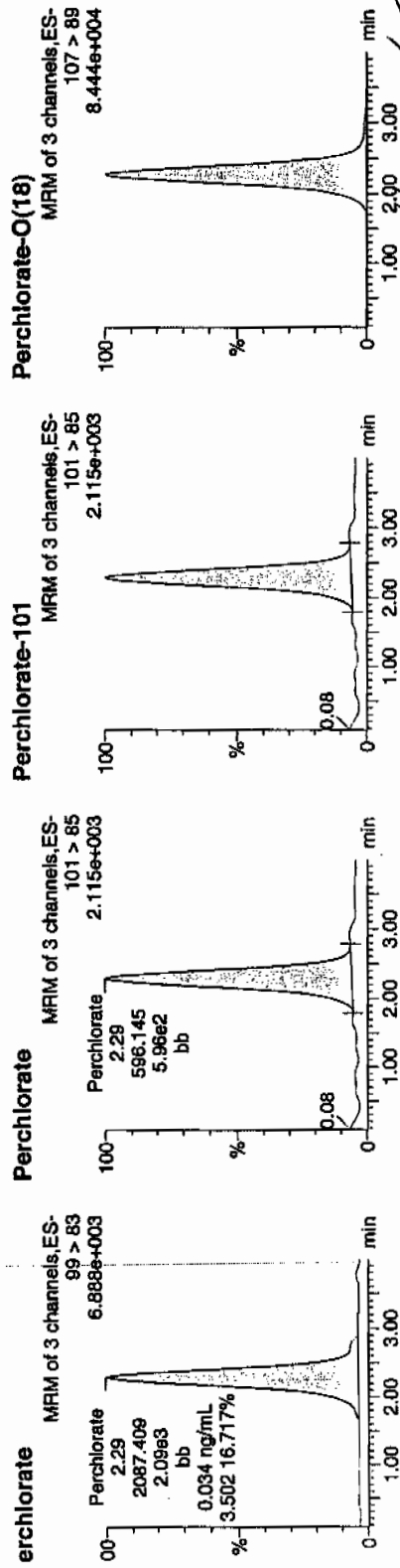
Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203063a  
Date: 03-Feb-2010  
Time: 22:04:47  
ID: 245147013  
Lab: 2:3,F

02-05-10

LANC | 945202 | SATS | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147013	Perchlorate	2.29	2087.409	2087.409	bb			0.0342			320.381	3.50
45147013	Perchlorate-101	2.29	596.145	596.145	bb			0.0333			145.898	
45147013	Perchlorate-O(18)	2.28	26758.994	26758.994	bb			0.5297	105.94	5.94	2076.1...	

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: 945200

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7184

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147014

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 83

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	.604	2.42	0.616	ug/kg	J	1	03-FEB-10 22:11	per0203064a
	Perchlorate Isotope Ratio			3.55			1	03-FEB-10 22:11	per0203064a
14797-73-0	Perchlorate-101	.604	2.42	0.604	ug/kg	U	1	03-FEB-10 22:11	per0203064a
	Perchlorate-O(18)			6.10	ug/kg		1	03-FEB-10 22:11	per0203064a

<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\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203064a

Date: 03-Feb-2010

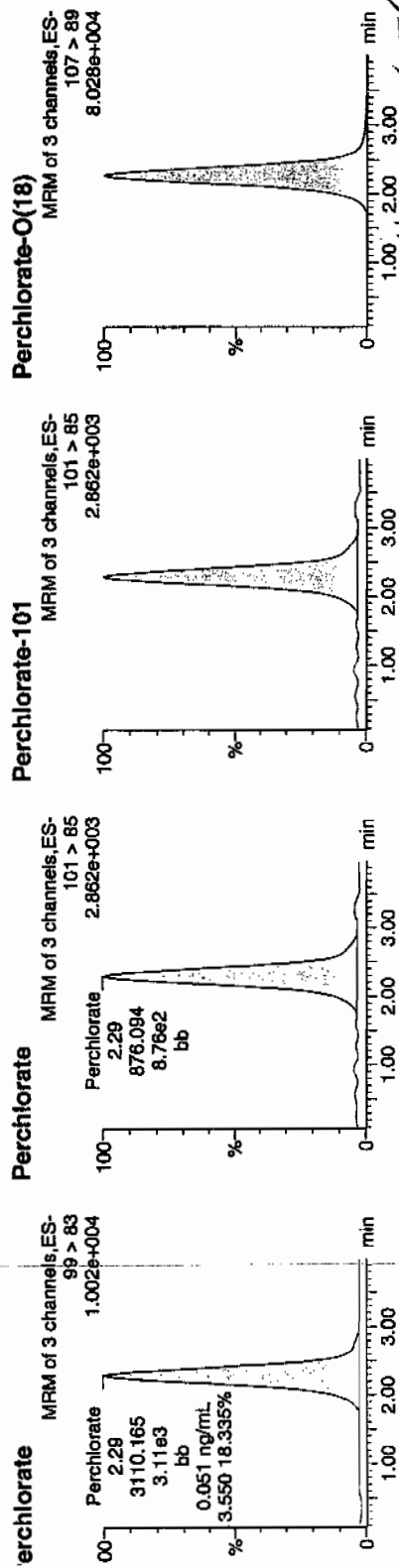
Time: 22:11:49

ID: 245147014

Label: 2:4,A

622  
02-05-10

14246 | 945202 | 5020 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Day	S/N	Ion Ratio
45147014	Perchlorate	2.29	3110.165	3110.165	bb			0.0510			347.811	3.55
45147014	Perchlorate-101	2.29	876.094	876.094	bb			0.0489			94.123	
45147014	Perchlorate-O(18)	2.28	25534.371	25534.371	bb			0.5055	101.09	1.09	2259.2...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7185

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147015

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 90.6

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.552	ug/kg	U	1	03-FEB-10 22:18	per0203065a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:18	per0203065a
14797-73-0	Perchlorate-101	.552	2.21	0.552	ug/kg	U	1	03-FEB-10 22:18	per0203065a
	Perchlorate-O(18)			5.59	ug/kg		1	03-FEB-10 22:18	per0203065a

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

\*Concentration =

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

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

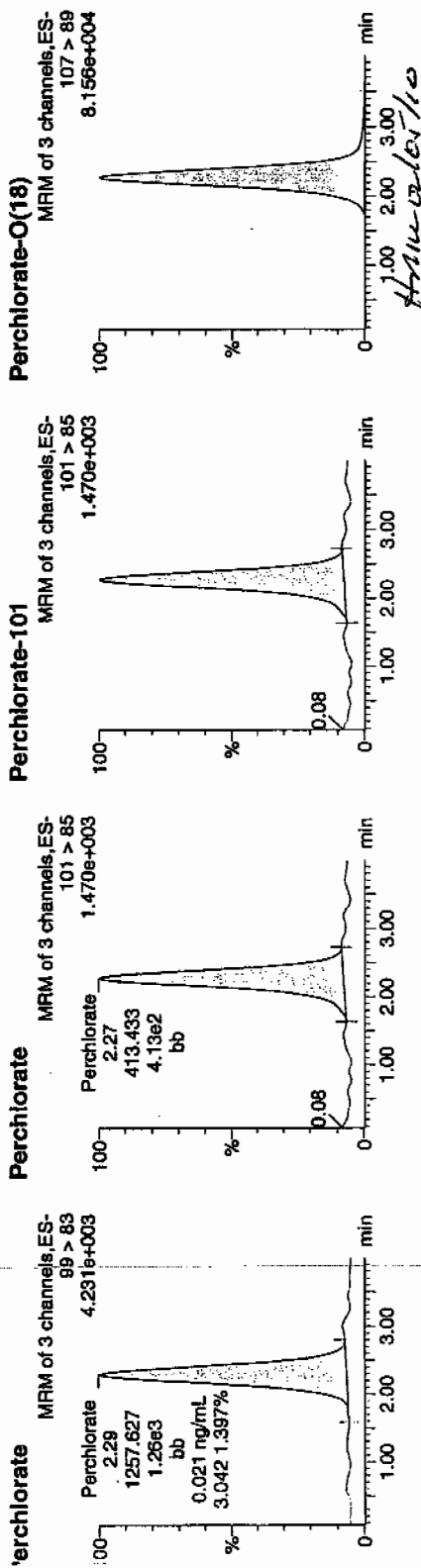
Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203065a  
Date: 03-Feb-2010  
Time: 22:18:52  
ID: 245147015  
Label: 2:4,B

02-05-10

1722/945202/5020/11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147015	Perchlorate	99 > 83	2.29	1257.627	bb			0.0206			256.596	3.04
45147015	Perchlorate-101	101 > 85	2.27	413.433	bb			0.0231			142.464	
45147015	Perchlorate-O(18)	107 > 89	2.28	25571.217	bb			0.5062	101.24	1.24	3352.7...	

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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7176

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147016

Date Filtered: 03-FEB-10

Injection Volume (mL): 20

%Solids: 95.3

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.524	2.1	1.19	ug/kg	J	1	03-FEB-10 22:25	per0203066a
	Perchlorate Isotope Ratio			3.08			1	03-FEB-10 22:25	per0203066a
14797-73-0	Perchlorate-101	.524	2.1	1.32	ug/kg	J	1	03-FEB-10 22:25	per0203066a
	Perchlorate-O(18)			5.54	ug/kg		1	03-FEB-10 22:25	per0203066a

<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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203066a

Date: 03-Feb-2010

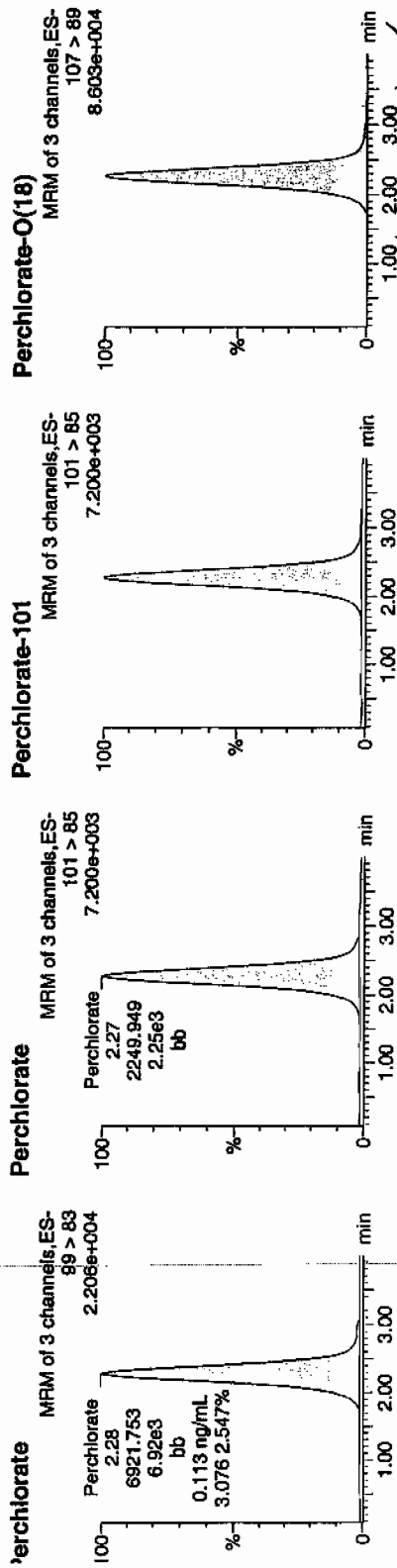
Time: 22:25:55

D: 245147016

File: 2:4.C

02-05-10

1620 | 945202 | 5220 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147016	Perchlorate	2.28	6921.753	6921.753	bb			0.1134			576.986	3.08
45147016	Perchlorate-101	2.27	2249.949	2249.949	bb			0.1256			631.917	
45147016	Perchlorate-O(18)	2.27	26670.129	26670.129	bb			0.5280	105.59	5.59	2263.5...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7180

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147017

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 87

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.577	2.31	0.577	ug/kg	U	1	03-FEB-10 22:32	per0203067a
	Perchlorate Isotope Ratio						1	03-FEB-10 22:32	per0203067a
14797-73-0	Perchlorate-101	.577	2.31	0.577	ug/kg	U	1	03-FEB-10 22:32	per0203067a
	Perchlorate-O(18)			5.67	ug/kg		1	03-FEB-10 22:32	per0203067a

<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\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203067a

Date: 03-Feb-2010

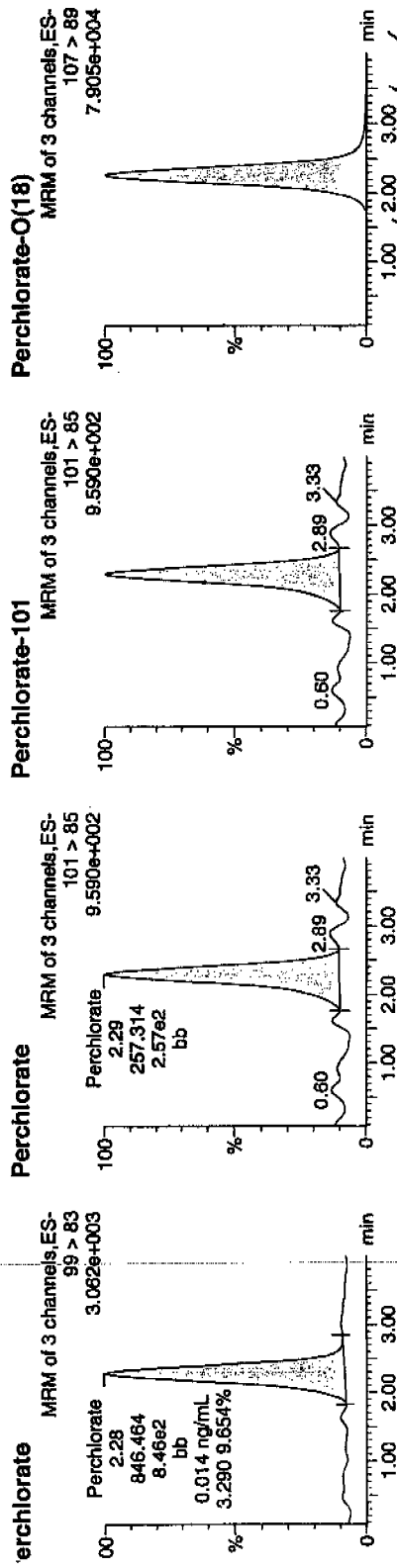
Time: 22:32:57

ID: 245147017

Label: 2:4,D

02-05-10

1000-145000-111



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
45147017	Perchlorate	2.28	846.464	846.464	bb			0.0139			107.244	3.29
45147017	Perchlorate-101	2.29	257.314	257.314	bb			0.0144			62.769	
45147017	Perchlorate-O(18)	2.27	24819.002	24819.002	bb			0.4913	98.26	-1.74	3478.7...	

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: 245200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7179

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 245147018

Date Filtered: 03-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	.627	2.51	0.752	ug/kg	J	1	03-FEB-10 22:40	per0203068a
	Perchlorate Isotope Ratio			3.04			1	03-FEB-10 22:40	per0203068a
14797-73-0	Perchlorate-101	.627	2.51	0.841	ug/kg	J	1	03-FEB-10 22:40	per0203068a
	Perchlorate-O(18)			6.28	ug/kg		1	03-FEB-10 22:40	per0203068a

<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: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203068a

Date: 03-Feb-2010

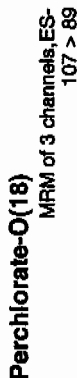
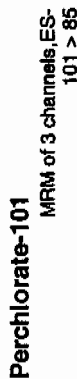
Time: 22:40:00

D: 245147018

/lal: 2:4,E

02-05-10

1201.301 | 3020 | 11



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
145147018	Perchlorate	99 > 83	2.28	3654.611	3654.611	bb			0.0599			527.035	3.04
145147018	Perchlorate-101	101 > 85	2.28	1201.301	1201.301	bb			0.0670			207.970	
145147018	Perchlorate-O(18)	107 > 89	2.27	25272.125	25272.125	bb			0.5003	100.06		0.06	4801.8...

# STANDARDS DATA

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-1306

General Engineering Laboratories

Lab Name:

Lab Code: GEL

Instrument ID:

LCMSMS

Date Analyzed:

03-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

Coefficient of Determination:

Calibration Curve: 61017.46

Response Type: External Standard

Curve Type: RF

Form 2

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-1306

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 03-FEB-10

HP/CL 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

Parunname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 17917.9

Response Type: External Standard

Curve Type: RF

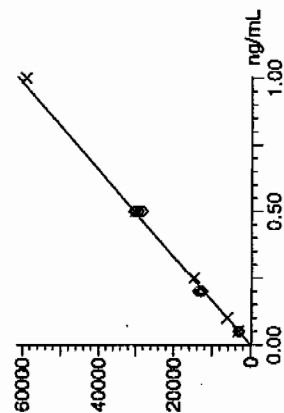
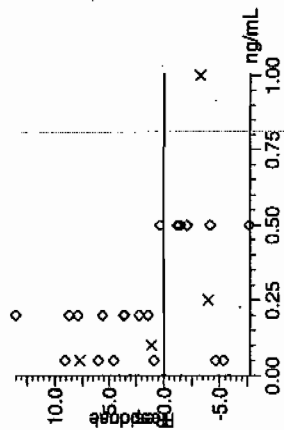
Quantify Calibration Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

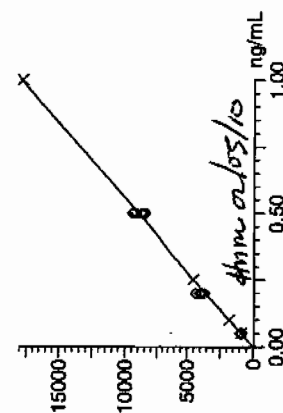
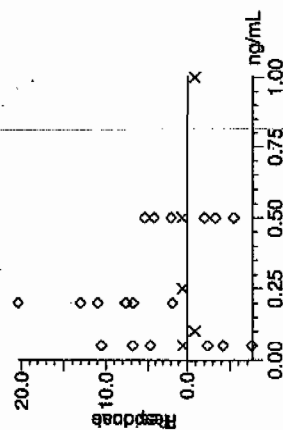
Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020310a.mdb 04 Feb 2010 08:58:49  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020310a.cdb 04 Feb 2010 08:59:03

Compound name: Perchlorate  
Response Factor: 61017.5  
RF SD: 2906.66, % Relative SD: 4.76365  
Response type: External Std, Area  
Curve type: RF



02-05-10

Compound name: Perchlorate-101  
Response Factor: 17917.9  
RF SD: 144.008, % Relative SD: 0.803711  
Response type: External Std, Area  
Curve type: RF



Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charliers W. Wilson

Page 2 of 2

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

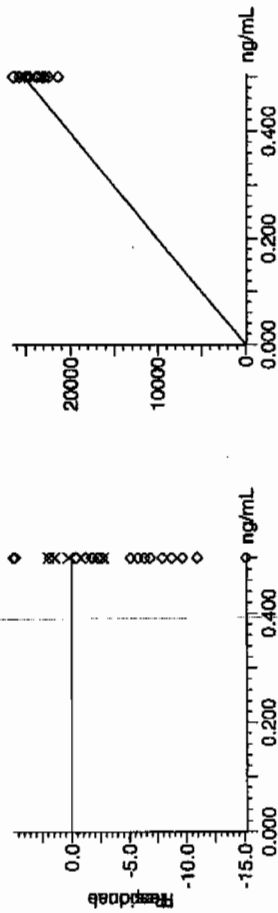
Compound name: Perchlorate-O(18)

Response Factor: 50516.2

RF SD: 945.64, % Relative SD: 1.87195 ✓

Response type: External Std, Area

Curve type: RF ✓



Form 3

Perchlorate Initial Calibration Verification

GEL Job No.(SDG): 10-1306

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.3	03-FEB-10 15:42	per0203009a
Perchlorate Isotope Ratio		3.24		03-FEB-10 15:42	per0203009a
Perchlorate-101	.5	.53	105.41	03-FEB-10 15:42	per0203009a

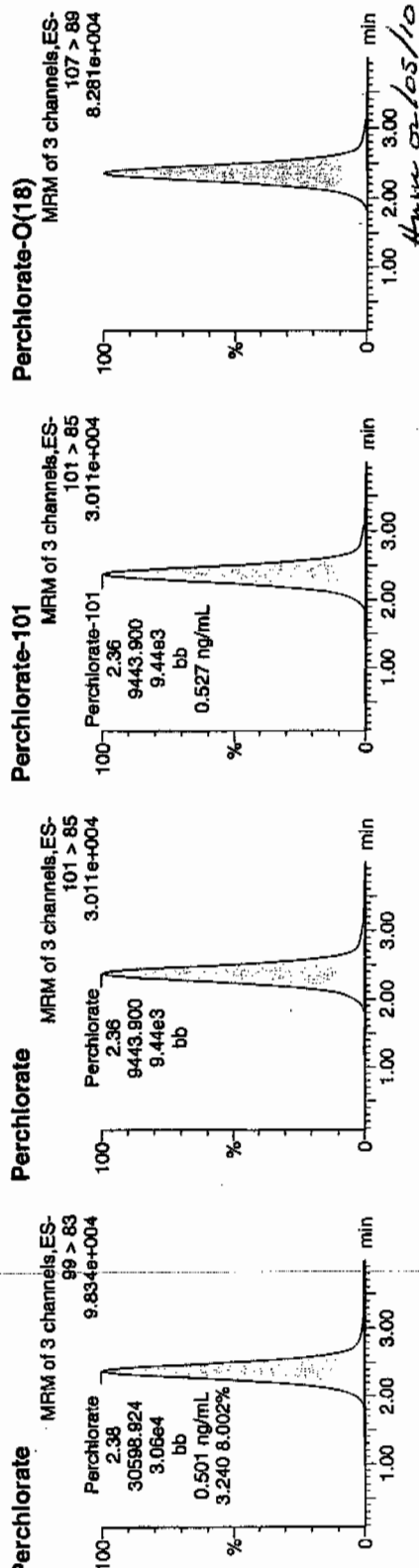
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample: per0203009a  
Date: 03-Feb-2010  
Time: 15:42:46  
D: WCL100128-06ICV  
Vial: 1:2,A

Pure and  
02-05-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06ICV	Perchlorate	99 > 83	2.38	30598.924	bb			0.5015	100.30	0.30	4801.3...	3.24
WCL100128-06ICV	Perchlorate-101	101 > 85	2.36	9443.900	bb			0.5271	105.41	5.41	2182.5...	
WCL100128-06ICV	Perchlorate-O(18)	107 > 89	2.35	25718.248	bb			0.5091	101.82	1.82	976.154	

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1306

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	97.92	03-FEB-10 17:14	per0203022a
Perchlorate Isotope Ratio		3.27		03-FEB-10 17:14	per0203022a
Perchlorate-101	.5	.51	101.98	03-FEB-10 17:14	per0203022a
Perchlorate	.5	.49	98.78	03-FEB-10 18:46	per0203035a
Perchlorate Isotope Ratio		3.23		03-FEB-10 18:46	per0203035a
Perchlorate-101	.5	.52	104.24	03-FEB-10 18:46	per0203035a
Perchlorate	.5	.49	98.56	03-FEB-10 20:04	per0203046a
Perchlorate Isotope Ratio		3.42		03-FEB-10 20:04	per0203046a
Perchlorate-101	.5	.49	98	03-FEB-10 20:04	per0203046a
Perchlorate	.5	.48	95.81	03-FEB-10 21:29	per0203058a
Perchlorate Isotope Ratio		3.37		03-FEB-10 21:29	per0203058a
Perchlorate-101	.5	.48	96.68	03-FEB-10 21:29	per0203058a
Perchlorate	.5	.46	92.33	03-FEB-10 22:47	per0203069a

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1306

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		3.33		03-FEB-10 22:47	per0203069a
Perchlorate-101	.5	.47	94.54	03-FEB-10 22:47	per0203069a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203022a

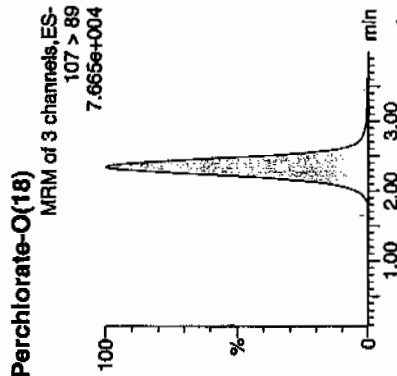
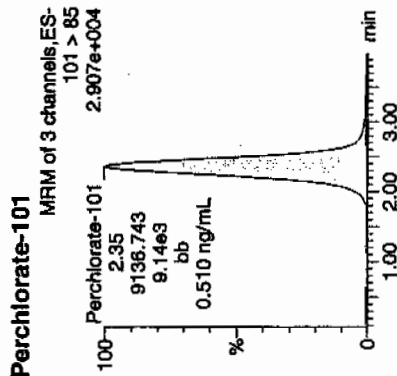
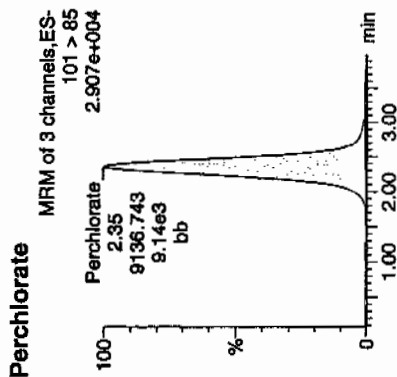
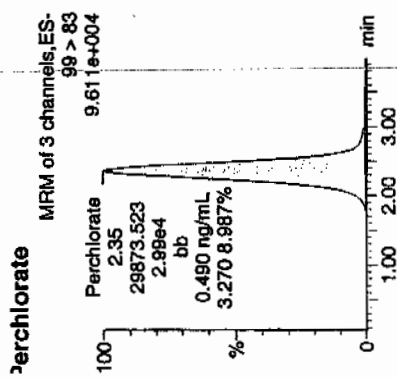
Date: 03-Feb-2010

Time: 17:14:46

D: WCL100128-06CCV

/lal: 1:2,A

Pure  
02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
	Perchlorate	99 > 83	2.35	29873.523	29873.523	bb			0.4896	97.92	-2.08	3013.9...	3.27
	Perchlorate-101	101 > 85	2.35	9136.743	9136.743	bb			0.5099	101.98	1.98	736.032	
	Perchlorate-O(18)	107 > 89	2.34	23804.943	23804.943	bb			0.4712	94.25	-5.75	2405.6...	

pure 02/05/10

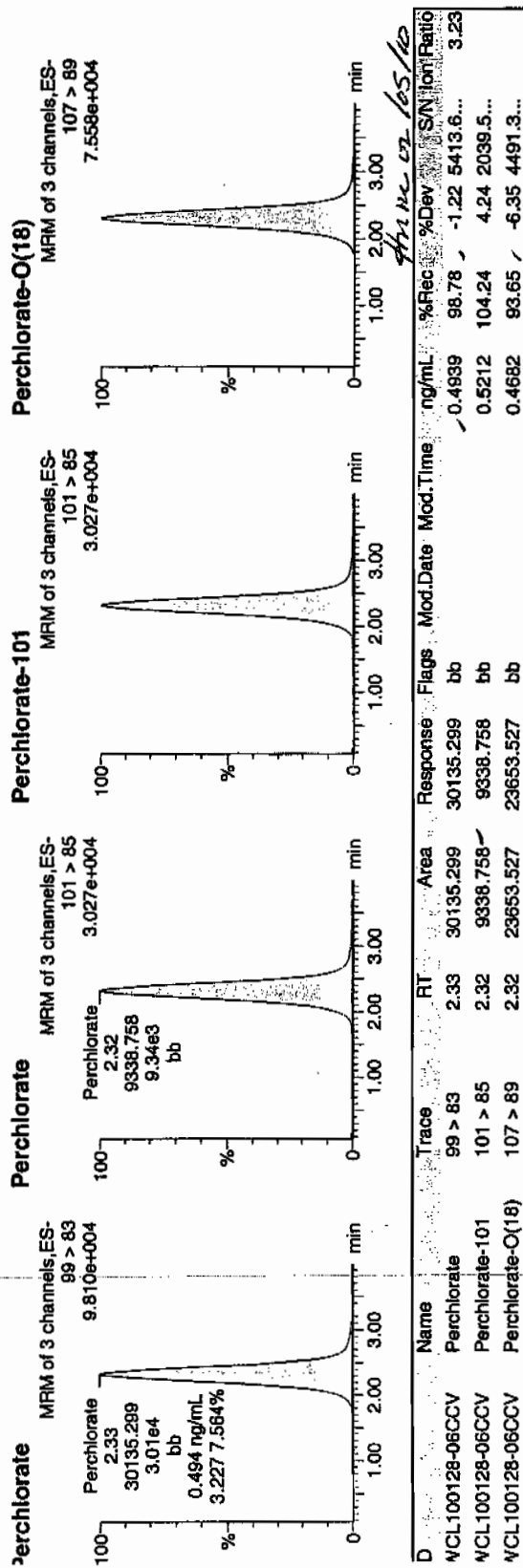
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203035a  
Date: 03-Feb-2010  
Time: 18:46:43  
D: WCL100128-06CCV  
/lal: 1:2,A

Pass  
and  
02-05-10

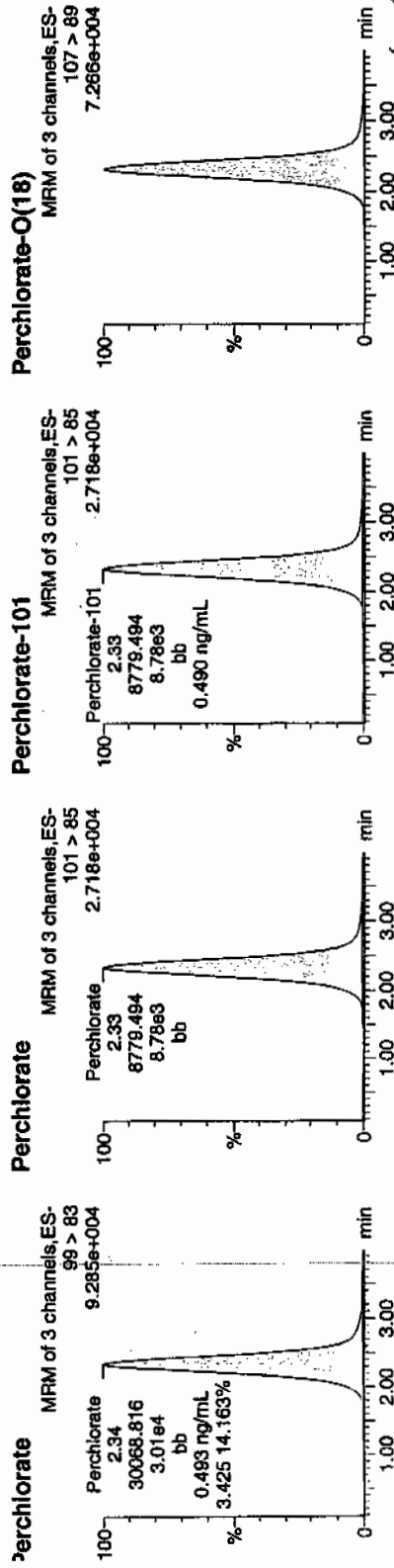


Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203046a  
Date: 03-Feb-2010  
Time: 20:04:24  
D: WCL100128-06CCV  
/ial: 1;2,A



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
NCL100128-06CCV	Perchlorate	99 > 83	2.34	30068.816	30068.816	bb			0.4928	98.56	-1.44	966.359	3.42
NCL100128-06CCV	Perchlorate-101	101 > 85	2.33	8779.494	8779.494	bb			0.4900	98.00	-2.00	1391.4...	
NCL100128-06CCV	Perchlorate-O(18)	107 > 89	2.33	23526.217	23526.217	bb			0.4857	93.14	-6.86	3418.1...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203058a

Date: 03-Feb-2010

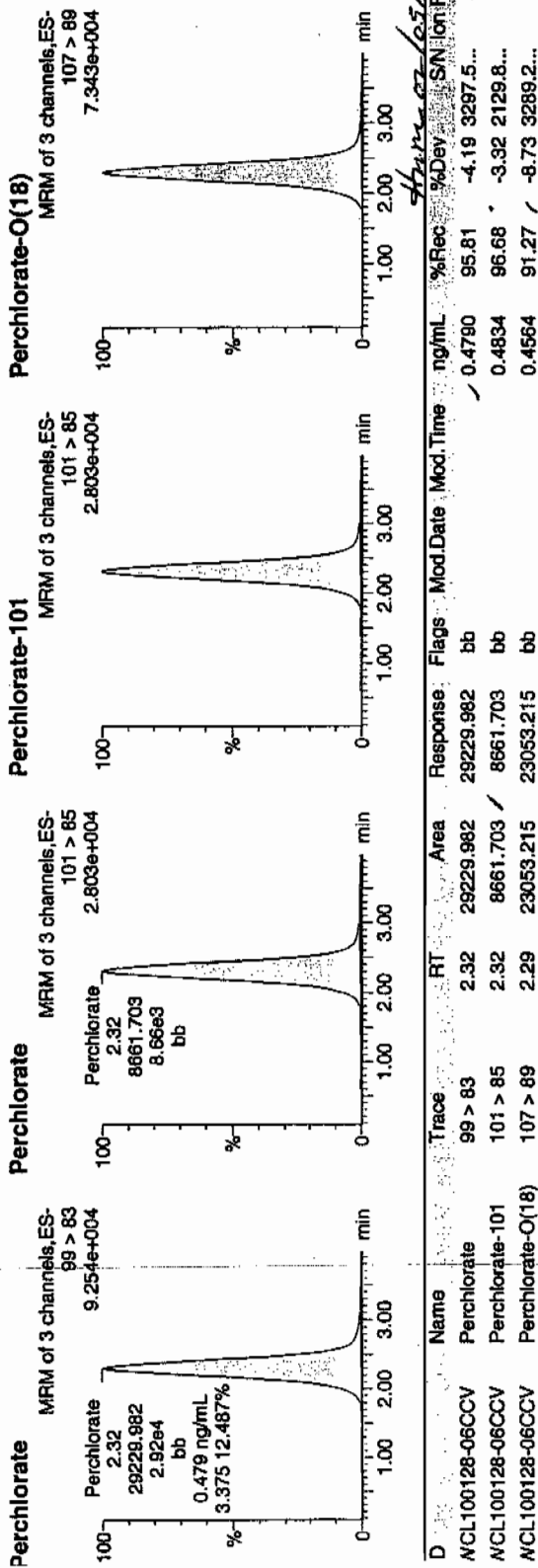
Time: 21:29:12

ID: WCL100128-06CCV

Vial: 1:2,A

Page 02-05-10

WCL 02-05-10



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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203069a

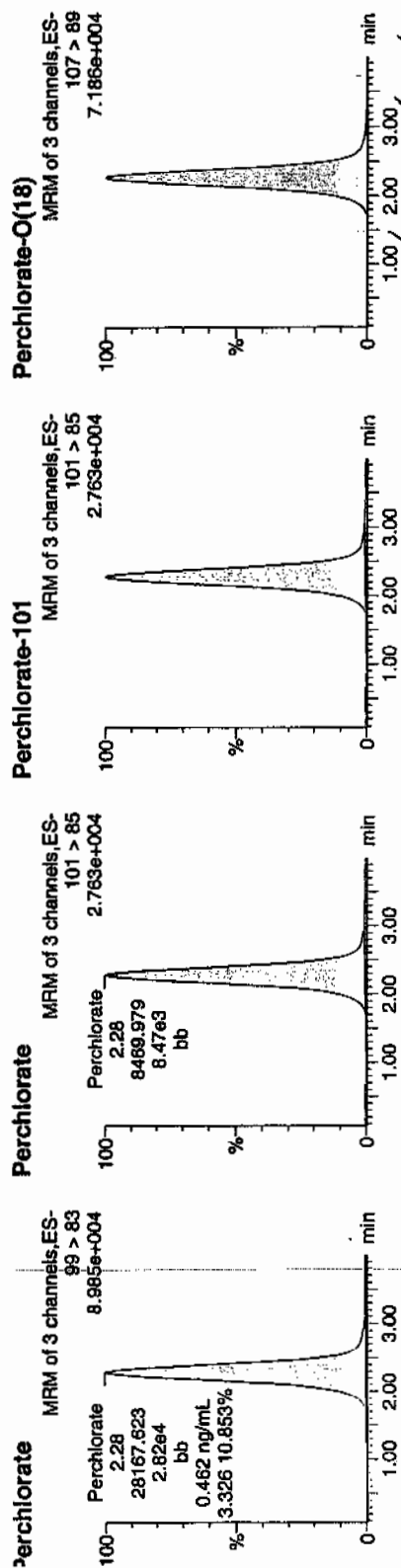
Date: 03-Feb-2010

Time: 22:47:01

D: WCL100128-06CCV

/lat: 1:2,A

*Per  
and  
01-25-10*



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ratio
	Perchlorate	99 > 83	2.28	28167.823	28167.623	bb			0.4616	92.33	-7.67	1328.6...	3.33
	Perchlorate-101	101 > 85	2.28	8469.979	8469.979	bb			0.4727	94.54	-5.46	1060.9...	
	Perchlorate-O(18)	107 > 89	2.27	22489.699	22489.699	bb			0.4452	89.04	-10.96	2474.9...	

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1306

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	100.89	03-FEB-10 15:56	per0203011a
Perchlorate Isotope Ratio		3.28		03-FEB-10 15:56	per0203011a
Perchlorate-101	.05	.05	104.72	03-FEB-10 15:56	per0203011a
Perchlorate	.05	.05	109.1	03-FEB-10 17:29	per0203024a
Perchlorate Isotope Ratio		3.81		03-FEB-10 17:29	per0203024a
Perchlorate-101	.05	.05	97.59	03-FEB-10 17:29	per0203024a
Perchlorate	.05	.05	106.04	03-FEB-10 19:00	per0203037a
Perchlorate Isotope Ratio		3.38		03-FEB-10 19:00	per0203037a
Perchlorate-101	.05	.05	106.83	03-FEB-10 19:00	per0203037a
Perchlorate	.05	.05	104.6	03-FEB-10 20:18	per0203048a
Perchlorate Isotope Ratio		3.22		03-FEB-10 20:18	per0203048a

Form 3

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1306

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate-101	.05	.06	110.55	03-FEB-10 20:18	per0203048a
Perchlorate	.05	.05	95.34	03-FEB-10 21:43	per0203060a
Perchlorate Isotope Ratio		3.39		03-FEB-10 21:43	per0203060a
Perchlorate-101	.05	.05	95.78	03-FEB-10 21:43	per0203060a
Perchlorate	.05	.05	94.64	03-FEB-10 23:01	per0203071a
Perchlorate Isotope Ratio		3.49		03-FEB-10 23:01	per0203071a
Perchlorate-101	.05	.05	92.48	03-FEB-10 23:01	per0203071a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample: per0203011a

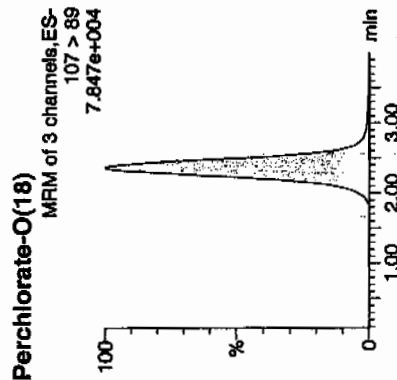
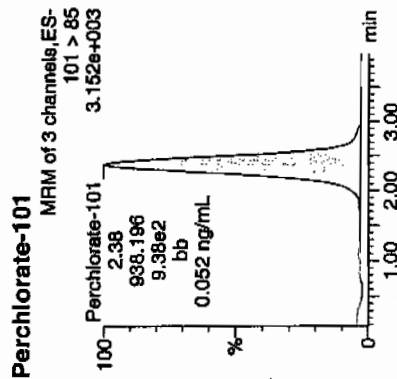
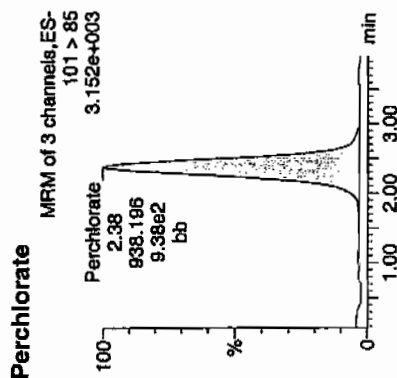
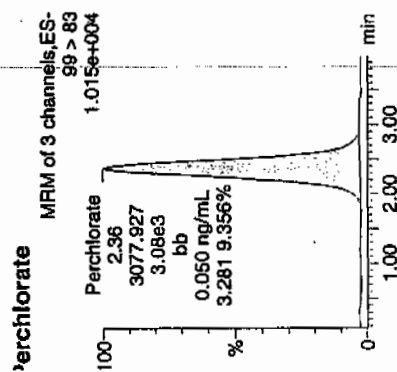
Date: 03-Feb-2010

Time: 15:56:50

ID: WCL100128-07CRI

File: 1:2,B

Per  
WCL  
02-05-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.36	3077.927	3077.927	bb			0.0504	100.89	0.89	847.527	3.28
WCL100128-07CRI	Perchlorate-101	101 > 85	2.38	938.196	938.196	bb			0.0524	104.72	4.72	565.311	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.35	24663.041	24663.041	bb			0.4882	97.64	-2.36	7180.0...	

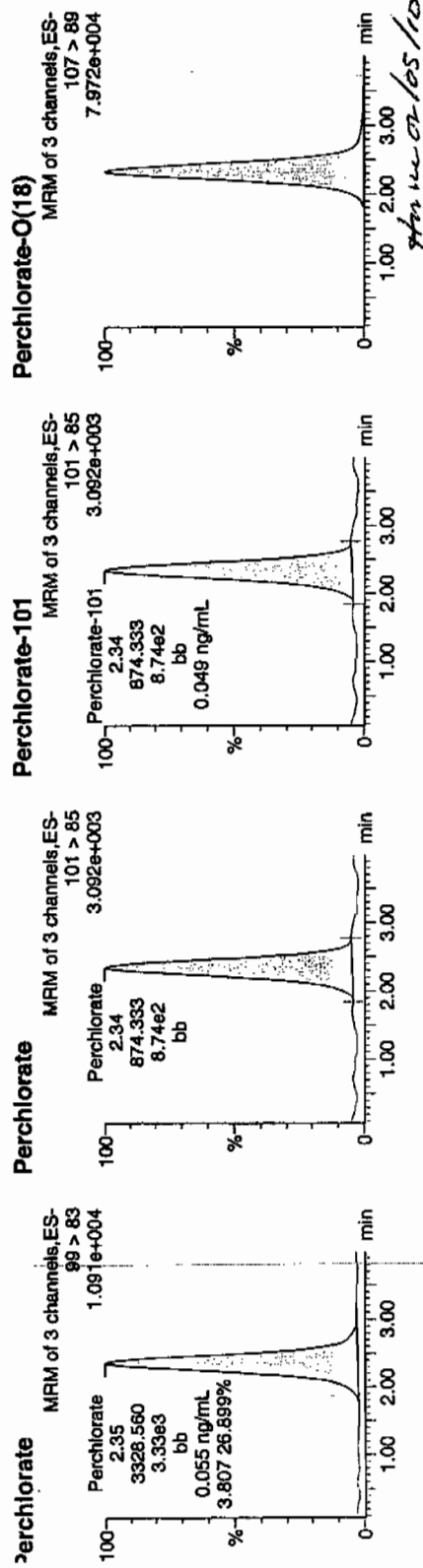
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

*Perchlorate  
and  
02-05-10*

Name: per0203024a  
Date: 03-Feb-2010  
Time: 17:29:06  
D: WCL100128-07CRI  
/lal: 1:2,B



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
	Perchlorate	99 > 83	2.35	3328.560	3328.560	bb			0.0546	109.10	9.10	350.449	3.81
	Perchlorate-101	101 > 85	2.34	874.333	874.333	bb			0.0488	97.59	-2.41	163.531	
	Perchlorate-O(18)	107 > 89	2.34	24829.422	24829.422	bb			0.4915	98.30	-1.70	8952.0...	

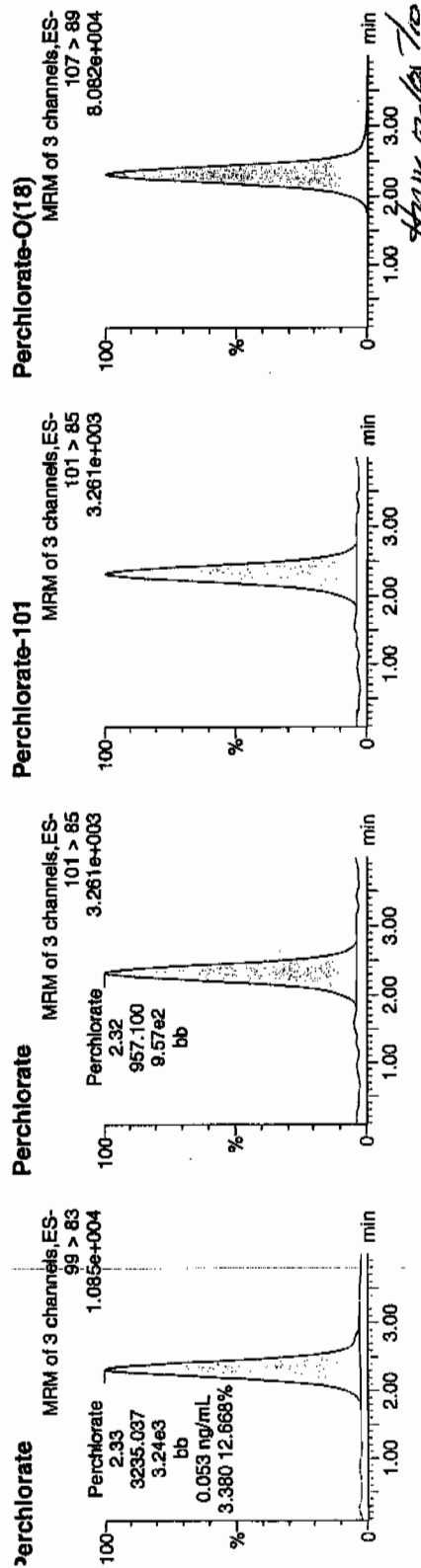
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203037a  
Date: 03-Feb-2010  
Time: 19:00:57  
D: WCL100128-07CRI  
/lat: 1:2,B

Pure  
and  
02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	IonRatio
	Perchlorate	99 > 83	2.33	3235.037	3235.037	bb			0.0530	106.04	6.04	177.003	3.38
	Perchlorate-101	101 > 85	2.32	957.100	957.100	bb			0.0534	106.83	6.83	133.444	
	Perchlorate-O(18)	107 > 89	2.32	24588.098	24588.098	bb			0.4867	97.35	-2.65	4360.7...	

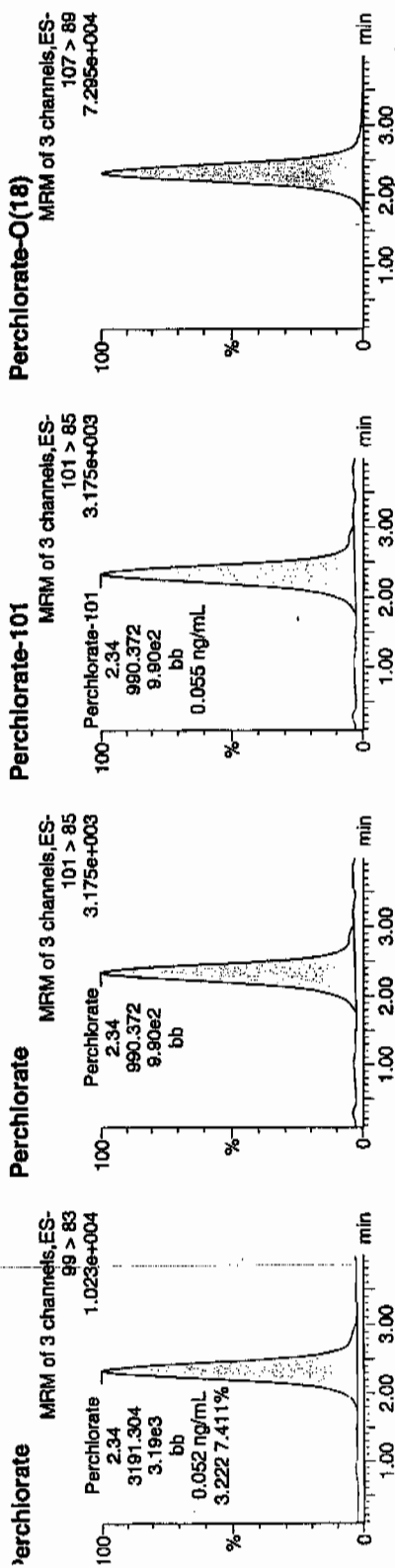
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Sample Name: per0203048a  
Date: 03-Feb-2010  
Time: 20:18:42  
D: WCL100128-07CRI  
File: 1:2,B

*Pass  
and  
02-05-10*



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
VCL100128-07CRI	99 > 83	2.34	3191.304	3191.304	bb			0.0523	104.60	4.60	933.184	3.22
VCL100128-07CRI	101 > 85	2.34	990.372	990.372	bb			0.0553	110.55	10.55	170.540	
VCL100128-07CRI	107 > 89	2.32	23254.930	23254.930	bb			0.4603	92.07	-7.93	1049.9...	

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

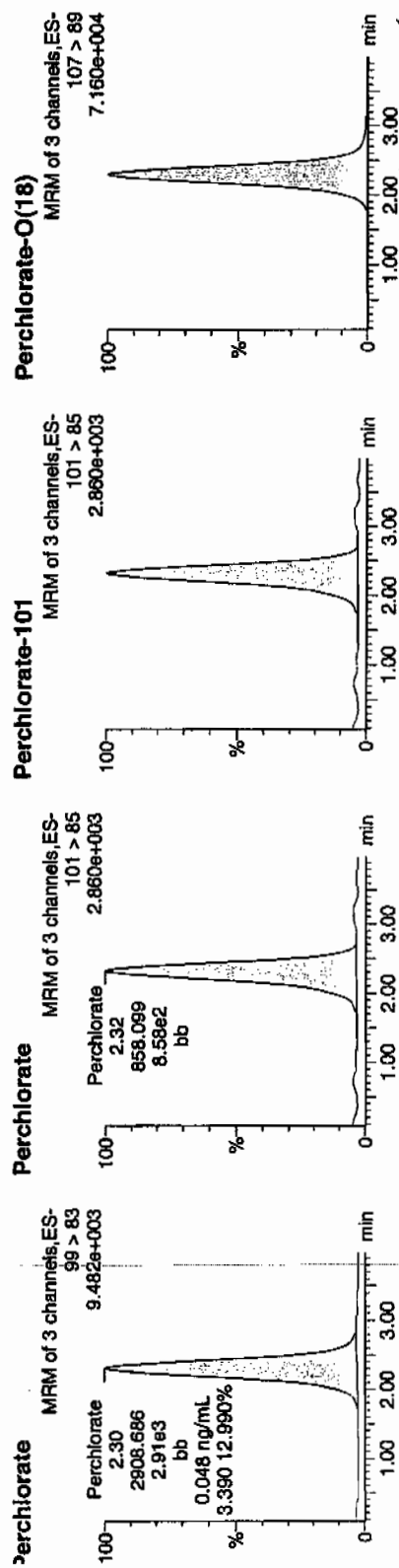
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Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203060a  
Date: 03-Feb-2010  
Time: 21:43:31  
D: WCL100128-07CRI  
/lal: 1:2,B

PWS

CW  
02-05-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
	Perchlorate	99 > 83	2.30	2908.886	2908.886	bb			0.0477	95.34	-4.66	193.142	3.39
	Perchlorate-101	101 > 85	2.32	858.099	858.099	bb			0.0479	95.78	-4.22	257.614	
	Perchlorate-O(18)	107 > 89	2.29	22818.682	22818.682	bb			0.4517	90.34	-9.66	9792.1...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203071a

Date: 03-Feb-2010

Time: 23:01:21

D: WCL100128-07CRI

Vial: 1:2, B

Per  
02-05-10

Perchlorate

MRM of 3 channels, ES-

99 > 83

9.539e+003

min

1.00 2.00 3.00

100

Perchlorate

2.28

2887.321

2.89e3

bb

0.047 ng/mL

3.485 16.167%

%

1.00 2.00 3.00

min

Perchlorate

MRM of 3 channels, ES-

101 > 85

2.873e+003

min

1.00 2.00 3.00

100

Perchlorate

2.27

828.497

8.28e2

bb

%

1.00 2.00 3.00

min

Perchlorate-101

MRM of 3 channels, ES-

101 > 85

2.873e+003

min

1.00 2.00 3.00

100

%

1.00 2.00 3.00

min

Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89

6.743e+004

min

1.00 2.00 3.00

100

%

1.00 2.00 3.00

min

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	2.28	2887.321	2887.321	bb			0.0473	94.64	-5.36	340.205	3.49
WCL100128-07CRI	Perchlorate-101	101 > 85	2.27	828.497	828.497	bb			0.0462	92.48	-7.52	215.395	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.27	21434.201	21434.201	bb			0.4243	84.86	-15.14	4050.2...	

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

# QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

MB

Date Received: 03-FEB-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 1202024344

Date Filtered: 03-FEB-10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	03-FEB-10 19:22	per0203040a
	Perchlorate Isotope Ratio						1	03-FEB-10 19:22	per0203040a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	03-FEB-10 19:22	per0203040a
	Perchlorate-O(18)			4.71	ug/kg		1	03-FEB-10 19:22	per0203040a

<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: Charles W. Wilson

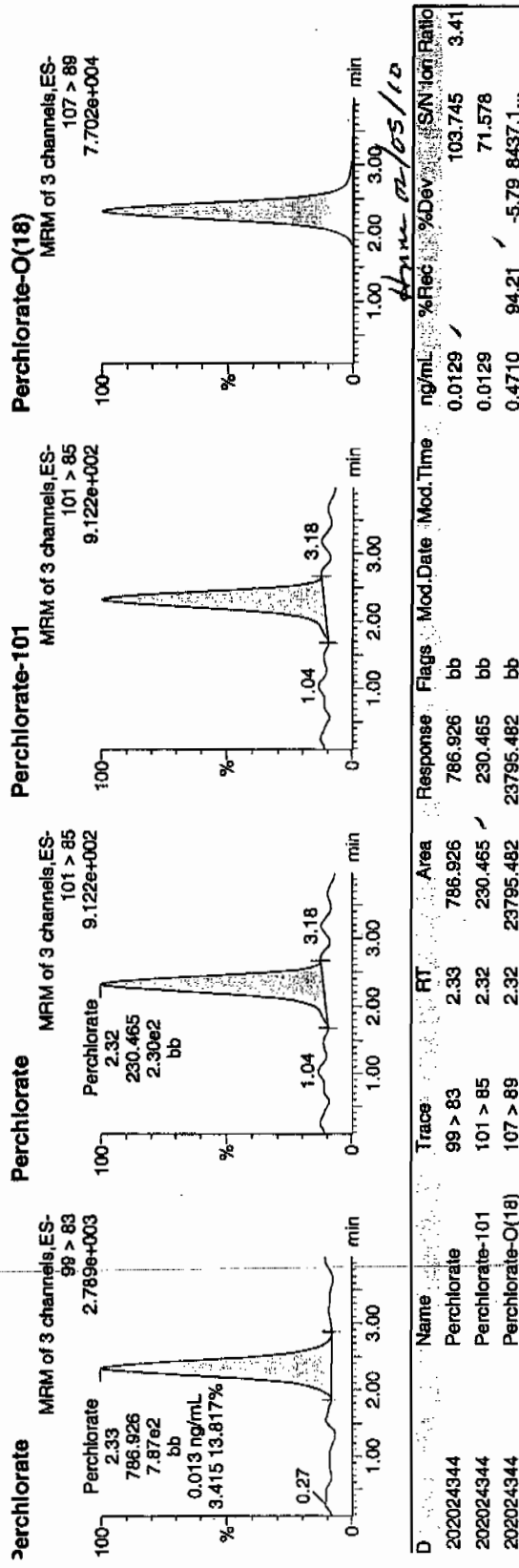
Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203040a  
Date: 03-Feb-2010  
Time: 19:22:06  
D: 1202024344  
/lat: 2:1,A

02-05-10

11420-19452021 5020 MB/11



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN:Ion:Ratio
202024344	Perchlorate	99 > 83	2.33	786.926	786.926	bb			0.0129	✓		103.745 3.41
202024344	Perchlorate-101	101 > 85	2.32	230.465	230.465	bb			0.0129			71.578
202024344	Perchlorate-O(18)	107 > 89	2.32	23795.482	23795.482	bb			0.4710	94.21	-5.79	8437.1...

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: 945200  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. LCS  
 Date Received: 03-FEB-10  
 GEL Job No (SDG): 10-1306  
 GEL Sample ID: 1202024345  
 Date Filtered: 03-FEB-10  
 Injection Volume (uL): 20  
 %Solids: 100

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.03	ug/kg		1	03-FEB-10 19:29	per0203041a
	Perchlorate Isotope Ratio			3.39			1	03-FEB-10 19:29	per0203041a
14797-73-0	Perchlorate-101	.5	2	2.04	ug/kg		1	03-FEB-10 19:29	per0203041a
	Perchlorate-O(18)			4.91	ug/kg		1	03-FEB-10 19:29	per0203041a

<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.

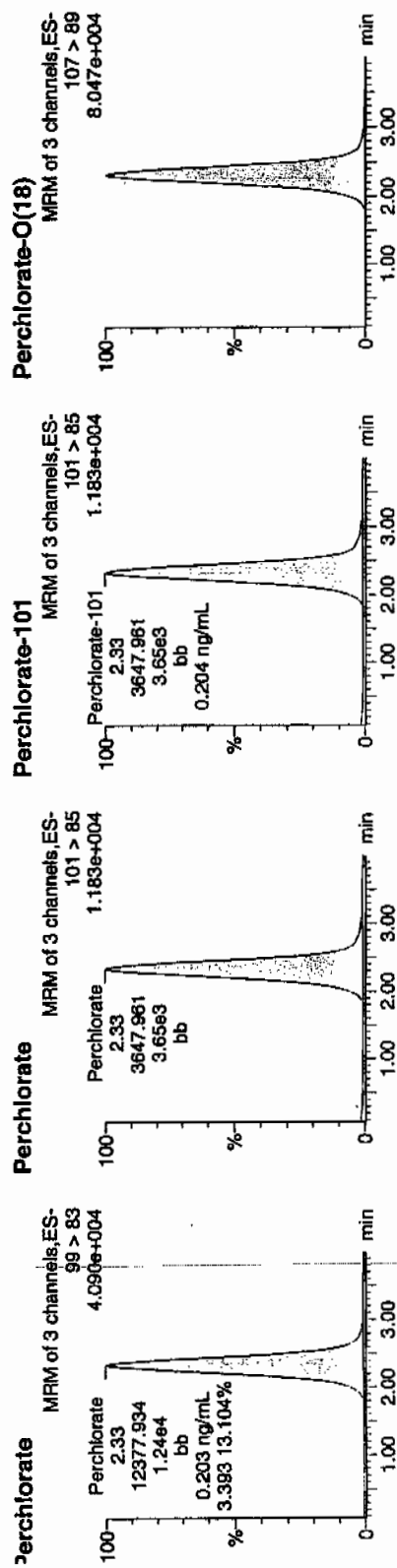
\*Concentration =

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

**Quantify Sample Report** MassLynx 4.0 SP4  
 The GEL Group, LLC Analyst: Charles W. Wilson  
 Dataset: C:\MassLynx\Perchlorate.PRO\per020310a.qld  
 Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
 Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203041a  
 Date: 03-Feb-2010  
 Time: 19:29:18  
 D: 1202024345  
 /lal: 2:1,B

02-05-10  
 12377.934 | 3647.961 | 3647.961 | 3647.961



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
202024345	Perchlorate	99 > 83	2.33	12377.934	12377.934	bb			0.2029	101.43	1.43	1771.3...	3.39
202024345	Perchlorate-101	101 > 85	2.33	3647.961	3647.961	bb			0.2036	101.80	1.80	749.345	
202024345	Perchlorate-O(18)	107 > 89	2.32	24782.068	24782.068	bb			0.4906	98.12	-1.88	3356.4...	

12377.934  
 61017.5 = 0.20285  
 H/mc 02/05/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7165MS

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 1202024346

Date Filtered: 03-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	.621	2.48	2.82	ug/kg		1	03-FEB-10 19:50	per0203044a
	Perchlorate Isotope Ratio			3.21			1	03-FEB-10 19:50	per0203044a
14797-73-0	Perchlorate-101	.621	2.48	2.99	ug/kg		1	03-FEB-10 19:50	per0203044a
	Perchlorate-O(18)			6.50	ug/kg		1	03-FEB-10 19:50	per0203044a

<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\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203044a

Date: 03-Feb-2010

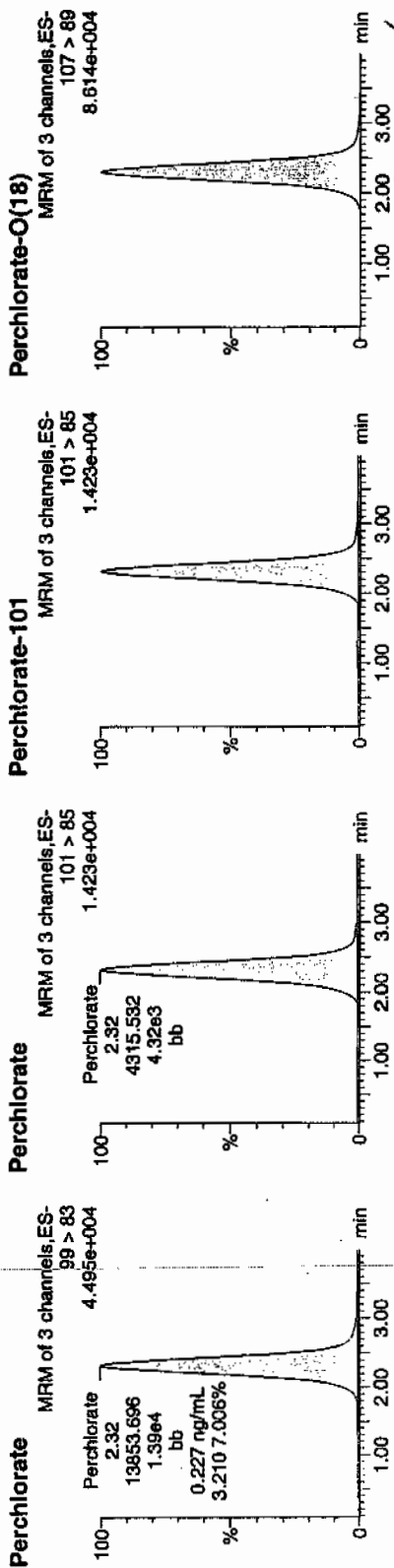
Time: 19:50:23

ID: 1202024346

Vial: 2:1,E

MS-10

LANC | 945202 | 5020 | MS | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202024346	Perchlorate	99 > 83	2.32	13853.696	13853.696	bb			0.2270	113.52	13.52	2174.7...	3.21
1202024346	Perchlorate-101	101 > 85	2.32	4315.532	4315.532	bb			0.2409	120.43	20.43	802.997	
1202024346	Perchlorate-O(18)	107 > 89	2.30	26458.799	26458.799	bb			0.5238	104.75	4.75	4405.9...	

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: 945200

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7165MSD

Date Received: 20-JAN-10

GEL Job No (SDG): 10-1306

GEL Sample ID: 1202024347

Date Filtered: 03-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	.621	2.48	2.70	ug/kg		1	03-FEB-10 19:57	per0203045a
	Perchlorate Isotope Ratio			3.07			1	03-FEB-10 19:57	per0203045a
14797-73-0	Perchlorate-101	.621	2.48	2.99	ug/kg		1	03-FEB-10 19:57	per0203045a
	Perchlorate-O(18)			6.51	ug/kg		1	03-FEB-10 19:57	per0203045a

<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\per020310a.qld

Last Altered: Thursday, February 04, 2010 8:59:04 AM Eastern Standard Time  
Printed: Thursday, February 04, 2010 9:08:57 AM Eastern Standard Time

Name: per0203045a

Date: 03-Feb-2010

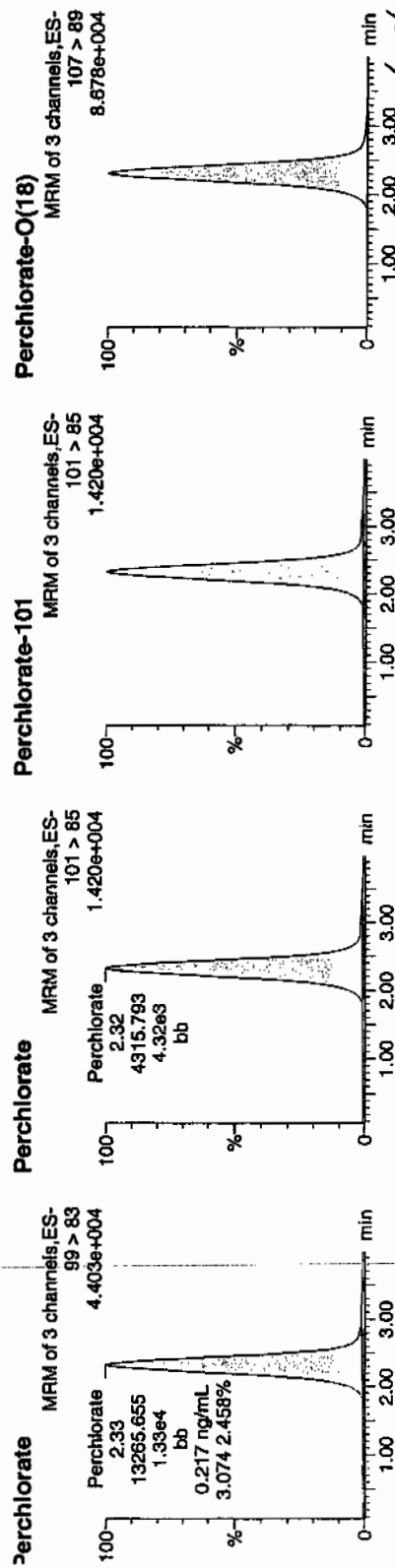
Time: 19:57:23

D: 1202024347

Vial: 2:1,F

WJ  
02-08-10

LANC | 945202 | SCLD | MSD | 11



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
202024347	Perchlorate	99 > 83	2.33	13265.655	13265.655	bb			0.2174	108.70	8.70	1165.5...	3.07
202024347	Perchlorate-101	101 > 85	2.32	4315.793	4315.793	bb			0.2409	120.43	20.43	759.973	
202024347	Perchlorate-O(18)	107 > 89	2.32	26509.885	26509.885	bb			0.5248	104.96	4.96	2854.1...	

# 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: 945200  
 Analyst: Charles Wilson  
 Method: SW846/6850 Modified  
 Verified by: \_\_\_\_\_  
 Lab SOP: GL-OA-E-067 REV# 6  
 Instrument: MicroMass Quattro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202024344 MB	03-FEB-2010 14:09:42	2	20	10
1202024345 LCS	03-FEB-2010 14:09:42	2	20	10
245147001	03-FEB-2010 14:09:42	2	20	10
1202024346 MS (245147001)	03-FEB-2010 14:09:42	2	20	10
1202024347 MSD (245147001)	03-FEB-2010 14:09:42	2	20	10
245147002	03-FEB-2010 14:09:42	2	20	10
245147003	03-FEB-2010 14:09:42	2	20	10
245147004	03-FEB-2010 14:09:42	2	20	10
245147005	03-FEB-2010 14:09:42	2	20	10
245147006	03-FEB-2010 14:09:42	2	20	10
245147007	03-FEB-2010 14:09:42	2	20	10
245147008	03-FEB-2010 14:09:42	2	20	10
245147009	03-FEB-2010 14:09:42	2	20	10
245147010	03-FEB-2010 14:09:42	2	20	10
245147011	03-FEB-2010 14:09:42	2	20	10
245147012	03-FEB-2010 14:09:42	2	20	10
245147013	03-FEB-2010 14:09:42	2	20	10
245147014	03-FEB-2010 14:09:42	2	20	10
245147015	03-FEB-2010 14:09:42	2	20	10
245147016	03-FEB-2010 14:09:42	2	20	10
245147017	03-FEB-2010 14:10:10	2	20	10
245147018	03-FEB-2010 14:10:11	2	20	10
1202024348 ICS	03-FEB-2010 14:10:12	2	20	10

Type	Sample ID	Description	Serial Number	Spike Amt	Units	Comments
ICS	1202024348	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL	Desalting cartridges used: 090406-1-Ba & 091130-1-H
LCS	1202024345	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL	
MS	1202024346	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL	
MSD	1202024347	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LOMSMS#2

Date: 02/03/10

Extr. Injection Volume: 20uL

Sequence Number: per020310a

Initial Calibration Date: 02/03/10

Method: EPA 6850-Modified

Int. Std.: UCL100122-01

Mobile Phase Lot#: 1254342, 1246195

Standard-Samp Reagent Lot#: 1233976

Reviewed BY: *AMU*

Date: 02/06/10

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

Alt Check Std. ID: WCL100128-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0203001a	IPB001	CWW	2/3/2010 14:46			1		USE	B
per0203002a	IPB001	CWW	2/3/2010 14:53			1		USE	B
per0203003a	WCLICAL-01	CWW	2/3/2010 15:00			1		USE	I
per0203004a	WCLICAL-02	CWW	2/3/2010 15:07			1		USE	I
per0203005a	WCLICAL-03	CWW	2/3/2010 15:14			1		USE	I
per0203006a	WCLICAL-04	CWW	2/3/2010 15:21			1		USE	I
per0203007a	WCLICAL-05	CWW	2/3/2010 15:28			1		USE	I
per0203008a	IPB002	CWW	2/3/2010 15:35			1		USE	B
per0203009a	WCLICV	CWW	2/3/2010 15:42			1		USE	C
per0203010a	IPB003	CWW	2/3/2010 15:49			1		USE	B
per0203011a	WCLCRI	CWW	2/3/2010 15:56			1		USE	C
per0203012a	1202024359	CWW	2/3/2010 16:03	945210	10-1328	1	LANL	USE	S
per0203013a	1202024360	CWW	2/3/2010 16:10	945210	10-1328	1	LANL	USE	S
per0203014a	1202024363	CWW	2/3/2010 16:17	945210	10-1328	1	LANL	USE	S
per0203015a	245119001	CWW	2/3/2010 16:25	945210	10-1328	1	LANL	USE	S
per0203016a	1202024361	CWW	2/3/2010 16:32	945210	10-1328	1	LANL	USE	S
per0203017a	1202024362	CWW	2/3/2010 16:39	945210	10-1328	1	LANL	USE	S
per0203018a	245119002	CWW	2/3/2010 16:46	945210	10-1328	1	LANL	USE	S
per0203019a	245119003	CWW	2/3/2010 16:53	945210	10-1328	1	LANL	USE	S
per0203020a	245119004	CWW	2/3/2010 17:00	945210	10-1328	1	LANL	USE	S
per0203021a	245119005	CWW	2/3/2010 17:07	945210	10-1328	1	LANL	USE	S
per0203022a	WCLCCV	CWW	2/3/2010 17:14			1		USE	C
per0203023a	IPB004	CWW	2/3/2010 17:21			1		USE	B
per0203024a	WCLCRI	CWW	2/3/2010 17:29			1		USE	C
per0203025a	245119006	CWW	2/3/2010 17:36	945210	10-1328	1	LANL	USE	S
per0203026a	245119007	CWW	2/3/2010 17:43	945210	10-1328	1	LANL	USE	S
per0203027a	245119008	CWW	2/3/2010 17:50	945210	10-1328	1	LANL	USE	S
per0203028a	245119009	CWW	2/3/2010 17:57	945210	10-1328	1	LANL	USE	S
per0203029a	245119010	CWW	2/3/2010 18:04	945210	10-1328	1	LANL	USE	S

per0203030a	245119011	CWW	2/3/2010 18:11	945210	10-1328	1	LANL	USE	S
per0203031a	245119012	CWW	2/3/2010 18:18	945210	10-1328	1	LANL	USE	S
per0203032a	245119013	CWW	2/3/2010 18:25	945210	10-1328	1	LANL	USE	S
per0203033a	245119014	CWW	2/3/2010 18:32	945210	10-1328	1	LANL	USE	S
per0203034a	245119015	CWW	2/3/2010 18:39	945210	10-1328	1	LANL	USE	S
per0203035a	WCLCCV	CWW	2/3/2010 18:46			1		USE	C
per0203036a	IPB005	CWW	2/3/2010 18:53			1		USE	B
per0203037a	WCLCRI	CWW	2/3/2010 19:00			1		USE	C
per0203038a	245119016	CWW	2/3/2010 19:08	945210	10-1328	1	LANL	USE	S
per0203039a	IPB006	CWW	2/3/2010 19:15			1		USE	B
per0203040a	1202024344	CWW	2/3/2010 19:22	945202	10-1306	1	LANL	USE	S
per0203041a	1202024345	CWW	2/3/2010 19:29	945202	10-1306	1	LANL	USE	S
per0203042a	1202024348	CWW	2/3/2010 19:36	945202	10-1306	1	LANL	USE	S
per0203043a	245147001	CWW	2/3/2010 19:43	945202	10-1306	1	LANL	USE	S
per0203044a	1202024346	CWW	2/3/2010 19:50	945202	10-1306	1	LANL	USE	S
per0203045a	1202024347	CWW	2/3/2010 19:57	945202	10-1306	1	LANL	USE	S
per0203046a	WCLCCV	CWW	2/3/2010 20:04			1		USE	C
per0203047a	IPB007	CWW	2/3/2010 20:11			1		USE	B
per0203048a	WCLCRI	CWW	2/3/2010 20:18			1		USE	C
per0203049a	245147002	CWW	2/3/2010 20:25	945202	10-1306	1	LANL	USE	S
per0203050a	245147003	CWW	2/3/2010 20:32	945202	10-1306	1	LANL	USE	S
per0203051a	245147004	CWW	2/3/2010 20:39	945202	10-1306	1	LANL	USE	S
per0203052a	245147005	CWW	2/3/2010 20:47	945202	10-1306	1	LANL	USE	S
per0203053a	245147006	CWW	2/3/2010 20:54	945202	10-1306	1	LANL	USE	S
per0203054a	245147007	CWW	2/3/2010 21:01	945202	10-1306	1	LANL	USE	S
per0203055a	245147008	CWW	2/3/2010 21:08	945202	10-1306	1	LANL	USE	S
per0203056a	245147009	CWW	2/3/2010 21:15	945202	10-1306	1	LANL	USE	S
per0203057a	245147010	CWW	2/3/2010 21:22	945202	10-1306	1	LANL	USE	S
per0203058a	WCLCCV	CWW	2/3/2010 21:29			1		USE	C
per0203059a	IPB008	CWW	2/3/2010 21:36			1		USE	B
per0203060a	WCLCRI	CWW	2/3/2010 21:43			1		USE	C
per0203061a	245147011	CWW	2/3/2010 21:50	945202	10-1306	1	LANL	USE	S
per0203062a	245147012	CWW	2/3/2010 21:57	945202	10-1306	1	LANL	USE	S
per0203063a	245147013	CWW	2/3/2010 22:04	945202	10-1306	1	LANL	USE	S
per0203064a	245147014	CWW	2/3/2010 22:11	945202	10-1306	1	LANL	USE	S
per0203065a	245147015	CWW	2/3/2010 22:18	945202	10-1306	1	LANL	USE	S
per0203066a	245147016	CWW	2/3/2010 22:25	945202	10-1306	1	LANL	USE	S

per0203067a	245147017	CWW	2/3/2010 22:32	945202	10-1306	1	LANL	USE	S
per0203068a	245147018	CWW	2/3/2010 22:40	945202	10-1306	1	LANL	USE	S
per0203069a	WCLCCV	CWW	2/3/2010 22:47			1		USE	C
per0203070a	IPB009	CWW	2/3/2010 22:54			1		USE	B
per0203071a	WCLCRI	CWW	2/3/2010 23:01			1		USE	C

## Isotope Ratio Criteria

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

2.31-3.85

## Tune Criteria

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

# **Metals Analysis**

# Case Narrative

**Metals Fractional Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1306**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
245147001	RE15-10-7165
245147002	RE15-10-7171
245147003	RE15-10-7170
245147004	RE15-10-7164
245147005	RE15-10-7167
245147006	RE15-10-7169
245147007	RE15-10-7168
245147008	RE15-10-7166
245147009	RE15-10-7177
245147010	RE15-10-7181
245147011	RE15-10-7178
245147012	RE15-10-7182
245147013	RE15-10-7183
245147014	RE15-10-7184
245147015	RE15-10-7185
245147016	RE15-10-7176
245147017	RE15-10-7180
245147018	RE15-10-7179
1202021583	Method Blank (MB) ICP
1202021588	Laboratory Control Sample (LCS)
1202021585	245147001(RE15-10-7165L) Serial Dilution (SD)
1202021584	245147001(RE15-10-7165D) Sample Duplicate (DUP)
1202021586	245147001(RE15-10-7165S) Matrix Spike (MS)
1202021587	245147001(RE15-10-7165SD) Matrix Spike Duplicate (MSD)
1202021595	Method Blank (MB) ICP-MS
1202043958	Method Blank (MB) ICP-MS
1202021600	Laboratory Control Sample (LCS)
1202043959	Laboratory Control Sample (LCS)
1202021597	245147001(RE15-10-7165L) Serial Dilution (SD)

1202043962	245147001(RE15-10-7165L) Serial Dilution (SD)
1202021596	245147001(RE15-10-7165D) Sample Duplicate (DUP)
1202043960	245147001(RE15-10-7165D) Sample Duplicate (DUP)
1202021598	245147001(RE15-10-7165S) Matrix Spike (MS)
1202043961	245147001(RE15-10-7165S) Matrix Spike (MS)
1202021599	245147001(RE15-10-7165SD) Matrix Spike Duplicate (MSD)
1202043963	245147001(RE15-10-7165SD) Matrix Spike Duplicate (MSD)
1202025236	Method Blank (MB) CVAA
1202025237	Laboratory Control Sample (LCS)
1202025240	245147001(RE15-10-7165L) Serial Dilution (SD)
1202025238	245147001(RE15-10-7165D) Sample Duplicate (DUP)
1202025239	245147001(RE15-10-7165S) Matrix Spike (MS)
1202025241	245147001(RE15-10-7165SD) Matrix Spike Duplicate (MSD)

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

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

<b>Analytical Batch:</b>	944117, 944120, 953457 and 945594
<b>Prep Batch :</b>	944116, 944119, 953455 and 945593
<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 - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

### **Calibration Information**

#### **Instrument Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

#### **CRDL Requirements**

All CRDL standard(s) met the referenced advisory control limits.

#### **ICSA/ICSAB Statement**

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

#### **Continuing Calibration Blank (CCB) Requirements**

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

#### **Continuing Calibration Verification (CCV) Requirements**

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

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

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

The MBs analyzed with this SDG met the acceptance criteria.

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

**Quality Control (QC) Sample Statement**

The following samples were selected as the quality control (QC) samples for this SDG: 245147001 (RE15-10-7165)-ICP, ICP-MS, ICP-MS and CVAA.

**Matrix Spike (MS) Recovery Statement**

The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of magnesium potassium, 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 exceptions of antimony, magnesium, potassium, selenium and nickel as indicated by the "N" qualifiers.

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

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

**Duplicate Relative Percent Difference (RPD) Statement**

The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

**Serial Dilution % Difference Statement**

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

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

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

**Sample Dilutions**

Dilutions are performed to minimize matrix interferences resulting from elevated mineral

element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

#### **Preparation Information**

The samples in this SDG were prepared exactly according to the cited SOP.

#### **Miscellaneous Information**

##### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

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

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG: DER ID 789167, 790980 and 791524. A copy 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: Nick Cole A. Elmore Date: 2.16.10

# **Sample Data Summary**

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147001

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7165

LEVEL: Low

DATE RECEIVED 20-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	13100000	ug/Kg		8050	23700	23700	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-36-0	Antimony	1110	ug/Kg	JN	391	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-38-2	Arsenic	2.06	mg/kg		0.244	1.22	1.22	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-39-3	Barium	174000	ug/Kg		118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-41-7	Beryllium	0.983	mg/kg		0.022	0.11	0.11	2	MS	BAJ	02/16/10 11:38	100216-3	953457
7440-43-9	Cadmium	592	ug/Kg	U	118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-70-2	Calcium	2690000	ug/Kg		9480	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-47-3	Chromium	12800	ug/Kg		178	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-48-4	Cobalt	5790	ug/Kg		178	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-50-8	Copper	7670	ug/Kg		355	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-89-6	Iron	16300000	ug/Kg		9480	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-92-1	Lead	16300	ug/Kg		296	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-95-4	Magnesium	2090000	ug/Kg	N	10100	35500	35500	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-96-5	Manganese	362000	ug/Kg		237	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117
7439-97-6	Mercury	16.1	ug/kg		4.67	13.7	13.7	1	AV	JXL1	02/03/10 11:25	020310S2-4	945594
7440-02-0	Nickel	9.58	mg/kg	N	0.11	0.439	0.439	2	MS	BAJ	02/16/10 11:38	100216-3	953457
7440-09-7	Potassium	1780000	ug/Kg	N	7580	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7782-49-2	Selenium	1.22	mg/kg	UN	0.611	1.22	1.22	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-22-4	Silver	1900	ug/Kg		118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-23-5	Sodium	231000	ug/Kg		8290	29600	29600	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-28-0	Thallium	0.277	mg/kg		0.0733	0.244	0.244	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-61-1	Uranium	0.977	mg/kg		0.0161	0.0489	0.0489	2	MS	SKJ	02/10/10 18:14	100210-2	944120
7440-62-2	Vanadium	27900	ug/Kg		118	592	592	1	P	HSC	02/08/10 14:57	020810A-1	944117
7440-66-6	Zinc	33200	ug/Kg		391	1180	1180	1	P	HSC	02/08/10 14:57	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.524	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.508	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.542	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.565	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147002

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7171

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 92.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9080000	ug/Kg		7060	20800	20800	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-36-0	Antimony	830	ug/Kg	JN	343	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-38-2	Arsenic	1.68	mg/kg		0.214	1.07	1.07	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-39-3	Barium	114000	ug/Kg		104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-41-7	Beryllium	0.740	mg/kg		0.0189	0.0943	0.0943	2	MS	BAJ	02/16/10 11:49	100216-3	953457
7440-43-9	Cadmium	519	ug/Kg	U	104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-70-2	Calcium	1790000	ug/Kg		8310	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-47-3	Chromium	12600	ug/Kg		156	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-48-4	Cobalt	6390	ug/Kg		156	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-50-8	Copper	7090	ug/Kg		312	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-89-6	Iron	16200000	ug/Kg		8310	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-92-1	Lead	12100	ug/Kg		260	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-95-4	Magnesium	1680000	ug/Kg	N	8830	31200	31200	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-96-5	Manganese	352000	ug/Kg		208	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117
7439-97-6	Mercury	12.1	ug/kg		4.03	11.9	11.9	1	AV	JXL1	02/03/10 11:33	020310S2-4	945594
7440-02-0	Nickel	5.79	mg/kg	N	0.0943	0.377	0.377	2	MS	BAJ	02/16/10 11:49	100216-3	953457
7440-09-7	Potassium	1860000	ug/Kg	N	6650	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7782-49-2	Selenium	1.07	mg/kg	UN	0.535	1.07	1.07	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-22-4	Silver	397	ug/Kg	J	104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-23-5	Sodium	260000	ug/Kg		7270	26000	26000	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-28-0	Thallium	0.179	mg/kg	J	0.0642	0.214	0.214	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-61-1	Uranium	1.02	mg/kg		0.0141	0.0428	0.0428	2	MS	SKJ	02/10/10 18:57	100210-2	944120
7440-62-2	Vanadium	31200	ug/Kg		104	519	519	1	P	HSC	02/08/10 15:16	020810A-1	944117
7440-66-6	Zinc	43500	ug/Kg		343	1040	1040	1	P	HSC	02/08/10 15:16	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.522	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.507	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.549	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.575	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147003

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7170

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 77

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9280000	ug/Kg		8700	25600	25600	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-36-0	Antimony	836	ug/Kg	JN	422	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-38-2	Arsenic	1.66	mg/kg		0.253	1.26	1.26	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-39-3	Barium	169000	ug/Kg		128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-41-7	Beryllium	0.785	mg/kg		0.024	0.12	0.12	2	MS	BAJ	02/16/10 11:56	100216-3	953457
7440-43-9	Cadmium	640	ug/Kg	U	128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-70-2	Calcium	2980000	ug/Kg		10200	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-47-3	Chromium	10500	ug/Kg		192	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-48-4	Cobalt	4890	ug/Kg		192	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-50-8	Copper	11900	ug/Kg		384	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-89-6	Iron	11700000	ug/Kg		10200	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-92-1	Lead	22400	ug/Kg		320	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-95-4	Magnesium	1810000	ug/Kg	N	10900	38400	38400	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-96-5	Manganese	370000	ug/Kg		256	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117
7439-97-6	Mercury	38.2	ug/kg		4.92	14.5	14.5	1	AV	JXLI	02/03/10 11:35	020310S2-4	945594
7440-02-0	Nickel	7.21	mg/kg	N	0.12	0.48	0.48	2	MS	BAJ	02/16/10 11:56	100216-3	953457
7440-09-7	Potassium	1860000	ug/Kg	N	8190	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7782-49-2	Selenium	1.26	mg/kg	UN	0.632	1.26	1.26	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-22-4	Silver	373	ug/Kg	J	128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-23-5	Sodium	84500	ug/Kg		8950	32000	32000	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-28-0	Thallium	0.165	mg/kg	J	0.0758	0.253	0.253	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-61-1	Uranium	11	mg/kg		0.0167	0.0506	0.0506	2	MS	SKJ	02/10/10 19:03	100210-2	944120
7440-62-2	Vanadium	24700	ug/Kg		128	640	640	1	P	HSC	02/08/10 15:27	020810A-1	944117
7440-66-6	Zinc	32300	ug/Kg		422	1280	1280	1	P	HSC	02/08/10 15:27	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.509	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.515	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.54	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.543	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147004

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7164

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 82

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10300000	ug/Kg		8120	23900	23900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-36-0	Antimony	1200	ug/Kg	N	394	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-38-2	Arsenic	1.9	mg/kg		0.241	1.2	1.2	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-39-3	Barium	145000	ug/Kg		119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-41-7	Beryllium	0.851	mg/kg		0.0237	0.118	0.118	2	MS	BAJ	02/16/10 11:58	100216-3	953457
7440-43-9	Cadmium	597	ug/Kg	U	119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-70-2	Calcium	5800000	ug/Kg		9550	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-47-3	Chromium	13600	ug/Kg		179	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-48-4	Cobalt	5010	ug/Kg		179	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-50-8	Copper	7250	ug/Kg		358	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-89-6	Iron	14100000	ug/Kg		9550	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-92-1	Lead	14500	ug/Kg		299	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-95-4	Magnesium	1780000	ug/Kg	N	10100	35800	35800	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-96-5	Manganese	361000	ug/Kg		239	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117
7439-97-6	Mercury	17.2	ug/kg		4.81	14.1	14.1	1	AV	JXL1	02/03/10 11:40	020310S2-4	945594
7440-02-0	Nickel	8.1	mg/kg	N	0.118	0.474	0.474	2	MS	BAJ	02/16/10 11:58	100216-3	953457
7440-09-7	Potassium	1430000	ug/Kg	N	7640	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7782-49-2	Selenium	1.2	mg/kg	UN	0.602	1.2	1.2	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-22-4	Silver	7630	ug/Kg		119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-23-5	Sodium	242000	ug/Kg		8360	29900	29900	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-28-0	Thallium	0.197	mg/kg	J	0.0722	0.241	0.241	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-61-1	Uranium	0.947	mg/kg		0.0159	0.0481	0.0481	2	MS	SKJ	02/10/10 19:09	100210-2	944120
7440-62-2	Vanadium	24300	ug/Kg		119	597	597	1	P	HSC	02/08/10 15:30	020810A-1	944117
7440-66-6	Zinc	44200	ug/Kg		394	1190	1190	1	P	HSC	02/08/10 15:30	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.509	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.505	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.516	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.513	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147005

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7167

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 78

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11100000	ug/Kg		8720	25600	25600	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-36-0	Antimony	963	ug/Kg	JN	423	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-38-2	Arsenic	2.12	mg/kg		0.249	1.24	1.24	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-39-3	Barium	163000	ug/Kg		128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-41-7	Beryllium	0.835	mg/kg		0.025	0.125	0.125	2	MS	BAJ	02/16/10 12:00	100216-3	953457
7440-43-9	Cadmium	641	ug/Kg	U	128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-70-2	Calcium	2340000	ug/Kg		10300	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-47-3	Chromium	12400	ug/Kg		192	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-48-4	Cobalt	6690	ug/Kg		192	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-50-8	Copper	8140	ug/Kg		385	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-89-6	Iron	14800000	ug/Kg		10300	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-92-1	Lead	13400	ug/Kg		320	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-95-4	Magnesium	2110000	ug/Kg	N	10900	38500	38500	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-96-5	Manganese	380000	ug/Kg		256	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117
7439-97-6	Mercury	10.3	ug/kg	J	4.68	13.8	13.8	1	AV	JXL1	02/03/10 11:41	020310S2-4	945594
7440-02-0	Nickel	7.37	mg/kg	N	0.125	0.501	0.501	2	MS	BAJ	02/16/10 12:00	100216-3	953457
7440-09-7	Potassium	1970000	ug/Kg	N	8200	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7782-49-2	Selenium	1.24	mg/kg	UN	0.622	1.24	1.24	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-22-4	Silver	641	ug/Kg	U	128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-23-5	Sodium	96700	ug/Kg		8970	32000	32000	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-28-0	Thallium	0.204	mg/kg	J	0.0747	0.249	0.249	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-61-1	Uranium	0.898	mg/kg		0.0164	0.0498	0.0498	2	MS	SKJ	02/10/10 19:15	100210-2	944120
7440-62-2	Vanadium	28400	ug/Kg		128	641	641	1	P	HSC	02/08/10 15:34	020810A-1	944117
7440-66-6	Zinc	30800	ug/Kg		423	1280	1280	1	P	HSC	02/08/10 15:34	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.5	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.515	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.559	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.512	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147006

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7169

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 91.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10700000	ug/Kg		7440	21900	21900	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-36-0	Antimony	817	ug/Kg	JN	361	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-38-2	Arsenic	1.7	mg/kg		0.21	1.05	1.05	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-39-3	Barium	193000	ug/Kg		109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-41-7	Beryllium	0.932	mg/kg		0.0212	0.106	0.106	2	MS	BAJ	02/16/10 12:03	100216-3	953457
7440-43-9	Cadmium	547	ug/Kg	U	109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-70-2	Calcium	2130000	ug/Kg		8750	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-47-3	Chromium	11200	ug/Kg		164	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-48-4	Cobalt	8240	ug/Kg		164	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-50-8	Copper	7200	ug/Kg		328	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-89-6	Iron	14200000	ug/Kg		8750	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-92-1	Lead	14700	ug/Kg		273	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-95-4	Magnesium	1830000	ug/Kg	N	9300	32800	32800	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-96-5	Manganese	574000	ug/Kg		219	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117
7439-97-6	Mercury	12.8	ug/kg		4.22	12.4	12.4	1	AV	JXL1	02/03/10 11:43	020310S2-4	945594
7440-02-0	Nickel	6.66	mg/kg	N	0.106	0.425	0.425	2	MS	BAJ	02/16/10 12:03	100216-3	953457
7440-09-7	Potassium	1870000	ug/Kg	N	7000	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7782-49-2	Selenium	1.05	mg/kg	UN	0.525	1.05	1.05	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-22-4	Silver	547	ug/Kg	U	109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-23-5	Sodium	102000	ug/Kg		7660	27300	27300	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-28-0	Thallium	0.186	mg/kg	J	0.063	0.21	0.21	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-61-1	Uranium	0.974	mg/kg		0.0139	0.042	0.042	2	MS	SKJ	02/10/10 19:22	100210-2	944120
7440-62-2	Vanadium	30800	ug/Kg		109	547	547	1	P	HSC	02/08/10 15:38	020810A-1	944117
7440-66-6	Zinc	27700	ug/Kg		361	1090	1090	1	P	HSC	02/08/10 15:38	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.502	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.523	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.531	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.517	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147007

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7168

LEVEL: Low

DATE RECEIVED 20-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	10700000	ug/Kg		8380	24600	24600	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-36-0	Antimony	987	ug/Kg	JN	407	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-38-2	Arsenic	1.52	mg/kg		0.241	1.2	1.2	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-39-3	Barium	195000	ug/Kg		123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-41-7	Beryllium	0.998	mg/kg		0.023	0.115	0.115	2	MS	BAJ	02/16/10 12:05	100216-3	953457
7440-43-9	Cadmium	616	ug/Kg	U	123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-70-2	Calcium	3690000	ug/Kg		9860	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-47-3	Chromium	13100	ug/Kg		185	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-48-4	Cobalt	4870	ug/Kg		185	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-50-8	Copper	8280	ug/Kg		370	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-89-6	Iron	11600000	ug/Kg		9860	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-92-1	Lead	15900	ug/Kg		308	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-95-4	Magnesium	1820000	ug/Kg	N	10500	37000	37000	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-96-5	Manganese	393000	ug/Kg		246	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117
7439-97-6	Mercury	26.1	ug/kg		5	14.7	14.7	1	AV	JXL1	02/03/10 11:45	020310S2-4	945594
7440-02-0	Nickel	7.46	mg/kg	N	0.115	0.46	0.46	2	MS	BAJ	02/16/10 12:05	100216-3	953457
7440-09-7	Potassium	1800000	ug/Kg	N	7890	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7782-49-2	Selenium	1.2	mg/kg	UN	0.602	1.2	1.2	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-22-4	Silver	616	ug/Kg	U	123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-23-5	Sodium	84800	ug/Kg		8630	30800	30800	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-28-0	Thallium	0.153	mg/kg	J	0.0722	0.241	0.241	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-61-1	Uranium	4.86	mg/kg		0.0159	0.0481	0.0481	2	MS	SKJ	02/10/10 19:28	100210-2	944120
7440-62-2	Vanadium	25200	ug/Kg		123	616	616	1	P	HSC	02/08/10 15:42	020810A-1	944117
7440-66-6	Zinc	30600	ug/Kg		407	1230	1230	1	P	HSC	02/08/10 15:42	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.502	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.514	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.505	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.538	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147008

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7166

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 68

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11900000	ug/Kg		9720	28600	28600	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-36-0	Antimony	1570	ug/Kg	N	472	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-38-2	Arsenic	1.65	mg/kg		0.272	1.36	1.36	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-39-3	Barium	180000	ug/Kg		143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-41-7	Beryllium	0.829	mg/kg		0.0269	0.134	0.134	2	MS	BAJ	02/16/10 12:07	100216-3	953457
7440-43-9	Cadmium	715	ug/Kg	U	143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-70-2	Calcium	3110000	ug/Kg		11400	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-47-3	Chromium	29600	ug/Kg		214	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-48-4	Cobalt	4150	ug/Kg		214	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-50-8	Copper	6470	ug/Kg		429	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-89-6	Iron	11200000	ug/Kg		11400	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-92-1	Lead	13200	ug/Kg		357	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-95-4	Magnesium	1650000	ug/Kg	N	12200	42900	42900	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-96-5	Manganese	292000	ug/Kg		286	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117
7439-97-6	Mercury	15.9	ug/kg		5.08	14.9	14.9	1	AV	JXL1	02/03/10 11:46	020310S2-4	945594
7440-02-0	Nickel	8.81	mg/kg	N	0.134	0.537	0.537	2	MS	BAJ	02/16/10 12:07	100216-3	953457
7440-09-7	Potassium	2060000	ug/Kg	N	9150	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7782-49-2	Selenium	1.36	mg/kg	UN	0.68	1.36	1.36	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-22-4	Silver	715	ug/Kg	U	143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-23-5	Sodium	169000	ug/Kg		10000	35700	35700	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-28-0	Thallium	0.177	mg/kg	J	0.0816	0.272	0.272	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-61-1	Uranium	2.81	mg/kg		0.018	0.0544	0.0544	2	MS	SKJ	02/10/10 19:46	100210-2	944120
7440-62-2	Vanadium	21600	ug/Kg		143	715	715	1	P	HSC	02/08/10 15:45	020810A-1	944117
7440-66-6	Zinc	27600	ug/Kg		472	1430	1430	1	P	HSC	02/08/10 15:45	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.511	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.537	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.587	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.544	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147009

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7177

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 92.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9050000	ug/Kg		7320	21500	21500	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-36-0	Antimony	1120	ug/Kg	N	355	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-38-2	Arsenic	1.15	mg/kg		0.211	1.06	1.06	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-39-3	Barium	177000	ug/Kg		108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-41-7	Beryllium	0.771	mg/kg		0.0214	0.107	0.107	2	MS	BAJ	02/16/10 12:09	100216-3	953457
7440-43-9	Cadmium	538	ug/Kg	U	108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-70-2	Calcium	2350000	ug/Kg		8610	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-47-3	Chromium	10100	ug/Kg		161	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-48-4	Cobalt	3840	ug/Kg		161	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-50-8	Copper	5450	ug/Kg		323	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-89-6	Iron	10800000	ug/Kg		8610	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-92-1	Lead	10100	ug/Kg		269	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-95-4	Magnesium	1530000	ug/Kg	N	9150	32300	32300	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-96-5	Manganese	201000	ug/Kg		215	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117
7439-97-6	Mercury	18.3	ug/kg		4.15	12.2	12.2	1	AV	JXL1	02/03/10 11:48	020310S2-4	945594
7440-02-0	Nickel	6.8	mg/kg	N	0.107	0.428	0.428	2	MS	BAJ	02/16/10 12:09	100216-3	953457
7440-09-7	Potassium	1730000	ug/Kg	N	6890	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7782-49-2	Selenium	1.06	mg/kg	UN	0.529	1.06	1.06	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-22-4	Silver	538	ug/Kg	U	108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-23-5	Sodium	138000	ug/Kg		7530	26900	26900	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-28-0	Thallium	0.189	mg/kg	J	0.0634	0.211	0.211	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-61-1	Uranium	1.21	mg/kg		0.014	0.0423	0.0423	2	MS	SKJ	02/10/10 19:52	100210-2	944120
7440-62-2	Vanadium	23800	ug/Kg		108	538	538	1	P	HSC	02/08/10 15:49	020810A-1	944117
7440-66-6	Zinc	22300	ug/Kg		355	1080	1080	1	P	HSC	02/08/10 15:49	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.502	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.511	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.531	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.505	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147010

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7181

LEVEL: Low

DATE RECEIVED 20-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	8220000	ug/Kg		7660	22500	22500	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-36-0	Antimony	799	ug/Kg	JN	372	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-38-2	Arsenic	1.85	mg/kg		0.228	1.14	1.14	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-39-3	Barium	124000	ug/Kg		113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-41-7	Beryllium	0.737	mg/kg		0.0221	0.11	0.11	2	MS	BAJ	02/16/10 12:12	100216-3	953457
7440-43-9	Cadmium	563	ug/Kg	U	113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-70-2	Calcium	2020000	ug/Kg		9020	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-47-3	Chromium	21600	ug/Kg		169	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-48-4	Cobalt	5210	ug/Kg		169	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-50-8	Copper	9580	ug/Kg		338	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-89-6	Iron	13000000	ug/Kg		9020	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-92-1	Lead	11800	ug/Kg		282	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-95-4	Magnesium	1720000	ug/Kg	N	9580	33800	33800	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-96-5	Manganese	313000	ug/Kg		225	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117
7439-97-6	Mercury	22	ug/kg		4.59	13.5	13.5	1	AV	JXL1	02/03/10 11:50	020310S2-4	945594
7440-02-0	Nickel	7.98	mg/kg	N	0.11	0.441	0.441	2	MS	BAJ	02/16/10 12:12	100216-3	953457
7440-09-7	Potassium	1390000	ug/Kg	N	7210	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7782-49-2	Selenium	1.14	mg/kg	UN	0.569	1.14	1.14	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-22-4	Silver	563	ug/Kg	U	113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-23-5	Sodium	150000	ug/Kg		7890	28200	28200	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-28-0	Thallium	0.150	mg/kg	J	0.0683	0.228	0.228	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-61-1	Uranium	0.581	mg/kg		0.015	0.0455	0.0455	2	MS	SKJ	02/10/10 19:59	100210-2	944120
7440-62-2	Vanadium	27100	ug/Kg		113	563	563	1	P	HSC	02/08/10 15:53	020810A-1	944117
7440-66-6	Zinc	29800	ug/Kg		372	1130	1130	1	P	HSC	02/08/10 15:53	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.505	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.5	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.506	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.516	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147011

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7178

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8000000	ug/Kg		8340	24500	24500	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-36-0	Antimony	737	ug/Kg	JN	405	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-38-2	Arsenic	1.74	mg/kg		0.25	1.25	1.25	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-39-3	Barium	138000	ug/Kg		123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-41-7	Beryllium	0.749	mg/kg		0.0245	0.122	0.122	2	MS	BAJ	02/16/10 12:18	100216-3	953457
7440-43-9	Cadmium	613	ug/Kg	U	123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-70-2	Calcium	2240000	ug/Kg		9810	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-47-3	Chromium	12200	ug/Kg		184	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-48-4	Cobalt	4740	ug/Kg		184	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-50-8	Copper	10400	ug/Kg		368	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-89-6	Iron	10900000	ug/Kg		9810	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-92-1	Lead	22900	ug/Kg		306	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-95-4	Magnesium	1540000	ug/Kg	N	10400	36800	36800	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-96-5	Manganese	317000	ug/Kg		245	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117
7439-97-6	Mercury	119	ug/kg		4.86	14.3	14.3	1	AV	JXL1	02/03/10 11:51	020310S2-4	945594
7440-02-0	Nickel	7.96	mg/kg	N	0.122	0.489	0.489	2	MS	BAJ	02/16/10 12:18	100216-3	953457
7440-09-7	Potassium	1560000	ug/Kg	N	7850	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7782-49-2	Selenium	1.25	mg/kg	UN	0.626	1.25	1.25	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-22-4	Silver	613	ug/Kg	U	123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-23-5	Sodium	75600	ug/Kg		8580	30600	30600	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-28-0	Thallium	0.145	mg/kg	J	0.0751	0.25	0.25	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-61-1	Uranium	3.47	mg/kg		0.0165	0.0501	0.0501	2	MS	SKJ	02/10/10 20:05	100210-2	944120
7440-62-2	Vanadium	23300	ug/Kg		123	613	613	1	P	HSC	02/08/10 16:03	020810A-1	944117
7440-66-6	Zinc	44700	ug/Kg		405	1230	1230	1	P	HSC	02/08/10 16:03	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt/vol	Units	Final wt/vol	Units	Date	Analyst
944117	944116	SW846 3050B	0.519	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.508	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.534	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.52	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147012

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7182

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 82

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9000000	ug/Kg		7930	23300	23300	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-36-0	Antimony	1170	ug/Kg	UN	385	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-38-2	Arsenic	1.59	mg/kg		0.24	1.2	1.2	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-39-3	Barium	144000	ug/Kg		117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-41-7	Beryllium	0.868	mg/kg		0.0218	0.109	0.109	2	MS	BAJ	02/16/10 12:20	100216-3	953457
7440-43-9	Cadmium	583	ug/Kg	U	117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-70-2	Calcium	2470000	ug/Kg		9330	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-47-3	Chromium	7310	ug/Kg		175	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-48-4	Cobalt	3890	ug/Kg		175	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-50-8	Copper	6040	ug/Kg		350	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-89-6	Iron	9210000	ug/Kg		9330	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-92-1	Lead	12100	ug/Kg		291	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-95-4	Magnesium	1460000	ug/Kg	N	9910	35000	35000	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-96-5	Manganese	197000	ug/Kg		233	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117
7439-97-6	Mercury	16.9	ug/kg		4.83	14.2	14.2	1	AV	JXL1	02/03/10 11:53	020310S2-4	945594
7440-02-0	Nickel	6.63	mg/kg	N	0.109	0.436	0.436	2	MS	BAJ	02/16/10 12:20	100216-3	953457
7440-09-7	Potassium	1900000	ug/Kg	N	7460	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7782-49-2	Selenium	1.2	mg/kg	UN	0.599	1.2	1.2	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-22-4	Silver	583	ug/Kg	U	117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-23-5	Sodium	133000	ug/Kg		8160	29100	29100	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-28-0	Thallium	0.147	mg/kg	J	0.0719	0.24	0.24	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-61-1	Uranium	2.38	mg/kg		0.0158	0.0479	0.0479	2	MS	SKJ	02/10/10 20:11	100210-2	944120
7440-62-2	Vanadium	17500	ug/Kg		117	583	583	1	P	HSC	02/08/10 16:07	020810A-1	944117
7440-66-6	Zinc	24400	ug/Kg		385	1170	1170	1	P	HSC	02/08/10 16:07	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.523	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.509	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.515	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.559	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147013

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7183

LEVEL: Low

DATE RECEIVED 20-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	6140000	ug/Kg		7640	22500	22500	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-36-0	Antimony	1180	ug/Kg	N	371	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-38-2	Arsenic	1.44	mg/kg		0.225	1.13	1.13	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-39-3	Barium	89400	ug/Kg		112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-41-7	Beryllium	0.573	mg/kg		0.0223	0.111	0.111	2	MS	BAJ	02/16/10 12:23	100216-3	953457
7440-43-9	Cadmium	562	ug/Kg	U	112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-70-2	Calcium	1640000	ug/Kg		8990	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-47-3	Chromium	21100	ug/Kg		169	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-48-4	Cobalt	3190	ug/Kg		169	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-50-8	Copper	3870	ug/Kg		337	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-89-6	Iron	11500000	ug/Kg		8990	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-92-1	Lead	8560	ug/Kg		281	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-95-4	Magnesium	1140000	ug/Kg	N	9550	33700	33700	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-96-5	Manganese	270000	ug/Kg		225	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117
7439-97-6	Mercury	8.85	ug/kg	J	4.59	13.5	13.5	1	AV	JXL1	02/03/10 11:55	020310S2-4	945594
7440-02-0	Nickel	5.55	mg/kg	N	0.111	0.446	0.446	2	MS	BAJ	02/16/10 12:23	100216-3	953457
7440-09-7	Potassium	1420000	ug/Kg	N	7190	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7782-49-2	Selenium	1.13	mg/kg	UN	0.563	1.13	1.13	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-22-4	Silver	562	ug/Kg	U	112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-23-5	Sodium	144000	ug/Kg		7870	28100	28100	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-28-0	Thallium	0.0926	mg/kg	J	0.0676	0.225	0.225	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-61-1	Uranium	1.06	mg/kg		0.0149	0.045	0.045	2	MS	SKJ	02/10/10 20:17	100210-2	944120
7440-62-2	Vanadium	16400	ug/Kg		112	562	562	1	P	HSC	02/08/10 16:11	020810A-1	944117
7440-66-6	Zinc	44600	ug/Kg		371	1120	1120	1	P	HSC	02/08/10 16:11	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.507	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.506	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.506	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.511	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147014

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7184

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 83

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9860000	ug/Kg		8080	23800	23800	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-36-0	Antimony	575	ug/Kg	JN	392	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-38-2	Arsenic	2.03	mg/kg		0.234	1.17	1.17	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-39-3	Barium	150000	ug/Kg		119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-41-7	Beryllium	0.922	mg/kg		0.0238	0.119	0.119	2	MS	BAJ	02/16/10 12:25	100216-3	953457
7440-43-9	Cadmium	594	ug/Kg	U	119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-70-2	Calcium	2380000	ug/Kg		9510	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-47-3	Chromium	15300	ug/Kg		178	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-48-4	Cobalt	5060	ug/Kg		178	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-50-8	Copper	9780	ug/Kg		357	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-89-6	Iron	12200000	ug/Kg		9510	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-92-1	Lead	30500	ug/Kg		297	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-95-4	Magnesium	1740000	ug/Kg	N	10100	35700	35700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-96-5	Manganese	340000	ug/Kg		238	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117
7439-97-6	Mercury	185	ug/kg		4.23	12.4	12.4	1	AV	JXL1	02/03/10 12:00	020310S2-4	945594
7440-02-0	Nickel	8.75	mg/kg	N	0.119	0.475	0.475	2	MS	BAJ	02/16/10 12:25	100216-3	953457
7440-09-7	Potassium	1560000	ug/Kg	N	7610	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7782-49-2	Selenium	1.17	mg/kg	UN	0.586	1.17	1.17	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-22-4	Silver	594	ug/Kg	U	119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-23-5	Sodium	83000	ug/Kg		8320	29700	29700	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-28-0	Thallium	0.174	mg/kg	J	0.0703	0.234	0.234	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-61-1	Uranium	2.8	mg/kg		0.0155	0.0469	0.0469	2	MS	SKJ	02/10/10 20:36	100210-2	944120
7440-62-2	Vanadium	25500	ug/Kg		119	594	594	1	P	HSC	02/08/10 16:14	020810A-1	944117
7440-66-6	Zinc	36200	ug/Kg		392	1190	1190	1	P	HSC	02/08/10 16:14	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.508	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.515	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.583	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.508	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147015

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7185

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 90.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10400000	ug/Kg		7420	21800	21800	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-36-0	Antimony	967	ug/Kg	JN	360	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-38-2	Arsenic	1.54	mg/kg		0.218	1.09	1.09	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-39-3	Barium	132000	ug/Kg		109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-41-7	Beryllium	0.854	mg/kg		0.0208	0.104	0.104	2	MS	BAJ	02/16/10 12:27	100216-3	953457
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-70-2	Calcium	2050000	ug/Kg		8730	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-47-3	Chromium	15500	ug/Kg		164	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-48-4	Cobalt	5170	ug/Kg		164	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-50-8	Copper	6780	ug/Kg		327	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-89-6	Iron	14100000	ug/Kg		8730	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-92-1	Lead	13600	ug/Kg		273	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-95-4	Magnesium	1720000	ug/Kg	N	9270	32700	32700	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-96-5	Manganese	297000	ug/Kg		218	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117
7439-97-6	Mercury	36.6	ug/kg		4.21	12.4	12.4	1	AV	JXL1	02/03/10 12:02	020310S2-4	945594
7440-02-0	Nickel	7.19	mg/kg	N	0.104	0.415	0.415	2	MS	BAJ	02/16/10 12:27	100216-3	953457
7440-09-7	Potassium	1810000	ug/Kg	N	6980	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7782-49-2	Selenium	1.09	mg/kg	UN	0.544	1.09	1.09	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-22-4	Silver	545	ug/Kg	U	109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-23-5	Sodium	123000	ug/Kg		7640	27300	27300	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-28-0	Thallium	0.165	mg/kg	J	0.0653	0.218	0.218	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-61-1	Uranium	1.4	mg/kg		0.0144	0.0435	0.0435	2	MS	SKJ	02/10/10 20:42	100210-2	944120
7440-62-2	Vanadium	30200	ug/Kg		109	545	545	1	P	HSC	02/08/10 16:18	020810A-1	944117
7440-66-6	Zinc	30600	ug/Kg		360	1090	1090	1	P	HSC	02/08/10 16:18	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.506	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.507	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.535	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.532	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147016

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7176

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 95.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8280000	ug/Kg		7130	21000	21000	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-36-0	Antimony	1000	ug/Kg	JN	346	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-38-2	Arsenic	1.48	mg/kg		0.194	0.969	0.969	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-39-3	Barium	127000	ug/Kg		105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-41-7	Beryllium	0.750	mg/kg		0.0205	0.103	0.103	2	MS	BAJ	02/16/10 12:29	100216-3	953457
7440-43-9	Cadmium	524	ug/Kg	U	105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-70-2	Calcium	2160000	ug/Kg		8390	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-47-3	Chromium	8140	ug/Kg		157	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-48-4	Cobalt	3590	ug/Kg		157	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-50-8	Copper	6100	ug/Kg		315	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-89-6	Iron	9630000	ug/Kg		8390	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-92-1	Lead	13300	ug/Kg		262	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-95-4	Magnesium	1490000	ug/Kg	N	8920	31500	31500	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-96-5	Manganese	203000	ug/Kg		210	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117
7439-97-6	Mercury	15	ug/kg		3.93	11.5	11.5	1	AV	JXL1	02/03/10 12:03	020310S2-4	945594
7440-02-0	Nickel	6.21	mg/kg	N	0.103	0.411	0.411	2	MS	BAJ	02/16/10 12:29	100216-3	953457
7440-09-7	Potassium	1880000	ug/Kg	N	6710	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7782-49-2	Selenium	0.969	mg/kg	UN	0.485	0.969	0.969	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-22-4	Silver	524	ug/Kg	U	105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-23-5	Sodium	131000	ug/Kg		7340	26200	26200	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-28-0	Thallium	0.134	mg/kg	J	0.0582	0.194	0.194	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-61-1	Uranium	3.28	mg/kg		0.0128	0.0388	0.0388	2	MS	SKJ	02/10/10 20:48	100210-2	944120
7440-62-2	Vanadium	20300	ug/Kg		105	524	524	1	P	HSC	02/08/10 16:22	020810A-1	944117
7440-66-6	Zinc	28500	ug/Kg		346	1050	1050	1	P	HSC	02/08/10 16:22	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.5	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.541	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.545	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.511	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147017

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7180

LEVEL: Low

DATE RECEIVED 20-JAN-10

MATRIX: SOIL

%SOLIDS: 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8390000	ug/Kg		7830	23000	23000	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-36-0	Antimony	912	ug/Kg	JN	380	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-38-2	Arsenic	1.52	mg/kg		0.227	1.13	1.13	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-39-3	Barium	119000	ug/Kg		115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-41-7	Beryllium	0.659	mg/kg		0.0222	0.111	0.111	2	MS	BAJ	02/16/10 12:32	100216-3	953457
7440-43-9	Cadmium	576	ug/Kg	U	115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-70-2	Calcium	1970000	ug/Kg		9220	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-47-3	Chromium	10600	ug/Kg		173	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-48-4	Cobalt	3770	ug/Kg		173	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-50-8	Copper	6520	ug/Kg		346	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-89-6	Iron	10600000	ug/Kg		9220	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-92-1	Lead	11600	ug/Kg		288	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-95-4	Magnesium	1340000	ug/Kg	N	9790	34600	34600	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-96-5	Manganese	147000	ug/Kg		230	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117
7439-97-6	Mercury	27.7	ug/kg		4.1	12.1	12.1	1	AV	JXLI	02/03/10 12:05	020310S2-4	945594
7440-02-0	Nickel	5.85	mg/kg	N	0.111	0.444	0.444	2	MS	BAJ	02/16/10 12:32	100216-3	953457
7440-09-7	Potassium	1270000	ug/Kg	N	7370	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7782-49-2	Selenium	1.13	mg/kg	UN	0.567	1.13	1.13	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-22-4	Silver	576	ug/Kg	U	115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-23-5	Sodium	120000	ug/Kg		8060	28800	28800	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-28-0	Thallium	0.118	mg/kg	J	0.068	0.227	0.227	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-61-1	Uranium	0.624	mg/kg		0.015	0.0454	0.0454	2	MS	SKJ	02/10/10 20:54	100210-2	944120
7440-62-2	Vanadium	24100	ug/Kg		115	576	576	1	P	HSC	02/08/10 16:25	020810A-1	944117
7440-66-6	Zinc	23900	ug/Kg		380	1150	1150	1	P	HSC	02/08/10 16:25	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.501	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.509	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.574	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.52	g	50	mL	02/15/10	BXA1

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

SDG No: 10-1306

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245147018

BASIS: Dry Weight

DATE COLLECTED 13-JAN-10

CLIENT ID: RE15-10-7179

LEVEL: Low

DATE RECEIVED 20-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	8950000	ug/Kg		8160	24000	24000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-36-0	Antimony	848	ug/Kg	JN	396	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-38-2	Arsenic	1.58	mg/kg		0.249	1.24	1.24	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-39-3	Barium	139000	ug/Kg		120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-41-7	Beryllium	0.804	mg/kg		0.025	0.125	0.125	2	MS	BAJ	02/16/10 12:34	100216-3	953457
7440-43-9	Cadmium	600	ug/Kg	U	120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-70-2	Calcium	2080000	ug/Kg		9600	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-47-3	Chromium	23200	ug/Kg		180	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-48-4	Cobalt	4890	ug/Kg		180	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-50-8	Copper	12400	ug/Kg		360	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-89-6	Iron	11700000	ug/Kg		9600	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-92-1	Lead	22800	ug/Kg		300	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-95-4	Magnesium	1590000	ug/Kg	N	10200	36000	36000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-96-5	Manganese	307000	ug/Kg		240	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117
7439-97-6	Mercury	171	ug/kg		4.76	14	14	1	AV	JXL1	02/03/10 12:07	020310S2-4	945594
7440-02-0	Nickel	9.37	mg/kg	N	0.125	0.5	0.5	2	MS	BAJ	02/16/10 12:34	100216-3	953457
7440-09-7	Potassium	1540000	ug/Kg	N	7680	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7782-49-2	Selenium	1.24	mg/kg	UN	0.622	1.24	1.24	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-22-4	Silver	600	ug/Kg	U	120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-23-5	Sodium	94500	ug/Kg		8400	30000	30000	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-28-0	Thallium	0.151	mg/kg	J	0.0747	0.249	0.249	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-61-1	Uranium	3.8	mg/kg		0.0164	0.0498	0.0498	2	MS	SKJ	02/10/10 21:00	100210-2	944120
7440-62-2	Vanadium	25100	ug/Kg		120	600	600	1	P	HSC	02/08/10 16:29	020810A-1	944117
7440-66-6	Zinc	39800	ug/Kg		396	1200	1200	1	P	HSC	02/08/10 16:29	020810A-1	944117

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
944117	944116	SW846 3050B	0.523	g	50	mL	01/27/10	AXG2
944120	944119	SW846 3050B	0.504	g	50	mL	01/28/10	FGA
945594	945593	SW846 7471A Prep	0.538	g	30	mL	02/02/10	TXB3
953457	953455	SW846 3050B	0.502	g	50	mL	02/15/10	BXA1

# **Quality Control Summary**

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Mercury	5.35	ug/L	5	ug/L	106.9	90.0 - 110.0	AV	03-FEB-10 09:31	020310S2-4
	Aluminum	5090	ug/L	5000	ug/L	101.8	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Antimony	513	ug/L	500	ug/L	102.5	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Barium	521	ug/L	500	ug/L	104.1	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Cadmium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Calcium	5020	ug/L	5000	ug/L	100.5	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Chromium	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Cobalt	523	ug/L	500	ug/L	104.5	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Copper	523	ug/L	500	ug/L	104.7	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Iron	5150	ug/L	5000	ug/L	103.1	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Lead	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Manganese	526	ug/L	500	ug/L	105.2	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Potassium	2600	ug/L	2500	ug/L	104.1	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Silver	266	ug/L	250	ug/L	106.4	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Sodium	2540	ug/L	2500	ug/L	101.5	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Vanadium	526	ug/L	500	ug/L	105.2	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Zinc	518	ug/L	500	ug/L	103.6	90.0 - 110.0	P	08-FEB-10 09:41	020810A-1
	Arsenic	48.4	ug/L	50	ug/L	96.7	90.0 - 110.0	MS	10-FEB-10 16:08	100210-2
	Selenium	48	ug/L	50	ug/L	95.9	90.0 - 110.0	MS	10-FEB-10 16:08	100210-2
	Thallium	46.6	ug/L	50	ug/L	93.1	90.0 - 110.0	MS	10-FEB-10 16:08	100210-2
	Uranium	51.8	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	10-FEB-10 16:08	100210-2
	Beryllium	51	ug/L	50	ug/L	102.1	90.0 - 110.0	MS	16-FEB-10 11:12	100216-3
	Nickel	52.6	ug/L	50	ug/L	105.1	90.0 - 110.0	MS	16-FEB-10 11:12	100216-3
CCV01										
	Mercury	5.23	ug/L	5	ug/L	104.6	80.0 - 120.0	AV	03-FEB-10 09:36	020310S2-4
	Aluminum	5160	ug/L	5000	ug/L	103.3	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Antimony	519	ug/L	500	ug/L	103.7	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Barium	515	ug/L	500	ug/L	103	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Cadmium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	5230	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Chromium	516	ug/L	500	ug/L	103.1	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Cobalt	516	ug/L	500	ug/L	103.3	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Copper	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Iron	5280	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Lead	522	ug/L	500	ug/L	104.5	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Magnesium	5290	ug/L	5000	ug/L	105.8	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Manganese	520	ug/L	500	ug/L	104	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Potassium	5400	ug/L	5000	ug/L	108	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Silver	519	ug/L	500	ug/L	103.9	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Sodium	10500	ug/L	10000	ug/L	104.9	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Vanadium	521	ug/L	500	ug/L	104.2	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Zinc	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	08-FEB-10 10:09	020810A-1
	Arsenic	46.9	ug/L	50	ug/L	93.9	90.0 - 110.0	MS	10-FEB-10 16:39	100210-2
	Selenium	47.6	ug/L	50	ug/L	95.2	90.0 - 110.0	MS	10-FEB-10 16:39	100210-2
	Thallium	47.3	ug/L	50	ug/L	94.7	90.0 - 110.0	MS	10-FEB-10 16:39	100210-2
	Uranium	51.1	ug/L	50	ug/L	102.2	90.0 - 110.0	MS	10-FEB-10 16:39	100210-2
	Beryllium	50.8	ug/L	50	ug/L	101.5	90.0 - 110.0	MS	16-FEB-10 11:23	100216-3
	Nickel	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	16-FEB-10 11:23	100216-3
CCV02										
	Mercury	5.28	ug/L	5	ug/L	105.7	80.0 - 120.0	AV	03-FEB-10 09:56	020310S2-4
	Aluminum	5100	ug/L	5000	ug/L	101.9	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Antimony	535	ug/L	500	ug/L	107	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Barium	532	ug/L	500	ug/L	106.5	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Cadmium	535	ug/L	500	ug/L	107	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Calcium	5110	ug/L	5000	ug/L	102.2	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Chromium	534	ug/L	500	ug/L	106.7	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Cobalt	534	ug/L	500	ug/L	106.9	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Copper	534	ug/L	500	ug/L	106.7	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1
	Iron	5260	ug/L	5000	ug/L	105.1	90.0 - 110.0	P	08-FEB-10 10:22	020810A-1

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	537	ug/L	500	ug/L	107.4	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Magnesium	5200	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Manganese	539	ug/L	500	ug/L	107.8	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Potassium	5290	ug/L	5000	ug/L	105.8	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Silver	536	ug/L	500	ug/L	107.1	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Sodium	10300	ug/L	10000	ug/L	102.7	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Vanadium	539	ug/L	500	ug/L	107.8	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Zinc	530	ug/L	500	ug/L	106.1	90.0 – 110.0	P	08-FEB-10 10:22	020810A-1
	Arsenic	47.7	ug/L	50	ug/L	95.4	90.0 – 110.0	MS	10-FEB-10 16:57	100210-2
	Selenium	46.7	ug/L	50	ug/L	93.3	90.0 – 110.0	MS	10-FEB-10 16:57	100210-2
	Thallium	47	ug/L	50	ug/L	94.1	90.0 – 110.0	MS	10-FEB-10 16:57	100210-2
	Uranium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	10-FEB-10 16:57	100210-2
	Beryllium	49	ug/L	50	ug/L	98	90.0 – 110.0	MS	16-FEB-10 11:29	100216-3
	Nickel	49.8	ug/L	50	ug/L	99.6	90.0 – 110.0	MS	16-FEB-10 11:29	100216-3
CCV03										
	Mercury	5.27	ug/L	5	ug/L	105.4	80.0 – 120.0	AV	03-FEB-10 10:16	020310S2-4
	Aluminum	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Antimony	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Barium	529	ug/L	500	ug/L	105.9	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Cadmium	529	ug/L	500	ug/L	105.8	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Calcium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Chromium	531	ug/L	500	ug/L	106.1	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Cobalt	530	ug/L	500	ug/L	105.9	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Copper	536	ug/L	500	ug/L	107.2	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Iron	5240	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Lead	531	ug/L	500	ug/L	106.1	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Manganese	538	ug/L	500	ug/L	107.7	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Potassium	5330	ug/L	5000	ug/L	106.6	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Silver	537	ug/L	500	ug/L	107.4	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Sodium	10400	ug/L	10000	ug/L	103.9	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Vanadium	538	ug/L	500	ug/L	107.6	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Zinc	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	08-FEB-10 10:58	020810A-1
	Arsenic	45.5	ug/L	50	ug/L	91	90.0 – 110.0	MS	10-FEB-10 17:47	100210-2
	Selenium	47.1	ug/L	50	ug/L	94.1	90.0 – 110.0	MS	10-FEB-10 17:47	100210-2
	Thallium	47.2	ug/L	50	ug/L	94.4	90.0 – 110.0	MS	10-FEB-10 17:47	100210-2
	Uranium	50.6	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	10-FEB-10 17:47	100210-2
	Beryllium	46.5	ug/L	50	ug/L	93	90.0 – 110.0	MS	16-FEB-10 11:51	100216-3
	Nickel	48.6	ug/L	50	ug/L	97.2	90.0 – 110.0	MS	16-FEB-10 11:51	100216-3
CCV04	Mercury	5.16	ug/L	5	ug/L	103.1	80.0 – 120.0	AV	03-FEB-10 10:36	020310S2-4
	Aluminum	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Antimony	544	ug/L	500	ug/L	108.9	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Barium	540	ug/L	500	ug/L	108	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Cadmium	541	ug/L	500	ug/L	108.2	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Calcium	5100	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Chromium	541	ug/L	500	ug/L	108.2	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Cobalt	543	ug/L	500	ug/L	108.6	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Copper	545	ug/L	500	ug/L	109.1	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Lead	543	ug/L	500	ug/L	108.5	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Magnesium	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Manganese	535	ug/L	500	ug/L	107	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Potassium	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Silver	548	ug/L	500	ug/L	109.5	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Sodium	10400	ug/L	10000	ug/L	103.5	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Vanadium	548	ug/L	500	ug/L	109.6	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Zinc	539	ug/L	500	ug/L	107.8	90.0 – 110.0	P	08-FEB-10 11:34	020810A-1
	Arsenic	46.1	ug/L	50	ug/L	92.2	90.0 – 110.0	MS	10-FEB-10 18:45	100210-2
	Selenium	46.8	ug/L	50	ug/L	93.6	90.0 – 110.0	MS	10-FEB-10 18:45	100210-2

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Thallium	47.3	ug/L	50	ug/L	94.5	90.0 - 110.0	MS	10-FEB-10 18:45	100210-2
	Uranium	49.7	ug/L	50	ug/L	99.3	90.0 - 110.0	MS	10-FEB-10 18:45	100210-2
	Beryllium	47.9	ug/L	50	ug/L	95.8	90.0 - 110.0	MS	16-FEB-10 12:14	100216-3
	Nickel	49	ug/L	50	ug/L	98	90.0 - 110.0	MS	16-FEB-10 12:14	100216-3
CCV05										
	Mercury	5.17	ug/L	5	ug/L	103.3	80.0 - 120.0	AV	03-FEB-10 10:56	020310S2-4
	Aluminum	4960	ug/L	5000	ug/L	99.3	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Antimony	525	ug/L	500	ug/L	104.9	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Barium	523	ug/L	500	ug/L	104.6	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Cadmium	524	ug/L	500	ug/L	104.8	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Calcium	4970	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Chromium	523	ug/L	500	ug/L	104.5	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Cobalt	524	ug/L	500	ug/L	104.7	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Copper	525	ug/L	500	ug/L	105.1	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Iron	5040	ug/L	5000	ug/L	100.7	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Lead	524	ug/L	500	ug/L	104.8	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Magnesium	5060	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Manganese	528	ug/L	500	ug/L	105.6	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Potassium	5130	ug/L	5000	ug/L	102.5	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Silver	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Sodium	10000	ug/L	10000	ug/L	100.5	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Vanadium	529	ug/L	500	ug/L	105.8	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Zinc	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	08-FEB-10 12:11	020810A-1
	Arsenic	46.6	ug/L	50	ug/L	93.1	90.0 - 110.0	MS	10-FEB-10 19:34	100210-2
	Selenium	46.7	ug/L	50	ug/L	93.4	90.0 - 110.0	MS	10-FEB-10 19:34	100210-2
	Thallium	47.3	ug/L	50	ug/L	94.5	90.0 - 110.0	MS	10-FEB-10 19:34	100210-2
	Uranium	51.1	ug/L	50	ug/L	102.2	90.0 - 110.0	MS	10-FEB-10 19:34	100210-2
	Beryllium	48.5	ug/L	50	ug/L	96.9	90.0 - 110.0	MS	16-FEB-10 12:36	100216-3
	Nickel	50.5	ug/L	50	ug/L	100.9	90.0 - 110.0	MS	16-FEB-10 12:36	100216-3

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CCV06										
	Mercury	5.02	ug/L	5	ug/L	100.5	80.0 - 120.0	AV	03-FEB-10 11:16	020310S2-4
	Aluminum	4740	ug/L	5000	ug/L	94.7	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Barium	510	ug/L	500	ug/L	101.9	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Cadmium	507	ug/L	500	ug/L	101.5	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Calcium	4660	ug/L	5000	ug/L	93.2	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Chromium	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Copper	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Iron	4710	ug/L	5000	ug/L	94.3	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Lead	503	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Magnesium	4780	ug/L	5000	ug/L	95.7	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Manganese	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Potassium	4900	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Silver	516	ug/L	500	ug/L	103.2	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Sodium	9590	ug/L	10000	ug/L	95.9	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Vanadium	516	ug/L	500	ug/L	103.2	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Zinc	507	ug/L	500	ug/L	101.5	90.0 - 110.0	P	08-FEB-10 12:47	020810A-1
	Arsenic	45.4	ug/L	50	ug/L	90.8	90.0 - 110.0	MS	10-FEB-10 20:23	100210-2
	Selenium	46.1	ug/L	50	ug/L	92.1	90.0 - 110.0	MS	10-FEB-10 20:23	100210-2
	Thallium	46.4	ug/L	50	ug/L	92.9	90.0 - 110.0	MS	10-FEB-10 20:23	100210-2
	Uranium	49.9	ug/L	50	ug/L	99.9	90.0 - 110.0	MS	10-FEB-10 20:23	100210-2
CCV07										
	Mercury	5.11	ug/L	5	ug/L	102.2	80.0 - 120.0	AV	03-FEB-10 11:36	020310S2-4
	Aluminum	4720	ug/L	5000	ug/L	94.5	90.0 - 110.0	P	08-FEB-10 13:59	020810A-1
	Antimony	475	ug/L	500	ug/L	95	90.0 - 110.0	P	08-FEB-10 13:59	020810A-1
	Barium	475	ug/L	500	ug/L	95.1	90.0 - 110.0	P	08-FEB-10 13:59	020810A-1
	Cadmium	472	ug/L	500	ug/L	94.5	90.0 - 110.0	P	08-FEB-10 13:59	020810A-1
	Calcium	4610	ug/L	5000	ug/L	92.1	90.0 - 110.0	P	08-FEB-10 13:59	020810A-1
	Chromium	474	ug/L	500	ug/L	94.7	90.0 - 110.0	P	08-FEB-10 13:59	020810A-1

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cobalt	475	ug/L	500	ug/L	94.9	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Copper	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Iron	4670	ug/L	5000	ug/L	93.4	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Lead	472	ug/L	500	ug/L	94.4	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Magnesium	4770	ug/L	5000	ug/L	95.4	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Manganese	467	ug/L	500	ug/L	93.4	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Potassium	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Silver	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Sodium	9640	ug/L	10000	ug/L	96.4	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Vanadium	483	ug/L	500	ug/L	96.5	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Zinc	472	ug/L	500	ug/L	94.5	90.0 – 110.0	P	08-FEB-10 13:59	020810A-1
	Arsenic	45.4	ug/L	50	ug/L	90.8	90.0 – 110.0	MS	10-FEB-10 21:07	100210-2
	Selenium	46.5	ug/L	50	ug/L	93	90.0 – 110.0	MS	10-FEB-10 21:07	100210-2
	Thallium	47	ug/L	50	ug/L	94	90.0 – 110.0	MS	10-FEB-10 21:07	100210-2
	Uranium	50.7	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	10-FEB-10 21:07	100210-2
CCV08										
	Mercury	5.07	ug/L	5	ug/L	101.4	80.0 – 120.0	AV	03-FEB-10 11:57	020310S2-4
	Aluminum	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Antimony	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Barium	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Cadmium	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Chromium	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Cobalt	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Copper	520	ug/L	500	ug/L	104	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Iron	5190	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Lead	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Magnesium	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Manganese	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1
	Potassium	5340	ug/L	5000	ug/L	106.9	90.0 – 110.0	P	08-FEB-10 14:43	020810A-1

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Silver	522	ug/L	500	ug/L	104.4	90.0 - 110.0	P	08-FEB-10 14:43	020810A-1
	Sodium	10500	ug/L	10000	ug/L	105.3	90.0 - 110.0	P	08-FEB-10 14:43	020810A-1
	Vanadium	521	ug/L	500	ug/L	104.2	90.0 - 110.0	P	08-FEB-10 14:43	020810A-1
	Zinc	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	08-FEB-10 14:43	020810A-1
CCV09										
	Mercury	4.88	ug/L	5	ug/L	97.5	80.0 - 120.0	AV	03-FEB-10 12:17	020310S2-4
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Antimony	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Barium	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Cadmium	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Calcium	4710	ug/L	5000	ug/L	94.2	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Cobalt	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Copper	500	ug/L	500	ug/L	100	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Iron	4780	ug/L	5000	ug/L	95.6	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Lead	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Magnesium	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Manganese	484	ug/L	500	ug/L	96.9	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Potassium	5030	ug/L	5000	ug/L	100.6	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Silver	504	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Sodium	9860	ug/L	10000	ug/L	98.7	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Vanadium	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
	Zinc	490	ug/L	500	ug/L	98	90.0 - 110.0	P	08-FEB-10 15:19	020810A-1
CCV10										
	Aluminum	4810	ug/L	5000	ug/L	96.2	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Antimony	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Barium	483	ug/L	500	ug/L	96.6	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Cadmium	479	ug/L	500	ug/L	95.7	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Calcium	4680	ug/L	5000	ug/L	93.6	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Chromium	483	ug/L	500	ug/L	96.5	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cobalt	483	ug/L	500	ug/L	96.7	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Copper	490	ug/L	500	ug/L	98	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Iron	4730	ug/L	5000	ug/L	94.6	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Lead	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Magnesium	4860	ug/L	5000	ug/L	97.1	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Manganese	475	ug/L	500	ug/L	95	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Potassium	5030	ug/L	5000	ug/L	100.5	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Silver	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Sodium	9810	ug/L	10000	ug/L	98.1	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Vanadium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
	Zinc	480	ug/L	500	ug/L	96	90.0 - 110.0	P	08-FEB-10 15:56	020810A-1
CCV11	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Antimony	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Barium	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Cadmium	483	ug/L	500	ug/L	96.6	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Calcium	4780	ug/L	5000	ug/L	95.6	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Chromium	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Iron	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Lead	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Magnesium	4970	ug/L	5000	ug/L	99.4	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Manganese	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Silver	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Sodium	10000	ug/L	10000	ug/L	100	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Vanadium	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1
	Zinc	483	ug/L	500	ug/L	96.6	90.0 - 110.0	P	08-FEB-10 16:33	020810A-1

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.179	ug/L	.2	ug/L	89.5	70.0 – 130.0	AV	03-FEB-10 09:34	020310S2-4
	Thallium	1.1	ug/L	1	ug/L	109.7	70.0 – 130.0	MS	10-FEB-10 16:20	100210-2
	Arsenic	5.39	ug/L	5	ug/L	107.8	70.0 – 130.0	MS	10-FEB-10 16:20	100210-2
	Uranium	.247	ug/L	.2	ug/L	123.5	70.0 – 130.0	MS	10-FEB-10 16:20	100210-2
	Selenium	5.88	ug/L	5	ug/L	117.6	70.0 – 130.0	MS	10-FEB-10 16:20	100210-2
	Nickel	2.25	ug/L	2	ug/L	112.3	70.0 – 130.0	MS	16-FEB-10 11:16	100216-3
	Beryllium	.583	ug/L	.5	ug/L	116.6	70.0 – 130.0	MS	16-FEB-10 11:16	100216-3
PQL01										
	Aluminum	185	ug/L	200	ug/L	92.4	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Iron	102	ug/L	100	ug/L	102.2	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Lead	12.4	ug/L	10	ug/L	123.7	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Magnesium	298	ug/L	300	ug/L	99.4	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Manganese	11.2	ug/L	10	ug/L	111.6	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Potassium	137	ug/L	150	ug/L	91.6	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Silver	5.23	ug/L	5	ug/L	104.5	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Sodium	314	ug/L	300	ug/L	104.7	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Antimony	9.08	ug/L	10	ug/L	90.8	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Barium	5.42	ug/L	5	ug/L	108.3	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Cadmium	5.24	ug/L	5	ug/L	104.8	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Chromium	5.56	ug/L	5	ug/L	111.3	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Cobalt	5.71	ug/L	5	ug/L	114.3	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Copper	12.6	ug/L	10	ug/L	125.7	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Vanadium	5.46	ug/L	5	ug/L	109.2	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Zinc	11.6	ug/L	10	ug/L	116.3	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1
	Calcium	198	ug/L	200	ug/L	98.9	70.0 – 130.0	P	08-FEB-10 09:48	020810A-1

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>ICB01</b>										
	Mercury	-0.08	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 09:32	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 09:44	020810A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 09:44	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 09:44	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 09:44	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 09:44	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 09:44	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 09:44	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 09:44	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 09:44	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 09:44	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 09:44	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 09:44	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 09:44	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 09:44	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 09:44	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 09:44	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 09:44	020810A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 16:14	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 16:14	100210-2
	Thallium	0.365	+/-1	J	0.3	1.0	SOL	MS	10-FEB-10 16:14	100210-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	10-FEB-10 16:14	100210-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 11:14	100216-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 11:14	100216-3
<b>CCB01</b>										
	Mercury	-0.092	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 09:37	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 10:13	020810A-1
	Antimony	6.02	+/-10	J	3.3	10.0	SOL	P	08-FEB-10 10:13	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:13	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:13	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 10:13	020810A-1

SW846

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 10:13	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 10:13	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 10:13	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 10:13	020810A-1
	Lead	3.0	+/-10	J	2.5	10.0	SOL	P	08-FEB-10 10:13	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 10:13	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 10:13	020810A-1
	Potassium	86.89	+/-250	J	64.0	250	SOL	P	08-FEB-10 10:13	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:13	020810A-1
	Sodium	78.53	+/-250	J	70.0	250	SOL	P	08-FEB-10 10:13	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:13	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 10:13	020810A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 16:45	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 16:45	100210-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	10-FEB-10 16:45	100210-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	10-FEB-10 16:45	100210-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 11:25	100216-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 11:25	100216-3
<b>CCB02</b>	Mercury	-0.091	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 09:57	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 10:25	020810A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 10:25	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:25	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:25	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 10:25	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 10:25	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 10:25	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 10:25	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 10:25	020810A-1
	Lead	2.92	+/-10	J	2.5	10.0	SOL	P	08-FEB-10 10:25	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 10:25	020810A-1

SW846

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ng/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 10:25	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 10:25	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:25	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 10:25	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 10:25	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 10:25	020810A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 17:03	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 17:03	100210-2
	Thallium	0.629	+/-1	J	0.3	1.0	SOL	MS	10-FEB-10 17:03	100210-2
	Uranium	0.109	+/-2	J	0.066	0.2	SOL	MS	10-FEB-10 17:03	100210-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 11:31	100216-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 11:31	100216-3
<b>CCB03</b>	Mercury	-0.085	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 10:17	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 11:01	020810A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 11:01	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:01	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:01	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 11:01	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 11:01	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 11:01	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 11:01	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 11:01	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 11:01	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 11:01	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 11:01	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 11:01	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:01	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 11:01	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:01	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 11:01	020810A-1

SW846

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ng/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 17:53	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 17:53	100210-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	10-FEB-10 17:53	100210-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	10-FEB-10 17:53	100210-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 11:54	100216-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 11:54	100216-3
<b>CCB04</b>	Mercury	-0.082	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 10:38	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 11:38	020810A-1
	Antimony	5.93	+/-10	J	3.3	10.0	SOL	P	08-FEB-10 11:38	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:38	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:38	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 11:38	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 11:38	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 11:38	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 11:38	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 11:38	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 11:38	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 11:38	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 11:38	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 11:38	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:38	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 11:38	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 11:38	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 11:38	020810A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 18:51	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 18:51	100210-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	10-FEB-10 18:51	100210-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	10-FEB-10 18:51	100210-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 12:16	100216-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 12:16	100216-3

SW846

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB05	Mercury	-0.08	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 10:58	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 12:14	020810A-1
	Antimony	3.41	+/-10	J	3.3	10.0	SOL	P	08-FEB-10 12:14	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:14	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:14	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 12:14	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 12:14	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 12:14	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 12:14	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 12:14	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 12:14	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 12:14	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 12:14	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 12:14	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:14	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 12:14	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:14	020810A-1
	Zinc	3.79	+/-10	J	3.3	10.0	SOL	P	08-FEB-10 12:14	020810A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 19:40	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 19:40	100210-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	10-FEB-10 19:40	100210-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	10-FEB-10 19:40	100210-2
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	16-FEB-10 12:38	100216-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	16-FEB-10 12:38	100216-3
CCB06	Mercury	-0.082	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 11:18	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 12:51	020810A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 12:51	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:51	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:51	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 12:51	020810A-1

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ng/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 12:51	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 12:51	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 12:51	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 12:51	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 12:51	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 12:51	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 12:51	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 12:51	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:51	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 12:51	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 12:51	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 12:51	020810A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 20:29	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 20:29	100210-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	10-FEB-10 20:29	100210-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	10-FEB-10 20:29	100210-2
<b>CCB07</b>	Mercury	-0.087	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 11:38	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 14:02	020810A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 14:02	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:02	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:02	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 14:02	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 14:02	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 14:02	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 14:02	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 14:02	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 14:02	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 14:02	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 14:02	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 14:02	020810A-1

SW846

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ng/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:02	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 14:02	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:02	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 14:02	020810A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	10-FEB-10 21:13	100210-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	10-FEB-10 21:13	100210-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	10-FEB-10 21:13	100210-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	10-FEB-10 21:13	100210-2
<b>CCB08</b>	Mercury	-0.082	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 11:58	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 14:46	020810A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 14:46	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:46	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:46	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 14:46	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 14:46	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 14:46	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 14:46	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 14:46	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 14:46	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 14:46	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 14:46	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 14:46	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:46	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 14:46	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 14:46	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 14:46	020810A-1
<b>CCB09</b>	Mercury	-0.085	+/-2	J	0.068	0.2	SOL	AV	03-FEB-10 12:18	020310S2-4
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 15:23	020810A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 15:23	020810A-1

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 15:23	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 15:23	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 15:23	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 15:23	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 15:23	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 15:23	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 15:23	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 15:23	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 15:23	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 15:23	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 15:23	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 15:23	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 15:23	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 15:23	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 15:23	020810A-1
CCB10	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 16:00	020810A-1
	Antimony	5.55	+/-10	J	3.3	10.0	SOL	P	08-FEB-10 16:00	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:00	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:00	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 16:00	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 16:00	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 16:00	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 16:00	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 16:00	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 16:00	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 16:00	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 16:00	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 16:00	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:00	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 16:00	020810A-1

SW846

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

SDG No.: 10-1306

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>
CCB11	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:00	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 16:00	020810A-1
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-FEB-10 16:36	020810A-1
	Antimony	4.58	+/-10	J	3.3	10.0	SOL	P	08-FEB-10 16:36	020810A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:36	020810A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:36	020810A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 16:36	020810A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 16:36	020810A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-FEB-10 16:36	020810A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-FEB-10 16:36	020810A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-FEB-10 16:36	020810A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-FEB-10 16:36	020810A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-FEB-10 16:36	020810A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-FEB-10 16:36	020810A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-FEB-10 16:36	020810A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:36	020810A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-FEB-10 16:36	020810A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-FEB-10 16:36	020810A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-FEB-10 16:36	020810A-1

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

SDG NO. 10-1306  
 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>
1202021583	Antimony	330	ug/Kg	+/-1000	U	P	330	1000
	Barium	100	ug/Kg	+/-500	U	P	100	500
	Cadmium	100	ug/Kg	+/-500	U	P	100	500
	Calcium	8000	ug/Kg	+/-25000	U	P	8000	25000
	Chromium	150	ug/Kg	+/-500	U	P	150	500
	Cobalt	150	ug/Kg	+/-500	U	P	150	500
	Copper	300	ug/Kg	+/-1000	U	P	300	1000
	Iron	9850	ug/Kg	+/-25000	J	P	8000	25000
	Lead	281	ug/Kg	+/-1000	J	P	250	1000
	Magnesium	8500	ug/Kg	+/-30000	U	P	8500	30000
	Manganese	200	ug/Kg	+/-1000	U	P	200	1000
	Potassium	6400	ug/Kg	+/-25000	U	P	6400	25000
	Silver	100	ug/Kg	+/-500	U	P	100	500
	Sodium	7000	ug/Kg	+/-25000	U	P	7000	25000
	Aluminum	6800	ug/Kg	+/-20000	U	P	6800	20000
	Vanadium	100	ug/Kg	+/-500	U	P	100	500
	Zinc	330	ug/Kg	+/-1000	U	P	330	1000
1202021595	Arsenic	0.195	mg/kg	+/-0.975	U	MS	0.195	0.975
	Selenium	0.487	mg/kg	+/-0.975	U	MS	0.487	0.975
	Thallium	0.0585	mg/kg	+/-0.195	U	MS	0.0585	0.195
	Uranium	0.0129	mg/kg	+/-0.039	U	MS	0.0129	0.039
1202025236	Mercury	-4.51	ug/kg	+/-11.1	J	AV	3.78	11.1
1202043958	Beryllium	0.02	mg/kg	+/-0.0998	U	MS	0.02	0.0998
	Nickel	0.0998	mg/kg	+/-0.399	U	MS	0.0998	0.399

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

SDG No: 10-1306

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	579000	ug/L	500000	ug/L	116	80.0 - 120.0	08-FEB-10 09:51	020810A-1
	Antimony	-5.58	ug/L					08-FEB-10 09:51	020810A-1
	Barium	8.15	ug/L					08-FEB-10 09:51	020810A-1
	Cadmium	-8.54	ug/L					08-FEB-10 09:51	020810A-1
	Calcium	552000	ug/L	500000	ug/L	110	80.0 - 120.0	08-FEB-10 09:51	020810A-1
	Chromium	-0.754	ug/L					08-FEB-10 09:51	020810A-1
	Cobalt	2.91	ug/L					08-FEB-10 09:51	020810A-1
	Copper	0.778	ug/L					08-FEB-10 09:51	020810A-1
	Iron	213000	ug/L	200000	ug/L	107	80.0 - 120.0	08-FEB-10 09:51	020810A-1
	Lead	15.7	ug/L					08-FEB-10 09:51	020810A-1
	Magnesium	546000	ug/L	500000	ug/L	109	80.0 - 120.0	08-FEB-10 09:51	020810A-1
	Manganese	9.35	ug/L					08-FEB-10 09:51	020810A-1
	Potassium	-43.4	ug/L					08-FEB-10 09:51	020810A-1
	Silver	-6.18	ug/L					08-FEB-10 09:51	020810A-1
	Sodium	36.3	ug/L					08-FEB-10 09:51	020810A-1
	Vanadium	-0.881	ug/L					08-FEB-10 09:51	020810A-1
	Zinc	-11.4	ug/L					08-FEB-10 09:51	020810A-1
<b>ICSAB01</b>									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Antimony	530	ug/L	500	ug/L	106	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Barium	516	ug/L	500	ug/L	103	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Cadmium	473	ug/L	500	ug/L	94.6	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Calcium	497000	ug/L	500000	ug/L	99.5	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Chromium	503	ug/L	500	ug/L	101	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Cobalt	455	ug/L	500	ug/L	90.9	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Copper	553	ug/L	500	ug/L	111	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Iron	193000	ug/L	200000	ug/L	96.5	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Lead	510	ug/L	500	ug/L	102	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Magnesium	496000	ug/L	500000	ug/L	99.2	80.0 - 120.0	08-FEB-10 09:54	020810A-1

## METALS

-4-

## Interference Check Sample

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

ICS:

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<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	497	ug/L	500	ug/L	99.3	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Potassium	5300	ug/L	5000	ug/L	106	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Silver	261	ug/L	250	ug/L	105	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Sodium	5200	ug/L	5000	ug/L	104	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Vanadium	532	ug/L	500	ug/L	106	80.0 - 120.0	08-FEB-10 09:54	020810A-1
	Zinc	477	ug/L	500	ug/L	95.5	80.0 - 120.0	08-FEB-10 09:54	020810A-1

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

SDG No: 10-1306

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	-1.48	ug/L					10-FEB-10 16:27	100210-2
	Selenium	-0.894	ug/L					10-FEB-10 16:27	100210-2
	Thallium	-0.015	ug/L					10-FEB-10 16:27	100210-2
	Uranium	-0.011	ug/L					10-FEB-10 16:27	100210-2
<b>ICSAB01</b>									
	Arsenic	20.6	ug/L	20	ug/L	103	80.0 - 120.0	10-FEB-10 16:33	100210-2
	Selenium	20.7	ug/L	20	ug/L	103	80.0 - 120.0	10-FEB-10 16:33	100210-2
	Thallium	17.5	ug/L	20	ug/L	87.3	80.0 - 120.0	10-FEB-10 16:33	100210-2
	Uranium	20.3	ug/L	20	ug/L	102	80.0 - 120.0	10-FEB-10 16:33	100210-2

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

SDG No: 10-1306

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
<b>ICSA01</b>									
	Beryllium	0.103	ug/L					16-FEB-10 11:18	100216-3
	Nickel	3.53	ug/L					16-FEB-10 11:18	100216-3
<b>ICSAB01</b>									
	Beryllium	18.8	ug/L	20	ug/L	93.8	80.0 - 120.0	16-FEB-10 11:20	100216-3
	Nickel	23.9	ug/L	23.31	ug/L	103	80.0 - 120.0	16-FEB-10 11:20	100216-3

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1306

Client ID: RE15-10-7165S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 81

Sample ID: 245147001

Spike ID: 1202021586

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Chromium	ug/Kg	75-125	80400		12800		59100	114		P
Cobalt	ug/Kg	75-125	65400		5790		59100	101		P
Copper	ug/Kg	75-125	77300		7670		59100	118		P
Iron	ug/Kg		16500000		16300000		591000	41.5	N/A	P
Lead	ug/Kg	75-125	77800		16300		59100	104		P
Magnesium	ug/Kg	75-125	3160000		2090000		591000	180	N	P
Manganese	ug/Kg		363000		362000		59100	2.23	N/A	P
Potassium	ug/Kg	75-125	2750000		1780000		591000	164	N	P
Silver	ug/Kg	75-125	70700		1900		59100	116		P
Sodium	ug/Kg	75-125	878000		231000		591000	109		P
Vanadium	ug/Kg	75-125	94400		27900		59100	113		P
Zinc	ug/Kg	75-125	103000		33200		59100	119		P
Aluminum	ug/Kg		19600000		13100000		591000	1090	N/A	P
Antimony	ug/Kg	75-125	46800		1110	J	59100	77.3		P
Barium	ug/Kg	75-125	233000		174000		59100	99		P
Cadmium	ug/Kg	75-125	62700		118	U	59100	106		P
Calcium	ug/Kg		3110000		2690000		591000	70.3	N/A	P

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1306 Client ID: RE15-10-7165SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 81

Sample ID: 245147001 Spike ID: 1202021587

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		19800000		13100000		599000	1120	N/A	P
Antimony	ug/Kg	75-125	44000		1110	J	59900	71.5	N	P
Barium	ug/Kg	75-125	228000		174000		59900	90.1		P
Cadmium	ug/Kg	75-125	59300		118	U	59900	99		P
Calcium	ug/Kg		2950000		2690000		599000	44	N/A	P
Chromium	ug/Kg	75-125	75700		12800		59900	105		P
Cobalt	ug/Kg	75-125	63700		5790		59900	96.6		P
Copper	ug/Kg	75-125	73200		7670		59900	109		P
Iron	ug/Kg		16900000		16300000		599000	102	N/A	P
Lead	ug/Kg	75-125	76000		16300		59900	99.6		P
Magnesium	ug/Kg	75-125	3190000		2090000		599000	182	N	P
Manganese	ug/Kg		416000		362000		59900	90	N/A	P
Potassium	ug/Kg	75-125	2760000		1780000		599000	164	N	P
Silver	ug/Kg	75-125	65600		1900		59900	106		P
Sodium	ug/Kg	75-125	841000		231000		599000	102		P
Vanadium	ug/Kg	75-125	92700		27900		59900	108		P
Zinc	ug/Kg	75-125	98300		33200		59900	109		P

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1306

Client ID: RE15-10-7165S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 81

Sample ID: 245147001

Spike ID: 1202021598

<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	9.9		2.06		9.93	78.9		MS
Selenium	mg/kg	75-125	2.11		0.611	U	2.48	62.5	N	MS
Thallium	mg/kg	75-125	10.9		0.277		12.4	85.9		MS
Uranium	mg/kg	75-125	6.73		0.977		6.21	92.7		MS

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1306 Client ID: RE15-10-7165SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 81

Sample ID: 245147001 Spike ID: 1202021599

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	10.1		2.06		9.64	83.4		MS
Selenium	mg/kg	75-125	2.22		0.611	U	2.41	69	N	MS
Thallium	mg/kg	75-125	10.4		0.277		12.1	83.9		MS
Uranium	mg/kg	75-125	6.55		0.977		6.03	92.5		MS

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1306

Client ID: RE15-10-7165S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 81

Sample ID: 245147001

Spike ID: 1202025239

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	162		16.1		131	111		AV

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1306 Client ID: RE15-10-7165SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 81

Sample ID: 245147001 Spike ID: 1202025241

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	156		16.1		125	112		AV

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1306

Client ID: RE15-10-7165S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 81

Sample ID: 245147001

Spike ID: 1202043961

<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>
Beryllium	mg/kg	75-125	5.54		0.983		5.54	82.2		MS
Nickel	mg/kg	75-125	13.8		9.58		5.54	75.9		MS

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1306 Client ID: RE15-10-7165SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 81

Sample ID: 245147001 Spike ID: 1202043963

<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>
Beryllium	mg/kg	75-125	5.46		0.983		5.22	85.8		MS
Nickel	mg/kg	75-125	13.4		9.58		5.22	72.5	N	MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165D

Sample ID: 245147001

Duplicate ID: 1202021584

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	13100000		11400000		14		P
Antimony	ug/Kg		1110 J		396 U		200		P
Barium	ug/Kg	+/-20%	174000		162000		7.11		P
Cadmium	ug/Kg		118 U		120 U				P
Calcium	ug/Kg	+/-20%	2690000		2230000		18.5		P
Chromium	ug/Kg	+/-20%	12800		13300		3.52		P
Cobalt	ug/Kg	+/-20%	5790		5620		2.92		P
Copper	ug/Kg	+/-20%	7670		7240		5.77		P
Iron	ug/Kg	+/-20%	16300000		13600000		18.1		P
Lead	ug/Kg	+/-20%	16300		17700		7.83		P
Magnesium	ug/Kg	+/-20%	2090000		1960000		6.56		P
Manganese	ug/Kg	+/-20%	362000		363000		.189		P
Potassium	ug/Kg	+/-20%	1780000		1660000		7.17		P
Silver	ug/Kg	+/-600	1900		1820		4.44		P
Sodium	ug/Kg	+/-20%	231000		208000		10.6		P
Vanadium	ug/Kg	+/-20%	27900		27200		2.43		P
Zinc	ug/Kg	+/-20%	33200		32900		.925		P

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

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165SD

Sample ID: 1202021586

Duplicate ID: 1202021587

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	19600000		19800000		1.33		P
Antimony	ug/Kg	+/-20	46800		44000		6.22		P
Barium	ug/Kg	+/-20	233000		228000		1.98		P
Cadmium	ug/Kg	+/-20	62700		59300		5.61		P
Calcium	ug/Kg	+/-20	3110000		2950000		5.02		P
Chromium	ug/Kg	+/-20	80400		75700		6.04		P
Cobalt	ug/Kg	+/-20	65400		63700		2.62		P
Copper	ug/Kg	+/-20	77300		73200		5.33		P
Iron	ug/Kg	+/-20	16500000		16900000		2.17		P
Lead	ug/Kg	+/-20	77800		76000		2.28		P
Magnesium	ug/Kg	+/-20	3160000		3190000		.963		P
Manganese	ug/Kg	+/-20	363000		416000		13.5		P
Potassium	ug/Kg	+/-20	2750000		2760000		.522		P
Silver	ug/Kg	+/-20	70700		65600		7.35		P
Sodium	ug/Kg	+/-20	878000		841000		4.29		P
Vanadium	ug/Kg	+/-20	94400		92700		1.77		P
Zinc	ug/Kg	+/-20	103000		98300		5.03		P

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165D

Sample ID: 245147001

Duplicate ID: 1202021596

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-1.24	2.06		1.99		3.44		MS
Selenium	mg/kg		0.611 U		0.619 U				MS
Thallium	mg/kg	+/- .248	0.277		0.227 J		19.7		MS
Uranium	mg/kg	+/-20%	0.977		1		2.68		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165SD

Sample ID: 1202021598

Duplicate ID: 1202021599

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	9.9		10.1		2.08		MS
Selenium	mg/kg	+/-20	2.11		2.22		5.1		MS
Thallium	mg/kg	+/-20	10.9		10.4		5.1		MS
Uranium	mg/kg	+/-20	6.73		6.55		2.72		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165D

Sample ID: 245147001

Duplicate ID: 1202025238

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12.6	16.1		15		7.38		AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165SD

Sample ID: 1202025239

Duplicate ID: 1202025241

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	162		156		3.87		AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165D

Sample ID: 245147001

Duplicate ID: 1202043960

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Beryllium	mg/kg	+/-20%	0.983		0.987		.443		MS
Nickel	mg/kg	+/-20%	9.58		8.46		12.4		MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1306

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7165SD

Sample ID: 1202043961

Duplicate ID: 1202043963

Percent Solids for Dup: 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Beryllium	mg/kg	+/-20	5.54		5.46		1.35		MS
Nickel	mg/kg	+/-20	13.8		13.4		3.1		MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1306

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>
1202021588								
	Antimony	ug/Kg	173000	149000		86.1	71-130	P
	Barium	ug/Kg	198000	204000		103	80-120	P
	Cadmium	ug/Kg	60700	64800		107	81-120	P
	Aluminum	ug/Kg	10500000	8800000		83.8	56-144	P
	Calcium	ug/Kg	9870000	10000000		102	83-117	P
	Chromium	ug/Kg	236000	268000		114	80-120	P
	Cobalt	ug/Kg	91200	101000		110	81-120	P
	Copper	ug/Kg	174000	198000		114	81-118	P
	Iron	ug/Kg	18000000	17500000		96.9	51-149	P
	Lead	ug/Kg	86000	85200		99	79-121	P
	Magnesium	ug/Kg	4000000	3820000		95.5	79-122	P
	Manganese	ug/Kg	558000	566000		101	81-119	P
	Potassium	ug/Kg	4300000	4110000		95.5	74-127	P
	Silver	ug/Kg	30100	31200		104	66-134	P
	Sodium	ug/Kg	1020000	1060000		104	74-127	P
	Vanadium	ug/Kg	115000	127000		111	79-121	P
	Zinc	ug/Kg	594000	619000		104	80-121	P

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1306

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>
1202021600								
	Arsenic	mg/kg	104	114		109	78-123	MS
	Selenium	mg/kg	286	329		115	77-123	MS
	Thallium	mg/kg	121	120		99.3	78-122	MS
	Uranium	mg/kg	2.13	1.74		81.7	73-127	MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1306

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>
1202025237	Mercury	ug/kg	5150	6080		118	71.6-128.3	AV

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1306

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

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<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202043959								
	Beryllium	mg/kg	77.6	75.1		96.8	84-116	MS
	Nickel	mg/kg	134	137		102	78-123	MS

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## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1306

Client ID: RE15-10-7165L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 245147001

Serial Dilution ID: 1202021585

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	111000		117000		5.41		10	P
Antimony	9.38	J	37.6	J	301			P
Barium	1470		1530		4.08		10	P
Cadmium	1	U	5	U				P
Calcium	22700		23500		3.52		10	P
Chromium	108		110		1.85		10	P
Cobalt	48.9		51.5		5.32			P
Copper	64.7		65.5		1.24			P
Iron	138000		145000		5.07		10	P
Lead	138		151		9.42		10	P
Magnesium	17700		18400		3.95		10	P
Manganese	3060		3200		4.41		10	P
Potassium	15000		15700		4.67		10	P
Silver	16.1		15.1	J	6.21			P
Sodium	1950		2060		5.64			P
Vanadium	235		245		4.04		10	P
Zinc	281		283		.534		10	P

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1306

Client ID RE15-10-7165L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 245147001

Serial Dilution ID: 1202021597

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	8.45		9.25	J	9.47			MS
Selenium	2.5	U	12.5	U				MS
Thallium	1.13		2.07	J	83.2			MS
Uranium	4		4.18		4.5			MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1306 Client ID: RE15-10-7165L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 245147001 Serial Dilution ID: 1202025240

Analyte	Initial Value ng/L	C	Serial Value ng/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.235		.34	U	100			AV

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1306 Client ID RE15-10-7165L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 245147001 Serial Dilution ID: 1202043962

Analyte	Initial Value ng/L	C	Serial Value ng/L	C	% Difference	Qual	Acceptance Limit	M
Beryllium	4.47		4.9		9.51			MS
Nickel	43.6		45.5		4.36			MS

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

SDG No: 10-1306

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 944116</b>							
1202021583	MB for batch 944116	MB	S	27-JAN-10	.5g	50mL	
1202021588	LCS for batch 944116	LCS	S	27-JAN-10	.515g	50mL	
1202021586	RE15-10-7165S	MS	S	27-JAN-10	.525g	50mL	
1202021587	RE15-10-7165SD	MSD	S	27-JAN-10	.518g	50mL	
1202021584	RE15-10-7165D	DUP	S	27-JAN-10	.517g	50mL	
245147001	RE15-10-7165	SAMPLE	S	27-JAN-10	.524g	50mL	
245147002	RE15-10-7171	SAMPLE	S	27-JAN-10	.522g	50mL	
245147003	RE15-10-7170	SAMPLE	S	27-JAN-10	.509g	50mL	
245147004	RE15-10-7164	SAMPLE	S	27-JAN-10	.509g	50mL	
245147005	RE15-10-7167	SAMPLE	S	27-JAN-10	.5g	50mL	
245147006	RE15-10-7169	SAMPLE	S	27-JAN-10	.502g	50mL	
245147007	RE15-10-7168	SAMPLE	S	27-JAN-10	.502g	50mL	
245147008	RE15-10-7166	SAMPLE	S	27-JAN-10	.511g	50mL	
245147009	RE15-10-7177	SAMPLE	S	27-JAN-10	.502g	50mL	
245147010	RE15-10-7181	SAMPLE	S	27-JAN-10	.505g	50mL	
245147011	RE15-10-7178	SAMPLE	S	27-JAN-10	.519g	50mL	
245147012	RE15-10-7182	SAMPLE	S	27-JAN-10	.523g	50mL	
245147013	RE15-10-7183	SAMPLE	S	27-JAN-10	.507g	50mL	
245147014	RE15-10-7184	SAMPLE	S	27-JAN-10	.508g	50mL	

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

SDG No: 10-1306

Method Type: P

Contract:

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>
245147015	RE15-10-7185	SAMPLE	S	27-JAN-10	.506g	50mL	
245147016	RE15-10-7176	SAMPLE	S	27-JAN-10	.5g	50mL	
245147017	RE15-10-7180	SAMPLE	S	27-JAN-10	.501g	50mL	
245147018	RE15-10-7179	SAMPLE	S	27-JAN-10	.523g	50mL	

SW846

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

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SDG No: 10-1306

Method Type: MS

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 944119							
1202021595	MB for batch 944119	MB	S	28-JAN-10	.513g	50mL	
1202021600	LCS for batch 944119	LCS	S	28-JAN-10	.507g	50mL	
1202021598	RE15-10-7165S	MS	S	28-JAN-10	.5g	50mL	
1202021599	RE15-10-7165SD	MSD	S	28-JAN-10	.515g	50mL	
1202021596	RE15-10-7165D	DUP	S	28-JAN-10	.501g	50mL	
245147001	RE15-10-7165	SAMPLE	S	28-JAN-10	.508g	50mL	
245147002	RE15-10-7171	SAMPLE	S	28-JAN-10	.507g	50mL	
245147003	RE15-10-7170	SAMPLE	S	28-JAN-10	.515g	50mL	
245147004	RE15-10-7164	SAMPLE	S	28-JAN-10	.505g	50mL	
245147005	RE15-10-7167	SAMPLE	S	28-JAN-10	.515g	50mL	
245147006	RE15-10-7169	SAMPLE	S	28-JAN-10	.523g	50mL	
245147007	RE15-10-7168	SAMPLE	S	28-JAN-10	.514g	50mL	
245147008	RE15-10-7166	SAMPLE	S	28-JAN-10	.537g	50mL	
245147009	RE15-10-7177	SAMPLE	S	28-JAN-10	.511g	50mL	
245147010	RE15-10-7181	SAMPLE	S	28-JAN-10	.5g	50mL	
245147011	RE15-10-7178	SAMPLE	S	28-JAN-10	.508g	50mL	
245147012	RE15-10-7182	SAMPLE	S	28-JAN-10	.509g	50mL	
245147013	RE15-10-7183	SAMPLE	S	28-JAN-10	.506g	50mL	
245147014	RE15-10-7184	SAMPLE	S	28-JAN-10	.515g	50mL	

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

SDG No: 10-1306

Method Type: MS

Contract:

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>
245147015	RE15-10-7185	SAMPLE	S	28-JAN-10	.507g	50mL	
245147016	RE15-10-7176	SAMPLE	S	28-JAN-10	.541g	50mL	
245147017	RE15-10-7180	SAMPLE	S	28-JAN-10	.509g	50mL	
245147018	RE15-10-7179	SAMPLE	S	28-JAN-10	.504g	50mL	
<b>Batch Number 953455</b>							
1202043958	MB for batch 953455	MB	S	15-FEB-10	.501g	50mL	
1202043959	LCS for batch 953455	LCS	S	15-FEB-10	.523g	50mL	
1202043961	RE15-10-7165S	MS	S	15-FEB-10	.56g	50mL	
1202043963	RE15-10-7165SD	MSD	S	15-FEB-10	.594g	50mL	
1202043960	RE15-10-7165D	DUP	S	15-FEB-10	.542g	50mL	
245147001	RE15-10-7165	SAMPLE	S	15-FEB-10	.565g	50mL	
245147002	RE15-10-7171	SAMPLE	S	15-FEB-10	.575g	50mL	
245147003	RE15-10-7170	SAMPLE	S	15-FEB-10	.543g	50mL	
245147004	RE15-10-7164	SAMPLE	S	15-FEB-10	.513g	50mL	
245147005	RE15-10-7167	SAMPLE	S	15-FEB-10	.512g	50mL	
245147006	RE15-10-7169	SAMPLE	S	15-FEB-10	.517g	50mL	
245147007	RE15-10-7168	SAMPLE	S	15-FEB-10	.538g	50mL	
245147008	RE15-10-7166	SAMPLE	S	15-FEB-10	.544g	50mL	
245147009	RE15-10-7177	SAMPLE	S	15-FEB-10	.505g	50mL	

SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1306

Method Type: MS

Contract:

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>
245147010	RE15-10-7181	SAMPLE	S	15-FEB-10	.516g	50mL	
245147011	RE15-10-7178	SAMPLE	S	15-FEB-10	.52g	50mL	
245147012	RE15-10-7182	SAMPLE	S	15-FEB-10	.559g	50mL	
245147013	RE15-10-7183	SAMPLE	S	15-FEB-10	.511g	50mL	
245147014	RE15-10-7184	SAMPLE	S	15-FEB-10	.508g	50mL	
245147015	RE15-10-7185	SAMPLE	S	15-FEB-10	.532g	50mL	
245147016	RE15-10-7176	SAMPLE	S	15-FEB-10	.511g	50mL	
245147017	RE15-10-7180	SAMPLE	S	15-FEB-10	.52g	50mL	
245147018	RE15-10-7179	SAMPLE	S	15-FEB-10	.502g	50mL	

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

SDG No: 10-1306

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>
<b>Batch Number 945593</b>							
1202025236	MB for batch 945593	MB	S	02-FEB-10	.539g	30mL	
1202025237	LCS for batch 945593	LCS	S	02-FEB-10	.205g	30mL	
1202025239	RE15-10-7165S	MS	S	02-FEB-10	.567g	30mL	
1202025241	RE15-10-7165SD	MSD	S	02-FEB-10	.597g	30mL	
1202025238	RE15-10-7165D	DUP	S	02-FEB-10	.591g	30mL	
245147001	RE15-10-7165	SAMPLE	S	02-FEB-10	.542g	30mL	
245147002	RE15-10-7171	SAMPLE	S	02-FEB-10	.549g	30mL	
245147003	RE15-10-7170	SAMPLE	S	02-FEB-10	.54g	30mL	
245147004	RE15-10-7164	SAMPLE	S	02-FEB-10	.516g	30mL	
245147005	RE15-10-7167	SAMPLE	S	02-FEB-10	.559g	30mL	
245147006	RE15-10-7169	SAMPLE	S	02-FEB-10	.531g	30mL	
245147007	RE15-10-7168	SAMPLE	S	02-FEB-10	.505g	30mL	
245147008	RE15-10-7166	SAMPLE	S	02-FEB-10	.587g	30mL	
245147009	RE15-10-7177	SAMPLE	S	02-FEB-10	.531g	30mL	
245147010	RE15-10-7181	SAMPLE	S	02-FEB-10	.506g	30mL	
245147011	RE15-10-7178	SAMPLE	S	02-FEB-10	.534g	30mL	
245147012	RE15-10-7182	SAMPLE	S	02-FEB-10	.515g	30mL	
245147013	RE15-10-7183	SAMPLE	S	02-FEB-10	.506g	30mL	
245147014	RE15-10-7184	SAMPLE	S	02-FEB-10	.583g	30mL	

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1306

Method Type: AV

Contract:

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>
245147015	RE15-10-7185	SAMPLE	S	02-FEB-10	.535g	30mL	
245147016	RE15-10-7176	SAMPLE	S	02-FEB-10	.545g	30mL	
245147017	RE15-10-7180	SAMPLE	S	02-FEB-10	.574g	30mL	
245147018	RE15-10-7179	SAMPLE	S	02-FEB-10	.538g	30mL	

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SW846

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

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 16-FEB-10

End Date: 16-FEB-10

Client Sdg: 10-1306

Method MS

Data File: 100216-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	11:05					X											X								
S10	1	11:07					X											X								
S100	1	11:09					X											X								
ICV01	1	11:12					X											X								
ICB01	1	11:14					X											X								
CRDL01	1	11:16					X											X								
ICSA01	1	11:18					X											X								
ICSAB01	1	11:20					X											X								
CCV01	1	11:23					X											X								
CCB01	1	11:25					X											X								
LR01	1	11:27					X											X								
CCV02	1	11:29					X											X								
CCB02	1	11:31					X											X								
1202043958	2	11:34					X											X								
1202043959	40	11:36					X											X								
245147001	2	11:38					X											X								
1202043960	2	11:40					X											X								
1202043961	2	11:42					X											X								
1202043963	2	11:45					X											X								
1202043962	10	11:47					X											X								
245147002	2	11:49					X											X								
CCV03	1	11:51					X											X								
CCB03	1	11:54					X											X								
245147003	2	11:56					X											X								
245147004	2	11:58					X											X								
245147005	2	12:00					X											X								
245147006	2	12:03					X											X								
245147007	2	12:05					X											X								
245147008	2	12:07					X											X								
245147009	2	12:09					X											X								
245147010	2	12:12					X											X								
CCV04	1	12:14					X											X								
CCB04	1	12:16					X											X								
245147011	2	12:18					X											X								
245147012	2	12:20					X											X								
245147013	2	12:23					X											X								
245147014	2	12:25					X											X								
245147015	2	12:27					X											X								
245147016	2	12:29					X											X								
245147017	2	12:32					X											X								

Samp No.	D/F	Run Time
245147018	2	12:34
CCV05	1	12:36
CCB05	1	12:38

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: HG3

Start Date: 03-FEB-10

End Date: 03-FEB-10

Client Sdg: 10-1306

Method: AV

Data File: 020310S2-4

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	09:21															X									
S0.2	1	09:22															X									
S0.5	1	09:24															X									
S2.0	1	09:26															X									
S5.0	1	09:27															X									
S10.0	1	09:29															X									
ICV01	1	09:31															X									
ICB01	1	09:32															X									
CRDL01	1	09:34															X									
CCV01	1	09:36															X									
CCB01	1	09:37															X									
ZZZZZ	1	09:39																								
ZZZZZ	10	09:41																								
ZZZZZ	1	09:42																								
ZZZZZ	1	09:44																								
ZZZZZ	1	09:46																								
ZZZZZ	1	09:47																								
ZZZZZ	5	09:49																								
ZZZZZ	1	09:51																								
ZZZZZ	1	09:52																								
ZZZZZ	1	09:54																								
CCV02	1	09:56															X									
CCB02	1	09:57															X									
ZZZZZ	1	09:59																								
ZZZZZ	1	10:01																								
ZZZZZ	1	10:02																								
ZZZZZ	1	10:04																								
ZZZZZ	1	10:06																								
ZZZZZ	1	10:07																								
ZZZZZ	1	10:09																								
ZZZZZ	1	10:11																								
ZZZZZ	1	10:12																								
ZZZZZ	1	10:14																								
CCV03	1	10:16															X									
CCB03	1	10:17															X									
ZZZZZ	1	10:19																								
ZZZZZ	1	10:21																								
ZZZZZ	1	10:22																								
ZZZZZ	1	10:24																								
ZZZZZ	1	10:26																								

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

Samp No.	D/F	Run Time
ZZZZZ	1	10:28
ZZZZZ	1	10:29
ZZZZZ	10	10:31
ZZZZZ	1	10:33
ZZZZZ	1	10:34
CCV04	1	10:36
CCB04	1	10:38
ZZZZZ	1	10:39
ZZZZZ	1	10:41
ZZZZZ	1	10:43
ZZZZZ	1	10:44
ZZZZZ	1	10:46
ZZZZZ	1	10:48
ZZZZZ	1	10:49
ZZZZZ	1	10:51
ZZZZZ	1	10:53
ZZZZZ	1	10:54
CCV05	1	10:56
CCB05	1	10:58
ZZZZZ	1	10:59
ZZZZZ	1	11:01
ZZZZZ	1	11:03
ZZZZZ	1	11:04
ZZZZZ	1	11:06
ZZZZZ	1	11:08
ZZZZZ	1	11:09
ZZZZZ	1	11:11
ZZZZZ	5	11:13
ZZZZZ	1	11:14
CCV06	1	11:16
CCB06	1	11:18
ZZZZZ	1	11:19
1202025236	1	11:21
1202025237	10	11:23
245147001	1	11:25
1202025238	1	11:26
1202025239	1	11:28
1202025241	1	11:30
1202025240	5	11:31
245147002	1	11:33

**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
245147003	1	11:35															X									
CCV07	1	11:36															X									
CCB07	1	11:38															X									
245147004	1	11:40															X									
245147005	1	11:41															X									
245147006	1	11:43															X									
245147007	1	11:45															X									
245147008	1	11:46															X									
245147009	1	11:48															X									
245147010	1	11:50															X									
245147011	1	11:51															X									
245147012	1	11:53															X									
245147013	1	11:55															X									
CCV08	1	11:57															X									
CCB08	1	11:58															X									
245147014	1	12:00															X									
245147015	1	12:02															X									
245147016	1	12:03															X									
245147017	1	12:05															X									
245147018	1	12:07															X									
ZZZZZZ	1	12:08																								
ZZZZZZ	1	12:10																								
ZZZZZZ	1	12:12																								
ZZZZZZ	1	12:13																								
ZZZZZZ	1	12:15																								
CCV09	1	12:17															X									
CCB09	1	12:18															X									

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

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 10-FEB-10

End Date: 10-FEB-10

Client Sdg: 10-1306

Method MS

Data File: 100210-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	15:50			X															X			X	X		
S10	1	15:56			X															X			X	X		
S100	1	16:02			X															X			X	X		
ICV01	1	16:08			X															X			X	X		
ICB01	1	16:14			X															X			X	X		
CRDL01	1	16:20			X															X			X	X		
ICSA01	1	16:27			X															X			X	X		
ICSAB01	1	16:33			X															X			X	X		
CCV01	1	16:39			X															X			X	X		
CCB01	1	16:45			X															X			X	X		
LR01	1	16:51			X															X			X	X		
CCV02	1	16:57			X															X			X	X		
CCB02	1	17:03			X															X			X	X		
ZZZZZ	1	17:10																								
ZZZZZ	1	17:16																								
ZZZZZ	1	17:22																								
ZZZZZ	1	17:28																								
ZZZZZ	5	17:34																								
ZZZZZ	1	17:41																								
CCV03	1	17:47			X															X			X	X		
CCB03	1	17:53			X															X			X	X		
1202021595	2	18:02			X															X			X	X		
1202021600	40	18:08			X															X			X	X		
245147001	2	18:14			X															X			X	X		
1202021596	2	18:20			X															X			X	X		
1202021598	2	18:26			X															X			X	X		
1202021599	2	18:32			X															X			X	X		
1202021597	10	18:38			X															X			X	X		
CCV04	1	18:45			X															X			X	X		
CCB04	1	18:51			X															X			X	X		
245147002	2	18:57			X															X			X	X		
245147003	2	19:03			X															X			X	X		
245147004	2	19:09			X															X			X	X		
245147005	2	19:15			X															X			X	X		
245147006	2	19:22			X															X			X	X		
245147007	2	19:28			X															X			X	X		
CCV05	1	19:34			X															X			X	X		
CCB05	1	19:40			X															X			X	X		
245147008	2	19:46			X															X			X	X		
245147009	2	19:52			X															X			X	X		

Samp No.	D/F	Run Time														X			X	X		
245147010	2	19:59			X											X			X	X		
245147011	2	20:05			X											X			X	X		
245147012	2	20:11			X											X			X	X		
245147013	2	20:17			X											X			X	X		
CCV06	1	20:23			X											X			X	X		
CCB06	1	20:29			X											X			X	X		
245147014	2	20:36			X											X			X	X		
245147015	2	20:42			X											X			X	X		
245147016	2	20:48			X											X			X	X		
245147017	2	20:54			X											X			X	X		
245147018	2	21:00			X											X			X	X		
CCV07	1	21:07			X											X			X	X		
CCB07	1	21:13			X											X			X	X		

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

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 08-FEB-10

End Date: 08-FEB-10

Client Sdg: 10-1306

Method P

Data File: 020810A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	09:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	09:28		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	09:31	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	09:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	09:38	X						X				X		X							X				
ICV01	1	09:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	09:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	09:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	09:51	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	09:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	09:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	10:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	10:04																								
CCV01	1	10:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	10:13	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	10:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	10:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	10:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	10:29																								
ZZZZZZ	1	10:33																								
ZZZZZZ	1	10:36																								
ZZZZZZ	1	10:39																								
ZZZZZZ	1	10:43																								
ZZZZZZ	1	10:47																								
ZZZZZZ	5	10:50																								
ZZZZZZ	1	10:54																								
CCV03	1	10:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	11:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	11:05																								
ZZZZZZ	1	11:09																								
ZZZZZZ	1	11:12																								
ZZZZZZ	1	11:16																								
ZZZZZZ	1	11:20																								
ZZZZZZ	1	11:23																								
ZZZZZZ	1	11:27																								
ZZZZZZ	1	11:31																								
CCV04	1	11:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	11:38	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	11:42																								
ZZZZZZ	1	11:45																								

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

[illegible]

**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
CCV08	1	14:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB08	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202021583	1	14:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202021588	1	14:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147001	1	14:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202021584	1	15:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202021586	1	15:05	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202021587	1	15:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202021585	5	15:12	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147002	1	15:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV09	1	15:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB09	1	15:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147003	1	15:27	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147004	1	15:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147005	1	15:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147006	1	15:38	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147007	1	15:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147008	1	15:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147009	1	15:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147010	1	15:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV10	1	15:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB10	1	16:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147011	1	16:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147012	1	16:07	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147013	1	16:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147014	1	16:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147015	1	16:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147016	1	16:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147017	1	16:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
245147018	1	16:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV11	1	16:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB11	1	16:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

# Standards

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

SDG NO. 10-1306

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL	RDL
			ug/L	ug/L
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.** 10-1306

**Contract:** LANL01004

**Lab Code:** GEL

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

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

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

SDG NO. 10-1306

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<u>Analyte</u>	<u>Wavelength (nm)</u>	<u>MDL</u>	<u>RDL</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: 10-1306

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: 10-1306

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Boron	Cadmium	Chromium	Cobalt	Copper
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	11.3250	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	-1.59900	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-21.2250	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.68400
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.19100	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	105.59
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.36300	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	-2.30400	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.61100

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

Lab Code: GEL

GEL Job No: 10-1306

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	20.5430
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3320
Arsenic	188.979	-0.05800	0.00000	0.00000	0.00000	1.97700
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.13300	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-0.90500
Copper	324.752	-0.13900	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.03800	-2.87600	0.00000	0.00000	0.00000
Magnesium	279.077	1.07300	0.00000	0.00000	0.00000	-16.8110
Manganese	257.61	-0.13900	0.00000	0.04000	0.00000	0.00000
Molybdenum	202.031	-0.03800	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	-0.01300	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.81200	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.88200	0.00000	0.28200	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	-0.06300	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.03900	0.00000	0.00000	-4.11700	0.00000
Tin	189.927	-0.09200	0.00000	-0.19600	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.07900	0.00000	0.00000
Uranium	409.014	0.13900	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.05300	0.00000	0.00000	0.00000	-7.71400
Zinc	213.857	0.14460	0.00000	0.02030	0.00000	0.00000

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

Lab Code: GEL

GEL Job No: 10-1306

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Nickel	Phosphorous	Selenium	Silicon	Silver
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.99900	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	4.41600	0.00000	0.00000	0.00000	0.00000

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

Lab Code: GELGEL Job No: **10-1306**

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: 10-1306

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. 10-1306

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS5

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09

METALS  
-12-  
Linear Ranges

SDG NO. 10-1306

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-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09

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

SDG NO. 10-1306

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>
Silver	20	1000	ug/L	01-NOV-09
Sodium	20	500000	ug/L	01-NOV-09
Thallium	20	10000	ug/L	01-NOV-09
Uranium	20	15000	ug/L	01-NOV-09
Vanadium	20	10000	ug/L	01-NOV-09
Zinc	20	15000	ug/L	01-NOV-09
Selenium	20	10000	ug/L	01-NOV-09
Antimony	20	10000	ug/L	01-NOV-09
Arsenic	20	10000	ug/L	01-NOV-09
Barium	20	15000	ug/L	01-NOV-09
Beryllium	20	3000	ug/L	01-NOV-09
Cadmium	20	10000	ug/L	01-NOV-09
Calcium	20	500000	ug/L	01-NOV-09
Chromium	20	25000	ug/L	01-NOV-09
Cobalt	20	10000	ug/L	01-NOV-09
Copper	20	20000	ug/L	01-NOV-09
Aluminum	20	500000	ug/L	01-NOV-09
Iron	20	500000	ug/L	01-NOV-09
Lead	20	25000	ug/L	01-NOV-09
Magnesium	20	500000	ug/L	01-NOV-09
Manganese	20	10000	ug/L	01-NOV-09
Nickel	20	10000	ug/L	01-NOV-09
Potassium	20	300000	ug/L	01-NOV-09

# Raw Data



[illegible]

Batch Data Report: 16-FEB-10 14:02  
Batch seq: 949869

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946310007	SAMPLE	19-FEB-2010	A1BS0091S001	1	OPTIMA3	Batch Data	Analyst	Batch	Run Date	Y	04-FEB-10 13:11:00	05-FEB-10 09:00:00	Moisture	Dilution
					Prep	BCD1	949868	949868	07-FEB-2010 08:16	Y	0.512 g	50 mL	97.65625 mL/g	15.5%
					Analytical	HSC	949869	949869	09-FEB-2010 03:45	Y				1

Report Status	Parameter	CoFA Qual	Edd Qual	Client	Initial Result	Units	Result	MDL	PQL	RDL	CRQL	Units	Diff	RPD	Nom	Units	Calc(%)	SPC Range
Y	REYW Aluminum				91400	ug/L	10600	7.86	23.1	23.1	Y	mg/kg						
Y	REYW Antimony	U	U	GEL	-4.16	ug/L	-0.481	0.381	1.16	1.16	Y	mg/kg						
Y	REYW Boron	J	J	GEL	17.1	ug/L	1.97	1.16	5.78	5.78	Y	mg/kg						

Sample ID	Type	Due Date	Client	Samp ID	Schedule	Inst.	Short Name	Original Samp ID	Paired Samp ID	Run Date	Batch
246310008	SAMPLE	19-FEB-2010	A1BS0092S001	1	OPTIMA3	Prep	BCD1	949868	07-FEB-2010 08:16	07-FEB-2010 08:16	949868
					Analytical	HSC	949869	09-FEB-2010 03:52	09-FEB-2010 03:52	09-FEB-2010 03:52	949869

Report Status	Parameter	CoFA Qual	Edd Qual	Client	Initial Result	Units	Result	MDL	PQL	RDL	CRQL	Units	Diff	RPD	Nom	Units	Calc(%)	SPC Range
Y	REYW Aluminum				95900	ug/L	11500	8.17	24.0	24.0	Y	mg/kg						
Y	REYW Antimony	U	U	GEL	2.75	ug/L	0.331	0.397	1.20	1.20	Y	mg/kg						
Y	REYW Boron	J	J	GEL	22.7	ug/L	2.73	1.20	6.01	6.01	Y	mg/kg						

Sample ID	Type	Due Date	Client	Samp ID	Schedule	Inst.	Short Name	Original Samp ID	Paired Samp ID	Run Date	Batch
246310011	SAMPLE	19-FEB-2010	A1BS0097S001	1	OPTIMA3	Prep	BCD1	949868	07-FEB-2010 08:16	07-FEB-2010 08:16	949868
					Analytical	HSC	949869	09-FEB-2010 04:00	09-FEB-2010 04:00	09-FEB-2010 04:00	949869

Report Status	Parameter	CoFA Qual	Edd Qual	Client	Initial Result	Units	Result	MDL	PQL	RDL	CRQL	Units	Diff	RPD	Nom	Units	Calc(%)	SPC Range
Y	REYW Aluminum				131000	ug/L	16400	8.48	24.9	24.9	Y	mg/kg						
Y	REYW Antimony	U	U	GEL	-0.193	ug/L	-0.0241	0.412	1.25	1.25	Y	mg/kg						
Y	REYW Boron	J	J	GEL	33.8	ug/L	4.21	1.25	6.24	6.24	Y	mg/kg						

## Qualifier Description

	Qualifier Description	Client	Department
H	Analytical holding time exceeded.	CLP	Global
E	Concentration of the target analyte exceeds the instrument calibration range.	CLP	Global
C	Confirmed by GC/MS	CLP	Global
+	Correlation coefficient for the MSA < 0.995	CLP	Global
X	Due to the instability of Chloromethylmethyl ether in alcoholic and aqueous matrices, the duplicate injection precision not met	CLP	Global
M	Flag for results below the MDC or a flag for low tracer recovery.	CLP	Global
BD	Indicates an estimated value. The result was greater than the detection limit, but less than the detection limit.	CLP	Global
J	Indicates that a quality control analyte recovery is outside of specified acceptance criteria	CLP	Global
*	Indicates that a quality control analyte recovery is outside of specified acceptance criteria	CLP	Global
R	Indicates the target analyte was analyzed for but not detected above the detection limit.	CLP	Global
U	Lab-specific qualifier-please see case narrative, data summary package or contact your p	CLP	Global
X		CLP	Global

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Batch seq: 949869

S	Method of Standard Additions was used	CLP	Global
Z	Paint Filter Qualifier: Particulates passed through the filter. No free liquids were observed	CLP	Global
W	Post-digestion spike recovery out of control limits and sample absorbance < 50% spike a	CLP	Global
N	Presumptive evidence to make a tentative identification of the analyte (TIC)	CLP	Global
Y	QC Samples were not spiked with this compound.	CLP	Global
>	Result is greater than amount reported.	CLP	Global
<	Result is less than amount reported.	CLP	Global
D	Sample has been diluted and reanalyzed after initially exceeding inst. calibration range	CLP	Global
h	Sample preparation or preservation holding time exceeded.	CLP	Global
R	Sample results are rejected due to sample preservation with HCl.	CLP	Global
B	Target analyte was detected in the sample as well as the associated blank.	CLP	Global
P	The response between the confirmation column and the primary column is >40%D.	CLP	Global
A	This TIC is a suspected aldol-condensation product	CLP	Global
UI	Uncertain identification for gamma spectroscopy.	CLP	Global
B	Indicates an estimated value. The result was greater than the detection limit, but less than	CLP	Inorganics
E	Indicates that the difference between the serial dilution and parent sample exceeds 10%.	CLP	Inorganics
*	Indicates that the relative percent difference (RPD) between the MS/MSD or sample/dup	CLP	Inorganics
N	Spiked sample recovery not within control limits	CLP	Inorganics
d	5-day BOD--The 2:1 depletion requirement was not met for this sample	GEL	General Chemistr
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration	GEL	General Chemistr
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were ob	GEL	General Chemistr
*	A quality control analyte recovery is outside of specified acceptance criteria	GEL	Global
ND	Analyte concentration is not detected above the detection limit	GEL	Global
C	Analyte has been confirmed by GC/MS analysis	GEL	Global
**	Analyte is a surrogate compound	GEL	Global
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.	GEL	Global
H	Analytical holding time was exceeded	GEL	Global
UJ	Compound cannot be extracted	GEL	Global
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qua	GEL	Global
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qua	GEL	Global
F	Estimated Value	GEL	Global
FA	Failed analysis.	GEL	Global
B	For General Chemistry and Organic analysis the target analyte was detected in the associ	GEL	Global
M	Matrix Related Failure	GEL	Global
JNX	Non Calibrated Compound	GEL	Global
h	Preparation or preservation holding time was exceeded	GEL	Global
Y	QC Samples were not spiked with this compound	GEL	Global
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <SX the RL. Q	GEL	Global
N/A	RPD or %Recovery limits do not apply.	GEL	Global
>	Result is greater than value reported	GEL	Global
<	Result is less than value reported	GEL	Global
D	Results are reported from a diluted aliquot of the sample	GEL	Global
R	Sample results are rejected	GEL	Global
A	The TIC is a suspected aldol-condensation product	GEL	Global
J	Value is estimated	GEL	Global
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flag	GEL	Inorganics
B	Metals--Either presence of analyte detected in the associated blank, or MDL/IDL < samp	GEL	Inorganics
N	Metals--The Matrix spike sample recovery is not within specified control limits	GEL	Inorganics
E	Organics--Concentration of the target analyte exceeds the instrument calibration range	GEL	Organics
N	Organics--Presumptive evidence based on mass spectral library search to make a tentativ	GEL	Organics
P	Organics--The concentrations between the primary and confirmation columns/detectors	GEL	Organics
UI	Gamma Spectroscopy--Uncertain identification	GEL	Radiological
M	M if above MDC and less than LLD	GEL	Radiological

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BD Results are either below the MDC or tracer recovery is low

GEL Radiological

=====  
Analysis Begun

Start Time: 2/8/2010 09:25:03

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\020810.sif

Batch ID:

Results Data Set: 020810A

Results Library: c:\pe\optima1\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 2/8/2010 09:25:03

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	55915.0	55915.0	100 %	09:25:48
1	Al 396.153Radial†	-14.1	-14.1	[0.00] µg/L	09:25:48
1	Ca 317.933Radial†	180.1	179.4	[0.00] µg/L	09:26:09
1	Fe 238.204 Radial†	15.2	15.1	[0.00] µg/L	09:26:09
1	K 766.490 Radial†	240.6	239.7	[0.00] µg/L	09:25:48
1	Mg 279.077 IEC†	14.3	14.2	[0.00] µg/L	09:26:09
1	Na 589.592 Radial†	450.9	449.3	[0.00] µg/L	09:25:48
1	Sr 421.552†	52.3	52.1	[0.00] µg/L	09:25:48
1	Sc 361.383	1982162.6	1982162.6	99.941 %	09:27:11
1	Y 371.029	1372650.0	1372650.0	99.983 %	09:27:11
1	Ag 328.068†	-537.1	-537.4	[0.00] µg/L	09:27:16
1	As 188.979†	-1.6	-1.6	[0.00] µg/L	09:27:37
1	B 249.677†	320.4	320.6	[0.00] µg/L	09:27:37
1	Ba 233.527†	-14.9	-14.9	[0.00] µg/L	09:27:37
1	Be 313.107†	-3289.6	-3291.6	[0.00] µg/L	09:27:16
1	Cd 226.502†	-133.8	-133.9	[0.00] µg/L	09:27:37
1	Co 228.616†	-10.0	-10.0	[0.00] µg/L	09:27:37
1	Cr 267.716†	-40.8	-40.9	[0.00] µg/L	09:27:37
1	Cu 324.752†	2489.2	2490.7	[0.00] µg/L	09:27:16
1	Mn 257.610†	-249.5	-249.6	[0.00] µg/L	09:27:37
1	Mo 202.031†	-10.3	-10.3	[0.00] µg/L	09:27:37
1	Ni 231.604†	305.7	305.9	[0.00] µg/L	09:27:37
1	P 214.914†	22.2	22.2	[0.00] µg/L	09:27:37
1	Pb 220.353†	85.2	85.2	[0.00] µg/L	09:27:37
1	S 181.975 Axial†	15.7	15.7	[0.00] µg/L	09:27:37
1	Sb 206.836†	23.9	23.9	[0.00] µg/L	09:27:37
1	Se 196.026†	10.6	10.6	[0.00] µg/L	09:27:37
1	SiO2†	1331.5	1332.3	[0.00] µg/L	09:27:16
1	Si 251.611†	319.1	319.3	[0.00] µg/L	09:27:37
1	Sn 189.927†	7.3	7.3	[0.00] µg/L	09:27:37
1	Ti 334.940†	210.2	210.4	[0.00] µg/L	09:27:16
1	Tl 190.801†	-24.3	-24.3	[0.00] µg/L	09:27:37
1	U 409.014†	-89.5	-89.5	[0.00] µg/L	09:27:16
1	V 292.402†	-21.3	-21.3	[0.00] µg/L	09:27:16
1	Zn 213.857†	505.4	505.7	[0.00] µg/L	09:27:37
2	Sc RADIAL	55605.6	55605.6	99.8 %	09:26:14
2	Al 396.153Radial†	-20.8	-20.8	[0.00] µg/L	09:26:14
2	Ca 317.933Radial†	187.9	188.3	[0.00] µg/L	09:26:35
2	Fe 238.204 Radial†	16.1	16.1	[0.00] µg/L	09:26:35
2	K 766.490 Radial†	193.3	193.6	[0.00] µg/L	09:26:14
2	Mg 279.077 IEC†	13.0	13.0	[0.00] µg/L	09:26:35
2	Na 589.592 Radial†	480.3	481.3	[0.00] µg/L	09:26:14
2	Sr 421.552†	39.1	39.2	[0.00] µg/L	09:26:14
2	Sc 361.383	1988067.4	1988067.4	100.24 %	09:27:43
2	Y 371.029	1375529.9	1375529.9	100.19 %	09:27:43
2	Ag 328.068†	-479.0	-477.8	[0.00] µg/L	09:27:48
2	As 188.979†	-1.8	-1.8	[0.00] µg/L	09:28:09

2	B 249.677†	310.6	309.9	[0.00]	µg/L	09:28:09
2	Ba 233.527†	-24.3	-24.2	[0.00]	µg/L	09:28:09
2	Be 313.107†	-3265.8	-3258.0	[0.00]	µg/L	09:27:48
2	Cd 226.502†	-146.6	-146.3	[0.00]	µg/L	09:28:09
2	Co 228.616†	-8.4	-8.4	[0.00]	µg/L	09:28:09
2	Cr 267.716†	-39.8	-39.7	[0.00]	µg/L	09:28:09
2	Cu 324.752†	2482.1	2476.2	[0.00]	µg/L	09:27:48
2	Mn 257.610†	-267.1	-266.5	[0.00]	µg/L	09:28:09
2	Mo 202.031†	-8.6	-8.6	[0.00]	µg/L	09:28:09
2	Ni 231.604†	314.9	314.1	[0.00]	µg/L	09:28:09
2	P 214.914†	25.4	25.4	[0.00]	µg/L	09:28:09
2	Pb 220.353†	96.2	96.0	[0.00]	µg/L	09:28:09
2	S 181.975 Axial†	15.6	15.6	[0.00]	µg/L	09:28:09
2	Sb 206.836†	21.3	21.3	[0.00]	µg/L	09:28:09
2	Se 196.026†	14.5	14.5	[0.00]	µg/L	09:28:09
2	SiO2†	1341.9	1338.7	[0.00]	µg/L	09:27:48
2	Si 251.611†	304.4	303.6	[0.00]	µg/L	09:28:09
2	Sn 189.927†	3.9	3.9	[0.00]	µg/L	09:28:09
2	Ti 334.940†	139.8	139.4	[0.00]	µg/L	09:27:48
2	Tl 190.801†	-28.2	-28.1	[0.00]	µg/L	09:28:09
2	U 409.014†	-69.5	-69.3	[0.00]	µg/L	09:27:48
2	V 292.402†	-21.6	-21.6	[0.00]	µg/L	09:27:48
2	Zn 213.857†	504.9	503.7	[0.00]	µg/L	09:28:09
3	Sc RADIAL	55629.0	55629.0	99.8	%	09:26:40
3	Al 396.153Radial†	5.5	5.5	[0.00]	µg/L	09:26:40
3	Ca 317.933Radial†	195.6	195.9	[0.00]	µg/L	09:27:00
3	Fe 238.204 Radial†	16.2	16.3	[0.00]	µg/L	09:27:00
3	K 766.490 Radial†	126.6	126.8	[0.00]	µg/L	09:26:40
3	Mg 279.077 IEC†	10.8	10.8	[0.00]	µg/L	09:27:00
3	Na 589.592 Radial†	482.2	483.0	[0.00]	µg/L	09:26:40
3	Sr 421.552†	22.8	22.8	[0.00]	µg/L	09:26:40
3	Sc 361.383	1979744.5	1979744.5	99.819	%	09:28:15
3	Y 371.029	1370468.4	1370468.4	99.824	%	09:28:15
3	Ag 328.068†	-491.1	-492.0	[0.00]	µg/L	09:28:20
3	As 188.979†	-1.7	-1.7	[0.00]	µg/L	09:28:41
3	B 249.677†	312.2	312.7	[0.00]	µg/L	09:28:41
3	Ba 233.527†	-23.9	-23.9	[0.00]	µg/L	09:28:41
3	Be 313.107†	-3346.8	-3352.8	[0.00]	µg/L	09:28:20
3	Cd 226.502†	-154.6	-154.9	[0.00]	µg/L	09:28:41
3	Co 228.616†	-6.5	-6.5	[0.00]	µg/L	09:28:41
3	Cr 267.716†	-47.6	-47.7	[0.00]	µg/L	09:28:41
3	Cu 324.752†	2495.0	2499.6	[0.00]	µg/L	09:28:20
3	Mn 257.610†	-273.7	-274.2	[0.00]	µg/L	09:28:41
3	Mo 202.031†	-1.3	-1.3	[0.00]	µg/L	09:28:41
3	Ni 231.604†	300.8	301.3	[0.00]	µg/L	09:28:41
3	P 214.914†	16.0	16.0	[0.00]	µg/L	09:28:41
3	Pb 220.353†	92.9	93.1	[0.00]	µg/L	09:28:41
3	S 181.975 Axial†	12.6	12.6	[0.00]	µg/L	09:28:41
3	Sb 206.836†	28.6	28.7	[0.00]	µg/L	09:28:41
3	Se 196.026†	7.1	7.2	[0.00]	µg/L	09:28:41
3	SiO2†	1347.0	1349.4	[0.00]	µg/L	09:28:20
3	Si 251.611†	287.5	288.0	[0.00]	µg/L	09:28:41
3	Sn 189.927†	-2.8	-2.8	[0.00]	µg/L	09:28:41
3	Ti 334.940†	144.4	144.7	[0.00]	µg/L	09:28:20
3	Tl 190.801†	-25.7	-25.7	[0.00]	µg/L	09:28:41
3	U 409.014†	-150.7	-150.9	[0.00]	µg/L	09:28:20
3	V 292.402†	-57.0	-57.1	[0.00]	µg/L	09:28:20
3	Zn 213.857†	491.5	492.4	[0.00]	µg/L	09:28:41

## Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Sc 361.383	1983324.8	4281.42	0.22%	100.000	%
Sc RADIAL	55716.5	172.27	0.31%	100	%
Y 371.029	1372882.8	2538.77	0.18%	100.00	%
Ag 328.068†	-502.4	31.11	6.19%	[0.00]	µg/L
Al 396.153Radial†	-9.8	13.68	139.73%	[0.00]	µg/L
As 188.979†	-1.7	0.13	7.58%	[0.00]	µg/L
B 249.677†	314.4	5.58	1.77%	[0.00]	µg/L
Ba 233.527†	-21.0	5.32	25.33%	[0.00]	µg/L

Be 313.107†	-3300.8	48.09	1.46%	[0.00]	µg/L
Ca 317.933 Radial†	187.9	8.25	4.39%	[0.00]	µg/L
Cd 226.502†	-145.0	10.55	7.28%	[0.00]	µg/L
Co 228.616†	-8.3	1.78	21.49%	[0.00]	µg/L
Cr 267.716†	-42.7	4.32	10.11%	[0.00]	µg/L
Cu 324.752†	2488.8	11.78	0.47%	[0.00]	µg/L
Fe 238.204 Radial†	15.8	0.63	4.00%	[0.00]	µg/L
K 766.490 Radial†	186.7	56.78	30.41%	[0.00]	µg/L
Mg 279.077 IEC†	12.7	1.73	13.64%	[0.00]	µg/L
Mn 257.610†	-263.4	12.57	4.77%	[0.00]	µg/L
Mo 202.031†	-6.7	4.76	70.57%	[0.00]	µg/L
Na 589.592 Radial†	471.2	18.97	4.03%	[0.00]	µg/L
Ni 231.604†	307.1	6.49	2.11%	[0.00]	µg/L
P 214.914†	21.2	4.74	22.37%	[0.00]	µg/L
Pb 220.353†	91.4	5.58	6.10%	[0.00]	µg/L
S 181.975 Axial†	14.6	1.76	12.07%	[0.00]	µg/L
Sb 206.836†	24.6	3.73	15.17%	[0.00]	µg/L
Se 196.026†	10.7	3.65	34.04%	[0.00]	µg/L
SiO2†	1340.1	8.65	0.65%	[0.00]	µg/L
Si 251.611†	303.6	15.64	5.15%	[0.00]	µg/L
Sn 189.927†	2.8	5.12	181.33%	[0.00]	µg/L
Sr 421.552†	38.0	14.66	38.53%	[0.00]	µg/L
Ti 334.940†	164.8	39.51	23.97%	[0.00]	µg/L
Tl 190.801†	-26.1	1.94	7.43%	[0.00]	µg/L
U 409.014†	-103.2	42.51	41.17%	[0.00]	µg/L
V 292.402†	-33.3	20.60	61.79%	[0.00]	µg/L
Zn 213.857†	500.6	7.19	1.44%	[0.00]	µg/L

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

Autosampler Location: 2  
 Date Collected: 2/8/2010 09:28:50  
 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	56192.1	56192.1	101 %	09:29:25
1	K 766.490 Radial†	1387.4	1188.9	[1000] µg/L	09:29:25
1	Sr 421.552†	8626.9	8515.8	[100] µg/L	09:29:25
1	Sc 361.383	1970471.8	1970471.8	99.352 %	09:29:47
1	Y 371.029	1366969.6	1366969.6	99.569 %	09:29:47
1	Ag 328.068†	11240.4	11816.1	[100] µg/L	09:29:52
1	As 188.979†	47.2	49.2	[100] µg/L	09:30:13
1	B 249.677†	2381.6	2082.8	[100] µg/L	09:29:52
1	Ba 233.527†	3551.2	3595.4	[100] µg/L	09:29:52
1	Be 313.107†	136496.8	140688.0	[100] µg/L	09:29:47
1	Cd 226.502†	3310.8	3477.5	[100] µg/L	09:29:52
1	Co 228.616†	1857.9	1878.3	[100] µg/L	09:30:13
1	Cr 267.716†	4271.1	4341.7	[100] µg/L	09:29:52
1	Cu 324.752†	16072.7	13688.8	[100] µg/L	09:29:52
1	Mn 257.610†	27113.8	27554.1	[100] µg/L	09:29:52
1	Mo 202.031†	901.5	914.1	[100] µg/L	09:30:13
1	Ni 231.604†	2019.0	1725.1	[100] µg/L	09:30:13
1	P 214.914†	232.8	213.1	[500] µg/L	09:30:13
1	Pb 220.353†	454.6	366.1	[100] µg/L	09:30:13
1	S 181.975 Axial†	56.0	41.7	[200] µg/L	09:30:13
1	Sb 206.836†	137.5	113.8	[100] µg/L	09:30:13
1	Se 196.026†	79.6	69.3	[100] µg/L	09:30:13
1	SiO2†	5922.3	4620.8	[1069.5] µg/L	09:29:52
1	Si 251.611†	5947.6	5682.8	[500] µg/L	09:29:52
1	Sn 189.927†	206.8	205.3	[100] µg/L	09:30:13
1	Ti 334.940†	37329.3	37408.0	[100] µg/L	09:29:52
1	Tl 190.801†	37.8	64.1	[100] µg/L	09:30:13
1	U 409.014†	1006.0	1115.8	[100] µg/L	09:29:52
1	V 292.402†	8713.6	8803.8	[100] µg/L	09:29:52
1	Zn 213.857†	4272.9	3800.2	[100] µg/L	09:29:52
2	Sc RADIAL	56501.9	56501.9	101 %	09:29:31
2	K 766.490 Radial†	1447.6	1240.7	[1000] µg/L	09:29:31
2	Sr 421.552†	8679.0	8520.3	[100] µg/L	09:29:31
2	Sc 361.383	1965847.1	1965847.1	99.119 %	09:30:19
2	Y 371.029	1361935.5	1361935.5	99.203 %	09:30:19
2	Ag 328.068†	11408.0	12011.8	[100] µg/L	09:30:25
2	As 188.979†	54.7	56.9	[100] µg/L	09:30:45
2	B 249.677†	2407.4	2114.4	[100] µg/L	09:30:25
2	Ba 233.527†	3617.6	3670.8	[100] µg/L	09:30:25
2	Be 313.107†	137919.7	142446.6	[100] µg/L	09:30:19
2	Cd 226.502†	3403.2	3578.5	[100] µg/L	09:30:25
2	Co 228.616†	1885.3	1910.3	[100] µg/L	09:30:45
2	Cr 267.716†	4326.5	4407.8	[100] µg/L	09:30:25
2	Cu 324.752†	16294.6	13950.7	[100] µg/L	09:30:25
2	Mn 257.610†	27640.4	28149.6	[100] µg/L	09:30:25
2	Mo 202.031†	907.6	922.4	[100] µg/L	09:30:45
2	Ni 231.604†	2058.1	1769.3	[100] µg/L	09:30:45
2	P 214.914†	240.3	221.2	[500] µg/L	09:30:45
2	Pb 220.353†	453.7	366.3	[100] µg/L	09:30:45
2	S 181.975 Axial†	62.1	48.0	[200] µg/L	09:30:45
2	Sb 206.836†	118.9	95.3	[100] µg/L	09:30:45
2	Se 196.026†	75.5	65.5	[100] µg/L	09:30:45
2	SiO2†	6022.7	4736.1	[1069.5] µg/L	09:30:25
2	Si 251.611†	5966.6	5716.0	[500] µg/L	09:30:25
2	Sn 189.927†	212.8	211.9	[100] µg/L	09:30:45
2	Ti 334.940†	38017.4	38190.6	[100] µg/L	09:30:25
2	Tl 190.801†	42.6	69.0	[100] µg/L	09:30:45
2	U 409.014†	988.0	1100.0	[100] µg/L	09:30:25
2	V 292.402†	8892.9	9005.3	[100] µg/L	09:30:25

2	Zn 213.857†	4353.1	3891.2	[100]	µg/L	09:30:25
3	Sc RADIAL	56447.0	56447.0	101	%	09:29:36
3	K 766.490 Radial†	1457.2	1251.6	[1000]	µg/L	09:29:36
3	Sr 421.552†	8633.2	8483.4	[100]	µg/L	09:29:36
3	Sc 361.383	1962564.5	1962564.5	98.953	%	09:30:51
3	Y 371.029	1360725.8	1360725.8	99.114	%	09:30:51
3	Ag 328.068†	11175.6	11796.2	[100]	µg/L	09:30:57
3	As 188.979†	43.4	45.6	[100]	µg/L	09:31:17
3	B 249.677†	2351.9	2062.4	[100]	µg/L	09:30:57
3	Ba 233.527†	3486.4	3544.3	[100]	µg/L	09:30:57
3	Be 313.107†	136633.8	141379.9	[100]	µg/L	09:30:51
3	Cd 226.502†	3306.7	3486.7	[100]	µg/L	09:30:57
3	Co 228.616†	1859.8	1887.8	[100]	µg/L	09:31:17
3	Cr 267.716†	4272.8	4360.8	[100]	µg/L	09:30:57
3	Cu 324.752†	15985.5	13665.8	[100]	µg/L	09:30:57
3	Mn 257.610†	26938.6	27487.0	[100]	µg/L	09:30:57
3	Mo 202.031†	893.3	909.5	[100]	µg/L	09:31:17
3	Ni 231.604†	2017.2	1731.5	[100]	µg/L	09:31:17
3	P 214.914†	239.9	221.2	[500]	µg/L	09:31:17
3	Pb 220.353†	434.8	347.9	[100]	µg/L	09:31:17
3	S 181.975 Axial†	56.2	42.2	[200]	µg/L	09:31:17
3	Sb 206.836†	124.0	100.7	[100]	µg/L	09:31:17
3	Se 196.026†	85.8	76.0	[100]	µg/L	09:31:17
3	SiO2†	5874.9	4596.9	[1069.5]	µg/L	09:30:57
3	Si 251.611†	5832.7	5590.8	[500]	µg/L	09:30:57
3	Sn 189.927†	205.0	204.4	[100]	µg/L	09:31:17
3	Ti 334.940†	37066.2	37293.5	[100]	µg/L	09:30:57
3	Tl 190.801†	41.2	67.7	[100]	µg/L	09:31:17
3	U 409.014†	975.1	1088.7	[100]	µg/L	09:30:57
3	V 292.402†	8624.6	8749.2	[100]	µg/L	09:30:57
3	Zn 213.857†	4281.3	3825.9	[100]	µg/L	09:30:57

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Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1966294.5	3972.56	0.20%	99.141 %
Sc RADIAL	56380.3	165.30	0.29%	101 %
Y 371.029	1363210.3	3311.38	0.24%	99.295 %
Ag 328.068†	11874.7	119.18	1.00%	[100] µg/L
As 188.979†	50.6	5.80	11.46%	[100] µg/L
B 249.677†	2086.5	26.19	1.26%	[100] µg/L
Ba 233.527†	3603.5	63.62	1.77%	[100] µg/L
Be 313.107†	141504.8	885.97	0.63%	[100] µg/L
Cd 226.502†	3514.2	55.87	1.59%	[100] µg/L
Co 228.616†	1892.1	16.45	0.87%	[100] µg/L
Cr 267.716†	4370.1	33.99	0.78%	[100] µg/L
Cu 324.752†	13768.4	158.26	1.15%	[100] µg/L
K 766.490 Radial†	1227.1	33.50	2.73%	[1000] µg/L
Mn 257.610†	27730.2	364.73	1.32%	[100] µg/L
Mo 202.031†	915.3	6.56	0.72%	[100] µg/L
Ni 231.604†	1742.0	23.92	1.37%	[100] µg/L
P 214.914†	218.5	4.67	2.14%	[500] µg/L
Pb 220.353†	360.1	10.55	2.93%	[100] µg/L
S 181.975 Axial†	44.0	3.50	7.95%	[200] µg/L
Sb 206.836†	103.3	9.49	9.19%	[100] µg/L
Se 196.026†	70.3	5.32	7.56%	[100] µg/L
SiO2†	4651.3	74.45	1.60%	[1069.5] µg/L
Si 251.611†	5663.2	64.84	1.14%	[500] µg/L
Sn 189.927†	207.2	4.11	1.98%	[100] µg/L
Sr 421.552†	8506.5	20.12	0.24%	[100] µg/L
Ti 334.940†	37630.7	488.26	1.30%	[100] µg/L
Tl 190.801†	66.9	2.54	3.79%	[100] µg/L
U 409.014†	1101.5	13.62	1.24%	[100] µg/L
V 292.402†	8852.7	134.89	1.52%	[100] µg/L
Zn 213.857†	3839.1	46.92	1.22%	[100] µg/L

Sequence No.: 3  
 Sample ID: S0.5  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 3  
 Date Collected: 2/8/2010 09:31:26  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	55592.3	55592.3	99.8 %		09:31:59
1	Al 396.153Radial†	6210.6	6234.3	[5000] µg/L		09:31:59
1	Ca 317.933Radial†	4997.4	4820.7	[5000] µg/L		09:32:20
1	K 766.490 Radial†	6557.2	6385.1	[5000] µg/L		09:31:59
1	Mg 279.077 IEC†	511.6	500.1	[5000] µg/L		09:32:20
1	Sr 421.552†	43556.0	43615.3	[500] µg/L		09:31:59
1	Sc 361.383	1941886.2	1941886.2	97.911 %		09:33:23
1	Y 371.029	1340626.5	1340626.5	97.650 %		09:33:23
1	Ag 328.068†	58136.4	59879.4	[500] µg/L		09:33:28
1	As 188.979†	240.7	247.5	[500] µg/L		09:33:49
1	B 249.677†	10670.1	10583.4	[500] µg/L		09:33:28
1	Ba 233.527†	17585.3	17981.6	[500] µg/L		09:33:28
1	Be 313.107†	696948.9	715122.1	[500] µg/L		09:33:23
1	Cd 226.502†	16790.2	17293.5	[500] µg/L		09:33:28
1	Co 228.616†	9421.2	9630.5	[500] µg/L		09:33:28
1	Cr 267.716†	21411.3	21911.0	[500] µg/L		09:33:28
1	Cu 324.752†	69146.3	68133.0	[500] µg/L		09:33:28
1	Mn 257.610†	134406.5	137538.1	[500] µg/L		09:33:28
1	Mo 202.031†	4537.5	4641.0	[500] µg/L		09:33:49
1	Ni 231.604†	8819.1	8700.1	[500] µg/L		09:33:28
1	P 214.914†	1124.8	1127.6	[2500] µg/L		09:33:49
1	Pb 220.353†	1869.3	1817.7	[500] µg/L		09:33:49
1	S 181.975 Axial†	227.1	217.4	[1000] µg/L		09:33:49
1	Sb 206.836†	507.8	494.0	[500] µg/L		09:33:49
1	Se 196.026†	333.2	329.6	[500] µg/L		09:33:49
1	SiO2†	24135.2	23310.1	[5347.5] µg/L		09:33:28
1	Si 251.611†	28225.0	28523.7	[2500] µg/L		09:33:28
1	Sn 189.927†	1043.3	1062.7	[500] µg/L		09:33:49
1	Ti 334.940†	189174.5	193046.5	[500] µg/L		09:33:23
1	Tl 190.801†	312.5	345.3	[500] µg/L		09:33:49
1	U 409.014†	5288.1	5504.2	[500] µg/L		09:33:28
1	V 292.402†	43452.4	44413.0	[500] µg/L		09:33:28
1	Zn 213.857†	19145.8	19053.8	[500] µg/L		09:33:28
2	Sc RADIAL	55778.4	55778.4	100 %		09:32:25
2	Al 396.153Radial†	6121.9	6124.9	[5000] µg/L		09:32:25
2	Ca 317.933Radial†	4961.9	4768.5	[5000] µg/L		09:32:45
2	K 766.490 Radial†	6477.9	6284.0	[5000] µg/L		09:32:25
2	Mg 279.077 IEC†	513.5	500.3	[5000] µg/L		09:32:45
2	Sr 421.552†	43031.3	42945.5	[500] µg/L		09:32:25
2	Sc 361.383	1973765.7	1973765.7	99.518 %		09:33:55
2	Y 371.029	1362527.8	1362527.8	99.246 %		09:33:55
2	Ag 328.068†	57798.0	58580.4	[500] µg/L		09:34:01
2	As 188.979†	240.5	243.4	[500] µg/L		09:34:21
2	B 249.677†	10627.1	10364.1	[500] µg/L		09:34:01
2	Ba 233.527†	17558.3	17664.3	[500] µg/L		09:34:01
2	Be 313.107†	690897.9	697544.8	[500] µg/L		09:33:55
2	Cd 226.502†	16806.0	17032.5	[500] µg/L		09:34:01
2	Co 228.616†	9357.9	9411.5	[500] µg/L		09:34:01
2	Cr 267.716†	21345.0	21491.1	[500] µg/L		09:34:01
2	Cu 324.752†	68751.2	66595.3	[500] µg/L		09:34:01
2	Mn 257.610†	133531.2	134441.4	[500] µg/L		09:34:01
2	Mo 202.031†	4455.8	4484.2	[500] µg/L		09:34:21
2	Ni 231.604†	8776.1	8511.5	[500] µg/L		09:34:01
2	P 214.914†	1107.3	1091.5	[2500] µg/L		09:34:21
2	Pb 220.353†	1842.6	1760.1	[500] µg/L		09:34:21
2	S 181.975 Axial†	221.9	208.4	[1000] µg/L		09:34:21
2	Sb 206.836†	507.1	485.0	[500] µg/L		09:34:21
2	Se 196.026†	327.9	318.7	[500] µg/L		09:34:21
2	SiO2†	24039.2	22815.5	[5347.5] µg/L		09:34:01

2	Si 251.611†	28128.1	27960.7	[2500]	µg/L	09:34:01
2	Sn 189.927†	1023.4	1025.5	[500]	µg/L	09:34:21
2	Ti 334.940†	187545.5	188289.0	[500]	µg/L	09:33:55
2	Tl 190.801†	307.2	334.8	[500]	µg/L	09:34:21
2	U 409.014†	5175.2	5303.6	[500]	µg/L	09:34:01
2	V 292.402†	43308.3	43551.4	[500]	µg/L	09:34:01
2	Zn 213.857†	19053.9	18645.5	[500]	µg/L	09:34:01
3	Sc RADIAL	56581.0	56581.0	102	%	09:32:51
3	Al 396.153Radial†	6224.2	6138.9	[5000]	µg/L	09:32:51
3	Ca 317.933Radial†	4961.2	4697.5	[5000]	µg/L	09:33:11
3	K 766.490 Radial†	6625.1	6337.1	[5000]	µg/L	09:32:51
3	Mg 279.077 IEC†	509.8	489.3	[5000]	µg/L	09:33:11
3	Sr 421.552†	43740.5	43034.2	[500]	µg/L	09:32:51
3	Sc 361.383	1993008.9	1993008.9	100.49	%	09:34:28
3	Y 371.029	1374088.0	1374088.0	100.09	%	09:34:28
3	Ag 328.068†	54464.0	54701.7	[500]	µg/L	09:34:34
3	As 188.979†	206.6	207.3	[500]	µg/L	09:34:54
3	B 249.677†	9964.7	9601.9	[500]	µg/L	09:34:34
3	Ba 233.527†	16080.0	16022.8	[500]	µg/L	09:34:34
3	Be 313.107†	654913.7	655032.2	[500]	µg/L	09:34:28
3	Cd 226.502†	15300.8	15371.5	[500]	µg/L	09:34:34
3	Co 228.616†	8468.7	8435.9	[500]	µg/L	09:34:34
3	Cr 267.716†	18803.4	18754.8	[500]	µg/L	09:34:34
3	Cu 324.752†	62592.2	59799.2	[500]	µg/L	09:34:34
3	Mn 257.610†	121010.3	120685.8	[500]	µg/L	09:34:34
3	Mo 202.031†	3771.5	3760.0	[500]	µg/L	09:34:54
3	Ni 231.604†	7993.8	7647.9	[500]	µg/L	09:34:34
3	P 214.914†	963.3	937.4	[2500]	µg/L	09:34:54
3	Pb 220.353†	1622.6	1523.3	[500]	µg/L	09:34:54
3	S 181.975 Axial†	202.1	186.5	[1000]	µg/L	09:34:54
3	Sb 206.836†	437.1	410.4	[500]	µg/L	09:34:54
3	Se 196.026†	297.8	285.6	[500]	µg/L	09:34:54
3	SiO2†	22338.0	20889.3	[5347.5]	µg/L	09:34:34
3	Si 251.611†	26052.1	25621.8	[2500]	µg/L	09:34:34
3	Sn 189.927†	862.2	855.2	[500]	µg/L	09:34:54
3	Ti 334.940†	177036.5	176011.4	[500]	µg/L	09:34:28
3	Tl 190.801†	276.5	301.2	[500]	µg/L	09:34:54
3	U 409.014†	4574.3	4655.3	[500]	µg/L	09:34:34
3	V 292.402†	39100.6	38943.9	[500]	µg/L	09:34:34
3	Zn 213.857†	17397.7	16812.5	[500]	µg/L	09:34:34

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1969553.6	25820.34	1.31%	99.306 %
Sc RADIAL	55983.9	525.41	0.94%	100 %
Y 371.029	1359080.8	16994.97	1.25%	98.995 %
Ag 328.068†	57720.5	2693.79	4.67%	[500] µg/L
Al 396.153Radial†	6166.0	59.50	0.96%	[5000] µg/L
As 188.979†	232.7	22.10	9.49%	[500] µg/L
B 249.677†	10183.1	515.17	5.06%	[500] µg/L
Ba 233.527†	17222.9	1051.34	6.10%	[500] µg/L
Be 313.107†	689233.1	30895.20	4.48%	[500] µg/L
Ca 317.933Radial†	4762.2	61.83	1.30%	[5000] µg/L
Cd 226.502†	16565.8	1042.52	6.29%	[500] µg/L
Co 228.616†	9159.3	636.00	6.94%	[500] µg/L
Cr 267.716†	20718.9	1713.93	8.27%	[500] µg/L
Cu 324.752†	64842.5	4434.78	6.84%	[500] µg/L
K 766.490 Radial†	6335.4	50.57	0.80%	[5000] µg/L
Mg 279.077 IEC†	496.6	6.26	1.26%	[5000] µg/L
Mn 257.610†	130888.4	8970.38	6.85%	[500] µg/L
Mo 202.031†	4295.0	469.99	10.94%	[500] µg/L
Ni 231.604†	8286.5	561.06	6.77%	[500] µg/L
P 214.914†	1052.2	101.02	9.60%	[2500] µg/L
Pb 220.353†	1700.4	156.04	9.18%	[500] µg/L
S 181.975 Axial†	204.1	15.86	7.77%	[1000] µg/L
Sb 206.836†	463.1	45.89	9.91%	[500] µg/L
Se 196.026†	311.3	22.90	7.35%	[500] µg/L
SiO2†	22338.3	1279.00	5.73%	[5347.5] µg/L
Si 251.611†	27368.7	1538.82	5.62%	[2500] µg/L

Sn 189.927†	981.2	110.67	11.28%	[500] µg/L
Sr 421.552†	43198.3	363.83	0.84%	[500] µg/L
Ti 334.940†	185782.3	8789.82	4.73%	[500] µg/L
Tl 190.801†	327.1	22.99	7.03%	[500] µg/L
U 409.014†	5154.3	443.70	8.61%	[500] µg/L
V 292.402†	42302.8	2940.59	6.95%	[500] µg/L
Zn 213.857†	18170.6	1193.72	6.57%	[500] µg/L

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

Autosampler Location: 4  
 Date Collected: 2/8/2010 09:35:03  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	56862.0	56862.0	102 %	09:35:36
1	Al 396.153Radial†	12302.2	12064.2	[10000] µg/L	09:35:36
1	Ca 317.933Radial†	9845.6	9459.4	[10000] µg/L	09:35:56
1	Fe 238.204 Radial†	1131.7	1093.1	[10000] µg/L	09:35:56
1	K 766.490 Radial†	12788.4	12344.1	[10000] µg/L	09:35:36
1	Mg 279.077 IEC†	1017.4	984.3	[10000] µg/L	09:35:56
1	Na 589.592 Radial†	27821.5	26789.8	[10000] µg/L	09:35:36
1	Sr 421.552†	86007.9	84237.2	[1000] µg/L	09:35:36
1	Sc 361.383	1956496.3	1956496.3	98.647 %	09:37:00
1	Y 371.029	1348774.4	1348774.4	98.244 %	09:37:00
1	Ag 328.068†	116394.4	118492.9	[1000] µg/L	09:37:06
1	As 188.979†	488.9	497.3	[1000] µg/L	09:37:26
1	B 249.677†	21449.0	21428.7	[1000] µg/L	09:37:06
1	Ba 233.527†	35602.5	36111.8	[1000] µg/L	09:37:06
1	Be 313.107†	1409693.7	1432325.0	[1000] µg/L	09:37:00
1	Cd 226.502†	34092.6	34705.1	[1000] µg/L	09:37:06
1	Co 228.616†	18918.2	19185.9	[1000] µg/L	09:37:06
1	Cr 267.716†	43360.0	43997.3	[1000] µg/L	09:37:06
1	Cu 324.752†	136089.7	135467.1	[1000] µg/L	09:37:06
1	Mn 257.610†	272358.8	276357.0	[1000] µg/L	09:37:00
1	Mo 202.031†	9175.1	9307.6	[1000] µg/L	09:37:06
1	Ni 231.604†	17472.1	17404.6	[1000] µg/L	09:37:06
1	P 214.914†	2250.4	2260.1	[5000] µg/L	09:37:26
1	Pb 220.353†	3666.9	3625.7	[1000] µg/L	09:37:26
1	S 181.975 Axial†	440.7	432.1	[2000] µg/L	09:37:26
1	Sb 206.836†	1002.3	991.4	[1000] µg/L	09:37:26
1	Se 196.026†	656.2	654.5	[1000] µg/L	09:37:26
1	SiO2†	47339.8	46648.8	[10695] µg/L	09:37:06
1	Si 251.611†	56579.2	57051.4	[5000] µg/L	09:37:06
1	Sn 189.927†	2098.9	2124.8	[1000] µg/L	09:37:26
1	Ti 334.940†	379402.4	384440.2	[1000] µg/L	09:37:00
1	Tl 190.801†	648.8	683.8	[1000] µg/L	09:37:26
1	U 409.014†	10655.6	10905.0	[1000] µg/L	09:37:06
1	V 292.402†	87902.1	89140.8	[1000] µg/L	09:37:06
1	Zn 213.857†	38055.2	38076.4	[1000] µg/L	09:37:06
2	Sc RADIAL	57054.2	57054.2	102 %	09:36:02
2	Al 396.153Radial†	12500.1	12216.8	[10000] µg/L	09:36:02
2	Ca 317.933Radial†	9830.3	9411.9	[10000] µg/L	09:36:22
2	Fe 238.204 Radial†	1127.3	1085.1	[10000] µg/L	09:36:22
2	K 766.490 Radial†	12947.5	12457.2	[10000] µg/L	09:36:02
2	Mg 279.077 IEC†	1019.3	982.7	[10000] µg/L	09:36:22
2	Na 589.592 Radial†	28195.5	27063.2	[10000] µg/L	09:36:02
2	Sr 421.552†	87525.2	85435.1	[1000] µg/L	09:36:02
2	Sc 361.383	1939343.3	1939343.3	97.782 %	09:37:34
2	Y 371.029	1337246.1	1337246.1	97.404 %	09:37:34
2	Ag 328.068†	117063.5	120220.7	[1000] µg/L	09:37:39
2	As 188.979†	486.9	499.6	[1000] µg/L	09:38:00
2	B 249.677†	21501.2	21674.4	[1000] µg/L	09:37:39
2	Ba 233.527†	35738.0	36569.5	[1000] µg/L	09:37:39
2	Be 313.107†	1412381.1	1447712.7	[1000] µg/L	09:37:34
2	Cd 226.502†	34259.5	35181.5	[1000] µg/L	09:37:39
2	Co 228.616†	18972.1	19410.7	[1000] µg/L	09:37:39
2	Cr 267.716†	43535.4	44565.4	[1000] µg/L	09:37:39
2	Cu 324.752†	136738.2	137350.4	[1000] µg/L	09:37:39
2	Mn 257.610†	273223.4	279683.2	[1000] µg/L	09:37:34
2	Mo 202.031†	9231.4	9447.5	[1000] µg/L	09:37:39
2	Ni 231.604†	17544.7	17635.5	[1000] µg/L	09:37:39
2	P 214.914†	2260.6	2290.6	[5000] µg/L	09:38:00
2	Pb 220.353†	3656.1	3647.5	[1000] µg/L	09:38:00

2	S 181.975 Axial†	440.9	436.3	[2000]	µg/L	09:38:00
2	Sb 206.836†	1001.2	999.3	[1000]	µg/L	09:38:00
2	Se 196.026†	650.9	655.0	[1000]	µg/L	09:38:00
2	SiO2†	47577.4	47316.3	[10695]	µg/L	09:37:39
2	Si 251.611†	56896.6	57883.3	[5000]	µg/L	09:37:39
2	Sn 189.927†	2083.9	2128.3	[1000]	µg/L	09:38:00
2	Ti 334.940†	380156.3	388612.9	[1000]	µg/L	09:37:34
2	Tl 190.801†	650.3	691.1	[1000]	µg/L	09:38:00
2	U 409.014†	10661.1	11006.1	[1000]	µg/L	09:37:39
2	V 292.402†	88337.0	90373.7	[1000]	µg/L	09:37:39
2	Zn 213.857†	38247.4	38614.2	[1000]	µg/L	09:37:39
3	Sc RADIAL	55361.1	55361.1	99.4	%	09:36:28
3	Al 396.153Radial†	12700.7	12792.1	[10000]	µg/L	09:36:28
3	Ca 317.933Radial†	9923.3	9799.1	[10000]	µg/L	09:36:48
3	Fe 238.204 Radial†	1140.4	1131.9	[10000]	µg/L	09:36:48
3	K 766.490 Radial†	13043.4	12940.4	[10000]	µg/L	09:36:28
3	Mg 279.077 IEC†	1023.4	1017.3	[10000]	µg/L	09:36:48
3	Na 589.592 Radial†	28572.2	28284.4	[10000]	µg/L	09:36:28
3	Sr 421.552†	88630.3	89161.2	[1000]	µg/L	09:36:28
3	Sc 361.383	1955791.7	1955791.7	98.612	%	09:38:07
3	Y 371.029	1348579.5	1348579.5	98.230	%	09:38:07
3	Ag 328.068†	110041.9	112093.4	[1000]	µg/L	09:38:13
3	As 188.979†	413.4	420.9	[1000]	µg/L	09:38:33
3	B 249.677†	20085.8	20054.2	[1000]	µg/L	09:38:13
3	Ba 233.527†	32599.8	33079.7	[1000]	µg/L	09:38:13
3	Be 313.107†	1322205.7	1344120.2	[1000]	µg/L	09:38:07
3	Cd 226.502†	31099.7	31682.5	[1000]	µg/L	09:38:13
3	Co 228.616†	17047.8	17296.1	[1000]	µg/L	09:38:13
3	Cr 267.716†	38056.2	38634.7	[1000]	µg/L	09:38:13
3	Cu 324.752†	123489.6	122739.2	[1000]	µg/L	09:38:13
3	Mn 257.610†	256332.8	260204.8	[1000]	µg/L	09:38:07
3	Mo 202.031†	8269.0	8392.1	[1000]	µg/L	09:38:13
3	Ni 231.604†	15793.7	15709.0	[1000]	µg/L	09:38:13
3	P 214.914†	1910.8	1916.5	[5000]	µg/L	09:38:33
3	Pb 220.353†	3172.6	3125.8	[1000]	µg/L	09:38:33
3	S 181.975 Axial†	379.0	369.7	[2000]	µg/L	09:38:33
3	Sb 206.836†	858.0	845.5	[1000]	µg/L	09:38:33
3	Se 196.026†	574.3	571.7	[1000]	µg/L	09:38:33
3	SiO2†	43948.7	43227.3	[10695]	µg/L	09:38:13
3	Si 251.611†	52439.4	52874.0	[5000]	µg/L	09:38:13
3	Sn 189.927†	1712.0	1733.2	[1000]	µg/L	09:38:33
3	Ti 334.940†	353753.0	358568.2	[1000]	µg/L	09:38:07
3	Tl 190.801†	580.5	614.8	[1000]	µg/L	09:38:33
3	U 409.014†	9398.9	9634.5	[1000]	µg/L	09:38:13
3	V 292.402†	79052.4	80198.6	[1000]	µg/L	09:38:13
3	Zn 213.857†	34456.6	34441.1	[1000]	µg/L	09:38:13

## Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1950543.7	9706.29	0.50%	98.347	%
Sc RADIAL	56425.8	927.02	1.64%	101	%
Y 371.029	1344866.7	6600.32	0.49%	97.959	%
Ag 328.068†	116935.7	4281.57	3.66%	[1000]	µg/L
Al 396.153Radial†	12357.7	383.85	3.11%	[10000]	µg/L
As 188.979†	472.6	44.79	9.48%	[1000]	µg/L
B 249.677†	21052.4	873.18	4.15%	[1000]	µg/L
Ba 233.527†	35253.7	1896.53	5.38%	[1000]	µg/L
Be 313.107†	1408052.6	55899.15	3.97%	[1000]	µg/L
Ca 317.933Radial†	9556.8	211.20	2.21%	[10000]	µg/L
Cd 226.502†	33856.4	1897.61	5.60%	[1000]	µg/L
Co 228.616†	18630.9	1161.41	6.23%	[1000]	µg/L
Cr 267.716†	42399.2	3272.45	7.72%	[1000]	µg/L
Cu 324.752†	131852.3	7948.08	6.03%	[1000]	µg/L
Fe 238.204 Radial†	1103.3	25.01	2.27%	[10000]	µg/L
K 766.490 Radial†	12580.6	316.75	2.52%	[10000]	µg/L
Mg 279.077 IEC†	994.8	19.54	1.96%	[10000]	µg/L
Mn 257.610†	272081.7	10419.22	3.83%	[1000]	µg/L
Mo 202.031†	9049.1	573.21	6.33%	[1000]	µg/L
Na 589.592 Radial†	27379.1	795.82	2.91%	[10000]	µg/L

Ni 231.604†	16916.4	1051.99	6.22%	[1000]	µg/L
P 214.914†	2155.7	207.73	9.64%	[5000]	µg/L
Pb 220.353†	3466.4	295.12	8.51%	[1000]	µg/L
S 181.975 Axial†	412.7	37.29	9.04%	[2000]	µg/L
Sb 206.836†	945.4	86.63	9.16%	[1000]	µg/L
Se 196.026†	627.0	47.95	7.65%	[1000]	µg/L
SiO2†	45730.8	2193.64	4.80%	[10695]	µg/L
Si 251.611†	55936.2	2684.38	4.80%	[5000]	µg/L
Sn 189.927†	1995.5	227.11	11.38%	[1000]	µg/L
Sr 421.552†	86277.8	2567.89	2.98%	[1000]	µg/L
Ti 334.940†	377207.1	16276.00	4.31%	[1000]	µg/L
Tl 190.801†	663.2	42.14	6.35%	[1000]	µg/L
U 409.014†	10515.2	764.39	7.27%	[1000]	µg/L
V 292.402†	86571.0	5552.98	6.41%	[1000]	µg/L
Zn 213.857†	37043.9	2270.08	6.13%	[1000]	µg/L

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

Autosampler Location: 5  
 Date Collected: 2/8/2010 09:38:43  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc RADIAL	54544.7	54544.7	97.9 %	09:39:16
1	Al 396.153Radial†	62550.2	63903.8	[50000] µg/L	09:39:16
1	Ca 317.933Radial†	48991.7	49856.3	[50000] µg/L	09:39:16
1	Fe 238.204 Radial†	2267.5	2300.4	[20000] µg/L	09:39:36
1	Mg 279.077 IEC†	5024.1	5119.3	[50000] µg/L	09:39:36
1	Na 589.592 Radial†	55980.0	56711.4	[20000] µg/L	09:39:16
1	Sc 361.383	1940064.5	1940064.5	97.819 %	09:40:40
1	Y 371.029	1332073.4	1332073.4	97.027 %	09:40:40
2	Sc RADIAL	55045.7	55045.7	98.8 %	09:39:42
2	Al 396.153Radial†	62310.4	63079.6	[50000] µg/L	09:39:42
2	Ca 317.933Radial†	48829.7	49236.9	[50000] µg/L	09:39:42
2	Fe 238.204 Radial†	2238.2	2249.7	[20000] µg/L	09:40:02
2	Mg 279.077 IEC†	4976.9	5024.9	[50000] µg/L	09:40:02
2	Na 589.592 Radial†	55846.9	56056.2	[20000] µg/L	09:39:42
2	Sc 361.383	1909338.9	1909338.9	96.270 %	09:40:47
2	Y 371.029	1309669.0	1309669.0	95.396 %	09:40:47
3	Sc RADIAL	54997.8	54997.8	98.7 %	09:40:07
3	Al 396.153Radial†	62310.2	63134.3	[50000] µg/L	09:40:07
3	Ca 317.933Radial†	48808.5	49258.5	[50000] µg/L	09:40:07
3	Fe 238.204 Radial†	2231.9	2245.3	[20000] µg/L	09:40:28
3	Mg 279.077 IEC†	4989.2	5041.7	[50000] µg/L	09:40:28
3	Na 589.592 Radial†	55836.7	56095.2	[20000] µg/L	09:40:07
3	Sc 361.383	1929852.9	1929852.9	97.304 %	09:40:55
3	Y 371.029	1323164.9	1323164.9	96.379 %	09:40:55

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1926418.8	15648.05	0.81%	97.131 %
Sc RADIAL	54862.8	276.46	0.50%	98.5 %
Y 371.029	1321635.8	11280.21	0.85%	96.267 %
Al 396.153Radial†	63372.5	460.87	0.73%	[50000] µg/L
Ca 317.933Radial†	49450.6	351.53	0.71%	[50000] µg/L
Fe 238.204 Radial†	2265.1	30.62	1.35%	[20000] µg/L
Mg 279.077 IEC†	5062.0	50.37	1.00%	[50000] µg/L
Na 589.592 Radial†	56287.6	367.52	0.65%	[20000] µg/L

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	116.7	0.00000	0.999986	
Al 396.153Radial	3	Lin Thru 0	0.0	1.266	0.00000	0.999985	
As 188.979	3	Lin Thru 0	0.0	0.4715	0.00000	0.999961	
B 249.677	3	Lin Thru 0	0.0	20.91	0.00000	0.999915	
Ba 233.527	3	Lin Thru 0	0.0	35.10	0.00000	0.999955	
Be 313.107	3	Lin Thru 0	0.0	1402	0.00000	0.999964	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.9874	0.00000	0.999973	
Cd 226.502	3	Lin Thru 0	0.0	33.72	0.00000	0.999956	
Co 228.616	3	Lin Thru 0	0.0	18.57	0.00000	0.999976	
Cr 267.716	3	Lin Thru 0	0.0	42.22	0.00000	0.999954	
Cu 324.752	3	Lin Thru 0	0.0	131.5	0.00000	0.999969	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1127	0.00000	0.999946	
K 766.490 Radial	3	Lin Thru 0	0.0	1.260	0.00000	0.999993	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.1012	0.00000	0.999993	
Mn 257.610	3	Lin Thru 0	0.0	270.1	0.00000	0.999882	
Mo 202.031	3	Lin Thru 0	0.0	8.959	0.00000	0.999790	
Na 589.592 Radia	2	Lin Thru 0	0.0	2.799	0.00000	0.999940	

Ni 231.604	3	Lin Thru 0	0.0	16.85	0.00000	0.999963
P 214.914	3	Lin Thru 0	0.0	0.4292	0.00000	0.999953
Pb 220.353	3	Lin Thru 0	0.0	3.454	0.00000	0.999964
S 181.975 Axial	3	Lin Thru 0	0.0	0.2060	0.00000	0.999972
Sb 206.836	3	Lin Thru 0	0.0	0.9423	0.00000	0.999930
Se 196.026	3	Lin Thru 0	0.0	0.6268	0.00000	0.999937
SiO2	3	Lin Thru 0	0.0	4.257	0.00000	0.999956
Si 251.611	3	Lin Thru 0	0.0	11.14	0.00000	0.999962
Sn 189.927	3	Lin Thru 0	0.0	1.989	0.00000	0.999971
Sr 421.552	3	Lin Thru 0	0.0	86.29	0.00000	0.999999
Ti 334.940	3	Lin Thru 0	0.0	376.1	0.00000	0.999982
Tl 190.801	3	Lin Thru 0	0.0	0.6615	0.00000	0.999985
U 409.014	3	Lin Thru 0	0.0	10.48	0.00000	0.999959
V 292.402	3	Lin Thru 0	0.0	86.20	0.00000	0.999956
Zn 213.857	3	Lin Thru 0	0.0	36.92	0.00000	0.999965

Sequence No.: 6  
 Sample ID: ICV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 9  
 Date Collected: 2/8/2010 09:41:04  
 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	55064.2	55064.2	98.8 %			09:41:38
1	Al 396.153Radial†	6363.5	6448.7	5082.6 µg/L		5082.6 ppb	09:41:58
1	Ca 317.933Radial†	5065.5	4937.6	5000.7 µg/L		5000.7 ppb	09:41:58
1	Fe 238.204 Radial†	585.9	577.0	5132.7 µg/L		5132.7 ppb	09:41:58
1	K 766.490 Radial†	3394.1	3247.6	2578.3 µg/L		2578.3 ppb	09:41:38
1	Mg 279.077 IEC†	535.2	528.8	5231.8 µg/L		5231.8 ppb	09:41:58
1	Na 589.592 Radial†	7431.5	7048.3	2518.1 µg/L		2518.1 ppb	09:41:38
1	Sr 421.552†	46297.7	46808.1	542.44 µg/L		542.44 ppb	09:41:38
1	Sc 361.383	1944330.8	1944330.8	98.034 %			09:43:02
1	Y 371.029	1343002.3	1343002.3	97.824 %			09:43:02
1	Ag 328.068†	29916.4	31018.7	269.76 µg/L		269.76 ppb	09:43:07
1	As 188.979†	235.8	242.2	512.74 µg/L		512.74 ppb	09:43:28
1	B 249.677†	11379.6	11293.4	538.14 µg/L		538.14 ppb	09:43:07
1	Ba 233.527†	18305.8	18693.9	533.56 µg/L		533.56 ppb	09:43:07
1	Be 313.107†	370524.7	381256.4	271.69 µg/L		271.69 ppb	09:43:02
1	Cd 226.502†	17289.6	17781.3	527.23 µg/L		527.23 ppb	09:43:07
1	Co 228.616†	9753.3	9957.2	535.59 µg/L		535.59 ppb	09:43:07
1	Cr 267.716†	21545.7	22020.6	521.92 µg/L		521.92 ppb	09:43:07
1	Cu 324.752†	71654.1	70602.4	537.74 µg/L		537.74 ppb	09:43:07
1	Mn 257.610†	140886.3	143975.3	533.56 µg/L		533.56 ppb	09:43:02
1	Mo 202.031†	4931.9	5037.6	562.50 µg/L		562.50 ppb	09:43:28
1	Ni 231.604†	9013.0	8886.6	526.75 µg/L		526.75 ppb	09:43:07
1	P 214.914†	1153.5	1155.5	2641.7 µg/L		2641.7 ppb	09:43:28
1	Pb 220.353†	1912.9	1859.8	538.65 µg/L		538.65 ppb	09:43:28
1	S 181.975 Axial†	548.0	544.3	2642.1 µg/L		2642.1 ppb	09:43:28
1	Sb 206.836†	524.7	510.6	544.71 µg/L		544.71 ppb	09:43:28
1	Se 196.026†	1631.0	1653.0	2645.3 µg/L		2645.3 ppb	09:43:28
1	SiO2†	47197.3	46803.7	10995 µg/L		10995 ppb	09:43:07
1	Si 251.611†	56216.8	57040.6	5120.0 µg/L		5120.0 ppb	09:43:07
1	Sn 189.927†	1142.3	1162.3	584.29 µg/L		584.29 ppb	09:43:28
1	Ti 334.940†	191229.9	194900.2	517.91 µg/L		517.91 ppb	09:43:02
1	Tl 190.801†	335.8	368.6	563.44 µg/L		563.44 ppb	09:43:28
1	U 409.014†	5217.7	5425.6	516.78 µg/L		516.78 ppb	09:43:07
1	V 292.402†	45178.5	46117.9	541.71 µg/L		541.71 ppb	09:43:07
1	Zn 213.857†	19917.7	19816.6	533.08 µg/L		533.08 ppb	09:43:07
2	Sc RADIAL	54523.3	54523.3	97.9 %			09:42:04
2	Al 396.153Radial†	6358.0	6506.9	5128.7 µg/L		5128.7 ppb	09:42:24
2	Ca 317.933Radial†	5078.7	5002.0	5065.8 µg/L		5065.8 ppb	09:42:24
2	Fe 238.204 Radial†	585.5	582.5	5181.7 µg/L		5181.7 ppb	09:42:24
2	K 766.490 Radial†	3479.4	3368.9	2674.5 µg/L		2674.5 ppb	09:42:04
2	Mg 279.077 IEC†	526.7	525.6	5199.4 µg/L		5199.4 ppb	09:42:24
2	Na 589.592 Radial†	7494.0	7186.8	2567.6 µg/L		2567.6 ppb	09:42:04
2	Sr 421.552†	46917.2	47905.9	555.16 µg/L		555.16 ppb	09:42:04
2	Sc 361.383	1927692.5	1927692.5	97.195 %			09:43:35
2	Y 371.029	1330455.2	1330455.2	96.910 %			09:43:35
2	Ag 328.068†	30256.6	31632.2	275.10 µg/L		275.10 ppb	09:43:41
2	As 188.979†	228.9	237.2	502.12 µg/L		502.12 ppb	09:44:01
2	B 249.677†	11480.1	11497.0	547.86 µg/L		547.86 ppb	09:43:41
2	Ba 233.527†	18510.3	19065.5	544.17 µg/L		544.17 ppb	09:43:41
2	Be 313.107†	376192.6	390350.1	278.17 µg/L		278.17 ppb	09:43:35
2	Cd 226.502†	17489.6	18139.4	537.85 µg/L		537.85 ppb	09:43:41
2	Co 228.616†	9889.2	10182.9	547.71 µg/L		547.71 ppb	09:43:41
2	Cr 267.716†	21809.8	22481.9	532.85 µg/L		532.85 ppb	09:43:41
2	Cu 324.752†	72533.7	72138.2	549.43 µg/L		549.43 ppb	09:43:41
2	Mn 257.610†	142804.9	147189.6	545.47 µg/L		545.47 ppb	09:43:35
2	Mo 202.031†	4803.8	4949.2	552.64 µg/L		552.64 ppb	09:44:01
2	Ni 231.604†	9130.0	9086.4	538.59 µg/L		538.59 ppb	09:43:41
2	P 214.914†	1136.0	1147.5	2621.8 µg/L		2621.8 ppb	09:44:01
2	Pb 220.353†	1861.2	1823.5	528.08 µg/L		528.08 ppb	09:44:01

2	S 181.975 Axial†	534.6	535.4	2598.6 µg/L	2598.6 ppb	09:44:01
2	Sb 206.836†	514.0	504.2	537.65 µg/L	537.65 ppb	09:44:01
2	Se 196.026†	1594.3	1629.6	2608.1 µg/L	2608.1 ppb	09:44:01
2	SiO2†	47836.8	47877.3	11247 µg/L	11247 ppb	09:43:41
2	Si 251.611†	56976.6	58317.3	5234.6 µg/L	5234.6 ppb	09:43:41
2	Sn 189.927†	1116.4	1145.8	575.94 µg/L	575.94 ppb	09:44:01
2	Ti 334.940†	193816.6	199245.2	529.46 µg/L	529.46 ppb	09:43:35
2	Tl 190.801†	324.7	360.1	550.73 µg/L	550.73 ppb	09:44:01
2	U 409.014†	5251.3	5506.1	524.46 µg/L	524.46 ppb	09:43:41
2	V 292.402†	45760.6	47114.5	553.24 µg/L	553.24 ppb	09:43:41
2	Zn 213.857†	20122.9	20203.1	543.48 µg/L	543.48 ppb	09:43:41
3	Sc RADIAL	55224.5	55224.5	99.1 %		09:42:29
3	Al 396.153Radial†	6354.8	6421.2	5062.9 µg/L	5062.9 ppb	09:42:50
3	Ca 317.933Radial†	5082.2	4939.6	5002.7 µg/L	5002.7 ppb	09:42:50
3	Fe 238.204 Radial†	589.7	579.1	5150.2 µg/L	5150.2 ppb	09:42:50
3	K 766.490 Radial†	3377.0	3220.1	2556.7 µg/L	2556.7 ppb	09:42:29
3	Mg 279.077 IEC†	529.6	521.6	5159.1 µg/L	5159.1 ppb	09:42:50
3	Na 589.592 Radial†	7468.0	7063.3	2523.4 µg/L	2523.4 ppb	09:42:29
3	Sr 421.552†	46377.1	46752.3	541.79 µg/L	541.79 ppb	09:42:29
3	Sc 361.383	1956761.0	1956761.0	98.661 %		09:44:08
3	Y 371.029	1350822.2	1350822.2	98.393 %		09:44:08
3	Ag 328.068†	28256.5	29142.5	253.29 µg/L	253.29 ppb	09:44:14
3	As 188.979†	200.1	204.5	432.82 µg/L	432.82 ppb	09:44:34
3	B 249.677†	10658.8	10489.0	499.56 µg/L	499.56 ppb	09:44:14
3	Ba 233.527†	16705.7	16953.5	483.87 µg/L	483.87 ppb	09:44:14
3	Be 313.107†	347317.7	355333.5	253.22 µg/L	253.22 ppb	09:44:08
3	Cd 226.502†	15708.1	16066.4	476.32 µg/L	476.32 ppb	09:44:14
3	Co 228.616†	8874.3	9003.1	484.20 µg/L	484.20 ppb	09:44:14
3	Cr 267.716†	18906.4	19205.8	455.21 µg/L	455.21 ppb	09:44:14
3	Cu 324.752†	65005.9	63399.5	482.96 µg/L	482.96 ppb	09:44:14
3	Mn 257.610†	132404.1	134464.9	498.35 µg/L	498.35 ppb	09:44:08
3	Mo 202.031†	4059.9	4121.7	460.27 µg/L	460.27 ppb	09:44:34
3	Ni 231.604†	8185.8	7989.8	473.60 µg/L	473.60 ppb	09:44:14
3	P 214.914†	985.5	977.7	2231.5 µg/L	2231.5 ppb	09:44:34
3	Pb 220.353†	1646.0	1576.9	456.62 µg/L	456.62 ppb	09:44:34
3	S 181.975 Axial†	479.3	471.2	2287.3 µg/L	2287.3 ppb	09:44:34
3	Sb 206.836†	446.1	427.5	455.62 µg/L	455.62 ppb	09:44:34
3	Se 196.026†	1417.7	1426.2	2283.5 µg/L	2283.5 ppb	09:44:34
3	SiO2†	43822.9	43077.7	10119 µg/L	10119 ppb	09:44:14
3	Si 251.611†	52100.5	52504.2	4712.8 µg/L	4712.8 ppb	09:44:14
3	Sn 189.927†	927.5	937.2	471.13 µg/L	471.13 ppb	09:44:34
3	Ti 334.940†	178366.4	180623.0	479.95 µg/L	479.95 ppb	09:44:08
3	Tl 190.801†	305.3	335.5	512.92 µg/L	512.92 ppb	09:44:34
3	U 409.014†	4575.5	4740.8	451.43 µg/L	451.43 ppb	09:44:14
3	V 292.402†	40517.1	41100.5	482.49 µg/L	482.49 ppb	09:44:14
3	Zn 213.857†	18013.5	17757.4	477.63 µg/L	477.63 ppb	09:44:14

## Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1942928.1	97.963 %	0.7354			0.75%
Sc RADIAL	54937.3	98.6 %	0.66			0.67%
Y 371.029	1341426.6	97.709 %	0.7484			0.77%
Ag 328.068†	30597.8	266.05 µg/L	11.366	266.05 ppb	11.366	4.27%
QC value within limits for Ag 328.068 Recovery = 106.42%						
Al 396.153Radial†	6458.9	5091.4 µg/L	33.78	5091.4 ppb	33.78	0.66%
QC value within limits for Al 396.153Radial Recovery = 101.83%						
As 188.979†	228.0	482.56 µg/L	43.406	482.56 ppb	43.406	8.99%
QC value within limits for As 188.979 Recovery = 96.51%						
B 249.677†	11093.2	528.52 µg/L	25.547	528.52 ppb	25.547	4.83%
QC value within limits for B 249.677 Recovery = 105.70%						
Ba 233.527†	18237.6	520.53 µg/L	32.190	520.53 ppb	32.190	6.18%
QC value within limits for Ba 233.527 Recovery = 104.11%						
Be 313.107†	375646.7	267.70 µg/L	12.948	267.70 ppb	12.948	4.84%
QC value within limits for Be 313.107 Recovery = 107.08%						
Ca 317.933Radial†	4959.7	5023.1 µg/L	37.06	5023.1 ppb	37.06	0.74%
QC value within limits for Ca 317.933Radial Recovery = 100.46%						
Cd 226.502†	17329.0	513.80 µg/L	32.891	513.80 ppb	32.891	6.40%
QC value within limits for Cd 226.502 Recovery = 102.76%						
Co 228.616†	9714.4	522.50 µg/L	33.718	522.50 ppb	33.718	6.45%

QC value within limits for Co 228.616 Recovery = 104.50%							
Cr 267.716†	21236.1	503.33 µg/L	42.028	503.33 ppb	42.028	8.35%	
QC value within limits for Cr 267.716 Recovery = 100.67%							
Cu 324.752†	68713.4	523.38 µg/L	35.489	523.38 ppb	35.489	6.78%	
QC value within limits for Cu 324.752 Recovery = 104.68%							
Fe 238.204 Radial†	579.6	5154.9 µg/L	24.80	5154.9 ppb	24.80	0.48%	
QC value within limits for Fe 238.204 Radial Recovery = 103.10%							
K 766.490 Radial†	3278.9	2603.2 µg/L	62.76	2603.2 ppb	62.76	2.41%	
QC value within limits for K 766.490 Radial Recovery = 104.13%							
Mg 279.077 IEC†	525.3	5196.8 µg/L	36.41	5196.8 ppb	36.41	0.70%	
QC value within limits for Mg 279.077 IEC Recovery = 103.94%							
Mn 257.610†	141876.6	525.79 µg/L	24.500	525.79 ppb	24.500	4.66%	
QC value within limits for Mn 257.610 Recovery = 105.16%							
Mo 202.031†	4702.8	525.13 µg/L	56.392	525.13 ppb	56.392	10.74%	
QC value within limits for Mo 202.031 Recovery = 105.03%							
Na 589.592 Radial†	7099.5	2536.4 µg/L	27.16	2536.4 ppb	27.16	1.07%	
QC value within limits for Na 589.592 Radial Recovery = 101.45%							
Ni 231.604†	8654.3	512.98 µg/L	34.616	512.98 ppb	34.616	6.75%	
QC value within limits for Ni 231.604 Recovery = 102.60%							
P 214.914†	1093.6	2498.3 µg/L	231.26	2498.3 ppb	231.26	9.26%	
QC value within limits for P 214.914 Recovery = 99.93%							
Pb 220.353†	1753.4	507.78 µg/L	44.623	507.78 ppb	44.623	8.79%	
QC value within limits for Pb 220.353 Recovery = 101.56%							
S 181.975 Axial†	517.0	2509.3 µg/L	193.50	2509.3 ppb	193.50	7.71%	
QC value within limits for S 181.975 Axial Recovery = 100.37%							
Sb 206.836†	480.8	512.66 µg/L	49.524	512.66 ppb	49.524	9.66%	
QC value within limits for Sb 206.836 Recovery = 102.53%							
Se 196.026†	1569.6	2512.3 µg/L	199.01	2512.3 ppb	199.01	7.92%	
QC value within limits for Se 196.026 Recovery = 100.49%							
SiO2†	45919.5	10787 µg/L	591.7	10787 ppb	591.7	5.49%	
QC value within limits for SiO2 Recovery = 100.86%							
Si 251.611†	55954.0	5022.4 µg/L	274.22	5022.4 ppb	274.22	5.46%	
QC value within limits for Si 251.611 Recovery = 100.45%							
Sn 189.927†	1081.8	543.79 µg/L	63.062	543.79 ppb	63.062	11.60%	
QC value within limits for Sn 189.927 Recovery = 108.76%							
Sr 421.552†	47155.4	546.47 µg/L	7.538	546.47 ppb	7.538	1.38%	
QC value within limits for Sr 421.552 Recovery = 109.29%							
Ti 334.940†	191589.5	509.11 µg/L	25.904	509.11 ppb	25.904	5.09%	
QC value within limits for Ti 334.940 Recovery = 101.82%							
Tl 190.801†	354.7	542.36 µg/L	26.281	542.36 ppb	26.281	4.85%	
QC value within limits for Tl 190.801 Recovery = 108.47%							
U 409.014†	5224.2	497.56 µg/L	40.133	497.56 ppb	40.133	8.07%	
QC value within limits for U 409.014 Recovery = 99.51%							
V 292.402†	44777.6	525.81 µg/L	37.956	525.81 ppb	37.956	7.22%	
QC value within limits for V 292.402 Recovery = 105.16%							
Zn 213.857†	19259.0	518.06 µg/L	35.402	518.06 ppb	35.402	6.83%	
QC value within limits for Zn 213.857 Recovery = 103.61%							
All analyte(s) passed QC.							

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

Autosampler Location: 10  
 Date Collected: 2/8/2010 09:44:45  
 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	52814.7	52814.7	94.8 %		09:45:17
1	Al 396.153Radial†	-15.6	-6.7	-5.3141 µg/L	-5.3141 ppb	09:45:17
1	Ca 317.933Radial†	186.4	8.8	8.8764 µg/L	8.8764 ppb	09:45:38
1	Fe 238.204 Radial†	16.6	1.7	14.947 µg/L	14.947 ppb	09:45:38
1	K 766.490 Radial†	146.2	-32.5	-25.767 µg/L	-25.767 ppb	09:45:17
1	Mg 279.077 IEC†	14.9	3.0	29.564 µg/L	29.564 ppb	09:45:38
1	Na 589.592 Radial†	474.0	28.8	10.284 µg/L	10.284 ppb	09:45:17
1	Sr 421.552†	5.6	-32.2	-0.3727 µg/L	-0.3727 ppb	09:45:17
1	Sc 361.383	1911629.9	1911629.9	96.385 %		09:46:39
1	Y 371.029	1324298.1	1324298.1	96.461 %		09:46:39
1	Ag 328.068†	-448.5	37.1	0.3170 µg/L	0.3170 ppb	09:46:45
1	As 188.979†	1.8	3.6	7.5481 µg/L	7.5481 ppb	09:47:06
1	B 249.677†	340.2	38.5	1.8334 µg/L	1.8334 ppb	09:47:06
1	Ba 233.527†	-19.5	0.8	0.0222 µg/L	0.0222 ppb	09:47:06
1	Be 313.107†	-3132.3	51.0	0.0364 µg/L	0.0364 ppb	09:46:45
1	Cd 226.502†	-148.9	-9.4	-0.2798 µg/L	-0.2798 ppb	09:47:06
1	Co 228.616†	-3.7	4.4	0.2402 µg/L	0.2402 ppb	09:47:06
1	Cr 267.716†	-73.9	-34.0	-0.8046 µg/L	-0.8046 ppb	09:46:45
1	Cu 324.752†	2524.4	130.2	0.9927 µg/L	0.9927 ppb	09:46:45
1	Mn 257.610†	-259.4	-5.7	-0.0202 µg/L	-0.0202 ppb	09:47:06
1	Mo 202.031†	-0.7	6.1	0.6776 µg/L	0.6776 ppb	09:47:06
1	Ni 231.604†	325.9	31.0	1.8398 µg/L	1.8398 ppb	09:47:06
1	P 214.914†	13.6	-7.1	-16.686 µg/L	-16.686 ppb	09:47:06
1	Pb 220.353†	79.7	-8.8	-2.5476 µg/L	-2.5476 ppb	09:47:06
1	S 181.975 Axial†	15.3	1.3	6.3293 µg/L	6.3293 ppb	09:47:06
1	Sb 206.836†	28.0	4.5	4.7657 µg/L	4.7657 ppb	09:47:06
1	Se 196.026†	13.4	3.2	5.1533 µg/L	5.1533 ppb	09:47:06
1	SiO2†	1392.6	104.7	24.596 µg/L	24.596 ppb	09:46:45
1	Si 251.611†	326.1	34.7	3.1159 µg/L	3.1159 ppb	09:47:06
1	Sn 189.927†	0.0	-2.8	-1.4073 µg/L	-1.4073 ppb	09:47:06
1	Ti 334.940†	119.5	-40.9	-0.1109 µg/L	-0.1109 ppb	09:46:45
1	Tl 190.801†	-28.6	-3.6	-5.3942 µg/L	-5.3942 ppb	09:47:06
1	U 409.014†	-87.4	12.5	1.1931 µg/L	1.1931 ppb	09:46:45
1	V 292.402†	-59.0	-27.9	-0.3176 µg/L	-0.3176 ppb	09:46:45
1	Zn 213.857†	501.2	19.4	0.5144 µg/L	0.5144 ppb	09:47:06
2	Sc RADIAL	54363.0	54363.0	97.6 %		09:45:43
2	Al 396.153Radial†	-46.1	-37.5	-29.636 µg/L	-29.636 ppb	09:45:43
2	Ca 317.933Radial†	179.0	-4.4	-4.4937 µg/L	-4.4937 ppb	09:46:04
2	Fe 238.204 Radial†	17.2	1.8	16.039 µg/L	16.039 ppb	09:46:04
2	K 766.490 Radial†	142.0	-41.2	-32.739 µg/L	-32.739 ppb	09:45:43
2	Mg 279.077 IEC†	15.9	3.6	36.026 µg/L	36.026 ppb	09:46:04
2	Na 589.592 Radial†	502.8	44.1	15.757 µg/L	15.757 ppb	09:45:43
2	Sr 421.552†	23.8	-13.6	-0.1582 µg/L	-0.1582 ppb	09:45:43
2	Sc 361.383	1963140.0	1963140.0	98.982 %		09:47:12
2	Y 371.029	1359288.5	1359288.5	99.010 %		09:47:12
2	Ag 328.068†	-437.7	60.2	0.5130 µg/L	0.5130 ppb	09:47:17
2	As 188.979†	1.7	3.4	7.1630 µg/L	7.1630 ppb	09:47:38
2	B 249.677†	342.7	31.9	1.5147 µg/L	1.5147 ppb	09:47:38
2	Ba 233.527†	-15.0	5.8	0.1655 µg/L	0.1655 ppb	09:47:38
2	Be 313.107†	-3072.4	196.7	0.1404 µg/L	0.1404 ppb	09:47:17
2	Cd 226.502†	-141.4	2.1	0.0622 µg/L	0.0622 ppb	09:47:38
2	Co 228.616†	-5.3	2.9	0.1581 µg/L	0.1581 ppb	09:47:38
2	Cr 267.716†	-44.5	-2.2	-0.0533 µg/L	-0.0533 ppb	09:47:17
2	Cu 324.752†	2508.5	45.4	0.3478 µg/L	0.3478 ppb	09:47:17
2	Mn 257.610†	-251.8	9.0	0.0341 µg/L	0.0341 ppb	09:47:38
2	Mo 202.031†	-1.3	5.4	0.6020 µg/L	0.6020 ppb	09:47:38
2	Ni 231.604†	321.8	18.0	1.0690 µg/L	1.0690 ppb	09:47:38
2	P 214.914†	21.3	0.4	0.7695 µg/L	0.7695 ppb	09:47:38
2	Pb 220.353†	86.4	-4.2	-1.2167 µg/L	-1.2167 ppb	09:47:38

2	S 181.975 Axial†	16.5	2.1	9.9570 µg/L	9.9570 ppb	09:47:38
2	Sb 206.836†	27.6	3.2	3.4560 µg/L	3.4560 ppb	09:47:38
2	Se 196.026†	16.5	6.0	9.5475 µg/L	9.5475 ppb	09:47:38
2	SiO2†	1413.3	87.7	20.610 µg/L	20.610 ppb	09:47:17
2	Si 251.611†	327.4	27.1	2.4354 µg/L	2.4354 ppb	09:47:38
2	Sn 189.927†	2.1	-0.7	-0.3701 µg/L	-0.3701 ppb	09:47:38
2	Ti 334.940†	106.0	-57.7	-0.1564 µg/L	-0.1564 ppb	09:47:17
2	Tl 190.801†	-24.9	0.9	1.4173 µg/L	1.4173 ppb	09:47:38
2	U 409.014†	-84.0	18.4	1.7567 µg/L	1.7567 ppb	09:47:17
2	V 292.402†	-86.2	-53.7	-0.6149 µg/L	-0.6149 ppb	09:47:17
2	Zn 213.857†	497.5	2.1	0.0478 µg/L	0.0478 ppb	09:47:38
3	Sc RADIAL	53774.0	53774.0	96.5 %		09:46:09
3	Al 396.153Radial†	-31.2	-22.5	-17.793 µg/L	-17.793 ppb	09:46:09
3	Ca 317.933Radial†	180.0	-1.4	-1.4028 µg/L	-1.4028 ppb	09:46:29
3	Fe 238.204 Radial†	16.1	0.9	7.6603 µg/L	7.6603 ppb	09:46:29
3	K 766.490 Radial†	202.9	23.5	18.628 µg/L	18.628 ppb	09:46:09
3	Mg 279.077 IEC†	13.5	1.3	12.732 µg/L	12.732 ppb	09:46:29
3	Na 589.592 Radial†	496.3	43.0	15.354 µg/L	15.354 ppb	09:46:09
3	Sr 421.552†	59.0	23.0	0.2671 µg/L	0.2671 ppb	09:46:09
3	Sc 361.383	1951151.3	1951151.3	98.378 %		09:47:44
3	Y 371.029	1351640.5	1351640.5	98.453 %		09:47:44
3	Ag 328.068†	-418.3	77.2	0.6596 µg/L	0.6596 ppb	09:47:49
3	As 188.979†	3.0	4.7	10.064 µg/L	10.064 ppb	09:48:10
3	B 249.677†	349.1	40.5	1.9314 µg/L	1.9314 ppb	09:48:10
3	Ba 233.527†	-19.4	1.2	0.0348 µg/L	0.0348 ppb	09:48:10
3	Be 313.107†	-3123.0	126.3	0.0901 µg/L	0.0901 ppb	09:47:49
3	Cd 226.502†	-137.6	5.1	0.1516 µg/L	0.1516 ppb	09:48:10
3	Co 228.616†	-2.8	5.4	0.2937 µg/L	0.2937 ppb	09:48:10
3	Cr 267.716†	-39.0	3.1	0.0729 µg/L	0.0729 ppb	09:47:49
3	Cu 324.752†	2548.1	101.3	0.7715 µg/L	0.7715 ppb	09:47:49
3	Mn 257.610†	-263.6	-4.5	-0.0161 µg/L	-0.0161 ppb	09:48:10
3	Mo 202.031†	-5.4	1.3	0.1430 µg/L	0.1430 ppb	09:48:10
3	Ni 231.604†	317.3	15.4	0.9132 µg/L	0.9132 ppb	09:48:10
3	P 214.914†	17.1	-3.9	-9.1643 µg/L	-9.1643 ppb	09:48:10
3	Pb 220.353†	94.3	4.4	1.2706 µg/L	1.2706 ppb	09:48:10
3	S 181.975 Axial†	17.4	3.1	14.844 µg/L	14.844 ppb	09:48:10
3	Sb 206.836†	20.6	-3.7	-3.9337 µg/L	-3.9337 ppb	09:48:10
3	Se 196.026†	21.4	11.0	17.616 µg/L	17.616 ppb	09:48:10
3	SiO2†	1396.8	79.8	18.735 µg/L	18.735 ppb	09:47:49
3	Si 251.611†	340.2	42.1	3.7815 µg/L	3.7815 ppb	09:48:10
3	Sn 189.927†	-5.4	-8.3	-4.1629 µg/L	-4.1629 ppb	09:48:10
3	Ti 334.940†	136.4	-26.2	-0.0706 µg/L	-0.0706 ppb	09:47:49
3	Tl 190.801†	-26.7	-1.0	-1.5635 µg/L	-1.5635 ppb	09:48:10
3	U 409.014†	-34.4	68.3	6.5196 µg/L	6.5196 ppb	09:47:49
3	V 292.402†	-63.7	-31.4	-0.3552 µg/L	-0.3552 ppb	09:47:49
3	Zn 213.857†	505.6	13.4	0.3561 µg/L	0.3561 ppb	09:48:10

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Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1941973.7	97.915 %	1.3590			1.39%
Sc RADIAL	53650.5	96.3 %	1.40			1.46%
Y 371.029	1345075.7	97.975 %	1.3399			1.37%
Ag 328.068†	58.2	0.4965 µg/L	0.17191	0.4965 ppb	0.17191	34.62%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-22.2	-17.581 µg/L	12.1622	-17.581 ppb	12.1622	69.18%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	3.9	8.2582 µg/L	1.57532	8.2582 ppb	1.57532	19.08%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	37.0	1.7598 µg/L	0.21787	1.7598 ppb	0.21787	12.38%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.6	0.0742 µg/L	0.07935	0.0742 ppb	0.07935	106.97%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	124.7	0.0889 µg/L	0.05200	0.0889 ppb	0.05200	58.46%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1.0	0.9933 µg/L	6.99974	0.9933 ppb	6.99974	704.69%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-0.7	-0.0220 µg/L	0.22769	-0.0220 ppb	0.22769	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	4.3	0.2307 µg/L	0.06831	0.2307 ppb	0.06831	29.61%

Cr	267.716†	-11.0	-0.2617 µg/L	0.47444	-0.2617 ppb	0.47444	181.30%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cu	324.752†	92.3	0.7040 µg/L	0.32771	0.7040 ppb	0.32771	46.55%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	1.5	12.882 µg/L	4.5552	12.882 ppb	4.5552	35.36%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-16.7	-13.293 µg/L	27.8631	-13.293 ppb	27.8631	209.61%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	2.6	26.108 µg/L	12.0255	26.108 ppb	12.0255	46.06%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	-0.4	-0.0007 µg/L	0.03028	-0.0007 ppb	0.03028	>999.9%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	4.2	0.4742 µg/L	0.28930	0.4742 ppb	0.28930	61.01%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	38.6	13.799 µg/L	3.0501	13.799 ppb	3.0501	22.10%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	21.5	1.2740 µg/L	0.49613	1.2740 ppb	0.49613	38.94%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	-3.5	-8.3603 µg/L	8.75547	-8.3603 ppb	8.75547	104.73%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-2.9	-0.8312 µg/L	1.93803	-0.8312 ppb	1.93803	233.15%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	2.1	10.377 µg/L	4.2727	10.377 ppb	4.2727	41.18%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	1.3	1.4293 µg/L	4.69044	1.4293 ppb	4.69044	328.16%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	6.7	10.772 µg/L	6.3212	10.772 ppb	6.3212	58.68%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		90.7	21.314 µg/L	2.9934	21.314 ppb	2.9934	14.04%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	34.7	3.1109 µg/L	0.67303	3.1109 ppb	0.67303	21.63%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	-3.9	-1.9801 µg/L	1.96019	-1.9801 ppb	1.96019	98.99%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-7.6	-0.0879 µg/L	0.32562	-0.0879 ppb	0.32562	370.25%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-41.6	-0.1126 µg/L	0.04293	-0.1126 ppb	0.04293	38.11%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-1.2	-1.8468 µg/L	3.41456	-1.8468 ppb	3.41456	184.89%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	33.1	3.1565 µg/L	2.92616	3.1565 ppb	2.92616	92.70%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-37.7	-0.4293 µg/L	0.16189	-0.4293 ppb	0.16189	37.71%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	11.6	0.3061 µg/L	0.23729	0.3061 ppb	0.23729	77.53%
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: 2/8/2010 09:48:19  
 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	55274.3	55274.3	99.2 %		09:48:51
1	Al 396.153Radial†	207.2	218.7	172.50 µg/L	172.50 ppb	09:48:51
1	Ca 317.933Radial†	375.4	190.5	192.95 µg/L	192.95 ppb	09:49:12
1	Fe 238.204 Radial†	27.3	11.7	104.31 µg/L	104.31 ppb	09:49:12
1	K 766.490 Radial†	354.6	170.7	135.53 µg/L	135.53 ppb	09:48:51
1	Mg 279.077 IEC†	41.1	28.7	284.21 µg/L	284.21 ppb	09:49:12
1	Na 589.592 Radial†	1318.5	857.8	306.47 µg/L	306.47 ppb	09:48:51
1	Sr 421.552†	472.5	438.2	5.0781 µg/L	5.0781 ppb	09:48:51
1	Sc 361.383	1891199.8	1891199.8	95.355 %		09:50:14
1	Y 371.029	1310798.0	1310798.0	95.478 %		09:50:14
1	Ag 328.068†	117.7	625.9	5.4096 µg/L	5.4096 ppb	09:50:19
1	As 188.979†	16.0	18.4	39.083 µg/L	39.083 ppb	09:50:40
1	B 249.677†	1376.0	1128.6	53.916 µg/L	53.916 ppb	09:50:19
1	Ba 233.527†	175.7	205.3	5.8582 µg/L	5.8582 ppb	09:50:40
1	Be 313.107†	4139.7	7642.2	5.4479 µg/L	5.4479 ppb	09:50:19
1	Cd 226.502†	52.4	200.0	5.9263 µg/L	5.9263 ppb	09:50:40
1	Co 228.616†	104.4	117.7	6.3398 µg/L	6.3398 ppb	09:50:40
1	Cr 267.716†	207.3	260.1	6.1651 µg/L	6.1651 ppb	09:50:19
1	Cu 324.752†	3987.1	1692.5	12.888 µg/L	12.888 ppb	09:50:19
1	Mn 257.610†	2670.7	3064.3	11.348 µg/L	11.348 ppb	09:50:19
1	Mo 202.031†	96.8	108.3	12.091 µg/L	12.091 ppb	09:50:40
1	Ni 231.604†	432.0	145.9	8.6540 µg/L	8.6540 ppb	09:50:40
1	P 214.914†	97.1	80.7	186.74 µg/L	186.74 ppb	09:50:40
1	Pb 220.353†	138.1	53.4	15.409 µg/L	15.409 ppb	09:50:40
1	S 181.975 Axial†	40.3	27.7	134.24 µg/L	134.24 ppb	09:50:40
1	Sb 206.836†	36.1	13.2	14.155 µg/L	14.155 ppb	09:50:40
1	Se 196.026†	34.2	25.1	40.048 µg/L	40.048 ppb	09:50:40
1	SiO2†	2309.6	1081.9	254.16 µg/L	254.16 ppb	09:50:19
1	Si 251.611†	1488.8	1257.7	112.89 µg/L	112.89 ppb	09:50:40
1	Sn 189.927†	24.4	22.8	11.484 µg/L	11.484 ppb	09:50:40
1	Ti 334.940†	2132.0	2071.0	5.4874 µg/L	5.4874 ppb	09:50:19
1	Tl 190.801†	-10.8	14.8	22.476 µg/L	22.476 ppb	09:50:40
1	U 409.014†	438.6	563.2	53.721 µg/L	53.721 ppb	09:50:19
1	V 292.402†	439.1	493.8	5.9040 µg/L	5.9040 ppb	09:50:19
1	Zn 213.857†	912.7	456.6	12.288 µg/L	12.288 ppb	09:50:40
2	Sc RADIAL	56643.6	56643.6	102 %		09:49:17
2	Al 396.153Radial†	223.0	229.1	180.77 µg/L	180.77 ppb	09:49:17
2	Ca 317.933Radial†	377.1	183.1	185.40 µg/L	185.40 ppb	09:49:38
2	Fe 238.204 Radial†	26.5	10.2	90.706 µg/L	90.706 ppb	09:49:38
2	K 766.490 Radial†	334.1	141.9	112.68 µg/L	112.68 ppb	09:49:17
2	Mg 279.077 IEC†	43.7	30.3	299.59 µg/L	299.59 ppb	09:49:38
2	Na 589.592 Radial†	1313.4	820.7	293.20 µg/L	293.20 ppb	09:49:17
2	Sr 421.552†	463.6	418.0	4.8440 µg/L	4.8440 ppb	09:49:17
2	Sc 361.383	1819057.2	1819057.2	91.718 %		09:50:46
2	Y 371.029	1259829.3	1259829.3	91.765 %		09:50:46
2	Ag 328.068†	136.1	650.8	5.6215 µg/L	5.6215 ppb	09:50:51
2	As 188.979†	13.7	16.6	35.288 µg/L	35.288 ppb	09:51:12
2	B 249.677†	1426.5	1240.9	59.295 µg/L	59.295 ppb	09:50:51
2	Ba 233.527†	162.0	197.6	5.6407 µg/L	5.6407 ppb	09:51:12
2	Be 313.107†	4354.3	8048.3	5.7374 µg/L	5.7374 ppb	09:50:51
2	Cd 226.502†	33.8	181.9	5.3940 µg/L	5.3940 ppb	09:51:12
2	Co 228.616†	92.2	108.8	5.8577 µg/L	5.8577 ppb	09:51:12
2	Cr 267.716†	171.7	229.9	5.4496 µg/L	5.4496 ppb	09:50:51
2	Cu 324.752†	3963.7	1832.8	13.954 µg/L	13.954 ppb	09:50:51
2	Mn 257.610†	2752.6	3264.6	12.088 µg/L	12.088 ppb	09:50:51
2	Mo 202.031†	87.8	102.4	11.438 µg/L	11.438 ppb	09:51:12
2	Ni 231.604†	427.1	158.6	9.4045 µg/L	9.4045 ppb	09:51:12
2	P 214.914†	93.9	81.2	187.80 µg/L	187.80 ppb	09:51:12
2	Pb 220.353†	129.3	49.5	14.281 µg/L	14.281 ppb	09:51:12

2	S 181.975 Axial†	38.6	27.5	133.25 µg/L	133.25 ppb	09:51:12
2	Sb 206.836†	29.5	7.6	8.1415 µg/L	8.1415 ppb	09:51:12
2	Se 196.026†	32.9	25.1	40.016 µg/L	40.016 ppb	09:51:12
2	SiO2†	2344.9	1216.6	285.79 µg/L	285.79 ppb	09:50:51
2	Si 251.611†	1450.3	1277.6	114.68 µg/L	114.68 ppb	09:51:12
2	Sn 189.927†	23.8	23.2	11.675 µg/L	11.675 ppb	09:51:12
2	Ti 334.940†	2133.9	2161.8	5.7275 µg/L	5.7275 ppb	09:50:51
2	Tl 190.801†	-7.7	17.7	26.866 µg/L	26.866 ppb	09:51:12
2	U 409.014†	476.4	622.7	59.400 µg/L	59.400 ppb	09:50:51
2	V 292.402†	406.8	476.8	5.7049 µg/L	5.7049 ppb	09:50:51
2	Zn 213.857†	902.4	483.3	13.006 µg/L	13.006 ppb	09:51:12
3	Sc RADIAL	53272.5	53272.5	95.6 %		09:49:43
3	Al 396.153Radial†	234.4	254.9	201.19 µg/L	201.19 ppb	09:49:43
3	Ca 317.933Radial†	382.4	212.1	214.83 µg/L	214.83 ppb	09:50:04
3	Fe 238.204 Radial†	27.1	12.5	111.43 µg/L	111.43 ppb	09:50:04
3	K 766.490 Radial†	376.1	206.7	164.08 µg/L	164.08 ppb	09:49:43
3	Mg 279.077 IEC†	42.2	31.4	310.52 µg/L	310.52 ppb	09:50:04
3	Na 589.592 Radial†	1366.6	958.0	342.27 µg/L	342.27 ppb	09:49:43
3	Sr 421.552†	506.5	491.7	5.6976 µg/L	5.6976 ppb	09:49:43
3	Sc 361.383	1949696.7	1949696.7	98.304 %		09:51:18
3	Y 371.029	1349354.6	1349354.6	98.286 %		09:51:18
3	Ag 328.068†	34.5	537.5	4.6453 µg/L	4.6453 ppb	09:51:23
3	As 188.979†	17.4	19.4	41.125 µg/L	41.125 ppb	09:51:44
3	B 249.677†	1342.4	1051.1	50.207 µg/L	50.207 ppb	09:51:23
3	Ba 233.527†	142.9	166.3	4.7477 µg/L	4.7477 ppb	09:51:44
3	Be 313.107†	3484.0	6844.8	4.8795 µg/L	4.8795 ppb	09:51:23
3	Cd 226.502†	3.4	148.5	4.3967 µg/L	4.3967 ppb	09:51:44
3	Co 228.616†	82.2	91.9	4.9451 µg/L	4.9451 ppb	09:51:44
3	Cr 267.716†	168.4	214.0	5.0729 µg/L	5.0729 ppb	09:51:23
3	Cu 324.752†	3848.2	1425.8	10.860 µg/L	10.860 ppb	09:51:23
3	Mn 257.610†	2404.4	2709.3	10.034 µg/L	10.034 ppb	09:51:23
3	Mo 202.031†	74.7	82.7	9.2347 µg/L	9.2347 ppb	09:51:44
3	Ni 231.604†	390.7	90.4	5.3586 µg/L	5.3586 ppb	09:51:44
3	P 214.914†	75.8	55.9	129.24 µg/L	129.24 ppb	09:51:44
3	Pb 220.353†	115.2	25.8	7.4214 µg/L	7.4214 ppb	09:51:44
3	S 181.975 Axial†	39.0	25.1	121.72 µg/L	121.72 ppb	09:51:44
3	Sb 206.836†	28.7	4.6	4.9337 µg/L	4.9337 ppb	09:51:44
3	Se 196.026†	32.9	22.8	36.332 µg/L	36.332 ppb	09:51:44
3	SiO2†	2310.7	1010.4	237.36 µg/L	237.36 ppb	09:51:23
3	Si 251.611†	1292.3	1011.0	90.744 µg/L	90.744 ppb	09:51:44
3	Sn 189.927†	16.2	13.6	6.8713 µg/L	6.8713 ppb	09:51:44
3	Ti 334.940†	1954.6	1823.5	4.8276 µg/L	4.8276 ppb	09:51:23
3	Tl 190.801†	-11.6	14.2	21.657 µg/L	21.657 ppb	09:51:44
3	U 409.014†	419.0	529.5	50.502 µg/L	50.502 ppb	09:51:23
3	V 292.402†	358.7	398.2	4.7686 µg/L	4.7686 ppb	09:51:23
3	Zn 213.857†	843.0	356.9	9.6047 µg/L	9.6047 ppb	09:51:44

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1886651.2	95.126 %	3.2994			3.47%
Sc RADIAL	55063.5	98.8 %	3.04			3.08%
Y 371.029	1306660.6	95.176 %	3.2709			3.44%
Ag 328.068†	604.7	5.2255 µg/L	0.51349	5.2255 ppb	0.51349	9.83%
QC value within limits for Ag 328.068 Recovery = 104.51%						
Al 396.153Radial†	234.3	184.82 µg/L	14.763	184.82 ppb	14.763	7.99%
QC value within limits for Al 396.153Radial Recovery = 92.41%						
As 188.979†	18.2	38.499 µg/L	2.9622	38.499 ppb	2.9622	7.69%
QC value within limits for As 188.979 Recovery = 128.33%						
B 249.677†	1140.2	54.472 µg/L	4.5696	54.472 ppb	4.5696	8.39%
QC value within limits for B 249.677 Recovery = 108.94%						
Ba 233.527†	189.7	5.4156 µg/L	0.58851	5.4156 ppb	0.58851	10.87%
QC value within limits for Ba 233.527 Recovery = 108.31%						
Be 313.107†	7511.8	5.3549 µg/L	0.43644	5.3549 ppb	0.43644	8.15%
QC value within limits for Be 313.107 Recovery = 107.10%						
Ca 317.933Radial†	195.2	197.73 µg/L	15.282	197.73 ppb	15.282	7.73%
QC value within limits for Ca 317.933Radial Recovery = 98.86%						
Cd 226.502†	176.8	5.2390 µg/L	0.77649	5.2390 ppb	0.77649	14.82%
QC value within limits for Cd 226.502 Recovery = 104.78%						
Co 228.616†	106.1	5.7142 µg/L	0.70835	5.7142 ppb	0.70835	12.40%

Cr	267.716†	234.7	5.5625 µg/L	0.55481	5.5625 ppb	0.55481	9.97%
QC value within limits for Co 228.616 Recovery = 114.28%							
Cu	324.752†	1650.3	12.567 µg/L	1.5715	12.567 ppb	1.5715	12.50%
QC value within limits for Cr 267.716 Recovery = 111.25%							
Fe	238.204 Radial†	11.5	102.15 µg/L	10.529	102.15 ppb	10.529	10.31%
QC value within limits for Cu 324.752 Recovery = 125.67%							
K	766.490 Radial†	173.1	137.43 µg/L	25.753	137.43 ppb	25.753	18.74%
QC value within limits for Fe 238.204 Radial Recovery = 102.15%							
Mg	279.077 IEC†	30.1	298.11 µg/L	13.221	298.11 ppb	13.221	4.44%
QC value within limits for K 766.490 Radial Recovery = 91.62%							
Mn	257.610†	3012.7	11.157 µg/L	1.0402	11.157 ppb	1.0402	9.32%
QC value within limits for Mg 279.077 IEC Recovery = 99.37%							
Mo	202.031†	97.8	10.921 µg/L	1.4966	10.921 ppb	1.4966	13.70%
QC value within limits for Mn 257.610 Recovery = 111.57%							
Na	589.592 Radial†	878.9	313.98 µg/L	25.382	313.98 ppb	25.382	8.08%
QC value within limits for Mo 202.031 Recovery = 109.21%							
Ni	231.604†	131.6	7.8057 µg/L	2.15223	7.8057 ppb	2.15223	27.57%
QC value within limits for Na 589.592 Radial Recovery = 104.66%							
P	214.914†	72.6	167.93 µg/L	33.511	167.93 ppb	33.511	19.96%
QC value greater than the upper limit for Ni 231.604 Recovery = 156.11%							
Pb	220.353†	42.9	12.370 µg/L	4.3230	12.370 ppb	4.3230	34.95%
QC value within limits for P 214.914 Recovery = 111.95%							
S	181.975 Axial†	26.7	129.74 µg/L	6.958	129.74 ppb	6.958	5.36%
QC value within limits for Pb 220.353 Recovery = 123.70%							
Sb	206.836†	8.5	9.0768 µg/L	4.68146	9.0768 ppb	4.68146	51.58%
QC value within limits for S 181.975 Axial Recovery = 129.74%							
Se	196.026†	24.3	38.799 µg/L	2.1362	38.799 ppb	2.1362	5.51%
QC value within limits for Sb 206.836 Recovery = 90.77%							
SiO2†		1103.0	259.10 µg/L	24.587	259.10 ppb	24.587	9.49%
QC value within limits for Se 196.026 Recovery = 129.33%							
Si	251.611†	1182.1	106.10 µg/L	13.332	106.10 ppb	13.332	12.57%
QC value within limits for SiO2 Recovery = 121.64%							
Sn	189.927†	19.9	10.010 µg/L	2.7198	10.010 ppb	2.7198	27.17%
QC value within limits for Si 251.611 Recovery = 106.10%							
Sr	421.552†	449.3	5.2066 µg/L	0.44106	5.2066 ppb	0.44106	8.47%
QC value within limits for Sn 189.927 Recovery = 100.10%							
Ti	334.940†	2018.8	5.3475 µg/L	0.46598	5.3475 ppb	0.46598	8.71%
QC value within limits for Sr 421.552 Recovery = 104.13%							
Tl	190.801†	15.6	23.666 µg/L	2.8009	23.666 ppb	2.8009	11.84%
QC value within limits for Ti 334.940 Recovery = 106.95%							
U	409.014†	571.8	54.541 µg/L	4.5056	54.541 ppb	4.5056	8.26%
QC value within limits for Tl 190.801 Recovery = 118.33%							
V	292.402†	456.3	5.4592 µg/L	0.60630	5.4592 ppb	0.60630	11.11%
QC value within limits for U 409.014 Recovery = 109.08%							
Zn	213.857†	432.3	11.633 µg/L	1.7930	11.633 ppb	1.7930	15.41%
QC value within limits for V 292.402 Recovery = 109.18%							
QC Failed. Continue with analysis.							

Sequence No.: 9  
 Sample ID: IC5A  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 103  
 Date Collected: 2/8/2010 09:51:53  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: IC5A

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	50215.7	50215.7	90.1 %		09:52:34
1	Al 396.153Radial†	656992.4	728971.4	575840 µg/L	575840 ppb	09:52:29
1	Ca 317.933Radial†	488887.9	542254.5	549180 µg/L	549180 ppb	09:52:29
1	Fe 238.204 Radial†	21684.1	24043.6	213400 µg/L	213400 ppb	09:52:34
1	K 766.490 Radial†	144.5	-26.4	-20.953 µg/L	-20.953 ppb	09:52:34
1	Mg 279.077 IEC†	49809.9	55253.6	546000 µg/L	546000 ppb	09:52:34
1	Na 589.592 Radial†	495.8	78.9	28.203 µg/L	28.203 ppb	09:52:34
1	Sr 421.552†	361.3	362.8	4.2048 µg/L	4.2048 ppb	09:52:34
1	Sc 361.383	1743516.5	1743516.5	87.909 %		09:53:07
1	Y 371.029	1199678.3	1199678.3	87.384 %		09:53:07
1	Ag 328.068†	-2567.8	-2418.6	-7.4653 µg/L	-7.4653 ppb	09:53:12
1	As 188.979†	-16.5	-17.1	-52.323 µg/L	-52.323 ppb	09:53:33
1	B 249.677†	686.2	466.2	-89.062 µg/L	-89.062 ppb	09:53:12
1	Ba 233.527†	237.5	291.2	8.2488 µg/L	8.2488 ppb	09:53:33
1	Be 313.107†	-3815.6	-1039.7	-0.7523 µg/L	-0.7523 ppb	09:53:12
1	Cd 226.502†	342.9	535.1	-8.2514 µg/L	-8.2514 ppb	09:53:33
1	Co 228.616†	41.3	55.3	2.9058 µg/L	2.9058 ppb	09:53:33
1	Cr 267.716†	-75.9	-43.6	-1.0502 µg/L	-1.0502 ppb	09:53:33
1	Cu 324.752†	-1126.4	-3770.1	0.9853 µg/L	0.9853 ppb	09:53:12
1	Mn 257.610†	438.8	762.6	9.3559 µg/L	9.3559 ppb	09:53:12
1	Mo 202.031†	-108.8	-117.0	-4.9492 µg/L	-4.9492 ppb	09:53:33
1	Ni 231.604†	173.7	-109.5	-3.7292 µg/L	-3.7292 ppb	09:53:33
1	P 214.914†	98.0	90.2	205.32 µg/L	205.32 ppb	09:53:33
1	Pb 220.353†	54.4	-29.5	15.030 µg/L	15.030 ppb	09:53:33
1	S 181.975 Axial†	46.9	38.7	187.95 µg/L	187.95 ppb	09:53:33
1	Sb 206.836†	58.3	41.7	-3.7338 µg/L	-3.7338 ppb	09:53:33
1	Se 196.026†	28.6	21.8	-21.091 µg/L	-21.091 ppb	09:53:33
1	SiO2†	1163.2	-17.0	-3.9822 µg/L	-3.9822 ppb	09:53:33
1	Si 251.611†	422.4	176.9	15.876 µg/L	15.876 ppb	09:53:33
1	Sn 189.927†	-58.3	-69.2	4.1641 µg/L	4.1641 ppb	09:53:33
1	Ti 334.940†	9557.4	10707.1	-5.8953 µg/L	-5.8953 ppb	09:53:12
1	Tl 190.801†	-23.8	-1.1	21.344 µg/L	21.344 ppb	09:53:33
1	U 409.014†	-171.8	-92.1	-71.956 µg/L	-71.956 ppb	09:53:12
1	V 292.402†	-2049.3	-2297.9	-1.6538 µg/L	-1.6538 ppb	09:53:12
1	Zn 213.857†	1426.1	1121.7	-10.648 µg/L	-10.648 ppb	09:53:33
2	Sc RADIAL	50034.4	50034.4	89.8 %		09:52:45
2	Al 396.153Radial†	662631.3	737892.7	582890 µg/L	582890 ppb	09:52:40
2	Ca 317.933Radial†	492750.0	548521.2	555520 µg/L	555520 ppb	09:52:40
2	Fe 238.204 Radial†	21584.4	24019.8	213190 µg/L	213190 ppb	09:52:45
2	K 766.490 Radial†	97.1	-78.6	-62.416 µg/L	-62.416 ppb	09:52:45
2	Mg 279.077 IEC†	49556.0	55171.1	545190 µg/L	545190 ppb	09:52:45
2	Na 589.592 Radial†	509.4	96.0	34.302 µg/L	34.302 ppb	09:52:45
2	Sr 421.552†	329.4	328.8	3.8105 µg/L	3.8105 ppb	09:52:45
2	Sc 361.383	1829337.3	1829337.3	92.230 %		09:53:39
2	Y 371.029	1258938.5	1258938.5	91.700 %		09:53:39
2	Ag 328.068†	-2479.7	-2186.0	-5.4796 µg/L	-5.4796 ppb	09:53:45
2	As 188.979†	-16.7	-16.4	-51.371 µg/L	-51.371 ppb	09:54:05
2	B 249.677†	728.2	475.1	-88.525 µg/L	-88.525 ppb	09:53:45
2	Ba 233.527†	245.4	287.1	8.1325 µg/L	8.1325 ppb	09:54:05
2	Be 313.107†	-3791.9	-810.3	-0.5881 µg/L	-0.5881 ppb	09:53:45
2	Cd 226.502†	350.3	524.8	-8.5347 µg/L	-8.5347 ppb	09:54:05
2	Co 228.616†	41.9	53.7	2.8255 µg/L	2.8255 ppb	09:54:05
2	Cr 267.716†	-61.1	-23.5	-0.5734 µg/L	-0.5734 ppb	09:54:05
2	Cu 324.752†	-1215.7	-3806.8	0.6765 µg/L	0.6765 ppb	09:53:45
2	Mn 257.610†	449.8	751.1	9.3181 µg/L	9.3181 ppb	09:53:45
2	Mo 202.031†	-97.4	-98.9	-2.9352 µg/L	-2.9352 ppb	09:54:05
2	Ni 231.604†	176.2	-116.1	-4.1227 µg/L	-4.1227 ppb	09:54:05
2	P 214.914†	100.9	88.2	202.88 µg/L	202.88 ppb	09:54:05
2	Pb 220.353†	58.5	-28.0	15.873 µg/L	15.873 ppb	09:54:05

2	S 181.975 Axial†	36.2	24.6	119.44 µg/L	119.44 ppb	09:54:05
2	Sb 206.836†	69.2	50.4	5.0166 µg/L	5.0166 ppb	09:54:05
2	Se 196.026†	26.0	17.5	-29.614 µg/L	-29.614 ppb	09:54:05
2	SiO2†	1201.3	-37.7	-8.8621 µg/L	-8.8621 ppb	09:54:05
2	Si 251.611†	457.3	192.1	17.247 µg/L	17.247 ppb	09:54:05
2	Sn 189.927†	-60.2	-68.1	4.6108 µg/L	4.6108 ppb	09:54:05
2	Ti 334.940†	9501.1	10136.0	-7.2479 µg/L	-7.2479 ppb	09:53:45
2	Tl 190.801†	-33.5	-10.2	7.4334 µg/L	7.4334 ppb	09:54:05
2	U 409.014†	-71.4	25.8	-61.053 µg/L	-61.053 ppb	09:53:45
2	V 292.402†	-2088.5	-2231.0	-0.8741 µg/L	-0.8741 ppb	09:53:45
2	Zn 213.857†	1451.0	1072.6	-11.919 µg/L	-11.919 ppb	09:54:05
3	Sc RADIAL	50298.9	50298.9	90.3 %		09:52:56
3	Al 396.153Radial†	660084.3	731190.3	577600 µg/L	577600 ppb	09:52:51
3	Ca 317.933Radial†	491318.8	544049.8	551000 µg/L	551000 ppb	09:52:51
3	Fe 238.204 Radial†	21664.6	23982.2	212850 µg/L	212850 ppb	09:52:56
3	K 766.490 Radial†	115.3	-59.0	-46.871 µg/L	-46.871 ppb	09:52:56
3	Mg 279.077 IEC†	49844.8	55200.8	545480 µg/L	545480 ppb	09:52:56
3	Na 589.592 Radial†	542.6	129.8	46.375 µg/L	46.375 ppb	09:52:56
3	Sr 421.552†	363.2	364.3	4.2218 µg/L	4.2218 ppb	09:52:56
3	Sc 361.383	1816651.6	1816651.6	91.596 %		09:54:11
3	Y 371.029	1249542.9	1249542.9	91.016 %		09:54:11
3	Ag 328.068†	-2473.3	-2197.9	-5.5967 µg/L	-5.5967 ppb	09:54:17
3	As 188.979†	-15.6	-15.3	-48.754 µg/L	-48.754 ppb	09:54:38
3	B 249.677†	710.0	460.7	-89.039 µg/L	-89.039 ppb	09:54:17
3	Ba 233.527†	241.4	284.6	8.0631 µg/L	8.0631 ppb	09:54:38
3	Be 313.107†	-3705.5	-744.7	-0.5414 µg/L	-0.5414 ppb	09:54:17
3	Cd 226.502†	337.2	513.2	-8.8417 µg/L	-8.8417 ppb	09:54:38
3	Co 228.616†	44.5	56.9	2.9968 µg/L	2.9968 ppb	09:54:38
3	Cr 267.716†	-63.2	-26.2	-0.6371 µg/L	-0.6371 ppb	09:54:38
3	Cu 324.752†	-1202.2	-3801.3	0.6725 µg/L	0.6725 ppb	09:54:17
3	Mn 257.610†	476.1	783.2	9.3808 µg/L	9.3808 ppb	09:54:17
3	Mo 202.031†	-94.3	-96.2	-2.6453 µg/L	-2.6453 ppb	09:54:38
3	Ni 231.604†	184.2	-106.0	-3.5238 µg/L	-3.5238 ppb	09:54:38
3	P 214.914†	83.9	70.4	160.13 µg/L	160.13 ppb	09:54:38
3	Pb 220.353†	59.6	-26.3	16.084 µg/L	16.084 ppb	09:54:38
3	S 181.975 Axial†	37.5	26.3	127.66 µg/L	127.66 ppb	09:54:38
3	Sb 206.836†	48.5	28.4	-18.013 µg/L	-18.013 ppb	09:54:38
3	Se 196.026†	29.9	21.9	-22.416 µg/L	-22.416 ppb	09:54:38
3	SiO2†	1158.2	-75.7	-17.777 µg/L	-17.777 ppb	09:54:38
3	Si 251.611†	434.4	170.6	15.313 µg/L	15.313 ppb	09:54:38
3	Sn 189.927†	-64.1	-72.8	2.3566 µg/L	2.3566 ppb	09:54:38
3	Ti 334.940†	9493.2	10199.4	-7.1751 µg/L	-7.1751 ppb	09:54:17
3	Tl 190.801†	-30.1	-6.8	12.506 µg/L	12.506 ppb	09:54:38
3	U 409.014†	-145.7	-55.8	-68.522 µg/L	-68.522 ppb	09:54:17
3	V 292.402†	-2010.4	-2161.5	-0.1141 µg/L	-0.1141 ppb	09:54:17
3	Zn 213.857†	1446.9	1079.0	-11.748 µg/L	-11.748 ppb	09:54:38

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1796501.8	90.580 %	2.3356			2.58%
Sc RADIAL	50183.0	90.1 %	0.24			0.27%
Y 371.029	1236053.2	90.033 %	2.3199			2.58%
Ag 328.068†	-2267.5	-6.1805 µg/L	1.11416	-6.1805 ppb	1.11416	18.03%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	732684.8	578780 µg/L	3669.0	578780 ppb	3669.0	0.63%
QC value within limits for Al 396.153Radial Recovery = 115.76%						
As 188.979†	-16.3	-50.816 µg/L	1.8482	-50.816 ppb	1.8482	3.64%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	467.3	-88.875 µg/L	0.3035	-88.875 ppb	0.3035	0.34%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	287.6	8.1481 µg/L	0.09386	8.1481 ppb	0.09386	1.15%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-864.9	-0.6273 µg/L	0.11075	-0.6273 ppb	0.11075	17.66%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	544941.8	551900 µg/L	3268.4	551900 ppb	3268.4	0.59%
QC value within limits for Ca 317.933Radial Recovery = 110.38%						
Cd 226.502†	524.4	-8.5426 µg/L	0.29524	-8.5426 ppb	0.29524	3.46%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	55.3	2.9093 µg/L	0.08574	2.9093 ppb	0.08574	2.95%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-31.1	-0.7536 µg/L	0.25886	-0.7536 ppb	0.25886	34.35%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-3792.7	0.7781 µg/L	0.17944	0.7781 ppb	0.17944	23.06%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	24015.2	213140 µg/L	274.9	213140 ppb	274.9	0.13%	
QC value within limits for Fe 238.204 Radial Recovery = 106.57%							
K 766.490 Radial†	-54.7	-43.413 µg/L	20.9468	-43.413 ppb	20.9468	48.25%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	55208.5	545560 µg/L	412.7	545560 ppb	412.7	0.08%	
QC value within limits for Mg 279.077 IEC Recovery = 109.11%							
Mn 257.610†	765.6	9.3516 µg/L	0.03158	9.3516 ppb	0.03158	0.34%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-104.0	-3.5099 µg/L	1.25485	-3.5099 ppb	1.25485	35.75%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	101.6	36.293 µg/L	9.2483	36.293 ppb	9.2483	25.48%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-110.5	-3.7919 µg/L	0.30434	-3.7919 ppb	0.30434	8.03%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	83.0	189.44 µg/L	25.417	189.44 ppb	25.417	13.42%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-27.9	15.663 µg/L	0.5575	15.663 ppb	0.5575	3.56%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	29.9	145.02 µg/L	37.406	145.02 ppb	37.406	25.79%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	40.2	-5.5767 µg/L	11.62489	-5.5767 ppb	11.62489	208.45%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	20.4	-24.374 µg/L	4.5862	-24.374 ppb	4.5862	18.82%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-43.5	-10.207 µg/L	6.9949	-10.207 ppb	6.9949	68.53%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	179.9	16.145 µg/L	0.9949	16.145 ppb	0.9949	6.16%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-70.0	3.7105 µg/L	1.19359	3.7105 ppb	1.19359	32.17%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	352.0	4.0790 µg/L	0.23273	4.0790 ppb	0.23273	5.71%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	10347.5	-6.7727 µg/L	0.76079	-6.7727 ppb	0.76079	11.23%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-6.0	13.761 µg/L	7.0398	13.761 ppb	7.0398	51.16%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-40.7	-67.177 µg/L	5.5745	-67.177 ppb	5.5745	8.30%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-2230.1	-0.8807 µg/L	0.76990	-0.8807 ppb	0.76990	87.42%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	1091.1	-11.438 µg/L	0.6898	-11.438 ppb	0.6898	6.03%	
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: 2/8/2010 09:54:48  
 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	52901.6	52901.6	94.9 %		09:55:27
1	Al 396.153Radial†	623045.2	656207.6	518350 µg/L	518350 ppb	09:55:21
1	Ca 317.933Radial†	463681.3	488166.2	494400 µg/L	494400 ppb	09:55:21
1	Fe 238.204 Radial†	20767.9	21857.1	194000 µg/L	194000 ppb	09:55:27
1	K 766.490 Radial†	6515.3	6675.3	5299.5 µg/L	5299.5 ppb	09:55:27
1	Mg 279.077 IEC†	47954.9	50493.9	498980 µg/L	498980 ppb	09:55:27
1	Na 589.592 Radial†	14391.5	14686.1	5246.7 µg/L	5246.7 ppb	09:55:27
1	Sr 421.552†	43893.2	46190.7	535.29 µg/L	535.29 ppb	09:55:27
1	Sc 361.383	1824527.5	1824527.5	91.993 %		09:56:00
1	Y 371.029	1257235.8	1257235.8	91.576 %		09:56:00
1	Ag 328.068†	25635.8	28369.5	258.70 µg/L	258.70 ppb	09:56:06
1	As 188.979†	212.3	232.4	477.58 µg/L	477.58 ppb	09:56:27
1	B 249.677†	10834.4	11463.0	447.65 µg/L	447.65 ppb	09:56:06
1	Ba 233.527†	16424.8	17875.3	510.17 µg/L	510.17 ppb	09:56:06
1	Be 313.107†	315604.4	346373.8	246.81 µg/L	246.81 ppb	09:56:00
1	Cd 226.502†	15007.6	16458.8	466.58 µg/L	466.58 ppb	09:56:06
1	Co 228.616†	7719.7	8399.8	451.63 µg/L	451.63 ppb	09:56:27
1	Cr 267.716†	19279.4	21000.2	497.73 µg/L	497.73 ppb	09:56:06
1	Cu 324.752†	65230.8	68419.4	547.39 µg/L	547.39 ppb	09:56:06
1	Mn 257.610†	120356.8	131095.5	491.23 µg/L	491.23 ppb	09:56:06
1	Mo 202.031†	4099.4	4462.9	505.53 µg/L	505.53 ppb	09:56:27
1	Ni 231.604†	7144.3	7459.0	444.59 µg/L	444.59 ppb	09:56:27
1	P 214.914†	1139.4	1217.3	2780.7 µg/L	2780.7 ppb	09:56:27
1	Pb 220.353†	1636.0	1687.0	509.52 µg/L	509.52 ppb	09:56:27
1	S 181.975 Axial†	539.6	572.0	2776.2 µg/L	2776.2 ppb	09:56:27
1	Sb 206.836†	514.4	534.6	526.83 µg/L	526.83 ppb	09:56:27
1	Se 196.026†	1413.5	1525.8	2382.6 µg/L	2382.6 ppb	09:56:27
1	SiO2†	44651.5	47197.6	11087 µg/L	11087 ppb	09:56:06
1	Si 251.611†	53833.6	58215.4	5225.4 µg/L	5225.4 ppb	09:56:06
1	Sn 189.927†	908.6	984.8	530.75 µg/L	530.75 ppb	09:56:27
1	Ti 334.940†	185871.0	201883.4	505.28 µg/L	505.28 ppb	09:56:06
1	Tl 190.801†	257.2	305.6	488.47 µg/L	488.47 ppb	09:56:27
1	U 409.014†	4746.0	5262.3	445.09 µg/L	445.09 ppb	09:56:06
1	V 292.402†	39478.0	42947.3	526.59 µg/L	526.59 ppb	09:56:06
1	Zn 213.857†	17800.9	18849.6	470.31 µg/L	470.31 ppb	09:56:06
2	Sc RADIAL	52486.7	52486.7	94.2 %		09:55:38
2	Al 396.153Radial†	634085.7	673115.0	531710 µg/L	531710 ppb	09:55:33
2	Ca 317.933Radial†	472379.6	501260.4	507660 µg/L	507660 ppb	09:55:33
2	Fe 238.204 Radial†	20729.0	21988.8	195170 µg/L	195170 ppb	09:55:38
2	K 766.490 Radial†	6554.9	6771.6	5376.0 µg/L	5376.0 ppb	09:55:38
2	Mg 279.077 IEC†	47752.5	50678.3	500800 µg/L	500800 ppb	09:55:38
2	Na 589.592 Radial†	14292.0	14700.3	5251.8 µg/L	5251.8 ppb	09:55:38
2	Sr 421.552†	43688.9	46339.3	537.01 µg/L	537.01 ppb	09:55:38
2	Sc 361.383	1819659.2	1819659.2	91.748 %		09:56:33
2	Y 371.029	1253653.4	1253653.4	91.315 %		09:56:33
2	Ag 328.068†	25845.5	28672.5	261.42 µg/L	261.42 ppb	09:56:39
2	As 188.979†	212.3	233.1	478.37 µg/L	478.37 ppb	09:57:00
2	B 249.677†	10896.8	11562.5	451.81 µg/L	451.81 ppb	09:56:39
2	Ba 233.527†	16608.8	18123.7	517.26 µg/L	517.26 ppb	09:56:39
2	Be 313.107†	319760.7	351821.7	250.69 µg/L	250.69 ppb	09:56:33
2	Cd 226.502†	15191.5	16702.9	473.70 µg/L	473.70 ppb	09:56:39
2	Co 228.616†	7808.8	8519.4	458.06 µg/L	458.06 ppb	09:57:00
2	Cr 267.716†	19526.3	21325.3	505.43 µg/L	505.43 ppb	09:56:39
2	Cu 324.752†	65900.2	69338.7	554.54 µg/L	554.54 ppb	09:56:39
2	Mn 257.610†	121589.0	132788.5	497.58 µg/L	497.58 ppb	09:56:39
2	Mo 202.031†	4153.3	4533.6	513.46 µg/L	513.46 ppb	09:57:00
2	Ni 231.604†	7261.5	7607.5	453.42 µg/L	453.42 ppb	09:57:00
2	P 214.914†	1161.2	1244.5	2846.2 µg/L	2846.2 ppb	09:57:00
2	Pb 220.353†	1638.2	1694.1	512.29 µg/L	512.29 ppb	09:57:00

2	S 181.975 Axial†	548.6	583.4	2831.5 µg/L	2831.5 ppb	09:57:00
2	Sb 206.836†	524.3	546.9	538.77 µg/L	538.77 ppb	09:57:00
2	Se 196.026†	1414.5	1531.0	2388.8 µg/L	2388.8 ppb	09:57:00
2	SiO2†	45160.4	47882.2	11248 µg/L	11248 ppb	09:56:39
2	Si 251.611†	54372.9	58959.7	5292.2 µg/L	5292.2 ppb	09:56:39
2	Sn 189.927†	920.2	1000.1	538.47 µg/L	538.47 ppb	09:57:00
2	Ti 334.940†	188049.2	204798.1	513.10 µg/L	513.10 ppb	09:56:39
2	Tl 190.801†	255.9	305.0	487.56 µg/L	487.56 ppb	09:57:00
2	U 409.014†	4771.7	5304.2	448.12 µg/L	448.12 ppb	09:56:39
2	V 292.402†	39893.2	43514.7	533.39 µg/L	533.39 ppb	09:56:39
2	Zn 213.857†	18052.8	19176.0	478.94 µg/L	478.94 ppb	09:56:39
3	Sc RADIAL	53754.1	53754.1	96.5 %		09:55:50
3	Al 396.153Radial†	628247.7	651192.8	514390 µg/L	514390 ppb	09:55:44
3	Ca 317.933Radial†	466662.1	483510.6	489680 µg/L	489680 ppb	09:55:44
3	Fe 238.204 Radial†	20643.1	21380.9	189770 µg/L	189770 ppb	09:55:50
3	K 766.490 Radial†	6533.6	6585.3	5228.1 µg/L	5228.1 ppb	09:55:50
3	Mg 279.077 IEC†	47644.4	49371.1	487880 µg/L	487880 ppb	09:55:50
3	Na 589.592 Radial†	14246.6	14295.5	5107.2 µg/L	5107.2 ppb	09:55:50
3	Sr 421.552†	43621.4	45175.9	523.52 µg/L	523.52 ppb	09:55:50
3	Sc 361.383	1794750.5	1794750.5	90.492 %		09:57:06
3	Y 371.029	1237211.1	1237211.1	90.118 %		09:57:06
3	Ag 328.068†	25786.8	28998.7	263.89 µg/L	263.89 ppb	09:57:12
3	As 188.979†	216.4	240.9	495.43 µg/L	495.43 ppb	09:57:32
3	B 249.677†	10779.2	11597.4	456.30 µg/L	456.30 ppb	09:57:12
3	Ba 233.527†	16455.6	18205.6	519.60 µg/L	519.60 ppb	09:57:12
3	Be 313.107†	325305.1	362785.7	258.51 µg/L	258.51 ppb	09:57:06
3	Cd 226.502†	15099.9	16831.4	478.11 µg/L	478.11 ppb	09:57:12
3	Co 228.616†	7632.0	8442.2	453.90 µg/L	453.90 ppb	09:57:32
3	Cr 267.716†	19324.8	21398.0	507.16 µg/L	507.16 ppb	09:57:12
3	Cu 324.752†	65477.3	69868.2	557.82 µg/L	557.82 ppb	09:57:12
3	Mn 257.610†	120755.4	133706.6	500.78 µg/L	500.78 ppb	09:57:12
3	Mo 202.031†	4050.7	4483.1	507.62 µg/L	507.62 ppb	09:57:32
3	Ni 231.604†	7094.2	7532.5	448.90 µg/L	448.90 ppb	09:57:32
3	P 214.914†	1136.3	1234.5	2822.0 µg/L	2822.0 ppb	09:57:32
3	Pb 220.353†	1605.6	1682.9	508.25 µg/L	508.25 ppb	09:57:32
3	S 181.975 Axial†	537.0	578.8	2809.4 µg/L	2809.4 ppb	09:57:32
3	Sb 206.836†	503.3	531.6	523.99 µg/L	523.99 ppb	09:57:32
3	Se 196.026†	1402.2	1538.8	2403.1 µg/L	2403.1 ppb	09:57:32
3	SiO2†	44826.5	48196.2	11322 µg/L	11322 ppb	09:57:12
3	Si 251.611†	53972.3	59339.5	5326.3 µg/L	5326.3 ppb	09:57:12
3	Sn 189.927†	900.7	992.5	533.79 µg/L	533.79 ppb	09:57:32
3	Ti 334.940†	186381.3	205799.5	516.50 µg/L	516.50 ppb	09:57:12
3	Tl 190.801†	243.0	294.6	471.51 µg/L	471.51 ppb	09:57:32
3	U 409.014†	4835.8	5447.1	463.60 µg/L	463.60 ppb	09:57:12
3	V 292.402†	39503.6	43687.6	534.74 µg/L	534.74 ppb	09:57:12
3	Zn 213.857†	17901.2	19281.5	482.80 µg/L	482.80 ppb	09:57:12

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1812979.1	91.411 %	0.8054			0.88%
Sc RADIAL	53047.5	95.2 %	1.16			1.22%
Y 371.029	1249366.8	91.003 %	0.7778			0.85%
Ag 328.068†	28680.2	261.34 µg/L	2.593	261.34 ppb	2.593	0.99%
QC value within limits for Ag 328.068 Recovery = 104.53%						
Al 396.153Radial†	660171.8	521490 µg/L	9073.3	521490 ppb	9073.3	1.74%
QC value within limits for Al 396.153Radial Recovery = 104.30%						
As 188.979†	235.5	483.79 µg/L	10.085	483.79 ppb	10.085	2.08%
QC value within limits for As 188.979 Recovery = 96.76%						
B 249.677†	11541.0	451.92 µg/L	4.325	451.92 ppb	4.325	0.96%
QC value within limits for B 249.677 Recovery = 90.38%						
Ba 233.527†	18068.2	515.68 µg/L	4.908	515.68 ppb	4.908	0.95%
QC value within limits for Ba 233.527 Recovery = 103.14%						
Be 313.107†	353660.4	252.00 µg/L	5.959	252.00 ppb	5.959	2.36%
QC value within limits for Be 313.107 Recovery = 100.80%						
Ca 317.933Radial†	490979.0	497250 µg/L	9320.6	497250 ppb	9320.6	1.87%
QC value within limits for Ca 317.933Radial Recovery = 99.45%						
Cd 226.502†	16664.4	472.80 µg/L	5.818	472.80 ppb	5.818	1.23%
QC value within limits for Cd 226.502 Recovery = 94.56%						
Co 228.616†	8453.8	454.53 µg/L	3.262	454.53 ppb	3.262	0.72%

QC value within limits for Co 228.616 Recovery = 90.91%							
Cr 267.716†	21241.2	503.44 µg/L	5.021	503.44 ppb	5.021	1.00%	
QC value within limits for Cr 267.716 Recovery = 100.69%							
Cu 324.752†	69208.7	553.25 µg/L	5.335	553.25 ppb	5.335	0.96%	
QC value within limits for Cu 324.752 Recovery = 110.65%							
Fe 238.204 Radial†	21742.3	192980 µg/L	2838.3	192980 ppb	2838.3	1.47%	
QC value within limits for Fe 238.204 Radial Recovery = 96.49%							
K 766.490 Radial†	6677.4	5301.2 µg/L	73.93	5301.2 ppb	73.93	1.39%	
QC value within limits for K 766.490 Radial Recovery = 106.02%							
Mg 279.077 IEC†	50181.1	495890 µg/L	6991.6	495890 ppb	6991.6	1.41%	
QC value within limits for Mg 279.077 IEC Recovery = 99.18%							
Mn 257.610†	132530.2	496.53 µg/L	4.861	496.53 ppb	4.861	0.98%	
QC value within limits for Mn 257.610 Recovery = 99.31%							
Mo 202.031†	4493.2	508.87 µg/L	4.110	508.87 ppb	4.110	0.81%	
QC value within limits for Mo 202.031 Recovery = 101.77%							
Na 589.592 Radial†	14560.6	5201.9 µg/L	82.07	5201.9 ppb	82.07	1.58%	
QC value within limits for Na 589.592 Radial Recovery = 104.04%							
Ni 231.604†	7533.0	448.97 µg/L	4.412	448.97 ppb	4.412	0.98%	
QC value within limits for Ni 231.604 Recovery = 89.79%							
P 214.914†	1232.1	2816.3 µg/L	33.10	2816.3 ppb	33.10	1.18%	
QC value within limits for P 214.914 Recovery = 112.65%							
Pb 220.353†	1688.0	510.02 µg/L	2.066	510.02 ppb	2.066	0.41%	
QC value within limits for Pb 220.353 Recovery = 102.00%							
S 181.975 Axial†	578.0	2805.7 µg/L	27.84	2805.7 ppb	27.84	0.99%	
QC value within limits for S 181.975 Axial Recovery = 112.23%							
Sb 206.836†	537.7	529.86 µg/L	7.845	529.86 ppb	7.845	1.48%	
QC value within limits for Sb 206.836 Recovery = 105.97%							
Se 196.026†	1531.9	2391.5 µg/L	10.50	2391.5 ppb	10.50	0.44%	
QC value within limits for Se 196.026 Recovery = 95.66%							
SiO2†	47758.7	11219 µg/L	120.0	11219 ppb	120.0	1.07%	
QC value within limits for SiO2 Recovery = 104.90%							
Si 251.611†	58838.2	5281.3 µg/L	51.33	5281.3 ppb	51.33	0.97%	
QC value within limits for Si 251.611 Recovery = 105.63%							
Sn 189.927†	992.5	534.33 µg/L	3.887	534.33 ppb	3.887	0.73%	
QC value within limits for Sn 189.927 Recovery = 106.87%							
Sr 421.552†	45902.0	531.94 µg/L	7.338	531.94 ppb	7.338	1.38%	
QC value within limits for Sr 421.552 Recovery = 106.39%							
Ti 334.940†	204160.3	511.63 µg/L	5.751	511.63 ppb	5.751	1.12%	
QC value within limits for Ti 334.940 Recovery = 102.33%							
Tl 190.801†	301.7	482.51 µg/L	9.539	482.51 ppb	9.539	1.98%	
QC value within limits for Tl 190.801 Recovery = 96.50%							
U 409.014†	5337.9	452.27 µg/L	9.932	452.27 ppb	9.932	2.20%	
QC value within limits for U 409.014 Recovery = 90.45%							
V 292.402†	43383.2	531.58 µg/L	4.369	531.58 ppb	4.369	0.82%	
QC value within limits for V 292.402 Recovery = 106.32%							
Zn 213.857†	19102.4	477.35 µg/L	6.396	477.35 ppb	6.396	1.34%	
QC value within limits for Zn 213.857 Recovery = 95.47%							
All analyte(s) passed QC.							

Sequence No.: 11  
 Sample ID: LR1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 105  
 Date Collected: 2/8/2010 09:57:42  
 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	53804.1	53804.1	96.6 %		09:58:22
1	Al 396.153Radial†	607845.0	629460.6	497240 µg/L	497240 ppb	09:58:17
1	Ca 317.933Radial†	456318.9	472350.8	478380 µg/L	478380 ppb	09:58:17
1	Fe 238.204 Radial†	48985.1	50710.4	450080 µg/L	450080 ppb	09:58:22
1	K 766.490 Radial†	91.7	-91.7	-72.831 µg/L	-72.831 ppb	09:58:22
1	Mg 279.077 IEC†	45672.8	47283.5	466960 µg/L	466960 ppb	09:58:22
1	Na 589.592 Radial†	1298747.4	1344440.2	480310 µg/L	480310 ppb	09:58:17
1	Sr 421.552†	459.4	437.7	5.0722 µg/L	5.0722 ppb	09:58:22
1	Sc 361.383	1832599.1	1832599.1	92.400 %		09:58:56
1	Y 371.029	1252110.5	1252110.5	91.203 %		09:58:56
1	Ag 328.068†	-4559.7	-4432.3	-10.130 µg/L	-10.130 ppb	09:59:02
1	As 188.979†	-21.6	-21.7	-44.744 µg/L	-44.744 ppb	09:59:22
1	B 249.677†	1303.4	1096.1	-182.44 µg/L	-182.44 ppb	09:59:02
1	Ba 233.527†	488.9	550.1	15.540 µg/L	15.540 ppb	09:59:22
1	Be 313.107†	-10571.0	-8139.6	-5.8187 µg/L	-5.8187 ppb	09:59:02
1	Cd 226.502†	998.5	1225.6	-14.527 µg/L	-14.527 ppb	09:59:02
1	Co 228.616†	191.7	215.8	11.523 µg/L	11.523 ppb	09:59:22
1	Cr 267.716†	66.4	114.6	2.6671 µg/L	2.6671 ppb	09:59:22
1	Cu 324.752†	-8076.5	-11229.6	-22.856 µg/L	-22.856 ppb	09:59:02
1	Mn 257.610†	-5693.3	-5898.1	19.324 µg/L	19.324 ppb	09:59:02
1	Mo 202.031†	-185.3	-193.8	-4.5278 µg/L	-4.5278 ppb	09:59:22
1	Ni 231.604†	91.0	-208.7	-6.5442 µg/L	-6.5442 ppb	09:59:22
1	P 214.914†	276.5	278.0	434.25 µg/L	434.25 ppb	09:59:22
1	Pb 220.353†	161.9	83.7	20.284 µg/L	20.284 ppb	09:59:22
1	S 181.975 Axial†	39.7	28.3	137.39 µg/L	137.39 ppb	09:59:22
1	Sb 206.836†	54.6	34.5	-5.4300 µg/L	-5.4300 ppb	09:59:22
1	Se 196.026†	-109.4	-129.1	475.00 µg/L	475.00 ppb	09:59:22
1	SiO2†	1105.3	-143.9	-33.811 µg/L	-33.811 ppb	09:59:22
1	Si 251.611†	-230.1	-552.7	-49.612 µg/L	-49.612 ppb	09:59:22
1	Sn 189.927†	-42.2	-48.5	-19.651 µg/L	-19.651 ppb	09:59:22
1	Ti 334.940†	12935.2	13834.2	7.5115 µg/L	7.5115 ppb	09:59:02
1	Tl 190.801†	-52.3	-30.6	27.509 µg/L	27.509 ppb	09:59:22
1	U 409.014†	132884.8	143917.4	13643 µg/L	13643 ppb	09:59:02
1	V 292.402†	-5936.7	-6391.6	-7.0680 µg/L	-7.0680 ppb	09:59:02
1	Zn 213.857†	2686.1	2406.4	17.498 µg/L	17.498 ppb	09:59:22
2	Sc RADIAL	53728.2	53728.2	96.4 %		09:58:34
2	Al 396.153Radial†	603518.4	625862.2	494390 µg/L	494390 ppb	09:58:29
2	Ca 317.933Radial†	452392.6	468946.2	474930 µg/L	474930 ppb	09:58:29
2	Fe 238.204 Radial†	48820.4	50611.2	449200 µg/L	449200 ppb	09:58:34
2	K 766.490 Radial†	118.4	-64.0	-50.799 µg/L	-50.799 ppb	09:58:34
2	Mg 279.077 IEC†	45594.5	47269.1	466820 µg/L	466820 ppb	09:58:34
2	Na 589.592 Radial†	1290485.7	1337770.8	477930 µg/L	477930 ppb	09:58:29
2	Sr 421.552†	444.1	422.5	4.8958 µg/L	4.8958 ppb	09:58:34
2	Sc 361.383	1807037.0	1807037.0	91.112 %		09:59:28
2	Y 371.029	1233467.1	1233467.1	89.845 %		09:59:28
2	Ag 328.068†	-4556.2	-4498.3	-10.751 µg/L	-10.751 ppb	09:59:34
2	As 188.979†	-19.2	-19.4	-39.677 µg/L	-39.677 ppb	09:59:55
2	B 249.677†	1342.7	1159.3	-178.96 µg/L	-178.96 ppb	09:59:34
2	Ba 233.527†	518.7	590.3	16.685 µg/L	16.685 ppb	09:59:55
2	Be 313.107†	-10505.2	-8229.3	-5.8831 µg/L	-5.8831 ppb	09:59:34
2	Cd 226.502†	1002.5	1245.3	-13.842 µg/L	-13.842 ppb	09:59:34
2	Co 228.616†	167.7	192.4	10.261 µg/L	10.261 ppb	09:59:55
2	Cr 267.716†	68.4	117.8	2.7438 µg/L	2.7438 ppb	09:59:55
2	Cu 324.752†	-7849.2	-11103.8	-22.021 µg/L	-22.021 ppb	09:59:34
2	Mn 257.610†	-5648.0	-5935.5	19.074 µg/L	19.074 ppb	09:59:34
2	Mo 202.031†	-181.2	-192.1	-4.3731 µg/L	-4.3731 ppb	09:59:55
2	Ni 231.604†	108.1	-188.5	-5.3578 µg/L	-5.3578 ppb	09:59:55
2	P 214.914†	262.6	267.1	408.43 µg/L	408.43 ppb	09:59:55
2	Pb 220.353†	163.4	87.8	21.233 µg/L	21.233 ppb	09:59:55

2	S 181.975 Axial†	34.4	23.1	112.13 µg/L	112.13 ppb	09:59:55
2	Sb 206.836†	53.5	34.1	-5.5643 µg/L	-5.5643 ppb	09:59:55
2	Se 196.026†	-110.6	-132.1	468.94 µg/L	468.94 ppb	09:59:55
2	SiO2†	1098.6	-134.4	-31.566 µg/L	-31.566 ppb	09:59:55
2	Si 251.611†	-244.0	-571.4	-51.291 µg/L	-51.291 ppb	09:59:55
2	Sn 189.927†	-47.6	-55.1	-22.839 µg/L	-22.839 ppb	09:59:55
2	Ti 334.940†	13159.0	14277.9	8.6472 µg/L	8.6472 ppb	09:59:34
2	Tl 190.801†	-44.1	-22.3	40.089 µg/L	40.089 ppb	09:59:55
2	U 409.014†	132091.5	145081.0	13755 µg/L	13755 ppb	09:59:34
2	V 292.402†	-5858.2	-6396.4	-7.1097 µg/L	-7.1097 ppb	09:59:34
2	Zn 213.857†	2677.0	2437.6	18.384 µg/L	18.384 ppb	09:59:55
3	Sc RADIAL	54227.7	54227.7	97.3 %		09:58:46
3	Al 396.153Radial†	604826.6	621441.3	490900 µg/L	490900 ppb	09:58:40
3	Ca 317.933Radial†	453385.3	465644.7	471590 µg/L	471590 ppb	09:58:40
3	Fe 238.204 Radial†	49112.5	50445.0	447720 µg/L	447720 ppb	09:58:46
3	K 766.490 Radial†	114.1	-69.5	-55.138 µg/L	-55.138 ppb	09:58:46
3	Mg 279.077 IEC†	45711.2	46953.4	463700 µg/L	463700 ppb	09:58:46
3	Na 589.592 Radial†	1292771.3	1327791.9	474370 µg/L	474370 ppb	09:58:40
3	Sr 421.552†	446.3	420.6	4.8737 µg/L	4.8737 ppb	09:58:46
3	Sc 361.383	1797933.6	1797933.6	90.653 %		10:00:01
3	Y 371.029	1229237.2	1229237.2	89.537 %		10:00:01
3	Ag 328.068†	-4551.0	-4517.9	-11.018 µg/L	-11.018 ppb	10:00:07
3	As 188.979†	-24.2	-25.0	-51.508 µg/L	-51.508 ppb	10:00:27
3	B 249.677†	1315.9	1137.2	-179.24 µg/L	-179.24 ppb	10:00:07
3	Ba 233.527†	513.0	586.9	16.587 µg/L	16.587 ppb	10:00:27
3	Be 313.107†	-10477.1	-8256.6	-5.9034 µg/L	-5.9034 ppb	10:00:07
3	Cd 226.502†	1037.2	1289.2	-12.376 µg/L	-12.376 ppb	10:00:07
3	Co 228.616†	181.1	208.1	11.102 µg/L	11.102 ppb	10:00:27
3	Cr 267.716†	83.3	134.6	3.1408 µg/L	3.1408 ppb	10:00:27
3	Cu 324.752†	-8001.1	-11315.0	-23.833 µg/L	-23.833 ppb	10:00:07
3	Mn 257.610†	-5727.8	-6055.0	18.560 µg/L	18.560 ppb	10:00:07
3	Mo 202.031†	-184.0	-196.2	-4.8868 µg/L	-4.8868 ppb	10:00:27
3	Ni 231.604†	97.4	-199.7	-6.0427 µg/L	-6.0427 ppb	10:00:27
3	P 214.914†	269.9	276.5	430.73 µg/L	430.73 ppb	10:00:27
3	Pb 220.353†	157.3	82.1	19.322 µg/L	19.322 ppb	10:00:27
3	S 181.975 Axial†	39.7	29.2	141.61 µg/L	141.61 ppb	10:00:27
3	Sb 206.836†	64.8	46.9	8.3455 µg/L	8.3455 ppb	10:00:27
3	Se 196.026†	-124.2	-147.7	443.68 µg/L	443.68 ppb	10:00:27
3	SiO2†	1085.0	-143.2	-33.641 µg/L	-33.641 ppb	10:00:27
3	Si 251.611†	-222.9	-549.5	-49.328 µg/L	-49.328 ppb	10:00:27
3	Sn 189.927†	-55.2	-63.8	-27.405 µg/L	-27.405 ppb	10:00:27
3	Ti 334.940†	13806.8	15065.6	10.935 µg/L	10.935 ppb	10:00:07
3	Tl 190.801†	-46.9	-25.6	35.068 µg/L	35.068 ppb	10:00:27
3	U 409.014†	132385.5	146139.4	13856 µg/L	13856 ppb	10:00:07
3	V 292.402†	-5901.6	-6476.8	-8.1135 µg/L	-8.1135 ppb	10:00:07
3	Zn 213.857†	2699.7	2477.5	19.718 µg/L	19.718 ppb	10:00:27

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1812523.2	91.388 %	0.9062			0.99%
Sc RADIAL	53920.0	96.8 %	0.48			0.50%
Y 371.029	1238271.6	90.195 %	0.8865			0.98%
Ag 328.068†	-4482.8	-10.633 µg/L	0.4560	-10.633 ppb	0.4560	4.29%
Al 396.153Radial†	625588.1	494180 µg/L	3172.9	494180 ppb	3172.9	0.64%
QC value within limits for Al 396.153Radial Recovery = 98.84%						
As 188.979†	-22.0	-45.310 µg/L	5.9356	-45.310 ppb	5.9356	13.10%
B 249.677†	1130.9	-180.21 µg/L	1.931	-180.21 ppb	1.931	1.07%
Ba 233.527†	575.8	16.271 µg/L	0.6345	16.271 ppb	0.6345	3.90%
Be 313.107†	-8208.5	-5.8684 µg/L	0.04422	-5.8684 ppb	0.04422	0.75%
Ca 317.933Radial†	468980.6	474970 µg/L	3396.0	474970 ppb	3396.0	0.71%
QC value within limits for Ca 317.933Radial Recovery = 94.99%						
Cd 226.502†	1253.4	-13.582 µg/L	1.0989	-13.582 ppb	1.0989	8.09%
Co 228.616†	205.4	10.962 µg/L	0.6424	10.962 ppb	0.6424	5.86%
Cr 267.716†	122.3	2.8506 µg/L	0.25427	2.8506 ppb	0.25427	8.92%
Cu 324.752†	-11216.1	-22.903 µg/L	0.9068	-22.903 ppb	0.9068	3.96%
Fe 238.204 Radial†	50588.9	449000 µg/L	1190.2	449000 ppb	1190.2	0.27%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 89.80%						
K 766.490 Radial†	-75.1	-59.590 µg/L	11.6712	-59.590 ppb	11.6712	19.59%
Mg 279.077 IEC†	47168.7	465820 µg/L	1843.0	465820 ppb	1843.0	0.40%

QC value within limits for Mg 279.077 IEC Recovery = 93.16%							
Mn 257.610†	-5962.9	18.986 µg/L	0.3893	18.986 ppb	0.3893	2.05%	
Mo 202.031†	-194.0	-4.5959 µg/L	0.26353	-4.5959 ppb	0.26353	5.73%	
Na 589.592 Radial†	1336667.6	477540 µg/L	2993.4	477540 ppb	2993.4	0.63%	
QC value within limits for Na 589.592 Radial Recovery = 95.51%							
Ni 231.604†	-198.9	-5.9816 µg/L	0.59555	-5.9816 ppb	0.59555	9.96%	
P 214.914†	273.9	424.47 µg/L	14.002	424.47 ppb	14.002	3.30%	
Pb 220.353†	84.6	20.280 µg/L	0.9558	20.280 ppb	0.9558	4.71%	
S 181.975 Axial†	26.9	130.38 µg/L	15.941	130.38 ppb	15.941	12.23%	
Sb 206.836†	38.5	-0.8829 µg/L	7.99235	-0.8829 ppb	7.99235	905.22%	
Se 196.026†	-136.3	462.54 µg/L	16.615	462.54 ppb	16.615	3.59%	
SiO2†	-140.5	-33.006 µg/L	1.2496	-33.006 ppb	1.2496	3.79%	
Si 251.611†	-557.9	-50.077 µg/L	1.0612	-50.077 ppb	1.0612	2.12%	
Sn 189.927†	-55.8	-23.298 µg/L	3.8973	-23.298 ppb	3.8973	16.73%	
Sr 421.552†	426.9	4.9472 µg/L	0.10880	4.9472 ppb	0.10880	2.20%	
Ti 334.940†	14392.6	9.0311 µg/L	1.74367	9.0311 ppb	1.74367	19.31%	
Tl 190.801†	-26.2	34.222 µg/L	6.3325	34.222 ppb	6.3325	18.50%	
U 409.014†	145046.0	13751 µg/L	106.4	13751 ppb	106.4	0.77%	
QC value within limits for U 409.014 Recovery = 91.68%							
V 292.402†	-6421.6	-7.4304 µg/L	0.59196	-7.4304 ppb	0.59196	7.97%	
Zn 213.857†	2440.5	18.533 µg/L	1.1173	18.533 ppb	1.1173	6.03%	
QC Failed. Continue with analysis.							

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 2/8/2010 10:00:36

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	54807.8	54807.8	98.4 %		10:01:19
1	Al 396.153Radial†	263.8	277.9	4.1143 µg/L	4.1143 ppb	10:01:19
1	Ca 317.933Radial†	255.7	72.0	72.945 µg/L	72.945 ppb	10:01:39
1	Fe 238.204 Radial†	4.4	-11.4	115.00 µg/L	115.00 ppb	10:01:39
1	K 766.490 Radial†	378970.1	385066.9	305710 µg/L	305710 ppb	10:01:13
1	Mg 279.077 IEC†	2.1	-10.5	72.354 µg/L	72.354 ppb	10:01:39
1	Na 589.592 Radial†	1091.3	638.2	227.99 µg/L	227.99 ppb	10:01:19
1	Sr 421.552†	858547.5	872744.7	10114 µg/L	10114 ppb	10:01:13
1	Sc 361.383	1938985.9	1938985.9	97.764 %		10:03:07
1	Y 371.029	1328077.4	1328077.4	96.736 %		10:03:07
1	Ag 328.068†	-6866.1	-6520.7	15.705 µg/L	15.705 ppb	10:03:13
1	As 188.979†	4766.7	4877.4	10325 µg/L	10325 ppb	10:03:13
1	B 249.677†	107325.7	109465.5	5275.8 µg/L	5275.8 ppb	10:03:07
1	Ba 233.527†	538878.3	551221.9	15724 µg/L	15724 ppb	10:03:07
1	Be 313.107†	4231059.7	4331112.3	3084.7 µg/L	3084.7 ppb	10:03:07
1	Cd 226.502†	340264.5	348190.4	10335 µg/L	10335 ppb	10:03:07
1	Co 228.616†	184768.1	189001.4	10164 µg/L	10164 ppb	10:03:07
1	Cr 267.716†	1081298.2	1106067.0	26205 µg/L	26205 ppb	10:03:07
1	Cu 324.752†	2821363.0	2883390.5	21932 µg/L	21932 ppb	10:03:07
1	Mn 257.610†	2698685.5	2760659.9	10222 µg/L	10222 ppb	10:03:07
1	Mo 202.031†	91849.9	93957.0	10488 µg/L	10488 ppb	10:03:07
1	Ni 231.604†	170821.6	174420.6	10338 µg/L	10338 ppb	10:03:07
1	P 214.914†	6871.6	7007.6	14180 µg/L	14180 ppb	10:03:13
1	Pb 220.353†	90954.2	92942.6	26899 µg/L	26899 ppb	10:03:07
1	S 181.975 Axial†	11219.7	11461.7	55633 µg/L	55633 ppb	10:03:13
1	Sb 206.836†	10390.3	10603.3	11128 µg/L	11128 ppb	10:03:13
1	Se 196.026†	6247.8	6379.9	10179 µg/L	10179 ppb	10:03:13
1	SiO2†	442401.5	451177.8	105990 µg/L	105990 ppb	10:03:07
1	Si 251.611†	539881.9	551923.7	49541 µg/L	49541 ppb	10:03:07
1	Sn 189.927†	21865.3	22362.4	11240 µg/L	11240 ppb	10:03:13
1	Ti 334.940†	3900361.2	3989386.2	10608 µg/L	10608 ppb	10:03:07
1	Tl 190.801†	6496.8	6671.4	10186 µg/L	10186 ppb	10:03:13
1	U 409.014†	710.0	829.4	79.169 µg/L	79.169 ppb	10:03:07
1	V 292.402†	914565.8	935512.6	10995 µg/L	10995 ppb	10:03:07
1	Zn 213.857†	561806.8	574153.1	15472 µg/L	15472 ppb	10:03:07
2	Sc RADIAL	56395.5	56395.5	101 %		10:01:51
2	Al 396.153Radial†	262.2	268.9	-1.3876 µg/L	-1.3876 ppb	10:01:51
2	Ca 317.933Radial†	257.5	66.6	67.426 µg/L	67.426 ppb	10:02:11
2	Fe 238.204 Radial†	3.0	-12.8	100.45 µg/L	100.45 ppb	10:02:11
2	K 766.490 Radial†	382853.9	378057.9	300140 µg/L	300140 ppb	10:01:45
2	Mg 279.077 IEC†	-0.3	-13.0	46.395 µg/L	46.395 ppb	10:02:11
2	Na 589.592 Radial†	996.6	513.4	183.40 µg/L	183.40 ppb	10:01:51
2	Sr 421.552†	868461.6	857968.0	9942.6 µg/L	9942.6 ppb	10:01:45
2	Sc 361.383	1990537.2	1990537.2	100.36 %		10:03:29
2	Y 371.029	1363870.7	1363870.7	99.344 %		10:03:29
2	Ag 328.068†	-7104.3	-6576.2	14.616 µg/L	14.616 ppb	10:03:35
2	As 188.979†	4997.9	4981.5	10546 µg/L	10546 ppb	10:03:35
2	B 249.677†	109649.3	108937.6	5250.2 µg/L	5250.2 ppb	10:03:29
2	Ba 233.527†	549181.2	547212.3	15610 µg/L	15610 ppb	10:03:29
2	Be 313.107†	4310498.9	4298181.2	3061.2 µg/L	3061.2 ppb	10:03:29
2	Cd 226.502†	347576.8	346462.4	10284 µg/L	10284 ppb	10:03:29
2	Co 228.616†	188275.7	187601.8	10089 µg/L	10089 ppb	10:03:29
2	Cr 267.716†	1099814.5	1095872.2	25964 µg/L	25964 ppb	10:03:29
2	Cu 324.752†	2866639.2	2853763.5	21707 µg/L	21707 ppb	10:03:29
2	Mn 257.610†	2744065.8	2734386.5	10124 µg/L	10124 ppb	10:03:29
2	Mo 202.031†	93562.4	93230.1	10406 µg/L	10406 ppb	10:03:29
2	Ni 231.604†	174151.4	173213.3	10266 µg/L	10266 ppb	10:03:29
2	P 214.914†	7211.6	7164.3	14571 µg/L	14571 ppb	10:03:35
2	Pb 220.353†	93014.9	92586.4	26796 µg/L	26796 ppb	10:03:29

2	S 181.975 Axial†	11816.7	11759.2	57077 µg/L	57077 ppb	10:03:35
2	Sb 206.836†	10890.2	10826.1	11365 µg/L	11365 ppb	10:03:35
2	Se 196.026†	6562.5	6528.0	10415 µg/L	10415 ppb	10:03:35
2	SiO2†	452011.3	449033.3	105480 µg/L	105480 ppb	10:03:29
2	Si 251.611†	551161.5	548860.8	49266 µg/L	49266 ppb	10:03:29
2	Sn 189.927†	22834.1	22748.6	11434 µg/L	11434 ppb	10:03:35
2	Ti 334.940†	3968285.5	3953742.1	10513 µg/L	10513 ppb	10:03:29
2	Tl 190.801†	6814.5	6815.8	10403 µg/L	10403 ppb	10:03:35
2	U 409.014†	668.4	769.3	73.427 µg/L	73.427 ppb	10:03:29
2	V 292.402†	930841.5	927502.1	10900 µg/L	10900 ppb	10:03:29
2	Zn 213.857†	571895.5	569322.8	15342 µg/L	15342 ppb	10:03:29
3	Sc RADIAL	55473.7	55473.7	99.6 %		10:02:23
3	Al 396.153Radial†	280.7	291.7	30.305 µg/L	30.305 ppb	10:02:23
3	Ca 317.933Radial†	273.3	86.6	87.728 µg/L	87.728 ppb	10:02:43
3	Fe 238.204 Radial†	6.0	-9.8	113.53 µg/L	113.53 ppb	10:02:43
3	K 766.490 Radial†	394618.3	396158.8	314510 µg/L	314510 ppb	10:02:17
3	Mg 279.077 IEC†	2.5	-10.2	62.910 µg/L	62.910 ppb	10:02:43
3	Na 589.592 Radial†	988.0	521.1	186.18 µg/L	186.18 ppb	10:02:23
3	Sr 421.552†	905152.2	909076.1	10535 µg/L	10535 ppb	10:02:17
3	Sc 361.383	1998835.8	1998835.8	100.78 %		10:03:51
3	Y 371.029	1368057.0	1368057.0	99.648 %		10:03:51
3	Ag 328.068†	-6322.1	-5770.6	16.810 µg/L	16.810 ppb	10:03:57
3	As 188.979†	4524.9	4491.5	9507.6 µg/L	9507.6 ppb	10:03:57
3	B 249.677†	105805.8	104670.4	5042.8 µg/L	5042.8 ppb	10:03:51
3	Ba 233.527†	520983.2	516961.4	14747 µg/L	14747 ppb	10:03:51
3	Be 313.107†	4056115.7	4027941.0	2868.8 µg/L	2868.8 ppb	10:03:51
3	Cd 226.502†	329509.5	327097.5	9709.2 µg/L	9709.2 ppb	10:03:51
3	Co 228.616†	176994.0	175628.8	9445.3 µg/L	9445.3 ppb	10:03:51
3	Cr 267.716†	1014561.1	1006730.9	23852 µg/L	23852 ppb	10:03:51
3	Cu 324.752†	2687526.6	2664182.6	20265 µg/L	20265 ppb	10:03:51
3	Mn 257.610†	2582964.5	2563184.1	9490.5 µg/L	9490.5 ppb	10:03:51
3	Mo 202.031†	87948.3	87272.5	9741.5 µg/L	9741.5 ppb	10:03:51
3	Ni 231.604†	163677.0	162099.7	9607.6 µg/L	9607.6 ppb	10:03:51
3	P 214.914†	6384.3	6313.5	12718 µg/L	12718 ppb	10:03:57
3	Pb 220.353†	89023.4	88241.1	25538 µg/L	25538 ppb	10:03:51
3	S 181.975 Axial†	10700.5	10602.8	51464 µg/L	51464 ppb	10:03:57
3	Sb 206.836†	9725.7	9625.6	10104 µg/L	10104 ppb	10:03:57
3	Se 196.026†	5942.9	5886.1	9391.0 µg/L	9391.0 ppb	10:03:57
3	SiO2†	432028.4	427335.7	100390 µg/L	100390 ppb	10:03:51
3	Si 251.611†	526908.6	522516.1	46901 µg/L	46901 ppb	10:03:51
3	Sn 189.927†	19842.8	19686.0	9895.0 µg/L	9895.0 ppb	10:03:57
3	Ti 334.940†	3731078.8	3701960.8	9843.5 µg/L	9843.5 ppb	10:03:51
3	Tl 190.801†	6400.7	6377.1	9733.4 µg/L	9733.4 ppb	10:03:57
3	U 409.014†	635.2	733.5	70.012 µg/L	70.012 ppb	10:03:51
3	V 292.402†	872669.5	865930.9	10176 µg/L	10176 ppb	10:03:51
3	Zn 213.857†	539042.5	534358.9	14400 µg/L	14400 ppb	10:03:51

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1976119.7	99.637 %	1.6349			1.64%
Sc RADIAL	55559.0	99.7 %	1.43			1.44%
Y 371.029	1353335.0	98.576 %	1.6006			1.62%
Ag 328.068†	-6289.2	15.710 µg/L	1.0972	15.710 ppb	1.0972	6.98%
Al 396.153Radial†	279.5	11.011 µg/L	16.9344	11.011 ppb	16.9344	153.80%
As 188.979†	4783.5	10126 µg/L	546.8	10126 ppb	546.8	5.40%
QC value within limits for As 188.979 Recovery = 101.26%						
B 249.677†	107691.2	5189.6 µg/L	127.79	5189.6 ppb	127.79	2.46%
QC value within limits for B 249.677 Recovery = 103.79%						
Ba 233.527†	538465.2	15360 µg/L	534.4	15360 ppb	534.4	3.48%
QC value within limits for Ba 233.527 Recovery = 102.40%						
Be 313.107†	4219078.2	3004.9 µg/L	118.47	3004.9 ppb	118.47	3.94%
QC value within limits for Be 313.107 Recovery = 100.16%						
Ca 317.933Radial†	75.1	76.033 µg/L	10.4974	76.033 ppb	10.4974	13.81%
Cd 226.502†	340583.4	10110 µg/L	347.7	10110 ppb	347.7	3.44%
QC value within limits for Cd 226.502 Recovery = 101.10%						
Co 228.616†	184077.3	9899.7 µg/L	395.28	9899.7 ppb	395.28	3.99%
QC value within limits for Co 228.616 Recovery = 99.00%						
Cr 267.716†	1069556.7	25340 µg/L	1294.7	25340 ppb	1294.7	5.11%
QC value within limits for Cr 267.716 Recovery = 101.36%						

Cu 324.752†	2800445.5	21301 µg/L	904.7	21301 ppb	904.7	4.25%
QC value within limits for Cu 324.752 Recovery = 106.51%						
Fe 238.204 Radial†	-11.3	109.66 µg/L	8.011	109.66 ppb	8.011	7.31%
K 766.490 Radial†	386427.9	306790 µg/L	7245.8	306790 ppb	7245.8	2.36%
QC value within limits for K 766.490 Radial Recovery = 102.26%						
Mg 279.077 IEC†	-11.3	60.553 µg/L	13.1393	60.553 ppb	13.1393	21.70%
Mn 257.610†	2686076.8	9945.5 µg/L	397.05	9945.5 ppb	397.05	3.99%
QC value within limits for Mn 257.610 Recovery = 99.46%						
Mo 202.031†	91486.6	10212 µg/L	409.4	10212 ppb	409.4	4.01%
QC value within limits for Mo 202.031 Recovery = 102.12%						
Na 589.592 Radial†	557.5	199.19 µg/L	24.981	199.19 ppb	24.981	12.54%
Ni 231.604†	169911.2	10071 µg/L	402.6	10071 ppb	402.6	4.00%
QC value within limits for Ni 231.604 Recovery = 100.71%						
P 214.914†	6828.5	13823 µg/L	976.5	13823 ppb	976.5	7.06%
QC value within limits for P 214.914 Recovery = 92.15%						
Pb 220.353†	91256.7	26411 µg/L	757.4	26411 ppb	757.4	2.87%
QC value within limits for Pb 220.353 Recovery = 105.64%						
S 181.975 Axial†	11274.6	54725 µg/L	2914.6	54725 ppb	2914.6	5.33%
QC value within limits for S 181.975 Axial Recovery = 109.45%						
Sb 206.836†	10351.7	10866 µg/L	670.0	10866 ppb	670.0	6.17%
QC value within limits for Sb 206.836 Recovery = 108.66%						
Se 196.026†	6264.7	9995.0 µg/L	536.29	9995.0 ppb	536.29	5.37%
QC value within limits for Se 196.026 Recovery = 99.95%						
SiO2†	442515.6	103950 µg/L	3098.4	103950 ppb	3098.4	2.98%
QC value within limits for SiO2 Recovery = 97.15%						
Si 251.611†	541100.2	48569 µg/L	1451.2	48569 ppb	1451.2	2.99%
QC value within limits for Si 251.611 Recovery = 97.14%						
Sn 189.927†	21599.0	10857 µg/L	838.4	10857 ppb	838.4	7.72%
QC value within limits for Sn 189.927 Recovery = 108.57%						
Sr 421.552†	879929.6	10197 µg/L	304.8	10197 ppb	304.8	2.99%
QC value within limits for Sr 421.552 Recovery = 101.97%						
Ti 334.940†	3881696.4	10321 µg/L	416.6	10321 ppb	416.6	4.04%
QC value within limits for Ti 334.940 Recovery = 103.21%						
Tl 190.801†	6621.5	10107 µg/L	341.5	10107 ppb	341.5	3.38%
QC value within limits for Tl 190.801 Recovery = 101.07%						
U 409.014†	777.4	74.202 µg/L	4.6274	74.202 ppb	4.6274	6.24%
V 292.402†	909648.5	10690 µg/L	447.8	10690 ppb	447.8	4.19%
QC value within limits for V 292.402 Recovery = 106.90%						
Zn 213.857†	559278.3	15072 µg/L	585.0	15072 ppb	585.0	3.88%
QC value within limits for Zn 213.857 Recovery = 100.48%						
All analyte(s) passed QC.						

Sequence No.: 14  
Sample ID: CCB  
Analyst:  
Initial Sample Wt:  
Dilution:  
User canceled analysis.

Autosampler Location: 8  
Date Collected: 2/8/2010 10:07:49  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:

## Analysis Begun

Start Time: 2/8/2010 10:09:26 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\020810.sif  
Batch ID:  
Results Data Set: 020810A  
Results Library: c:\pe\optima1\Results\Results.mdb

Sequence No.: 13  
Sample ID: CCV  
Analyst:  
Initial Sample Wt:  
Dilution:

Autosampler Location: 7  
Date Collected: 2/8/2010 10:09:26  
Data Type: Original  
Initial Sample Vol:  
Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	54736.6	54736.6	98.2 %		10:09:59
1	Al 396.153Radial†	6454.9	6580.2	5187.1 µg/L	5187.1 ppb	10:10:20
1	Ca 317.933Radial†	5258.1	5164.4	5230.3 µg/L	5230.3 ppb	10:10:20
1	Fe 238.204 Radial†	604.1	599.1	5328.7 µg/L	5328.7 ppb	10:10:20
1	K 766.490 Radial†	6886.0	6822.5	5416.4 µg/L	5416.4 ppb	10:09:59
1	Mg 279.077 IEC†	538.1	535.0	5292.4 µg/L	5292.4 ppb	10:10:20
1	Na 589.592 Radial†	29312.1	29365.6	10491 µg/L	10491 ppb	10:09:59
1	Sr 421.552†	45191.8	45962.8	532.64 µg/L	532.64 ppb	10:09:59
1	Sc 361.383	1971682.0	1971682.0	99.413 %		10:11:23
1	Y 371.029	1360864.9	1360864.9	99.125 %		10:11:23
1	Ag 328.068†	59909.2	60765.3	524.72 µg/L	524.72 ppb	10:11:29
1	As 188.979†	251.9	255.1	540.03 µg/L	540.03 ppb	10:11:49
1	B 249.677†	11103.3	10854.5	517.06 µg/L	517.06 ppb	10:11:29
1	Ba 233.527†	18297.5	18426.6	525.93 µg/L	525.93 ppb	10:11:29
1	Be 313.107†	731295.1	738914.2	526.75 µg/L	526.75 ppb	10:11:23
1	Cd 226.502†	17581.5	17830.4	528.66 µg/L	528.66 ppb	10:11:29
1	Co 228.616†	9769.1	9835.1	528.96 µg/L	528.96 ppb	10:11:29
1	Cr 267.716†	22291.7	22466.1	532.47 µg/L	532.47 ppb	10:11:29
1	Cu 324.752†	71456.8	69390.0	528.55 µg/L	528.55 ppb	10:11:29
1	Mn 257.610†	141537.8	142637.0	528.63 µg/L	528.63 ppb	10:11:23
1	Mo 202.031†	4721.8	4756.4	531.12 µg/L	531.12 ppb	10:11:49
1	Ni 231.604†	9220.8	8968.1	531.60 µg/L	531.60 ppb	10:11:29
1	P 214.914†	1169.2	1154.9	2640.8 µg/L	2640.8 ppb	10:11:49
1	Pb 220.353†	1944.8	1864.9	540.03 µg/L	540.03 ppb	10:11:49
1	S 181.975 Axial†	230.9	217.6	1056.2 µg/L	1056.2 ppb	10:11:49
1	Sb 206.836†	526.6	505.1	538.23 µg/L	538.23 ppb	10:11:49
1	Se 196.026†	340.5	331.8	537.81 µg/L	537.81 ppb	10:11:49
1	SiO2†	25085.8	23893.8	5612.9 µg/L	5612.9 ppb	10:11:29
1	Si 251.611†	29292.3	29161.6	2617.6 µg/L	2617.6 ppb	10:11:29
1	Sn 189.927†	1099.1	1102.8	554.33 µg/L	554.33 ppb	10:11:49
1	Ti 334.940†	197976.3	198980.5	528.76 µg/L	528.76 ppb	10:11:23
1	Tl 190.801†	321.0	348.9	533.79 µg/L	533.79 ppb	10:11:49
1	U 409.014†	5348.8	5483.6	522.28 µg/L	522.28 ppb	10:11:29
1	V 292.402†	45174.2	45474.3	534.06 µg/L	534.06 ppb	10:11:29
1	Zn 213.857†	19918.6	19535.6	525.45 µg/L	525.45 ppb	10:11:29
2	Sc RADIAL	55192.6	55192.6	99.1 %		10:10:25
2	Al 396.153Radial†	6468.8	6540.0	5155.1 µg/L	5155.1 ppb	10:10:46
2	Ca 317.933Radial†	5296.4	5158.8	5224.7 µg/L	5224.7 ppb	10:10:46
2	Fe 238.204 Radial†	603.1	593.0	5274.2 µg/L	5274.2 ppb	10:10:46

2	K 766.490 Radial†	6898.9	6777.7	5380.8 µg/L	5380.8 ppb	10:10:25
2	Mg 279.077 IEC†	541.4	533.9	5281.5 µg/L	5281.5 ppb	10:10:46
2	Na 589.592 Radial†	29429.4	29237.6	10445 µg/L	10445 ppb	10:10:25
2	Sr 421.552†	45581.8	45976.5	532.80 µg/L	532.80 ppb	10:10:25
2	Sc 361.383	1935098.8	1935098.8	97.568 %		10:11:56
2	Y 371.029	1335168.7	1335168.7	97.253 %		10:11:56
2	Ag 328.068†	59837.9	61831.6	533.92 µg/L	533.92 ppb	10:12:02
2	As 188.979†	256.3	264.3	559.64 µg/L	559.64 ppb	10:12:23
2	B 249.677†	11109.2	11071.6	527.49 µg/L	527.49 ppb	10:12:02
2	Ba 233.527†	18218.1	18693.2	533.54 µg/L	533.54 ppb	10:12:02
2	Be 313.107†	720046.3	741291.8	528.45 µg/L	528.45 ppb	10:11:56
2	Cd 226.502†	17485.8	18066.6	535.68 µg/L	535.68 ppb	10:12:02
2	Co 228.616†	9740.0	9991.0	537.36 µg/L	537.36 ppb	10:12:02
2	Cr 267.716†	22251.1	22848.4	541.53 µg/L	541.53 ppb	10:12:02
2	Cu 324.752†	71367.7	70657.5	538.18 µg/L	538.18 ppb	10:12:02
2	Mn 257.610†	139622.6	143365.7	531.32 µg/L	531.32 ppb	10:11:56
2	Mo 202.031†	4699.4	4823.3	538.58 µg/L	538.58 ppb	10:12:23
2	Ni 231.604†	9176.7	9098.3	539.32 µg/L	539.32 ppb	10:12:02
2	P 214.914†	1166.9	1174.8	2686.3 µg/L	2686.3 ppb	10:12:23
2	Pb 220.353†	1949.4	1906.6	552.09 µg/L	552.09 ppb	10:12:23
2	S 181.975 Axial†	238.0	229.3	1113.1 µg/L	1113.1 ppb	10:12:23
2	Sb 206.836†	523.6	512.1	545.64 µg/L	545.64 ppb	10:12:23
2	Se 196.026†	356.8	355.0	574.65 µg/L	574.65 ppb	10:12:23
2	SiO2†	24971.3	24253.5	5697.4 µg/L	5697.4 ppb	10:12:02
2	Si 251.611†	29225.6	29650.3	2661.4 µg/L	2661.4 ppb	10:12:02
2	Sn 189.927†	1091.3	1115.7	560.82 µg/L	560.82 ppb	10:12:23
2	Ti 334.940†	195120.6	199818.5	530.99 µg/L	530.99 ppb	10:11:56
2	Tl 190.801†	321.1	355.2	543.22 µg/L	543.22 ppb	10:12:23
2	U 409.014†	5433.5	5672.2	540.28 µg/L	540.28 ppb	10:12:02
2	V 292.402†	45092.3	46249.4	543.14 µg/L	543.14 ppb	10:12:02
2	Zn 213.857†	19865.3	19859.8	534.18 µg/L	534.18 ppb	10:12:02
3	Sc RADIAL	54372.5	54372.5	97.6 %		10:10:51
3	Al 396.153Radial†	6362.5	6529.6	5148.8 µg/L	5148.8 ppb	10:11:11
3	Ca 317.933Radial†	5218.9	5160.0	5225.9 µg/L	5225.9 ppb	10:11:11
3	Fe 238.204 Radial†	588.7	587.4	5223.8 µg/L	5223.8 ppb	10:11:11
3	K 766.490 Radial†	6820.6	6802.5	5400.5 µg/L	5400.5 ppb	10:10:51
3	Mg 279.077 IEC†	534.3	534.8	5289.4 µg/L	5289.4 ppb	10:11:11
3	Na 589.592 Radial†	29246.5	29498.2	10539 µg/L	10539 ppb	10:10:51
3	Sr 421.552†	45253.0	46333.5	536.94 µg/L	536.94 ppb	10:10:51
3	Sc 361.383	1959631.5	1959631.5	98.805 %		10:12:30
3	Y 371.029	1351522.9	1351522.9	98.444 %		10:12:30
3	Ag 328.068†	56626.5	57813.6	499.09 µg/L	499.09 ppb	10:12:36
3	As 188.979†	218.0	222.3	470.70 µg/L	470.70 ppb	10:12:56
3	B 249.677†	10362.0	10172.8	484.43 µg/L	484.43 ppb	10:12:36
3	Ba 233.527†	16804.9	17029.1	486.03 µg/L	486.03 ppb	10:12:36
3	Be 313.107†	684872.7	696454.1	496.48 µg/L	496.48 ppb	10:12:30
3	Cd 226.502†	16054.4	16393.6	486.02 µg/L	486.02 ppb	10:12:36
3	Co 228.616†	8857.8	8973.2	482.55 µg/L	482.55 ppb	10:12:36
3	Cr 267.716†	19682.8	19963.5	473.16 µg/L	473.16 ppb	10:12:36
3	Cu 324.752†	65328.2	63629.2	484.71 µg/L	484.71 ppb	10:12:36
3	Mn 257.610†	133050.0	134922.1	500.05 µg/L	500.05 ppb	10:12:30
3	Mo 202.031†	3961.9	4016.6	448.53 µg/L	448.53 ppb	10:12:56
3	Ni 231.604†	8401.5	8196.0	485.83 µg/L	485.83 ppb	10:12:36
3	P 214.914†	998.8	989.6	2258.9 µg/L	2258.9 ppb	10:12:56
3	Pb 220.353†	1710.9	1640.1	474.85 µg/L	474.85 ppb	10:12:56
3	S 181.975 Axial†	209.6	197.5	958.78 µg/L	958.78 ppb	10:12:56
3	Sb 206.836†	462.3	443.3	471.95 µg/L	471.95 ppb	10:12:56
3	Se 196.026†	301.2	294.1	477.39 µg/L	477.39 ppb	10:12:56
3	SiO2†	23327.7	22269.6	5231.4 µg/L	5231.4 ppb	10:12:36
3	Si 251.611†	27175.4	27200.4	2441.5 µg/L	2441.5 ppb	10:12:36
3	Sn 189.927†	896.4	904.4	454.65 µg/L	454.65 ppb	10:12:56
3	Ti 334.940†	184856.3	186926.6	496.70 µg/L	496.70 ppb	10:12:30
3	Tl 190.801†	296.7	326.3	499.30 µg/L	499.30 ppb	10:12:56
3	U 409.014†	4842.4	5004.2	476.54 µg/L	476.54 ppb	10:12:36
3	V 292.402†	40796.6	41323.2	485.06 µg/L	485.06 ppb	10:12:36
3	Zn 213.857†	18119.0	17837.5	479.73 µg/L	479.73 ppb	10:12:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
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Sc 361.383	1955470.8	98.596 %	0.9400			0.95%
Sc RADIAL	54767.2	98.3 %	0.74			0.75%
Y 371.029	1349185.5	98.274 %	0.9474			0.96%
Ag 328.068†	60136.8	519.24 µg/L	18.047	519.24 ppb	18.047	3.48%
QC value within limits for Ag 328.068 Recovery = 103.85%						
Al 396.153Radial†	6549.9	5163.7 µg/L	20.52	5163.7 ppb	20.52	0.40%
QC value within limits for Al 396.153Radial Recovery = 103.27%						
As 188.979†	247.2	523.46 µg/L	46.732	523.46 ppb	46.732	8.93%
QC value within limits for As 188.979 Recovery = 104.69%						
B 249.677†	10699.6	509.66 µg/L	22.462	509.66 ppb	22.462	4.41%
QC value within limits for B 249.677 Recovery = 101.93%						
Ba 233.527†	18049.6	515.17 µg/L	25.520	515.17 ppb	25.520	4.95%
QC value within limits for Ba 233.527 Recovery = 103.03%						
Be 313.107†	725553.4	517.23 µg/L	17.984	517.23 ppb	17.984	3.48%
QC value within limits for Be 313.107 Recovery = 103.45%						
Ca 317.933Radial†	5161.1	5227.0 µg/L	2.98	5227.0 ppb	2.98	0.06%
QC value within limits for Ca 317.933Radial Recovery = 104.54%						
Cd 226.502†	17430.2	516.79 µg/L	26.875	516.79 ppb	26.875	5.20%
QC value within limits for Cd 226.502 Recovery = 103.36%						
Co 228.616†	9599.8	516.29 µg/L	29.523	516.29 ppb	29.523	5.72%
QC value within limits for Co 228.616 Recovery = 103.26%						
Cr 267.716†	21759.3	515.72 µg/L	37.134	515.72 ppb	37.134	7.20%
QC value within limits for Cr 267.716 Recovery = 103.14%						
Cu 324.752†	67892.2	517.15 µg/L	28.498	517.15 ppb	28.498	5.51%
QC value within limits for Cu 324.752 Recovery = 103.43%						
Fe 238.204 Radial†	593.2	5275.5 µg/L	52.49	5275.5 ppb	52.49	0.99%
QC value within limits for Fe 238.204 Radial Recovery = 105.51%						
K 766.490 Radial†	6800.9	5399.2 µg/L	17.83	5399.2 ppb	17.83	0.33%
QC value within limits for K 766.490 Radial Recovery = 107.98%						
Mg 279.077 IEC†	534.6	5287.8 µg/L	5.65	5287.8 ppb	5.65	0.11%
QC value within limits for Mg 279.077 IEC Recovery = 105.76%						
Mn 257.610†	140308.3	520.00 µg/L	17.330	520.00 ppb	17.330	3.33%
QC value within limits for Mn 257.610 Recovery = 104.00%						
Mo 202.031†	4532.1	506.08 µg/L	49.975	506.08 ppb	49.975	9.87%
QC value within limits for Mo 202.031 Recovery = 101.22%						
Na 589.592 Radial†	29367.2	10492 µg/L	46.6	10492 ppb	46.6	0.44%
QC value within limits for Na 589.592 Radial Recovery = 104.92%						
Ni 231.604†	8754.1	518.92 µg/L	28.909	518.92 ppb	28.909	5.57%
QC value within limits for Ni 231.604 Recovery = 103.78%						
P 214.914†	1106.5	2528.7 µg/L	234.76	2528.7 ppb	234.76	9.28%
QC value within limits for P 214.914 Recovery = 101.15%						
Pb 220.353†	1803.9	522.32 µg/L	41.549	522.32 ppb	41.549	7.95%
QC value within limits for Pb 220.353 Recovery = 104.46%						
S 181.975 Axial†	214.8	1042.7 µg/L	78.03	1042.7 ppb	78.03	7.48%
QC value within limits for S 181.975 Axial Recovery = 104.27%						
Sb 206.836†	486.8	518.60 µg/L	40.576	518.60 ppb	40.576	7.82%
QC value within limits for Sb 206.836 Recovery = 103.72%						
Se 196.026†	327.0	529.95 µg/L	49.105	529.95 ppb	49.105	9.27%
QC value within limits for Se 196.026 Recovery = 105.99%						
SiO2†	23472.3	5513.9 µg/L	248.29	5513.9 ppb	248.29	4.50%
QC value within limits for SiO2 Recovery = 103.11%						
Si 251.611†	28670.8	2573.5 µg/L	116.39	2573.5 ppb	116.39	4.52%
QC value within limits for Si 251.611 Recovery = 102.94%						
Sn 189.927†	1041.0	523.27 µg/L	59.514	523.27 ppb	59.514	11.37%
QC value within limits for Sn 189.927 Recovery = 104.65%						
Sr 421.552†	46090.9	534.13 µg/L	2.436	534.13 ppb	2.436	0.46%
QC value within limits for Sr 421.552 Recovery = 106.83%						
Ti 334.940†	195241.9	518.82 µg/L	19.181	518.82 ppb	19.181	3.70%
QC value within limits for Ti 334.940 Recovery = 103.76%						
Tl 190.801†	343.5	525.43 µg/L	23.122	525.43 ppb	23.122	4.40%
QC value within limits for Tl 190.801 Recovery = 105.09%						
U 409.014†	5386.6	513.03 µg/L	32.863	513.03 ppb	32.863	6.41%
QC value within limits for U 409.014 Recovery = 102.61%						
V 292.402†	44349.0	520.75 µg/L	31.239	520.75 ppb	31.239	6.00%
QC value within limits for V 292.402 Recovery = 104.15%						
Zn 213.857†	19077.6	513.12 µg/L	29.247	513.12 ppb	29.247	5.70%
QC value within limits for Zn 213.857 Recovery = 102.62%						
All analyte(s) passed QC.						

Sequence No.: 14  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/8/2010 10:13:06  
 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	53812.6	53812.6	96.6 %		10:13:38
1	Al 396.153Radial†	-5.4	4.2	3.2788 µg/L	3.2788 ppb	10:13:38
1	Ca 317.933Radial†	186.1	4.8	4.8624 µg/L	4.8624 ppb	10:13:59
1	Fe 238.204 Radial†	14.5	-0.8	-6.7295 µg/L	-6.7295 ppb	10:13:59
1	K 766.490 Radial†	282.1	105.4	83.659 µg/L	83.659 ppb	10:13:38
1	Mg 279.077 IEC†	13.3	1.0	10.285 µg/L	10.285 ppb	10:13:59
1	Na 589.592 Radial†	620.3	171.0	61.099 µg/L	61.099 ppb	10:13:38
1	Sr 421.552†	23.3	-13.9	-0.1613 µg/L	-0.1613 ppb	10:13:38
1	Sc 361.383	1935681.9	1935681.9	97.598 %		10:15:01
1	Y 371.029	1339986.4	1339986.4	97.604 %		10:15:01
1	Ag 328.068†	-378.2	114.9	0.9834 µg/L	0.9834 ppb	10:15:06
1	As 188.979†	-1.5	0.1	0.2602 µg/L	0.2602 ppb	10:15:27
1	B 249.677†	384.7	79.7	3.8149 µg/L	3.8149 ppb	10:15:27
1	Ba 233.527†	-2.9	18.1	0.5143 µg/L	0.5143 ppb	10:15:27
1	Be 313.107†	-3026.1	200.2	0.1426 µg/L	0.1426 ppb	10:15:06
1	Cd 226.502†	-138.5	3.1	0.0942 µg/L	0.0942 ppb	10:15:27
1	Co 228.616†	-3.7	4.5	0.2449 µg/L	0.2449 ppb	10:15:27
1	Cr 267.716†	-37.8	4.0	0.0947 µg/L	0.0947 ppb	10:15:06
1	Cu 324.752†	2771.2	350.6	2.6658 µg/L	2.6658 ppb	10:15:06
1	Mn 257.610†	-148.5	111.3	0.4109 µg/L	0.4109 ppb	10:15:27
1	Mo 202.031†	-0.3	6.4	0.7176 µg/L	0.7176 ppb	10:15:27
1	Ni 231.604†	339.0	40.2	2.3878 µg/L	2.3878 ppb	10:15:27
1	P 214.914†	18.6	-2.1	-5.2315 µg/L	-5.2315 ppb	10:15:27
1	Pb 220.353†	98.0	9.0	2.5973 µg/L	2.5973 ppb	10:15:27
1	S 181.975 Axial†	17.6	3.4	16.521 µg/L	16.521 ppb	10:15:27
1	Sb 206.836†	32.9	9.1	9.6827 µg/L	9.6827 ppb	10:15:27
1	Se 196.026†	25.2	15.1	24.003 µg/L	24.003 ppb	10:15:27
1	SiO2†	1461.6	157.5	36.987 µg/L	36.987 ppb	10:15:06
1	Si 251.611†	377.8	83.4	7.4878 µg/L	7.4878 ppb	10:15:27
1	Sn 189.927†	6.4	3.7	1.8624 µg/L	1.8624 ppb	10:15:27
1	Ti 334.940†	270.4	112.2	0.2976 µg/L	0.2976 ppb	10:15:06
1	Tl 190.801†	-21.8	3.8	5.7047 µg/L	5.7047 ppb	10:15:27
1	U 409.014†	9.5	112.9	10.779 µg/L	10.779 ppb	10:15:06
1	V 292.402†	-42.8	-10.6	-0.1063 µg/L	-0.1063 ppb	10:15:06
1	Zn 213.857†	555.0	68.1	1.8295 µg/L	1.8295 ppb	10:15:27
2	Sc RADIAL	53841.0	53841.0	96.6 %		10:14:04
2	Al 396.153Radial†	-46.4	-38.2	-30.217 µg/L	-30.217 ppb	10:14:04
2	Ca 317.933Radial†	185.3	3.9	3.9805 µg/L	3.9805 ppb	10:14:25
2	Fe 238.204 Radial†	17.6	2.3	20.802 µg/L	20.802 ppb	10:14:25
2	K 766.490 Radial†	277.3	100.2	79.568 µg/L	79.568 ppb	10:14:04
2	Mg 279.077 IEC†	9.3	-3.1	-30.168 µg/L	-30.168 ppb	10:14:25
2	Na 589.592 Radial†	712.7	266.3	95.152 µg/L	95.152 ppb	10:14:04
2	Sr 421.552†	69.8	34.1	0.3957 µg/L	0.3957 ppb	10:14:04
2	Sc 361.383	1951294.7	1951294.7	98.385 %		10:15:33
2	Y 371.029	1351775.5	1351775.5	98.463 %		10:15:33
2	Ag 328.068†	-459.5	35.4	0.3032 µg/L	0.3032 ppb	10:15:39
2	As 188.979†	0.7	2.4	5.1888 µg/L	5.1888 ppb	10:15:59
2	B 249.677†	405.8	98.1	4.6788 µg/L	4.6788 ppb	10:15:59
2	Ba 233.527†	-0.9	20.1	0.5716 µg/L	0.5716 ppb	10:15:59
2	Be 313.107†	-3206.8	41.4	0.0294 µg/L	0.0294 ppb	10:15:39
2	Cd 226.502†	-133.4	9.4	0.2783 µg/L	0.2783 ppb	10:15:59
2	Co 228.616†	-1.2	7.1	0.3842 µg/L	0.3842 ppb	10:15:59
2	Cr 267.716†	-31.0	11.2	0.2660 µg/L	0.2660 ppb	10:15:39
2	Cu 324.752†	2752.5	308.9	2.3523 µg/L	2.3523 ppb	10:15:39
2	Mn 257.610†	-119.0	142.5	0.5316 µg/L	0.5316 ppb	10:15:59
2	Mo 202.031†	7.1	13.9	1.5573 µg/L	1.5573 ppb	10:15:59
2	Ni 231.604†	330.7	29.0	1.7212 µg/L	1.7212 ppb	10:15:59
2	P 214.914†	24.0	3.2	7.1746 µg/L	7.1746 ppb	10:15:59
2	Pb 220.353†	99.5	9.7	2.7991 µg/L	2.7991 ppb	10:15:59

2	S 181.975 Axial†	17.4	3.1	15.107 µg/L	15.107 ppb	10:15:59
2	Sb 206.836†	28.4	4.3	4.5615 µg/L	4.5615 ppb	10:15:59
2	Se 196.026†	17.7	7.2	11.619 µg/L	11.619 ppb	10:15:59
2	SiO2†	1448.4	132.0	31.009 µg/L	31.009 ppb	10:15:39
2	Si 251.611†	396.9	99.8	8.9592 µg/L	8.9592 ppb	10:15:59
2	Sn 189.927†	6.9	4.2	2.1239 µg/L	2.1239 ppb	10:15:59
2	Ti 334.940†	249.7	89.0	0.2391 µg/L	0.2391 ppb	10:15:39
2	Tl 190.801†	-28.7	-3.1	-4.6246 µg/L	-4.6246 ppb	10:15:59
2	U 409.014†	-91.5	10.3	0.9764 µg/L	0.9764 ppb	10:15:39
2	V 292.402†	-50.2	-17.7	-0.1892 µg/L	-0.1892 ppb	10:15:39
2	Zn 213.857†	559.1	67.7	1.8234 µg/L	1.8234 ppb	10:15:59
3	Sc RADIAL	55090.0	55090.0	98.9 %		10:14:30
3	Al 396.153Radial†	5.5	15.3	12.087 µg/L	12.087 ppb	10:14:30
3	Ca 317.933Radial†	193.8	8.1	8.2260 µg/L	8.2260 ppb	10:14:51
3	Fe 238.204 Radial†	17.5	1.9	16.572 µg/L	16.572 ppb	10:14:51
3	K 766.490 Radial†	306.0	122.7	97.441 µg/L	97.441 ppb	10:14:30
3	Mg 279.077 IEC†	16.2	3.7	36.658 µg/L	36.658 ppb	10:14:51
3	Na 589.592 Radial†	685.5	222.1	79.347 µg/L	79.347 ppb	10:14:30
3	Sr 421.552†	35.8	-1.8	-0.0210 µg/L	-0.0210 ppb	10:14:30
3	Sc 361.383	1970564.7	1970564.7	99.357 %		10:16:05
3	Y 371.029	1363998.5	1363998.5	99.353 %		10:16:05
3	Ag 328.068†	-402.5	97.3	0.8360 µg/L	0.8360 ppb	10:16:11
3	As 188.979†	2.5	4.2	8.8961 µg/L	8.8961 ppb	10:16:31
3	B 249.677†	372.9	60.9	2.9028 µg/L	2.9028 ppb	10:16:31
3	Ba 233.527†	-7.9	13.0	0.3711 µg/L	0.3711 ppb	10:16:31
3	Be 313.107†	-3058.0	223.0	0.1589 µg/L	0.1589 ppb	10:16:11
3	Cd 226.502†	-138.4	5.7	0.1695 µg/L	0.1695 ppb	10:16:31
3	Co 228.616†	2.8	11.1	0.5977 µg/L	0.5977 ppb	10:16:31
3	Cr 267.716†	4.8	47.6	1.1264 µg/L	1.1264 ppb	10:16:11
3	Cu 324.752†	2716.5	245.3	1.8682 µg/L	1.8682 ppb	10:16:11
3	Mn 257.610†	-156.4	106.0	0.3932 µg/L	0.3932 ppb	10:16:31
3	Mo 202.031†	2.7	9.5	1.0614 µg/L	1.0614 ppb	10:16:31
3	Ni 231.604†	334.8	29.8	1.7698 µg/L	1.7698 ppb	10:16:31
3	P 214.914†	25.2	4.2	9.5233 µg/L	9.5233 ppb	10:16:31
3	Pb 220.353†	103.3	12.5	3.6150 µg/L	3.6150 ppb	10:16:31
3	S 181.975 Axial†	16.1	1.5	7.4828 µg/L	7.4828 ppb	10:16:31
3	Sb 206.836†	28.0	3.6	3.8293 µg/L	3.8293 ppb	10:16:31
3	Se 196.026†	10.1	-0.5	-0.8542 µg/L	-0.8542 ppb	10:16:31
3	SiO2†	1459.8	129.2	30.345 µg/L	30.345 ppb	10:16:11
3	Si 251.611†	377.7	76.5	6.8711 µg/L	6.8711 ppb	10:16:31
3	Sn 189.927†	6.9	4.2	2.0960 µg/L	2.0960 ppb	10:16:31
3	Ti 334.940†	224.6	61.2	0.1601 µg/L	0.1601 ppb	10:16:11
3	Tl 190.801†	-24.9	1.0	1.4654 µg/L	1.4654 ppb	10:16:31
3	U 409.014†	-94.9	7.7	0.7319 µg/L	0.7319 ppb	10:16:11
3	V 292.402†	-21.6	11.6	0.1485 µg/L	0.1485 ppb	10:16:11
3	Zn 213.857†	539.2	42.1	1.1270 µg/L	1.1270 ppb	10:16:31

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1952513.8	98.446 %	0.8810			0.89%
Sc RADIAL	54247.9	97.4 %	1.31			1.34%
Y 371.029	1351920.2	98.473 %	0.8746			0.89%
Ag 328.068†	82.5	0.7075 µg/L	0.35784	0.7075 ppb	0.35784	50.58%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-6.2	-4.9502 µg/L	22.32021	-4.9502 ppb	22.32021	450.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.3	4.7817 µg/L	4.33233	4.7817 ppb	4.33233	90.60%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	79.5	3.7988 µg/L	0.88809	3.7988 ppb	0.88809	23.38%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	17.1	0.4857 µg/L	0.10330	0.4857 ppb	0.10330	21.27%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	154.8	0.1103 µg/L	0.07055	0.1103 ppb	0.07055	63.94%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	5.6	5.6896 µg/L	2.24037	5.6896 ppb	2.24037	39.38%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	6.1	0.1807 µg/L	0.09252	0.1807 ppb	0.09252	51.21%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	7.6	0.4089 µg/L	0.17767	0.4089 ppb	0.17767	43.45%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	20.9	0.4957 µg/L	0.55289	0.4957 ppb	0.55289	111.53%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	301.6	2.2954 µg/L	0.40182	2.2954 ppb	0.40182	17.51%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.1	10.215 µg/L	14.8258	10.215 ppb	14.8258	145.14%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	109.4	86.889 µg/L	9.3642	86.889 ppb	9.3642	10.78%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.6	5.5917 µg/L	33.65927	5.5917 ppb	33.65927	601.95%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	119.9	0.4452 µg/L	0.07530	0.4452 ppb	0.07530	16.91%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	10.0	1.1121 µg/L	0.42214	1.1121 ppb	0.42214	37.96%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	219.8	78.533 µg/L	17.0409	78.533 ppb	17.0409	21.70%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	33.0	1.9596 µg/L	0.37163	1.9596 ppb	0.37163	18.96%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	1.7	3.8221 µg/L	7.92810	3.8221 ppb	7.92810	207.43%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	10.4	3.0038 µg/L	0.53886	3.0038 ppb	0.53886	17.94%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	2.7	13.037 µg/L	4.8616	13.037 ppb	4.8616	37.29%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	5.7	6.0245 µg/L	3.18915	6.0245 ppb	3.18915	52.94%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	7.3	11.589 µg/L	12.4286	11.589 ppb	12.4286	107.24%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	139.5	32.780 µg/L	3.6579	32.780 ppb	3.6579	11.16%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	86.6	7.7727 µg/L	1.07279	7.7727 ppb	1.07279	13.80%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	4.0	2.0274 µg/L	0.14362	2.0274 ppb	0.14362	7.08%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	6.1	0.0711 µg/L	0.28971	0.0711 ppb	0.28971	407.21%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	87.5	0.2322 µg/L	0.06902	0.2322 ppb	0.06902	29.72%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.6	0.8485 µg/L	5.19220	0.8485 ppb	5.19220	611.90%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	43.6	4.1625 µg/L	5.73160	4.1625 ppb	5.73160	137.70%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-5.5	-0.0490 µg/L	0.17599	-0.0490 ppb	0.17599	359.30%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	59.3	1.5933 µg/L	0.40385	1.5933 ppb	0.40385	25.35%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

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Analysis Begun

Start Time: 2/8/2010 10:18:32

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

Logged In Analyst: optima

Technique: ICP Continuous

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

Sample Information File: C:\pe\optimal\Sample Information\020810.sif

Batch ID:

Results Data Set: 020810A

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

## Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 2/8/2010 09:05:41

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

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Sequence No.: 1

Autosampler Location: 113

Sample ID: LR1

Date Collected: 2/8/2010 10:18:34

Analyst: HSC

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
=====

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55504.1	55504.1	99.6 %		10:19:09
1	Al 396.153Radial†	-31.4	-21.7	-16.836 µg/L	-16.836 ppb	10:19:29
1	Ca 317.933Radial†	212.0	25.0	25.303 µg/L	25.303 ppb	10:19:29
1	Fe 238.204 Radial†	46500.0	46662.1	414150 µg/L	414150 ppb	10:19:09

1	K 766.490 Radial†	87.2	-99.2	-78.771 µg/L	-78.771 ppb	10:19:09
1	Mg 279.077 IEC†	25.7	13.1	-314.93 µg/L	-314.93 ppb	10:19:29
1	Na 589.592 Radial†	620.8	152.0	54.306 µg/L	54.306 ppb	10:19:09
1	Sr 421.552†	102.0	64.4	0.7461 µg/L	0.7461 ppb	10:19:09
1	Sc 361.383	1931689.0	1931689.0	97.397 %		10:20:32
1	Y 371.029	1331705.4	1331705.4	97.001 %		10:20:32
1	Ag 328.068†	-3955.4	-3558.7	-4.7861 µg/L	-4.7861 ppb	10:20:38
1	As 188.979†	-10.9	-9.5	3.8756 µg/L	3.8756 ppb	10:20:58
1	B 249.677†	1447.6	1171.9	-160.08 µg/L	-160.08 ppb	10:20:38
1	Ba 233.527†	479.2	513.0	14.513 µg/L	14.513 ppb	10:20:58
1	Be 313.107†	-3261.7	-48.1	-0.0344 µg/L	-0.0344 ppb	10:20:38
1	Cd 226.502†	1227.7	1405.5	-5.1297 µg/L	-5.1297 ppb	10:20:38
1	Co 228.616†	178.8	191.9	10.317 µg/L	10.317 ppb	10:20:58
1	Cr 267.716†	-306.7	-272.1	-6.4807 µg/L	-6.4807 ppb	10:20:58
1	Cu 324.752†	-6327.8	-8985.7	-10.783 µg/L	-10.783 ppb	10:20:38
1	Mn 257.610†	-9743.6	-9740.6	19.010 µg/L	19.010 ppb	10:20:32
1	Mo 202.031†	-139.0	-135.9	0.5662 µg/L	0.5662 ppb	10:20:38
1	Ni 231.604†	144.9	-158.3	-4.0226 µg/L	-4.0226 ppb	10:20:58
1	P 214.914†	282.5	268.9	297.46 µg/L	297.46 ppb	10:20:58
1	Pb 220.353†	190.7	104.4	14.500 µg/L	14.500 ppb	10:20:58
1	S 181.975 Axial†	8.1	-6.3	-30.785 µg/L	-30.785 ppb	10:20:58
1	Sb 206.836†	32.0	8.3	8.6136 µg/L	8.6136 ppb	10:20:58
1	Se 196.026†	-214.0	-230.5	764.30 µg/L	764.30 ppb	10:20:58
1	SiO2†	1226.6	-80.7	-18.960 µg/L	-18.960 ppb	10:20:58
1	Si 251.611†	-547.8	-866.1	-77.739 µg/L	-77.739 ppb	10:20:58
1	Sn 189.927†	9.5	6.9	-40.709 µg/L	-40.709 ppb	10:20:58
1	Ti 334.940†	231.3	72.7	0.1834 µg/L	0.1834 ppb	10:20:38
1	Tl 190.801†	-42.5	-17.6	31.712 µg/L	31.712 ppb	10:20:58
1	U 409.014†	310.6	422.1	-17.284 µg/L	-17.284 ppb	10:20:38
1	V 292.402†	-4751.3	-4844.9	-7.5530 µg/L	-7.5530 ppb	10:20:38
1	Zn 213.857†	2359.1	1921.6	32.526 µg/L	32.526 ppb	10:20:58
2	Sc RADIAL	55047.8	55047.8	98.8 %		10:19:35
2	Al 396.153Radial†	-54.7	-45.5	-35.710 µg/L	-35.710 ppb	10:19:55
2	Ca 317.933Radial†	215.3	30.0	30.395 µg/L	30.395 ppb	10:19:55
2	Fe 238.204 Radial†	46324.5	46871.4	416000 µg/L	416000 ppb	10:19:35
2	K 766.490 Radial†	27.6	-158.8	-126.04 µg/L	-126.04 ppb	10:19:35
2	Mg 279.077 IEC†	29.3	17.0	-278.77 µg/L	-278.77 ppb	10:19:55
2	Na 589.592 Radial†	613.7	149.9	53.569 µg/L	53.569 ppb	10:19:35
2	Sr 421.552†	66.3	29.1	0.3375 µg/L	0.3375 ppb	10:19:35
2	Sc 361.383	1970883.7	1970883.7	99.373 %		10:21:05
2	Y 371.029	1357761.6	1357761.6	98.899 %		10:21:05
2	Ag 328.068†	-3973.7	-3496.4	-4.1126 µg/L	-4.1126 ppb	10:21:10
2	As 188.979†	-9.0	-7.3	8.6376 µg/L	8.6376 ppb	10:21:31
2	B 249.677†	1379.3	1073.6	-165.75 µg/L	-165.75 ppb	10:21:10
2	Ba 233.527†	486.1	510.2	14.441 µg/L	14.441 ppb	10:21:31
2	Be 313.107†	-3334.9	-55.1	-0.0392 µg/L	-0.0392 ppb	10:21:10
2	Cd 226.502†	1203.8	1356.4	-6.7949 µg/L	-6.7949 ppb	10:21:10
2	Co 228.616†	180.8	190.3	10.234 µg/L	10.234 ppb	10:21:31
2	Cr 267.716†	-314.7	-274.0	-6.5230 µg/L	-6.5230 ppb	10:21:31
2	Cu 324.752†	-6213.2	-8741.2	-8.6646 µg/L	-8.6646 ppb	10:21:10
2	Mn 257.610†	-9664.0	-9461.6	20.289 µg/L	20.289 ppb	10:21:05
2	Mo 202.031†	-121.5	-115.5	2.9151 µg/L	2.9151 ppb	10:21:10
2	Ni 231.604†	146.6	-159.6	-4.0764 µg/L	-4.0764 ppb	10:21:31
2	P 214.914†	285.7	266.3	289.81 µg/L	289.81 ppb	10:21:31
2	Pb 220.353†	205.7	115.5	17.677 µg/L	17.677 ppb	10:21:31
2	S 181.975 Axial†	5.9	-8.7	-42.177 µg/L	-42.177 ppb	10:21:31
2	Sb 206.836†	26.5	2.1	2.0627 µg/L	2.0627 ppb	10:21:31
2	Se 196.026†	-211.9	-224.0	779.62 µg/L	779.62 ppb	10:21:31
2	SiO2†	1224.8	-107.5	-25.263 µg/L	-25.263 ppb	10:21:31
2	Si 251.611†	-537.8	-844.9	-75.834 µg/L	-75.834 ppb	10:21:31
2	Sn 189.927†	7.8	5.0	-41.852 µg/L	-41.852 ppb	10:21:31
2	Ti 334.940†	25.3	-139.4	-0.3833 µg/L	-0.3833 ppb	10:21:10
2	Tl 190.801†	-44.0	-18.2	31.054 µg/L	31.054 ppb	10:21:31
2	U 409.014†	173.5	277.8	-31.310 µg/L	-31.310 ppb	10:21:10
2	V 292.402†	-4551.0	-4546.4	-3.8679 µg/L	-3.8679 ppb	10:21:10
2	Zn 213.857†	2328.0	1842.1	30.281 µg/L	30.281 ppb	10:21:31
3	Sc RADIAL	55847.3	55847.3	100 %		10:20:01
3	Al 396.153Radial†	-52.3	-42.3	-33.213 µg/L	-33.213 ppb	10:20:21
3	Ca 317.933Radial†	201.9	13.6	13.731 µg/L	13.731 ppb	10:20:21
3	Fe 238.204 Radial†	46793.3	46667.8	414200 µg/L	414200 ppb	10:20:01
3	K 766.490 Radial†	19.5	-167.2	-132.76 µg/L	-132.76 ppb	10:20:01

3	Mg 279.077 IEC†	27.1	14.4	-302.56 µg/L	-302.56 ppb	10:20:21
3	Na 589.592 Radial†	566.4	93.9	33.546 µg/L	33.546 ppb	10:20:01
3	Sr 421.552†	72.6	34.4	0.3990 µg/L	0.3990 ppb	10:20:01
3	Sc 361.383	1979511.2	1979511.2	99.808 %		10:21:37
3	Y 371.029	1365096.5	1365096.5	99.433 %		10:21:37
3	Ag 328.068†	-3565.5	-3069.9	-0.5441 µg/L	-0.5441 ppb	10:21:43
3	As 188.979†	-7.6	-5.9	11.510 µg/L	11.510 ppb	10:22:03
3	B 249.677†	1293.0	981.1	-169.23 µg/L	-169.23 ppb	10:21:43
3	Ba 233.527†	398.3	420.1	11.880 µg/L	11.880 ppb	10:22:03
3	Be 313.107†	-3195.4	99.2	0.0709 µg/L	0.0709 ppb	10:21:43
3	Cd 226.502†	1048.0	1195.1	-11.374 µg/L	-11.374 ppb	10:21:43
3	Co 228.616†	164.7	173.3	9.3232 µg/L	9.3232 ppb	10:22:03
3	Cr 267.716†	-280.1	-237.9	-5.6653 µg/L	-5.6653 ppb	10:22:03
3	Cu 324.752†	-5430.5	-7929.8	-2.7440 µg/L	-2.7440 ppb	10:21:43
3	Mn 257.610†	-9144.7	-8898.9	22.133 µg/L	22.133 ppb	10:21:37
3	Mo 202.031†	-111.7	-105.2	4.0012 µg/L	4.0012 ppb	10:21:43
3	Ni 231.604†	184.3	-122.5	-1.8948 µg/L	-1.8948 ppb	10:22:03
3	P 214.914†	241.9	221.2	185.49 µg/L	185.49 ppb	10:22:03
3	Pb 220.353†	177.9	86.8	9.4273 µg/L	9.4273 ppb	10:22:03
3	S 181.975 Axial†	10.4	-4.2	-20.281 µg/L	-20.281 ppb	10:22:03
3	Sb 206.836†	22.5	-2.1	-2.3255 µg/L	-2.3255 ppb	10:22:03
3	Se 196.026†	-187.6	-198.6	815.18 µg/L	815.18 ppb	10:22:03
3	SiO2†	1240.7	-97.0	-22.788 µg/L	-22.788 ppb	10:22:03
3	Si 251.611†	-394.2	-698.6	-62.702 µg/L	-62.702 ppb	10:22:03
3	Sn 189.927†	8.5	5.7	-41.301 µg/L	-41.301 ppb	10:22:03
3	Ti 334.940†	75.7	-89.0	-0.2477 µg/L	-0.2477 ppb	10:21:43
3	Tl 190.801†	-34.3	-8.3	45.860 µg/L	45.860 ppb	10:22:03
3	U 409.014†	206.9	310.6	-27.933 µg/L	-27.933 ppb	10:21:43
3	V 292.402†	-4230.5	-4205.3	-0.1089 µg/L	-0.1089 ppb	10:21:43
3	Zn 213.857†	2028.6	1531.9	21.944 µg/L	21.944 ppb	10:22:03

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1960694.6	98.859 %		1.2851			1.30%
Sc RADIAL	55466.4	99.6 %		0.72			0.72%
Y 371.029	1351521.2	98.444 %		1.2782			1.30%
Ag 328.068†	-3375.0	-3.1476 µg/L		2.27969	-3.1476 ppb	2.27969	72.43%
Al 396.153Radial†	-36.5	-28.586 µg/L		10.2522	-28.586 ppb	10.2522	35.86%
As 188.979†	-7.6	8.0077 µg/L		3.85604	8.0077 ppb	3.85604	48.15%
B 249.677†	1075.5	-165.02 µg/L		4.617	-165.02 ppb	4.617	2.80%
Ba 233.527†	481.1	13.611 µg/L		1.4998	13.611 ppb	1.4998	11.02%
Be 313.107†	-1.3	-0.0009 µg/L		0.06219	-0.0009 ppb	0.06219	>999.9%
Ca 317.933Radial†	22.9	23.143 µg/L		8.5399	23.143 ppb	8.5399	36.90%
Cd 226.502†	1319.0	-7.7662 µg/L		3.23343	-7.7662 ppb	3.23343	41.63%
Co 228.616†	185.2	9.9583 µg/L		0.55151	9.9583 ppb	0.55151	5.54%
Cr 267.716†	-261.3	-6.2230 µg/L		0.48343	-6.2230 ppb	0.48343	7.77%
Cu 324.752†	-8552.3	-7.3971 µg/L		4.16655	-7.3971 ppb	4.16655	56.33%
Fe 238.204 Radial†	46733.8	414780 µg/L		1058.1	414780 ppb	1058.1	0.26%
K 766.490 Radial†	-141.7	-112.53 µg/L		29.425	-112.53 ppb	29.425	26.15%
Mg 279.077 IEC†	14.8	-298.75 µg/L		18.381	-298.75 ppb	18.381	6.15%
Mn 257.610†	-9367.0	20.477 µg/L		1.5699	20.477 ppb	1.5699	7.67%
Mo 202.031†	-118.9	2.4941 µg/L		1.75577	2.4941 ppb	1.75577	70.40%
Na 589.592 Radial†	131.9	47.140 µg/L		11.7792	47.140 ppb	11.7792	24.99%
Ni 231.604†	-146.8	-3.3313 µg/L		1.24432	-3.3313 ppb	1.24432	37.35%
P 214.914†	252.1	257.58 µg/L		62.556	257.58 ppb	62.556	24.29%
Pb 220.353†	102.2	13.868 µg/L		4.1610	13.868 ppb	4.1610	30.00%
S 181.975 Axial†	-6.4	-31.081 µg/L		10.9509	-31.081 ppb	10.9509	35.23%
Sb 206.836†	2.8	2.7836 µg/L		5.50511	2.7836 ppb	5.50511	197.77%
Se 196.026†	-217.7	786.37 µg/L		26.104	786.37 ppb	26.104	3.32%
SiO2†	-95.1	-22.337 µg/L		3.1757	-22.337 ppb	3.1757	14.22%
Si 251.611†	-803.2	-72.092 µg/L		8.1872	-72.092 ppb	8.1872	11.36%
Sn 189.927†	5.9	-41.287 µg/L		0.5718	-41.287 ppb	0.5718	1.38%
Sr 421.552†	42.6	0.4942 µg/L		0.22034	0.4942 ppb	0.22034	44.59%
Ti 334.940†	-51.9	-0.1492 µg/L		0.29591	-0.1492 ppb	0.29591	198.28%
Tl 190.801†	-14.7	36.209 µg/L		8.3644	36.209 ppb	8.3644	23.10%
U 409.014†	336.8	-25.509 µg/L		7.3206	-25.509 ppb	7.3206	28.70%
V 292.402†	-4532.2	-3.8433 µg/L		3.72213	-3.8433 ppb	3.72213	96.85%
Zn 213.857†	1765.2	28.250 µg/L		5.5758	28.250 ppb	5.5758	19.74%

Sequence No.: 2  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 2/8/2010 10:22:13  
 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	55679.0	55679.0	99.9 %		10:22:49
1	Al 396.153Radial†	6402.5	6416.6	5057.5 µg/L	5057.5 ppb	10:22:49
1	Ca 317.933Radial†	5166.3	4981.9	5045.5 µg/L	5045.5 ppb	10:23:09
1	Fe 238.204 Radial†	599.4	583.9	5194.1 µg/L	5194.1 ppb	10:23:09
1	K 766.490 Radial†	6832.0	6649.9	5279.4 µg/L	5279.4 ppb	10:22:49
1	Mg 279.077 IEC†	530.8	518.5	5129.5 µg/L	5129.5 ppb	10:23:09
1	Na 589.592 Radial†	29081.5	28629.9	10228 µg/L	10228 ppb	10:22:49
1	Sr 421.552†	45050.4	45042.7	521.98 µg/L	521.98 ppb	10:22:49
1	Sc 361.383	1951062.0	1951062.0	98.373 %		10:24:13
1	Y 371.029	1347636.5	1347636.5	98.161 %		10:24:13
1	Ag 328.068†	59976.6	61470.8	530.80 µg/L	530.80 ppb	10:24:18
1	As 188.979†	258.6	264.5	560.06 µg/L	560.06 ppb	10:24:39
1	B 249.677†	11018.6	10886.3	518.67 µg/L	518.67 ppb	10:24:18
1	Ba 233.527†	18287.6	18611.0	531.20 µg/L	531.20 ppb	10:24:18
1	Be 313.107†	728639.9	743989.4	530.37 µg/L	530.37 ppb	10:24:13
1	Cd 226.502†	17599.7	18035.8	534.78 µg/L	534.78 ppb	10:24:18
1	Co 228.616†	9791.2	9961.4	535.78 µg/L	535.78 ppb	10:24:18
1	Cr 267.716†	22344.4	22756.6	539.35 µg/L	539.35 ppb	10:24:18
1	Cu 324.752†	71413.6	70105.7	533.97 µg/L	533.97 ppb	10:24:18
1	Mn 257.610†	141182.8	143780.8	532.85 µg/L	532.85 ppb	10:24:13
1	Mo 202.031†	4835.1	4921.8	549.58 µg/L	549.58 ppb	10:24:39
1	Ni 231.604†	9219.8	9065.1	537.35 µg/L	537.35 ppb	10:24:18
1	P 214.914†	1194.6	1193.2	2729.8 µg/L	2729.8 ppb	10:24:39
1	Pb 220.353†	1982.8	1924.2	557.22 µg/L	557.22 ppb	10:24:39
1	S 181.975 Axial†	239.0	228.3	1108.1 µg/L	1108.1 ppb	10:24:39
1	Sb 206.836†	540.9	525.2	559.86 µg/L	559.86 ppb	10:24:39
1	Se 196.026†	349.3	344.4	557.67 µg/L	557.67 ppb	10:24:39
1	SiO2†	25015.4	24088.9	5658.8 µg/L	5658.8 ppb	10:24:18
1	Si 251.611†	29202.3	29381.5	2637.3 µg/L	2637.3 ppb	10:24:18
1	Sn 189.927†	1120.9	1136.6	571.33 µg/L	571.33 ppb	10:24:39
1	Ti 334.940†	197188.3	200284.1	532.23 µg/L	532.23 ppb	10:24:13
1	Tl 190.801†	327.0	358.5	548.26 µg/L	548.26 ppb	10:24:39
1	U 409.014†	5398.4	5590.9	532.55 µg/L	532.55 ppb	10:24:18
1	V 292.402†	45249.1	46030.7	540.66 µg/L	540.66 ppb	10:24:18
1	Zn 213.857†	19866.6	19694.5	529.74 µg/L	529.74 ppb	10:24:18
2	Sc RADIAL	55449.7	55449.7	99.5 %		10:23:15
2	Al 396.153Radial†	6416.0	6456.6	5088.9 µg/L	5088.9 ppb	10:23:15
2	Ca 317.933Radial†	5209.7	5046.9	5111.3 µg/L	5111.3 ppb	10:23:35
2	Fe 238.204 Radial†	604.3	591.4	5260.6 µg/L	5260.6 ppb	10:23:35
2	K 766.490 Radial†	6814.0	6660.1	5287.4 µg/L	5287.4 ppb	10:23:15
2	Mg 279.077 IEC†	536.0	525.8	5202.1 µg/L	5202.1 ppb	10:23:35
2	Na 589.592 Radial†	29071.2	28739.9	10268 µg/L	10268 ppb	10:23:15
2	Sr 421.552†	45080.3	45259.2	524.49 µg/L	524.49 ppb	10:23:15
2	Sc 361.383	1910205.9	1910205.9	96.313 %		10:24:46
2	Y 371.029	1317804.8	1317804.8	95.988 %		10:24:46
2	Ag 328.068†	61690.8	64554.6	557.43 µg/L	557.43 ppb	10:24:51
2	As 188.979†	252.1	263.4	557.68 µg/L	557.68 ppb	10:25:12
2	B 249.677†	11316.7	11435.5	544.94 µg/L	544.94 ppb	10:24:51
2	Ba 233.527†	18856.3	19599.1	559.40 µg/L	559.40 ppb	10:24:51
2	Be 313.107†	750631.0	782664.4	557.94 µg/L	557.94 ppb	10:24:46
2	Cd 226.502†	18137.5	18976.8	562.70 µg/L	562.70 ppb	10:24:51
2	Co 228.616†	10111.1	10506.4	565.07 µg/L	565.07 ppb	10:24:51
2	Cr 267.716†	23069.5	23995.3	568.71 µg/L	568.71 ppb	10:24:51
2	Cu 324.752†	73632.6	73962.3	563.31 µg/L	563.31 ppb	10:24:51
2	Mn 257.610†	145254.9	151078.4	559.88 µg/L	559.88 ppb	10:24:46
2	Mo 202.031†	4789.5	4979.6	556.03 µg/L	556.03 ppb	10:25:12
2	Ni 231.604†	9508.8	9565.6	567.01 µg/L	567.01 ppb	10:24:51
2	P 214.914†	1182.1	1206.1	2756.7 µg/L	2756.7 ppb	10:25:12
2	Pb 220.353†	1971.6	1955.6	566.26 µg/L	566.26 ppb	10:25:12

2	S 181.975 Axial†	239.6	234.2	1136.7 µg/L	1136.7 ppb	10:25:12
2	Sb 206.836†	528.9	524.6	558.90 µg/L	558.90 ppb	10:25:12
2	Se 196.026†	352.9	355.7	575.77 µg/L	575.77 ppb	10:25:12
2	SiO2†	25757.7	25403.5	5967.6 µg/L	5967.6 ppb	10:24:51
2	Si 251.611†	30128.9	30978.5	2780.6 µg/L	2780.6 ppb	10:24:51
2	Sn 189.927†	1105.4	1144.9	575.51 µg/L	575.51 ppb	10:25:12
2	Ti 334.940†	203401.1	211022.0	560.78 µg/L	560.78 ppb	10:24:46
2	Tl 190.801†	325.7	364.2	557.25 µg/L	557.25 ppb	10:25:12
2	U 409.014†	5578.2	5895.0	561.56 µg/L	561.56 ppb	10:24:51
2	V 292.402†	46704.3	48525.3	569.76 µg/L	569.76 ppb	10:24:51
2	Zn 213.857†	20568.4	20855.1	560.99 µg/L	560.99 ppb	10:24:51
3	Sc RADIAL	54874.6	54874.6	98.5 %		10:23:41
3	Al 396.153Radial†	6413.4	6521.6	5142.1 µg/L	5142.1 ppb	10:23:41
3	Ca 317.933Radial†	5221.9	5114.2	5179.5 µg/L	5179.5 ppb	10:24:01
3	Fe 238.204 Radial†	604.2	597.6	5314.8 µg/L	5314.8 ppb	10:24:01
3	K 766.490 Radial†	6769.3	6686.4	5308.4 µg/L	5308.4 ppb	10:23:41
3	Mg 279.077 IEC†	538.0	533.6	5276.9 µg/L	5276.9 ppb	10:24:01
3	Na 589.592 Radial†	28932.2	28904.8	10327 µg/L	10327 ppb	10:23:41
3	Sr 421.552†	44821.6	45471.2	526.95 µg/L	526.95 ppb	10:23:41
3	Sc 361.383	1902130.0	1902130.0	95.906 %		10:25:19
3	Y 371.029	1313771.4	1313771.4	95.694 %		10:25:19
3	Ag 328.068†	57128.4	60069.4	518.57 µg/L	518.57 ppb	10:25:25
3	As 188.979†	216.4	227.3	481.28 µg/L	481.28 ppb	10:25:45
3	B 249.677†	10427.2	10557.9	502.83 µg/L	502.83 ppb	10:25:25
3	Ba 233.527†	16991.5	17737.8	506.26 µg/L	506.26 ppb	10:25:25
3	Be 313.107†	696496.4	729528.0	520.06 µg/L	520.06 ppb	10:25:19
3	Cd 226.502†	16275.8	17115.6	507.44 µg/L	507.44 ppb	10:25:25
3	Co 228.616†	8950.1	9340.5	502.29 µg/L	502.29 ppb	10:25:25
3	Cr 267.716†	19905.6	20798.1	492.94 µg/L	492.94 ppb	10:25:25
3	Cu 324.752†	65823.8	66144.8	503.86 µg/L	503.86 ppb	10:25:25
3	Mn 257.610†	135229.0	141264.8	523.55 µg/L	523.55 ppb	10:25:19
3	Mo 202.031†	3969.7	4146.0	462.98 µg/L	462.98 ppb	10:25:45
3	Ni 231.604†	8429.4	8482.1	502.79 µg/L	502.79 ppb	10:25:25
3	P 214.914†	1010.8	1032.7	2357.5 µg/L	2357.5 ppb	10:25:45
3	Pb 220.353†	1702.0	1683.2	487.30 µg/L	487.30 ppb	10:25:45
3	S 181.975 Axial†	211.6	206.0	999.94 µg/L	999.94 ppb	10:25:45
3	Sb 206.836†	462.0	457.1	486.67 µg/L	486.67 ppb	10:25:45
3	Se 196.026†	308.6	311.0	504.64 µg/L	504.64 ppb	10:25:45
3	SiO2†	23526.0	23190.1	5447.6 µg/L	5447.6 ppb	10:25:25
3	Si 251.611†	27458.0	28326.4	2542.6 µg/L	2542.6 ppb	10:25:25
3	Sn 189.927†	905.0	940.8	472.92 µg/L	472.92 ppb	10:25:45
3	Ti 334.940†	187909.4	195765.7	520.21 µg/L	520.21 ppb	10:25:19
3	Tl 190.801†	294.0	332.6	509.13 µg/L	509.13 ppb	10:25:45
3	U 409.014†	4885.2	5196.9	494.92 µg/L	494.92 ppb	10:25:25
3	V 292.402†	41306.8	43103.3	505.90 µg/L	505.90 ppb	10:25:25
3	Zn 213.857†	18312.3	18593.4	500.09 µg/L	500.09 ppb	10:25:25

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1921132.7	96.864 %	1.3226			1.37%
Sc RADIAL	55334.4	99.3 %	0.74			0.75%
Y 371.029	1326404.2	96.615 %	1.3474			1.39%
Ag 328.068†	62031.6	535.60 µg/L	19.870	535.60 ppb	19.870	3.71%
QC value within limits for Ag 328.068 Recovery = 107.12%						
Al 396.153Radial†	6464.9	5096.2 µg/L	42.80	5096.2 ppb	42.80	0.84%
QC value within limits for Al 396.153Radial Recovery = 101.92%						
As 188.979†	251.8	533.00 µg/L	44.812	533.00 ppb	44.812	8.41%
QC value within limits for As 188.979 Recovery = 106.60%						
B 249.677†	10959.9	522.14 µg/L	21.269	522.14 ppb	21.269	4.07%
QC value within limits for B 249.677 Recovery = 104.43%						
Ba 233.527†	18649.3	532.29 µg/L	26.587	532.29 ppb	26.587	4.99%
QC value within limits for Ba 233.527 Recovery = 106.46%						
Be 313.107†	752060.6	536.12 µg/L	19.584	536.12 ppb	19.584	3.65%
QC value within limits for Be 313.107 Recovery = 107.22%						
Ca 317.933Radial†	5047.6	5112.1 µg/L	67.00	5112.1 ppb	67.00	1.31%
QC value within limits for Ca 317.933Radial Recovery = 102.24%						
Cd 226.502†	18042.7	534.97 µg/L	27.631	534.97 ppb	27.631	5.16%
QC value within limits for Cd 226.502 Recovery = 106.99%						
Co 228.616†	9936.1	534.38 µg/L	31.413	534.38 ppb	31.413	5.88%

QC value within limits for Co 228.616 Recovery = 106.88%							
Cr 267.716†	22516.7	533.67 µg/L	38.203	533.67 ppb	38.203	7.16%	
QC value within limits for Cr 267.716 Recovery = 106.73%							
Cu 324.752†	70070.9	533.72 µg/L	29.728	533.72 ppb	29.728	5.57%	
QC value within limits for Cu 324.752 Recovery = 106.74%							
Fe 238.204 Radial†	591.0	5256.5 µg/L	60.48	5256.5 ppb	60.48	1.15%	
QC value within limits for Fe 238.204 Radial Recovery = 105.13%							
K 766.490 Radial†	6665.5	5291.7 µg/L	14.95	5291.7 ppb	14.95	0.28%	
QC value within limits for K 766.490 Radial Recovery = 105.83%							
Mg 279.077 IEC†	526.0	5202.9 µg/L	73.67	5202.9 ppb	73.67	1.42%	
QC value within limits for Mg 279.077 IEC Recovery = 104.06%							
Mn 257.610†	145374.7	538.76 µg/L	18.872	538.76 ppb	18.872	3.50%	
QC value within limits for Mn 257.610 Recovery = 107.75%							
Mo 202.031†	4682.5	522.86 µg/L	51.961	522.86 ppb	51.961	9.94%	
QC value within limits for Mo 202.031 Recovery = 104.57%							
Na 589.592 Radial†	28758.2	10274 µg/L	49.4	10274 ppb	49.4	0.48%	
QC value within limits for Na 589.592 Radial Recovery = 102.74%							
Ni 231.604†	9037.6	535.72 µg/L	32.140	535.72 ppb	32.140	6.00%	
QC value within limits for Ni 231.604 Recovery = 107.14%							
P 214.914†	1144.0	2614.6 µg/L	223.13	2614.6 ppb	223.13	8.53%	
QC value within limits for P 214.914 Recovery = 104.59%							
Pb 220.353†	1854.3	536.93 µg/L	43.218	536.93 ppb	43.218	8.05%	
QC value within limits for Pb 220.353 Recovery = 107.39%							
S 181.975 Axial†	222.8	1081.6 µg/L	72.11	1081.6 ppb	72.11	6.67%	
QC value within limits for S 181.975 Axial Recovery = 108.16%							
Sb 206.836†	502.3	535.14 µg/L	41.983	535.14 ppb	41.983	7.85%	
QC value within limits for Sb 206.836 Recovery = 107.03%							
Se 196.026†	337.0	546.02 µg/L	36.969	546.02 ppb	36.969	6.77%	
QC value within limits for Se 196.026 Recovery = 109.20%							
SiO2†	24227.5	5691.3 µg/L	261.50	5691.3 ppb	261.50	4.59%	
QC value within limits for SiO2 Recovery = 106.43%							
Si 251.611†	29562.2	2653.5 µg/L	119.85	2653.5 ppb	119.85	4.52%	
QC value within limits for Si 251.611 Recovery = 106.14%							
Sn 189.927†	1074.1	539.92 µg/L	58.057	539.92 ppb	58.057	10.75%	
QC value within limits for Sn 189.927 Recovery = 107.98%							
Sr 421.552†	45257.7	524.47 µg/L	2.483	524.47 ppb	2.483	0.47%	
QC value within limits for Sr 421.552 Recovery = 104.89%							
Ti 334.940†	202357.3	537.74 µg/L	20.839	537.74 ppb	20.839	3.88%	
QC value within limits for Ti 334.940 Recovery = 107.55%							
Tl 190.801†	351.8	538.21 µg/L	25.589	538.21 ppb	25.589	4.75%	
QC value within limits for Tl 190.801 Recovery = 107.64%							
U 409.014†	5561.0	529.68 µg/L	33.409	529.68 ppb	33.409	6.31%	
QC value within limits for U 409.014 Recovery = 105.94%							
V 292.402†	45886.4	538.78 µg/L	31.971	538.78 ppb	31.971	5.93%	
QC value within limits for V 292.402 Recovery = 107.76%							
Zn 213.857†	19714.3	530.27 µg/L	30.452	530.27 ppb	30.452	5.74%	
QC value within limits for Zn 213.857 Recovery = 106.05%							
All analyte(s) passed QC.							

Sequence No.: 3  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/8/2010 10:25:54  
 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	53718.3	53718.3	96.4 %		10:26:27
1	Al 396.153Radial†	-31.0	-22.4	-17.671 µg/L	-17.671 ppb	10:26:27
1	Ca 317.933Radial†	185.4	4.5	4.5120 µg/L	4.5120 ppb	10:26:47
1	Fe 238.204 Radial†	16.3	1.1	9.7460 µg/L	9.7460 ppb	10:26:47
1	K 766.490 Radial†	214.3	35.5	28.208 µg/L	28.208 ppb	10:26:27
1	Mg 279.077 IEC†	9.5	-2.8	-27.838 µg/L	-27.838 ppb	10:26:47
1	Na 589.592 Radial†	619.5	171.3	61.195 µg/L	61.195 ppb	10:26:27
1	Sr 421.552†	39.9	3.3	0.0387 µg/L	0.0387 ppb	10:26:27
1	Sc 361.383	1912915.0	1912915.0	96.450 %		10:27:49
1	Y 371.029	1324712.2	1324712.2	96.491 %		10:27:49
1	Ag 328.068†	-418.1	68.9	0.5892 µg/L	0.5892 ppb	10:27:55
1	As 188.979†	2.1	3.9	8.2369 µg/L	8.2369 ppb	10:28:15
1	B 249.677†	355.8	54.5	2.5995 µg/L	2.5995 ppb	10:28:15
1	Ba 233.527†	-15.4	5.1	0.1434 µg/L	0.1434 ppb	10:28:15
1	Be 313.107†	-3045.7	143.0	0.1019 µg/L	0.1019 ppb	10:27:55
1	Cd 226.502†	-145.4	-5.7	-0.1681 µg/L	-0.1681 ppb	10:28:15
1	Co 228.616†	-12.3	-4.5	-0.2405 µg/L	-0.2405 ppb	10:28:15
1	Cr 267.716†	-38.8	2.5	0.0585 µg/L	0.0585 ppb	10:27:55
1	Cu 324.752†	2570.5	176.3	1.3427 µg/L	1.3427 ppb	10:27:55
1	Mn 257.610†	-209.7	46.0	0.1728 µg/L	0.1728 ppb	10:28:15
1	Mo 202.031†	-1.6	5.1	0.5699 µg/L	0.5699 ppb	10:28:15
1	Ni 231.604†	323.5	28.3	1.6791 µg/L	1.6791 ppb	10:28:15
1	P 214.914†	13.2	-7.5	-17.677 µg/L	-17.677 ppb	10:28:15
1	Pb 220.353†	97.7	9.8	2.8474 µg/L	2.8474 ppb	10:28:15
1	S 181.975 Axial†	17.8	3.8	18.576 µg/L	18.576 ppb	10:28:15
1	Sb 206.836†	25.5	1.9	1.9939 µg/L	1.9939 ppb	10:28:15
1	Se 196.026†	14.4	4.2	6.7236 µg/L	6.7236 ppb	10:28:15
1	SiO2†	1448.9	162.1	38.071 µg/L	38.071 ppb	10:27:55
1	Si 251.611†	361.1	70.8	6.3516 µg/L	6.3516 ppb	10:28:15
1	Sn 189.927†	4.2	1.5	0.7399 µg/L	0.7399 ppb	10:28:15
1	Ti 334.940†	185.4	27.4	0.0750 µg/L	0.0750 ppb	10:27:55
1	Tl 190.801†	-27.9	-2.9	-4.3346 µg/L	-4.3346 ppb	10:28:15
1	U 409.014†	-89.7	10.3	0.9792 µg/L	0.9792 ppb	10:27:55
1	V 292.402†	-56.6	-25.4	-0.2876 µg/L	-0.2876 ppb	10:27:55
1	Zn 213.857†	531.5	50.5	1.3594 µg/L	1.3594 ppb	10:28:15
2	Sc RADIAL	54497.8	54497.8	97.8 %		10:26:53
2	Al 396.153Radial†	-20.8	-11.5	-9.0914 µg/L	-9.0914 ppb	10:26:53
2	Ca 317.933Radial†	188.5	4.8	4.9044 µg/L	4.9044 ppb	10:27:13
2	Fe 238.204 Radial†	16.8	1.4	12.338 µg/L	12.338 ppb	10:27:13
2	K 766.490 Radial†	184.7	2.1	1.6320 µg/L	1.6320 ppb	10:26:53
2	Mg 279.077 IEC†	11.6	-0.8	-7.7590 µg/L	-7.7590 ppb	10:27:13
2	Na 589.592 Radial†	606.0	148.4	53.008 µg/L	53.008 ppb	10:26:53
2	Sr 421.552†	28.9	-8.5	-0.0988 µg/L	-0.0988 ppb	10:26:53
2	Sc 361.383	1927457.1	1927457.1	97.183 %		10:28:21
2	Y 371.029	1336195.6	1336195.6	97.328 %		10:28:21
2	Ag 328.068†	-475.6	13.0	0.1108 µg/L	0.1108 ppb	10:28:27
2	As 188.979†	-1.0	0.6	1.3256 µg/L	1.3256 ppb	10:28:47
2	B 249.677†	365.3	61.5	2.9356 µg/L	2.9356 ppb	10:28:47
2	Ba 233.527†	-18.6	1.9	0.0530 µg/L	0.0530 ppb	10:28:47
2	Be 313.107†	-3097.2	113.8	0.0812 µg/L	0.0812 ppb	10:28:27
2	Cd 226.502†	-143.2	-2.3	-0.0692 µg/L	-0.0692 ppb	10:28:47
2	Co 228.616†	-6.4	1.7	0.0910 µg/L	0.0910 ppb	10:28:47
2	Cr 267.716†	-2.9	39.8	0.9428 µg/L	0.9428 ppb	10:28:27
2	Cu 324.752†	2578.1	164.0	1.2493 µg/L	1.2493 ppb	10:28:27
2	Mn 257.610†	-215.0	42.3	0.1584 µg/L	0.1584 ppb	10:28:47
2	Mo 202.031†	-6.6	-0.0	-0.0023 µg/L	-0.0023 ppb	10:28:47
2	Ni 231.604†	323.2	25.4	1.5078 µg/L	1.5078 ppb	10:28:47
2	P 214.914†	21.4	0.9	1.8926 µg/L	1.8926 ppb	10:28:47
2	Pb 220.353†	101.1	12.6	3.6441 µg/L	3.6441 ppb	10:28:47

2	S 181.975 Axial†	15.9	1.8	8.5278 µg/L	8.5278 ppb	10:28:47
2	Sb 206.836†	19.0	-5.1	-5.3865 µg/L	-5.3865 ppb	10:28:47
2	Se 196.026†	18.4	8.2	13.187 µg/L	13.187 ppb	10:28:47
2	SiO2†	1416.4	117.3	27.557 µg/L	27.557 ppb	10:28:27
2	Si 251.611†	368.7	75.8	6.7996 µg/L	6.7996 ppb	10:28:47
2	Sn 189.927†	5.6	2.9	1.4533 µg/L	1.4533 ppb	10:28:47
2	Ti 334.940†	145.8	-14.8	-0.0386 µg/L	-0.0386 ppb	10:28:27
2	Tl 190.801†	-23.4	1.9	2.9421 µg/L	2.9421 ppb	10:28:47
2	U 409.014†	-69.7	31.5	3.0050 µg/L	3.0050 ppb	10:28:27
2	V 292.402†	-47.7	-15.8	-0.1761 µg/L	-0.1761 ppb	10:28:27
2	Zn 213.857†	532.2	47.1	1.2664 µg/L	1.2664 ppb	10:28:47
3	Sc RADIAL	54580.6	54580.6	98.0 %		10:27:19
3	Al 396.153Radial†	-25.3	-16.0	-12.645 µg/L	-12.645 ppb	10:27:19
3	Ca 317.933Radial†	179.2	-5.0	-5.0402 µg/L	-5.0402 ppb	10:27:39
3	Fe 238.204 Radial†	17.4	1.9	16.884 µg/L	16.884 ppb	10:27:39
3	K 766.490 Radial†	210.3	27.9	22.151 µg/L	22.151 ppb	10:27:19
3	Mg 279.077 IEC†	17.1	4.8	47.357 µg/L	47.357 ppb	10:27:39
3	Na 589.592 Radial†	592.3	133.4	47.674 µg/L	47.674 ppb	10:27:19
3	Sr 421.552†	19.1	-18.5	-0.2147 µg/L	-0.2147 ppb	10:27:19
3	Sc 361.383	1951454.5	1951454.5	98.393 %		10:28:53
3	Y 371.029	1352023.1	1352023.1	98.481 %		10:28:53
3	Ag 328.068†	-364.8	131.7	1.1306 µg/L	1.1306 ppb	10:28:59
3	As 188.979†	3.4	5.2	10.997 µg/L	10.997 ppb	10:29:20
3	B 249.677†	359.1	50.6	2.4090 µg/L	2.4090 ppb	10:29:20
3	Ba 233.527†	-19.1	1.6	0.0451 µg/L	0.0451 ppb	10:29:20
3	Be 313.107†	-3056.2	194.6	0.1388 µg/L	0.1388 ppb	10:28:59
3	Cd 226.502†	-148.5	-5.9	-0.1751 µg/L	-0.1751 ppb	10:29:20
3	Co 228.616†	-0.5	7.8	0.4190 µg/L	0.4190 ppb	10:29:20
3	Cr 267.716†	-50.1	-8.2	-0.1937 µg/L	-0.1937 ppb	10:28:59
3	Cu 324.752†	2600.4	154.0	1.1740 µg/L	1.1740 ppb	10:28:59
3	Mn 257.610†	-198.3	61.9	0.2295 µg/L	0.2295 ppb	10:29:20
3	Mo 202.031†	-6.8	-0.1	-0.0129 µg/L	-0.0129 ppb	10:29:20
3	Ni 231.604†	317.4	15.5	0.9183 µg/L	0.9183 ppb	10:29:20
3	P 214.914†	29.2	8.4	19.535 µg/L	19.535 ppb	10:29:20
3	Pb 220.353†	97.7	7.8	2.2553 µg/L	2.2553 ppb	10:29:20
3	S 181.975 Axial†	17.6	3.2	15.738 µg/L	15.738 ppb	10:29:20
3	Sb 206.836†	24.2	-0.0	-0.0126 µg/L	-0.0126 ppb	10:29:20
3	Se 196.026†	11.5	1.0	1.5906 µg/L	1.5906 ppb	10:29:20
3	SiO2†	1463.2	147.0	34.530 µg/L	34.530 ppb	10:28:59
3	Si 251.611†	350.3	52.4	4.7043 µg/L	4.7043 ppb	10:29:20
3	Sn 189.927†	9.0	6.3	3.1875 µg/L	3.1875 ppb	10:29:20
3	Ti 334.940†	148.3	-14.1	-0.0413 µg/L	-0.0413 ppb	10:28:59
3	Tl 190.801†	-22.5	3.2	4.8566 µg/L	4.8566 ppb	10:29:20
3	U 409.014†	-66.0	36.2	3.4500 µg/L	3.4500 ppb	10:28:59
3	V 292.402†	-21.4	11.6	0.1394 µg/L	0.1394 ppb	10:28:59
3	Zn 213.857†	530.9	39.0	1.0457 µg/L	1.0457 ppb	10:29:20

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1930608.9	97.342 %	0.9813			1.01%
Sc RADIAL	54265.6	97.4 %	0.85			0.88%
Y 371.029	1337643.6	97.433 %	0.9988			1.03%
Ag 328.068†	71.2	0.6102 µg/L	0.51023	0.6102 ppb	0.51023	83.61%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-16.6	-13.136 µg/L	4.3110	-13.136 ppb	4.3110	32.82%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	3.2	6.8532 µg/L	4.98209	6.8532 ppb	4.98209	72.70%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	55.5	2.6480 µg/L	0.26660	2.6480 ppb	0.26660	10.07%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	2.8	0.0805 µg/L	0.05462	0.0805 ppb	0.05462	67.85%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	150.5	0.1073 µg/L	0.02919	0.1073 ppb	0.02919	27.20%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1.4	1.4587 µg/L	5.63165	1.4587 ppb	5.63165	386.06%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-4.6	-0.1375 µg/L	0.05923	-0.1375 ppb	0.05923	43.09%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	1.7	0.0898 µg/L	0.32977	0.0898 ppb	0.32977	367.11%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	11.4	0.2692 µg/L	0.59681	0.2692 ppb	0.59681	221.70%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	164.8	1.2553 µg/L	0.08453	1.2553 ppb	0.08453	6.73%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.5	12.989 µg/L	3.6132	12.989 ppb	3.6132	27.82%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	21.8	17.330 µg/L	13.9283	17.330 ppb	13.9283	80.37%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.4	3.9199 µg/L	38.93387	3.9199 ppb	38.93387	993.23%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	50.1	0.1869 µg/L	0.03756	0.1869 ppb	0.03756	20.09%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	1.7	0.1849 µg/L	0.33343	0.1849 ppb	0.33343	180.32%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	151.0	53.959 µg/L	6.8106	53.959 ppb	6.8106	12.62%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	23.1	1.3684 µg/L	0.39912	1.3684 ppb	0.39912	29.17%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	0.6	1.2500 µg/L	18.61425	1.2500 ppb	18.61425	>999.9%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	10.1	2.9156 µg/L	0.69688	2.9156 ppb	0.69688	23.90%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	2.9	14.281 µg/L	5.1802	14.281 ppb	5.1802	36.27%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-1.1	-1.1351 µg/L	3.81607	-1.1351 ppb	3.81607	336.20%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	4.5	7.1672 µg/L	5.81101	7.1672 ppb	5.81101	81.08%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	142.1	33.386 µg/L	5.3498	33.386 ppb	5.3498	16.02%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	66.3	5.9518 µg/L	1.10336	5.9518 ppb	1.10336	18.54%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	3.6	1.7936 µg/L	1.25878	1.7936 ppb	1.25878	70.18%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-7.9	-0.0916 µg/L	0.12686	-0.0916 ppb	0.12686	138.44%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-0.5	-0.0016 µg/L	0.06639	-0.0016 ppb	0.06639	>999.9%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.8	1.1547 µg/L	4.84927	1.1547 ppb	4.84927	419.97%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	26.0	2.4781 µg/L	1.31694	2.4781 ppb	1.31694	53.14%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-9.8	-0.1081 µg/L	0.22144	-0.1081 ppb	0.22144	204.83%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	45.5	1.2238 µg/L	0.16110	1.2238 ppb	0.16110	13.16%
QC value within limits for Zn 213.857 Recovery = Not calculated						
All analyte(s) passed QC.						

Sequence No.: 12

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/8/2010 10:58:06

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	54751.9	54751.9	98.3 %		10:58:45
1	Al 396.153Radial†	6394.9	6517.3	5136.9 µg/L	5136.9 ppb	10:58:45
1	Ca 317.933Radial†	5173.5	5076.8	5141.6 µg/L	5141.6 ppb	10:59:05
1	Fe 238.204 Radial†	597.9	592.6	5271.0 µg/L	5271.0 ppb	10:59:05
1	K 766.490 Radial†	6745.7	6677.8	5301.5 µg/L	5301.5 ppb	10:58:45
1	Mg 279.077 IEC†	539.3	536.1	5303.7 µg/L	5303.7 ppb	10:59:05
1	Na 589.592 Radial†	28959.1	28998.1	10360 µg/L	10360 ppb	10:58:45
1	Sr 421.552†	44589.1	45336.6	525.39 µg/L	525.39 ppb	10:58:45
1	Sc 361.383	1905288.5	1905288.5	96.065 %		11:00:09
1	Y 371.029	1316380.8	1316380.8	95.884 %		11:00:09
1	Ag 328.068†	59828.6	62781.5	542.11 µg/L	542.11 ppb	11:00:14
1	As 188.979†	248.7	260.6	551.59 µg/L	551.59 ppb	11:00:35
1	B 249.677†	10933.2	11066.6	527.26 µg/L	527.26 ppb	11:00:14
1	Ba 233.527†	18047.5	18807.6	536.82 µg/L	536.82 ppb	11:00:14
1	Be 313.107†	723571.3	756507.9	539.29 µg/L	539.29 ppb	11:00:09
1	Cd 226.502†	17287.2	18140.3	537.87 µg/L	537.87 ppb	11:00:14
1	Co 228.616†	9659.9	10063.8	541.27 µg/L	541.27 ppb	11:00:14
1	Cr 267.716†	22105.3	23053.4	546.39 µg/L	546.39 ppb	11:00:14
1	Cu 324.752†	71273.7	71704.1	546.14 µg/L	546.14 ppb	11:00:14
1	Mn 257.610†	140237.1	146244.4	541.98 µg/L	541.98 ppb	11:00:09
1	Mo 202.031†	4764.2	4966.1	554.52 µg/L	554.52 ppb	11:00:35
1	Ni 231.604†	9086.0	9151.0	542.44 µg/L	542.44 ppb	11:00:14
1	P 214.914†	1178.4	1205.4	2757.0 µg/L	2757.0 ppb	11:00:35
1	Pb 220.353†	1939.7	1927.8	558.25 µg/L	558.25 ppb	11:00:35
1	S 181.975 Axial†	237.6	232.7	1129.7 µg/L	1129.7 ppb	11:00:35
1	Sb 206.836†	532.8	530.0	564.94 µg/L	564.94 ppb	11:00:35
1	Se 196.026†	346.6	350.1	566.79 µg/L	566.79 ppb	11:00:35
1	SiO2†	24877.0	24555.8	5768.4 µg/L	5768.4 ppb	11:00:14
1	Si 251.611†	29122.0	30011.1	2693.8 µg/L	2693.8 ppb	11:00:14
1	Sn 189.927†	1103.3	1145.7	575.90 µg/L	575.90 ppb	11:00:35
1	Ti 334.940†	196815.2	204711.4	543.99 µg/L	543.99 ppb	11:00:09
1	Tl 190.801†	325.0	364.4	557.28 µg/L	557.28 ppb	11:00:35
1	U 409.014†	5342.1	5664.1	539.52 µg/L	539.52 ppb	11:00:14
1	V 292.402†	44971.4	46846.7	550.20 µg/L	550.20 ppb	11:00:14
1	Zn 213.857†	19705.2	20011.7	538.27 µg/L	538.27 ppb	11:00:14
2	Sc RADIAL	54527.3	54527.3	97.9 %		10:59:11
2	Al 396.153Radial†	6365.1	6513.7	5134.1 µg/L	5134.1 ppb	10:59:11
2	Ca 317.933Radial†	5112.2	5035.9	5100.2 µg/L	5100.2 ppb	10:59:31
2	Fe 238.204 Radial†	590.5	587.5	5226.6 µg/L	5226.6 ppb	10:59:31
2	K 766.490 Radial†	6752.9	6713.4	5329.8 µg/L	5329.8 ppb	10:59:11
2	Mg 279.077 IEC†	523.5	522.2	5166.2 µg/L	5166.2 ppb	10:59:31
2	Na 589.592 Radial†	28825.8	28983.3	10355 µg/L	10355 ppb	10:59:11
2	Sr 421.552†	44497.9	45430.3	526.47 µg/L	526.47 ppb	10:59:11
2	Sc 361.383	1867745.3	1867745.3	94.172 %		11:00:42
2	Y 371.029	1291227.1	1291227.1	94.052 %		11:00:42
2	Ag 328.068†	60403.4	64643.7	558.18 µg/L	558.18 ppb	11:00:48
2	As 188.979†	239.7	256.2	542.39 µg/L	542.39 ppb	11:01:08
2	B 249.677†	11048.6	11417.9	544.10 µg/L	544.10 ppb	11:00:48
2	Ba 233.527†	18347.2	19503.5	556.67 µg/L	556.67 ppb	11:00:48
2	Be 313.107†	741965.7	791180.7	564.01 µg/L	564.01 ppb	11:00:42
2	Cd 226.502†	17534.2	18764.2	556.40 µg/L	556.40 ppb	11:00:48
2	Co 228.616†	9741.9	10353.0	556.79 µg/L	556.79 ppb	11:00:48
2	Cr 267.716†	22351.4	23777.3	563.55 µg/L	563.55 ppb	11:00:48
2	Cu 324.752†	72158.4	74134.9	564.62 µg/L	564.62 ppb	11:00:48
2	Mn 257.610†	143792.7	152954.3	566.82 µg/L	566.82 ppb	11:00:42
2	Mo 202.031†	4628.9	4922.1	549.61 µg/L	549.61 ppb	11:01:08
2	Ni 231.604†	9201.0	9463.2	560.95 µg/L	560.95 ppb	11:00:48
2	P 214.914†	1142.5	1192.0	2723.7 µg/L	2723.7 ppb	11:01:08
2	Pb 220.353†	1905.5	1932.0	559.42 µg/L	559.42 ppb	11:01:08

2	S 181.975 Axial†	229.2	228.8	1110.6 µg/L	1110.6 ppb	11:01:08
2	Sb 206.836†	513.1	520.2	554.21 µg/L	554.21 ppb	11:01:08
2	Se 196.026†	339.0	349.2	565.43 µg/L	565.43 ppb	11:01:08
2	SiO2†	25172.3	25389.9	5964.4 µg/L	5964.4 ppb	11:00:48
2	Si 251.611†	29467.5	30987.4	2781.4 µg/L	2781.4 ppb	11:00:48
2	Sn 189.927†	1066.6	1129.7	567.87 µg/L	567.87 ppb	11:01:08
2	Ti 334.940†	201788.3	214110.5	568.99 µg/L	568.99 ppb	11:00:42
2	Tl 190.801†	315.2	360.8	552.18 µg/L	552.18 ppb	11:01:08
2	U 409.014†	5496.0	5939.3	565.79 µg/L	565.79 ppb	11:00:48
2	V 292.402†	45490.8	48339.2	567.54 µg/L	567.54 ppb	11:00:48
2	Zn 213.857†	19971.5	20706.8	557.00 µg/L	557.00 ppb	11:00:48
3	Sc RADIAL	54321.4	54321.4	97.5 %		10:59:37
3	Al 396.153Radial†	6398.9	6573.0	5183.0 µg/L	5183.0 ppb	10:59:37
3	Ca 317.933Radial†	5111.1	5054.5	5119.1 µg/L	5119.1 ppb	10:59:57
3	Fe 238.204 Radial†	589.3	588.6	5234.2 µg/L	5234.2 ppb	10:59:57
3	K 766.490 Radial†	6759.0	6745.8	5355.5 µg/L	5355.5 ppb	10:59:37
3	Mg 279.077 IEC†	528.1	529.0	5231.7 µg/L	5231.7 ppb	10:59:57
3	Na 589.592 Radial†	28952.4	29224.7	10441 µg/L	10441 ppb	10:59:37
3	Sr 421.552†	44533.1	45638.8	528.89 µg/L	528.89 ppb	10:59:37
3	Sc 361.383	1917220.7	1917220.7	96.667 %		11:01:15
3	Y 371.029	1325086.2	1325086.2	96.519 %		11:01:15
3	Ag 328.068†	56733.7	59192.2	510.99 µg/L	510.99 ppb	11:01:21
3	As 188.979†	211.2	220.2	466.18 µg/L	466.18 ppb	11:01:41
3	B 249.677†	10328.4	10370.2	493.87 µg/L	493.87 ppb	11:01:21
3	Ba 233.527†	16720.2	17317.7	494.27 µg/L	494.27 ppb	11:01:21
3	Be 313.107†	677481.2	704140.9	501.96 µg/L	501.96 ppb	11:01:15
3	Cd 226.502†	15920.2	16614.2	492.57 µg/L	492.57 ppb	11:01:21
3	Co 228.616†	8813.9	9126.1	490.77 µg/L	490.77 ppb	11:01:21
3	Cr 267.716†	19603.7	20322.3	481.67 µg/L	481.67 ppb	11:01:21
3	Cu 324.752†	65482.6	65251.6	497.05 µg/L	497.05 ppb	11:01:21
3	Mn 257.610†	131735.1	136540.6	506.04 µg/L	506.04 ppb	11:01:15
3	Mo 202.031†	3901.0	4042.2	451.40 µg/L	451.40 ppb	11:01:41
3	Ni 231.604†	8320.7	8300.4	492.02 µg/L	492.02 ppb	11:01:21
3	P 214.914†	986.8	999.6	2280.9 µg/L	2280.9 ppb	11:01:41
3	Pb 220.353†	1672.7	1639.0	474.49 µg/L	474.49 ppb	11:01:41
3	S 181.975 Axial†	203.4	195.8	950.27 µg/L	950.27 ppb	11:01:41
3	Sb 206.836†	457.1	448.2	477.16 µg/L	477.16 ppb	11:01:41
3	Se 196.026†	311.5	311.5	505.15 µg/L	505.15 ppb	11:01:41
3	SiO2†	23250.6	22712.1	5335.3 µg/L	5335.3 ppb	11:01:21
3	Si 251.611†	27154.4	27787.0	2494.2 µg/L	2494.2 ppb	11:01:21
3	Sn 189.927†	886.2	913.9	459.42 µg/L	459.42 ppb	11:01:41
3	Ti 334.940†	183503.3	189665.5	503.99 µg/L	503.99 ppb	11:01:15
3	Tl 190.801†	290.3	326.4	499.49 µg/L	499.49 ppb	11:01:41
3	U 409.014†	4951.4	5225.3	497.65 µg/L	497.65 ppb	11:01:21
3	V 292.402†	40869.7	42312.1	496.60 µg/L	496.60 ppb	11:01:21
3	Zn 213.857†	18070.9	18193.4	489.32 µg/L	489.32 ppb	11:01:21

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1896751.5	95.635 %	1.3018			1.36%
Sc RADIAL	54533.5	97.9 %	0.39			0.39%
Y 371.029	1310898.0	95.485 %	1.2807			1.34%
Ag 328.068†	62205.8	537.09 µg/L	23.993	537.09 ppb	23.993	4.47%
QC value within limits for Ag 328.068 Recovery = 107.42%						
Al 396.153Radial†	6534.7	5151.4 µg/L	27.44	5151.4 ppb	27.44	0.53%
QC value within limits for Al 396.153Radial Recovery = 103.03%						
As 188.979†	245.6	520.05 µg/L	46.884	520.05 ppb	46.884	9.02%
QC value within limits for As 188.979 Recovery = 104.01%						
B 249.677†	10951.5	521.74 µg/L	25.564	521.74 ppb	25.564	4.90%
QC value within limits for B 249.677 Recovery = 104.35%						
Ba 233.527†	18542.9	529.26 µg/L	31.881	529.26 ppb	31.881	6.02%
QC value within limits for Ba 233.527 Recovery = 105.85%						
Be 313.107†	750609.8	535.09 µg/L	31.237	535.09 ppb	31.237	5.84%
QC value within limits for Be 313.107 Recovery = 107.02%						
Ca 317.933Radial†	5055.7	5120.3 µg/L	20.76	5120.3 ppb	20.76	0.41%
QC value within limits for Ca 317.933Radial Recovery = 102.41%						
Cd 226.502†	17839.6	528.95 µg/L	32.836	528.95 ppb	32.836	6.21%
QC value within limits for Cd 226.502 Recovery = 105.79%						
Co 228.616†	9847.6	529.61 µg/L	34.519	529.61 ppb	34.519	6.52%

Cr	267.716†	22384.3	530.53 µg/L	43.180	530.53 ppb	43.180	8.14%
Cu	324.752†	70363.5	535.94 µg/L	34.920	535.94 ppb	34.920	6.52%
Fe	238.204 Radial†	589.6	5243.9 µg/L	23.77	5243.9 ppb	23.77	0.45%
K	766.490 Radial†	6712.4	5329.0 µg/L	27.00	5329.0 ppb	27.00	0.51%
Mg	279.077 IEC†	529.1	5233.9 µg/L	68.78	5233.9 ppb	68.78	1.31%
Mn	257.610†	145246.4	538.28 µg/L	30.556	538.28 ppb	30.556	5.68%
Mo	202.031†	4643.5	518.51 µg/L	58.172	518.51 ppb	58.172	11.22%
Na	589.592 Radial†	29068.7	10385 µg/L	48.3	10385 ppb	48.3	0.47%
Ni	231.604†	8971.6	531.80 µg/L	35.670	531.80 ppb	35.670	6.71%
P	214.914†	1132.3	2587.2 µg/L	265.81	2587.2 ppb	265.81	10.27%
Pb	220.353†	1832.9	530.72 µg/L	48.701	530.72 ppb	48.701	9.18%
S	181.975 Axial†	219.1	1063.5 µg/L	98.54	1063.5 ppb	98.54	9.27%
Sb	206.836†	499.5	532.10 µg/L	47.881	532.10 ppb	47.881	9.00%
Se	196.026†	336.9	545.79 µg/L	35.201	545.79 ppb	35.201	6.45%
SiO2†		24219.3	5689.4 µg/L	321.89	5689.4 ppb	321.89	5.66%
Si	251.611†	29595.2	2656.5 µg/L	147.23	2656.5 ppb	147.23	5.54%
Sn	189.927†	1063.1	534.40 µg/L	65.055	534.40 ppb	65.055	12.17%
Sr	421.552†	45468.6	526.92 µg/L	1.792	526.92 ppb	1.792	0.34%
Ti	334.940†	202829.1	538.99 µg/L	32.789	538.99 ppb	32.789	6.08%
Tl	190.801†	350.5	536.32 µg/L	31.993	536.32 ppb	31.993	5.97%
U	409.014†	5609.6	534.32 µg/L	34.368	534.32 ppb	34.368	6.43%
V	292.402†	45832.7	538.11 µg/L	36.981	538.11 ppb	36.981	6.87%
Zn	213.857†	19637.3	528.20 µg/L	34.945	528.20 ppb	34.945	6.62%

QC value within limits for Co 228.616 Recovery = 105.92%  
 QC value within limits for Cr 267.716 Recovery = 106.11%  
 QC value within limits for Cu 324.752 Recovery = 107.19%  
 QC value within limits for Fe 238.204 Radial Recovery = 104.88%  
 QC value within limits for K 766.490 Radial Recovery = 106.58%  
 QC value within limits for Mg 279.077 IEC Recovery = 104.68%  
 QC value within limits for Mn 257.610 Recovery = 107.66%  
 QC value within limits for Mo 202.031 Recovery = 103.70%  
 QC value within limits for Na 589.592 Radial Recovery = 103.85%  
 QC value within limits for Ni 231.604 Recovery = 106.36%  
 QC value within limits for P 214.914 Recovery = 103.49%  
 QC value within limits for Pb 220.353 Recovery = 106.14%  
 QC value within limits for S 181.975 Axial Recovery = 106.35%  
 QC value within limits for Sb 206.836 Recovery = 106.42%  
 QC value within limits for Se 196.026 Recovery = 109.16%  
 QC value within limits for SiO2 Recovery = 106.39%  
 QC value within limits for Si 251.611 Recovery = 106.26%  
 QC value within limits for Sn 189.927 Recovery = 106.88%  
 QC value within limits for Sr 421.552 Recovery = 105.38%  
 QC value within limits for Ti 334.940 Recovery = 107.80%  
 QC value within limits for Tl 190.801 Recovery = 107.26%  
 QC value within limits for U 409.014 Recovery = 106.86%  
 QC value within limits for V 292.402 Recovery = 107.62%  
 QC value within limits for Zn 213.857 Recovery = 105.64%

All analyte(s) passed QC.

Sequence No.: 13  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/8/2010 11:01:50  
 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	52548.9	52548.9	94.3 %		11:02:23
1	Al 396.153Radial†	-35.0	-27.3	-21.557 µg/L	-21.557 ppb	11:02:23
1	Ca 317.933Radial†	175.3	-2.0	-2.0541 µg/L	-2.0541 ppb	11:02:43
1	Fe 238.204 Radial†	14.7	-0.3	-2.4253 µg/L	-2.4253 ppb	11:02:43
1	K 766.490 Radial†	117.8	-61.8	-49.076 µg/L	-49.076 ppb	11:02:23
1	Mg 279.077 IEC†	11.4	-0.6	-6.2245 µg/L	-6.2245 ppb	11:02:43
1	Na 589.592 Radial†	507.4	66.7	23.842 µg/L	23.842 ppb	11:02:23
1	Sr 421.552†	26.8	-9.6	-0.1114 µg/L	-0.1114 ppb	11:02:23
1	Sc 361.383	1848146.2	1848146.2	93.184 %		11:03:46
1	Y 371.029	1282213.7	1282213.7	93.396 %		11:03:46
1	Ag 328.068†	-474.8	-7.1	-0.0648 µg/L	-0.0648 ppb	11:03:51
1	As 188.979†	-1.8	-0.3	-0.6121 µg/L	-0.6121 ppb	11:04:12
1	B 249.677†	356.9	68.6	3.2806 µg/L	3.2806 ppb	11:04:12
1	Ba 233.527†	-28.8	-9.9	-0.2829 µg/L	-0.2829 ppb	11:04:12
1	Be 313.107†	-2990.7	91.3	0.0651 µg/L	0.0651 ppb	11:03:51
1	Cd 226.502†	-143.4	-8.8	-0.2587 µg/L	-0.2587 ppb	11:04:12
1	Co 228.616†	5.3	14.0	0.7532 µg/L	0.7532 ppb	11:04:12
1	Cr 267.716†	-39.5	0.3	0.0079 µg/L	0.0079 ppb	11:03:51
1	Cu 324.752†	2495.3	189.0	1.4369 µg/L	1.4369 ppb	11:03:51
1	Mn 257.610†	-186.9	62.9	0.2328 µg/L	0.2328 ppb	11:04:12
1	Mo 202.031†	-1.4	5.2	0.5815 µg/L	0.5815 ppb	11:04:12
1	Ni 231.604†	325.4	42.1	2.4974 µg/L	2.4974 ppb	11:04:12
1	P 214.914†	24.3	4.9	11.256 µg/L	11.256 ppb	11:04:12
1	Pb 220.353†	99.4	15.3	4.4244 µg/L	4.4244 ppb	11:04:12
1	S 181.975 Axial†	13.9	0.3	1.3529 µg/L	1.3529 ppb	11:04:12
1	Sb 206.836†	23.3	0.4	0.3852 µg/L	0.3852 ppb	11:04:12
1	Se 196.026†	13.0	3.3	5.1967 µg/L	5.1967 ppb	11:04:12
1	SiO2†	1408.4	171.3	40.238 µg/L	40.238 ppb	11:03:51
1	Si 251.611†	399.9	125.5	11.268 µg/L	11.268 ppb	11:04:12
1	Sn 189.927†	2.9	0.3	0.1338 µg/L	0.1338 ppb	11:04:12
1	Ti 334.940†	156.9	3.5	0.0098 µg/L	0.0098 ppb	11:03:51
1	Tl 190.801†	-26.1	-1.9	-2.9296 µg/L	-2.9296 ppb	11:04:12
1	U 409.014†	-158.9	-67.2	-6.4158 µg/L	-6.4158 ppb	11:03:51
1	V 292.402†	-75.8	-48.1	-0.5599 µg/L	-0.5599 ppb	11:03:51
1	Zn 213.857†	525.3	63.2	1.6981 µg/L	1.6981 ppb	11:04:12
2	Sc RADIAL	52664.0	52664.0	94.5 %		11:02:49
2	Al 396.153Radial†	-27.3	-19.0	-15.058 µg/L	-15.058 ppb	11:02:49
2	Ca 317.933Radial†	179.9	2.4	2.4472 µg/L	2.4472 ppb	11:03:09
2	Fe 238.204 Radial†	16.9	2.0	18.140 µg/L	18.140 ppb	11:03:09
2	K 766.490 Radial†	157.8	-19.8	-15.686 µg/L	-15.686 ppb	11:02:49
2	Mg 279.077 IEC†	10.1	-2.0	-20.163 µg/L	-20.163 ppb	11:03:09
2	Na 589.592 Radial†	546.8	107.3	38.323 µg/L	38.323 ppb	11:02:49
2	Sr 421.552†	30.0	-6.3	-0.0732 µg/L	-0.0732 ppb	11:02:49
2	Sc 361.383	1882614.1	1882614.1	94.922 %		11:04:18
2	Y 371.029	1305214.2	1305214.2	95.071 %		11:04:18
2	Ag 328.068†	-490.7	-14.6	-0.1246 µg/L	-0.1246 ppb	11:04:23
2	As 188.979†	1.6	3.4	7.2324 µg/L	7.2324 ppb	11:04:44
2	B 249.677†	343.6	47.6	2.2634 µg/L	2.2634 ppb	11:04:44
2	Ba 233.527†	-19.4	0.6	0.0159 µg/L	0.0159 ppb	11:04:44
2	Be 313.107†	-2999.5	140.9	0.1004 µg/L	0.1004 ppb	11:04:23
2	Cd 226.502†	-150.3	-13.3	-0.3944 µg/L	-0.3944 ppb	11:04:44
2	Co 228.616†	-5.0	3.1	0.1655 µg/L	0.1655 ppb	11:04:44
2	Cr 267.716†	-61.4	-21.9	-0.5198 µg/L	-0.5198 ppb	11:04:23
2	Cu 324.752†	2468.2	111.4	0.8500 µg/L	0.8500 ppb	11:04:23
2	Mn 257.610†	-177.2	76.7	0.2873 µg/L	0.2873 ppb	11:04:44
2	Mo 202.031†	1.7	8.5	0.9516 µg/L	0.9516 ppb	11:04:44
2	Ni 231.604†	333.3	44.0	2.6135 µg/L	2.6135 ppb	11:04:44
2	P 214.914†	10.4	-10.3	-24.076 µg/L	-24.076 ppb	11:04:44
2	Pb 220.353†	85.9	-1.0	-0.2868 µg/L	-0.2868 ppb	11:04:44

2	S 181.975 Axial†	16.8	3.0	14.710 µg/L	14.710 ppb	11:04:44
2	Sb 206.836†	14.7	-9.2	-9.6986 µg/L	-9.6986 ppb	11:04:44
2	Se 196.026†	20.4	10.8	17.317 µg/L	17.317 ppb	11:04:44
2	SiO2†	1446.0	183.3	43.052 µg/L	43.052 ppb	11:04:23
2	Si 251.611†	383.8	100.7	9.0365 µg/L	9.0365 ppb	11:04:44
2	Sn 189.927†	5.9	3.4	1.7062 µg/L	1.7062 ppb	11:04:44
2	Ti 334.940†	217.0	63.8	0.1713 µg/L	0.1713 ppb	11:04:23
2	Tl 190.801†	-22.3	2.5	3.8261 µg/L	3.8261 ppb	11:04:44
2	U 409.014†	-31.5	70.1	6.6869 µg/L	6.6869 ppb	11:04:23
2	V 292.402†	-40.8	-9.6	-0.0961 µg/L	-0.0961 ppb	11:04:23
2	Zn 213.857†	514.4	41.3	1.1060 µg/L	1.1060 ppb	11:04:44
3	Sc RADIAL	52382.1	52382.1	94.0 %		11:03:15
3	Al 396.153Radial†	-21.6	-13.2	-10.454 µg/L	-10.454 ppb	11:03:15
3	Ca 317.933Radial†	173.8	-3.0	-3.0825 µg/L	-3.0825 ppb	11:03:35
3	Fe 238.204 Radial†	15.8	1.0	9.0486 µg/L	9.0486 ppb	11:03:35
3	K 766.490 Radial†	97.6	-82.9	-65.791 µg/L	-65.791 ppb	11:03:15
3	Mg 279.077 IEC†	12.1	0.2	1.6675 µg/L	1.6675 ppb	11:03:35
3	Na 589.592 Radial†	517.1	78.8	28.162 µg/L	28.162 ppb	11:03:15
3	Sr 421.552†	51.1	16.3	0.1889 µg/L	0.1889 ppb	11:03:15
3	Sc 361.383	1925825.6	1925825.6	97.101 %		11:04:50
3	Y 371.029	1334490.9	1334490.9	97.204 %		11:04:50
3	Ag 328.068†	-441.5	47.7	0.4069 µg/L	0.4069 ppb	11:04:55
3	As 188.979†	-1.8	-0.2	-0.3265 µg/L	-0.3265 ppb	11:05:16
3	B 249.677†	331.8	27.3	1.3024 µg/L	1.3024 ppb	11:05:16
3	Ba 233.527†	-28.5	-8.4	-0.2392 µg/L	-0.2392 ppb	11:05:16
3	Be 313.107†	-3037.2	172.9	0.1233 µg/L	0.1233 ppb	11:04:55
3	Cd 226.502†	-150.7	-10.2	-0.3024 µg/L	-0.3024 ppb	11:05:16
3	Co 228.616†	-1.8	6.4	0.3449 µg/L	0.3449 ppb	11:05:16
3	Cr 267.716†	-29.6	12.2	0.2894 µg/L	0.2894 ppb	11:04:55
3	Cu 324.752†	2460.2	44.8	0.3423 µg/L	0.3423 ppb	11:04:55
3	Mn 257.610†	-168.5	89.9	0.3341 µg/L	0.3341 ppb	11:05:16
3	Mo 202.031†	-3.6	3.1	0.3452 µg/L	0.3452 ppb	11:05:16
3	Ni 231.604†	326.1	28.7	1.7045 µg/L	1.7045 ppb	11:05:16
3	P 214.914†	15.5	-5.2	-12.214 µg/L	-12.214 ppb	11:05:16
3	Pb 220.353†	92.8	4.2	1.1924 µg/L	1.1924 ppb	11:05:16
3	S 181.975 Axial†	19.7	5.6	27.318 µg/L	27.318 ppb	11:05:16
3	Sb 206.836†	28.2	4.4	4.6860 µg/L	4.6860 ppb	11:05:16
3	Se 196.026†	14.9	4.6	7.4031 µg/L	7.4031 ppb	11:05:16
3	SiO2†	1389.7	91.1	21.395 µg/L	21.395 ppb	11:04:55
3	Si 251.611†	395.5	103.6	9.3027 µg/L	9.3027 ppb	11:05:16
3	Sn 189.927†	-0.4	-3.3	-1.6363 µg/L	-1.6363 ppb	11:05:16
3	Ti 334.940†	164.7	4.8	0.0125 µg/L	0.0125 ppb	11:04:55
3	Tl 190.801†	-25.7	-0.4	-0.6204 µg/L	-0.6204 ppb	11:05:16
3	U 409.014†	-2.1	101.0	9.6414 µg/L	9.6414 ppb	11:04:55
3	V 292.402†	-67.7	-36.3	-0.4072 µg/L	-0.4072 ppb	11:04:55
3	Zn 213.857†	516.4	31.3	0.8383 µg/L	0.8383 ppb	11:05:16

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1885528.7	95.069 %	1.9624			2.06%
Sc RADIAL	52531.7	94.3 %	0.25			0.27%
Y 371.029	1307306.2	95.223 %	1.9085			2.00%
Ag 328.068†	8.7	0.0725 µg/L	0.29115	0.0725 ppb	0.29115	401.53%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-19.8	-15.690 µg/L	5.5786	-15.690 ppb	5.5786	35.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.0	2.0979 µg/L	4.44887	2.0979 ppb	4.44887	212.06%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	47.8	2.2821 µg/L	0.98925	2.2821 ppb	0.98925	43.35%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-5.9	-0.1687 µg/L	0.16136	-0.1687 ppb	0.16136	95.63%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	135.0	0.0963 µg/L	0.02932	0.0963 ppb	0.02932	30.46%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.9	-0.8964 µg/L	2.94097	-0.8964 ppb	2.94097	328.07%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-10.8	-0.3185 µg/L	0.06926	-0.3185 ppb	0.06926	21.75%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	7.8	0.4212 µg/L	0.30117	0.4212 ppb	0.30117	71.51%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	-3.1	-0.0742 µg/L	0.41081	-0.0742 ppb	0.41081 553.89%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	115.1	0.8764 µg/L	0.54779	0.8764 ppb	0.54779 62.50%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	0.9	8.2544 µg/L	10.30569	8.2544 ppb	10.30569 124.85%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-54.8	-43.518 µg/L	25.5106	-43.518 ppb	25.5106 58.62%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	-0.8	-8.2401 µg/L	11.05419	-8.2401 ppb	11.05419 134.15%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	76.5	0.2847 µg/L	0.05070	0.2847 ppb	0.05070 17.81%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	5.6	0.6261 µg/L	0.30568	0.6261 ppb	0.30568 48.82%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	84.3	30.109 µg/L	7.4342	30.109 ppb	7.4342 24.69%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	38.3	2.2718 µg/L	0.49469	2.2718 ppb	0.49469 21.78%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	-3.5	-8.3447 µg/L	17.98090	-8.3447 ppb	17.98090 215.48%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	6.2	1.7767 µg/L	2.40931	1.7767 ppb	2.40931 135.61%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	3.0	14.460 µg/L	12.9846	14.460 ppb	12.9846 89.79%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	-1.5	-1.5425 µg/L	7.38351	-1.5425 ppb	7.38351 478.68%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	6.2	9.9723 µg/L	6.45571	9.9723 ppb	6.45571 64.74%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	148.5	34.895 µg/L	11.7756	34.895 ppb	11.7756 33.75%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	110.0	9.8692 µg/L	1.21902	9.8692 ppb	1.21902 12.35%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	0.1	0.0679 µg/L	1.67222	0.0679 ppb	1.67222 >999.9%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	0.1	0.0014 µg/L	0.16349	0.0014 ppb	0.16349 >999.9%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	24.0	0.0645 µg/L	0.09248	0.0645 ppb	0.09248 143.32%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	0.1	0.0920 µg/L	3.43370	0.0920 ppb	3.43370 >999.9%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	34.6	3.3041 µg/L	8.54636	3.3041 ppb	8.54636 258.66%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	-31.3	-0.3544 µg/L	0.23637	-0.3544 ppb	0.23637 66.69%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	45.2	1.2141 µg/L	0.43999	1.2141 ppb	0.43999 36.24%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 22  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 2/8/2010 11:34:45  
 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	56879.0	56879.0	102 %		11:35:22
1	Al 396.153Radial†	6181.5	6065.0	4779.7 µg/L	4779.7 ppb	11:35:22
1	Ca 317.933Radial†	5120.3	4827.8	4889.4 µg/L	4889.4 ppb	11:35:42
1	Fe 238.204 Radial†	586.2	558.4	4967.5 µg/L	4967.5 ppb	11:35:42
1	K 766.490 Radial†	6568.2	6247.2	4959.7 µg/L	4959.7 ppb	11:35:22
1	Mg 279.077 IEC†	529.1	505.6	5002.3 µg/L	5002.3 ppb	11:35:42
1	Na 589.592 Radial†	28118.8	27073.0	9672.1 µg/L	9672.1 ppb	11:35:22
1	Sr 421.552†	43132.8	42213.2	489.19 µg/L	489.19 ppb	11:35:22
1	Sc 361.383	1932230.7	1932230.7	97.424 %		11:36:46
1	Y 371.029	1336334.2	1336334.2	97.338 %		11:36:46
1	Ag 328.068†	60275.4	62371.6	538.55 µg/L	538.55 ppb	11:36:51
1	As 188.979†	253.4	261.8	554.22 µg/L	554.22 ppb	11:37:12
1	B 249.677†	11003.3	10979.8	523.26 µg/L	523.26 ppb	11:36:51
1	Ba 233.527†	18259.5	18763.4	535.55 µg/L	535.55 ppb	11:36:51
1	Be 313.107†	725927.3	748423.8	533.53 µg/L	533.53 ppb	11:36:46
1	Cd 226.502†	17477.4	18084.6	536.25 µg/L	536.25 ppb	11:36:51
1	Co 228.616†	9777.1	10043.9	540.20 µg/L	540.20 ppb	11:36:51
1	Cr 267.716†	22234.3	22865.0	541.92 µg/L	541.92 ppb	11:36:51
1	Cu 324.752†	71732.2	71140.2	541.81 µg/L	541.81 ppb	11:36:51
1	Mn 257.610†	139521.3	143474.1	531.69 µg/L	531.69 ppb	11:36:51
1	Mo 202.031†	4788.1	4921.4	549.52 µg/L	549.52 ppb	11:37:12
1	Ni 231.604†	9127.4	9061.6	537.13 µg/L	537.13 ppb	11:36:51
1	P 214.914†	1176.3	1186.2	2712.7 µg/L	2712.7 ppb	11:37:12
1	Pb 220.353†	1958.8	1919.2	555.74 µg/L	555.74 ppb	11:37:12
1	S 181.975 Axial†	234.6	226.2	1098.1 µg/L	1098.1 ppb	11:37:12
1	Sb 206.836†	528.8	518.2	552.34 µg/L	552.34 ppb	11:37:12
1	Se 196.026†	350.5	349.0	564.57 µg/L	564.57 ppb	11:37:12
1	SiO2†	25086.0	24409.2	5734.0 µg/L	5734.0 ppb	11:36:51
1	Si 251.611†	29394.5	29868.1	2681.0 µg/L	2681.0 ppb	11:36:51
1	Sn 189.927†	1102.0	1128.3	567.18 µg/L	567.18 ppb	11:37:12
1	Ti 334.940†	197499.5	202557.2	538.28 µg/L	538.28 ppb	11:36:46
1	Tl 190.801†	325.2	359.9	550.38 µg/L	550.38 ppb	11:37:12
1	U 409.014†	5472.6	5720.6	544.96 µg/L	544.96 ppb	11:36:51
1	V 292.402†	45280.6	46511.3	546.23 µg/L	546.23 ppb	11:36:51
1	Zn 213.857†	19888.7	19914.0	535.69 µg/L	535.69 ppb	11:36:51
2	Sc RADIAL	53817.8	53817.8	96.6 %		11:35:48
2	Al 396.153Radial†	6509.4	6748.8	5319.6 µg/L	5319.6 ppb	11:35:48
2	Ca 317.933Radial†	5163.9	5158.3	5224.1 µg/L	5224.1 ppb	11:36:08
2	Fe 238.204 Radial†	595.8	601.0	5346.4 µg/L	5346.4 ppb	11:36:08
2	K 766.490 Radial†	6782.7	6835.2	5426.5 µg/L	5426.5 ppb	11:35:48
2	Mg 279.077 IEC†	529.8	535.8	5300.4 µg/L	5300.4 ppb	11:36:08
2	Na 589.592 Radial†	29288.6	29850.7	10664 µg/L	10664 ppb	11:35:48
2	Sr 421.552†	45073.2	46625.4	540.32 µg/L	540.32 ppb	11:35:48
2	Sc 361.383	1885900.8	1885900.8	95.088 %		11:37:19
2	Y 371.029	1304214.7	1304214.7	94.998 %		11:37:19
2	Ag 328.068†	61327.8	64998.3	561.24 µg/L	561.24 ppb	11:37:24
2	As 188.979†	253.0	267.8	566.99 µg/L	566.99 ppb	11:37:45
2	B 249.677†	11244.9	11511.4	548.52 µg/L	548.52 ppb	11:37:24
2	Ba 233.527†	18602.8	19584.8	559.00 µg/L	559.00 ppb	11:37:24
2	Be 313.107†	743368.8	785071.4	559.66 µg/L	559.66 ppb	11:37:19
2	Cd 226.502†	17813.0	18878.3	559.77 µg/L	559.77 ppb	11:37:24
2	Co 228.616†	9958.0	10480.7	563.68 µg/L	563.68 ppb	11:37:24
2	Cr 267.716†	22679.4	23893.8	566.31 µg/L	566.31 ppb	11:37:24
2	Cu 324.752†	73013.1	74296.1	565.87 µg/L	565.87 ppb	11:37:24
2	Mn 257.610†	142396.2	150015.8	555.95 µg/L	555.95 ppb	11:37:24
2	Mo 202.031†	4766.2	5019.1	560.45 µg/L	560.45 ppb	11:37:45
2	Ni 231.604†	9317.7	9492.0	562.64 µg/L	562.64 ppb	11:37:24
2	P 214.914†	1164.8	1203.7	2751.0 µg/L	2751.0 ppb	11:37:45
2	Pb 220.353†	1945.2	1954.3	565.89 µg/L	565.89 ppb	11:37:45

2	S 181.975 Axial†	235.8	233.4	1132.7 µg/L	1132.7 ppb	11:37:45
2	Sb 206.836†	538.8	542.0	577.49 µg/L	577.49 ppb	11:37:45
2	Se 196.026†	350.6	358.0	579.61 µg/L	579.61 ppb	11:37:45
2	SiO2†	25536.4	25515.5	5993.9 µg/L	5993.9 ppb	11:37:24
2	Si 251.611†	29855.4	31094.1	2791.0 µg/L	2791.0 ppb	11:37:24
2	Sn 189.927†	1098.6	1152.5	579.32 µg/L	579.32 ppb	11:37:45
2	Ti 334.940†	202077.1	212351.4	564.31 µg/L	564.31 ppb	11:37:19
2	Tl 190.801†	330.7	373.9	571.85 µg/L	571.85 ppb	11:37:45
2	U 409.014†	5516.2	5904.4	562.43 µg/L	562.43 ppb	11:37:24
2	V 292.402†	46085.0	48499.1	569.50 µg/L	569.50 ppb	11:37:24
2	Zn 213.857†	20268.1	20814.5	559.90 µg/L	559.90 ppb	11:37:24
3	Sc RADIAL	54035.6	54035.6	97.0 %		11:36:14
3	Al 396.153Radial†	6539.2	6752.4	5324.2 µg/L	5324.2 ppb	11:36:14
3	Ca 317.933Radial†	5160.8	5133.5	5199.0 µg/L	5199.0 ppb	11:36:34
3	Fe 238.204 Radial†	598.3	601.1	5345.7 µg/L	5345.7 ppb	11:36:34
3	K 766.490 Radial†	6865.4	6892.2	5471.8 µg/L	5471.8 ppb	11:36:14
3	Mg 279.077 IEC†	532.1	536.0	5301.2 µg/L	5301.2 ppb	11:36:34
3	Na 589.592 Radial†	29573.2	30022.0	10726 µg/L	10726 ppb	11:36:14
3	Sr 421.552†	45598.0	46978.4	544.41 µg/L	544.41 ppb	11:36:14
3	Sc 361.383	1871420.2	1871420.2	94.358 %		11:37:51
3	Y 371.029	1294505.1	1294505.1	94.291 %		11:37:51
3	Ag 328.068†	58863.4	62885.6	542.86 µg/L	542.86 ppb	11:37:57
3	As 188.979†	220.2	235.0	497.58 µg/L	497.58 ppb	11:38:18
3	B 249.677†	10702.4	11028.0	525.32 µg/L	525.32 ppb	11:37:57
3	Ba 233.527†	17351.6	18410.2	525.46 µg/L	525.46 ppb	11:37:57
3	Be 313.107†	704140.7	749546.7	534.33 µg/L	534.33 ppb	11:37:51
3	Cd 226.502†	16634.1	17773.7	526.98 µg/L	526.98 ppb	11:37:57
3	Co 228.616†	9196.7	9754.9	524.59 µg/L	524.59 ppb	11:37:57
3	Cr 267.716†	20452.5	21718.3	514.75 µg/L	514.75 ppb	11:37:57
3	Cu 324.752†	67828.8	69396.0	528.59 µg/L	528.59 ppb	11:37:57
3	Mn 257.610†	131299.2	139413.9	516.70 µg/L	516.70 ppb	11:37:57
3	Mo 202.031†	4050.9	4299.8	480.16 µg/L	480.16 ppb	11:38:18
3	Ni 231.604†	8653.8	8864.2	525.44 µg/L	525.44 ppb	11:37:57
3	P 214.914†	1031.3	1071.7	2446.0 µg/L	2446.0 ppb	11:38:18
3	Pb 220.353†	1735.7	1748.0	506.08 µg/L	506.08 ppb	11:38:18
3	S 181.975 Axial†	211.1	209.1	1014.8 µg/L	1014.8 ppb	11:38:18
3	Sb 206.836†	469.4	472.8	503.36 µg/L	503.36 ppb	11:38:18
3	Se 196.026†	313.8	321.8	521.91 µg/L	521.91 ppb	11:38:18
3	SiO2†	24110.9	24212.5	5687.8 µg/L	5687.8 ppb	11:37:57
3	Si 251.611†	28215.9	29599.5	2656.9 µg/L	2656.9 ppb	11:37:57
3	Sn 189.927†	919.2	971.3	488.24 µg/L	488.24 ppb	11:38:18
3	Ti 334.940†	190418.4	201640.0	535.83 µg/L	535.83 ppb	11:37:51
3	Tl 190.801†	298.8	342.7	524.46 µg/L	524.46 ppb	11:38:18
3	U 409.014†	4994.1	5396.0	513.91 µg/L	513.91 ppb	11:37:57
3	V 292.402†	42470.9	45043.8	528.62 µg/L	528.62 ppb	11:37:57
3	Zn 213.857†	18777.7	19399.9	521.80 µg/L	521.80 ppb	11:37:57

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1896517.2	95.623 %	1.6016			1.67%
Sc RADIAL	54910.8	98.6 %	3.07			3.11%
Y 371.029	1311684.6	95.542 %	1.5946			1.67%
Ag 328.068†	63418.5	547.55 µg/L	12.050	547.55 ppb	12.050	2.20%
QC value within limits for Ag 328.068 Recovery = 109.51%						
Al 396.153Radial†	6522.1	5141.2 µg/L	313.05	5141.2 ppb	313.05	6.09%
QC value within limits for Al 396.153Radial Recovery = 102.82%						
As 188.979†	254.9	539.60 µg/L	36.942	539.60 ppb	36.942	6.85%
QC value within limits for As 188.979 Recovery = 107.92%						
B 249.677†	11173.1	532.37 µg/L	14.024	532.37 ppb	14.024	2.63%
QC value within limits for B 249.677 Recovery = 106.47%						
Ba 233.527†	18919.5	540.00 µg/L	17.206	540.00 ppb	17.206	3.19%
QC value within limits for Ba 233.527 Recovery = 108.00%						
Be 313.107†	761014.0	542.51 µg/L	14.857	542.51 ppb	14.857	2.74%
QC value within limits for Be 313.107 Recovery = 108.50%						
Ca 317.933Radial†	5039.8	5104.2 µg/L	186.42	5104.2 ppb	186.42	3.65%
QC value within limits for Ca 317.933Radial Recovery = 102.08%						
Cd 226.502†	18245.5	541.00 µg/L	16.903	541.00 ppb	16.903	3.12%
QC value within limits for Cd 226.502 Recovery = 108.20%						
Co 228.616†	10093.2	542.82 µg/L	19.678	542.82 ppb	19.678	3.63%

QC value within limits for Co	228.616	Recovery = 108.56%			
Cr 267.716†	22825.7	540.99 µg/L	25.790	540.99 ppb	25.790 4.77%
QC value within limits for Cr	267.716	Recovery = 108.20%			
Cu 324.752†	71610.8	545.42 µg/L	18.897	545.42 ppb	18.897 3.46%
QC value within limits for Cu	324.752	Recovery = 109.08%			
Fe 238.204 Radial†	586.8	5219.9 µg/L	218.58	5219.9 ppb	218.58 4.19%
QC value within limits for Fe	238.204 Radial	Recovery = 104.40%			
K 766.490 Radial†	6658.2	5286.0 µg/L	283.50	5286.0 ppb	283.50 5.36%
QC value within limits for K	766.490 Radial	Recovery = 105.72%			
Mg 279.077 IEC†	525.8	5201.3 µg/L	172.38	5201.3 ppb	172.38 3.31%
QC value within limits for Mg	279.077 IEC	Recovery = 104.03%			
Mn 257.610†	144301.3	534.78 µg/L	19.809	534.78 ppb	19.809 3.70%
QC value within limits for Mn	257.610	Recovery = 106.96%			
Mo 202.031†	4746.8	530.04 µg/L	43.546	530.04 ppb	43.546 8.22%
QC value within limits for Mo	202.031	Recovery = 106.01%			
Na 589.592 Radial†	28981.9	10354 µg/L	591.4	10354 ppb	591.4 5.71%
QC value within limits for Na	589.592 Radial	Recovery = 103.54%			
Ni 231.604†	9139.3	541.74 µg/L	19.026	541.74 ppb	19.026 3.51%
QC value within limits for Ni	231.604	Recovery = 108.35%			
P 214.914†	1153.9	2636.6 µg/L	166.15	2636.6 ppb	166.15 6.30%
QC value within limits for P	214.914	Recovery = 105.46%			
Pb 220.353†	1873.8	542.57 µg/L	32.007	542.57 ppb	32.007 5.90%
QC value within limits for Pb	220.353	Recovery = 108.51%			
S 181.975 Axial†	222.9	1081.9 µg/L	60.61	1081.9 ppb	60.61 5.60%
QC value within limits for S	181.975 Axial	Recovery = 108.19%			
Sb 206.836†	511.0	544.39 µg/L	37.699	544.39 ppb	37.699 6.92%
QC value within limits for Sb	206.836	Recovery = 108.88%			
Se 196.026†	342.9	555.36 µg/L	29.934	555.36 ppb	29.934 5.39%
QC value greater than the upper limit for Se	196.026	Recovery = 111.07%			
SiO2†	24712.4	5805.2 µg/L	165.00	5805.2 ppb	165.00 2.84%
QC value within limits for SiO2		Recovery = 108.56%			
Si 251.611†	30187.2	2709.6 µg/L	71.52	2709.6 ppb	71.52 2.64%
QC value within limits for Si	251.611	Recovery = 108.38%			
Sn 189.927†	1084.0	544.92 µg/L	49.455	544.92 ppb	49.455 9.08%
QC value within limits for Sn	189.927	Recovery = 108.98%			
Sr 421.552†	45272.3	524.64 µg/L	30.769	524.64 ppb	30.769 5.86%
QC value within limits for Sr	421.552	Recovery = 104.93%			
Ti 334.940†	205516.2	546.14 µg/L	15.783	546.14 ppb	15.783 2.89%
QC value within limits for Ti	334.940	Recovery = 109.23%			
Tl 190.801†	358.8	548.90 µg/L	23.729	548.90 ppb	23.729 4.32%
QC value within limits for Tl	190.801	Recovery = 109.78%			
U 409.014†	5673.6	540.44 µg/L	24.576	540.44 ppb	24.576 4.55%
QC value within limits for U	409.014	Recovery = 108.09%			
V 292.402†	46684.7	548.12 µg/L	20.502	548.12 ppb	20.502 3.74%
QC value within limits for V	292.402	Recovery = 109.62%			
Zn 213.857†	20042.8	539.13 µg/L	19.280	539.13 ppb	19.280 3.58%
QC value within limits for Zn	213.857	Recovery = 107.83%			
QC Failed. Continue with analysis.					

Sequence No.: 23  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/8/2010 11:38:28  
 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	52491.7	52491.7	94.2 %		11:39:00
1	Al 396.153Radial†	-15.3	-6.5	-5.1156 µg/L	-5.1156 ppb	11:39:00
1	Ca 317.933Radial†	184.4	7.8	7.9292 µg/L	7.9292 ppb	11:39:21
1	Fe 238.204 Radial†	15.5	0.7	5.9166 µg/L	5.9166 ppb	11:39:21
1	K 766.490 Radial†	178.2	2.4	1.9021 µg/L	1.9021 ppb	11:39:00
1	Mg 279.077 IEC†	10.2	-1.8	-18.089 µg/L	-18.089 ppb	11:39:21
1	Na 589.592 Radial†	494.4	53.6	19.133 µg/L	19.133 ppb	11:39:00
1	Sr 421.552†	65.5	31.5	0.3654 µg/L	0.3654 ppb	11:39:00
1	Sc 361.383	1914491.3	1914491.3	96.529 %		11:40:23
1	Y 371.029	1328360.7	1328360.7	96.757 %		11:40:23
1	Ag 328.068†	-491.7	-6.9	-0.0581 µg/L	-0.0581 ppb	11:40:28
1	As 188.979†	-1.6	0.1	0.1326 µg/L	0.1326 ppb	11:40:49
1	B 249.677†	322.4	19.5	0.9313 µg/L	0.9313 ppb	11:40:49
1	Ba 233.527†	-12.0	8.6	0.2449 µg/L	0.2449 ppb	11:40:49
1	Be 313.107†	-3120.3	68.3	0.0486 µg/L	0.0486 ppb	11:40:28
1	Cd 226.502†	-143.8	-3.9	-0.1141 µg/L	-0.1141 ppb	11:40:49
1	Co 228.616†	0.2	8.5	0.4603 µg/L	0.4603 ppb	11:40:49
1	Cr 267.716†	-35.1	6.4	0.1515 µg/L	0.1515 ppb	11:40:28
1	Cu 324.752†	2556.9	160.0	1.2177 µg/L	1.2177 ppb	11:40:28
1	Mn 257.610†	-164.9	92.6	0.3444 µg/L	0.3444 ppb	11:40:49
1	Mo 202.031†	1.3	8.1	0.9089 µg/L	0.9089 ppb	11:40:49
1	Ni 231.604†	331.5	36.3	2.1532 µg/L	2.1532 ppb	11:40:49
1	P 214.914†	23.8	3.5	7.9842 µg/L	7.9842 ppb	11:40:49
1	Pb 220.353†	93.2	5.1	1.4693 µg/L	1.4693 ppb	11:40:49
1	S 181.975 Axial†	17.0	3.0	14.443 µg/L	14.443 ppb	11:40:49
1	Sb 206.836†	30.7	7.1	7.5984 µg/L	7.5984 ppb	11:40:49
1	Se 196.026†	13.0	2.7	4.3826 µg/L	4.3826 ppb	11:40:49
1	SiO2†	1439.7	151.3	35.547 µg/L	35.547 ppb	11:40:28
1	Si 251.611†	376.8	86.7	7.7815 µg/L	7.7815 ppb	11:40:49
1	Sn 189.927†	-1.6	-4.5	-2.2582 µg/L	-2.2582 ppb	11:40:49
1	Ti 334.940†	283.5	128.9	0.3442 µg/L	0.3442 ppb	11:40:28
1	Tl 190.801†	-27.0	-1.9	-2.8903 µg/L	-2.8903 ppb	11:40:49
1	U 409.014†	-58.7	42.4	4.0475 µg/L	4.0475 ppb	11:40:28
1	V 292.402†	-20.1	12.5	0.1575 µg/L	0.1575 ppb	11:40:28
1	Zn 213.857†	518.6	36.6	0.9814 µg/L	0.9814 ppb	11:40:49
2	Sc RADIAL	52653.1	52653.1	94.5 %		11:39:26
2	Al 396.153Radial†	-34.7	-27.0	-21.287 µg/L	-21.287 ppb	11:39:26
2	Ca 317.933Radial†	179.3	1.9	1.8961 µg/L	1.8961 ppb	11:39:47
2	Fe 238.204 Radial†	17.6	2.8	24.667 µg/L	24.667 ppb	11:39:47
2	K 766.490 Radial†	175.0	-1.5	-1.2034 µg/L	-1.2034 ppb	11:39:26
2	Mg 279.077 IEC†	12.7	0.7	7.1759 µg/L	7.1759 ppb	11:39:47
2	Na 589.592 Radial†	494.7	52.3	18.679 µg/L	18.679 ppb	11:39:26
2	Sr 421.552†	13.9	-23.3	-0.2701 µg/L	-0.2701 ppb	11:39:26
2	Sc 361.383	1907024.4	1907024.4	96.153 %		11:40:55
2	Y 371.029	1323241.7	1323241.7	96.384 %		11:40:55
2	Ag 328.068†	-443.4	41.3	0.3531 µg/L	0.3531 ppb	11:41:00
2	As 188.979†	4.0	5.9	12.432 µg/L	12.432 ppb	11:41:21
2	B 249.677†	335.0	34.0	1.6137 µg/L	1.6137 ppb	11:41:21
2	Ba 233.527†	-23.8	-3.8	-0.1082 µg/L	-0.1082 ppb	11:41:21
2	Be 313.107†	-3082.6	94.8	0.0675 µg/L	0.0675 ppb	11:41:00
2	Cd 226.502†	-154.5	-15.7	-0.4657 µg/L	-0.4657 ppb	11:41:21
2	Co 228.616†	0.1	8.4	0.4510 µg/L	0.4510 ppb	11:41:21
2	Cr 267.716†	-33.9	7.4	0.1760 µg/L	0.1760 ppb	11:41:00
2	Cu 324.752†	2513.9	125.6	0.9590 µg/L	0.9590 ppb	11:41:00
2	Mn 257.610†	-168.9	87.8	0.3282 µg/L	0.3282 ppb	11:41:21
2	Mo 202.031†	-7.8	-1.3	-0.1485 µg/L	-0.1485 ppb	11:41:21
2	Ni 231.604†	319.2	24.9	1.4763 µg/L	1.4763 ppb	11:41:21
2	P 214.914†	28.1	8.0	18.583 µg/L	18.583 ppb	11:41:21
2	Pb 220.353†	86.0	-2.0	-0.5998 µg/L	-0.5998 ppb	11:41:21

2	S 181.975 Axial†	12.4	-1.7	-8.1991 µg/L	-8.1991 ppb	11:41:21
2	Sb 206.836†	26.0	2.4	2.5890 µg/L	2.5890 ppb	11:41:21
2	Se 196.026†	13.8	3.7	5.8936 µg/L	5.8936 ppb	11:41:21
2	SiO2†	1421.5	138.3	32.481 µg/L	32.481 ppb	11:41:00
2	Si 251.611†	366.9	77.9	6.9965 µg/L	6.9965 ppb	11:41:21
2	Sn 189.927†	2.0	-0.8	-0.3833 µg/L	-0.3833 ppb	11:41:21
2	Ti 334.940†	269.3	115.3	0.3060 µg/L	0.3060 ppb	11:41:00
2	Tl 190.801†	-26.3	-1.3	-2.0083 µg/L	-2.0083 ppb	11:41:21
2	U 409.014†	-44.3	57.2	5.4577 µg/L	5.4577 ppb	11:41:00
2	V 292.402†	-65.2	-34.4	-0.3916 µg/L	-0.3916 ppb	11:41:00
2	Zn 213.857†	519.1	39.2	1.0530 µg/L	1.0530 ppb	11:41:21
3	Sc RADIAL	51865.7	51865.7	93.1 %		11:39:52
3	Al 396.153Radial†	-22.1	-14.0	-11.066 µg/L	-11.066 ppb	11:39:52
3	Ca 317.933Radial†	177.3	2.6	2.6436 µg/L	2.6436 ppb	11:40:12
3	Fe 238.204 Radial†	16.5	1.9	17.093 µg/L	17.093 ppb	11:40:12
3	K 766.490 Radial†	189.2	16.5	13.088 µg/L	13.088 ppb	11:39:52
3	Mg 279.077 IEC†	12.1	0.3	2.8123 µg/L	2.8123 ppb	11:40:12
3	Na 589.592 Radial†	521.2	88.7	31.685 µg/L	31.685 ppb	11:39:52
3	Sr 421.552†	45.6	10.9	0.1263 µg/L	0.1263 ppb	11:39:52
3	Sc 361.383	1893038.3	1893038.3	95.448 %		11:41:27
3	Y 371.029	1314244.3	1314244.3	95.729 %		11:41:27
3	Ag 328.068†	-493.9	-15.0	-0.1293 µg/L	-0.1293 ppb	11:41:33
3	As 188.979†	-5.7	-4.3	-9.0911 µg/L	-9.0911 ppb	11:41:53
3	B 249.677†	325.3	26.5	1.2562 µg/L	1.2562 ppb	11:41:53
3	Ba 233.527†	-21.2	-1.2	-0.0359 µg/L	-0.0359 ppb	11:41:53
3	Be 313.107†	-3113.9	38.3	0.0271 µg/L	0.0271 ppb	11:41:33
3	Cd 226.502†	-143.4	-5.2	-0.1543 µg/L	-0.1543 ppb	11:41:53
3	Co 228.616†	2.1	10.5	0.5635 µg/L	0.5635 ppb	11:41:53
3	Cr 267.716†	-32.1	9.1	0.2152 µg/L	0.2152 ppb	11:41:33
3	Cu 324.752†	2477.0	106.3	0.8113 µg/L	0.8113 ppb	11:41:33
3	Mn 257.610†	-180.4	74.5	0.2780 µg/L	0.2780 ppb	11:41:53
3	Mo 202.031†	1.8	8.6	0.9610 µg/L	0.9610 ppb	11:41:53
3	Ni 231.604†	318.3	26.4	1.5671 µg/L	1.5671 ppb	11:41:53
3	P 214.914†	19.9	-0.3	-0.9092 µg/L	-0.9092 ppb	11:41:53
3	Pb 220.353†	98.5	11.8	3.4041 µg/L	3.4041 ppb	11:41:53
3	S 181.975 Axial†	17.9	4.1	19.834 µg/L	19.834 ppb	11:41:53
3	Sb 206.836†	30.3	7.2	7.6038 µg/L	7.6038 ppb	11:41:53
3	Se 196.026†	15.8	5.8	9.2989 µg/L	9.2989 ppb	11:41:53
3	SiO2†	1407.0	134.0	31.470 µg/L	31.470 ppb	11:41:33
3	Si 251.611†	368.6	82.5	7.4078 µg/L	7.4078 ppb	11:41:53
3	Sn 189.927†	-0.7	-3.6	-1.7862 µg/L	-1.7862 ppb	11:41:53
3	Ti 334.940†	363.7	216.2	0.5748 µg/L	0.5748 ppb	11:41:33
3	Tl 190.801†	-27.3	-2.6	-3.8724 µg/L	-3.8724 ppb	11:41:53
3	U 409.014†	-65.6	34.5	3.2945 µg/L	3.2945 ppb	11:41:33
3	V 292.402†	-52.4	-21.5	-0.2365 µg/L	-0.2365 ppb	11:41:33
3	Zn 213.857†	519.0	43.1	1.1590 µg/L	1.1590 ppb	11:41:53

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1904851.4	96.043 %		0.5491			0.57%
Sc RADIAL	52336.8	93.9 %		0.75			0.79%
Y 371.029	1321948.9	96.290 %		0.5205			0.54%
Ag 328.068†	6.5	0.0552 µg/L		0.26039	0.0552 ppb	0.26039	471.39%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-15.8	-12.489 µg/L		8.1793	-12.489 ppb	8.1793	65.49%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	0.5	1.1579 µg/L		10.79814	1.1579 ppb	10.79814	932.59%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	26.7	1.2671 µg/L		0.34131	1.2671 ppb	0.34131	26.94%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	1.2	0.0336 µg/L		0.18654	0.0336 ppb	0.18654	555.74%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	67.1	0.0477 µg/L		0.02021	0.0477 ppb	0.02021	42.34%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	4.1	4.1563 µg/L		3.28870	4.1563 ppb	3.28870	79.13%
QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	-8.3	-0.2447 µg/L		0.19248	-0.2447 ppb	0.19248	78.66%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	9.1	0.4916 µg/L		0.06244	0.4916 ppb	0.06244	12.70%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	7.6	0.1809 µg/L	0.03215	0.1809 ppb	0.03215	17.77%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	130.7	0.9960 µg/L	0.20572	0.9960 ppb	0.20572	20.65%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.8	15.892 µg/L	9.4328	15.892 ppb	9.4328	59.35%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	5.8	4.5955 µg/L	7.51661	4.5955 ppb	7.51661	163.57%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-0.3	-2.7002 µg/L	13.50430	-2.7002 ppb	13.50430	500.12%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	85.0	0.3169 µg/L	0.03463	0.3169 ppb	0.03463	10.93%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	5.1	0.5738 µg/L	0.62610	0.5738 ppb	0.62610	109.11%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	64.8	23.166 µg/L	7.3815	23.166 ppb	7.3815	31.86%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	29.2	1.7322 µg/L	0.36738	1.7322 ppb	0.36738	21.21%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	3.7	8.5527 µg/L	9.75864	8.5527 ppb	9.75864	114.10%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	4.9	1.4245 µg/L	2.00237	1.4245 ppb	2.00237	140.56%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	1.8	8.6928 µg/L	14.87511	8.6928 ppb	14.87511	171.12%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	5.6	5.9304 µg/L	2.89370	5.9304 ppb	2.89370	48.79%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	4.1	6.5250 µg/L	2.51827	6.5250 ppb	2.51827	38.59%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	141.2	33.166 µg/L	2.1234	33.166 ppb	2.1234	6.40%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	82.4	7.3952 µg/L	0.39267	7.3952 ppb	0.39267	5.31%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-2.9	-1.4759 µg/L	0.97523	-1.4759 ppb	0.97523	66.08%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	6.4	0.0739 µg/L	0.32098	0.0739 ppb	0.32098	434.44%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	153.5	0.4083 µg/L	0.14546	0.4083 ppb	0.14546	35.62%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-1.9	-2.9237 µg/L	0.93250	-2.9237 ppb	0.93250	31.90%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	44.7	4.2666 µg/L	1.09808	4.2666 ppb	1.09808	25.74%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-14.5	-0.1569 µg/L	0.28309	-0.1569 ppb	0.28309	180.47%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	39.7	1.0644 µg/L	0.08935	1.0644 ppb	0.08935	8.39%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 32

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/8/2010 12:11:04

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	56438.5	56438.5	101 %		12:11:39
1	Al 396.153Radial†	6325.0	6253.9	4929.1 µg/L	4929.1 ppb	12:12:00
1	Ca 317.933Radial†	5124.7	4871.2	4933.4 µg/L	4933.4 ppb	12:12:00
1	Fe 238.204 Radial†	584.0	560.7	4987.7 µg/L	4987.7 ppb	12:12:00
1	K 766.490 Radial†	6725.3	6452.5	5122.7 µg/L	5122.7 ppb	12:11:39
1	Mg 279.077 IEC†	525.6	506.2	5007.8 µg/L	5007.8 ppb	12:12:00
1	Na 589.592 Radial†	28940.3	28098.8	10039 µg/L	10039 ppb	12:11:39
1	Sr 421.552†	44874.0	44261.9	512.93 µg/L	512.93 ppb	12:11:39
1	Sc 361.383	1948977.9	1948977.9	98.268 %		12:13:04
1	Y 371.029	1343105.8	1343105.8	97.831 %		12:13:04
1	Ag 328.068†	59953.9	61512.9	531.14 µg/L	531.14 ppb	12:13:09
1	As 188.979†	253.2	259.3	549.06 µg/L	549.06 ppb	12:13:30
1	B 249.677†	10994.0	10873.4	518.15 µg/L	518.15 ppb	12:13:09
1	Ba 233.527†	18257.5	18600.3	530.89 µg/L	530.89 ppb	12:13:09
1	Be 313.107†	722622.9	738658.4	526.57 µg/L	526.57 ppb	12:13:04
1	Cd 226.502†	17515.1	17968.8	532.81 µg/L	532.81 ppb	12:13:09
1	Co 228.616†	9735.8	9915.7	533.31 µg/L	533.31 ppb	12:13:09
1	Cr 267.716†	22230.5	22665.0	537.18 µg/L	537.18 ppb	12:13:09
1	Cu 324.752†	71532.2	70304.0	535.45 µg/L	535.45 ppb	12:13:09
1	Mn 257.610†	140087.1	142819.4	529.27 µg/L	529.27 ppb	12:13:04
1	Mo 202.031†	4735.9	4826.1	538.89 µg/L	538.89 ppb	12:13:30
1	Ni 231.604†	9131.8	8985.7	532.63 µg/L	532.63 ppb	12:13:09
1	P 214.914†	1172.6	1172.1	2680.3 µg/L	2680.3 ppb	12:13:30
1	Pb 220.353†	1940.8	1883.5	545.43 µg/L	545.43 ppb	12:13:30
1	S 181.975 Axial†	235.4	224.9	1091.8 µg/L	1091.8 ppb	12:13:30
1	Sb 206.836†	522.7	507.3	540.66 µg/L	540.66 ppb	12:13:30
1	Se 196.026†	344.3	339.6	549.60 µg/L	549.60 ppb	12:13:30
1	SiO2†	25026.2	24127.1	5667.7 µg/L	5667.7 ppb	12:13:09
1	Si 251.611†	29240.6	29452.3	2643.6 µg/L	2643.6 ppb	12:13:09
1	Sn 189.927†	1094.2	1110.6	558.28 µg/L	558.28 ppb	12:13:30
1	Ti 334.940†	196300.5	199595.1	530.41 µg/L	530.41 ppb	12:13:04
1	Tl 190.801†	320.1	351.9	538.18 µg/L	538.18 ppb	12:13:30
1	U 409.014†	5413.8	5612.4	534.64 µg/L	534.64 ppb	12:13:09
1	V 292.402†	45129.2	45957.9	539.71 µg/L	539.71 ppb	12:13:09
1	Zn 213.857†	19997.9	19849.7	533.98 µg/L	533.98 ppb	12:13:09
2	Sc RADIAL	55674.7	55674.7	99.9 %		12:12:05
2	Al 396.153Radial†	6316.1	6330.6	4989.7 µg/L	4989.7 ppb	12:12:26
2	Ca 317.933Radial†	5132.3	4948.3	5011.5 µg/L	5011.5 ppb	12:12:26
2	Fe 238.204 Radial†	586.0	570.6	5076.3 µg/L	5076.3 ppb	12:12:26
2	K 766.490 Radial†	6614.9	6433.1	5107.3 µg/L	5107.3 ppb	12:12:05
2	Mg 279.077 IEC†	526.4	514.1	5085.9 µg/L	5085.9 ppb	12:12:26
2	Na 589.592 Radial†	28538.9	28089.1	10035 µg/L	10035 ppb	12:12:05
2	Sr 421.552†	44218.5	44213.7	512.37 µg/L	512.37 ppb	12:12:05
2	Sc 361.383	1890476.5	1890476.5	95.319 %		12:13:37
2	Y 371.029	1303356.7	1303356.7	94.936 %		12:13:37
2	Ag 328.068†	59857.9	63300.2	546.58 µg/L	546.58 ppb	12:13:43
2	As 188.979†	246.4	260.2	550.93 µg/L	550.93 ppb	12:14:03
2	B 249.677†	11003.0	11228.9	535.13 µg/L	535.13 ppb	12:13:43
2	Ba 233.527†	18230.4	19146.7	546.49 µg/L	546.49 ppb	12:13:43
2	Be 313.107†	740811.7	780496.5	556.39 µg/L	556.39 ppb	12:13:37
2	Cd 226.502†	17489.3	18493.3	548.37 µg/L	548.37 ppb	12:13:43
2	Co 228.616†	9725.7	10211.7	549.18 µg/L	549.18 ppb	12:13:43
2	Cr 267.716†	22211.7	23345.4	553.31 µg/L	553.31 ppb	12:13:43
2	Cu 324.752†	71258.8	72269.8	550.42 µg/L	550.42 ppb	12:13:43
2	Mn 257.610†	143246.3	150545.1	557.88 µg/L	557.88 ppb	12:13:37
2	Mo 202.031†	4616.3	4849.8	541.53 µg/L	541.53 ppb	12:14:03
2	Ni 231.604†	9152.8	9295.2	550.98 µg/L	550.98 ppb	12:13:43
2	P 214.914†	1148.3	1183.5	2705.3 µg/L	2705.3 ppb	12:14:03
2	Pb 220.353†	1904.9	1907.0	552.19 µg/L	552.19 ppb	12:14:03

2	S 181.975 Axial†	228.7	225.4	1093.9 µg/L	1093.9 ppb	12:14:03
2	Sb 206.836†	520.9	521.8	555.97 µg/L	555.97 ppb	12:14:03
2	Se 196.026†	328.3	333.7	540.28 µg/L	540.28 ppb	12:14:03
2	SiO2†	25024.5	24913.5	5852.4 µg/L	5852.4 ppb	12:13:43
2	Si 251.611†	29209.1	30340.1	2723.3 µg/L	2723.3 ppb	12:13:43
2	Sn 189.927†	1060.5	1109.8	557.86 µg/L	557.86 ppb	12:14:03
2	Ti 334.940†	201119.2	210832.0	560.28 µg/L	560.28 ppb	12:13:37
2	Tl 190.801†	319.6	361.4	552.90 µg/L	552.90 ppb	12:14:03
2	U 409.014†	5367.9	5734.8	546.30 µg/L	546.30 ppb	12:13:43
2	V 292.402†	45070.6	47317.5	555.56 µg/L	555.56 ppb	12:13:43
2	Zn 213.857†	19973.2	20453.6	550.22 µg/L	550.22 ppb	12:13:43
3	Sc RADIAL	56009.5	56009.5	101 %		12:12:31
3	Al 396.153Radial†	6331.4	6308.1	4973.8 µg/L	4973.8 ppb	12:12:52
3	Ca 317.933Radial†	5130.8	4916.1	4978.9 µg/L	4978.9 ppb	12:12:52
3	Fe 238.204 Radial†	585.8	567.0	5042.4 µg/L	5042.4 ppb	12:12:52
3	K 766.490 Radial†	6708.3	6486.5	5149.6 µg/L	5149.6 ppb	12:12:31
3	Mg 279.077 IEC†	528.3	512.8	5071.7 µg/L	5071.7 ppb	12:12:52
3	Na 589.592 Radial†	28800.0	28178.1	10067 µg/L	10067 ppb	12:12:31
3	Sr 421.552†	44602.6	44331.3	513.74 µg/L	513.74 ppb	12:12:31
3	Sc 361.383	1938888.2	1938888.2	97.759 %		12:14:10
3	Y 371.029	1336567.5	1336567.5	97.355 %		12:14:10
3	Ag 328.068†	56608.5	58408.3	504.22 µg/L	504.22 ppb	12:14:16
3	As 188.979†	213.0	219.6	464.93 µg/L	464.93 ppb	12:14:36
3	B 249.677†	10362.0	10285.1	489.90 µg/L	489.90 ppb	12:14:16
3	Ba 233.527†	16802.8	17208.9	491.16 µg/L	491.16 ppb	12:14:16
3	Be 313.107†	673226.2	691956.4	493.28 µg/L	493.28 ppb	12:14:10
3	Cd 226.502†	16039.8	16552.5	490.76 µg/L	490.76 ppb	12:14:16
3	Co 228.616†	8864.0	9075.5	488.06 µg/L	488.06 ppb	12:14:16
3	Cr 267.716†	19641.0	20133.9	477.20 µg/L	477.20 ppb	12:14:16
3	Cu 324.752†	65315.1	64323.2	489.97 µg/L	489.97 ppb	12:14:16
3	Mn 257.610†	130611.1	133868.0	496.13 µg/L	496.13 ppb	12:14:10
3	Mo 202.031†	3936.8	4033.8	450.45 µg/L	450.45 ppb	12:14:36
3	Ni 231.604†	8351.1	8235.3	488.16 µg/L	488.16 ppb	12:14:16
3	P 214.914†	997.5	999.2	2280.8 µg/L	2280.8 ppb	12:14:36
3	Pb 220.353†	1691.0	1638.3	474.31 µg/L	474.31 ppb	12:14:36
3	S 181.975 Axial†	209.8	200.0	970.69 µg/L	970.69 ppb	12:14:36
3	Sb 206.836†	462.6	448.5	477.54 µg/L	477.54 ppb	12:14:36
3	Se 196.026†	298.5	294.6	477.90 µg/L	477.90 ppb	12:14:36
3	SiO2†	23401.7	22597.9	5308.5 µg/L	5308.5 ppb	12:14:16
3	Si 251.611†	27294.4	27616.3	2478.8 µg/L	2478.8 ppb	12:14:16
3	Sn 189.927†	895.3	913.0	458.94 µg/L	458.94 ppb	12:14:36
3	Ti 334.940†	181816.2	185818.3	493.77 µg/L	493.77 ppb	12:14:10
3	Tl 190.801†	287.1	319.7	489.26 µg/L	489.26 ppb	12:14:36
3	U 409.014†	4852.1	5066.5	482.53 µg/L	482.53 ppb	12:14:16
3	V 292.402†	40915.8	41886.9	491.61 µg/L	491.61 ppb	12:14:16
3	Zn 213.857†	18257.2	18175.1	488.87 µg/L	488.87 ppb	12:14:16

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1926114.2	97.115 %	1.5768			1.62%
Sc RADIAL	56040.9	101 %	0.7			0.68%
Y 371.029	1327676.7	96.707 %	1.5525			1.61%
Ag 328.068†	61073.8	527.31 µg/L	21.435	527.31 ppb	21.435	4.06%
QC value within limits for Ag 328.068 Recovery = 105.46%						
Al 396.153Radial†	6297.5	4964.2 µg/L	31.39	4964.2 ppb	31.39	0.63%
QC value within limits for Al 396.153Radial Recovery = 99.28%						
As 188.979†	246.4	521.64 µg/L	49.124	521.64 ppb	49.124	9.42%
QC value within limits for As 188.979 Recovery = 104.33%						
B 249.677†	10795.8	514.39 µg/L	22.849	514.39 ppb	22.849	4.44%
QC value within limits for B 249.677 Recovery = 102.88%						
Ba 233.527†	18318.6	522.85 µg/L	28.525	522.85 ppb	28.525	5.46%
QC value within limits for Ba 233.527 Recovery = 104.57%						
Be 313.107†	737037.1	525.41 µg/L	31.574	525.41 ppb	31.574	6.01%
QC value within limits for Be 313.107 Recovery = 105.08%						
Ca 317.933Radial†	4911.9	4974.6 µg/L	39.21	4974.6 ppb	39.21	0.79%
QC value within limits for Ca 317.933Radial Recovery = 99.49%						
Cd 226.502†	17671.5	523.98 µg/L	29.803	523.98 ppb	29.803	5.69%
QC value within limits for Cd 226.502 Recovery = 104.80%						
Co 228.616†	9734.3	523.52 µg/L	31.716	523.52 ppb	31.716	6.06%

QC value within limits for Co 228.616 Recovery = 104.70%							
Cr 267.716†	22048.1	522.56 µg/L	40.104	522.56 ppb	40.104	7.67%	
QC value within limits for Cr 267.716 Recovery = 104.51%							
Cu 324.752†	68965.7	525.28 µg/L	31.482	525.28 ppb	31.482	5.99%	
QC value within limits for Cu 324.752 Recovery = 105.06%							
Fe 238.204 Radial†	566.1	5035.5 µg/L	44.69	5035.5 ppb	44.69	0.89%	
QC value within limits for Fe 238.204 Radial Recovery = 100.71%							
K 766.490 Radial†	6457.4	5126.5 µg/L	21.43	5126.5 ppb	21.43	0.42%	
QC value within limits for K 766.490 Radial Recovery = 102.53%							
Mg 279.077 IEC†	511.0	5055.1 µg/L	41.57	5055.1 ppb	41.57	0.82%	
QC value within limits for Mg 279.077 IEC Recovery = 101.10%							
Mn 257.610†	142410.8	527.76 µg/L	30.904	527.76 ppb	30.904	5.86%	
QC value within limits for Mn 257.610 Recovery = 105.55%							
Mo 202.031†	4569.9	510.29 µg/L	51.842	510.29 ppb	51.842	10.16%	
QC value within limits for Mo 202.031 Recovery = 102.06%							
Na 589.592 Radial†	28122.0	10047 µg/L	17.4	10047 ppb	17.4	0.17%	
QC value within limits for Na 589.592 Radial Recovery = 100.47%							
Ni 231.604†	8838.7	523.93 µg/L	32.302	523.93 ppb	32.302	6.17%	
QC value within limits for Ni 231.604 Recovery = 104.79%							
P 214.914†	1118.3	2555.4 µg/L	238.20	2555.4 ppb	238.20	9.32%	
QC value within limits for P 214.914 Recovery = 102.22%							
Pb 220.353†	1809.6	523.97 µg/L	43.144	523.97 ppb	43.144	8.23%	
QC value within limits for Pb 220.353 Recovery = 104.79%							
S 181.975 Axial†	216.8	1052.1 µg/L	70.54	1052.1 ppb	70.54	6.70%	
QC value within limits for S 181.975 Axial Recovery = 105.21%							
Sb 206.836†	492.6	524.72 µg/L	41.574	524.72 ppb	41.574	7.92%	
QC value within limits for Sb 206.836 Recovery = 104.94%							
Se 196.026†	322.6	522.59 µg/L	38.986	522.59 ppb	38.986	7.46%	
QC value within limits for Se 196.026 Recovery = 104.52%							
SiO2†	23879.5	5609.6 µg/L	276.60	5609.6 ppb	276.60	4.93%	
QC value within limits for SiO2 Recovery = 104.90%							
Si 251.611†	29136.2	2615.3 µg/L	124.69	2615.3 ppb	124.69	4.77%	
QC value within limits for Si 251.611 Recovery = 104.61%							
Sn 189.927†	1044.5	525.03 µg/L	57.231	525.03 ppb	57.231	10.90%	
QC value within limits for Sn 189.927 Recovery = 105.01%							
Sr 421.552†	44268.9	513.01 µg/L	0.685	513.01 ppb	0.685	0.13%	
QC value within limits for Sr 421.552 Recovery = 102.60%							
Ti 334.940†	198748.5	528.15 µg/L	33.313	528.15 ppb	33.313	6.31%	
QC value within limits for Ti 334.940 Recovery = 105.63%							
Tl 190.801†	344.3	526.78 µg/L	33.314	526.78 ppb	33.314	6.32%	
QC value within limits for Tl 190.801 Recovery = 105.36%							
U 409.014†	5471.2	521.15 µg/L	33.956	521.15 ppb	33.956	6.52%	
QC value within limits for U 409.014 Recovery = 104.23%							
V 292.402†	45054.1	528.96 µg/L	33.303	528.96 ppb	33.303	6.30%	
QC value within limits for V 292.402 Recovery = 105.79%							
Zn 213.857†	19492.8	524.36 µg/L	31.784	524.36 ppb	31.784	6.06%	
QC value within limits for Zn 213.857 Recovery = 104.87%							
All analyte(s) passed QC.							

Sequence No.: 33  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/8/2010 12:14:46  
 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	53830.5	53830.5	96.6 %		12:15:19
1	Al 396.153Radial†	4.5	14.5	11.418 µg/L	11.418 ppb	12:15:19
1	Ca 317.933Radial†	183.4	2.0	1.9964 µg/L	1.9964 ppb	12:15:39
1	Fe 238.204 Radial†	18.7	3.5	31.224 µg/L	31.224 ppb	12:15:39
1	K 766.490 Radial†	232.7	54.1	42.977 µg/L	42.977 ppb	12:15:19
1	Mg 279.077 IEC†	11.5	-0.8	-7.8398 µg/L	-7.8398 ppb	12:15:39
1	Na 589.592 Radial†	482.3	28.0	10.008 µg/L	10.008 ppb	12:15:19
1	Sr 421.552†	28.7	-8.3	-0.0966 µg/L	-0.0966 ppb	12:15:19
1	Sc 361.383	1837300.8	1837300.8	92.637 %		12:16:41
1	Y 371.029	1270643.2	1270643.2	92.553 %		12:16:41
1	Ag 328.068†	-434.2	33.7	0.2886 µg/L	0.2886 ppb	12:16:47
1	As 188.979†	2.2	4.1	8.6007 µg/L	8.6007 ppb	12:17:07
1	B 249.677†	330.0	41.8	1.9826 µg/L	1.9826 ppb	12:17:07
1	Ba 233.527†	-14.9	4.9	0.1380 µg/L	0.1380 ppb	12:17:07
1	Be 313.107†	-3144.9	-94.1	-0.0672 µg/L	-0.0672 ppb	12:16:47
1	Cd 226.502†	-148.7	-15.5	-0.4609 µg/L	-0.4609 ppb	12:17:07
1	Co 228.616†	-5.8	2.0	0.1062 µg/L	0.1062 ppb	12:17:07
1	Cr 267.716†	-26.5	14.1	0.3347 µg/L	0.3347 ppb	12:16:47
1	Cu 324.752†	2538.1	251.0	1.9133 µg/L	1.9133 ppb	12:16:47
1	Mn 257.610†	-187.9	60.6	0.2289 µg/L	0.2289 ppb	12:17:07
1	Mo 202.031†	-7.1	-0.9	-0.0969 µg/L	-0.0969 ppb	12:17:07
1	Ni 231.604†	327.0	45.8	2.7205 µg/L	2.7205 ppb	12:17:07
1	P 214.914†	18.9	-0.8	-2.1519 µg/L	-2.1519 ppb	12:17:07
1	Pb 220.353†	93.0	9.0	2.5949 µg/L	2.5949 ppb	12:17:07
1	S 181.975 Axial†	16.9	3.6	17.394 µg/L	17.394 ppb	12:17:07
1	Sb 206.836†	22.6	-0.2	-0.2412 µg/L	-0.2412 ppb	12:17:07
1	Se 196.026†	14.4	4.9	7.8378 µg/L	7.8378 ppb	12:17:07
1	SiO2†	1403.9	175.3	41.190 µg/L	41.190 ppb	12:16:47
1	Si 251.611†	371.6	97.5	8.7497 µg/L	8.7497 ppb	12:17:07
1	Sn 189.927†	4.6	2.1	1.0606 µg/L	1.0606 ppb	12:17:07
1	Ti 334.940†	198.2	49.1	0.1312 µg/L	0.1312 ppb	12:16:47
1	Tl 190.801†	-25.0	-0.9	-1.3418 µg/L	-1.3418 ppb	12:17:07
1	U 409.014†	-82.8	13.9	1.3221 µg/L	1.3221 ppb	12:16:47
1	V 292.402†	-61.3	-32.8	-0.3754 µg/L	-0.3754 ppb	12:16:47
1	Zn 213.857†	609.5	157.3	4.2452 µg/L	4.2452 ppb	12:17:07
2	Sc RADIAL	54011.8	54011.8	96.9 %		12:15:45
2	Al 396.153Radial†	-14.9	-5.6	-4.4132 µg/L	-4.4132 ppb	12:15:45
2	Ca 317.933Radial†	189.4	7.5	7.5995 µg/L	7.5995 ppb	12:16:05
2	Fe 238.204 Radial†	16.5	1.2	10.859 µg/L	10.859 ppb	12:16:05
2	K 766.490 Radial†	183.3	2.4	1.8927 µg/L	1.8927 ppb	12:15:45
2	Mg 279.077 IEC†	11.4	-0.9	-9.2359 µg/L	-9.2359 ppb	12:16:05
2	Na 589.592 Radial†	486.0	30.1	10.763 µg/L	10.763 ppb	12:15:45
2	Sr 421.552†	29.7	-7.4	-0.0857 µg/L	-0.0857 ppb	12:15:45
2	Sc 361.383	1867768.8	1867768.8	94.174 %		12:17:13
2	Y 371.029	1291322.7	1291322.7	94.059 %		12:17:13
2	Ag 328.068†	-449.2	25.4	0.2176 µg/L	0.2176 ppb	12:17:19
2	As 188.979†	-1.7	-0.1	-0.2858 µg/L	-0.2858 ppb	12:17:39
2	B 249.677†	334.5	40.8	1.9454 µg/L	1.9454 ppb	12:17:39
2	Ba 233.527†	-14.1	6.1	0.1730 µg/L	0.1730 ppb	12:17:39
2	Be 313.107†	-3209.2	-107.0	-0.0763 µg/L	-0.0763 ppb	12:17:19
2	Cd 226.502†	-149.3	-13.5	-0.3999 µg/L	-0.3999 ppb	12:17:39
2	Co 228.616†	-7.8	0.0	0.0026 µg/L	0.0026 ppb	12:17:39
2	Cr 267.716†	-39.7	0.5	0.0129 µg/L	0.0129 ppb	12:17:19
2	Cu 324.752†	2606.9	279.4	2.1264 µg/L	2.1264 ppb	12:17:19
2	Mn 257.610†	-181.8	70.4	0.2623 µg/L	0.2623 ppb	12:17:39
2	Mo 202.031†	-1.2	5.5	0.6105 µg/L	0.6105 ppb	12:17:39
2	Ni 231.604†	320.3	33.0	1.9582 µg/L	1.9582 ppb	12:17:39
2	P 214.914†	23.4	3.6	8.1769 µg/L	8.1769 ppb	12:17:39
2	Pb 220.353†	90.3	4.4	1.2674 µg/L	1.2674 ppb	12:17:39

2	S 181.975 Axial†	15.0	1.3	6.4143 µg/L	6.4143 ppb	12:17:39
2	Sb 206.836†	26.9	4.0	4.2350 µg/L	4.2350 ppb	12:17:39
2	Se 196.026†	14.9	5.1	8.1311 µg/L	8.1311 ppb	12:17:39
2	SiO2†	1455.7	205.6	48.300 µg/L	48.300 ppb	12:17:19
2	Si 251.611†	368.9	88.0	7.9034 µg/L	7.9034 ppb	12:17:39
2	Sn 189.927†	2.7	0.0	0.0139 µg/L	0.0139 ppb	12:17:39
2	Ti 334.940†	160.3	5.4	0.0153 µg/L	0.0153 ppb	12:17:19
2	Tl 190.801†	-23.8	0.7	1.1412 µg/L	1.1412 ppb	12:17:39
2	U 409.014†	-44.6	55.9	5.3324 µg/L	5.3324 ppb	12:17:19
2	V 292.402†	-42.2	-11.5	-0.1218 µg/L	-0.1218 ppb	12:17:19
2	Zn 213.857†	594.7	130.8	3.5324 µg/L	3.5324 ppb	12:17:39
3	Sc RADIAL	52720.9	52720.9	94.6 %		12:16:11
3	Al 396.153Radial†	-25.4	-17.1	-13.484 µg/L	-13.484 ppb	12:16:11
3	Ca 317.933Radial†	193.0	16.1	16.279 µg/L	16.279 ppb	12:16:31
3	Fe 238.204 Radial†	15.4	0.4	3.7293 µg/L	3.7293 ppb	12:16:31
3	K 766.490 Radial†	224.9	50.9	40.428 µg/L	40.428 ppb	12:16:11
3	Mg 279.077 IEC†	10.4	-1.7	-17.254 µg/L	-17.254 ppb	12:16:31
3	Na 589.592 Radial†	539.7	99.1	35.408 µg/L	35.408 ppb	12:16:11
3	Sr 421.552†	59.8	25.2	0.2917 µg/L	0.2917 ppb	12:16:11
3	Sc 361.383	1866098.6	1866098.6	94.089 %		12:17:46
3	Y 371.029	1289790.4	1289790.4	93.948 %		12:17:46
3	Ag 328.068†	-501.2	-30.3	-0.2628 µg/L	-0.2628 ppb	12:17:51
3	As 188.979†	-3.3	-1.9	-3.9631 µg/L	-3.9631 ppb	12:18:12
3	B 249.677†	328.8	35.0	1.6737 µg/L	1.6737 ppb	12:18:12
3	Ba 233.527†	-13.2	7.0	0.1984 µg/L	0.1984 ppb	12:18:12
3	Be 313.107†	-3244.7	-147.7	-0.1053 µg/L	-0.1053 ppb	12:17:51
3	Cd 226.502†	-144.4	-8.4	-0.2485 µg/L	-0.2485 ppb	12:18:12
3	Co 228.616†	-10.4	-2.8	-0.1494 µg/L	-0.1494 ppb	12:18:12
3	Cr 267.716†	-43.1	-3.1	-0.0741 µg/L	-0.0741 ppb	12:17:51
3	Cu 324.752†	2515.9	185.1	1.4083 µg/L	1.4083 ppb	12:17:51
3	Mn 257.610†	-189.3	62.2	0.2317 µg/L	0.2317 ppb	12:18:12
3	Mo 202.031†	-0.3	6.4	0.7185 µg/L	0.7185 ppb	12:18:12
3	Ni 231.604†	329.0	42.5	2.5241 µg/L	2.5241 ppb	12:18:12
3	P 214.914†	18.1	-2.0	-4.6989 µg/L	-4.6989 ppb	12:18:12
3	Pb 220.353†	95.3	9.8	2.8481 µg/L	2.8481 ppb	12:18:12
3	S 181.975 Axial†	19.9	6.5	31.727 µg/L	31.727 ppb	12:18:12
3	Sb 206.836†	28.7	5.9	6.2372 µg/L	6.2372 ppb	12:18:12
3	Se 196.026†	10.8	0.8	1.2308 µg/L	1.2308 ppb	12:18:12
3	SiO2†	1427.8	177.3	41.658 µg/L	41.658 ppb	12:17:51
3	Si 251.611†	363.3	82.5	7.4032 µg/L	7.4032 ppb	12:18:12
3	Sn 189.927†	7.5	5.2	2.6091 µg/L	2.6091 ppb	12:18:12
3	Ti 334.940†	142.4	-13.5	-0.0343 µg/L	-0.0343 ppb	12:17:51
3	Tl 190.801†	-26.3	-1.9	-2.8548 µg/L	-2.8548 ppb	12:18:12
3	U 409.014†	-88.0	9.7	0.9228 µg/L	0.9228 ppb	12:17:51
3	V 292.402†	-73.1	-44.3	-0.5075 µg/L	-0.5075 ppb	12:17:51
3	Zn 213.857†	596.0	132.9	3.5870 µg/L	3.5870 ppb	12:18:12

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1857056.1	93.633 %		0.8636			0.92%
Sc RADIAL	53521.0	96.1 %		1.25			1.31%
Y 371.029	1283918.8	93.520 %		0.8393			0.90%
Ag 328.068†	9.6	0.0811 µg/L		0.29996	0.0811 ppb	0.29996	369.70%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-2.7	-2.1597 µg/L		12.60308	-2.1597 ppb	12.60308	583.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	0.7	1.4506 µg/L		6.45938	1.4506 ppb	6.45938	445.29%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	39.2	1.8672 µg/L		0.16867	1.8672 ppb	0.16867	9.03%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	6.0	0.1698 µg/L		0.03034	0.1698 ppb	0.03034	17.87%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	-116.3	-0.0829 µg/L		0.01993	-0.0829 ppb	0.01993	24.04%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	8.5	8.6251 µg/L		7.19644	8.6251 ppb	7.19644	83.44%
QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	-12.5	-0.3698 µg/L		0.10939	-0.3698 ppb	0.10939	29.58%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	-0.3	-0.0135 µg/L		0.12853	-0.0135 ppb	0.12853	948.68%

Cr 267.716†	3.9	0.0912 µg/L	0.21533	0.0912 ppb	0.21533	236.16%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	238.5	1.8160 µg/L	0.36883	1.8160 ppb	0.36883	20.31%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.7	15.271 µg/L	14.2684	15.271 ppb	14.2684	93.44%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	35.8	28.432 µg/L	23.0193	28.432 ppb	23.0193	80.96%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-1.2	-11.443 µg/L	5.0803	-11.443 ppb	5.0803	44.40%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	64.4	0.2410 µg/L	0.01853	0.2410 ppb	0.01853	7.69%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	3.7	0.4107 µg/L	0.44288	0.4107 ppb	0.44288	107.84%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	52.4	18.726 µg/L	14.4517	18.726 ppb	14.4517	77.17%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	40.5	2.4009 µg/L	0.39579	2.4009 ppb	0.39579	16.48%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	0.3	0.4421 µg/L	6.81857	0.4421 ppb	6.81857	>999.9%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	7.7	2.2368 µg/L	0.84902	2.2368 ppb	0.84902	37.96%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	3.8	18.512 µg/L	12.6932	18.512 ppb	12.6932	68.57%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	3.2	3.4104 µg/L	3.31700	3.4104 ppb	3.31700	97.26%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	3.6	5.7332 µg/L	3.90196	5.7332 ppb	3.90196	68.06%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	186.1	43.716 µg/L	3.9770	43.716 ppb	3.9770	9.10%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	89.3	8.0188 µg/L	0.68062	8.0188 ppb	0.68062	8.49%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	2.4	1.2278 µg/L	1.30567	1.2278 ppb	1.30567	106.34%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	3.1	0.0365 µg/L	0.22112	0.0365 ppb	0.22112	606.19%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	13.7	0.0374 µg/L	0.08492	0.0374 ppb	0.08492	227.23%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.7	-1.0184 µg/L	2.01753	-1.0184 ppb	2.01753	198.10%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	26.5	2.5258 µg/L	2.43882	2.5258 ppb	2.43882	96.56%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-29.5	-0.3349 µg/L	0.19602	-0.3349 ppb	0.19602	58.54%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	140.3	3.7882 µg/L	0.39673	3.7882 ppb	0.39673	10.47%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 42  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 2/8/2010 12:47:19  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	58109.9	58109.9	104 %		12:47:57
1	Al 396.153Radial†	6172.1	5927.7	4672.2 µg/L	4672.2 ppb	12:47:57
1	Ca 317.933Radial†	4890.1	4500.8	4558.3 µg/L	4558.3 ppb	12:48:17
1	Fe 238.204 Radial†	553.2	514.6	4577.6 µg/L	4577.6 ppb	12:48:17
1	K 766.490 Radial†	6587.2	6129.2	4866.0 µg/L	4866.0 ppb	12:47:57
1	Mg 279.077 IEC†	505.1	471.6	4665.5 µg/L	4665.5 ppb	12:48:17
1	Na 589.592 Radial†	28245.7	26611.2	9507.1 µg/L	9507.1 ppb	12:47:57
1	Sr 421.552†	43192.5	41375.5	479.48 µg/L	479.48 ppb	12:47:57
1	Sc 361.383	1990213.1	1990213.1	100.35 %		12:49:20
1	Y 371.029	1370777.8	1370777.8	99.847 %		12:49:20
1	Ag 328.068†	57733.2	58035.8	501.09 µg/L	501.09 ppb	12:49:26
1	As 188.979†	241.6	242.5	513.36 µg/L	513.36 ppb	12:49:47
1	B 249.677†	10560.2	10209.2	486.55 µg/L	486.55 ppb	12:49:26
1	Ba 233.527†	17470.9	17431.4	497.53 µg/L	497.53 ppb	12:49:26
1	Be 313.107†	702061.1	702932.0	501.10 µg/L	501.10 ppb	12:49:20
1	Cd 226.502†	16605.7	16693.3	494.99 µg/L	494.99 ppb	12:49:26
1	Co 228.616†	9333.7	9309.7	500.70 µg/L	500.70 ppb	12:49:26
1	Cr 267.716†	21172.9	21142.4	501.10 µg/L	501.10 ppb	12:49:26
1	Cu 324.752†	68659.1	65932.7	502.14 µg/L	502.14 ppb	12:49:26
1	Mn 257.610†	132712.6	132516.8	491.08 µg/L	491.08 ppb	12:49:26
1	Mo 202.031†	4522.2	4513.3	503.96 µg/L	503.96 ppb	12:49:47
1	Ni 231.604†	8703.4	8366.2	495.91 µg/L	495.91 ppb	12:49:26
1	P 214.914†	1119.9	1094.8	2503.5 µg/L	2503.5 ppb	12:49:47
1	Pb 220.353†	1869.3	1771.4	512.96 µg/L	512.96 ppb	12:49:47
1	S 181.975 Axial†	224.6	209.2	1015.6 µg/L	1015.6 ppb	12:49:47
1	Sb 206.836†	509.1	482.7	514.49 µg/L	514.49 ppb	12:49:47
1	Se 196.026†	324.5	312.6	505.85 µg/L	505.85 ppb	12:49:47
1	SiO2†	24034.6	22611.3	5311.6 µg/L	5311.6 ppb	12:49:26
1	Si 251.611†	28110.9	27710.0	2487.3 µg/L	2487.3 ppb	12:49:26
1	Sn 189.927†	1036.0	1029.6	517.55 µg/L	517.55 ppb	12:49:47
1	Ti 334.940†	191371.2	190544.0	506.36 µg/L	506.36 ppb	12:49:20
1	Tl 190.801†	309.7	334.7	511.92 µg/L	511.92 ppb	12:49:47
1	U 409.014†	5212.6	5297.8	504.69 µg/L	504.69 ppb	12:49:26
1	V 292.402†	43147.3	43031.2	505.32 µg/L	505.32 ppb	12:49:26
1	Zn 213.857†	19060.2	18493.6	497.49 µg/L	497.49 ppb	12:49:26
2	Sc RADIAL	57771.0	57771.0	104 %		12:48:23
2	Al 396.153Radial†	6148.2	5939.4	4680.9 µg/L	4680.9 ppb	12:48:23
2	Ca 317.933Radial†	4954.1	4590.0	4648.6 µg/L	4648.6 ppb	12:48:43
2	Fe 238.204 Radial†	569.3	533.2	4744.2 µg/L	4744.2 ppb	12:48:43
2	K 766.490 Radial†	6531.2	6112.2	4852.5 µg/L	4852.5 ppb	12:48:23
2	Mg 279.077 IEC†	513.3	482.4	4772.4 µg/L	4772.4 ppb	12:48:43
2	Na 589.592 Radial†	28120.9	26649.7	9520.8 µg/L	9520.8 ppb	12:48:23
2	Sr 421.552†	42929.0	41364.2	479.35 µg/L	479.35 ppb	12:48:23
2	Sc 361.383	1924358.7	1924358.7	97.027 %		12:49:53
2	Y 371.029	1325869.2	1325869.2	96.576 %		12:49:53
2	Ag 328.068†	61406.0	63790.0	550.79 µg/L	550.79 ppb	12:49:59
2	As 188.979†	247.1	256.3	542.67 µg/L	542.67 ppb	12:50:19
2	B 249.677†	11263.4	11294.1	538.43 µg/L	538.43 ppb	12:49:59
2	Ba 233.527†	18643.8	19236.1	549.04 µg/L	549.04 ppb	12:49:59
2	Be 313.107†	733191.7	758959.0	541.04 µg/L	541.04 ppb	12:49:53
2	Cd 226.502†	17829.8	18521.2	549.24 µg/L	549.24 ppb	12:49:59
2	Co 228.616†	9989.7	10304.1	554.18 µg/L	554.18 ppb	12:49:59
2	Cr 267.716†	22711.0	23449.7	555.78 µg/L	555.78 ppb	12:49:59
2	Cu 324.752†	73376.9	73136.4	556.96 µg/L	556.96 ppb	12:49:59
2	Mn 257.610†	142293.8	146917.4	544.42 µg/L	544.42 ppb	12:49:59
2	Mo 202.031†	4594.5	4742.0	529.49 µg/L	529.49 ppb	12:50:19
2	Ni 231.604†	9356.5	9336.1	553.40 µg/L	553.40 ppb	12:49:59
2	P 214.914†	1134.5	1148.1	2622.1 µg/L	2622.1 ppb	12:50:19
2	Pb 220.353†	1886.1	1852.4	536.33 µg/L	536.33 ppb	12:50:19

2	S 181.975 Axial†	225.3	217.6	1056.2 µg/L	1056.2 ppb	12:50:19
2	Sb 206.836†	517.3	508.6	541.68 µg/L	541.68 ppb	12:50:19
2	Se 196.026†	336.1	335.7	542.94 µg/L	542.94 ppb	12:50:19
2	SiO2†	25603.4	25047.8	5884.0 µg/L	5884.0 ppb	12:49:59
2	Si 251.611†	29949.3	30563.4	2743.4 µg/L	2743.4 ppb	12:49:59
2	Sn 189.927†	1052.2	1081.6	543.68 µg/L	543.68 ppb	12:50:19
2	Ti 334.940†	199765.7	205722.1	546.71 µg/L	546.71 ppb	12:49:53
2	Tl 190.801†	317.8	353.6	541.02 µg/L	541.02 ppb	12:50:19
2	U 409.014†	5593.2	5867.9	559.07 µg/L	559.07 ppb	12:49:59
2	V 292.402†	46293.4	47745.3	560.41 µg/L	560.41 ppb	12:49:59
2	Zn 213.857†	20289.8	20410.9	549.08 µg/L	549.08 ppb	12:49:59
3	Sc RADIAL	57023.9	57023.9	102 %		12:48:49
3	Al 396.153Radial†	6293.9	6159.4	4856.6 µg/L	4856.6 ppb	12:48:49
3	Ca 317.933Radial†	5019.2	4716.2	4776.5 µg/L	4776.5 ppb	12:49:09
3	Fe 238.204 Radial†	571.1	542.2	4822.5 µg/L	4822.5 ppb	12:49:09
3	K 766.490 Radial†	6626.0	6287.3	4991.5 µg/L	4991.5 ppb	12:48:49
3	Mg 279.077 IEC†	521.2	496.5	4911.0 µg/L	4911.0 ppb	12:49:09
3	Na 589.592 Radial†	28427.8	27304.9	9754.9 µg/L	9754.9 ppb	12:48:49
3	Sr 421.552†	43668.1	42628.9	494.01 µg/L	494.01 ppb	12:48:49
3	Sc 361.383	1948663.0	1948663.0	98.252 %		12:50:26
3	Y 371.029	1342373.7	1342373.7	97.778 %		12:50:26
3	Ag 328.068†	55991.1	57489.5	496.27 µg/L	496.27 ppb	12:50:32
3	As 188.979†	211.8	217.2	459.91 µg/L	459.91 ppb	12:50:52
3	B 249.677†	10215.7	10083.0	480.34 µg/L	480.34 ppb	12:50:32
3	Ba 233.527†	16576.5	16892.4	482.13 µg/L	482.13 ppb	12:50:32
3	Be 313.107†	672226.2	687484.2	490.09 µg/L	490.09 ppb	12:50:26
3	Cd 226.502†	15681.3	16105.3	477.51 µg/L	477.51 ppb	12:50:32
3	Co 228.616†	8721.8	8885.2	477.81 µg/L	477.81 ppb	12:50:32
3	Cr 267.716†	19334.0	19720.7	467.41 µg/L	467.41 ppb	12:50:32
3	Cu 324.752†	64695.4	63357.3	482.59 µg/L	482.59 ppb	12:50:32
3	Mn 257.610†	124094.3	126565.1	469.07 µg/L	469.07 ppb	12:50:32
3	Mo 202.031†	3839.0	3914.0	437.07 µg/L	437.07 ppb	12:50:52
3	Ni 231.604†	8212.8	8051.7	477.28 µg/L	477.28 ppb	12:50:32
3	P 214.914†	984.6	980.9	2238.9 µg/L	2238.9 ppb	12:50:52
3	Pb 220.353†	1645.1	1582.9	458.26 µg/L	458.26 ppb	12:50:52
3	S 181.975 Axial†	203.0	191.9	931.68 µg/L	931.68 ppb	12:50:52
3	Sb 206.836†	443.3	426.6	454.16 µg/L	454.16 ppb	12:50:52
3	Se 196.026†	293.3	287.8	466.66 µg/L	466.66 ppb	12:50:52
3	SiO2†	22975.9	22044.5	5178.5 µg/L	5178.5 ppb	12:50:32
3	Si 251.611†	26828.0	27001.6	2423.7 µg/L	2423.7 ppb	12:50:32
3	Sn 189.927†	877.1	889.9	447.33 µg/L	447.33 ppb	12:50:52
3	Ti 334.940†	182211.6	185287.8	492.37 µg/L	492.37 ppb	12:50:26
3	Tl 190.801†	275.4	306.4	468.96 µg/L	468.96 ppb	12:50:52
3	U 409.014†	4815.5	5004.4	476.64 µg/L	476.64 ppb	12:50:32
3	V 292.402†	40385.0	41136.7	482.75 µg/L	482.75 ppb	12:50:32
3	Zn 213.857†	17859.1	17676.2	475.44 µg/L	475.44 ppb	12:50:32

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1954411.6	98.542 %	1.6791			1.70%
Sc RADIAL	57634.9	103 %	1.0			0.96%
Y 371.029	1346340.2	98.067 %	1.6546			1.69%
Ag 328.068†	59771.8	516.05 µg/L	30.179	516.05 ppb	30.179	5.85%
QC value within limits for Ag 328.068 Recovery = 103.21%						
Al 396.153Radial†	6008.8	4736.6 µg/L	104.05	4736.6 ppb	104.05	2.20%
QC value within limits for Al 396.153Radial Recovery = 94.73%						
As 188.979†	238.7	505.32 µg/L	41.965	505.32 ppb	41.965	8.30%
QC value within limits for As 188.979 Recovery = 101.06%						
B 249.677†	10528.8	501.77 µg/L	31.896	501.77 ppb	31.896	6.36%
QC value within limits for B 249.677 Recovery = 100.35%						
Ba 233.527†	17853.3	509.57 µg/L	35.043	509.57 ppb	35.043	6.88%
QC value within limits for Ba 233.527 Recovery = 101.91%						
Be 313.107†	716458.4	510.74 µg/L	26.809	510.74 ppb	26.809	5.25%
QC value within limits for Be 313.107 Recovery = 102.15%						
Ca 317.933Radial†	4602.4	4661.1 µg/L	109.63	4661.1 ppb	109.63	2.35%
QC value within limits for Ca 317.933Radial Recovery = 93.22%						
Cd 226.502†	17106.6	507.25 µg/L	37.400	507.25 ppb	37.400	7.37%
QC value within limits for Cd 226.502 Recovery = 101.45%						
Co 228.616†	9499.7	510.89 µg/L	39.193	510.89 ppb	39.193	7.67%

QC value within limits for Co 228.616 Recovery = 102.18%						
Cr 267.716†	21437.6	508.10 µg/L	44.601	508.10 ppb	44.601	8.78%
QC value within limits for Cr 267.716 Recovery = 101.62%						
Cu 324.752†	67475.5	513.90 µg/L	38.554	513.90 ppb	38.554	7.50%
QC value within limits for Cu 324.752 Recovery = 102.78%						
Fe 238.204 Radial†	530.0	4714.8 µg/L	125.10	4714.8 ppb	125.10	2.65%
QC value within limits for Fe 238.204 Radial Recovery = 94.30%						
K 766.490 Radial†	6176.2	4903.3 µg/L	76.69	4903.3 ppb	76.69	1.56%
QC value within limits for K 766.490 Radial Recovery = 98.07%						
Mg 279.077 IEC†	483.5	4783.0 µg/L	123.13	4783.0 ppb	123.13	2.57%
QC value within limits for Mg 279.077 IEC Recovery = 95.66%						
Mn 257.610†	135333.1	501.52 µg/L	38.746	501.52 ppb	38.746	7.73%
QC value within limits for Mn 257.610 Recovery = 100.30%						
Mo 202.031†	4389.8	490.17 µg/L	47.725	490.17 ppb	47.725	9.74%
QC value within limits for Mo 202.031 Recovery = 98.03%						
Na 589.592 Radial†	26855.2	9594.3 µg/L	139.29	9594.3 ppb	139.29	1.45%
QC value within limits for Na 589.592 Radial Recovery = 95.94%						
Ni 231.604†	8584.7	508.86 µg/L	39.679	508.86 ppb	39.679	7.80%
QC value within limits for Ni 231.604 Recovery = 101.77%						
P 214.914†	1074.6	2454.8 µg/L	196.16	2454.8 ppb	196.16	7.99%
QC value within limits for P 214.914 Recovery = 98.19%						
Pb 220.353†	1735.6	502.51 µg/L	40.070	502.51 ppb	40.070	7.97%
QC value within limits for Pb 220.353 Recovery = 100.50%						
S 181.975 Axial†	206.3	1001.1 µg/L	63.50	1001.1 ppb	63.50	6.34%
QC value within limits for S 181.975 Axial Recovery = 100.11%						
Sb 206.836†	472.6	503.44 µg/L	44.793	503.44 ppb	44.793	8.90%
QC value within limits for Sb 206.836 Recovery = 100.69%						
Se 196.026†	312.0	505.15 µg/L	38.144	505.15 ppb	38.144	7.55%
QC value within limits for Se 196.026 Recovery = 101.03%						
SiO2†	23234.5	5458.0 µg/L	374.85	5458.0 ppb	374.85	6.87%
QC value within limits for SiO2 Recovery = 102.07%						
Si 251.611†	28425.0	2551.4 µg/L	169.24	2551.4 ppb	169.24	6.63%
QC value within limits for Si 251.611 Recovery = 102.06%						
Sn 189.927†	1000.3	502.85 µg/L	49.832	502.85 ppb	49.832	9.91%
QC value within limits for Sn 189.927 Recovery = 100.57%						
Sr 421.552†	41789.6	484.28 µg/L	8.424	484.28 ppb	8.424	1.74%
QC value within limits for Sr 421.552 Recovery = 96.86%						
Ti 334.940†	193851.3	515.15 µg/L	28.217	515.15 ppb	28.217	5.48%
QC value within limits for Ti 334.940 Recovery = 103.03%						
Tl 190.801†	331.6	507.30 µg/L	36.249	507.30 ppb	36.249	7.15%
QC value within limits for Tl 190.801 Recovery = 101.46%						
U 409.014†	5390.0	513.47 µg/L	41.907	513.47 ppb	41.907	8.16%
QC value within limits for U 409.014 Recovery = 102.69%						
V 292.402†	43971.1	516.16 µg/L	39.949	516.16 ppb	39.949	7.74%
QC value within limits for V 292.402 Recovery = 103.23%						
Zn 213.857†	18860.2	507.34 µg/L	37.792	507.34 ppb	37.792	7.45%
QC value within limits for Zn 213.857 Recovery = 101.47%						
All analyte(s) passed QC.						

Sequence No.: 43

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/8/2010 12:51:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	54773.9	54773.9	98.3 %		12:51:35
1	Al 396.153Radial†	-13.0	-3.4	-2.7030 µg/L	-2.7030 ppb	12:51:35
1	Ca 317.933Radial†	195.1	10.6	10.734 µg/L	10.734 ppb	12:51:55
1	Fe 238.204 Radial†	15.5	-0.1	-0.5898 µg/L	-0.5898 ppb	12:51:55
1	K 766.490 Radial†	170.1	-13.7	-10.853 µg/L	-10.853 ppb	12:51:35
1	Mg 279.077 IEC†	19.3	7.0	69.114 µg/L	69.114 ppb	12:51:55
1	Na 589.592 Radial†	508.9	46.5	16.596 µg/L	16.596 ppb	12:51:35
1	Sr 421.552†	46.0	8.8	0.1015 µg/L	0.1015 ppb	12:51:35
1	Sc 361.383	1954852.9	1954852.9	98.564 %		12:52:57
1	Y 371.029	1351010.9	1351010.9	98.407 %		12:52:57
1	Ag 328.068†	-531.5	-36.8	-0.3204 µg/L	-0.3204 ppb	12:53:03
1	As 188.979†	-1.8	-0.1	-0.1929 µg/L	-0.1929 ppb	12:53:23
1	B 249.677†	321.6	11.8	0.5665 µg/L	0.5665 ppb	12:53:23
1	Ba 233.527†	-19.8	0.9	0.0241 µg/L	0.0241 ppb	12:53:23
1	Be 313.107†	-3227.5	26.3	0.0187 µg/L	0.0187 ppb	12:53:03
1	Cd 226.502†	-137.3	5.7	0.1720 µg/L	0.1720 ppb	12:53:23
1	Co 228.616†	-1.9	6.4	0.3442 µg/L	0.3442 ppb	12:53:23
1	Cr 267.716†	-33.5	8.8	0.2076 µg/L	0.2076 ppb	12:53:03
1	Cu 324.752†	2519.8	67.7	0.5150 µg/L	0.5150 ppb	12:53:03
1	Mn 257.610†	-201.3	59.2	0.2165 µg/L	0.2165 ppb	12:53:23
1	Mo 202.031†	-6.1	0.5	0.0579 µg/L	0.0579 ppb	12:53:23
1	Ni 231.604†	327.1	24.8	1.4714 µg/L	1.4714 ppb	12:53:23
1	P 214.914†	22.2	1.3	2.9388 µg/L	2.9388 ppb	12:53:23
1	Pb 220.353†	100.8	10.8	3.1336 µg/L	3.1336 ppb	12:53:23
1	S 181.975 Axial†	15.9	1.5	7.1195 µg/L	7.1195 ppb	12:53:23
1	Sb 206.836†	24.4	0.1	0.1220 µg/L	0.1220 ppb	12:53:23
1	Se 196.026†	15.4	4.9	7.7480 µg/L	7.7480 ppb	12:53:23
1	SiO2†	1426.5	107.1	25.163 µg/L	25.163 ppb	12:53:03
1	Si 251.611†	338.0	39.3	3.5276 µg/L	3.5276 ppb	12:53:23
1	Sn 189.927†	-2.7	-5.5	-2.7737 µg/L	-2.7737 ppb	12:53:23
1	Ti 334.940†	160.9	-1.5	-0.0094 µg/L	-0.0094 ppb	12:53:03
1	Tl 190.801†	-26.4	-0.8	-1.1577 µg/L	-1.1577 ppb	12:53:23
1	U 409.014†	-63.8	38.5	3.6780 µg/L	3.6780 ppb	12:53:03
1	V 292.402†	-92.4	-60.4	-0.6958 µg/L	-0.6958 ppb	12:53:03
1	Zn 213.857†	550.9	58.3	1.5684 µg/L	1.5684 ppb	12:53:23
2	Sc RADIAL	55049.7	55049.7	98.8 %		12:52:01
2	Al 396.153Radial†	-11.0	-1.4	-1.0941 µg/L	-1.0941 ppb	12:52:01
2	Ca 317.933Radial†	192.4	6.8	6.9035 µg/L	6.9035 ppb	12:52:21
2	Fe 238.204 Radial†	15.7	0.0	0.3993 µg/L	0.3993 ppb	12:52:21
2	K 766.490 Radial†	180.2	-4.4	-3.4746 µg/L	-3.4746 ppb	12:52:01
2	Mg 279.077 IEC†	7.0	-5.6	-55.401 µg/L	-55.401 ppb	12:52:21
2	Na 589.592 Radial†	476.6	11.1	3.9789 µg/L	3.9789 ppb	12:52:01
2	Sr 421.552†	46.3	8.8	0.1025 µg/L	0.1025 ppb	12:52:01
2	Sc 361.383	1963616.2	1963616.2	99.006 %		12:53:29
2	Y 371.029	1356939.3	1356939.3	98.839 %		12:53:29
2	Ag 328.068†	-546.6	-49.7	-0.4293 µg/L	-0.4293 ppb	12:53:35
2	As 188.979†	-4.5	-2.9	-6.1207 µg/L	-6.1207 ppb	12:53:55
2	B 249.677†	325.5	14.4	0.6878 µg/L	0.6878 ppb	12:53:55
2	Ba 233.527†	-22.7	-1.9	-0.0552 µg/L	-0.0552 ppb	12:53:55
2	Be 313.107†	-3255.7	12.4	0.0089 µg/L	0.0089 ppb	12:53:35
2	Cd 226.502†	-142.1	1.5	0.0446 µg/L	0.0446 ppb	12:53:55
2	Co 228.616†	-8.7	-0.5	-0.0253 µg/L	-0.0253 ppb	12:53:55
2	Cr 267.716†	-4.8	37.9	0.8980 µg/L	0.8980 ppb	12:53:35
2	Cu 324.752†	2528.5	65.0	0.4947 µg/L	0.4947 ppb	12:53:35
2	Mn 257.610†	-206.1	55.3	0.2070 µg/L	0.2070 ppb	12:53:55
2	Mo 202.031†	-2.6	4.1	0.4583 µg/L	0.4583 ppb	12:53:55
2	Ni 231.604†	316.6	12.7	0.7535 µg/L	0.7535 ppb	12:53:55
2	P 214.914†	22.7	1.8	4.0531 µg/L	4.0531 ppb	12:53:55
2	Pb 220.353†	97.4	6.9	1.9934 µg/L	1.9934 ppb	12:53:55

2	S 181.975 Axial†	19.6	5.1	24.912 µg/L	24.912 ppb	12:53:55
2	Sb 206.836†	26.4	2.1	2.1912 µg/L	2.1912 ppb	12:53:55
2	Se 196.026†	22.4	11.9	18.962 µg/L	18.962 ppb	12:53:55
2	SiO2†	1412.5	86.6	20.340 µg/L	20.340 ppb	12:53:35
2	Si 251.611†	352.1	52.0	4.6647 µg/L	4.6647 ppb	12:53:55
2	Sn 189.927†	2.7	-0.1	-0.0786 µg/L	-0.0786 ppb	12:53:55
2	Ti 334.940†	165.6	2.5	0.0111 µg/L	0.0111 ppb	12:53:35
2	Tl 190.801†	-27.7	-1.9	-2.8630 µg/L	-2.8630 ppb	12:53:55
2	U 409.014†	0.8	104.0	9.9271 µg/L	9.9271 ppb	12:53:35
2	V 292.402†	-72.7	-40.1	-0.4496 µg/L	-0.4496 ppb	12:53:35
2	Zn 213.857†	559.2	64.2	1.7388 µg/L	1.7388 ppb	12:53:55
3	Sc RADIAL	54758.9	54758.9	98.3 %		12:52:27
3	Al 396.153Radial†	-26.6	-17.3	-13.628 µg/L	-13.628 ppb	12:52:27
3	Ca 317.933Radial†	192.2	7.7	7.7813 µg/L	7.7813 ppb	12:52:47
3	Fe 238.204 Radial†	16.9	1.3	11.732 µg/L	11.732 ppb	12:52:47
3	K 766.490 Radial†	136.9	-47.4	-37.634 µg/L	-37.634 ppb	12:52:27
3	Mg 279.077 IEC†	8.9	-3.7	-36.445 µg/L	-36.445 ppb	12:52:47
3	Na 589.592 Radial†	463.0	-0.2	-0.0536 µg/L	-0.0536 ppb	12:52:27
3	Sr 421.552†	40.8	3.5	0.0405 µg/L	0.0405 ppb	12:52:27
3	Sc 361.383	1978610.5	1978610.5	99.762 %		12:54:01
3	Y 371.029	1367536.6	1367536.6	99.611 %		12:54:01
3	Ag 328.068†	-455.8	45.5	0.3909 µg/L	0.3909 ppb	12:54:07
3	As 188.979†	-3.5	-1.8	-3.8566 µg/L	-3.8566 ppb	12:54:27
3	B 249.677†	293.0	-20.7	-0.9974 µg/L	-0.9974 ppb	12:54:27
3	Ba 233.527†	-18.3	2.7	0.0759 µg/L	0.0759 ppb	12:54:27
3	Be 313.107†	-3168.5	124.7	0.0890 µg/L	0.0890 ppb	12:54:07
3	Cd 226.502†	-143.5	1.1	0.0338 µg/L	0.0338 ppb	12:54:27
3	Co 228.616†	-20.8	-12.6	-0.6766 µg/L	-0.6766 ppb	12:54:27
3	Cr 267.716†	-39.4	3.2	0.0758 µg/L	0.0758 ppb	12:54:07
3	Cu 324.752†	2494.0	11.2	0.0865 µg/L	0.0865 ppb	12:54:07
3	Mn 257.610†	-199.6	63.3	0.2376 µg/L	0.2376 ppb	12:54:27
3	Mo 202.031†	-12.8	-6.1	-0.6809 µg/L	-0.6809 ppb	12:54:27
3	Ni 231.604†	329.6	23.2	1.3794 µg/L	1.3794 ppb	12:54:27
3	P 214.914†	20.7	-0.5	-1.0696 µg/L	-1.0696 ppb	12:54:27
3	Pb 220.353†	82.6	-8.6	-2.5039 µg/L	-2.5039 ppb	12:54:27
3	S 181.975 Axial†	14.5	-0.1	-0.6345 µg/L	-0.6345 ppb	12:54:27
3	Sb 206.836†	23.8	-0.7	-0.7834 µg/L	-0.7834 ppb	12:54:27
3	Se 196.026†	17.2	6.5	10.465 µg/L	10.465 ppb	12:54:27
3	SiO2†	1401.6	64.8	15.215 µg/L	15.215 ppb	12:54:07
3	Si 251.611†	337.9	35.0	3.1450 µg/L	3.1450 ppb	12:54:27
3	Sn 189.927†	7.4	4.6	2.2828 µg/L	2.2828 ppb	12:54:27
3	Ti 334.940†	105.7	-58.9	-0.1535 µg/L	-0.1535 ppb	12:54:07
3	Tl 190.801†	-23.8	2.2	3.2778 µg/L	3.2778 ppb	12:54:27
3	U 409.014†	-63.2	39.9	3.8044 µg/L	3.8044 ppb	12:54:07
3	V 292.402†	-29.3	4.0	0.0465 µg/L	0.0465 ppb	12:54:07
3	Zn 213.857†	560.0	60.7	1.6407 µg/L	1.6407 ppb	12:54:27

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1965693.2	99.111 %		0.6058			0.61%
Sc RADIAL	54860.8	98.5 %		0.29			0.30%
Y 371.029	1358495.6	98.952 %		0.6098			0.62%
Ag 328.068†	-13.7	-0.1196 µg/L		0.44543	-0.1196 ppb	0.44543	372.40%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-7.4	-5.8082 µg/L		6.81938	-5.8082 ppb	6.81938	117.41%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	-1.6	-3.3900 µg/L		2.99131	-3.3900 ppb	2.99131	88.24%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	1.8	0.0856 µg/L		0.93988	0.0856 ppb	0.93988	>999.9%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	0.5	0.0149 µg/L		0.06603	0.0149 ppb	0.06603	442.97%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	54.5	0.0389 µg/L		0.04369	0.0389 ppb	0.04369	112.40%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	8.4	8.4729 µg/L		2.00665	8.4729 ppb	2.00665	23.68%
QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	2.8	0.0835 µg/L		0.07683	0.0835 ppb	0.07683	92.04%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	-2.2	-0.1192 µg/L		0.51688	-0.1192 ppb	0.51688	433.47%

Cr	267.716†	QC value within limits for Co 228.616	Recovery = Not calculated		
		16.6	0.3938 µg/L	0.44158	0.3938 ppb
				0.44158	112.12%
Cu	324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated		
		48.0	0.3654 µg/L	0.24176	0.3654 ppb
				0.24176	66.16%
Fe	238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated		
		0.4	3.8471 µg/L	6.84616	3.8471 ppb
				6.84616	177.96%
K	766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated		
		-21.8	-17.321 µg/L	17.9748	-17.321 ppb
				17.9748	103.78%
Mg	279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated		
		-0.8	-7.5771 µg/L	67.08950	-7.5771 ppb
				67.08950	885.43%
Mn	257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated		
		59.3	0.2204 µg/L	0.01565	0.2204 ppb
				0.01565	7.10%
Mo	202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated		
		-0.5	-0.0549 µg/L	0.57794	-0.0549 ppb
				0.57794	>999.9%
Na	589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated		
		19.1	6.8405 µg/L	8.68597	6.8405 ppb
				8.68597	126.98%
Ni	231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated		
		20.2	1.2014 µg/L	0.39065	1.2014 ppb
				0.39065	32.52%
P	214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated		
		0.9	1.9741 µg/L	2.69416	1.9741 ppb
				2.69416	136.47%
Pb	220.353†	QC value within limits for P 214.914	Recovery = Not calculated		
		3.0	0.8744 µg/L	2.98070	0.8744 ppb
				2.98070	340.90%
S	181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated		
		2.2	10.466 µg/L	13.0978	10.466 ppb
				13.0978	125.15%
Sb	206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated		
		0.5	0.5099 µg/L	1.52476	0.5099 ppb
				1.52476	299.03%
Se	196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated		
		7.8	12.392 µg/L	5.8499	12.392 ppb
				5.8499	47.21%
SiO2†		QC value within limits for Se 196.026	Recovery = Not calculated		
		86.2	20.240 µg/L	4.9749	20.240 ppb
				4.9749	24.58%
Si	251.611†	QC value within limits for SiO2	Recovery = Not calculated		
		42.1	3.7791 µg/L	0.79044	3.7791 ppb
				0.79044	20.92%
Sn	189.927†	QC value within limits for Si 251.611	Recovery = Not calculated		
		-0.4	-0.1898 µg/L	2.53006	-0.1898 ppb
				2.53006	>999.9%
Sr	421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated		
		7.0	0.0815 µg/L	0.03553	0.0815 ppb
				0.03553	43.60%
Ti	334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated		
		-19.3	-0.0506 µg/L	0.08969	-0.0506 ppb
				0.08969	177.21%
Tl	190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated		
		-0.2	-0.2476 µg/L	3.16993	-0.2476 ppb
				3.16993	>999.9%
U	409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated		
		60.8	5.8031 µg/L	3.57198	5.8031 ppb
				3.57198	61.55%
V	292.402†	QC value within limits for U 409.014	Recovery = Not calculated		
		-32.2	-0.3663 µg/L	0.37810	-0.3663 ppb
				0.37810	103.21%
Zn	213.857†	QC value within limits for V 292.402	Recovery = Not calculated		
		61.1	1.6493 µg/L	0.08557	1.6493 ppb
				0.08557	5.19%

QC value within limits for Zn 213.857 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 11  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 2/8/2010 13:59:04  
 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	57068.3	57068.3	102 %		13:59:44
1	Al 396.153Radial†	6132.9	5997.5	4727.6 µg/L	4727.6 ppb	13:59:44
1	Ca 317.933Radial†	4849.2	4546.4	4604.5 µg/L	4604.5 ppb	14:00:05
1	Fe 238.204 Radial†	556.3	527.3	4690.1 µg/L	4690.1 ppb	14:00:05
1	K 766.490 Radial†	6570.5	6228.2	4944.6 µg/L	4944.6 ppb	13:59:44
1	Mg 279.077 IEC†	506.4	481.7	4765.3 µg/L	4765.3 ppb	14:00:05
1	Na 589.592 Radial†	28170.8	27032.3	9657.5 µg/L	9657.5 ppb	13:59:44
1	Sr 421.552†	42899.0	41844.9	484.92 µg/L	484.92 ppb	13:59:44
1	Sc 361.383	2012205.1	2012205.1	101.46 %		14:01:08
1	Y 371.029	1387127.4	1387127.4	101.04 %		14:01:08
1	Ag 328.068†	57307.9	56987.8	492.04 µg/L	492.04 ppb	14:01:13
1	As 188.979†	238.1	236.4	500.40 µg/L	500.40 ppb	14:01:34
1	B 249.677†	10461.9	9997.3	476.34 µg/L	476.34 ppb	14:01:13
1	Ba 233.527†	17205.7	16979.7	484.64 µg/L	484.64 ppb	14:01:13
1	Be 313.107†	679437.4	672986.5	479.75 µg/L	479.75 ppb	14:01:08
1	Cd 226.502†	16402.0	16311.6	483.65 µg/L	483.65 ppb	14:01:13
1	Co 228.616†	9175.7	9052.3	486.86 µg/L	486.86 ppb	14:01:13
1	Cr 267.716†	20927.4	20669.8	489.90 µg/L	489.90 ppb	14:01:13
1	Cu 324.752†	68153.1	64686.1	492.68 µg/L	492.68 ppb	14:01:13
1	Mn 257.610†	130751.9	129138.7	478.58 µg/L	478.58 ppb	14:01:13
1	Mo 202.031†	4431.4	4374.5	488.47 µg/L	488.47 ppb	14:01:34
1	Ni 231.604†	8632.8	8201.8	486.17 µg/L	486.17 ppb	14:01:13
1	P 214.914†	1097.9	1060.9	2425.1 µg/L	2425.1 ppb	14:01:34
1	Pb 220.353†	1820.3	1702.7	493.05 µg/L	493.05 ppb	14:01:34
1	S 181.975 Axial†	220.2	202.5	982.66 µg/L	982.66 ppb	14:01:34
1	Sb 206.836†	504.4	472.6	503.55 µg/L	503.55 ppb	14:01:34
1	Se 196.026†	323.1	307.8	498.32 µg/L	498.32 ppb	14:01:34
1	SiO2†	23784.0	22102.5	5192.1 µg/L	5192.1 ppb	14:01:13
1	Si 251.611†	27762.9	27060.8	2429.0 µg/L	2429.0 ppb	14:01:13
1	Sn 189.927†	1014.2	996.9	501.10 µg/L	501.10 ppb	14:01:34
1	Ti 334.940†	185754.3	182923.4	486.09 µg/L	486.09 ppb	14:01:08
1	Tl 190.801†	301.6	323.3	494.49 µg/L	494.49 ppb	14:01:34
1	U 409.014†	5191.9	5220.6	497.30 µg/L	497.30 ppb	14:01:13
1	V 292.402†	42737.4	42157.3	495.05 µg/L	495.05 ppb	14:01:13
1	Zn 213.857†	18769.0	17999.0	484.14 µg/L	484.14 ppb	14:01:13
2	Sc RADIAL	57556.8	57556.8	103 %		14:00:10
2	Al 396.153Radial†	6157.2	5970.1	4706.0 µg/L	4706.0 ppb	14:00:10
2	Ca 317.933Radial†	4878.3	4534.5	4592.4 µg/L	4592.4 ppb	14:00:30
2	Fe 238.204 Radial†	556.8	523.2	4654.0 µg/L	4654.0 ppb	14:00:30
2	K 766.490 Radial†	6577.1	6180.1	4906.4 µg/L	4906.4 ppb	14:00:10
2	Mg 279.077 IEC†	507.3	478.4	4732.4 µg/L	4732.4 ppb	14:00:30
2	Na 589.592 Radial†	28218.9	26845.5	9590.8 µg/L	9590.8 ppb	14:00:10
2	Sr 421.552†	43108.7	41692.4	483.16 µg/L	483.16 ppb	14:00:10
2	Sc 361.383	2000413.8	2000413.8	100.86 %		14:01:41
2	Y 371.029	1378932.3	1378932.3	100.44 %		14:01:41
2	Ag 328.068†	57500.8	57512.0	496.57 µg/L	496.57 ppb	14:01:46
2	As 188.979†	231.2	230.9	488.78 µg/L	488.78 ppb	14:02:07
2	B 249.677†	10514.4	10110.1	481.76 µg/L	481.76 ppb	14:01:46
2	Ba 233.527†	17334.0	17206.9	491.12 µg/L	491.12 ppb	14:01:46
2	Be 313.107†	677284.2	674799.2	481.04 µg/L	481.04 ppb	14:01:41
2	Cd 226.502†	16420.8	16425.6	487.04 µg/L	487.04 ppb	14:01:46
2	Co 228.616†	9207.5	9137.2	491.43 µg/L	491.43 ppb	14:01:46
2	Cr 267.716†	20962.0	20825.6	493.59 µg/L	493.59 ppb	14:01:46
2	Cu 324.752†	68366.7	65293.9	497.30 µg/L	497.30 ppb	14:01:46
2	Mn 257.610†	131412.4	130553.2	483.82 µg/L	483.82 ppb	14:01:46
2	Mo 202.031†	4380.8	4350.1	485.74 µg/L	485.74 ppb	14:02:07
2	Ni 231.604†	8681.5	8300.3	492.01 µg/L	492.01 ppb	14:01:46
2	P 214.914†	1092.0	1061.4	2425.8 µg/L	2425.8 ppb	14:02:07
2	Pb 220.353†	1802.6	1695.8	491.02 µg/L	491.02 ppb	14:02:07

2	S 181.975 Axial†	219.5	203.1	985.60 µg/L	985.60 ppb	14:02:07
2	Sb 206.836†	488.5	459.7	489.85 µg/L	489.85 ppb	14:02:07
2	Se 196.026†	318.5	305.1	493.96 µg/L	493.96 ppb	14:02:07
2	SiO2†	23859.3	22315.4	5242.1 µg/L	5242.1 ppb	14:01:46
2	Si 251.611†	27965.2	27422.7	2461.5 µg/L	2461.5 ppb	14:01:46
2	Sn 189.927†	1003.9	992.5	498.91 µg/L	498.91 ppb	14:02:07
2	Ti 334.940†	185175.8	183429.1	487.44 µg/L	487.44 ppb	14:01:41
2	Tl 190.801†	300.2	323.7	495.08 µg/L	495.08 ppb	14:02:07
2	U 409.014†	5234.1	5292.6	504.19 µg/L	504.19 ppb	14:01:46
2	V 292.402†	42916.8	42583.5	499.98 µg/L	499.98 ppb	14:01:46
2	Zn 213.857†	18838.4	18176.9	488.93 µg/L	488.93 ppb	14:01:46
3	Sc RADIAL	56978.3	56978.3	102 %		14:00:36
3	Al 396.153Radial†	6129.2	6003.3	4733.8 µg/L	4733.8 ppb	14:00:36
3	Ca 317.933Radial†	4858.1	4562.6	4620.9 µg/L	4620.9 ppb	14:00:56
3	Fe 238.204 Radial†	552.8	524.7	4666.8 µg/L	4666.8 ppb	14:00:56
3	K 766.490 Radial†	6510.1	6179.2	4905.7 µg/L	4905.7 ppb	14:00:36
3	Mg 279.077 IEC†	510.0	486.0	4806.7 µg/L	4806.7 ppb	14:00:56
3	Na 589.592 Radial†	28163.5	27068.6	9670.5 µg/L	9670.5 ppb	14:00:36
3	Sr 421.552†	43006.8	42016.4	486.91 µg/L	486.91 ppb	14:00:36
3	Sc 361.383	2005306.4	2005306.4	101.11 %		14:02:13
3	Y 371.029	1382841.9	1382841.9	100.73 %		14:02:13
3	Ag 328.068†	54484.9	54390.0	469.50 µg/L	469.50 ppb	14:02:19
3	As 188.979†	200.1	199.6	422.48 µg/L	422.48 ppb	14:02:39
3	B 249.677†	9860.4	9437.9	449.52 µg/L	449.52 ppb	14:02:19
3	Ba 233.527†	15927.6	15774.0	450.21 µg/L	450.21 ppb	14:02:19
3	Be 313.107†	639147.4	635442.0	452.99 µg/L	452.99 ppb	14:02:13
3	Cd 226.502†	15079.5	15059.3	446.48 µg/L	446.48 ppb	14:02:19
3	Co 228.616†	8372.3	8288.8	445.75 µg/L	445.75 ppb	14:02:19
3	Cr 267.716†	18605.1	18443.9	437.15 µg/L	437.15 ppb	14:02:19
3	Cu 324.752†	62714.7	59538.4	453.52 µg/L	453.52 ppb	14:02:19
3	Mn 257.610†	119278.2	118234.2	438.20 µg/L	438.20 ppb	14:02:19
3	Mo 202.031†	3718.6	3684.6	411.46 µg/L	411.46 ppb	14:02:39
3	Ni 231.604†	7913.1	7519.2	445.72 µg/L	445.72 ppb	14:02:19
3	P 214.914†	945.0	913.5	2084.5 µg/L	2084.5 ppb	14:02:39
3	Pb 220.353†	1602.3	1493.3	432.33 µg/L	432.33 ppb	14:02:39
3	S 181.975 Axial†	196.9	180.2	874.43 µg/L	874.43 ppb	14:02:39
3	Sb 206.836†	434.9	405.5	431.74 µg/L	431.74 ppb	14:02:39
3	Se 196.026†	282.2	268.4	435.38 µg/L	435.38 ppb	14:02:39
3	SiO2†	22333.3	20748.4	4874.0 µg/L	4874.0 ppb	14:02:19
3	Si 251.611†	25999.9	25411.3	2280.9 µg/L	2280.9 ppb	14:02:19
3	Sn 189.927†	841.5	829.4	416.94 µg/L	416.94 ppb	14:02:39
3	Ti 334.940†	173798.2	171728.3	456.32 µg/L	456.32 ppb	14:02:13
3	Tl 190.801†	275.2	298.2	456.27 µg/L	456.27 ppb	14:02:39
3	U 409.014†	4671.4	4723.5	449.86 µg/L	449.86 ppb	14:02:19
3	V 292.402†	38968.6	38574.8	452.72 µg/L	452.72 ppb	14:02:19
3	Zn 213.857†	17200.1	16511.0	444.07 µg/L	444.07 ppb	14:02:19

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2005975.1	101.14 %	0.299			0.30%
Sc RADIAL	57201.1	103 %	0.6			0.54%
Y 371.029	1382967.2	100.73 %	0.299			0.30%
Ag 328.068†	56296.6	486.04 µg/L	14.500	486.04 ppb	14.500	2.98%
QC value within limits for Ag 328.068 Recovery = 97.21%						
Al 396.153Radial†	5990.3	4722.5 µg/L	14.57	4722.5 ppb	14.57	0.31%
QC value within limits for Al 396.153Radial Recovery = 94.45%						
As 188.979†	222.3	470.56 µg/L	42.035	470.56 ppb	42.035	8.93%
QC value within limits for As 188.979 Recovery = 94.11%						
B 249.677†	9848.4	469.21 µg/L	17.262	469.21 ppb	17.262	3.68%
QC value within limits for B 249.677 Recovery = 93.84%						
Ba 233.527†	16653.5	475.33 µg/L	21.988	475.33 ppb	21.988	4.63%
QC value within limits for Ba 233.527 Recovery = 95.07%						
Be 313.107†	661075.9	471.26 µg/L	15.838	471.26 ppb	15.838	3.36%
QC value within limits for Be 313.107 Recovery = 94.25%						
Ca 317.933Radial†	4547.8	4605.9 µg/L	14.30	4605.9 ppb	14.30	0.31%
QC value within limits for Ca 317.933Radial Recovery = 92.12%						
Cd 226.502†	15932.1	472.39 µg/L	22.504	472.39 ppb	22.504	4.76%
QC value within limits for Cd 226.502 Recovery = 94.48%						
Co 228.616†	8826.1	474.68 µg/L	25.160	474.68 ppb	25.160	5.30%

QC value within limits for Co 228.616 Recovery = 94.94%							
Cr 267.716†	19979.8	473.54 µg/L	31.576	473.54 ppb	31.576	6.67%	
QC value within limits for Cr 267.716 Recovery = 94.71%							
Cu 324.752†	63172.8	481.16 µg/L	24.052	481.16 ppb	24.052	5.00%	
QC value within limits for Cu 324.752 Recovery = 96.23%							
Fe 238.204 Radial†	525.1	4670.3 µg/L	18.32	4670.3 ppb	18.32	0.39%	
QC value within limits for Fe 238.204 Radial Recovery = 93.41%							
K 766.490 Radial†	6195.8	4918.9 µg/L	22.25	4918.9 ppb	22.25	0.45%	
QC value within limits for K 766.490 Radial Recovery = 98.38%							
Mg 279.077 IEC†	482.0	4768.1 µg/L	37.20	4768.1 ppb	37.20	0.78%	
QC value within limits for Mg 279.077 IEC Recovery = 95.36%							
Mn 257.610†	125975.4	466.87 µg/L	24.962	466.87 ppb	24.962	5.35%	
QC value within limits for Mn 257.610 Recovery = 93.37%							
Mo 202.031†	4136.4	461.89 µg/L	43.694	461.89 ppb	43.694	9.46%	
QC value within limits for Mo 202.031 Recovery = 92.38%							
Na 589.592 Radial†	26982.1	9639.6 µg/L	42.78	9639.6 ppb	42.78	0.44%	
QC value within limits for Na 589.592 Radial Recovery = 96.40%							
Ni 231.604†	8007.1	474.63 µg/L	25.210	474.63 ppb	25.210	5.31%	
QC value within limits for Ni 231.604 Recovery = 94.93%							
P 214.914†	1011.9	2311.8 µg/L	196.86	2311.8 ppb	196.86	8.52%	
QC value within limits for P 214.914 Recovery = 92.47%							
Pb 220.353†	1630.6	472.13 µg/L	34.487	472.13 ppb	34.487	7.30%	
QC value within limits for Pb 220.353 Recovery = 94.43%							
S 181.975 Axial†	195.2	947.56 µg/L	63.350	947.56 ppb	63.350	6.69%	
QC value within limits for S 181.975 Axial Recovery = 94.76%							
Sb 206.836†	445.9	475.05 µg/L	38.122	475.05 ppb	38.122	8.02%	
QC value within limits for Sb 206.836 Recovery = 95.01%							
Se 196.026†	293.7	475.89 µg/L	35.149	475.89 ppb	35.149	7.39%	
QC value within limits for Se 196.026 Recovery = 95.18%							
SiO2†	21722.1	5102.8 µg/L	199.66	5102.8 ppb	199.66	3.91%	
QC value within limits for SiO2 Recovery = 95.42%							
Si 251.611†	26631.6	2390.5 µg/L	96.24	2390.5 ppb	96.24	4.03%	
QC value within limits for Si 251.611 Recovery = 95.62%							
Sn 189.927†	939.6	472.32 µg/L	47.969	472.32 ppb	47.969	10.16%	
QC value within limits for Sn 189.927 Recovery = 94.46%							
Sr 421.552†	41851.2	485.00 µg/L	1.879	485.00 ppb	1.879	0.39%	
QC value within limits for Sr 421.552 Recovery = 97.00%							
Ti 334.940†	179360.3	476.62 µg/L	17.590	476.62 ppb	17.590	3.69%	
QC value within limits for Ti 334.940 Recovery = 95.32%							
Tl 190.801†	315.1	481.95 µg/L	22.237	481.95 ppb	22.237	4.61%	
QC value within limits for Tl 190.801 Recovery = 96.39%							
U 409.014†	5078.9	483.78 µg/L	29.578	483.78 ppb	29.578	6.11%	
QC value within limits for U 409.014 Recovery = 96.76%							
V 292.402†	41105.2	482.58 µg/L	25.981	482.58 ppb	25.981	5.38%	
QC value within limits for V 292.402 Recovery = 96.52%							
Zn 213.857†	17562.3	472.38 µg/L	24.633	472.38 ppb	24.633	5.21%	
QC value within limits for Zn 213.857 Recovery = 94.48%							
All analyte(s) passed QC.							

Sequence No.: 12

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/8/2010 14:02:49

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56279.5	56279.5	101 %		14:03:22
1	Al 396.153Radial†	4.7	14.4	11.374 µg/L	11.374 ppb	14:03:22
1	Ca 317.933Radial†	195.6	5.8	5.8281 µg/L	5.8281 ppb	14:03:42
1	Fe 238.204 Radial†	16.2	0.3	2.2553 µg/L	2.2553 ppb	14:03:42
1	K 766.490 Radial†	165.4	-23.0	-18.271 µg/L	-18.271 ppb	14:03:22
1	Mg 279.077 IEC†	14.4	1.5	15.043 µg/L	15.043 ppb	14:03:42
1	Na 589.592 Radial†	490.3	14.2	5.0635 µg/L	5.0635 ppb	14:03:22
1	Sr 421.552†	59.6	21.0	0.2432 µg/L	0.2432 ppb	14:03:22
1	Sc 361.383	2008229.7	2008229.7	101.26 %		14:04:44
1	Y 371.029	1389857.4	1389857.4	101.24 %		14:04:44
1	Ag 328.068†	-544.3	-35.1	-0.3013 µg/L	-0.3013 ppb	14:04:50
1	As 188.979†	0.7	2.4	5.0570 µg/L	5.0570 ppb	14:05:10
1	B 249.677†	325.5	7.0	0.3352 µg/L	0.3352 ppb	14:05:10
1	Ba 233.527†	-18.0	3.2	0.0924 µg/L	0.0924 ppb	14:05:10
1	Be 313.107†	-2919.4	417.6	0.2979 µg/L	0.2979 ppb	14:04:50
1	Cd 226.502†	-140.1	6.7	0.1970 µg/L	0.1970 ppb	14:05:10
1	Co 228.616†	-8.6	-0.2	-0.0098 µg/L	-0.0098 ppb	14:05:10
1	Cr 267.716†	-34.7	8.4	0.1997 µg/L	0.1997 ppb	14:05:10
1	Cu 324.752†	2478.7	-40.8	-0.3104 µg/L	-0.3104 ppb	14:04:50
1	Mn 257.610†	-155.7	109.7	0.4058 µg/L	0.4058 ppb	14:05:10
1	Mo 202.031†	-4.0	2.8	0.3158 µg/L	0.3158 ppb	14:05:10
1	Ni 231.604†	302.8	-8.1	-0.4790 µg/L	-0.4790 ppb	14:05:10
1	P 214.914†	25.2	3.7	8.6588 µg/L	8.6588 ppb	14:05:10
1	Pb 220.353†	98.7	6.1	1.7594 µg/L	1.7594 ppb	14:05:10
1	S 181.975 Axial†	16.5	1.7	8.2679 µg/L	8.2679 ppb	14:05:10
1	Sb 206.836†	26.5	1.6	1.6745 µg/L	1.6745 ppb	14:05:10
1	Se 196.026†	18.9	8.0	12.718 µg/L	12.718 ppb	14:05:10
1	SiO2†	1364.9	7.9	1.8482 µg/L	1.8482 ppb	14:04:50
1	Si 251.611†	372.8	64.5	5.7918 µg/L	5.7918 ppb	14:05:10
1	Sn 189.927†	-2.9	-5.7	-2.8683 µg/L	-2.8683 ppb	14:05:10
1	Ti 334.940†	67.8	-97.9	-0.2614 µg/L	-0.2614 ppb	14:04:50
1	Tl 190.801†	-30.2	-3.8	-5.6875 µg/L	-5.6875 ppb	14:05:10
1	U 409.014†	-163.2	-57.9	-5.5299 µg/L	-5.5299 ppb	14:04:50
1	V 292.402†	-40.6	-6.8	-0.0809 µg/L	-0.0809 ppb	14:04:50
1	Zn 213.857†	515.9	8.9	0.2422 µg/L	0.2422 ppb	14:05:10
2	Sc RADIAL	56338.6	56338.6	101 %		14:03:48
2	Al 396.153Radial†	-15.0	-5.1	-4.0115 µg/L	-4.0115 ppb	14:03:48
2	Ca 317.933Radial†	189.9	-0.0	-0.0421 µg/L	-0.0421 ppb	14:04:08
2	Fe 238.204 Radial†	16.2	0.2	1.6410 µg/L	1.6410 ppb	14:04:08
2	K 766.490 Radial†	148.3	-40.0	-31.773 µg/L	-31.773 ppb	14:03:48
2	Mg 279.077 IEC†	11.7	-1.1	-10.881 µg/L	-10.881 ppb	14:04:08
2	Na 589.592 Radial†	457.0	-19.2	-6.8631 µg/L	-6.8631 ppb	14:03:48
2	Sr 421.552†	-1.3	-39.4	-0.4561 µg/L	-0.4561 ppb	14:03:48
2	Sc 361.383	2019304.1	2019304.1	101.81 %		14:05:16
2	Y 371.029	1397872.0	1397872.0	101.82 %		14:05:16
2	Ag 328.068†	-532.3	-20.4	-0.1739 µg/L	-0.1739 ppb	14:05:22
2	As 188.979†	-0.3	1.4	2.9411 µg/L	2.9411 ppb	14:05:42
2	B 249.677†	300.1	-19.7	-0.9404 µg/L	-0.9404 ppb	14:05:42
2	Ba 233.527†	-20.8	0.6	0.0171 µg/L	0.0171 ppb	14:05:42
2	Be 313.107†	-2919.5	433.3	0.3090 µg/L	0.3090 ppb	14:05:22
2	Cd 226.502†	-148.2	-0.5	-0.0159 µg/L	-0.0159 ppb	14:05:42
2	Co 228.616†	-15.3	-6.7	-0.3629 µg/L	-0.3629 ppb	14:05:42
2	Cr 267.716†	-35.2	8.2	0.1944 µg/L	0.1944 ppb	14:05:42
2	Cu 324.752†	2448.3	-84.1	-0.6398 µg/L	-0.6398 ppb	14:05:22
2	Mn 257.610†	-205.6	61.5	0.2285 µg/L	0.2285 ppb	14:05:42
2	Mo 202.031†	-4.0	2.8	0.3126 µg/L	0.3126 ppb	14:05:42
2	Ni 231.604†	310.4	-2.2	-0.1295 µg/L	-0.1295 ppb	14:05:42
2	P 214.914†	21.7	0.1	0.3459 µg/L	0.3459 ppb	14:05:42
2	Pb 220.353†	92.9	-0.2	-0.0683 µg/L	-0.0683 ppb	14:05:42

2	S 181.975 Axial†	18.7	3.8	18.331 µg/L	18.331 ppb	14:05:42
2	Sb 206.836†	29.9	4.7	5.0375 µg/L	5.0375 ppb	14:05:42
2	Se 196.026†	13.7	2.8	4.4468 µg/L	4.4468 ppb	14:05:42
2	SiO2†	1367.6	3.1	0.7319 µg/L	0.7319 ppb	14:05:22
2	Si 251.611†	328.0	18.5	1.6620 µg/L	1.6620 ppb	14:05:42
2	Sn 189.927†	2.4	-0.4	-0.2271 µg/L	-0.2271 ppb	14:05:42
2	Ti 334.940†	199.8	31.4	0.0843 µg/L	0.0843 ppb	14:05:22
2	Tl 190.801†	-25.0	1.5	2.2499 µg/L	2.2499 ppb	14:05:42
2	U 409.014†	-46.2	57.8	5.5182 µg/L	5.5182 ppb	14:05:22
2	V 292.402†	-22.5	11.2	0.1392 µg/L	0.1392 ppb	14:05:22
2	Zn 213.857†	497.2	-12.3	-0.3306 µg/L	-0.3306 ppb	14:05:42
3	Sc RADIAL	56501.3	56501.3	101 %		14:04:14
3	Al 396.153Radial†	-16.4	-6.3	-4.9998 µg/L	-4.9998 ppb	14:04:14
3	Ca 317.933Radial†	186.7	-3.8	-3.8270 µg/L	-3.8270 ppb	14:04:34
3	Fe 238.204 Radial†	16.7	0.7	6.0670 µg/L	6.0670 ppb	14:04:34
3	K 766.490 Radial†	131.2	-57.3	-45.498 µg/L	-45.498 ppb	14:04:14
3	Mg 279.077 IEC†	13.5	0.7	6.5319 µg/L	6.5319 ppb	14:04:34
3	Na 589.592 Radial†	388.4	-88.2	-31.495 µg/L	-31.495 ppb	14:04:14
3	Sr 421.552†	44.9	6.2	0.0720 µg/L	0.0720 ppb	14:04:14
3	Sc 361.383	2001547.2	2001547.2	100.92 %		14:05:48
3	Y 371.029	1383819.0	1383819.0	100.80 %		14:05:48
3	Ag 328.068†	-487.9	18.9	0.1628 µg/L	0.1628 ppb	14:05:54
3	As 188.979†	-6.7	-5.0	-10.553 µg/L	-10.553 ppb	14:06:14
3	B 249.677†	309.7	-7.5	-0.3633 µg/L	-0.3633 ppb	14:06:14
3	Ba 233.527†	-19.8	1.4	0.0393 µg/L	0.0393 ppb	14:06:14
3	Be 313.107†	-2860.2	466.6	0.3328 µg/L	0.3328 ppb	14:05:54
3	Cd 226.502†	-141.8	4.5	0.1330 µg/L	0.1330 ppb	14:06:14
3	Co 228.616†	-5.3	3.0	0.1619 µg/L	0.1619 ppb	14:06:14
3	Cr 267.716†	-30.3	12.7	0.3004 µg/L	0.3004 ppb	14:06:14
3	Cu 324.752†	2482.9	-28.5	-0.2157 µg/L	-0.2157 ppb	14:05:54
3	Mn 257.610†	-207.5	57.8	0.2146 µg/L	0.2146 ppb	14:06:14
3	Mo 202.031†	-10.2	-3.4	-0.3745 µg/L	-0.3745 ppb	14:06:14
3	Ni 231.604†	311.8	1.9	0.1116 µg/L	0.1116 ppb	14:06:14
3	P 214.914†	24.1	2.7	6.2319 µg/L	6.2319 ppb	14:06:14
3	Pb 220.353†	92.5	0.3	0.0761 µg/L	0.0761 ppb	14:06:14
3	S 181.975 Axial†	13.3	-1.5	-7.0388 µg/L	-7.0388 ppb	14:06:14
3	Sb 206.836†	20.1	-4.7	-4.9634 µg/L	-4.9634 ppb	14:06:14
3	Se 196.026†	14.7	3.8	6.1456 µg/L	6.1456 ppb	14:06:14
3	SiO2†	1368.5	15.9	3.7362 µg/L	3.7362 ppb	14:05:54
3	Si 251.611†	336.7	30.0	2.6935 µg/L	2.6935 ppb	14:06:14
3	Sn 189.927†	1.8	-1.1	-0.5411 µg/L	-0.5411 ppb	14:06:14
3	Ti 334.940†	169.2	2.8	0.0070 µg/L	0.0070 ppb	14:05:54
3	Tl 190.801†	-25.1	1.2	1.7833 µg/L	1.7833 ppb	14:06:14
3	U 409.014†	-126.8	-22.3	-2.1334 µg/L	-2.1334 ppb	14:05:54
3	V 292.402†	-27.6	5.9	0.0653 µg/L	0.0653 ppb	14:05:54
3	Zn 213.857†	495.8	-9.3	-0.2527 µg/L	-0.2527 ppb	14:06:14

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	2009693.6	101.33 %		0.452				0.45%
Sc RADIAL	56373.1	101 %		0.2				0.20%
Y 371.029	1390516.1	101.28 %		0.513				0.51%
Ag 328.068†	-12.2	-0.1041 µg/L		0.23981	-0.1041 ppb		0.23981	230.33%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1.0	0.7875 µg/L		9.18136	0.7875 ppb		9.18136	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.4	-0.8518 µg/L		8.46829	-0.8518 ppb		8.46829	994.20%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-6.7	-0.3228 µg/L		0.63877	-0.3228 ppb		0.63877	197.87%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	1.7	0.0496 µg/L		0.03869	0.0496 ppb		0.03869	78.02%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	439.2	0.3132 µg/L		0.01781	0.3132 ppb		0.01781	5.69%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.6	0.6530 µg/L		4.86494	0.6530 ppb		4.86494	745.05%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	3.5	0.1047 µg/L		0.10924	0.1047 ppb		0.10924	104.31%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-1.3	-0.0702 µg/L		0.26758	-0.0702 ppb		0.26758	380.97%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated			
	9.8	0.2315 µg/L	0.05972	0.2315 ppb	0.05972 25.80%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated			
	-51.2	-0.3886 µg/L	0.22257	-0.3886 ppb	0.22257 57.27%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated			
	0.4	3.3211 µg/L	2.39776	3.3211 ppb	2.39776 72.20%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated			
	-40.1	-31.847 µg/L	13.6134	-31.847 ppb	13.6134 42.75%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated			
	0.4	3.5646 µg/L	13.21432	3.5646 ppb	13.21432 370.71%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated			
	76.3	0.2830 µg/L	0.10663	0.2830 ppb	0.10663 37.68%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated			
	0.8	0.0846 µg/L	0.39764	0.0846 ppb	0.39764 469.86%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated			
	-31.1	-11.098 µg/L	18.6437	-11.098 ppb	18.6437 167.99%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated			
	-2.8	-0.1656 µg/L	0.29693	-0.1656 ppb	0.29693 179.27%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated			
	2.2	5.0789 µg/L	4.27473	5.0789 ppb	4.27473 84.17%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated			
	2.0	0.5890 µg/L	1.01611	0.5890 ppb	1.01611 172.50%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated			
	1.3	6.5199 µg/L	12.77467	6.5199 ppb	12.77467 195.93%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated			
	0.6	0.5829 µg/L	5.08900	0.5829 ppb	5.08900 873.09%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated			
	4.9	7.7703 µg/L	4.36856	7.7703 ppb	4.36856 56.22%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated			
	9.0	2.1054 µg/L	1.51857	2.1054 ppb	1.51857 72.13%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated			
	37.7	3.3824 µg/L	2.14937	3.3824 ppb	2.14937 63.54%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated			
	-2.4	-1.2122 µg/L	1.44284	-1.2122 ppb	1.44284 119.03%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated			
	-4.1	-0.0470 µg/L	0.36452	-0.0470 ppb	0.36452 775.52%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated			
	-21.2	-0.0567 µg/L	0.18144	-0.0567 ppb	0.18144 319.84%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated			
	-0.4	-0.5514 µg/L	4.45409	-0.5514 ppb	4.45409 807.71%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated			
	-7.5	-0.7151 µg/L	5.65897	-0.7151 ppb	5.65897 791.39%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated			
	3.5	0.0412 µg/L	0.11202	0.0412 ppb	0.11202 271.96%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated			
	-4.2	-0.1137 µg/L	0.31068	-0.1137 ppb	0.31068 273.26%
	QC value within limits for Zn 213.857	Recovery = Not calculated			

All analyte(s) passed QC.

Sequence No.: 23

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/8/2010 14:43:11

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	54935.4	54935.4	98.6 %		14:43:50
1	Al 396.153Radial†	6396.2	6497.0	5121.3 µg/L	5121.3 ppb	14:43:50
1	Ca 317.933Radial†	5162.6	5048.2	5112.6 µg/L	5112.6 ppb	14:44:10
1	Fe 238.204 Radial†	588.9	581.4	5171.7 µg/L	5171.7 ppb	14:44:10
1	K 766.490 Radial†	6737.9	6647.0	5277.0 µg/L	5277.0 ppb	14:43:50
1	Mg 279.077 IEC†	538.4	533.4	5276.1 µg/L	5276.1 ppb	14:44:10
1	Na 589.592 Radial†	29252.6	29197.3	10431 µg/L	10431 ppb	14:43:50
1	Sr 421.552†	44901.4	45501.8	527.30 µg/L	527.30 ppb	14:43:50
1	Sc 361.383	1943081.4	1943081.4	97.971 %		14:45:14
1	Y 371.029	1338445.1	1338445.1	97.492 %		14:45:14
1	Ag 328.068†	59475.3	61209.5	528.52 µg/L	528.52 ppb	14:45:19
1	As 188.979†	249.7	256.6	543.17 µg/L	543.17 ppb	14:45:40
1	B 249.677†	10867.3	10778.0	513.48 µg/L	513.48 ppb	14:45:19
1	Ba 233.527†	17947.1	18339.8	523.46 µg/L	523.46 ppb	14:45:19
1	Be 313.107†	718751.1	736938.0	525.34 µg/L	525.34 ppb	14:45:14
1	Cd 226.502†	17086.9	17585.8	521.43 µg/L	521.43 ppb	14:45:19
1	Co 228.616†	9604.3	9811.5	527.69 µg/L	527.69 ppb	14:45:19
1	Cr 267.716†	21892.7	22388.9	530.64 µg/L	530.64 ppb	14:45:19
1	Cu 324.752†	70909.5	69889.3	532.32 µg/L	532.32 ppb	14:45:19
1	Mn 257.610†	138647.4	141782.4	525.44 µg/L	525.44 ppb	14:45:14
1	Mo 202.031†	4651.2	4754.3	530.88 µg/L	530.88 ppb	14:45:40
1	Ni 231.604†	9010.2	8889.7	526.95 µg/L	526.95 ppb	14:45:19
1	P 214.914†	1158.6	1161.3	2655.4 µg/L	2655.4 ppb	14:45:40
1	Pb 220.353†	1898.2	1846.1	534.58 µg/L	534.58 ppb	14:45:40
1	S 181.975 Axial†	232.0	222.2	1078.3 µg/L	1078.3 ppb	14:45:40
1	Sb 206.836†	526.7	513.0	546.61 µg/L	546.61 ppb	14:45:40
1	Se 196.026†	338.8	335.1	542.63 µg/L	542.63 ppb	14:45:40
1	SiO2†	24722.9	23894.8	5613.2 µg/L	5613.2 ppb	14:45:19
1	Si 251.611†	28946.3	29242.1	2624.8 µg/L	2624.8 ppb	14:45:19
1	Sn 189.927†	1070.3	1089.6	547.74 µg/L	547.74 ppb	14:45:40
1	Ti 334.940†	196451.6	200355.5	532.41 µg/L	532.41 ppb	14:45:14
1	Tl 190.801†	316.2	348.9	533.68 µg/L	533.68 ppb	14:45:40
1	U 409.014†	5368.9	5583.3	531.82 µg/L	531.82 ppb	14:45:19
1	V 292.402†	44598.7	45555.7	534.99 µg/L	534.99 ppb	14:45:19
1	Zn 213.857†	19632.2	19538.2	525.54 µg/L	525.54 ppb	14:45:19
2	Sc RADIAL	55161.9	55161.9	99.0 %		14:44:16
2	Al 396.153Radial†	6563.8	6639.6	5234.1 µg/L	5234.1 ppb	14:44:16
2	Ca 317.933Radial†	5130.4	4994.1	5057.9 µg/L	5057.9 ppb	14:44:36
2	Fe 238.204 Radial†	592.7	582.8	5183.7 µg/L	5183.7 ppb	14:44:36
2	K 766.490 Radial†	6896.1	6778.7	5381.6 µg/L	5381.6 ppb	14:44:16
2	Mg 279.077 IEC†	534.0	526.7	5209.9 µg/L	5209.9 ppb	14:44:36
2	Na 589.592 Radial†	29724.2	29551.9	10558 µg/L	10558 ppb	14:44:16
2	Sr 421.552†	45884.3	46307.6	536.64 µg/L	536.64 ppb	14:44:16
2	Sc 361.383	1945772.6	1945772.6	98.107 %		14:45:47
2	Y 371.029	1340534.5	1340534.5	97.644 %		14:45:47
2	Ag 328.068†	59665.5	61319.4	529.48 µg/L	529.48 ppb	14:45:53
2	As 188.979†	245.0	251.4	532.28 µg/L	532.28 ppb	14:46:13
2	B 249.677†	10895.0	10790.8	514.09 µg/L	514.09 ppb	14:45:53
2	Ba 233.527†	18020.2	18389.0	524.87 µg/L	524.87 ppb	14:45:53
2	Be 313.107†	725583.9	742888.0	529.58 µg/L	529.58 ppb	14:45:47
2	Cd 226.502†	17152.2	17628.3	522.68 µg/L	522.68 ppb	14:45:53
2	Co 228.616†	9637.7	9832.0	528.78 µg/L	528.78 ppb	14:45:53
2	Cr 267.716†	21977.0	22443.9	531.94 µg/L	531.94 ppb	14:45:53
2	Cu 324.752†	71216.6	70102.2	533.94 µg/L	533.94 ppb	14:45:53
2	Mn 257.610†	140087.6	143054.7	530.16 µg/L	530.16 ppb	14:45:47
2	Mo 202.031†	4626.0	4722.0	527.28 µg/L	527.28 ppb	14:46:13
2	Ni 231.604†	9051.4	8919.0	528.68 µg/L	528.68 ppb	14:45:53
2	P 214.914†	1145.9	1146.8	2621.2 µg/L	2621.2 ppb	14:46:13
2	Pb 220.353†	1899.4	1844.6	534.14 µg/L	534.14 ppb	14:46:13

2	S 181.975 Axial†	228.4	218.2	1059.2 µg/L	1059.2 ppb	14:46:13
2	Sb 206.836†	521.9	507.4	540.63 µg/L	540.63 ppb	14:46:13
2	Se 196.026†	336.7	332.5	538.56 µg/L	538.56 ppb	14:46:13
2	SiO2†	24853.3	23992.9	5636.2 µg/L	5636.2 ppb	14:45:53
2	Si 251.611†	29098.2	29356.2	2635.0 µg/L	2635.0 ppb	14:45:53
2	Sn 189.927†	1059.7	1077.3	541.53 µg/L	541.53 ppb	14:46:13
2	Ti 334.940†	198152.7	201812.1	536.29 µg/L	536.29 ppb	14:45:47
2	Tl 190.801†	317.6	349.7	535.10 µg/L	535.10 ppb	14:46:13
2	U 409.014†	5380.4	5587.5	532.22 µg/L	532.22 ppb	14:45:53
2	V 292.402†	44830.4	45729.0	536.97 µg/L	536.97 ppb	14:45:53
2	Zn 213.857†	19737.2	19617.5	527.68 µg/L	527.68 ppb	14:45:53
3	Sc RADIAL	54486.7	54486.7	97.8 %		14:44:42
3	Al 396.153Radial†	6483.4	6639.6	5235.6 µg/L	5235.6 ppb	14:44:42
3	Ca 317.933Radial†	5172.3	5101.1	5166.3 µg/L	5166.3 ppb	14:45:02
3	Fe 238.204 Radial†	590.4	588.0	5228.7 µg/L	5228.7 ppb	14:45:02
3	K 766.490 Radial†	6801.6	6768.4	5373.5 µg/L	5373.5 ppb	14:44:42
3	Mg 279.077 IEC†	543.5	543.0	5370.4 µg/L	5370.4 ppb	14:45:02
3	Na 589.592 Radial†	29496.7	29691.3	10607 µg/L	10607 ppb	14:44:42
3	Sr 421.552†	45328.8	46313.9	536.71 µg/L	536.71 ppb	14:44:42
3	Sc 361.383	1930530.8	1930530.8	97.338 %		14:46:20
3	Y 371.029	1330481.5	1330481.5	96.912 %		14:46:20
3	Ag 328.068†	56845.4	58902.3	508.47 µg/L	508.47 ppb	14:46:26
3	As 188.979†	212.4	219.9	465.48 µg/L	465.48 ppb	14:46:46
3	B 249.677†	10328.8	10296.9	490.36 µg/L	490.36 ppb	14:46:26
3	Ba 233.527†	16656.9	17133.4	489.02 µg/L	489.02 ppb	14:46:26
3	Be 313.107†	676016.9	697804.6	497.45 µg/L	497.45 ppb	14:46:20
3	Cd 226.502†	15847.1	16425.5	486.97 µg/L	486.97 ppb	14:46:26
3	Co 228.616†	8782.9	9031.4	485.67 µg/L	485.67 ppb	14:46:26
3	Cr 267.716†	19490.2	20065.9	475.59 µg/L	475.59 ppb	14:46:26
3	Cu 324.752†	65491.3	64793.5	493.57 µg/L	493.57 ppb	14:46:26
3	Mn 257.610†	130748.2	134587.2	498.81 µg/L	498.81 ppb	14:46:20
3	Mo 202.031†	3918.5	4032.4	450.30 µg/L	450.30 ppb	14:46:46
3	Ni 231.604†	8269.8	8188.8	485.41 µg/L	485.41 ppb	14:46:26
3	P 214.914†	995.5	1001.5	2285.6 µg/L	2285.6 ppb	14:46:46
3	Pb 220.353†	1675.5	1629.9	471.87 µg/L	471.87 ppb	14:46:46
3	S 181.975 Axial†	209.0	200.1	971.49 µg/L	971.49 ppb	14:46:46
3	Sb 206.836†	453.0	440.8	469.29 µg/L	469.29 ppb	14:46:46
3	Se 196.026†	286.5	283.6	460.48 µg/L	460.48 ppb	14:46:46
3	SiO2†	23345.4	22643.7	5319.2 µg/L	5319.2 ppb	14:46:26
3	Si 251.611†	27186.6	27626.5	2479.8 µg/L	2479.8 ppb	14:46:26
3	Sn 189.927†	879.0	900.2	452.55 µg/L	452.55 ppb	14:46:46
3	Ti 334.940†	183606.4	188462.7	500.78 µg/L	500.78 ppb	14:46:20
3	Tl 190.801†	291.5	325.5	498.12 µg/L	498.12 ppb	14:46:46
3	U 409.014†	4832.3	5067.7	482.60 µg/L	482.60 ppb	14:46:26
3	V 292.402†	40719.2	41866.1	491.39 µg/L	491.39 ppb	14:46:26
3	Zn 213.857†	18092.9	18087.1	486.47 µg/L	486.47 ppb	14:46:26

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1939795.0	97.805 %	0.4102			0.42%
Sc RADIAL	54861.3	98.5 %	0.62			0.63%
Y 371.029	1336487.0	97.349 %	0.3864			0.40%
Ag 328.068†	60477.0	522.16 µg/L	11.865	522.16 ppb	11.865	2.27%
QC value within limits for Ag 328.068 Recovery = 104.43%						
Al 396.153Radial†	6592.1	5197.0 µg/L	65.55	5197.0 ppb	65.55	1.26%
QC value within limits for Al 396.153Radial Recovery = 103.94%						
As 188.979†	242.6	513.64 µg/L	42.066	513.64 ppb	42.066	8.19%
QC value within limits for As 188.979 Recovery = 102.73%						
B 249.677†	10621.9	505.98 µg/L	13.529	505.98 ppb	13.529	2.67%
QC value within limits for B 249.677 Recovery = 101.20%						
Ba 233.527†	17954.1	512.45 µg/L	20.306	512.45 ppb	20.306	3.96%
QC value within limits for Ba 233.527 Recovery = 102.49%						
Be 313.107†	725876.9	517.46 µg/L	17.459	517.46 ppb	17.459	3.37%
QC value within limits for Be 313.107 Recovery = 103.49%						
Ca 317.933Radial†	5047.8	5112.3 µg/L	54.20	5112.3 ppb	54.20	1.06%
QC value within limits for Ca 317.933Radial Recovery = 102.25%						
Cd 226.502†	17213.2	510.36 µg/L	20.266	510.36 ppb	20.266	3.97%
QC value within limits for Cd 226.502 Recovery = 102.07%						
Co 228.616†	9558.3	514.04 µg/L	24.579	514.04 ppb	24.579	4.78%

QC value within limits for Co 228.616 Recovery = 102.81%							
Cr 267.716†	21632.9	512.72 µg/L	32.166	512.72 ppb	32.166	6.27%	
QC value within limits for Cr 267.716 Recovery = 102.54%							
Cu 324.752†	68261.7	519.94 µg/L	22.856	519.94 ppb	22.856	4.40%	
QC value within limits for Cu 324.752 Recovery = 103.99%							
Fe 238.204 Radial†	584.1	5194.7 µg/L	30.02	5194.7 ppb	30.02	0.58%	
QC value within limits for Fe 238.204 Radial Recovery = 103.89%							
K 766.490 Radial†	6731.4	5344.0 µg/L	58.17	5344.0 ppb	58.17	1.09%	
QC value within limits for K 766.490 Radial Recovery = 106.88%							
Mg 279.077 IEC†	534.4	5285.5 µg/L	80.67	5285.5 ppb	80.67	1.53%	
QC value within limits for Mg 279.077 IEC Recovery = 105.71%							
Mn 257.610†	139808.1	518.14 µg/L	16.905	518.14 ppb	16.905	3.26%	
QC value within limits for Mn 257.610 Recovery = 103.63%							
Mo 202.031†	4502.9	502.82 µg/L	45.517	502.82 ppb	45.517	9.05%	
QC value within limits for Mo 202.031 Recovery = 100.56%							
Na 589.592 Radial†	29480.2	10532 µg/L	91.0	10532 ppb	91.0	0.86%	
QC value within limits for Na 589.592 Radial Recovery = 105.32%							
Ni 231.604†	8665.8	513.68 µg/L	24.500	513.68 ppb	24.500	4.77%	
QC value within limits for Ni 231.604 Recovery = 102.74%							
P 214.914†	1103.2	2520.7 µg/L	204.37	2520.7 ppb	204.37	8.11%	
QC value within limits for P 214.914 Recovery = 100.83%							
Pb 220.353†	1773.5	513.53 µg/L	36.078	513.53 ppb	36.078	7.03%	
QC value within limits for Pb 220.353 Recovery = 102.71%							
S 181.975 Axial†	213.5	1036.3 µg/L	56.97	1036.3 ppb	56.97	5.50%	
QC value within limits for S 181.975 Axial Recovery = 103.63%							
Sb 206.836†	487.0	518.84 µg/L	43.019	518.84 ppb	43.019	8.29%	
QC value within limits for Sb 206.836 Recovery = 103.77%							
Se 196.026†	317.0	513.89 µg/L	46.298	513.89 ppb	46.298	9.01%	
QC value within limits for Se 196.026 Recovery = 102.78%							
SiO2†	23510.5	5522.9 µg/L	176.72	5522.9 ppb	176.72	3.20%	
QC value within limits for SiO2 Recovery = 103.28%							
Si 251.611†	28741.6	2579.9 µg/L	86.83	2579.9 ppb	86.83	3.37%	
QC value within limits for Si 251.611 Recovery = 103.19%							
Sn 189.927†	1022.4	513.94 µg/L	53.259	513.94 ppb	53.259	10.36%	
QC value within limits for Sn 189.927 Recovery = 102.79%							
Sr 421.552†	46041.1	533.55 µg/L	5.413	533.55 ppb	5.413	1.01%	
QC value within limits for Sr 421.552 Recovery = 106.71%							
Ti 334.940†	196876.8	523.16 µg/L	19.478	523.16 ppb	19.478	3.72%	
QC value within limits for Ti 334.940 Recovery = 104.63%							
Tl 190.801†	341.4	522.30 µg/L	20.954	522.30 ppb	20.954	4.01%	
QC value within limits for Tl 190.801 Recovery = 104.46%							
U 409.014†	5412.8	515.55 µg/L	28.535	515.55 ppb	28.535	5.53%	
QC value within limits for U 409.014 Recovery = 103.11%							
V 292.402†	44383.6	521.12 µg/L	25.764	521.12 ppb	25.764	4.94%	
QC value within limits for V 292.402 Recovery = 104.22%							
Zn 213.857†	19080.9	513.23 µg/L	23.201	513.23 ppb	23.201	4.52%	
QC value within limits for Zn 213.857 Recovery = 102.65%							
All analyte(s) passed QC.							

Sequence No.: 24

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/8/2010 14:46:57

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	53780.1	53780.1	96.5 %		14:47:29
1	Al 396.153Radial†	-16.6	-7.4	-5.8320 µg/L	-5.8320 ppb	14:47:29
1	Ca 317.933Radial†	189.5	8.4	8.5488 µg/L	8.5488 ppb	14:47:50
1	Fe 238.204 Radial†	17.3	2.1	18.574 µg/L	18.574 ppb	14:47:50
1	K 766.490 Radial†	176.5	-3.8	-3.0404 µg/L	-3.0404 ppb	14:47:29
1	Mg 279.077 IEC†	10.7	-1.6	-16.180 µg/L	-16.180 ppb	14:47:50
1	Na 589.592 Radial†	471.2	17.0	6.0567 µg/L	6.0567 ppb	14:47:29
1	Sr 421.552†	35.0	-1.8	-0.0205 µg/L	-0.0205 ppb	14:47:29
1	Sc 361.383	1938132.9	1938132.9	97.721 %		14:48:52
1	Y 371.029	1341043.9	1341043.9	97.681 %		14:48:52
1	Ag 328.068†	-546.6	-56.9	-0.4854 µg/L	-0.4854 ppb	14:48:57
1	As 188.979†	-1.5	0.1	0.2482 µg/L	0.2482 ppb	14:49:18
1	B 249.677†	303.9	-3.5	-0.1756 µg/L	-0.1756 ppb	14:49:18
1	Ba 233.527†	-17.2	3.4	0.0962 µg/L	0.0962 ppb	14:49:18
1	Be 313.107†	-3159.6	67.5	0.0481 µg/L	0.0481 ppb	14:48:57
1	Cd 226.502†	-147.7	-6.2	-0.1835 µg/L	-0.1835 ppb	14:49:18
1	Co 228.616†	-4.5	3.7	0.1975 µg/L	0.1975 ppb	14:49:18
1	Cr 267.716†	-45.0	-3.3	-0.0788 µg/L	-0.0788 ppb	14:49:18
1	Cu 324.752†	2536.4	106.7	0.8142 µg/L	0.8142 ppb	14:48:57
1	Mn 257.610†	-193.5	65.5	0.2456 µg/L	0.2456 ppb	14:49:18
1	Mo 202.031†	-9.5	-3.0	-0.3299 µg/L	-0.3299 ppb	14:49:18
1	Ni 231.604†	317.2	17.4	1.0351 µg/L	1.0351 ppb	14:49:18
1	P 214.914†	15.1	-5.8	-13.566 µg/L	-13.566 ppb	14:49:18
1	Pb 220.353†	85.1	-4.3	-1.2594 µg/L	-1.2594 ppb	14:49:18
1	S 181.975 Axial†	17.4	3.1	15.283 µg/L	15.283 ppb	14:49:18
1	Sb 206.836†	22.6	-1.5	-1.6198 µg/L	-1.6198 ppb	14:49:18
1	Se 196.026†	8.2	-2.4	-3.6995 µg/L	-3.6995 ppb	14:49:18
1	SiO2†	1351.3	42.6	10.017 µg/L	10.017 ppb	14:48:57
1	Si 251.611†	337.0	41.2	3.7013 µg/L	3.7013 ppb	14:49:18
1	Sn 189.927†	-2.1	-5.0	-2.5254 µg/L	-2.5254 ppb	14:49:18
1	Ti 334.940†	155.1	-6.1	-0.0149 µg/L	-0.0149 ppb	14:48:57
1	Tl 190.801†	-20.8	4.8	7.2292 µg/L	7.2292 ppb	14:49:18
1	U 409.014†	-26.4	76.2	7.2687 µg/L	7.2687 ppb	14:48:57
1	V 292.402†	-16.4	16.6	0.1994 µg/L	0.1994 ppb	14:48:57
1	Zn 213.857†	547.4	59.6	1.6081 µg/L	1.6081 ppb	14:49:18
2	Sc RADIAL	54159.0	54159.0	97.2 %		14:47:55
2	Al 396.153Radial†	-12.7	-3.3	-2.5857 µg/L	-2.5857 ppb	14:47:55
2	Ca 317.933Radial†	187.0	4.5	4.5972 µg/L	4.5972 ppb	14:48:16
2	Fe 238.204 Radial†	18.5	3.2	28.828 µg/L	28.828 ppb	14:48:16
2	K 766.490 Radial†	151.4	-31.0	-24.609 µg/L	-24.609 ppb	14:47:55
2	Mg 279.077 IEC†	11.0	-1.3	-13.214 µg/L	-13.214 ppb	14:48:16
2	Na 589.592 Radial†	479.6	22.2	7.9154 µg/L	7.9154 ppb	14:47:55
2	Sr 421.552†	38.5	1.6	0.0188 µg/L	0.0188 ppb	14:47:55
2	Sc 361.383	1916247.6	1916247.6	96.618 %		14:49:24
2	Y 371.029	1326105.9	1326105.9	96.593 %		14:49:24
2	Ag 328.068†	-492.4	-7.2	-0.0609 µg/L	-0.0609 ppb	14:49:29
2	As 188.979†	1.3	3.0	6.4483 µg/L	6.4483 ppb	14:49:50
2	B 249.677†	318.1	14.8	0.6917 µg/L	0.6917 ppb	14:49:50
2	Ba 233.527†	-26.6	-6.6	-0.1869 µg/L	-0.1869 ppb	14:49:50
2	Be 313.107†	-3141.7	49.1	0.0350 µg/L	0.0350 ppb	14:49:29
2	Cd 226.502†	-143.6	-3.6	-0.1092 µg/L	-0.1092 ppb	14:49:50
2	Co 228.616†	-5.6	2.4	0.1317 µg/L	0.1317 ppb	14:49:50
2	Cr 267.716†	-28.9	12.8	0.3035 µg/L	0.3035 ppb	14:49:50
2	Cu 324.752†	2628.9	232.1	1.7693 µg/L	1.7693 ppb	14:49:29
2	Mn 257.610†	-179.3	77.8	0.2926 µg/L	0.2926 ppb	14:49:50
2	Mo 202.031†	-7.2	-0.7	-0.0804 µg/L	-0.0804 ppb	14:49:50
2	Ni 231.604†	307.3	10.9	0.6498 µg/L	0.6498 ppb	14:49:50
2	P 214.914†	24.2	3.8	8.7127 µg/L	8.7127 ppb	14:49:50
2	Pb 220.353†	95.9	7.9	2.2684 µg/L	2.2684 ppb	14:49:50

2	S 181.975 Axial†	20.0	6.1	29.572 µg/L	29.572 ppb	14:49:50
2	Sb 206.836†	29.1	5.5	5.8309 µg/L	5.8309 ppb	14:49:50
2	Se 196.026†	18.9	8.8	14.139 µg/L	14.139 ppb	14:49:50
2	SiO2†	1385.5	93.9	22.059 µg/L	22.059 ppb	14:49:29
2	Si 251.611†	335.5	43.6	3.9152 µg/L	3.9152 ppb	14:49:50
2	Sn 189.927†	0.4	-2.4	-1.2025 µg/L	-1.2025 ppb	14:49:50
2	Ti 334.940†	186.7	28.4	0.0768 µg/L	0.0768 ppb	14:49:29
2	Tl 190.801†	-31.6	-6.7	-10.102 µg/L	-10.102 ppb	14:49:50
2	U 409.014†	-88.0	12.2	1.1560 µg/L	1.1560 ppb	14:49:29
2	V 292.402†	-43.2	-11.4	-0.1272 µg/L	-0.1272 ppb	14:49:29
2	Zn 213.857†	541.3	59.7	1.6101 µg/L	1.6101 ppb	14:49:50
3	Sc RADIAL	54126.4	54126.4	97.1 %		14:48:21
3	Al 396.153Radial†	-12.6	-3.1	-2.4816 µg/L	-2.4816 ppb	14:48:21
3	Ca 317.933Radial†	186.8	4.4	4.4669 µg/L	4.4669 ppb	14:48:42
3	Fe 238.204 Radial†	16.0	0.7	6.1429 µg/L	6.1429 ppb	14:48:42
3	K 766.490 Radial†	148.4	-34.0	-26.999 µg/L	-26.999 ppb	14:48:21
3	Mg 279.077 IEC†	10.2	-2.2	-21.308 µg/L	-21.308 ppb	14:48:42
3	Na 589.592 Radial†	468.0	10.6	3.7780 µg/L	3.7780 ppb	14:48:21
3	Sr 421.552†	49.2	12.6	0.1457 µg/L	0.1457 ppb	14:48:21
3	Sc 361.383	1916487.6	1916487.6	96.630 %		14:49:56
3	Y 371.029	1326452.0	1326452.0	96.618 %		14:49:56
3	Ag 328.068†	-501.0	-16.1	-0.1370 µg/L	-0.1370 ppb	14:50:02
3	As 188.979†	4.1	5.9	12.552 µg/L	12.552 ppb	14:50:22
3	B 249.677†	303.3	-0.6	-0.0300 µg/L	-0.0300 ppb	14:50:22
3	Ba 233.527†	-15.4	5.0	0.1434 µg/L	0.1434 ppb	14:50:22
3	Be 313.107†	-3147.0	44.0	0.0314 µg/L	0.0314 ppb	14:50:02
3	Cd 226.502†	-147.4	-7.5	-0.2225 µg/L	-0.2225 ppb	14:50:22
3	Co 228.616†	1.6	10.0	0.5363 µg/L	0.5363 ppb	14:50:22
3	Cr 267.716†	-49.6	-8.6	-0.2038 µg/L	-0.2038 ppb	14:50:22
3	Cu 324.752†	2549.7	149.8	1.1403 µg/L	1.1403 ppb	14:50:02
3	Mn 257.610†	-179.9	77.3	0.2878 µg/L	0.2878 ppb	14:50:22
3	Mo 202.031†	-3.6	3.0	0.3341 µg/L	0.3341 ppb	14:50:22
3	Ni 231.604†	302.2	5.6	0.3333 µg/L	0.3333 ppb	14:50:22
3	P 214.914†	17.7	-2.9	-6.8241 µg/L	-6.8241 ppb	14:50:22
3	Pb 220.353†	92.5	4.3	1.2351 µg/L	1.2351 ppb	14:50:22
3	S 181.975 Axial†	18.3	4.3	21.045 µg/L	21.045 ppb	14:50:22
3	Sb 206.836†	21.7	-2.1	-2.2434 µg/L	-2.2434 ppb	14:50:22
3	Se 196.026†	23.0	13.1	20.894 µg/L	20.894 ppb	14:50:22
3	SiO2†	1348.5	55.4	13.014 µg/L	13.014 ppb	14:50:02
3	Si 251.611†	327.6	35.4	3.1755 µg/L	3.1755 ppb	14:50:22
3	Sn 189.927†	0.8	-2.0	-1.0028 µg/L	-1.0028 ppb	14:50:22
3	Ti 334.940†	125.8	-34.7	-0.0905 µg/L	-0.0905 ppb	14:50:02
3	Tl 190.801†	-24.7	0.5	0.8157 µg/L	0.8157 ppb	14:50:22
3	U 409.014†	-114.7	-15.4	-1.4740 µg/L	-1.4740 ppb	14:50:02
3	V 292.402†	-28.8	3.5	0.0424 µg/L	0.0424 ppb	14:50:02
3	Zn 213.857†	530.2	48.1	1.3002 µg/L	1.3002 ppb	14:50:22

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1923622.7	96.990 %		0.6336			0.65%
Sc RADIAL	54021.9	97.0 %		0.38			0.39%
Y 371.029	1331200.6	96.964 %		0.6211			0.64%
Ag 328.068†	-26.7	-0.2278 µg/L		0.22632	-0.2278 ppb	0.22632	99.37%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-4.6	-3.6331 µg/L		1.90501	-3.6331 ppb	1.90501	52.43%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	3.0	6.4163 µg/L		6.15211	6.4163 ppb	6.15211	95.88%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	3.6	0.1620 µg/L		0.46444	0.1620 ppb	0.46444	286.63%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	0.6	0.0176 µg/L		0.17863	0.0176 ppb	0.17863	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	53.6	0.0382 µg/L		0.00880	0.0382 ppb	0.00880	23.03%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	5.8	5.8710 µg/L		2.32000	5.8710 ppb	2.32000	39.52%
QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	-5.7	-0.1717 µg/L		0.05758	-0.1717 ppb	0.05758	33.53%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	5.4	0.2885 µg/L		0.21711	0.2885 ppb	0.21711	75.26%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	0.3	0.0070 µg/L	0.26430	0.0070 ppb	0.26430	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	162.9	1.2412 µg/L	0.48552	1.2412 ppb	0.48552	39.12%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	2.0	17.848 µg/L	11.3601	17.848 ppb	11.3601	63.65%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-22.9	-18.216 µg/L	13.1967	-18.216 ppb	13.1967	72.45%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-1.7	-16.901 µg/L	4.0945	-16.901 ppb	4.0945	24.23%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	73.5	0.2753 µg/L	0.02587	0.2753 ppb	0.02587	9.40%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-0.2	-0.0254 µg/L	0.33540	-0.0254 ppb	0.33540	>999.9%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	16.6	5.9167 µg/L	2.07227	5.9167 ppb	2.07227	35.02%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	11.3	0.6727 µg/L	0.35144	0.6727 ppb	0.35144	52.24%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-1.6	-3.8923 µg/L	11.42484	-3.8923 ppb	11.42484	293.52%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	2.6	0.7480 µg/L	1.81363	0.7480 ppb	1.81363	242.45%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	4.5	21.967 µg/L	7.1887	21.967 ppb	7.1887	32.73%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	0.6	0.6559 µg/L	4.49253	0.6559 ppb	4.49253	684.94%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	6.5	10.445 µg/L	12.7063	10.445 ppb	12.7063	121.66%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	64.0	15.030 µg/L	6.2687	15.030 ppb	6.2687	41.71%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	40.1	3.5974 µg/L	0.38065	3.5974 ppb	0.38065	10.58%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-3.1	-1.5769 µg/L	0.82748	-1.5769 ppb	0.82748	52.48%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	4.1	0.0480 µg/L	0.08690	0.0480 ppb	0.08690	181.03%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-4.1	-0.0095 µg/L	0.08374	-0.0095 ppb	0.08374	877.63%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.5	-0.6857 µg/L	8.76259	-0.6857 ppb	8.76259	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	24.3	2.3169 µg/L	4.48545	2.3169 ppb	4.48545	193.60%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	2.9	0.0382 µg/L	0.16335	0.0382 ppb	0.16335	427.59%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	55.8	1.5061 µg/L	0.17837	1.5061 ppb	0.17837	11.84%
QC value within limits for Zn 213.857 Recovery = Not calculated						
All analyte(s) passed QC.						

Sequence No.: 25

Sample ID: 1202021583|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 321

Date Collected: 2/8/2010 14:50:32

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202021583|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	52738.7	52738.7	94.7 %		14:51:11
1	Al 396.153Radial†	-20.7	-12.0	-9.4985 µg/L	-9.4985 ppb	14:51:11
1	Ca 317.933Radial†	193.1	16.2	16.377 µg/L	16.377 ppb	14:51:31
1	Fe 238.204 Radial†	25.3	10.9	96.871 µg/L	96.871 ppb	14:51:31
1	K 766.490 Radial†	128.4	-51.1	-40.570 µg/L	-40.570 ppb	14:51:11
1	Mg 279.077 IEC†	10.4	-1.7	-17.031 µg/L	-17.031 ppb	14:51:31
1	Na 589.592 Radial†	428.5	-18.5	-6.5991 µg/L	-6.5991 ppb	14:51:11
1	Sr 421.552†	27.5	-9.0	-0.1039 µg/L	-0.1039 ppb	14:51:11
1	Sc 361.383	1903094.8	1903094.8	95.955 %		14:52:33
1	Y 371.029	1313517.0	1313517.0	95.676 %		14:52:33
1	Ag 328.068†	-499.1	-17.8	-0.1443 µg/L	-0.1443 ppb	14:52:39
1	As 188.979†	1.6	3.4	7.1944 µg/L	7.1944 ppb	14:52:59
1	B 249.677†	305.7	4.1	0.1478 µg/L	0.1478 ppb	14:52:59
1	Ba 233.527†	-23.2	-3.2	-0.0902 µg/L	-0.0902 ppb	14:52:59
1	Be 313.107†	-3255.1	-91.5	-0.0654 µg/L	-0.0654 ppb	14:52:39
1	Cd 226.502†	-149.5	-10.8	-0.3291 µg/L	-0.3291 ppb	14:52:59
1	Co 228.616†	-10.3	-2.4	-0.1311 µg/L	-0.1311 ppb	14:52:59
1	Cr 267.716†	-18.6	23.4	0.5538 µg/L	0.5538 ppb	14:52:59
1	Cu 324.752†	2514.7	131.9	1.0168 µg/L	1.0168 ppb	14:52:39
1	Mn 257.610†	2.4	266.0	0.9983 µg/L	0.9983 ppb	14:52:59
1	Mo 202.031†	-10.6	-4.3	-0.4761 µg/L	-0.4761 ppb	14:52:59
1	Ni 231.604†	311.7	17.7	1.0513 µg/L	1.0513 ppb	14:52:59
1	P 214.914†	25.1	4.9	11.288 µg/L	11.288 ppb	14:52:59
1	Pb 220.353†	91.9	4.3	1.2316 µg/L	1.2316 ppb	14:52:59
1	S 181.975 Axial†	19.0	5.2	25.242 µg/L	25.242 ppb	14:52:59
1	Sb 206.836†	18.9	-5.0	-5.2805 µg/L	-5.2805 ppb	14:52:59
1	Se 196.026†	18.3	8.3	13.549 µg/L	13.549 ppb	14:52:59
1	SiO2†	1403.9	123.0	28.894 µg/L	28.894 ppb	14:52:39
1	Si 251.611†	395.7	108.8	9.7633 µg/L	9.7633 ppb	14:52:59
1	Sn 189.927†	2.7	-0.0	-0.0158 µg/L	-0.0158 ppb	14:52:59
1	Tl 334.940†	283.0	130.1	0.3476 µg/L	0.3476 ppb	14:52:39
1	Ti 190.801†	-23.3	1.7	2.6626 µg/L	2.6626 ppb	14:52:59
1	U 409.014†	-29.1	72.9	6.9405 µg/L	6.9405 ppb	14:52:39
1	V 292.402†	-9.6	23.3	0.2864 µg/L	0.2864 ppb	14:52:39
1	Zn 213.857†	576.7	100.4	2.7105 µg/L	2.7105 ppb	14:52:59
2	Sc RADIAL	54281.7	54281.7	97.4 %		14:51:37
2	Al 396.153Radial†	-21.4	-12.2	-9.6214 µg/L	-9.6214 ppb	14:51:37
2	Ca 317.933Radial†	197.0	14.3	14.476 µg/L	14.476 ppb	14:51:57
2	Fe 238.204 Radial†	26.0	10.8	96.058 µg/L	96.058 ppb	14:51:57
2	K 766.490 Radial†	128.7	-54.7	-43.388 µg/L	-43.388 ppb	14:51:37
2	Mg 279.077 IEC†	16.5	4.3	42.172 µg/L	42.172 ppb	14:51:57
2	Na 589.592 Radial†	499.1	41.1	14.691 µg/L	14.691 ppb	14:51:37
2	Sr 421.552†	31.1	-6.1	-0.0705 µg/L	-0.0705 ppb	14:51:37
2	Sc 361.383	1858584.4	1858584.4	93.711 %		14:53:05
2	Y 371.029	1281785.8	1281785.8	93.365 %		14:53:05
2	Ag 328.068†	-498.7	-29.7	-0.2478 µg/L	-0.2478 ppb	14:53:11
2	As 188.979†	-1.9	-0.3	-0.6756 µg/L	-0.6756 ppb	14:53:32
2	B 249.677†	310.4	16.8	0.7549 µg/L	0.7549 ppb	14:53:32
2	Ba 233.527†	-17.8	2.0	0.0573 µg/L	0.0573 ppb	14:53:32
2	Be 313.107†	-3278.1	-197.3	-0.1409 µg/L	-0.1409 ppb	14:53:11
2	Cd 226.502†	-137.2	-1.4	-0.0517 µg/L	-0.0517 ppb	14:53:32
2	Co 228.616†	-16.4	-9.2	-0.4965 µg/L	-0.4965 ppb	14:53:32
2	Cr 267.716†	-23.8	17.3	0.4109 µg/L	0.4109 ppb	14:53:32
2	Cu 324.752†	2521.2	201.6	1.5469 µg/L	1.5469 ppb	14:53:11
2	Mn 257.610†	3.1	266.8	0.9988 µg/L	0.9988 ppb	14:53:32
2	Mo 202.031†	-6.5	-0.2	-0.0208 µg/L	-0.0208 ppb	14:53:32
2	Ni 231.604†	310.1	23.8	1.4158 µg/L	1.4158 ppb	14:53:32
2	P 214.914†	23.8	4.1	9.4194 µg/L	9.4194 ppb	14:53:32
2	Pb 220.353†	96.0	11.0	3.1640 µg/L	3.1640 ppb	14:53:32

2	S 181.975 Axial†	15.6	2.1	9.9888 µg/L	9.9888 ppb	14:53:32
2	Sb 206.836†	25.5	2.6	2.7874 µg/L	2.7874 ppb	14:53:32
2	Se 196.026†	8.3	-1.8	-2.6945 µg/L	-2.6945 ppb	14:53:32
2	SiO2†	1381.6	134.2	31.525 µg/L	31.525 ppb	14:53:11
2	Si 251.611†	397.1	120.1	10.780 µg/L	10.780 ppb	14:53:32
2	Sn 189.927†	3.7	1.2	0.5858 µg/L	0.5858 ppb	14:53:32
2	Ti 334.940†	274.8	128.4	0.3382 µg/L	0.3382 ppb	14:53:11
2	Tl 190.801†	-25.2	-0.8	-1.2478 µg/L	-1.2478 ppb	14:53:32
2	U 409.014†	-26.1	75.4	7.1844 µg/L	7.1844 ppb	14:53:11
2	V 292.402†	-18.7	13.4	0.1753 µg/L	0.1753 ppb	14:53:11
2	Zn 213.857†	563.3	100.5	2.7061 µg/L	2.7061 ppb	14:53:32
3	Sc RADIAL	55117.8	55117.8	98.9 %		14:52:02
3	Al 396.153Radial†	-13.0	-3.4	-2.6557 µg/L	-2.6557 ppb	14:52:02
3	Ca 317.933Radial†	202.5	16.8	17.011 µg/L	17.011 ppb	14:52:23
3	Fe 238.204 Radial†	27.1	11.6	102.65 µg/L	102.65 ppb	14:52:23
3	K 766.490 Radial†	142.2	-43.0	-34.145 µg/L	-34.145 ppb	14:52:02
3	Mg 279.077 IEC†	4.1	-8.5	-84.192 µg/L	-84.192 ppb	14:52:23
3	Na 589.592 Radial†	496.2	30.4	10.848 µg/L	10.848 ppb	14:52:02
3	Sr 421.552†	30.1	-7.6	-0.0884 µg/L	-0.0884 ppb	14:52:02
3	Sc 361.383	1908334.1	1908334.1	96.219 %		14:53:37
3	Y 371.029	1314801.6	1314801.6	95.769 %		14:53:37
3	Ag 328.068†	-528.3	-46.7	-0.3936 µg/L	-0.3936 ppb	14:53:43
3	As 188.979†	-2.6	-1.0	-2.0473 µg/L	-2.0473 ppb	14:54:04
3	B 249.677†	288.3	-14.7	-0.7576 µg/L	-0.7576 ppb	14:54:04
3	Ba 233.527†	-11.3	9.2	0.2623 µg/L	0.2623 ppb	14:54:04
3	Be 313.107†	-3131.8	45.9	0.0326 µg/L	0.0326 ppb	14:53:43
3	Cd 226.502†	-146.8	-7.5	-0.2331 µg/L	-0.2331 ppb	14:54:04
3	Co 228.616†	-11.5	-3.6	-0.1960 µg/L	-0.1960 ppb	14:54:04
3	Cr 267.716†	-16.6	25.4	0.6026 µg/L	0.6026 ppb	14:54:04
3	Cu 324.752†	2491.7	100.8	0.7807 µg/L	0.7807 ppb	14:53:43
3	Mn 257.610†	-7.3	255.9	0.9644 µg/L	0.9644 ppb	14:54:04
3	Mo 202.031†	-7.7	-1.2	-0.1317 µg/L	-0.1317 ppb	14:54:04
3	Ni 231.604†	308.1	13.1	0.7776 µg/L	0.7776 ppb	14:54:04
3	P 214.914†	19.8	-0.6	-1.6242 µg/L	-1.6242 ppb	14:54:04
3	Pb 220.353†	101.4	13.9	4.0287 µg/L	4.0287 ppb	14:54:04
3	S 181.975 Axial†	15.9	1.9	9.4478 µg/L	9.4478 ppb	14:54:04
3	Sb 206.836†	25.5	1.9	1.9598 µg/L	1.9598 ppb	14:54:04
3	Se 196.026†	18.8	8.9	14.497 µg/L	14.497 ppb	14:54:04
3	SiO2†	1416.2	131.7	30.943 µg/L	30.943 ppb	14:53:43
3	Si 251.611†	390.5	102.2	9.1771 µg/L	9.1771 ppb	14:54:04
3	Sn 189.927†	-1.5	-4.4	-2.2108 µg/L	-2.2108 ppb	14:54:04
3	Ti 334.940†	249.9	94.9	0.2593 µg/L	0.2593 ppb	14:53:43
3	Tl 190.801†	-26.8	-1.8	-2.6475 µg/L	-2.6475 ppb	14:54:04
3	U 409.014†	-155.5	-58.4	-5.5842 µg/L	-5.5842 ppb	14:53:43
3	V 292.402†	-33.5	-1.5	-0.0112 µg/L	-0.0112 ppb	14:53:43
3	Zn 213.857†	567.4	89.1	2.4076 µg/L	2.4076 ppb	14:54:04

Mean Data: 1202021583|944117|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1890004.4	95.295 %		1.3783			1.45%
Sc RADIAL	54046.1	97.0 %		2.17			2.23%
Y 371.029	1303368.1	94.937 %		1.3622			1.43%
Ag 328.068†	-31.4	-0.2619 µg/L		0.12524	-0.2619 ppb	0.12524	47.82%
Al 396.153Radial†	-9.2	-7.2586 µg/L		3.98667	-7.2586 ppb	3.98667	54.92%
As 188.979†	0.7	1.4905 µg/L		4.98710	1.4905 ppb	4.98710	334.59%
B 249.677†	2.1	0.0484 µg/L		0.76114	0.0484 ppb	0.76114	>999.9%
Ba 233.527†	2.7	0.0765 µg/L		0.17703	0.0765 ppb	0.17703	231.44%
Be 313.107†	-81.0	-0.0579 µg/L		0.08700	-0.0579 ppb	0.08700	150.34%
Ca 317.933Radial†	15.8	15.955 µg/L		1.3194	15.955 ppb	1.3194	8.27%
Cd 226.502†	-6.6	-0.2046 µg/L		0.14091	-0.2046 ppb	0.14091	68.86%
Co 228.616†	-5.1	-0.2746 µg/L		0.19497	-0.2746 ppb	0.19497	71.01%
Cr 267.716†	22.1	0.5224 µg/L		0.09965	0.5224 ppb	0.09965	19.07%
Cu 324.752†	144.8	1.1148 µg/L		0.39240	1.1148 ppb	0.39240	35.20%
Fe 238.204 Radial†	11.1	98.525 µg/L		3.5931	98.525 ppb	3.5931	3.65%
K 766.490 Radial†	-49.6	-39.368 µg/L		4.7372	-39.368 ppb	4.7372	12.03%
Mg 279.077 IEC†	-2.0	-19.684 µg/L		63.2239	-19.684 ppb	63.2239	321.19%
Mn 257.610†	262.9	0.9872 µg/L		0.01975	0.9872 ppb	0.01975	2.00%
Mo 202.031†	-1.9	-0.2095 µg/L		0.23745	-0.2095 ppb	0.23745	113.32%
Na 589.592 Radial†	17.7	6.3135 µg/L		11.34653	6.3135 ppb	11.34653	179.72%

Ni 231.604†	18.2	1.0816 µg/L	0.32015	1.0816 ppb	0.32015	29.60%
P 214.914†	2.8	6.3610 µg/L	6.97816	6.3610 ppb	6.97816	109.70%
Pb 220.353†	9.7	2.8081 µg/L	1.43213	2.8081 ppb	1.43213	51.00%
S 181.975 Axial†	3.1	14.893 µg/L	8.9665	14.893 ppb	8.9665	60.21%
Sb 206.836†	-0.2	-0.1777 µg/L	4.43842	-0.1777 ppb	4.43842	>999.9%
Se 196.026†	5.1	8.4505 µg/L	9.66343	8.4505 ppb	9.66343	114.35%
SiO2†	129.6	30.454 µg/L	1.3820	30.454 ppb	1.3820	4.54%
Si 251.611†	110.4	9.9067 µg/L	0.81090	9.9067 ppb	0.81090	8.19%
Sn 189.927†	-1.1	-0.5469 µg/L	1.47203	-0.5469 ppb	1.47203	269.14%
Sr 421.552†	-7.6	-0.0876 µg/L	0.01674	-0.0876 ppb	0.01674	19.11%
Ti 334.940†	117.8	0.3150 µg/L	0.04849	0.3150 ppb	0.04849	15.39%
Tl 190.801†	-0.3	-0.4109 µg/L	2.75215	-0.4109 ppb	2.75215	669.78%
U 409.014†	30.0	2.8469 µg/L	7.30255	2.8469 ppb	7.30255	256.51%
V 292.402†	11.7	0.1502 µg/L	0.15037	0.1502 ppb	0.15037	100.14%
Zn 213.857†	96.7	2.6081 µg/L	0.17360	2.6081 ppb	0.17360	6.66%

Sequence No.: 26

Sample ID: 1202021588|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 322

Date Collected: 2/8/2010 14:54:13

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202021588|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56093.0	56093.0	101 %		14:54:47
1	Al 396.153Radial†	114504.3	113745.6	89840 µg/L	89840 ppb	14:54:47
1	Ca 317.933Radial†	102447.3	101571.8	102870 µg/L	102870 ppb	14:54:47
1	Fe 238.204 Radial†	20138.9	19987.9	177420 µg/L	177420 ppb	14:55:07
1	K 766.490 Radial†	53422.2	52876.9	41979 µg/L	41979 ppb	14:54:47
1	Mg 279.077 IEC†	3986.8	3947.3	38842 µg/L	38842 ppb	14:55:07
1	Na 589.592 Radial†	31027.3	30347.8	10842 µg/L	10842 ppb	14:54:47
1	Sr 421.552†	218247.8	216745.0	2511.8 µg/L	2511.8 ppb	14:54:47
1	Sc 361.383	1928082.8	1928082.8	97.215 %		14:56:13
1	Y 371.029	1352996.9	1352996.9	98.552 %		14:56:13
1	Ag 328.068†	33709.6	35177.9	321.22 µg/L	321.22 ppb	14:56:18
1	As 188.979†	499.6	515.7	1097.5 µg/L	1097.5 ppb	14:56:39
1	B 249.677†	34712.7	35392.9	1604.1 µg/L	1604.1 ppb	14:56:18
1	Ba 233.527†	71962.9	74045.7	2111.9 µg/L	2111.9 ppb	14:56:18
1	Be 313.107†	1203267.8	1241043.7	882.83 µg/L	882.83 ppb	14:56:13
1	Cd 226.502†	22348.0	23133.3	667.50 µg/L	667.50 ppb	14:56:18
1	Co 228.616†	18949.6	19500.9	1038.5 µg/L	1038.5 ppb	14:56:18
1	Cr 267.716†	114224.7	117540.2	2784.9 µg/L	2784.9 ppb	14:56:18
1	Cu 324.752†	261939.4	266955.5	2055.2 µg/L	2055.2 ppb	14:56:18
1	Mn 257.610†	1533423.6	1577621.6	5863.4 µg/L	5863.4 ppb	14:56:13
1	Mo 202.031†	5091.2	5243.9	592.07 µg/L	592.07 ppb	14:56:39
1	Ni 231.604†	25835.4	26268.5	1559.8 µg/L	1559.8 ppb	14:56:18
1	P 214.914†	3845.7	3934.6	8852.3 µg/L	8852.3 ppb	14:56:39
1	Pb 220.353†	3088.3	3085.4	889.74 µg/L	889.74 ppb	14:56:39
1	S 181.975 Axial†	868.0	878.2	4262.9 µg/L	4262.9 ppb	14:56:39
1	Sb 206.836†	1482.4	1500.3	1561.3 µg/L	1561.3 ppb	14:56:39
1	Se 196.026†	1887.1	1930.5	3501.6 µg/L	3501.6 ppb	14:56:39
1	SiO2†	304707.2	312097.4	73315 µg/L	73315 ppb	14:56:18
1	Si 251.611†	380415.0	391010.8	35097 µg/L	35097 ppb	14:56:13
1	Sn 189.927†	2160.0	2219.1	1100.6 µg/L	1100.6 ppb	14:56:39
1	Ti 334.940†	2121443.1	2182060.3	5800.7 µg/L	5800.7 ppb	14:56:13
1	Tl 190.801†	759.6	807.5	1313.6 µg/L	1313.6 ppb	14:56:39
1	U 409.014†	-1159.7	-1089.7	-134.93 µg/L	-134.93 ppb	14:56:18
1	V 292.402†	107709.8	110829.1	1317.5 µg/L	1317.5 ppb	14:56:18
1	Zn 213.857†	230601.4	236707.9	6391.4 µg/L	6391.4 ppb	14:56:18
2	Sc RADIAL	55804.4	55804.4	100 %		14:55:13
2	Al 396.153Radial†	114810.5	114639.5	90546 µg/L	90546 ppb	14:55:13
2	Ca 317.933Radial†	102219.4	101870.6	103170 µg/L	103170 ppb	14:55:13
2	Fe 238.204 Radial†	20260.4	20212.7	179420 µg/L	179420 ppb	14:55:33
2	K 766.490 Radial†	53450.0	53179.1	42219 µg/L	42219 ppb	14:55:13
2	Mg 279.077 IEC†	4005.5	3986.5	39228 µg/L	39228 ppb	14:55:33
2	Na 589.592 Radial†	31139.3	30619.1	10939 µg/L	10939 ppb	14:55:13
2	Sr 421.552†	218406.1	218024.2	2526.6 µg/L	2526.6 ppb	14:55:13
2	Sc 361.383	1906404.2	1906404.2	96.122 %		14:56:46
2	Y 371.029	1337771.1	1337771.1	97.442 %		14:56:46
2	Ag 328.068†	33954.4	35826.8	327.11 µg/L	327.11 ppb	14:56:52
2	As 188.979†	512.4	534.7	1138.1 µg/L	1138.1 ppb	14:57:13
2	B 249.677†	35204.8	36310.8	1647.1 µg/L	1647.1 ppb	14:56:52
2	Ba 233.527†	72822.9	75782.2	2161.4 µg/L	2161.4 ppb	14:56:52
2	Be 313.107†	1193947.2	1245421.9	885.95 µg/L	885.95 ppb	14:56:46
2	Cd 226.502†	22647.3	23706.1	684.29 µg/L	684.29 ppb	14:56:52
2	Co 228.616†	19192.5	19975.2	1064.0 µg/L	1064.0 ppb	14:56:52
2	Cr 267.716†	115609.5	120316.9	2850.7 µg/L	2850.7 ppb	14:56:52
2	Cu 324.752†	264306.6	272482.1	2097.5 µg/L	2097.5 ppb	14:56:52
2	Mn 257.610†	1523105.6	1584824.1	5890.3 µg/L	5890.3 ppb	14:56:46
2	Mo 202.031†	5098.3	5310.7	599.61 µg/L	599.61 ppb	14:57:13
2	Ni 231.604†	26167.3	26916.0	1598.2 µg/L	1598.2 ppb	14:56:52
2	P 214.914†	3885.4	4020.9	9047.8 µg/L	9047.8 ppb	14:57:13
2	Pb 220.353†	3089.3	3122.5	900.40 µg/L	900.40 ppb	14:57:13

2	S 181.975 Axial†	883.7	904.8	4391.5 µg/L	4391.5 ppb	14:57:13
2	Sb 206.836†	1493.1	1528.7	1590.8 µg/L	1590.8 ppb	14:57:13
2	Se 196.026†	1884.9	1950.2	3538.2 µg/L	3538.2 ppb	14:57:13
2	SiO2†	307894.9	318977.9	74931 µg/L	74931 ppb	14:56:52
2	Si 251.611†	377411.0	392335.3	35216 µg/L	35216 ppb	14:56:46
2	Sn 189.927†	2172.3	2257.2	1119.5 µg/L	1119.5 ppb	14:57:13
2	Ti 334.940†	2106699.2	2191536.5	5825.8 µg/L	5825.8 ppb	14:56:46
2	Tl 190.801†	767.3	824.3	1339.7 µg/L	1339.7 ppb	14:57:13
2	U 409.014†	-1145.3	-1088.2	-135.09 µg/L	-135.09 ppb	14:56:52
2	V 292.402†	109028.7	113461.1	1348.5 µg/L	1348.5 ppb	14:56:52
2	Zn 213.857†	233213.6	242122.8	6537.8 µg/L	6537.8 ppb	14:56:52
3	Sc RADIAL	54730.0	54730.0	98.2 %		14:55:39
3	Al 396.153Radial†	113812.9	115874.1	91523 µg/L	91523 ppb	14:55:39
3	Ca 317.933Radial†	100827.4	102456.9	103770 µg/L	103770 ppb	14:55:39
3	Fe 238.204 Radial†	20199.1	20547.4	182390 µg/L	182390 ppb	14:56:00
3	K 766.490 Radial†	53013.5	53782.3	42698 µg/L	42698 ppb	14:55:39
3	Mg 279.077 IEC†	3996.5	4055.8	39909 µg/L	39909 ppb	14:56:00
3	Na 589.592 Radial†	30925.7	31011.9	11079 µg/L	11079 ppb	14:55:39
3	Sr 421.552†	215911.5	219765.3	2546.8 µg/L	2546.8 ppb	14:55:39
3	Sc 361.383	1913184.5	1913184.5	96.463 %		14:57:20
3	Y 371.029	1340422.3	1340422.3	97.636 %		14:57:20
3	Ag 328.068†	32914.4	34623.5	316.41 µg/L	316.41 ppb	14:57:26
3	As 188.979†	481.9	501.3	1067.4 µg/L	1067.4 ppb	14:57:46
3	B 249.677†	33779.5	34703.5	1568.4 µg/L	1568.4 ppb	14:57:26
3	Ba 233.527†	69146.1	71702.1	2045.0 µg/L	2045.0 ppb	14:57:26
3	Be 313.107†	1167871.6	1213988.4	863.59 µg/L	863.59 ppb	14:57:20
3	Cd 226.502†	21621.2	22558.9	649.84 µg/L	649.84 ppb	14:57:26
3	Co 228.616†	18167.0	18841.3	1003.2 µg/L	1003.2 ppb	14:57:26
3	Cr 267.716†	108061.6	112066.1	2655.2 µg/L	2655.2 ppb	14:57:26
3	Cu 324.752†	249695.6	256361.0	1975.3 µg/L	1975.3 ppb	14:57:26
3	Mn 257.610†	1490804.0	1545722.7	5745.9 µg/L	5745.9 ppb	14:57:20
3	Mo 202.031†	4692.5	4871.2	550.67 µg/L	550.67 ppb	14:57:46
3	Ni 231.604†	24714.6	25313.5	1503.2 µg/L	1503.2 ppb	14:57:26
3	P 214.914†	3589.5	3699.9	8309.1 µg/L	8309.1 ppb	14:57:46
3	Pb 220.353†	2905.6	2920.7	841.98 µg/L	841.98 ppb	14:57:46
3	S 181.975 Axial†	823.0	838.5	4070.1 µg/L	4070.1 ppb	14:57:46
3	Sb 206.836†	1371.2	1396.8	1452.2 µg/L	1452.2 ppb	14:57:46
3	Se 196.026†	1770.0	1824.2	3344.4 µg/L	3344.4 ppb	14:57:46
3	SiO2†	293957.8	303394.7	71271 µg/L	71271 ppb	14:57:26
3	Si 251.611†	372385.2	385733.8	34624 µg/L	34624 ppb	14:57:20
3	Sn 189.927†	1987.1	2057.1	1018.7 µg/L	1018.7 ppb	14:57:46
3	Ti 334.940†	2055316.3	2130502.6	5663.5 µg/L	5663.5 ppb	14:57:20
3	Tl 190.801†	718.2	770.6	1257.1 µg/L	1257.1 ppb	14:57:46
3	U 409.014†	-989.1	-922.1	-119.68 µg/L	-119.68 ppb	14:57:26
3	V 292.402†	102228.6	106009.8	1261.5 µg/L	1261.5 ppb	14:57:26
3	Zn 213.857†	221646.4	229271.7	6190.1 µg/L	6190.1 ppb	14:57:26

Mean Data: 1202021588|944117|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	1915890.5	96.600 %	0.5591			0.58%
Sc RADIAL	55542.5	99.7 %	1.29			1.29%
Y 371.029	1343730.1	97.877 %	0.5925			0.61%
Ag 328.068†	35209.4	321.58 µg/L	5.358	321.58 ppb	5.358	1.67%
Al 396.153Radial†	114753.1	90636 µg/L	844.7	90636 ppb	844.7	0.93%
As 188.979†	517.2	1101.0 µg/L	35.47	1101.0 ppb	35.47	3.22%
B 249.677†	35469.1	1606.5 µg/L	39.41	1606.5 ppb	39.41	2.45%
Ba 233.527†	73843.3	2106.1 µg/L	58.41	2106.1 ppb	58.41	2.77%
Be 313.107†	1233484.7	877.46 µg/L	12.108	877.46 ppb	12.108	1.38%
Ca 317.933Radial†	101966.5	103270 µg/L	456.0	103270 ppb	456.0	0.44%
Cd 226.502†	23132.8	667.21 µg/L	17.227	667.21 ppb	17.227	2.58%
Co 228.616†	19439.1	1035.2 µg/L	30.51	1035.2 ppb	30.51	2.95%
Cr 267.716†	116641.0	2763.6 µg/L	99.47	2763.6 ppb	99.47	3.60%
Cu 324.752†	265266.2	2042.7 µg/L	62.06	2042.7 ppb	62.06	3.04%
Fe 238.204 Radial†	20249.3	179740 µg/L	2498.1	179740 ppb	2498.1	1.39%
K 766.490 Radial†	53279.4	42299 µg/L	366.0	42299 ppb	366.0	0.87%
Mg 279.077 IEC†	3996.6	39327 µg/L	540.1	39327 ppb	540.1	1.37%
Mn 257.610†	1569389.5	5833.2 µg/L	76.79	5833.2 ppb	76.79	1.32%
Mo 202.031†	5141.9	580.78 µg/L	26.353	580.78 ppb	26.353	4.54%
Na 589.592 Radial†	30659.6	10953 µg/L	119.3	10953 ppb	119.3	1.09%

Ni 231.604†	26166.0	1553.8 µg/L	47.78	1553.8 ppb	47.78	3.07%
P 214.914†	3885.2	8736.4 µg/L	382.74	8736.4 ppb	382.74	4.38%
Pb 220.353†	3042.9	877.37 µg/L	31.110	877.37 ppb	31.110	3.55%
S 181.975 Axial†	873.8	4241.5 µg/L	161.78	4241.5 ppb	161.78	3.81%
Sb 206.836†	1475.3	1534.8 µg/L	73.02	1534.8 ppb	73.02	4.76%
Se 196.026†	1901.6	3461.4 µg/L	102.94	3461.4 ppb	102.94	2.97%
SiO2†	311490.0	73172 µg/L	1834.5	73172 ppb	1834.5	2.51%
Si 251.611†	389693.3	34979 µg/L	313.5	34979 ppb	313.5	0.90%
Sn 189.927†	2177.8	1079.6 µg/L	53.56	1079.6 ppb	53.56	4.96%
Sr 421.552†	218178.1	2528.4 µg/L	17.57	2528.4 ppb	17.57	0.69%
Ti 334.940†	2168033.1	5763.3 µg/L	87.37	5763.3 ppb	87.37	1.52%
Tl 190.801†	800.8	1303.5 µg/L	42.20	1303.5 ppb	42.20	3.24%
U 409.014†	-1033.3	-129.90 µg/L	8.851	-129.90 ppb	8.851	6.81%
V 292.402†	110100.0	1309.2 µg/L	44.05	1309.2 ppb	44.05	3.36%
Zn 213.857†	236034.1	6373.1 µg/L	174.57	6373.1 ppb	174.57	2.74%

Sequence No.: 27

Sample ID: 245147001|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 323

Date Collected: 2/8/2010 14:57:55

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147001|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56000.0	56000.0	101 %		14:58:28
1	Al 396.153Radial†	141201.0	140496.0	110980 µg/L	110980 ppb	14:58:28
1	Ca 317.933Radial†	22702.1	22399.4	22685 µg/L	22685 ppb	14:58:49
1	Fe 238.204 Radial†	15560.2	15465.6	137260 µg/L	137260 ppb	14:58:49
1	K 766.490 Radial†	19267.2	18983.0	15071 µg/L	15071 ppb	14:58:28
1	Mg 279.077 IEC†	1825.9	1804.0	17687 µg/L	17687 ppb	14:58:49
1	Na 589.592 Radial†	5963.1	5461.7	1951.3 µg/L	1951.3 ppb	14:58:49
1	Sr 421.552†	22648.5	22495.8	260.69 µg/L	260.69 ppb	14:58:28
1	Sc 361.383	1920378.7	1920378.7	96.826 %		14:59:54
1	Y 371.029	1356415.8	1356415.8	98.801 %		14:59:54
1	Ag 328.068†	190.2	698.9	16.166 µg/L	16.166 ppb	14:59:59
1	As 188.979†	13.9	16.1	40.869 µg/L	40.869 ppb	15:00:20
1	B 249.677†	1257.1	983.9	-24.398 µg/L	-24.398 ppb	14:59:59
1	Ba 233.527†	52689.6	54437.6	1551.4 µg/L	1551.4 ppb	14:59:59
1	Be 313.107†	14751.8	18536.1	11.324 µg/L	11.324 ppb	14:59:59
1	Cd 226.502†	308.2	463.4	-1.6927 µg/L	-1.6927 ppb	15:00:20
1	Co 228.616†	1126.7	1171.9	52.721 µg/L	52.721 ppb	15:00:20
1	Cr 267.716†	4644.2	4839.1	114.77 µg/L	114.77 ppb	14:59:59
1	Cu 324.752†	8656.5	6451.4	68.152 µg/L	68.152 ppb	14:59:59
1	Mn 257.610†	844555.1	872501.4	3248.1 µg/L	3248.1 ppb	14:59:54
1	Mo 202.031†	-13.0	-6.6	4.4748 µg/L	4.4748 ppb	15:00:20
1	Ni 231.604†	1572.5	1317.0	79.858 µg/L	79.858 ppb	15:00:20
1	P 214.914†	585.7	583.7	1275.2 µg/L	1275.2 ppb	15:00:20
1	Pb 220.353†	578.1	505.6	147.29 µg/L	147.29 ppb	15:00:20
1	S 181.975 Axial†	153.6	144.0	698.91 µg/L	698.91 ppb	15:00:20
1	Sb 206.836†	38.1	14.8	12.385 µg/L	12.385 ppb	15:00:20
1	Se 196.026†	-44.0	-56.2	263.37 µg/L	263.37 ppb	15:00:20
1	SiO2†	335923.5	345594.2	81184 µg/L	81184 ppb	14:59:54
1	Si 251.611†	407171.6	420214.3	37719 µg/L	37719 ppb	14:59:54
1	Sn 189.927†	-26.3	-30.0	-27.754 µg/L	-27.754 ppb	15:00:20
1	Ti 334.940†	1811616.9	1870833.2	4973.5 µg/L	4973.5 ppb	14:59:54
1	Tl 190.801†	-67.5	-43.6	16.616 µg/L	16.616 ppb	15:00:20
1	U 409.014†	-1341.3	-1282.1	-142.82 µg/L	-142.82 ppb	14:59:54
1	V 292.402†	19296.3	19962.2	247.88 µg/L	247.88 ppb	14:59:59
1	Zn 213.857†	11405.6	11278.8	297.58 µg/L	297.58 ppb	14:59:59
2	Sc RADIAL	56498.8	56498.8	101 %		14:58:54
2	Al 396.153Radial†	141519.6	139569.8	110250 µg/L	110250 ppb	14:58:54
2	Ca 317.933Radial†	22747.2	22244.3	22528 µg/L	22528 ppb	14:59:15
2	Fe 238.204 Radial†	15596.9	15365.1	136370 µg/L	136370 ppb	14:59:15
2	K 766.490 Radial†	19278.2	18824.5	14945 µg/L	14945 ppb	14:58:54
2	Mg 279.077 IEC†	1822.0	1784.1	17491 µg/L	17491 ppb	14:59:15
2	Na 589.592 Radial†	5981.2	5427.2	1938.9 µg/L	1938.9 ppb	14:59:15
2	Sr 421.552†	22681.4	22329.3	258.76 µg/L	258.76 ppb	14:58:54
2	Sc 361.383	1990654.3	1990654.3	100.37 %		15:00:27
2	Y 371.029	1401062.0	1401062.0	102.05 %		15:00:27
2	Ag 328.068†	191.1	692.8	15.984 µg/L	15.984 ppb	15:00:33
2	As 188.979†	4.8	6.4	20.398 µg/L	20.398 ppb	15:00:54
2	B 249.677†	1206.3	887.5	-28.551 µg/L	-28.551 ppb	15:00:33
2	Ba 233.527†	51883.4	51713.4	1473.7 µg/L	1473.7 ppb	15:00:33
2	Be 313.107†	14461.0	17708.5	10.862 µg/L	10.862 ppb	15:00:33
2	Cd 226.502†	275.7	419.7	-2.8903 µg/L	-2.8903 ppb	15:00:54
2	Co 228.616†	1096.3	1100.6	49.582 µg/L	49.582 ppb	15:00:54
2	Cr 267.716†	4571.0	4596.9	109.02 µg/L	109.02 ppb	15:00:33
2	Cu 324.752†	8512.0	5991.8	64.532 µg/L	64.532 ppb	15:00:33
2	Mn 257.610†	815988.6	813247.6	3028.6 µg/L	3028.6 ppb	15:00:27
2	Mo 202.031†	-5.6	1.2	5.3146 µg/L	5.3146 ppb	15:00:54
2	Ni 231.604†	1547.5	1234.7	74.969 µg/L	74.969 ppb	15:00:54
2	P 214.914†	564.4	541.2	1176.9 µg/L	1176.9 ppb	15:00:54
2	Pb 220.353†	572.3	478.7	139.49 µg/L	139.49 ppb	15:00:54

2	S 181.975 Axial†	150.1	134.9	654.84 µg/L	654.84 ppb	15:00:54
2	Sb 206.836†	35.2	10.5	7.9219 µg/L	7.9219 ppb	15:00:54
2	Se 196.026†	-41.8	-52.4	267.22 µg/L	267.22 ppb	15:00:54
2	SiO2†	325472.6	322934.1	75861 µg/L	75861 ppb	15:00:27
2	Si 251.611†	393781.5	392027.9	35189 µg/L	35189 ppb	15:00:27
2	Sn 189.927†	-28.2	-31.0	-28.151 µg/L	-28.151 ppb	15:00:54
2	Ti 334.940†	1751007.1	1744395.2	4637.3 µg/L	4637.3 ppb	15:00:27
2	Tl 190.801†	-68.4	-42.1	14.933 µg/L	14.933 ppb	15:00:54
2	U 409.014†	-1172.9	-1065.4	-122.01 µg/L	-122.01 ppb	15:00:27
2	V 292.402†	19030.7	18993.9	236.55 µg/L	236.55 ppb	15:00:33
2	Zn 213.857†	11215.9	10674.0	281.27 µg/L	281.27 ppb	15:00:33
3	Sc RADIAL	56158.2	56158.2	101 %		14:59:20
3	Al 396.153Radial†	141529.5	140426.2	110930 µg/L	110930 ppb	14:59:20
3	Ca 317.933Radial†	22996.7	22628.0	22917 µg/L	22917 ppb	14:59:41
3	Fe 238.204 Radial†	15802.5	15662.4	139010 µg/L	139010 ppb	14:59:41
3	K 766.490 Radial†	19376.8	19037.7	15114 µg/L	15114 ppb	14:59:20
3	Mg 279.077 IEC†	1846.9	1819.7	17841 µg/L	17841 ppb	14:59:41
3	Na 589.592 Radial†	6039.5	5520.8	1972.3 µg/L	1972.3 ppb	14:59:41
3	Sr 421.552†	22724.3	22507.5	260.83 µg/L	260.83 ppb	14:59:20
3	Sc 361.383	2017288.6	2017288.6	101.71 %		15:01:01
3	Y 371.029	1419330.5	1419330.5	103.38 %		15:01:01
3	Ag 328.068†	196.5	695.6	16.071 µg/L	16.071 ppb	15:01:07
3	As 188.979†	10.1	11.6	31.526 µg/L	31.526 ppb	15:01:28
3	B 249.677†	1144.7	811.1	-33.595 µg/L	-33.595 ppb	15:01:07
3	Ba 233.527†	49309.3	48500.1	1382.2 µg/L	1382.2 ppb	15:01:07
3	Be 313.107†	13388.2	16463.6	10.064 µg/L	10.064 ppb	15:01:07
3	Cd 226.502†	250.1	390.9	-4.0508 µg/L	-4.0508 ppb	15:01:28
3	Co 228.616†	1001.0	992.4	44.251 µg/L	44.251 ppb	15:01:28
3	Cr 267.716†	4279.3	4250.0	100.80 µg/L	100.80 ppb	15:01:07
3	Cu 324.752†	8168.9	5542.5	61.481 µg/L	61.481 ppb	15:01:07
3	Mn 257.610†	788404.7	775394.3	2888.8 µg/L	2888.8 ppb	15:01:01
3	Mo 202.031†	-20.5	-13.4	3.7888 µg/L	3.7888 ppb	15:01:28
3	Ni 231.604†	1445.0	1113.6	67.824 µg/L	67.824 ppb	15:01:28
3	P 214.914†	526.0	495.9	1069.9 µg/L	1069.9 ppb	15:01:28
3	Pb 220.353†	535.6	435.1	126.81 µg/L	126.81 ppb	15:01:28
3	S 181.975 Axial†	139.6	122.6	595.12 µg/L	595.12 ppb	15:01:28
3	Sb 206.836†	35.6	10.4	7.8394 µg/L	7.8394 ppb	15:01:28
3	Se 196.026†	-40.8	-50.8	276.56 µg/L	276.56 ppb	15:01:28
3	SiO2†	316039.2	309378.2	72676 µg/L	72676 ppb	15:01:01
3	Si 251.611†	382924.3	376173.6	33765 µg/L	33765 ppb	15:01:01
3	Sn 189.927†	-31.1	-33.4	-29.623 µg/L	-29.623 ppb	15:01:28
3	Ti 334.940†	1683556.7	1655046.9	4399.7 µg/L	4399.7 ppb	15:01:01
3	Tl 190.801†	-50.9	-24.0	40.071 µg/L	40.071 ppb	15:01:28
3	U 409.014†	-1150.8	-1028.2	-118.84 µg/L	-118.84 ppb	15:01:01
3	V 292.402†	17916.0	17647.7	221.22 µg/L	221.22 ppb	15:01:07
3	Zn 213.857†	10692.9	10012.2	263.24 µg/L	263.24 ppb	15:01:07

## Mean Data: 245147001|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1976107.2	99.636 %		2.5243				2.53%
Sc RADIAL	56219.0	101 %		0.5				0.45%
Y 371.029	1392269.4	101.41 %		2.358				2.32%
Ag 328.068†	695.8	16.074 µg/L		0.0910	16.074 ppb		0.0910	0.57%
Al 396.153Radial†	140164.0	110720 µg/L		407.5	110720 ppb		407.5	0.37%
As 188.979†	11.4	30.931 µg/L		10.2483	30.931 ppb		10.2483	33.13%
B 249.677†	894.1	-28.848 µg/L		4.6059	-28.848 ppb		4.6059	15.97%
Ba 233.527†	51550.4	1469.1 µg/L		84.70	1469.1 ppb		84.70	5.77%
Be 313.107†	17569.4	10.750 µg/L		0.6371	10.750 ppb		0.6371	5.93%
Ca 317.933Radial†	22423.9	22710 µg/L		195.5	22710 ppb		195.5	0.86%
Cd 226.502†	424.7	-2.8780 µg/L		1.17912	-2.8780 ppb		1.17912	40.97%
Co 228.616†	1088.3	48.851 µg/L		4.2818	48.851 ppb		4.2818	8.77%
Cr 267.716†	4562.0	108.19 µg/L		7.022	108.19 ppb		7.022	6.49%
Cu 324.752†	5995.3	64.721 µg/L		3.3394	64.721 ppb		3.3394	5.16%
Fe 238.204 Radial†	15497.7	137550 µg/L		1342.3	137550 ppb		1342.3	0.98%
K 766.490 Radial†	18948.4	15043 µg/L		87.9	15043 ppb		87.9	0.58%
Mg 279.077 IEC†	1802.6	17673 µg/L		175.1	17673 ppb		175.1	0.99%
Mn 257.610†	820381.1	3055.1 µg/L		181.13	3055.1 ppb		181.13	5.93%
Mo 202.031†	-6.3	4.5260 µg/L		0.76418	4.5260 ppb		0.76418	16.88%
Na 589.592 Radial†	5469.9	1954.2 µg/L		16.91	1954.2 ppb		16.91	0.87%

Ni 231.604†	1221.8	74.217 µg/L	6.0521	74.217 ppb	6.0521	8.15%
P 214.914†	540.2	1174.0 µg/L	102.66	1174.0 ppb	102.66	8.74%
Pb 220.353†	473.2	137.87 µg/L	10.337	137.87 ppb	10.337	7.50%
S 181.975 Axial†	133.8	649.62 µg/L	52.088	649.62 ppb	52.088	8.02%
Sb 206.836†	11.9	9.3821 µg/L	2.60096	9.3821 ppb	2.60096	27.72%
Se 196.026†	-53.1	269.05 µg/L	6.781	269.05 ppb	6.781	2.52%
SiO2†	325968.8	76574 µg/L	4298.3	76574 ppb	4298.3	5.61%
Si 251.611†	396138.6	35558 µg/L	2002.2	35558 ppb	2002.2	5.63%
Sn 189.927†	-31.5	-28.509 µg/L	0.9846	-28.509 ppb	0.9846	3.45%
Sr 421.552†	22444.2	260.10 µg/L	1.155	260.10 ppb	1.155	0.44%
Ti 334.940†	1756758.4	4670.2 µg/L	288.30	4670.2 ppb	288.30	6.17%
Tl 190.801†	-36.6	23.873 µg/L	14.0532	23.873 ppb	14.0532	58.87%
U 409.014†	-1125.2	-127.89 µg/L	13.025	-127.89 ppb	13.025	10.18%
V 292.402†	18867.9	235.22 µg/L	13.379	235.22 ppb	13.379	5.69%
Zn 213.857†	10655.0	280.70 µg/L	17.176	280.70 ppb	17.176	6.12%

Sequence No.: 28

Sample ID: 1202021584|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 324

Date Collected: 2/8/2010 15:01:37

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202021584|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	57057.1	57057.1	102 %		15:02:10
1	Al 396.153Radial†	125550.6	122610.6	96855 µg/L	96855 ppb	15:02:10
1	Ca 317.933Radial†	19495.3	18849.4	19090 µg/L	19090 ppb	15:02:30
1	Fe 238.204 Radial†	13399.4	13068.7	115990 µg/L	115990 ppb	15:02:30
1	K 766.490 Radial†	18333.1	17715.6	14064 µg/L	14064 ppb	15:02:10
1	Mg 279.077 IEC†	1762.1	1708.0	16761 µg/L	16761 ppb	15:02:30
1	Na 589.592 Radial†	5584.7	4982.2	1780.0 µg/L	1780.0 ppb	15:02:30
1	Sr 421.552†	20372.4	19855.7	230.10 µg/L	230.10 ppb	15:02:10
1	Sc 361.383	2044793.0	2044793.0	103.10 %		15:03:34
1	Y 371.029	1437656.2	1437656.2	104.72 %		15:03:34
1	Ag 328.068†	201.3	697.6	14.666 µg/L	14.666 ppb	15:03:40
1	As 188.979†	7.6	9.1	24.989 µg/L	24.989 ppb	15:04:01
1	B 249.677†	1114.9	766.9	-23.681 µg/L	-23.681 ppb	15:03:40
1	Ba 233.527†	47763.1	46348.3	1320.9 µg/L	1320.9 ppb	15:03:40
1	Be 313.107†	13636.8	16527.6	10.144 µg/L	10.144 ppb	15:03:40
1	Cd 226.502†	240.8	378.6	-1.8073 µg/L	-1.8073 ppb	15:04:01
1	Co 228.616†	1067.0	1043.2	47.176 µg/L	47.176 ppb	15:04:01
1	Cr 267.716†	4679.5	4581.6	108.65 µg/L	108.65 ppb	15:03:40
1	Cu 324.752†	8422.1	5680.2	59.328 µg/L	59.328 ppb	15:03:40
1	Mn 257.610†	816069.0	791800.7	2946.5 µg/L	2946.5 ppb	15:03:34
1	Mo 202.031†	-11.7	-4.6	3.8937 µg/L	3.8937 ppb	15:04:01
1	Ni 231.604†	1564.3	1210.2	73.254 µg/L	73.254 ppb	15:04:01
1	P 214.914†	561.8	523.7	1149.3 µg/L	1149.3 ppb	15:04:01
1	Pb 220.353†	614.7	504.8	147.08 µg/L	147.08 ppb	15:04:01
1	S 181.975 Axial†	133.0	114.4	555.40 µg/L	555.40 ppb	15:04:01
1	Sb 206.836†	23.3	-2.0	-5.0127 µg/L	-5.0127 ppb	15:04:01
1	Se 196.026†	-45.9	-55.2	208.60 µg/L	208.60 ppb	15:04:01
1	SiO2†	297611.9	287325.3	67496 µg/L	67496 ppb	15:03:34
1	Si 251.611†	360461.8	349322.4	31355 µg/L	31355 ppb	15:03:34
1	Sn 189.927†	-26.8	-28.8	-24.974 µg/L	-24.974 ppb	15:04:01
1	Ti 334.940†	1671606.9	1621192.2	4309.7 µg/L	4309.7 ppb	15:03:34
1	Tl 190.801†	-61.6	-33.7	20.800 µg/L	20.800 ppb	15:04:01
1	U 409.014†	-1150.6	-1012.8	-113.94 µg/L	-113.94 ppb	15:03:40
1	V 292.402†	18530.1	18006.4	222.70 µg/L	222.70 ppb	15:03:40
1	Zn 213.857†	10962.1	10132.0	267.61 µg/L	267.61 ppb	15:03:40
2	Sc RADIAL	58219.6	58219.6	104 %		15:02:36
2	Al 396.153Radial†	125078.8	119711.0	94565 µg/L	94565 ppb	15:02:36
2	Ca 317.933Radial†	19201.8	18188.4	18421 µg/L	18421 ppb	15:02:56
2	Fe 238.204 Radial†	13241.3	12656.2	112330 µg/L	112330 ppb	15:02:56
2	K 766.490 Radial†	18293.2	17320.0	13750 µg/L	13750 ppb	15:02:36
2	Mg 279.077 IEC†	1741.0	1653.4	16225 µg/L	16225 ppb	15:02:56
2	Na 589.592 Radial†	5495.5	4788.1	1710.6 µg/L	1710.6 ppb	15:02:56
2	Sr 421.552†	20343.0	19430.4	225.17 µg/L	225.17 ppb	15:02:36
2	Sc 361.383	1982613.6	1982613.6	99.964 %		15:04:08
2	Y 371.029	1396060.6	1396060.6	101.69 %		15:04:08
2	Ag 328.068†	275.3	777.8	15.210 µg/L	15.210 ppb	15:04:13
2	As 188.979†	8.1	9.8	26.307 µg/L	26.307 ppb	15:04:34
2	B 249.677†	1130.5	816.5	-19.390 µg/L	-19.390 ppb	15:04:13
2	Ba 233.527†	49215.1	49253.7	1403.7 µg/L	1403.7 ppb	15:04:13
2	Be 313.107†	14135.7	17441.5	10.712 µg/L	10.712 ppb	15:04:13
2	Cd 226.502†	242.9	388.1	-1.1116 µg/L	-1.1116 ppb	15:04:34
2	Co 228.616†	1079.6	1088.3	49.144 µg/L	49.144 ppb	15:04:34
2	Cr 267.716†	4833.0	4877.5	115.67 µg/L	115.67 ppb	15:04:13
2	Cu 324.752†	8615.6	6129.8	62.240 µg/L	62.240 ppb	15:04:13
2	Mn 257.610†	832088.0	832649.9	3097.3 µg/L	3097.3 ppb	15:04:08
2	Mo 202.031†	-9.5	-2.8	3.9556 µg/L	3.9556 ppb	15:04:34
2	Ni 231.604†	1559.0	1252.4	75.709 µg/L	75.709 ppb	15:04:34
2	P 214.914†	561.5	540.5	1190.3 µg/L	1190.3 ppb	15:04:34
2	Pb 220.353†	607.9	516.6	150.53 µg/L	150.53 ppb	15:04:34

2	S 181.975 Axial†	144.8	130.2	631.99 µg/L	631.99 ppb	15:04:34
2	Sb 206.836†	32.0	7.4	4.9287 µg/L	4.9287 ppb	15:04:34
2	Se 196.026†	-31.7	-42.4	219.75 µg/L	219.75 ppb	15:04:34
2	SiO2†	302810.2	301578.7	70844 µg/L	70844 ppb	15:04:08
2	Si 251.611†	366870.3	366698.2	32915 µg/L	32915 ppb	15:04:08
2	Sn 189.927†	-30.9	-33.7	-27.085 µg/L	-27.085 ppb	15:04:34
2	Ti 334.940†	1703979.6	1704426.0	4531.1 µg/L	4531.1 ppb	15:04:08
2	Tl 190.801†	-66.6	-40.6	12.312 µg/L	12.312 ppb	15:04:34
2	U 409.014†	-1295.1	-1192.3	-130.53 µg/L	-130.53 ppb	15:04:13
2	V 292.402†	19102.6	19142.8	235.45 µg/L	235.45 ppb	15:04:13
2	Zn 213.857†	11285.8	10789.2	285.61 µg/L	285.61 ppb	15:04:13
3	Sc RADIAL	58470.2	58470.2	105 %		15:03:02
3	Al 396.153Radial†	124102.7	118267.8	93425 µg/L	93425 ppb	15:03:02
3	Ca 317.933Radial†	19188.2	18096.7	18328 µg/L	18328 ppb	15:03:22
3	Fe 238.204 Radial†	13153.2	12517.9	111100 µg/L	111100 ppb	15:03:22
3	K 766.490 Radial†	18213.2	17168.7	13630 µg/L	13630 ppb	15:03:02
3	Mg 279.077 IEC†	1724.8	1630.9	16004 µg/L	16004 ppb	15:03:22
3	Na 589.592 Radial†	5526.1	4794.7	1712.9 µg/L	1712.9 ppb	15:03:22
3	Sr 421.552†	20153.4	19166.3	222.11 µg/L	222.11 ppb	15:03:02
3	Sc 361.383	2002637.4	2002637.4	100.97 %		15:04:41
3	Y 371.029	1407243.6	1407243.6	102.50 %		15:04:41
3	Ag 328.068†	347.9	847.0	15.634 µg/L	15.634 ppb	15:04:47
3	As 188.979†	14.5	16.0	39.496 µg/L	39.496 ppb	15:05:07
3	B 249.677†	1105.7	780.6	-20.477 µg/L	-20.477 ppb	15:04:47
3	Ba 233.527†	46944.4	46512.7	1325.5 µg/L	1325.5 ppb	15:04:47
3	Be 313.107†	13118.7	16293.0	9.9456 µg/L	9.9456 ppb	15:04:47
3	Cd 226.502†	209.2	352.3	-2.0415 µg/L	-2.0415 ppb	15:05:07
3	Co 228.616†	990.9	989.6	44.119 µg/L	44.119 ppb	15:05:07
3	Cr 267.716†	4529.0	4528.1	107.38 µg/L	107.38 ppb	15:04:47
3	Cu 324.752†	8330.7	5761.5	59.267 µg/L	59.267 ppb	15:04:47
3	Mn 257.610†	818443.0	810813.7	3016.3 µg/L	3016.3 ppb	15:04:41
3	Mo 202.031†	-21.8	-14.8	2.5682 µg/L	2.5682 ppb	15:05:07
3	Ni 231.604†	1456.3	1135.1	68.737 µg/L	68.737 ppb	15:05:07
3	P 214.914†	512.9	486.7	1066.0 µg/L	1066.0 ppb	15:05:07
3	Pb 220.353†	590.3	493.2	143.70 µg/L	143.70 ppb	15:05:07
3	S 181.975 Axial†	133.0	117.1	568.62 µg/L	568.62 ppb	15:05:07
3	Sb 206.836†	32.9	7.9	5.5862 µg/L	5.5862 ppb	15:05:07
3	Se 196.026†	-27.1	-37.6	224.26 µg/L	224.26 ppb	15:05:07
3	SiO2†	298644.9	294424.7	69164 µg/L	69164 ppb	15:04:41
3	Si 251.611†	361885.0	358091.5	32142 µg/L	32142 ppb	15:04:41
3	Sn 189.927†	-26.7	-29.3	-24.769 µg/L	-24.769 ppb	15:05:07
3	Ti 334.940†	1668335.2	1652081.7	4391.9 µg/L	4391.9 ppb	15:04:41
3	Tl 190.801†	-62.9	-36.2	17.189 µg/L	17.189 ppb	15:05:07
3	U 409.014†	-1138.5	-1024.2	-114.31 µg/L	-114.31 ppb	15:04:47
3	V 292.402†	18086.2	17945.1	221.40 µg/L	221.40 ppb	15:04:47
3	Zn 213.857†	10813.6	10208.8	269.99 µg/L	269.99 ppb	15:04:47

Mean Data: 1202021584|944117|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	2010014.7	101.35 %	1.600			1.58%
Sc RADIAL	57915.6	104 %	1.4			1.30%
Y 371.029	1413653.4	102.97 %	1.568			1.52%
Ag 328.068†	774.1	15.170 µg/L	0.4851	15.170 ppb	0.4851	3.20%
Al 396.153Radial†	120196.5	94948 µg/L	1747.1	94948 ppb	1747.1	1.84%
As 188.979†	11.6	30.264 µg/L	8.0223	30.264 ppb	8.0223	26.51%
B 249.677†	788.0	-21.183 µg/L	2.2309	-21.183 ppb	2.2309	10.53%
Ba 233.527†	47371.6	1350.0 µg/L	46.51	1350.0 ppb	46.51	3.45%
Be 313.107†	16754.0	10.267 µg/L	0.3975	10.267 ppb	0.3975	3.87%
Ca 317.933Radial†	18378.2	18613 µg/L	415.9	18613 ppb	415.9	2.23%
Cd 226.502†	373.0	-1.6535 µg/L	0.48365	-1.6535 ppb	0.48365	29.25%
Co 228.616†	1040.4	46.813 µg/L	2.5322	46.813 ppb	2.5322	5.41%
Cr 267.716†	4662.4	110.57 µg/L	4.462	110.57 ppb	4.462	4.04%
Cu 324.752†	5857.2	60.278 µg/L	1.6988	60.278 ppb	1.6988	2.82%
Fe 238.204 Radial†	12747.6	113140 µg/L	2543.4	113140 ppb	2543.4	2.25%
K 766.490 Radial†	17401.4	13815 µg/L	224.2	13815 ppb	224.2	1.62%
Mg 279.077 IEC†	1664.1	16330 µg/L	389.2	16330 ppb	389.2	2.38%
Mn 257.610†	811754.8	3020.0 µg/L	75.46	3020.0 ppb	75.46	2.50%
Mo 202.031†	-7.4	3.4725 µg/L	0.78377	3.4725 ppb	0.78377	22.57%
Na 589.592 Radial†	4855.0	1734.5 µg/L	39.39	1734.5 ppb	39.39	2.27%

Ni 231.604†	1199.2	72.567 µg/L	3.5362	72.567 ppb	3.5362	4.87%
P 214.914†	517.0	1135.2 µg/L	63.34	1135.2 ppb	63.34	5.58%
Pb 220.353†	504.9	147.11 µg/L	3.413	147.11 ppb	3.413	2.32%
S 181.975 Axial†	120.6	585.34 µg/L	40.941	585.34 ppb	40.941	6.99%
Sb 206.836†	4.4	1.8341 µg/L	5.93859	1.8341 ppb	5.93859	323.79%
Se 196.026†	-45.1	217.54 µg/L	8.057	217.54 ppb	8.057	3.70%
SiO2†	294442.9	69168 µg/L	1674.1	69168 ppb	1674.1	2.42%
Si 251.611†	358037.4	32138 µg/L	779.8	32138 ppb	779.8	2.43%
Sn 189.927†	-30.6	-25.609 µg/L	1.2820	-25.609 ppb	1.2820	5.01%
Sr 421.552†	19484.1	225.79 µg/L	4.031	225.79 ppb	4.031	1.79%
Ti 334.940†	1659233.3	4410.9 µg/L	111.89	4410.9 ppb	111.89	2.54%
Tl 190.801†	-36.8	16.767 µg/L	4.2593	16.767 ppb	4.2593	25.40%
U 409.014†	-1076.4	-119.59 µg/L	9.473	-119.59 ppb	9.473	7.92%
V 292.402†	18364.8	226.51 µg/L	7.765	226.51 ppb	7.765	3.43%
Zn 213.857†	10376.7	274.40 µg/L	9.775	274.40 ppb	9.775	3.56%

Sequence No.: 29

Sample ID: 1202021586|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 325

Date Collected: 2/8/2010 15:05:16

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202021586|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55272.2	55272.2	99.2 %		15:05:49
1	Al 396.153Radial†	211602.6	213313.4	168490 µg/L	168490 ppb	15:05:49
1	Ca 317.933Radial†	26617.2	26643.3	26983 µg/L	26983 ppb	15:06:10
1	Fe 238.204 Radial†	16039.4	16152.5	143370 µg/L	143370 ppb	15:06:10
1	K 766.490 Radial†	29709.1	29761.2	23627 µg/L	23627 ppb	15:05:49
1	Mg 279.077 IEC†	2773.0	2782.6	27364 µg/L	27364 ppb	15:06:10
1	Na 589.592 Radial†	21450.2	21151.5	7556.6 µg/L	7556.6 ppb	15:05:49
1	Sr 421.552†	70345.0	70872.4	821.31 µg/L	821.31 ppb	15:05:49
1	Sc 361.383	1929298.2	1929298.2	97.276 %		15:07:15
1	Y 371.029	1356706.5	1356706.5	98.822 %		15:07:15
1	Ag 328.068†	68277.5	70691.9	620.39 µg/L	620.39 ppb	15:07:20
1	As 188.979†	271.3	280.6	601.09 µg/L	601.09 ppb	15:07:41
1	B 249.677†	12541.4	12578.2	527.74 µg/L	527.74 ppb	15:07:20
1	Ba 233.527†	70097.9	72081.9	2055.1 µg/L	2055.1 ppb	15:07:20
1	Be 313.107†	793931.0	819464.5	582.16 µg/L	582.16 ppb	15:07:15
1	Cd 226.502†	18513.8	19177.3	553.10 µg/L	553.10 ppb	15:07:20
1	Co 228.616†	10827.1	11138.6	588.02 µg/L	588.02 ppb	15:07:41
1	Cr 267.716†	29220.9	30081.9	713.04 µg/L	713.04 ppb	15:07:20
1	Cu 324.752†	87259.3	87214.1	683.31 µg/L	683.31 ppb	15:07:20
1	Mn 257.610†	829658.7	853155.4	3176.9 µg/L	3176.9 ppb	15:07:15
1	Mo 202.031†	4538.6	4672.4	526.99 µg/L	526.99 ppb	15:07:41
1	Ni 231.604†	10573.8	10562.8	627.94 µg/L	627.94 ppb	15:07:41
1	P 214.914†	857.2	860.0	1874.5 µg/L	1874.5 ppb	15:07:41
1	Pb 220.353†	2410.4	2386.5	694.58 µg/L	694.58 ppb	15:07:41
1	S 181.975 Axial†	1293.5	1315.1	6383.1 µg/L	6383.1 ppb	15:07:41
1	Sb 206.836†	410.8	397.7	420.14 µg/L	420.14 ppb	15:07:41
1	Se 196.026†	282.7	279.9	806.48 µg/L	806.48 ppb	15:07:41
1	SiO2†	347912.9	356315.5	83702 µg/L	83702 ppb	15:07:20
1	Si 251.611†	421438.9	432936.9	38861 µg/L	38861 ppb	15:07:15
1	Sn 189.927†	1117.1	1145.6	563.62 µg/L	563.62 ppb	15:07:41
1	Ti 334.940†	2144413.3	2204299.1	5859.5 µg/L	5859.5 ppb	15:07:15
1	Tl 190.801†	286.2	320.3	578.31 µg/L	578.31 ppb	15:07:41
1	U 409.014†	4485.4	4714.3	428.34 µg/L	428.34 ppb	15:07:20
1	V 292.402†	68057.6	69996.8	835.07 µg/L	835.07 ppb	15:07:20
1	Zn 213.857†	33692.9	34135.8	912.50 µg/L	912.50 ppb	15:07:20
2	Sc RADIAL	57241.7	57241.7	103 %		15:06:15
2	Al 396.153Radial†	212544.2	206890.7	163420 µg/L	163420 ppb	15:06:15
2	Ca 317.933Radial†	26423.2	25531.3	25857 µg/L	25857 ppb	15:06:35
2	Fe 238.204 Radial†	15966.6	15525.4	137810 µg/L	137810 ppb	15:06:35
2	K 766.490 Radial†	29960.1	28975.1	23003 µg/L	23003 ppb	15:06:15
2	Mg 279.077 IEC†	2755.8	2669.7	26253 µg/L	26253 ppb	15:06:35
2	Na 589.592 Radial†	21590.1	20543.6	7339.4 µg/L	7339.4 ppb	15:06:15
2	Sr 421.552†	70945.0	69016.6	799.81 µg/L	799.81 ppb	15:06:15
2	Sc 361.383	1944791.4	1944791.4	98.057 %		15:07:48
2	Y 371.029	1365744.8	1365744.8	99.480 %		15:07:48
2	Ag 328.068†	66765.2	68590.5	601.86 µg/L	601.86 ppb	15:07:54
2	As 188.979†	264.8	271.8	582.11 µg/L	582.11 ppb	15:08:15
2	B 249.677†	12318.8	12248.4	514.84 µg/L	514.84 ppb	15:07:54
2	Ba 233.527†	68456.6	69834.0	1991.0 µg/L	1991.0 ppb	15:07:54
2	Be 313.107†	784275.8	803115.9	570.55 µg/L	570.55 ppb	15:07:48
2	Cd 226.502†	18106.6	18610.4	536.89 µg/L	536.89 ppb	15:07:54
2	Co 228.616†	10401.7	10616.1	560.10 µg/L	560.10 ppb	15:08:15
2	Cr 267.716†	28492.6	29099.9	689.76 µg/L	689.76 ppb	15:07:54
2	Cu 324.752†	85230.9	84430.8	661.37 µg/L	661.37 ppb	15:07:54
2	Mn 257.610†	818107.2	834580.4	3107.4 µg/L	3107.4 ppb	15:07:48
2	Mo 202.031†	4361.7	4454.9	502.50 µg/L	502.50 ppb	15:08:15
2	Ni 231.604†	10157.2	10051.3	597.55 µg/L	597.55 ppb	15:08:15
2	P 214.914†	832.7	828.0	1804.9 µg/L	1804.9 ppb	15:08:15
2	Pb 220.353†	2322.5	2277.0	662.80 µg/L	662.80 ppb	15:08:15

2	S 181.975 Axial†	1244.5	1254.6	6089.4 µg/L	6089.4 ppb	15:08:15
2	Sb 206.836†	397.7	381.0	402.37 µg/L	402.37 ppb	15:08:15
2	Se 196.026†	272.9	267.6	772.92 µg/L	772.92 ppb	15:08:15
2	SiO2†	339945.7	345341.1	81124 µg/L	81124 ppb	15:07:54
2	Si 251.611†	417121.9	425083.0	38156 µg/L	38156 ppb	15:07:48
2	Sn 189.927†	1075.8	1094.2	538.30 µg/L	538.30 ppb	15:08:15
2	Ti 334.940†	2118515.4	2160326.1	5742.6 µg/L	5742.6 ppb	15:07:48
2	Tl 190.801†	264.3	295.6	538.68 µg/L	538.68 ppb	15:08:15
2	U 409.014†	4466.0	4657.7	423.79 µg/L	423.79 ppb	15:07:54
2	V 292.402†	66540.3	67892.0	809.75 µg/L	809.75 ppb	15:07:54
2	Zn 213.857†	32883.6	33034.6	883.17 µg/L	883.17 ppb	15:07:54
3	Sc RADIAL	56502.1	56502.1	101 %		15:06:41
3	Al 396.153Radial†	210899.0	207976.7	164280 µg/L	164280 ppb	15:06:41
3	Ca 317.933Radial†	26187.1	25635.1	25962 µg/L	25962 ppb	15:07:01
3	Fe 238.204 Radial†	15839.3	15603.2	138500 µg/L	138500 ppb	15:07:01
3	K 766.490 Radial†	29713.2	29113.4	23113 µg/L	23113 ppb	15:06:41
3	Mg 279.077 IEC†	2740.3	2689.6	26448 µg/L	26448 ppb	15:07:01
3	Na 589.592 Radial†	21406.6	20637.7	7373.0 µg/L	7373.0 ppb	15:06:41
3	Sr 421.552†	70131.5	69118.4	800.99 µg/L	800.99 ppb	15:06:41
3	Sc 361.383	2002409.0	2002409.0	100.96 %		15:08:22
3	Y 371.029	1405068.3	1405068.3	102.34 %		15:08:22
3	Ag 328.068†	65115.3	64997.1	570.71 µg/L	570.71 ppb	15:08:28
3	As 188.979†	251.6	250.9	537.90 µg/L	537.90 ppb	15:08:48
3	B 249.677†	11922.8	11494.7	478.36 µg/L	478.36 ppb	15:08:28
3	Ba 233.527†	65648.6	65043.9	1854.4 µg/L	1854.4 ppb	15:08:28
3	Be 313.107†	759457.4	755520.1	536.74 µg/L	536.74 ppb	15:08:22
3	Cd 226.502†	17435.9	17414.8	501.31 µg/L	501.31 ppb	15:08:28
3	Co 228.616†	9771.7	9686.8	510.77 µg/L	510.77 ppb	15:08:48
3	Cr 267.716†	27095.5	26880.0	637.14 µg/L	637.14 ppb	15:08:28
3	Cu 324.752†	81681.2	78413.9	615.70 µg/L	615.70 ppb	15:08:28
3	Mn 257.610†	794513.7	787205.0	2932.1 µg/L	2932.1 ppb	15:08:22
3	Mo 202.031†	4119.0	4086.5	461.41 µg/L	461.41 ppb	15:08:48
3	Ni 231.604†	9583.7	9185.2	546.22 µg/L	546.22 ppb	15:08:48
3	P 214.914†	777.0	748.4	1623.1 µg/L	1623.1 ppb	15:08:48
3	Pb 220.353†	2228.4	2115.7	616.14 µg/L	616.14 ppb	15:08:48
3	S 181.975 Axial†	1195.8	1169.8	5677.9 µg/L	5677.9 ppb	15:08:48
3	Sb 206.836†	373.9	345.7	364.84 µg/L	364.84 ppb	15:08:48
3	Se 196.026†	269.6	256.3	756.62 µg/L	756.62 ppb	15:08:48
3	SiO2†	326330.2	321879.9	75613 µg/L	75613 ppb	15:08:28
3	Si 251.611†	404610.9	400451.1	35945 µg/L	35945 ppb	15:08:22
3	Sn 189.927†	1003.5	991.1	486.42 µg/L	486.42 ppb	15:08:48
3	Ti 334.940†	2045873.7	2026210.4	5386.0 µg/L	5386.0 ppb	15:08:22
3	Tl 190.801†	264.7	288.2	523.93 µg/L	523.93 ppb	15:08:48
3	U 409.014†	4123.5	4187.5	378.80 µg/L	378.80 ppb	15:08:28
3	V 292.402†	63378.1	62807.4	750.35 µg/L	750.35 ppb	15:08:28
3	Zn 213.857†	31736.1	30933.0	826.50 µg/L	826.50 ppb	15:08:28

## Mean Data: 1202021586|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1958832.9	98.765 %		1.9424				1.97%
Sc RADIAL	56338.7	101 %		1.8				1.77%
Y 371.029	1375839.9	100.22 %		1.873				1.87%
Ag 328.068†	68093.2	597.65 µg/L		25.104	597.65 ppb		25.104	4.20%
Al 396.153Radial†	209393.6	165400 µg/L		2715.2	165400 ppb		2715.2	1.64%
As 188.979†	267.8	573.70 µg/L		32.423	573.70 ppb		32.423	5.65%
B 249.677†	12107.1	506.98 µg/L		25.612	506.98 ppb		25.612	5.05%
Ba 233.527†	68986.6	1966.9 µg/L		102.49	1966.9 ppb		102.49	5.21%
Be 313.107†	792700.2	563.15 µg/L		23.597	563.15 ppb		23.597	4.19%
Ca 317.933Radial†	25936.6	26268 µg/L		622.1	26268 ppb		622.1	2.37%
Cd 226.502†	18400.8	530.43 µg/L		26.495	530.43 ppb		26.495	4.99%
Co 228.616†	10480.5	552.96 µg/L		39.113	552.96 ppb		39.113	7.07%
Cr 267.716†	28687.3	679.98 µg/L		38.881	679.98 ppb		38.881	5.72%
Cu 324.752†	83352.9	653.46 µg/L		34.494	653.46 ppb		34.494	5.28%
Fe 238.204 Radial†	15760.4	139890 µg/L		3034.6	139890 ppb		3034.6	2.17%
K 766.490 Radial†	29283.2	23248 µg/L		333.2	23248 ppb		333.2	1.43%
Mg 279.077 IEC†	2713.9	26688 µg/L		593.4	26688 ppb		593.4	2.22%
Mn 257.610†	824980.2	3072.1 µg/L		126.16	3072.1 ppb		126.16	4.11%
Mo 202.031†	4404.6	496.96 µg/L		33.140	496.96 ppb		33.140	6.67%
Na 589.592 Radial†	20777.6	7423.0 µg/L		116.89	7423.0 ppb		116.89	1.57%

Ni 231.604†	9933.1	590.57 µg/L	41.301	590.57 ppb	41.301	6.99%
P 214.914†	812.1	1767.5 µg/L	129.79	1767.5 ppb	129.79	7.34%
Pb 220.353†	2259.8	657.84 µg/L	39.455	657.84 ppb	39.455	6.00%
S 181.975 Axial†	1246.5	6050.1 µg/L	354.28	6050.1 ppb	354.28	5.86%
Sb 206.836†	374.8	395.78 µg/L	28.235	395.78 ppb	28.235	7.13%
Se 196.026†	267.9	778.67 µg/L	25.423	778.67 ppb	25.423	3.26%
SiO2†	341178.8	80147 µg/L	4132.3	80147 ppb	4132.3	5.16%
Si 251.611†	419490.3	37654 µg/L	1521.4	37654 ppb	1521.4	4.04%
Sn 189.927†	1077.0	529.45 µg/L	39.355	529.45 ppb	39.355	7.43%
Sr 421.552†	69669.2	807.37 µg/L	12.090	807.37 ppb	12.090	1.50%
Ti 334.940†	2130278.5	5662.7 µg/L	246.65	5662.7 ppb	246.65	4.36%
Tl 190.801†	301.4	546.97 µg/L	28.125	546.97 ppb	28.125	5.14%
U 409.014†	4519.8	410.31 µg/L	27.381	410.31 ppb	27.381	6.67%
V 292.402†	66898.7	798.39 µg/L	43.483	798.39 ppb	43.483	5.45%
Zn 213.857†	32701.1	874.06 µg/L	43.722	874.06 ppb	43.722	5.00%

Sequence No.: 30

Sample ID: 1202021587|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 326

Date Collected: 2/8/2010 15:08:57

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202021587|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Conc. Units	Sample	Analysis Time
1	Sc RADIAL	57406.1	57406.1	103 %				15:09:30
1	Al 396.153Radial†	215948.7	209602.6	165560 µg/L		165560 ppb		15:09:30
1	Ca 317.933Radial†	25583.7	24642.8	24957 µg/L		24957 ppb		15:09:50
1	Fe 238.204 Radial†	16519.8	16017.7	142180 µg/L		142180 ppb		15:09:50
1	K 766.490 Radial†	30178.4	29103.4	23105 µg/L		23105 ppb		15:09:30
1	Mg 279.077 IEC†	2825.1	2729.3	26837 µg/L		26837 ppb		15:09:50
1	Na 589.592 Radial†	20738.3	19656.8	7022.6 µg/L		7022.6 ppb		15:09:30
1	Sr 421.552†	68627.0	66569.1	771.44 µg/L		771.44 ppb		15:09:30
1	Sc 361.383	2019574.2	2019574.2	101.83 %				15:10:56
1	Y 371.029	1418864.3	1418864.3	103.35 %				15:10:56
1	Ag 328.068†	63167.3	62535.9	550.04 µg/L		550.04 ppb		15:11:01
1	As 188.979†	255.0	252.1	540.75 µg/L		540.75 ppb		15:11:22
1	B 249.677†	12032.7	11502.3	476.80 µg/L		476.80 ppb		15:11:01
1	Ba 233.527†	68445.5	67237.9	1917.0 µg/L		1917.0 ppb		15:11:01
1	Be 313.107†	761889.9	751515.5	533.67 µg/L		533.67 ppb		15:10:56
1	Cd 226.502†	17472.6	17304.0	497.63 µg/L		497.63 ppb		15:11:01
1	Co 228.616†	10440.2	10261.1	540.49 µg/L		540.49 ppb		15:11:22
1	Cr 267.716†	27282.5	26835.6	636.11 µg/L		636.11 ppb		15:11:01
1	Cu 324.752†	82442.1	78473.5	616.66 µg/L		616.66 ppb		15:11:01
1	Mn 257.610†	952960.9	936119.6	3483.9 µg/L		3483.9 ppb		15:10:56
1	Mo 202.031†	4286.0	4215.8	475.97 µg/L		475.97 ppb		15:11:22
1	Ni 231.604†	10130.8	9641.9	573.33 µg/L		573.33 ppb		15:11:22
1	P 214.914†	825.1	789.1	1715.6 µg/L		1715.6 ppb		15:11:22
1	Pb 220.353†	2330.9	2197.6	639.81 µg/L		639.81 ppb		15:11:22
1	S 181.975 Axial†	1229.7	1193.0	5790.5 µg/L		5790.5 ppb		15:11:22
1	Sb 206.836†	380.7	349.2	368.94 µg/L		368.94 ppb		15:11:22
1	Se 196.026†	266.9	251.4	758.68 µg/L		758.68 ppb		15:11:22
1	SiO2†	325554.8	318371.2	74789 µg/L		74789 ppb		15:11:01
1	Si 251.611†	400576.5	393082.9	35283 µg/L		35283 ppb		15:10:56
1	Sn 189.927†	1051.6	1029.9	505.58 µg/L		505.58 ppb		15:11:22
1	Ti 334.940†	2286454.2	2245249.8	5968.4 µg/L		5968.4 ppb		15:10:56
1	Tl 190.801†	260.2	281.6	521.88 µg/L		521.88 ppb		15:11:22
1	U 409.014†	4089.0	4118.8	371.80 µg/L		371.80 ppb		15:11:01
1	V 292.402†	66537.4	65376.4	780.69 µg/L		780.69 ppb		15:11:01
1	Zn 213.857†	32029.2	30953.7	826.74 µg/L		826.74 ppb		15:11:01
2	Sc RADIAL	57828.9	57828.9	104 %				15:09:56
2	Al 396.153Radial†	217740.7	209796.7	165720 µg/L		165720 ppb		15:09:56
2	Ca 317.933Radial†	25416.6	24300.3	24611 µg/L		24611 ppb		15:10:17
2	Fe 238.204 Radial†	16501.7	15883.1	140980 µg/L		140980 ppb		15:10:17
2	K 766.490 Radial†	30313.8	29019.7	23039 µg/L		23039 ppb		15:09:56
2	Mg 279.077 IEC†	2825.3	2709.4	26642 µg/L		26642 ppb		15:10:17
2	Na 589.592 Radial†	20884.8	19650.7	7020.4 µg/L		7020.4 ppb		15:09:56
2	Sr 421.552†	69150.3	66586.3	771.64 µg/L		771.64 ppb		15:09:56
2	Sc 361.383	2022304.1	2022304.1	101.97 %				15:11:29
2	Y 371.029	1419887.1	1419887.1	103.42 %				15:11:29
2	Ag 328.068†	62897.0	62187.1	546.96 µg/L		546.96 ppb		15:11:35
2	As 188.979†	253.1	250.0	536.15 µg/L		536.15 ppb		15:11:56
2	B 249.677†	11975.4	11430.2	473.97 µg/L		473.97 ppb		15:11:35
2	Ba 233.527†	68195.3	66901.9	1907.4 µg/L		1907.4 ppb		15:11:35
2	Be 313.107†	765379.6	753927.9	535.38 µg/L		535.38 ppb		15:11:29
2	Cd 226.502†	17420.1	17229.4	495.55 µg/L		495.55 ppb		15:11:35
2	Co 228.616†	10467.9	10274.4	541.16 µg/L		541.16 ppb		15:11:56
2	Cr 267.716†	27324.4	26840.5	636.22 µg/L		636.22 ppb		15:11:35
2	Cu 324.752†	82175.9	78103.2	613.68 µg/L		613.68 ppb		15:11:35
2	Mn 257.610†	956244.9	938077.0	3491.0 µg/L		3491.0 ppb		15:11:29
2	Mo 202.031†	4299.8	4223.7	476.81 µg/L		476.81 ppb		15:11:56
2	Ni 231.604†	10161.8	9658.8	574.32 µg/L		574.32 ppb		15:11:56
2	P 214.914†	829.8	792.6	1725.1 µg/L		1725.1 ppb		15:11:56
2	Pb 220.353†	2353.0	2216.2	645.25 µg/L		645.25 ppb		15:11:56

2	S 181.975 Axial†	1227.2	1188.9	5770.7 µg/L	5770.7 ppb	15:11:56
2	Sb 206.836†	383.8	351.8	371.67 µg/L	371.67 ppb	15:11:56
2	Se 196.026†	258.0	242.3	741.18 µg/L	741.18 ppb	15:11:56
2	SiO2†	324499.6	316904.8	74444 µg/L	74444 ppb	15:11:35
2	Si 251.611†	402890.5	394821.3	35439 µg/L	35439 ppb	15:11:29
2	Sn 189.927†	1056.2	1033.1	507.25 µg/L	507.25 ppb	15:11:56
2	Ti 334.940†	2299262.9	2254780.5	5993.8 µg/L	5993.8 ppb	15:11:29
2	Tl 190.801†	262.8	283.8	525.40 µg/L	525.40 ppb	15:11:56
2	U 409.014†	4234.2	4255.8	385.06 µg/L	385.06 ppb	15:11:35
2	V 292.402†	66400.9	65154.4	778.00 µg/L	778.00 ppb	15:11:35
2	Zn 213.857†	31858.2	30743.6	821.11 µg/L	821.11 ppb	15:11:35
3	Sc RADIAL	58396.6	58396.6	105 %		15:10:22
3	Al 396.153Radial†	218738.0	208708.9	164860 µg/L	164860 ppb	15:10:22
3	Ca 317.933Radial†	25427.5	24072.7	24380 µg/L	24380 ppb	15:10:42
3	Fe 238.204 Radial†	16548.9	15773.5	140010 µg/L	140010 ppb	15:10:42
3	K 766.490 Radial†	30600.7	29009.6	23031 µg/L	23031 ppb	15:10:22
3	Mg 279.077 IEC†	2814.7	2672.9	26281 µg/L	26281 ppb	15:10:42
3	Na 589.592 Radial†	21045.2	19608.2	7005.2 µg/L	7005.2 ppb	15:10:22
3	Sr 421.552†	69671.7	66436.1	769.90 µg/L	769.90 ppb	15:10:22
3	Sc 361.383	2016646.5	2016646.5	101.68 %		15:12:03
3	Y 371.029	1415454.4	1415454.4	103.10 %		15:12:03
3	Ag 328.068†	62702.6	62169.0	546.65 µg/L	546.65 ppb	15:12:09
3	As 188.979†	244.6	242.3	519.82 µg/L	519.82 ppb	15:12:29
3	B 249.677†	11939.2	11427.5	474.33 µg/L	474.33 ppb	15:12:09
3	Ba 233.527†	67144.1	66055.7	1883.3 µg/L	1883.3 ppb	15:12:09
3	Be 313.107†	749692.0	740605.4	525.92 µg/L	525.92 ppb	15:12:03
3	Cd 226.502†	17219.5	17080.1	491.21 µg/L	491.21 ppb	15:12:09
3	Co 228.616†	9897.8	9742.5	512.74 µg/L	512.74 ppb	15:12:29
3	Cr 267.716†	26653.7	26256.1	622.37 µg/L	622.37 ppb	15:12:09
3	Cu 324.752†	80608.5	76787.8	603.54 µg/L	603.54 ppb	15:12:09
3	Mn 257.610†	938220.9	922981.8	3435.0 µg/L	3435.0 ppb	15:12:03
3	Mo 202.031†	4058.5	3998.2	451.60 µg/L	451.60 ppb	15:12:29
3	Ni 231.604†	9607.3	9141.5	543.65 µg/L	543.65 ppb	15:12:29
3	P 214.914†	804.9	770.4	1674.4 µg/L	1674.4 ppb	15:12:29
3	Pb 220.353†	2251.5	2122.9	618.18 µg/L	618.18 ppb	15:12:29
3	S 181.975 Axial†	1187.6	1153.4	5598.4 µg/L	5598.4 ppb	15:12:29
3	Sb 206.836†	371.9	341.1	360.18 µg/L	360.18 ppb	15:12:29
3	Se 196.026†	258.0	243.0	740.12 µg/L	740.12 ppb	15:12:29
3	SiO2†	319150.2	312536.6	73418 µg/L	73418 ppb	15:12:09
3	Si 251.611†	395532.1	388693.0	34889 µg/L	34889 ppb	15:12:03
3	Sn 189.927†	987.4	968.2	474.73 µg/L	474.73 ppb	15:12:29
3	Ti 334.940†	2248293.6	2210979.6	5877.3 µg/L	5877.3 ppb	15:12:03
3	Tl 190.801†	259.5	281.3	520.19 µg/L	520.19 ppb	15:12:29
3	U 409.014†	4081.9	4117.7	372.03 µg/L	372.03 ppb	15:12:09
3	V 292.402†	64929.5	63890.0	762.97 µg/L	762.97 ppb	15:12:09
3	Zn 213.857†	31430.9	30411.0	812.32 µg/L	812.32 ppb	15:12:09

Mean Data: 1202021587|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	2019508.3	101.82 %		0.143				0.14%
Sc RADIAL	57877.2	104 %		0.9				0.86%
Y 371.029	1418068.6	103.29 %		0.169				0.16%
Ag 328.068†	62297.4	547.88 µg/L		1.877	547.88 ppb		1.877	0.34%
Al 396.153Radial†	209369.4	165380 µg/L		458.0	165380 ppb		458.0	0.28%
As 188.979†	248.1	532.24 µg/L		10.999	532.24 ppb		10.999	2.07%
B 249.677†	11453.3	475.03 µg/L		1.538	475.03 ppb		1.538	0.32%
Ba 233.527†	66731.8	1902.6 µg/L		17.37	1902.6 ppb		17.37	0.91%
Be 313.107†	748683.0	531.65 µg/L		5.039	531.65 ppb		5.039	0.95%
Ca 317.933Radial†	24338.6	24649 µg/L		290.7	24649 ppb		290.7	1.18%
Cd 226.502†	17204.5	494.80 µg/L		3.279	494.80 ppb		3.279	0.66%
Co 228.616†	10092.7	531.46 µg/L		16.221	531.46 ppb		16.221	3.05%
Cr 267.716†	26644.0	631.57 µg/L		7.964	631.57 ppb		7.964	1.26%
Cu 324.752†	77788.1	611.29 µg/L		6.879	611.29 ppb		6.879	1.13%
Fe 238.204 Radial†	15891.5	141050 µg/L		1085.8	141050 ppb		1085.8	0.77%
K 766.490 Radial†	29044.2	23058 µg/L		40.9	23058 ppb		40.9	0.18%
Mg 279.077 IEC†	2703.8	26587 µg/L		282.0	26587 ppb		282.0	1.06%
Mn 257.610†	932392.8	3470.0 µg/L		30.49	3470.0 ppb		30.49	0.88%
Mo 202.031†	4145.9	468.13 µg/L		14.318	468.13 ppb		14.318	3.06%
Na 589.592 Radial†	19638.5	7016.1 µg/L		9.46	7016.1 ppb		9.46	0.13%

Ni 231.604†	9480.7	563.77 µg/L	17.432	563.77 ppb	17.432	3.09%
P 214.914†	784.0	1705.1 µg/L	26.96	1705.1 ppb	26.96	1.58%
Pb 220.353†	2178.9	634.41 µg/L	14.317	634.41 ppb	14.317	2.26%
S 181.975 Axial†	1178.4	5719.9 µg/L	105.64	5719.9 ppb	105.64	1.85%
Sb 206.836†	347.4	366.93 µg/L	6.007	366.93 ppb	6.007	1.64%
Se 196.026†	245.5	746.66 µg/L	10.421	746.66 ppb	10.421	1.40%
SiO2†	315937.6	74217 µg/L	713.0	74217 ppb	713.0	0.96%
Si 251.611†	392199.1	35204 µg/L	283.5	35204 ppb	283.5	0.81%
Sn 189.927†	1010.4	495.85 µg/L	18.315	495.85 ppb	18.315	3.69%
Sr 421.552†	66530.5	770.99 µg/L	0.952	770.99 ppb	0.952	0.12%
Ti 334.940†	2237003.3	5946.5 µg/L	61.24	5946.5 ppb	61.24	1.03%
Tl 190.801†	282.2	522.49 µg/L	2.658	522.49 ppb	2.658	0.51%
U 409.014†	4164.1	376.30 µg/L	7.591	376.30 ppb	7.591	2.02%
V 292.402†	64806.9	773.89 µg/L	9.547	773.89 ppb	9.547	1.23%
Zn 213.857†	30702.8	820.06 µg/L	7.266	820.06 ppb	7.266	0.89%

Sequence No.: 31

Sample ID: 1202021585|944117|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 327

Date Collected: 2/8/2010 15:12:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202021585|944117|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	53282.0	53282.0	95.6 %		15:13:11
1	Al 396.153Radial†	29440.4	30795.3	24326 µg/L	24326 ppb	15:13:11
1	Ca 317.933Radial†	4760.0	4789.6	4850.7 µg/L	4850.7 ppb	15:13:32
1	Fe 238.204 Radial†	3243.4	3375.8	29962 µg/L	29962 ppb	15:13:32
1	K 766.490 Radial†	4049.8	4048.2	3213.8 µg/L	3213.8 ppb	15:13:11
1	Mg 279.077 IEC†	382.9	387.7	3800.7 µg/L	3800.7 ppb	15:13:32
1	Na 589.592 Radial†	1616.7	1219.3	435.61 µg/L	435.61 ppb	15:13:11
1	Sr 421.552†	4731.2	4909.3	56.892 µg/L	56.892 ppb	15:13:11
1	Sc 361.383	1977960.6	1977960.6	99.730 %		15:14:35
1	Y 371.029	1367064.6	1367064.6	99.576 %		15:14:35
1	Ag 328.068†	-413.1	88.2	2.9390 µg/L	2.9390 ppb	15:14:40
1	As 188.979†	1.0	2.7	7.1151 µg/L	7.1151 ppb	15:15:01
1	B 249.677†	496.1	183.0	-6.8472 µg/L	-6.8472 ppb	15:14:40
1	Ba 233.527†	10622.2	10672.0	304.13 µg/L	304.13 ppb	15:14:40
1	Be 313.107†	369.1	3670.9	2.2493 µg/L	2.2493 ppb	15:14:40
1	Cd 226.502†	-52.1	92.8	-0.6181 µg/L	-0.6181 ppb	15:15:01
1	Co 228.616†	226.4	235.3	10.652 µg/L	10.652 ppb	15:15:01
1	Cr 267.716†	868.4	913.5	21.666 µg/L	21.666 ppb	15:14:40
1	Cu 324.752†	3631.9	1153.0	12.934 µg/L	12.934 ppb	15:14:40
1	Mn 257.610†	169590.2	170313.6	634.44 µg/L	634.44 ppb	15:14:35
1	Mo 202.031†	-6.7	0.0	1.1429 µg/L	1.1429 ppb	15:15:01
1	Ni 231.604†	569.5	264.0	16.039 µg/L	16.039 ppb	15:15:01
1	P 214.914†	141.9	121.1	263.80 µg/L	263.80 ppb	15:15:01
1	Pb 220.353†	199.4	108.5	31.616 µg/L	31.616 ppb	15:15:01
1	S 181.975 Axial†	42.0	27.5	133.49 µg/L	133.49 ppb	15:15:01
1	Sb 206.836†	34.4	9.9	9.7879 µg/L	9.7879 ppb	15:15:01
1	Se 196.026†	5.2	-5.5	68.345 µg/L	68.345 ppb	15:15:01
1	SiO2†	66035.4	64874.3	15240 µg/L	15240 ppb	15:14:40
1	Si 251.611†	79201.0	79112.1	7101.1 µg/L	7101.1 ppb	15:14:40
1	Sn 189.927†	-4.6	-7.4	-6.5022 µg/L	-6.5022 ppb	15:15:01
1	Ti 334.940†	363024.2	363843.9	967.24 µg/L	967.24 ppb	15:14:35
1	Tl 190.801†	-39.4	-13.5	-3.6155 µg/L	-3.6155 ppb	15:15:01
1	U 409.014†	-254.1	-151.5	-18.920 µg/L	-18.920 ppb	15:14:40
1	V 292.402†	3818.4	3862.1	48.367 µg/L	48.367 ppb	15:14:40
1	Zn 213.857†	2695.9	2202.6	57.942 µg/L	57.942 ppb	15:15:01
2	Sc RADIAL	55263.0	55263.0	99.2 %		15:13:37
2	Al 396.153Radial†	28838.3	29084.8	22975 µg/L	22975 ppb	15:13:37
2	Ca 317.933Radial†	4722.4	4573.3	4631.7 µg/L	4631.7 ppb	15:13:57
2	Fe 238.204 Radial†	3217.8	3228.4	28653 µg/L	28653 ppb	15:13:57
2	K 766.490 Radial†	4065.2	3911.8	3105.6 µg/L	3105.6 ppb	15:13:37
2	Mg 279.077 IEC†	381.1	371.5	3642.1 µg/L	3642.1 ppb	15:13:57
2	Na 589.592 Radial†	1566.8	1108.4	395.99 µg/L	395.99 ppb	15:13:37
2	Sr 421.552†	4654.5	4654.7	53.941 µg/L	53.941 ppb	15:13:37
2	Sc 361.383	1944228.8	1944228.8	98.029 %		15:15:08
2	Y 371.029	1344335.7	1344335.7	97.921 %		15:15:08
2	Ag 328.068†	-376.8	118.0	3.1259 µg/L	3.1259 ppb	15:15:14
2	As 188.979†	1.0	2.7	7.1090 µg/L	7.1090 ppb	15:15:34
2	B 249.677†	497.0	192.6	-5.7056 µg/L	-5.7056 ppb	15:15:14
2	Ba 233.527†	10789.1	11027.1	314.25 µg/L	314.25 ppb	15:15:14
2	Be 313.107†	422.5	3731.8	2.2843 µg/L	2.2843 ppb	15:15:14
2	Cd 226.502†	-50.0	94.0	-0.4328 µg/L	-0.4328 ppb	15:15:34
2	Co 228.616†	227.3	240.2	10.868 µg/L	10.868 ppb	15:15:34
2	Cr 267.716†	906.4	967.4	22.944 µg/L	22.944 ppb	15:15:14
2	Cu 324.752†	3662.3	1247.1	13.469 µg/L	13.469 ppb	15:15:14
2	Mn 257.610†	170696.2	174392.2	649.37 µg/L	649.37 ppb	15:15:08
2	Mo 202.031†	-0.8	5.9	1.7511 µg/L	1.7511 ppb	15:15:34
2	Ni 231.604†	577.4	281.9	17.083 µg/L	17.083 ppb	15:15:34
2	P 214.914†	143.4	125.1	273.85 µg/L	273.85 ppb	15:15:34
2	Pb 220.353†	184.8	97.1	28.287 µg/L	28.287 ppb	15:15:34

2	S 181.975 Axial†	42.9	29.1	141.31 µg/L	141.31 ppb	15:15:34
2	Sb 206.836†	30.5	6.5	6.2072 µg/L	6.2072 ppb	15:15:34
2	Se 196.026†	0.9	-9.8	58.082 µg/L	58.082 ppb	15:15:34
2	SiO2†	67147.6	67157.7	15776 µg/L	15776 ppb	15:15:14
2	Si 251.611†	80428.2	81741.9	7337.2 µg/L	7337.2 ppb	15:15:14
2	Sn 189.927†	-4.7	-7.6	-6.4593 µg/L	-6.4593 ppb	15:15:34
2	Ti 334.940†	365022.4	372197.7	989.46 µg/L	989.46 ppb	15:15:08
2	Tl 190.801†	-31.8	-6.4	7.0612 µg/L	7.0612 ppb	15:15:34
2	U 409.014†	-347.0	-250.7	-28.191 µg/L	-28.191 ppb	15:15:14
2	V 292.402†	3930.0	4042.4	50.303 µg/L	50.303 ppb	15:15:14
2	Zn 213.857†	2710.9	2264.8	59.694 µg/L	59.694 ppb	15:15:34
3	Sc RADIAL	55104.3	55104.3	98.9 %		15:14:03
3	Al 396.153Radial†	28631.0	28958.9	22876 µg/L	22876 ppb	15:14:03
3	Ca 317.933Radial†	4682.9	4547.0	4605.1 µg/L	4605.1 ppb	15:14:23
3	Fe 238.204 Radial†	3188.7	3208.3	28476 µg/L	28476 ppb	15:14:23
3	K 766.490 Radial†	4037.5	3895.6	3092.7 µg/L	3092.7 ppb	15:14:03
3	Mg 279.077 IEC†	376.3	367.8	3605.1 µg/L	3605.1 ppb	15:14:23
3	Na 589.592 Radial†	1588.9	1135.4	405.62 µg/L	405.62 ppb	15:14:03
3	Sr 421.552†	4617.2	4630.5	53.660 µg/L	53.660 ppb	15:14:03
3	Sc 361.383	1918625.4	1918625.4	96.738 %		15:15:41
3	Y 371.029	1326016.5	1326016.5	96.586 %		15:15:41
3	Ag 328.068†	-385.3	104.1	2.9805 µg/L	2.9805 ppb	15:15:46
3	As 188.979†	-1.4	0.2	1.9357 µg/L	1.9357 ppb	15:16:07
3	B 249.677†	497.9	200.2	-5.2502 µg/L	-5.2502 ppb	15:15:46
3	Ba 233.527†	10181.2	10545.5	300.53 µg/L	300.53 ppb	15:15:46
3	Be 313.107†	255.3	3564.7	2.1764 µg/L	2.1764 ppb	15:15:46
3	Cd 226.502†	-59.4	83.7	-0.7221 µg/L	-0.7221 ppb	15:16:07
3	Co 228.616†	197.5	212.4	9.4340 µg/L	9.4340 ppb	15:16:07
3	Cr 267.716†	827.0	897.6	21.289 µg/L	21.289 ppb	15:15:46
3	Cu 324.752†	3553.0	1184.0	12.964 µg/L	12.964 ppb	15:15:46
3	Mn 257.610†	164146.3	169945.1	632.89 µg/L	632.89 ppb	15:15:41
3	Mo 202.031†	-13.3	-7.0	0.3055 µg/L	0.3055 ppb	15:16:07
3	Ni 231.604†	535.9	246.9	15.005 µg/L	15.005 ppb	15:16:07
3	P 214.914†	122.9	105.9	229.15 µg/L	229.15 ppb	15:16:07
3	Pb 220.353†	190.4	105.4	30.703 µg/L	30.703 ppb	15:16:07
3	S 181.975 Axial†	42.2	29.0	140.83 µg/L	140.83 ppb	15:16:07
3	Sb 206.836†	30.4	6.8	6.5670 µg/L	6.5670 ppb	15:16:07
3	Se 196.026†	2.4	-8.2	60.179 µg/L	60.179 ppb	15:16:07
3	SiO2†	63785.9	64596.7	15174 µg/L	15174 ppb	15:15:46
3	Si 251.611†	76344.0	78614.9	7056.5 µg/L	7056.5 ppb	15:15:46
3	Sn 189.927†	-5.2	-8.2	-6.7549 µg/L	-6.7549 ppb	15:16:07
3	Ti 334.940†	349354.3	360970.3	959.61 µg/L	959.61 ppb	15:15:41
3	Tl 190.801†	-33.3	-8.4	3.6435 µg/L	3.6435 ppb	15:16:07
3	U 409.014†	-356.7	-265.5	-29.579 µg/L	-29.579 ppb	15:15:46
3	V 292.402†	3682.9	3840.5	47.923 µg/L	47.923 ppb	15:15:46
3	Zn 213.857†	2395.5	1975.7	51.882 µg/L	51.882 ppb	15:16:07

## Mean Data: 1202021585|944117|5

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1946938.3	98.165 %	1.5005			1.53%
Sc RADIAL	54549.8	97.9 %	1.98			2.02%
Y 371.029	1345805.6	98.028 %	1.4978			1.53%
Ag 328.068†	103.4	3.0152 µg/L	0.09817	3.0152 ppb	0.09817	3.26%
Al 396.153Radial†	29613.0	23393 µg/L	810.4	23393 ppb	810.4	3.46%
As 188.979†	1.9	5.3866 µg/L	2.98860	5.3866 ppb	2.98860	55.48%
B 249.677†	192.0	-5.9344 µg/L	0.82271	-5.9344 ppb	0.82271	13.86%
Ba 233.527†	10748.2	306.30 µg/L	7.116	306.30 ppb	7.116	2.32%
Be 313.107†	3655.8	2.2367 µg/L	0.05500	2.2367 ppb	0.05500	2.46%
Ca 317.933Radial†	4636.6	4695.8 µg/L	134.79	4695.8 ppb	134.79	2.87%
Cd 226.502†	90.2	-0.5910 µg/L	0.14654	-0.5910 ppb	0.14654	24.80%
Co 228.616†	229.3	10.318 µg/L	0.7733	10.318 ppb	0.7733	7.49%
Cr 267.716†	926.2	21.966 µg/L	0.8674	21.966 ppb	0.8674	3.95%
Cu 324.752†	1194.7	13.122 µg/L	0.3001	13.122 ppb	0.3001	2.29%
Fe 238.204 Radial†	3270.8	29030 µg/L	811.6	29030 ppb	811.6	2.80%
K 766.490 Radial†	3951.8	3137.4 µg/L	66.53	3137.4 ppb	66.53	2.12%
Mg 279.077 IEC†	375.7	3682.6 µg/L	103.93	3682.6 ppb	103.93	2.82%
Mn 257.610†	171550.3	638.90 µg/L	9.104	638.90 ppb	9.104	1.42%
Mo 202.031†	-0.3	1.0665 µg/L	0.72582	1.0665 ppb	0.72582	68.05%
Na 589.592 Radial†	1154.4	412.41 µg/L	20.667	412.41 ppb	20.667	5.01%

Ni 231.604†	264.2	16.042 µg/L	1.0391	16.042 ppb	1.0391	6.48%
P 214.914†	117.4	255.60 µg/L	23.451	255.60 ppb	23.451	9.17%
Pb 220.353†	103.7	30.202 µg/L	1.7199	30.202 ppb	1.7199	5.69%
S 181.975 Axial†	28.5	138.54 µg/L	4.386	138.54 ppb	4.386	3.17%
Sb 206.836†	7.7	7.5207 µg/L	1.97167	7.5207 ppb	1.97167	26.22%
Se 196.026†	-7.9	62.202 µg/L	5.4223	62.202 ppb	5.4223	8.72%
SiO2†	65542.9	15397 µg/L	330.1	15397 ppb	330.1	2.14%
Si 251.611†	79822.9	7164.9 µg/L	150.83	7164.9 ppb	150.83	2.11%
Sn 189.927†	-7.7	-6.5721 µg/L	0.15971	-6.5721 ppb	0.15971	2.43%
Sr 421.552†	4731.5	54.831 µg/L	1.7903	54.831 ppb	1.7903	3.27%
Ti 334.940†	365670.6	972.10 µg/L	15.509	972.10 ppb	15.509	1.60%
Tl 190.801†	-9.4	2.3631 µg/L	5.45229	2.3631 ppb	5.45229	230.73%
U 409.014†	-222.6	-25.563 µg/L	5.7948	-25.563 ppb	5.7948	22.67%
V 292.402†	3915.0	48.864 µg/L	1.2656	48.864 ppb	1.2656	2.59%
Zn 213.857†	2147.7	56.506 µg/L	4.0993	56.506 ppb	4.0993	7.25%

Sequence No.: 32  
 Sample ID: 245147002|944117|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 328  
 Date Collected: 2/8/2010 15:16:16  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: 245147002|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	54434.9	54434.9	97.7 %		15:16:49
1	Al 396.153Radial†	108252.8	110811.4	87534 µg/L	87534 ppb	15:16:49
1	Ca 317.933Radial†	16801.8	17009.5	17227 µg/L	17227 ppb	15:17:10
1	Fe 238.204 Radial†	17170.7	17559.2	155850 µg/L	155850 ppb	15:17:10
1	K 766.490 Radial†	22183.7	22519.3	17878 µg/L	17878 ppb	15:16:49
1	Mg 279.077 IEC†	1625.6	1651.1	16156 µg/L	16156 ppb	15:17:10
1	Na 589.592 Radial†	7274.7	6974.8	2491.8 µg/L	2491.8 ppb	15:17:10
1	Sr 421.552†	17738.6	18118.2	209.96 µg/L	209.96 ppb	15:16:49
1	Sc 361.383	1894732.1	1894732.1	95.533 %		15:18:15
1	Y 371.029	1343746.6	1343746.6	97.878 %		15:18:15
1	Ag 328.068†	-1383.7	-946.0	3.5924 µg/L	3.5924 ppb	15:18:20
1	As 188.979†	9.6	11.8	33.082 µg/L	33.082 ppb	15:18:41
1	B 249.677†	1290.0	1035.9	-31.592 µg/L	-31.592 ppb	15:18:20
1	Ba 233.527†	36993.4	38744.1	1104.3 µg/L	1104.3 ppb	15:18:20
1	Be 313.107†	16031.1	20081.4	11.540 µg/L	11.540 ppb	15:18:20
1	Cd 226.502†	357.2	518.9	-2.1437 µg/L	-2.1437 ppb	15:18:41
1	Co 228.616†	1391.0	1464.4	63.617 µg/L	63.617 ppb	15:18:41
1	Cr 267.716†	4947.6	5221.7	123.86 µg/L	123.86 ppb	15:18:20
1	Cu 324.752†	8266.0	6163.7	68.546 µg/L	68.546 ppb	15:18:20
1	Mn 257.610†	880184.3	921602.9	3432.4 µg/L	3432.4 ppb	15:18:15
1	Mo 202.031†	-5.8	0.7	5.9984 µg/L	5.9984 ppb	15:18:41
1	Ni 231.604†	1563.6	1329.6	80.829 µg/L	80.829 ppb	15:18:41
1	P 214.914†	620.4	628.2	1357.2 µg/L	1357.2 ppb	15:18:41
1	Pb 220.353†	477.1	408.0	117.03 µg/L	117.03 ppb	15:18:41
1	S 181.975 Axial†	125.1	116.3	564.63 µg/L	564.63 ppb	15:18:41
1	Sb 206.836†	33.7	10.7	8.4496 µg/L	8.4496 ppb	15:18:41
1	Se 196.026†	-54.6	-67.8	298.45 µg/L	298.45 ppb	15:18:41
1	SiO2†	320442.6	334085.5	78480 µg/L	78480 ppb	15:18:15
1	Si 251.611†	387850.5	405681.7	36414 µg/L	36414 ppb	15:18:15
1	Sn 189.927†	-33.6	-38.0	-33.905 µg/L	-33.905 ppb	15:18:41
1	Ti 334.940†	2622732.7	2745200.0	7298.5 µg/L	7298.5 ppb	15:18:15
1	Tl 190.801†	-84.1	-62.0	10.921 µg/L	10.921 ppb	15:18:41
1	U 409.014†	-1231.9	-1186.2	-135.92 µg/L	-135.92 ppb	15:18:15
1	V 292.402†	23474.9	24605.8	303.97 µg/L	303.97 ppb	15:18:20
1	Zn 213.857†	15730.4	15965.3	423.73 µg/L	423.73 ppb	15:18:20
2	Sc RADIAL	54817.6	54817.6	98.4 %		15:17:15
2	Al 396.153Radial†	108503.3	110292.4	87124 µg/L	87124 ppb	15:17:15
2	Ca 317.933Radial†	16859.1	16947.6	17164 µg/L	17164 ppb	15:17:36
2	Fe 238.204 Radial†	17235.3	17502.1	155340 µg/L	155340 ppb	15:17:36
2	K 766.490 Radial†	22285.7	22464.4	17835 µg/L	17835 ppb	15:17:15
2	Mg 279.077 IEC†	1641.5	1655.7	16202 µg/L	16202 ppb	15:17:36
2	Na 589.592 Radial†	7337.2	6986.3	2495.9 µg/L	2495.9 ppb	15:17:36
2	Sr 421.552†	17740.4	17993.3	208.52 µg/L	208.52 ppb	15:17:15
2	Sc 361.383	1893598.3	1893598.3	95.476 %		15:18:49
2	Y 371.029	1345336.4	1345336.4	97.994 %		15:18:49
2	Ag 328.068†	-1457.3	-1023.9	2.9165 µg/L	2.9165 ppb	15:18:54
2	As 188.979†	5.9	7.9	24.804 µg/L	24.804 ppb	15:19:15
2	B 249.677†	1312.6	1060.3	-30.159 µg/L	-30.159 ppb	15:18:54
2	Ba 233.527†	37340.0	39130.4	1115.4 µg/L	1115.4 ppb	15:18:54
2	Be 313.107†	16308.9	20382.5	11.746 µg/L	11.746 ppb	15:18:54
2	Cd 226.502†	345.4	506.8	-2.4457 µg/L	-2.4457 ppb	15:19:15
2	Co 228.616†	1403.5	1478.3	64.323 µg/L	64.323 ppb	15:19:15
2	Cr 267.716†	4959.0	5236.8	124.22 µg/L	124.22 ppb	15:18:54
2	Cu 324.752†	8334.1	6240.1	69.057 µg/L	69.057 ppb	15:18:54
2	Mn 257.610†	881531.5	923565.6	3439.6 µg/L	3439.6 ppb	15:18:49
2	Mo 202.031†	7.5	14.6	7.5296 µg/L	7.5296 ppb	15:19:15
2	Ni 231.604†	1585.8	1353.8	82.258 µg/L	82.258 ppb	15:19:15
2	P 214.914†	644.2	653.6	1416.5 µg/L	1416.5 ppb	15:19:15
2	Pb 220.353†	488.3	420.0	120.52 µg/L	120.52 ppb	15:19:15

2	S 181.975 Axial†	127.2	118.6	575.47 µg/L	575.47 ppb	15:19:15
2	Sb 206.836†	36.0	13.1	11.034 µg/L	11.034 ppb	15:19:15
2	Se 196.026†	-60.4	-74.0	287.16 µg/L	287.16 ppb	15:19:15
2	SiO2†	321199.1	335078.8	78714 µg/L	78714 ppb	15:18:49
2	Si 251.611†	389068.1	407200.1	36550 µg/L	36550 ppb	15:18:49
2	Sn 189.927†	-41.7	-46.5	-38.092 µg/L	-38.092 ppb	15:19:15
2	Ti 334.940†	2629297.0	2753719.1	7321.1 µg/L	7321.1 ppb	15:18:49
2	Tl 190.801†	-79.4	-57.1	18.505 µg/L	18.505 ppb	15:19:15
2	U 409.014†	-1234.4	-1189.6	-136.17 µg/L	-136.17 ppb	15:18:49
2	V 292.402†	23760.0	24919.2	307.56 µg/L	307.56 ppb	15:18:54
2	Zn 213.857†	15840.0	16090.0	427.13 µg/L	427.13 ppb	15:18:54
3	Sc RADIAL	54485.0	54485.0	97.8 %		15:17:41
3	Al 396.153Radial†	108221.5	110677.4	87429 µg/L	87429 ppb	15:17:41
3	Ca 317.933Radial†	16892.7	17086.7	17305 µg/L	17305 ppb	15:18:02
3	Fe 238.204 Radial†	17255.7	17629.9	156470 µg/L	156470 ppb	15:18:02
3	K 766.490 Radial†	22192.0	22506.8	17868 µg/L	17868 ppb	15:17:41
3	Mg 279.077 IEC†	1637.4	1661.7	16260 µg/L	16260 ppb	15:18:02
3	Na 589.592 Radial†	7321.5	7015.7	2506.4 µg/L	2506.4 ppb	15:18:02
3	Sr 421.552†	17705.0	18067.1	209.37 µg/L	209.37 ppb	15:17:41
3	Sc 361.383	1908074.7	1908074.7	96.206 %		15:19:23
3	Y 371.029	1352747.9	1352747.9	98.533 %		15:19:23
3	Ag 328.068†	-1234.5	-780.8	4.9524 µg/L	4.9524 ppb	15:19:28
3	As 188.979†	6.6	8.6	26.404 µg/L	26.404 ppb	15:19:49
3	B 249.677†	1260.4	995.7	-33.855 µg/L	-33.855 ppb	15:19:28
3	Ba 233.527†	35752.2	37183.2	1059.9 µg/L	1059.9 ppb	15:19:28
3	Be 313.107†	15108.3	19004.9	10.883 µg/L	10.883 ppb	15:19:28
3	Cd 226.502†	305.9	463.0	-3.8793 µg/L	-3.8793 ppb	15:19:49
3	Co 228.616†	1265.2	1323.4	56.635 µg/L	56.635 ppb	15:19:49
3	Cr 267.716†	4702.4	4930.6	116.96 µg/L	116.96 ppb	15:19:28
3	Cu 324.752†	8122.9	5954.4	67.041 µg/L	67.041 ppb	15:19:28
3	Mn 257.610†	852898.6	886798.4	3303.6 µg/L	3303.6 ppb	15:19:23
3	Mo 202.031†	1.2	8.0	6.8345 µg/L	6.8345 ppb	15:19:49
3	Ni 231.604†	1457.4	1207.7	73.615 µg/L	73.615 ppb	15:19:49
3	P 214.914†	571.3	572.6	1227.3 µg/L	1227.3 ppb	15:19:49
3	Pb 220.353†	463.3	390.2	111.85 µg/L	111.85 ppb	15:19:49
3	S 181.975 Axial†	121.7	111.9	543.05 µg/L	543.05 ppb	15:19:49
3	Sb 206.836†	30.3	6.9	4.4824 µg/L	4.4824 ppb	15:19:49
3	Se 196.026†	-42.0	-54.4	321.53 µg/L	321.53 ppb	15:19:49
3	SiO2†	313572.0	324598.4	76252 µg/L	76252 ppb	15:19:23
3	Si 251.611†	379793.8	394468.4	35408 µg/L	35408 ppb	15:19:23
3	Sn 189.927†	-35.0	-39.2	-34.548 µg/L	-34.548 ppb	15:19:49
3	Ti 334.940†	2536026.9	2635877.2	7007.8 µg/L	7007.8 ppb	15:19:23
3	Tl 190.801†	-75.2	-52.2	22.876 µg/L	22.876 ppb	15:19:49
3	U 409.014†	-1232.2	-1177.6	-135.19 µg/L	-135.19 ppb	15:19:23
3	V 292.402†	22441.5	23359.9	289.58 µg/L	289.58 ppb	15:19:28
3	Zn 213.857†	15214.8	15314.3	406.10 µg/L	406.10 ppb	15:19:28

Mean Data: 245147002|944117|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1898801.7	95.738 %	0.4059			0.42%
Sc RADIAL	54579.2	98.0 %	0.37			0.38%
Y 371.029	1347277.0	98.135 %	0.3499			0.36%
Ag 328.068†	-916.9	3.8204 µg/L	1.03696	3.8204 ppb	1.03696	27.14%
Al 396.153Radial†	110593.7	87362 µg/L	212.9	87362 ppb	212.9	0.24%
As 188.979†	9.4	28.097 µg/L	4.3908	28.097 ppb	4.3908	15.63%
B 249.677†	1030.6	-31.869 µg/L	1.8636	-31.869 ppb	1.8636	5.85%
Ba 233.527†	38352.5	1093.2 µg/L	29.39	1093.2 ppb	29.39	2.69%
Be 313.107†	19822.9	11.390 µg/L	0.4507	11.390 ppb	0.4507	3.96%
Ca 317.933Radial†	17014.6	17232 µg/L	70.5	17232 ppb	70.5	0.41%
Cd 226.502†	496.2	-2.8229 µg/L	0.92727	-2.8229 ppb	0.92727	32.85%
Co 228.616†	1422.0	61.525 µg/L	4.2495	61.525 ppb	4.2495	6.91%
Cr 267.716†	5129.7	121.68 µg/L	4.094	121.68 ppb	4.094	3.36%
Cu 324.752†	6119.4	68.215 µg/L	1.0478	68.215 ppb	1.0478	1.54%
Fe 238.204 Radial†	17563.7	155890 µg/L	568.1	155890 ppb	568.1	0.36%
K 766.490 Radial†	22496.8	17860 µg/L	22.9	17860 ppb	22.9	0.13%
Mg 279.077 IEC†	1656.2	16206 µg/L	52.0	16206 ppb	52.0	0.32%
Mn 257.610†	910655.6	3391.9 µg/L	76.52	3391.9 ppb	76.52	2.26%
Mo 202.031†	7.7	6.7875 µg/L	0.76669	6.7875 ppb	0.76669	11.30%
Na 589.592 Radial†	6992.3	2498.1 µg/L	7.55	2498.1 ppb	7.55	0.30%

Ni 231.604†	1297.0	78.901 µg/L	4.6332	78.901 ppb	4.6332	5.87%
P 214.914†	618.1	1333.7 µg/L	96.76	1333.7 ppb	96.76	7.25%
Pb 220.353†	406.0	116.47 µg/L	4.364	116.47 ppb	4.364	3.75%
S 181.975 Axial†	115.6	561.05 µg/L	16.505	561.05 ppb	16.505	2.94%
Sb 206.836†	10.2	7.9887 µg/L	3.30012	7.9887 ppb	3.30012	41.31%
Se 196.026†	-65.4	302.38 µg/L	17.523	302.38 ppb	17.523	5.79%
SiO2†	331254.2	77815 µg/L	1359.1	77815 ppb	1359.1	1.75%
Si 251.611†	402450.1	36124 µg/L	624.2	36124 ppb	624.2	1.73%
Sn 189.927†	-41.2	-35.515 µg/L	2.2545	-35.515 ppb	2.2545	6.35%
Sr 421.552†	18059.5	209.28 µg/L	0.728	209.28 ppb	0.728	0.35%
Ti 334.940†	2711598.8	7209.1 µg/L	174.74	7209.1 ppb	174.74	2.42%
Tl 190.801†	-57.1	17.434 µg/L	6.0492	17.434 ppb	6.0492	34.70%
U 409.014†	-1184.5	-135.76 µg/L	0.510	-135.76 ppb	0.510	0.38%
V 292.402†	24295.0	300.37 µg/L	9.514	300.37 ppb	9.514	3.17%
Zn 213.857†	15789.9	418.99 µg/L	11.290	418.99 ppb	11.290	2.69%

Sequence No.: 33

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/8/2010 15:19:58

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	56282.6	56282.6	101 %		15:20:35
1	Al 396.153Radial†	6244.5	6191.5	4880.6 µg/L	4880.6 ppb	15:20:35
1	Ca 317.933Radial†	4875.2	4638.3	4697.5 µg/L	4697.5 ppb	15:20:56
1	Fe 238.204 Radial†	556.9	535.5	4763.1 µg/L	4763.1 ppb	15:20:56
1	K 766.490 Radial†	6598.7	6345.6	5037.8 µg/L	5037.8 ppb	15:20:35
1	Mg 279.077 IEC†	516.4	498.5	4931.2 µg/L	4931.2 ppb	15:20:56
1	Na 589.592 Radial†	28464.4	27706.9	9898.6 µg/L	9898.6 ppb	15:20:35
1	Sr 421.552†	43393.5	42919.1	497.37 µg/L	497.37 ppb	15:20:35
1	Sc 361.383	1969322.9	1969322.9	99.294 %		15:21:59
1	Y 371.029	1354876.0	1354876.0	98.688 %		15:21:59
1	Ag 328.068†	58162.9	59078.9	510.10 µg/L	510.10 ppb	15:22:04
1	As 188.979†	235.7	239.1	506.17 µg/L	506.17 ppb	15:22:25
1	B 249.677†	10612.6	10373.6	494.33 µg/L	494.33 ppb	15:22:04
1	Ba 233.527†	17482.5	17627.8	503.14 µg/L	503.14 ppb	15:22:04
1	Be 313.107†	693938.9	702173.6	500.56 µg/L	500.56 ppb	15:21:59
1	Cd 226.502†	16565.1	16827.9	498.97 µg/L	498.97 ppb	15:22:04
1	Co 228.616†	9300.0	9374.4	504.17 µg/L	504.17 ppb	15:22:04
1	Cr 267.716†	21274.8	21468.8	508.83 µg/L	508.83 ppb	15:22:04
1	Cu 324.752†	69194.8	67197.9	511.79 µg/L	511.79 ppb	15:22:04
1	Mn 257.610†	132773.2	133980.7	496.52 µg/L	496.52 ppb	15:22:04
1	Mo 202.031†	4462.5	4500.9	502.58 µg/L	502.58 ppb	15:22:25
1	Ni 231.604†	8745.3	8500.4	503.87 µg/L	503.87 ppb	15:22:04
1	P 214.914†	1100.7	1087.3	2484.8 µg/L	2484.8 ppb	15:22:25
1	Pb 220.353†	1830.8	1752.4	507.43 µg/L	507.43 ppb	15:22:25
1	S 181.975 Axial†	221.2	208.2	1010.5 µg/L	1010.5 ppb	15:22:25
1	Sb 206.836†	511.9	491.0	523.09 µg/L	523.09 ppb	15:22:25
1	Se 196.026†	313.4	304.9	493.83 µg/L	493.83 ppb	15:22:25
1	SiO2†	24103.0	22934.3	5387.5 µg/L	5387.5 ppb	15:22:04
1	Si 251.611†	28232.8	28129.9	2525.0 µg/L	2525.0 ppb	15:22:04
1	Sn 189.927†	1020.1	1024.5	515.01 µg/L	515.01 ppb	15:22:25
1	Ti 334.940†	190535.8	191725.7	509.49 µg/L	509.49 ppb	15:21:59
1	Tl 190.801†	299.8	328.0	501.81 µg/L	501.81 ppb	15:22:25
1	U 409.014†	5256.1	5396.7	514.09 µg/L	514.09 ppb	15:22:04
1	V 292.402†	43465.7	43808.0	514.38 µg/L	514.38 ppb	15:22:04
1	Zn 213.857†	19020.1	18654.7	501.78 µg/L	501.78 ppb	15:22:04
2	Sc RADIAL	56319.9	56319.9	101 %		15:21:01
2	Al 396.153Radial†	6198.2	6141.6	4841.2 µg/L	4841.2 ppb	15:21:01
2	Ca 317.933Radial†	4901.5	4661.1	4720.6 µg/L	4720.6 ppb	15:21:22
2	Fe 238.204 Radial†	559.3	537.5	4781.1 µg/L	4781.1 ppb	15:21:22
2	K 766.490 Radial†	6549.8	6292.9	4996.0 µg/L	4996.0 ppb	15:21:01
2	Mg 279.077 IEC†	516.1	497.9	4925.6 µg/L	4925.6 ppb	15:21:22
2	Na 589.592 Radial†	28286.7	27512.5	9829.1 µg/L	9829.1 ppb	15:21:01
2	Sr 421.552†	43168.1	42667.6	494.46 µg/L	494.46 ppb	15:21:01
2	Sc 361.383	1983413.8	1983413.8	100.00 %		15:22:32
2	Y 371.029	1365564.5	1365564.5	99.467 %		15:22:32
2	Ag 328.068†	57398.9	57898.7	499.91 µg/L	499.91 ppb	15:22:37
2	As 188.979†	242.0	243.7	515.94 µg/L	515.94 ppb	15:22:58
2	B 249.677†	10440.0	10125.1	482.42 µg/L	482.42 ppb	15:22:37
2	Ba 233.527†	17230.4	17250.7	492.37 µg/L	492.37 ppb	15:22:37
2	Be 313.107†	682584.7	685854.9	488.93 µg/L	488.93 ppb	15:22:32
2	Cd 226.502†	16305.5	16449.8	487.75 µg/L	487.75 ppb	15:22:37
2	Co 228.616†	9231.1	9239.0	496.90 µg/L	496.90 ppb	15:22:37
2	Cr 267.716†	20867.6	20909.4	495.58 µg/L	495.58 ppb	15:22:37
2	Cu 324.752†	68175.5	65683.6	500.28 µg/L	500.28 ppb	15:22:37
2	Mn 257.610†	130698.8	130956.4	485.32 µg/L	485.32 ppb	15:22:37
2	Mo 202.031†	4471.6	4478.1	500.04 µg/L	500.04 ppb	15:22:58
2	Ni 231.604†	8638.3	8330.8	493.81 µg/L	493.81 ppb	15:22:37
2	P 214.914†	1120.3	1099.0	2513.3 µg/L	2513.3 ppb	15:22:58
2	Pb 220.353†	1842.9	1751.4	507.17 µg/L	507.17 ppb	15:22:58

2	S 181.975 Axial†	219.9	205.2	996.18 µg/L	996.18 ppb	15:22:58
2	Sb 206.836†	509.2	484.5	516.35 µg/L	516.35 ppb	15:22:58
2	Se 196.026†	316.2	305.4	494.64 µg/L	494.64 ppb	15:22:58
2	SiO2†	23781.2	22440.0	5271.4 µg/L	5271.4 ppb	15:22:37
2	Si 251.611†	27822.7	27517.9	2470.0 µg/L	2470.0 ppb	15:22:37
2	Sn 189.927†	1024.0	1021.2	513.33 µg/L	513.33 ppb	15:22:58
2	Ti 334.940†	187205.7	187032.4	497.01 µg/L	497.01 ppb	15:22:32
2	Tl 190.801†	303.8	329.8	504.50 µg/L	504.50 ppb	15:22:58
2	U 409.014†	5117.7	5220.7	497.29 µg/L	497.29 ppb	15:22:37
2	V 292.402†	42770.2	42801.6	502.63 µg/L	502.63 ppb	15:22:37
2	Zn 213.857†	18745.4	18244.0	490.72 µg/L	490.72 ppb	15:22:37
3	Sc RADIAL	56407.4	56407.4	101 %		15:21:27
3	Al 396.153Radial†	6219.2	6152.8	4851.4 µg/L	4851.4 ppb	15:21:27
3	Ca 317.933Radial†	4898.5	4650.7	4710.0 µg/L	4710.0 ppb	15:21:47
3	Fe 238.204 Radial†	561.0	538.3	4787.7 µg/L	4787.7 ppb	15:21:47
3	K 766.490 Radial†	6630.8	6362.9	5051.5 µg/L	5051.5 ppb	15:21:27
3	Mg 279.077 IEC†	508.6	489.7	4843.1 µg/L	4843.1 ppb	15:21:47
3	Na 589.592 Radial†	28438.6	27619.0	9867.1 µg/L	9867.1 ppb	15:21:27
3	Sr 421.552†	43474.0	42903.4	497.19 µg/L	497.19 ppb	15:21:27
3	Sc 361.383	1940546.4	1940546.4	97.843 %		15:23:04
3	Y 371.029	1335507.1	1335507.1	97.278 %		15:23:04
3	Ag 328.068†	56271.8	58014.7	500.80 µg/L	500.80 ppb	15:23:10
3	As 188.979†	202.4	208.6	441.58 µg/L	441.58 ppb	15:23:30
3	B 249.677†	10206.2	10116.8	481.98 µg/L	481.98 ppb	15:23:10
3	Ba 233.527†	16570.1	16956.4	483.96 µg/L	483.96 ppb	15:23:10
3	Be 313.107†	663151.2	681070.9	485.52 µg/L	485.52 ppb	15:23:04
3	Cd 226.502†	15621.2	16110.6	477.68 µg/L	477.68 ppb	15:23:10
3	Co 228.616†	8681.0	8880.7	477.56 µg/L	477.56 ppb	15:23:10
3	Cr 267.716†	19427.2	19898.2	471.62 µg/L	471.62 ppb	15:23:10
3	Cu 324.752†	65066.3	64011.9	487.56 µg/L	487.56 ppb	15:23:10
3	Mn 257.610†	124159.1	127159.6	471.27 µg/L	471.27 ppb	15:23:10
3	Mo 202.031†	3792.4	3882.7	433.58 µg/L	433.58 ppb	15:23:30
3	Ni 231.604†	8214.3	8088.3	479.45 µg/L	479.45 ppb	15:23:10
3	P 214.914†	954.2	954.0	2175.6 µg/L	2175.6 ppb	15:23:30
3	Pb 220.353†	1621.7	1566.0	453.36 µg/L	453.36 ppb	15:23:30
3	S 181.975 Axial†	195.5	185.2	899.07 µg/L	899.07 ppb	15:23:30
3	Sb 206.836†	448.7	434.0	461.94 µg/L	461.94 ppb	15:23:30
3	Se 196.026†	290.3	286.0	463.68 µg/L	463.68 ppb	15:23:30
3	SiO2†	23038.7	22206.4	5216.5 µg/L	5216.5 ppb	15:23:10
3	Si 251.611†	26968.5	27259.4	2446.8 µg/L	2446.8 ppb	15:23:10
3	Sn 189.927†	850.8	866.8	435.71 µg/L	435.71 ppb	15:23:30
3	Ti 334.940†	181225.3	185055.4	491.76 µg/L	491.76 ppb	15:23:04
3	Tl 190.801†	278.8	311.0	475.98 µg/L	475.98 ppb	15:23:30
3	U 409.014†	4795.3	5004.3	476.64 µg/L	476.64 ppb	15:23:10
3	V 292.402†	40509.9	41436.2	486.21 µg/L	486.21 ppb	15:23:10
3	Zn 213.857†	17856.8	17749.8	477.42 µg/L	477.42 ppb	15:23:10

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1964427.7	99.047 %	1.1016			1.11%
Sc RADIAL	56336.6	101 %	0.1			0.11%
Y 371.029	1351982.5	98.478 %	1.1098			1.13%
Ag 328.068†	58330.8	503.60 µg/L	5.645	503.60 ppb	5.645	1.12%
QC value within limits for Ag 328.068 Recovery = 100.72%						
Al 396.153Radial†	6161.9	4857.7 µg/L	20.41	4857.7 ppb	20.41	0.42%
QC value within limits for Al 396.153Radial Recovery = 97.15%						
As 188.979†	230.5	487.90 µg/L	40.409	487.90 ppb	40.409	8.28%
QC value within limits for As 188.979 Recovery = 97.58%						
B 249.677†	10205.2	486.24 µg/L	7.007	486.24 ppb	7.007	1.44%
QC value within limits for B 249.677 Recovery = 97.25%						
Ba 233.527†	17278.3	493.16 µg/L	9.614	493.16 ppb	9.614	1.95%
QC value within limits for Ba 233.527 Recovery = 98.63%						
Be 313.107†	689699.8	491.67 µg/L	7.887	491.67 ppb	7.887	1.60%
QC value within limits for Be 313.107 Recovery = 98.33%						
Ca 317.933Radial†	4650.0	4709.4 µg/L	11.55	4709.4 ppb	11.55	0.25%
QC value within limits for Ca 317.933Radial Recovery = 94.19%						
Cd 226.502†	16462.8	488.13 µg/L	10.653	488.13 ppb	10.653	2.18%
QC value within limits for Cd 226.502 Recovery = 97.63%						
Co 228.616†	9164.7	492.88 µg/L	13.754	492.88 ppb	13.754	2.79%

QC value within limits for Co 228.616 Recovery = 98.58%						
Cr 267.716†	20758.8	492.01 µg/L	18.864	492.01 ppb	18.864	3.83%
QC value within limits for Cr 267.716 Recovery = 98.40%						
Cu 324.752†	65631.2	499.88 µg/L	12.120	499.88 ppb	12.120	2.42%
QC value within limits for Cu 324.752 Recovery = 99.98%						
Fe 238.204 Radial†	537.1	4777.3 µg/L	12.74	4777.3 ppb	12.74	0.27%
QC value within limits for Fe 238.204 Radial Recovery = 95.55%						
K 766.490 Radial†	6333.8	5028.4 µg/L	28.94	5028.4 ppb	28.94	0.58%
QC value within limits for K 766.490 Radial Recovery = 100.57%						
Mg 279.077 IEC†	495.4	4900.0 µg/L	49.33	4900.0 ppb	49.33	1.01%
QC value within limits for Mg 279.077 IEC Recovery = 98.00%						
Mn 257.610†	130698.9	484.37 µg/L	12.652	484.37 ppb	12.652	2.61%
QC value within limits for Mn 257.610 Recovery = 96.87%						
Mo 202.031†	4287.3	478.73 µg/L	39.124	478.73 ppb	39.124	8.17%
QC value within limits for Mo 202.031 Recovery = 95.75%						
Na 589.592 Radial†	27612.8	9864.9 µg/L	34.79	9864.9 ppb	34.79	0.35%
QC value within limits for Na 589.592 Radial Recovery = 98.65%						
Ni 231.604†	8306.5	492.38 µg/L	12.273	492.38 ppb	12.273	2.49%
QC value within limits for Ni 231.604 Recovery = 98.48%						
P 214.914†	1046.8	2391.3 µg/L	187.28	2391.3 ppb	187.28	7.83%
QC value within limits for P 214.914 Recovery = 95.65%						
Pb 220.353†	1689.9	489.32 µg/L	31.141	489.32 ppb	31.141	6.36%
QC value within limits for Pb 220.353 Recovery = 97.86%						
S 181.975 Axial†	199.6	968.59 µg/L	60.633	968.59 ppb	60.633	6.26%
QC value within limits for S 181.975 Axial Recovery = 96.86%						
Sb 206.836†	469.8	500.46 µg/L	33.530	500.46 ppb	33.530	6.70%
QC value within limits for Sb 206.836 Recovery = 100.09%						
Se 196.026†	298.8	484.05 µg/L	17.644	484.05 ppb	17.644	3.65%
QC value within limits for Se 196.026 Recovery = 96.81%						
SiO2†	22526.9	5291.8 µg/L	87.30	5291.8 ppb	87.30	1.65%
QC value within limits for SiO2 Recovery = 98.96%						
Si 251.611†	27635.7	2480.6 µg/L	40.13	2480.6 ppb	40.13	1.62%
QC value within limits for Si 251.611 Recovery = 99.22%						
Sn 189.927†	970.8	488.02 µg/L	45.310	488.02 ppb	45.310	9.28%
QC value within limits for Sn 189.927 Recovery = 97.60%						
Sr 421.552†	42830.0	496.34 µg/L	1.633	496.34 ppb	1.633	0.33%
QC value within limits for Sr 421.552 Recovery = 99.27%						
Ti 334.940†	187937.8	499.42 µg/L	9.107	499.42 ppb	9.107	1.82%
QC value within limits for Ti 334.940 Recovery = 99.88%						
Tl 190.801†	322.9	494.10 µg/L	15.749	494.10 ppb	15.749	3.19%
QC value within limits for Tl 190.801 Recovery = 98.82%						
U 409.014†	5207.2	496.01 µg/L	18.762	496.01 ppb	18.762	3.78%
QC value within limits for U 409.014 Recovery = 99.20%						
V 292.402†	42682.0	501.07 µg/L	14.150	501.07 ppb	14.150	2.82%
QC value within limits for V 292.402 Recovery = 100.21%						
Zn 213.857†	18216.2	489.98 µg/L	12.199	489.98 ppb	12.199	2.49%
QC value within limits for Zn 213.857 Recovery = 98.00%						
All analyte(s) passed QC.						

Sequence No.: 34  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/8/2010 15:23:40  
 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	55248.0	55248.0	99.2 %		15:24:13
1	Al 396.153Radial†	-7.6	2.1	1.6855 µg/L	1.6855 ppb	15:24:13
1	Ca 317.933Radial†	188.6	2.3	2.3447 µg/L	2.3447 ppb	15:24:34
1	Fe 238.204 Radial†	18.5	2.8	25.197 µg/L	25.197 ppb	15:24:34
1	K 766.490 Radial†	113.2	-72.5	-57.581 µg/L	-57.581 ppb	15:24:13
1	Mg 279.077 IEC†	11.2	-1.4	-13.463 µg/L	-13.463 ppb	15:24:34
1	Na 589.592 Radial†	448.0	-19.4	-6.9393 µg/L	-6.9393 ppb	15:24:13
1	Sr 421.552†	51.9	14.3	0.1660 µg/L	0.1660 ppb	15:24:13
1	Sc 361.383	1942055.1	1942055.1	97.919 %		15:25:35
1	Y 371.029	1342954.2	1342954.2	97.820 %		15:25:35
1	Ag 328.068†	-549.8	-59.0	-0.5035 µg/L	-0.5035 ppb	15:25:41
1	As 188.979†	-2.6	-1.0	-2.0396 µg/L	-2.0396 ppb	15:26:02
1	B 249.677†	318.9	11.3	0.5265 µg/L	0.5265 ppb	15:26:02
1	Ba 233.527†	-28.4	-8.0	-0.2281 µg/L	-0.2281 ppb	15:26:02
1	Be 313.107†	-3255.5	-23.9	-0.0170 µg/L	-0.0170 ppb	15:25:41
1	Cd 226.502†	-151.6	-9.8	-0.2911 µg/L	-0.2911 ppb	15:26:02
1	Co 228.616†	-8.7	-0.6	-0.0333 µg/L	-0.0333 ppb	15:26:02
1	Cr 267.716†	-53.0	-11.4	-0.2691 µg/L	-0.2691 ppb	15:25:41
1	Cu 324.752†	2477.3	41.2	0.3166 µg/L	0.3166 ppb	15:25:41
1	Mn 257.610†	-215.1	43.8	0.1659 µg/L	0.1659 ppb	15:26:02
1	Mo 202.031†	-1.5	5.2	0.5794 µg/L	0.5794 ppb	15:26:02
1	Ni 231.604†	318.8	18.4	1.0937 µg/L	1.0937 ppb	15:26:02
1	P 214.914†	30.3	9.7	22.647 µg/L	22.647 ppb	15:26:02
1	Pb 220.353†	95.9	6.5	1.8782 µg/L	1.8782 ppb	15:26:02
1	S 181.975 Axial†	17.0	2.8	13.420 µg/L	13.420 ppb	15:26:02
1	Sb 206.836†	28.0	4.0	4.2057 µg/L	4.2057 ppb	15:26:02
1	Se 196.026†	9.8	-0.7	-1.1070 µg/L	-1.1070 ppb	15:26:02
1	SiO2†	1374.3	63.4	14.892 µg/L	14.892 ppb	15:25:41
1	Si 251.611†	323.7	27.0	2.4220 µg/L	2.4220 ppb	15:26:02
1	Sn 189.927†	0.7	-2.1	-1.0537 µg/L	-1.0537 ppb	15:26:02
1	Ti 334.940†	154.4	-7.1	-0.0178 µg/L	-0.0178 ppb	15:25:41
1	Tl 190.801†	-28.6	-3.2	-4.7787 µg/L	-4.7787 ppb	15:26:02
1	U 409.014†	5.2	108.6	10.358 µg/L	10.358 ppb	15:25:41
1	V 292.402†	-20.3	12.6	0.1633 µg/L	0.1633 ppb	15:25:41
1	Zn 213.857†	508.9	19.1	0.5127 µg/L	0.5127 ppb	15:26:02
2	Sc RADIAL	55283.5	55283.5	99.2 %		15:24:39
2	Al 396.153Radial†	18.6	28.5	22.547 µg/L	22.547 ppb	15:24:39
2	Ca 317.933Radial†	188.2	1.8	1.8635 µg/L	1.8635 ppb	15:25:00
2	Fe 238.204 Radial†	14.8	-0.9	-7.9691 µg/L	-7.9691 ppb	15:25:00
2	K 766.490 Radial†	130.6	-55.1	-43.749 µg/L	-43.749 ppb	15:24:39
2	Mg 279.077 IEC†	9.8	-2.9	-28.311 µg/L	-28.311 ppb	15:25:00
2	Na 589.592 Radial†	382.4	-85.8	-30.651 µg/L	-30.651 ppb	15:24:39
2	Sr 421.552†	43.8	6.2	0.0713 µg/L	0.0713 ppb	15:24:39
2	Sc 361.383	1967441.1	1967441.1	99.199 %		15:26:08
2	Y 371.029	1360362.9	1360362.9	99.088 %		15:26:08
2	Ag 328.068†	-568.7	-70.9	-0.6113 µg/L	-0.6113 ppb	15:26:13
2	As 188.979†	3.7	5.4	11.498 µg/L	11.498 ppb	15:26:34
2	B 249.677†	307.8	-4.1	-0.1944 µg/L	-0.1944 ppb	15:26:34
2	Ba 233.527†	-18.0	2.8	0.0804 µg/L	0.0804 ppb	15:26:34
2	Be 313.107†	-3158.0	117.3	0.0836 µg/L	0.0836 ppb	15:26:13
2	Cd 226.502†	-137.9	6.0	0.1789 µg/L	0.1789 ppb	15:26:34
2	Co 228.616†	-10.0	-1.8	-0.0947 µg/L	-0.0947 ppb	15:26:34
2	Cr 267.716†	-51.7	-9.4	-0.2223 µg/L	-0.2223 ppb	15:26:13
2	Cu 324.752†	2481.1	12.3	0.0925 µg/L	0.0925 ppb	15:26:13
2	Mn 257.610†	-189.3	72.7	0.2691 µg/L	0.2691 ppb	15:26:34
2	Mo 202.031†	-5.4	1.3	0.1463 µg/L	0.1463 ppb	15:26:34
2	Ni 231.604†	304.2	-0.4	-0.0264 µg/L	-0.0264 ppb	15:26:34
2	P 214.914†	27.2	6.2	14.363 µg/L	14.363 ppb	15:26:34
2	Pb 220.353†	84.2	-6.5	-1.8946 µg/L	-1.8946 ppb	15:26:34

2	S 181.975 Axial†	19.2	4.7	23.013 µg/L	23.013 ppb	15:26:34
2	Sb 206.836†	25.7	1.3	1.3708 µg/L	1.3708 ppb	15:26:34
2	Se 196.026†	10.3	-0.4	-0.5611 µg/L	-0.5611 ppb	15:26:34
2	SiO2†	1392.0	63.1	14.826 µg/L	14.826 ppb	15:26:13
2	Si 251.611†	341.5	40.6	3.6468 µg/L	3.6468 ppb	15:26:34
2	Sn 189.927†	0.4	-2.5	-1.2426 µg/L	-1.2426 ppb	15:26:34
2	Ti 334.940†	189.9	26.6	0.0729 µg/L	0.0729 ppb	15:26:13
2	Tl 190.801†	-24.4	1.5	2.2850 µg/L	2.2850 ppb	15:26:34
2	U 409.014†	-92.3	10.2	0.9721 µg/L	0.9721 ppb	15:26:13
2	V 292.402†	-70.0	-37.3	-0.4318 µg/L	-0.4318 ppb	15:26:13
2	Zn 213.857†	505.2	8.7	0.2375 µg/L	0.2375 ppb	15:26:34
3	Sc RADIAL	55510.6	55510.6	99.6 %		15:25:05
3	Al 396.153Radial†	6.8	16.6	13.108 µg/L	13.108 ppb	15:25:05
3	Ca 317.933Radial†	189.9	2.7	2.7317 µg/L	2.7317 ppb	15:25:25
3	Fe 238.204 Radial†	16.5	0.8	6.7827 µg/L	6.7827 ppb	15:25:25
3	K 766.490 Radial†	133.1	-53.2	-42.213 µg/L	-42.213 ppb	15:25:05
3	Mg 279.077 IEC†	11.6	-1.1	-10.534 µg/L	-10.534 ppb	15:25:25
3	Na 589.592 Radial†	448.9	-20.6	-7.3732 µg/L	-7.3732 ppb	15:25:05
3	Sr 421.552†	44.4	6.5	0.0754 µg/L	0.0754 ppb	15:25:05
3	Sc 361.383	1964151.0	1964151.0	99.033 %		15:26:40
3	Y 371.029	1357971.8	1357971.8	98.914 %		15:26:40
3	Ag 328.068†	-496.5	1.0	0.0074 µg/L	0.0074 ppb	15:26:45
3	As 188.979†	1.6	3.4	7.1148 µg/L	7.1148 ppb	15:27:06
3	B 249.677†	309.4	-2.0	-0.0974 µg/L	-0.0974 ppb	15:27:06
3	Ba 233.527†	-17.3	3.5	0.1002 µg/L	0.1002 ppb	15:27:06
3	Be 313.107†	-3229.8	39.5	0.0280 µg/L	0.0280 ppb	15:26:45
3	Cd 226.502†	-143.2	0.5	0.0136 µg/L	0.0136 ppb	15:27:06
3	Co 228.616†	-9.2	-1.0	-0.0536 µg/L	-0.0536 ppb	15:27:06
3	Cr 267.716†	-48.1	-5.8	-0.1375 µg/L	-0.1375 ppb	15:26:45
3	Cu 324.752†	2528.4	64.3	0.4901 µg/L	0.4901 ppb	15:26:45
3	Mn 257.610†	-209.2	52.2	0.1946 µg/L	0.1946 ppb	15:27:06
3	Mo 202.031†	-5.7	1.0	0.1092 µg/L	0.1092 ppb	15:27:06
3	Ni 231.604†	310.3	6.3	0.3717 µg/L	0.3717 ppb	15:27:06
3	P 214.914†	26.9	5.9	13.721 µg/L	13.721 ppb	15:27:06
3	Pb 220.353†	102.2	11.8	3.4087 µg/L	3.4087 ppb	15:27:06
3	S 181.975 Axial†	14.1	-0.4	-1.9291 µg/L	-1.9291 ppb	15:27:06
3	Sb 206.836†	23.2	-1.2	-1.2284 µg/L	-1.2284 ppb	15:27:06
3	Se 196.026†	17.2	6.6	10.597 µg/L	10.597 ppb	15:27:06
3	SiO2†	1363.2	36.4	8.5557 µg/L	8.5557 ppb	15:26:45
3	Si 251.611†	333.3	32.9	2.9526 µg/L	2.9526 ppb	15:27:06
3	Sn 189.927†	-0.5	-3.3	-1.6857 µg/L	-1.6857 ppb	15:27:06
3	Ti 334.940†	280.1	118.0	0.3146 µg/L	0.3146 ppb	15:26:45
3	Tl 190.801†	-28.6	-2.8	-4.2657 µg/L	-4.2657 ppb	15:27:06
3	U 409.014†	-76.6	25.9	2.4714 µg/L	2.4714 ppb	15:26:45
3	V 292.402†	-57.1	-24.3	-0.2778 µg/L	-0.2778 ppb	15:26:45
3	Zn 213.857†	498.7	2.9	0.0770 µg/L	0.0770 ppb	15:27:06

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1957882.4	98.717 %	0.6961			0.71%
Sc RADIAL	55347.4	99.3 %	0.26			0.26%
Y 371.029	1353763.0	98.607 %	0.6874			0.70%
Ag 328.068†	-43.0	-0.3691 µg/L	0.33049	-0.3691 ppb	0.33049	89.53%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	15.8	12.447 µg/L	10.4467	12.447 ppb	10.4467	83.93%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.6	5.5244 µg/L	6.90751	5.5244 ppb	6.90751	125.04%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	1.7	0.0782 µg/L	0.39120	0.0782 ppb	0.39120	500.04%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-0.5	-0.0158 µg/L	0.18412	-0.0158 ppb	0.18412	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	44.3	0.0316 µg/L	0.05042	0.0316 ppb	0.05042	159.79%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	2.3	2.3133 µg/L	0.43494	2.3133 ppb	0.43494	18.80%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-1.1	-0.0329 µg/L	0.23841	-0.0329 ppb	0.23841	724.74%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.1	-0.0605 µg/L	0.03125	-0.0605 ppb	0.03125	51.63%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-8.8	-0.2096 µg/L	0.06669	-0.2096 ppb	0.06669	31.81%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	39.3	0.2997 µg/L	0.19931	0.2997 ppb	0.19931	66.49%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	0.9	8.0036 µg/L	16.61684	8.0036 ppb	16.61684	207.62%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-60.3	-47.848 µg/L	8.4645	-47.848 ppb	8.4645	17.69%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-1.8	-17.436 µg/L	9.5311	-17.436 ppb	9.5311	54.66%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	56.2	0.2099 µg/L	0.05328	0.2099 ppb	0.05328	25.39%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	2.5	0.2783 µg/L	0.26145	0.2783 ppb	0.26145	93.94%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-42.0	-14.988 µg/L	13.5666	-14.988 ppb	13.5666	90.52%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	8.1	0.4796 µg/L	0.56780	0.4796 ppb	0.56780	118.38%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	7.3	16.910 µg/L	4.9784	16.910 ppb	4.9784	29.44%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	3.9	1.1308 µg/L	2.72952	1.1308 ppb	2.72952	241.39%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	2.4	11.501 µg/L	12.5813	11.501 ppb	12.5813	109.39%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	1.4	1.4494 µg/L	2.71788	1.4494 ppb	2.71788	187.52%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	1.8	2.9763 µg/L	6.60530	2.9763 ppb	6.60530	221.93%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	54.3	12.758 µg/L	3.6396	12.758 ppb	3.6396	28.53%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	33.5	3.0071 µg/L	0.61425	3.0071 ppb	0.61425	20.43%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-2.6	-1.3273 µg/L	0.32443	-1.3273 ppb	0.32443	24.44%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	9.0	0.1043 µg/L	0.05353	0.1043 ppb	0.05353	51.34%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	45.8	0.1232 µg/L	0.17184	0.1232 ppb	0.17184	139.43%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-1.5	-2.2531 µg/L	3.93849	-2.2531 ppb	3.93849	174.80%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	48.2	4.6005 µg/L	5.04225	4.6005 ppb	5.04225	109.60%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-16.3	-0.1821 µg/L	0.30890	-0.1821 ppb	0.30890	169.63%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	10.3	0.2757 µg/L	0.22036	0.2757 ppb	0.22036	79.92%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

Sequence No.: 35

Sample ID: 245147003|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 329

Date Collected: 2/8/2010 15:27:15

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147003|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56278.6	56278.6	101 %		15:27:53
1	Al 396.153Radial†	91791.7	90884.8	71794 µg/L	71794 ppb	15:27:53
1	Ca 317.933Radial†	23170.1	22750.9	23041 µg/L	23041 ppb	15:27:53
1	Fe 238.204 Radial†	10357.3	10238.0	90867 µg/L	90867 ppb	15:28:13
1	K 766.490 Radial†	18487.1	18115.7	14382 µg/L	14382 ppb	15:27:53
1	Mg 279.077 IEC†	1455.6	1428.3	14023 µg/L	14023 ppb	15:28:13
1	Na 589.592 Radial†	2317.8	1823.5	651.45 µg/L	651.45 ppb	15:27:53
1	Sr 421.552†	19663.2	19428.8	225.15 µg/L	225.15 ppb	15:27:53
1	Sc 361.383	1950218.4	1950218.4	98.331 %		15:29:17
1	Y 371.029	1372177.5	1372177.5	99.949 %		15:29:17
1	Ag 328.068†	-972.8	-486.9	2.7536 µg/L	2.7536 ppb	15:29:23
1	As 188.979†	7.7	9.5	24.211 µg/L	24.211 ppb	15:29:43
1	B 249.677†	1014.9	717.7	-12.969 µg/L	-12.969 ppb	15:29:23
1	Ba 233.527†	45518.1	46311.8	1319.8 µg/L	1319.8 ppb	15:29:23
1	Be 313.107†	11089.7	14578.8	8.8977 µg/L	8.8977 ppb	15:29:23
1	Cd 226.502†	186.2	334.4	-0.2945 µg/L	-0.2945 ppb	15:29:43
1	Co 228.616†	842.6	865.2	38.376 µg/L	38.376 ppb	15:29:43
1	Cr 267.716†	3327.3	3426.5	81.276 µg/L	81.276 ppb	15:29:23
1	Cu 324.752†	12792.7	10521.1	92.658 µg/L	92.658 ppb	15:29:23
1	Mn 257.610†	761440.0	774629.5	2879.7 µg/L	2879.7 ppb	15:29:17
1	Mo 202.031†	9.6	16.5	5.2957 µg/L	5.2957 ppb	15:29:43
1	Ni 231.604†	1240.1	954.1	57.741 µg/L	57.741 ppb	15:29:43
1	P 214.914†	752.5	744.0	1672.0 µg/L	1672.0 ppb	15:29:43
1	Pb 220.353†	678.6	598.7	173.70 µg/L	173.70 ppb	15:29:43
1	S 181.975 Axial†	293.9	284.3	1380.0 µg/L	1380.0 ppb	15:29:43
1	Sb 206.836†	29.9	5.8	3.2908 µg/L	3.2908 ppb	15:29:43
1	Se 196.026†	-17.2	-28.2	184.34 µg/L	184.34 ppb	15:29:43
1	SiO2†	316055.9	320081.1	75191 µg/L	75191 ppb	15:29:17
1	Si 251.611†	382882.5	389078.6	34924 µg/L	34924 ppb	15:29:17
1	Sn 189.927†	-27.6	-30.9	-23.682 µg/L	-23.682 ppb	15:29:43
1	Ti 334.940†	1455177.4	1479715.3	3933.8 µg/L	3933.8 ppb	15:29:17
1	Tl 190.801†	-53.7	-28.6	19.170 µg/L	19.170 ppb	15:29:43
1	U 409.014†	-288.5	-190.2	-32.184 µg/L	-32.184 ppb	15:29:23
1	V 292.402†	15415.1	15710.1	193.14 µg/L	193.14 ppb	15:29:23
1	Zn 213.857†	9843.9	9510.4	252.13 µg/L	252.13 ppb	15:29:23
2	Sc RADIAL	56057.8	56057.8	101 %		15:28:18
2	Al 396.153Radial†	92461.6	91908.5	72602 µg/L	72602 ppb	15:28:18
2	Ca 317.933Radial†	23324.2	22994.3	23288 µg/L	23288 ppb	15:28:18
2	Fe 238.204 Radial†	10367.3	10288.3	91314 µg/L	91314 ppb	15:28:39
2	K 766.490 Radial†	18626.7	18326.6	14549 µg/L	14549 ppb	15:28:18
2	Mg 279.077 IEC†	1455.9	1434.3	14082 µg/L	14082 ppb	15:28:39
2	Na 589.592 Radial†	2317.5	1832.2	654.58 µg/L	654.58 ppb	15:28:18
2	Sr 421.552†	19862.7	19703.7	228.34 µg/L	228.34 ppb	15:28:18
2	Sc 361.383	1937037.2	1937037.2	97.666 %		15:29:51
2	Y 371.029	1364401.3	1364401.3	99.382 %		15:29:51
2	Ag 328.068†	-961.1	-481.6	2.8413 µg/L	2.8413 ppb	15:29:56
2	As 188.979†	8.1	9.9	25.172 µg/L	25.172 ppb	15:30:17
2	B 249.677†	1011.6	721.4	-13.022 µg/L	-13.022 ppb	15:29:56
2	Ba 233.527†	45747.4	46861.6	1335.4 µg/L	1335.4 ppb	15:29:56
2	Be 313.107†	11141.9	14709.0	8.9733 µg/L	8.9733 ppb	15:29:56
2	Cd 226.502†	191.7	341.3	-0.1401 µg/L	-0.1401 ppb	15:30:17
2	Co 228.616†	862.5	891.4	39.692 µg/L	39.692 ppb	15:30:17
2	Cr 267.716†	3397.9	3521.8	83.535 µg/L	83.535 ppb	15:29:56
2	Cu 324.752†	12842.1	10660.2	93.778 µg/L	93.778 ppb	15:29:56
2	Mn 257.610†	764064.5	782586.1	2909.2 µg/L	2909.2 ppb	15:29:51
2	Mo 202.031†	6.5	13.4	4.9687 µg/L	4.9687 ppb	15:30:17
2	Ni 231.604†	1251.2	974.0	58.926 µg/L	58.926 ppb	15:30:17
2	P 214.914†	752.9	749.7	1684.8 µg/L	1684.8 ppb	15:30:17
2	Pb 220.353†	694.4	619.6	179.76 µg/L	179.76 ppb	15:30:17

2	S 181.975 Axial†	298.9	291.4	1414.5 µg/L	1414.5 ppb	15:30:17
2	Sb 206.836†	32.2	8.3	5.8621 µg/L	5.8621 ppb	15:30:17
2	Se 196.026†	-20.9	-32.1	179.29 µg/L	179.29 ppb	15:30:17
2	SiO2†	317633.7	323883.7	76084 µg/L	76084 ppb	15:29:51
2	Si 251.611†	384872.6	393765.9	35345 µg/L	35345 ppb	15:29:51
2	Sn 189.927†	-31.5	-35.1	-25.816 µg/L	-25.816 ppb	15:30:17
2	Ti 334.940†	1461985.2	1496756.0	3979.1 µg/L	3979.1 ppb	15:29:51
2	Tl 190.801†	-57.0	-32.3	14.074 µg/L	14.074 ppb	15:30:17
2	U 409.014†	-300.0	-203.9	-33.574 µg/L	-33.574 ppb	15:29:56
2	V 292.402†	15501.1	15904.8	195.45 µg/L	195.45 ppb	15:29:56
2	Zn 213.857†	9890.0	9625.7	255.22 µg/L	255.22 ppb	15:29:56
3	Sc RADIAL	55584.4	55584.4	99.8 %		15:28:44
3	Al 396.153Radial†	92599.1	92829.0	73329 µg/L	73329 ppb	15:28:44
3	Ca 317.933Radial†	23378.8	23246.5	23543 µg/L	23543 ppb	15:28:44
3	Fe 238.204 Radial†	10456.2	10465.3	92885 µg/L	92885 ppb	15:29:05
3	K 766.490 Radial†	18688.9	18546.6	14724 µg/L	14724 ppb	15:28:44
3	Mg 279.077 IEC†	1477.4	1468.2	14415 µg/L	14415 ppb	15:29:05
3	Na 589.592 Radial†	2360.8	1895.2	677.08 µg/L	677.08 ppb	15:28:44
3	Sr 421.552†	19862.1	19871.2	230.28 µg/L	230.28 ppb	15:28:44
3	Sc 361.383	1918214.7	1918214.7	96.717 %		15:30:24
3	Y 371.029	1352133.6	1352133.6	98.489 %		15:30:24
3	Ag 328.068†	-922.5	-451.4	3.1657 µg/L	3.1657 ppb	15:30:30
3	As 188.979†	9.1	11.1	27.775 µg/L	27.775 ppb	15:30:50
3	B 249.677†	980.4	699.3	-14.904 µg/L	-14.904 ppb	15:30:30
3	Ba 233.527†	44299.7	45824.4	1305.9 µg/L	1305.9 ppb	15:30:30
3	Be 313.107†	10555.9	14215.0	8.6366 µg/L	8.6366 ppb	15:30:30
3	Cd 226.502†	166.8	317.4	-1.0292 µg/L	-1.0292 ppb	15:30:50
3	Co 228.616†	799.2	834.6	36.723 µg/L	36.723 ppb	15:30:50
3	Cr 267.716†	3240.9	3393.7	80.496 µg/L	80.496 ppb	15:30:30
3	Cu 324.752†	12547.5	10484.6	92.660 µg/L	92.660 ppb	15:30:30
3	Mn 257.610†	752575.0	778383.2	2893.8 µg/L	2893.8 ppb	15:30:24
3	Mo 202.031†	5.4	12.4	4.9103 µg/L	4.9103 ppb	15:30:50
3	Ni 231.604†	1171.1	903.7	54.780 µg/L	54.780 ppb	15:30:50
3	P 214.914†	709.8	712.7	1597.9 µg/L	1597.9 ppb	15:30:50
3	Pb 220.353†	663.3	594.3	172.44 µg/L	172.44 ppb	15:30:50
3	S 181.975 Axial†	283.9	278.9	1353.8 µg/L	1353.8 ppb	15:30:50
3	Sb 206.836†	36.0	12.6	10.461 µg/L	10.461 ppb	15:30:50
3	Se 196.026†	-24.1	-35.6	177.64 µg/L	177.64 ppb	15:30:50
3	SiO2†	313732.6	323041.5	75886 µg/L	75886 ppb	15:30:24
3	Si 251.611†	379894.0	392485.1	35230 µg/L	35230 ppb	15:30:24
3	Sn 189.927†	-23.0	-26.6	-21.679 µg/L	-21.679 ppb	15:30:50
3	Ti 334.940†	1432903.4	1481375.7	3938.2 µg/L	3938.2 ppb	15:30:24
3	Tl 190.801†	-55.2	-31.0	15.920 µg/L	15.920 ppb	15:30:50
3	U 409.014†	-272.6	-178.6	-31.391 µg/L	-31.391 ppb	15:30:30
3	V 292.402†	14920.7	15460.5	190.47 µg/L	190.47 ppb	15:30:30
3	Zn 213.857†	9641.4	9468.0	250.88 µg/L	250.88 ppb	15:30:30

## Mean Data: 245147003|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	1935156.8	97.571 %		0.8110			0.83%
Sc RADIAL	55973.6	100 %		0.6			0.63%
Y 371.029	1362904.1	99.273 %		0.7361			0.74%
Ag 328.068†	-473.3	2.9202 µg/L		0.21711	2.9202 ppb	0.21711	7.43%
Al 396.153Radial†	91874.1	72575 µg/L		768.3	72575 ppb	768.3	1.06%
As 188.979†	10.2	25.719 µg/L		1.8441	25.719 ppb	1.8441	7.17%
B 249.677†	712.8	-13.632 µg/L		1.1021	-13.632 ppb	1.1021	8.08%
Ba 233.527†	46332.6	1320.4 µg/L		14.79	1320.4 ppb	14.79	1.12%
Be 313.107†	14500.9	8.8359 µg/L		0.17665	8.8359 ppb	0.17665	2.00%
Ca 317.933Radial†	22997.2	23291 µg/L		251.0	23291 ppb	251.0	1.08%
Cd 226.502†	331.1	-0.4879 µg/L		0.47504	-0.4879 ppb	0.47504	97.36%
Co 228.616†	863.7	38.264 µg/L		1.4879	38.264 ppb	1.4879	3.89%
Cr 267.716†	3447.3	81.769 µg/L		1.5779	81.769 ppb	1.5779	1.93%
Cu 324.752†	10555.3	93.032 µg/L		0.6460	93.032 ppb	0.6460	0.69%
Fe 238.204 Radial†	10330.5	91689 µg/L		1059.5	91689 ppb	1059.5	1.16%
K 766.490 Radial†	18329.6	14552 µg/L		171.1	14552 ppb	171.1	1.18%
Mg 279.077 IEC†	1443.6	14173 µg/L		211.6	14173 ppb	211.6	1.49%
Mn 257.610†	778532.9	2894.2 µg/L		14.76	2894.2 ppb	14.76	0.51%
Mo 202.031†	14.1	5.0582 µg/L		0.20769	5.0582 ppb	0.20769	4.11%
Na 589.592 Radial†	1850.3	661.04 µg/L		13.983	661.04 ppb	13.983	2.12%

Ni 231.604†	943.9	57.149 µg/L	2.1355	57.149 ppb	2.1355	3.74%
P 214.914†	735.5	1651.6 µg/L	46.93	1651.6 ppb	46.93	2.84%
Pb 220.353†	604.2	175.30 µg/L	3.916	175.30 ppb	3.916	2.23%
S 181.975 Axial†	284.9	1382.8 µg/L	30.43	1382.8 ppb	30.43	2.20%
Sb 206.836†	8.9	6.5379 µg/L	3.63246	6.5379 ppb	3.63246	55.56%
Se 196.026†	-32.0	180.42 µg/L	3.493	180.42 ppb	3.493	1.94%
SiO2†	322335.4	75720 µg/L	469.2	75720 ppb	469.2	0.62%
Si 251.611†	391776.5	35166 µg/L	217.5	35166 ppb	217.5	0.62%
Sn 189.927†	-30.9	-23.726 µg/L	2.0687	-23.726 ppb	2.0687	8.72%
Sr 421.552†	19667.9	227.92 µg/L	2.589	227.92 ppb	2.589	1.14%
Ti 334.940†	1485949.0	3950.4 µg/L	24.99	3950.4 ppb	24.99	0.63%
Tl 190.801†	-30.6	16.388 µg/L	2.5800	16.388 ppb	2.5800	15.74%
U 409.014†	-190.9	-32.383 µg/L	1.1052	-32.383 ppb	1.1052	3.41%
V 292.402†	15691.8	193.02 µg/L	2.490	193.02 ppb	2.490	1.29%
Zn 213.857†	9534.7	252.75 µg/L	2.236	252.75 ppb	2.236	0.88%

Sequence No.: 36

Sample ID: 245147004|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 330

Date Collected: 2/8/2010 15:30:59

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147004|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	53654.6	53654.6	96.3 %		15:31:32
1	Al 396.153Radial†	106442.3	110542.6	87322 µg/L	87322 ppb	15:31:32
1	Ca 317.933Radial†	46990.7	48608.7	49229 µg/L	49229 ppb	15:31:32
1	Fe 238.204 Radial†	12894.5	13374.2	118700 µg/L	118700 ppb	15:31:52
1	K 766.490 Radial†	14861.4	15245.8	12104 µg/L	12104 ppb	15:31:32
1	Mg 279.077 IEC†	1481.7	1526.0	14959 µg/L	14959 ppb	15:31:52
1	Na 589.592 Radial†	5947.4	5704.8	2038.1 µg/L	2038.1 ppb	15:31:52
1	Sr 421.552†	25973.0	26933.1	312.12 µg/L	312.12 ppb	15:31:32
1	Sc 361.383	1900573.8	1900573.8	95.828 %		15:32:58
1	Y 371.029	1352751.7	1352751.7	98.534 %		15:32:58
1	Ag 328.068†	5778.6	6532.6	64.761 µg/L	64.761 ppb	15:33:03
1	As 188.979†	3.3	5.1	15.214 µg/L	15.214 ppb	15:33:23
1	B 249.677†	1014.4	744.2	-26.170 µg/L	-26.170 ppb	15:33:03
1	Ba 233.527†	41582.8	43414.3	1237.2 µg/L	1237.2 ppb	15:33:03
1	Be 313.107†	11923.6	15743.6	9.6288 µg/L	9.6288 ppb	15:33:03
1	Cd 226.502†	220.5	375.1	-2.2243 µg/L	-2.2243 ppb	15:33:23
1	Co 228.616†	918.4	966.6	43.296 µg/L	43.296 ppb	15:33:23
1	Cr 267.716†	4682.5	4929.2	116.88 µg/L	116.88 ppb	15:33:03
1	Cu 324.752†	8084.6	5947.8	61.741 µg/L	61.741 ppb	15:33:03
1	Mn 257.610†	793599.4	828416.2	3082.5 µg/L	3082.5 ppb	15:32:58
1	Mo 202.031†	21.4	29.0	7.7512 µg/L	7.7512 ppb	15:33:23
1	Ni 231.604†	1355.0	1106.9	67.164 µg/L	67.164 ppb	15:33:23
1	P 214.914†	624.7	630.7	1393.3 µg/L	1393.3 ppb	15:33:23
1	Pb 220.353†	490.9	420.9	122.18 µg/L	122.18 ppb	15:33:23
1	S 181.975 Axial†	213.4	208.0	1009.7 µg/L	1009.7 ppb	15:33:23
1	Sb 206.836†	43.9	21.1	16.886 µg/L	16.886 ppb	15:33:23
1	Se 196.026†	-46.4	-59.1	202.98 µg/L	202.98 ppb	15:33:23
1	SiO2†	346130.8	359861.3	84535 µg/L	84535 ppb	15:32:58
1	Si 251.611†	419038.3	436979.6	39223 µg/L	39223 ppb	15:32:58
1	Sn 189.927†	-34.5	-38.8	-30.652 µg/L	-30.652 ppb	15:33:23
1	Ti 334.940†	1512330.3	1578012.3	4195.5 µg/L	4195.5 ppb	15:32:58
1	Tl 190.801†	-60.1	-36.6	12.519 µg/L	12.519 ppb	15:33:23
1	U 409.014†	-1323.5	-1277.8	-141.46 µg/L	-141.46 ppb	15:32:58
1	V 292.402†	16027.7	16758.9	208.56 µg/L	208.56 ppb	15:33:03
1	Zn 213.857†	14111.4	14225.2	378.49 µg/L	378.49 ppb	15:33:03
2	Sc RADIAL	53740.5	53740.5	96.5 %		15:31:58
2	Al 396.153Radial†	106106.6	110017.9	86908 µg/L	86908 ppb	15:31:58
2	Ca 317.933Radial†	46743.7	48274.5	48891 µg/L	48891 ppb	15:31:58
2	Fe 238.204 Radial†	12997.2	13459.3	119460 µg/L	119460 ppb	15:32:18
2	K 766.490 Radial†	14798.9	15156.3	12033 µg/L	12033 ppb	15:31:58
2	Mg 279.077 IEC†	1491.5	1533.7	15034 µg/L	15034 ppb	15:32:18
2	Na 589.592 Radial†	5970.1	5718.4	2043.0 µg/L	2043.0 ppb	15:32:18
2	Sr 421.552†	25963.9	26880.6	311.51 µg/L	311.51 ppb	15:31:58
2	Sc 361.383	1902747.3	1902747.3	95.937 %		15:33:31
2	Y 371.029	1352739.0	1352739.0	98.533 %		15:33:31
2	Ag 328.068†	5644.1	6385.5	63.525 µg/L	63.525 ppb	15:33:37
2	As 188.979†	12.3	14.5	35.188 µg/L	35.188 ppb	15:33:57
2	B 249.677†	998.1	726.0	-27.438 µg/L	-27.438 ppb	15:33:37
2	Ba 233.527†	40999.7	42756.9	1218.5 µg/L	1218.5 ppb	15:33:37
2	Be 313.107†	11838.1	15640.2	9.5840 µg/L	9.5840 ppb	15:33:37
2	Cd 226.502†	213.7	367.8	-2.5263 µg/L	-2.5263 ppb	15:33:57
2	Co 228.616†	916.3	963.4	43.278 µg/L	43.278 ppb	15:33:57
2	Cr 267.716†	4626.5	4865.2	115.36 µg/L	115.36 ppb	15:33:37
2	Cu 324.752†	7995.6	5845.4	61.067 µg/L	61.067 ppb	15:33:37
2	Mn 257.610†	778822.8	812067.8	3022.1 µg/L	3022.1 ppb	15:33:31
2	Mo 202.031†	22.5	30.2	7.9071 µg/L	7.9071 ppb	15:33:57
2	Ni 231.604†	1358.9	1109.3	67.319 µg/L	67.319 ppb	15:33:57
2	P 214.914†	618.0	623.0	1374.8 µg/L	1374.8 ppb	15:33:57
2	Pb 220.353†	492.2	421.6	122.36 µg/L	122.36 ppb	15:33:57

2	S 181.975 Axial†	208.7	203.0	985.12 µg/L	985.12 ppb	15:33:57
2	Sb 206.836†	34.9	11.8	7.0170 µg/L	7.0170 ppb	15:33:57
2	Se 196.026†	-42.4	-54.9	211.84 µg/L	211.84 ppb	15:33:57
2	SiO2†	340395.1	353470.0	83034 µg/L	83034 ppb	15:33:31
2	Si 251.611†	412148.7	429298.7	38534 µg/L	38534 ppb	15:33:31
2	Sn 189.927†	-28.4	-32.5	-27.527 µg/L	-27.527 ppb	15:33:57
2	Ti 334.940†	1486739.4	1549535.0	4119.8 µg/L	4119.8 ppb	15:33:31
2	Tl 190.801†	-61.9	-38.5	8.9041 µg/L	8.9041 ppb	15:33:57
2	U 409.014†	-1338.3	-1291.7	-142.86 µg/L	-142.86 ppb	15:33:31
2	V 292.402†	15763.9	16464.8	205.24 µg/L	205.24 ppb	15:33:37
2	Zn 213.857†	13928.6	14017.9	372.84 µg/L	372.84 ppb	15:33:37
3	Sc RADIAL	54729.6	54729.6	98.2 %		15:32:24
3	Al 396.153Radial†	105145.3	107051.0	84564 µg/L	84564 ppb	15:32:24
3	Ca 317.933Radial†	46455.6	47105.4	47707 µg/L	47707 ppb	15:32:24
3	Fe 238.204 Radial†	12949.7	13167.4	116870 µg/L	116870 ppb	15:32:44
3	K 766.490 Radial†	14781.8	14861.6	11799 µg/L	11799 ppb	15:32:24
3	Mg 279.077 IEC†	1480.3	1494.3	14647 µg/L	14647 ppb	15:32:44
3	Na 589.592 Radial†	5937.2	5573.0	1991.0 µg/L	1991.0 ppb	15:32:44
3	Sr 421.552†	25749.6	26175.9	303.34 µg/L	303.34 ppb	15:32:24
3	Sc 361.383	1891019.8	1891019.8	95.346 %		15:34:05
3	Y 371.029	1342222.8	1342222.8	97.767 %		15:34:05
3	Ag 328.068†	5606.8	6382.8	63.287 µg/L	63.287 ppb	15:34:11
3	As 188.979†	7.2	9.2	23.898 µg/L	23.898 ppb	15:34:31
3	B 249.677†	968.2	701.1	-27.285 µg/L	-27.285 ppb	15:34:11
3	Ba 233.527†	39368.5	41311.1	1177.3 µg/L	1177.3 ppb	15:34:11
3	Be 313.107†	11071.0	14912.1	9.0945 µg/L	9.0945 ppb	15:34:11
3	Cd 226.502†	202.5	357.4	-2.5477 µg/L	-2.5477 ppb	15:34:31
3	Co 228.616†	838.7	887.9	39.377 µg/L	39.377 ppb	15:34:31
3	Cr 267.716†	4365.7	4621.6	109.58 µg/L	109.58 ppb	15:34:11
3	Cu 324.752†	7773.2	5663.8	59.325 µg/L	59.325 ppb	15:34:11
3	Mn 257.610†	761943.0	799398.6	2974.8 µg/L	2974.8 ppb	15:34:05
3	Mo 202.031†	14.2	21.7	6.8579 µg/L	6.8579 ppb	15:34:31
3	Ni 231.604†	1275.9	1031.0	62.643 µg/L	62.643 ppb	15:34:31
3	P 214.914†	580.5	587.6	1293.9 µg/L	1293.9 ppb	15:34:31
3	Pb 220.353†	477.5	409.4	118.78 µg/L	118.78 ppb	15:34:31
3	S 181.975 Axial†	202.0	197.3	957.54 µg/L	957.54 ppb	15:34:31
3	Sb 206.836†	33.9	10.9	6.2203 µg/L	6.2203 ppb	15:34:31
3	Se 196.026†	-35.7	-48.2	216.19 µg/L	216.19 ppb	15:34:31
3	SiO2†	334138.3	349108.3	82009 µg/L	82009 ppb	15:34:05
3	Si 251.611†	404656.6	424105.2	38068 µg/L	38068 ppb	15:34:05
3	Sn 189.927†	-24.3	-28.3	-25.220 µg/L	-25.220 ppb	15:34:31
3	Ti 334.940†	1449557.8	1520149.2	4041.7 µg/L	4041.7 ppb	15:34:05
3	Tl 190.801†	-56.8	-33.5	15.141 µg/L	15.141 ppb	15:34:31
3	U 409.014†	-1331.0	-1292.7	-142.52 µg/L	-142.52 ppb	15:34:05
3	V 292.402†	15018.5	15784.9	197.03 µg/L	197.03 ppb	15:34:11
3	Zn 213.857†	13398.1	13551.5	360.37 µg/L	360.37 ppb	15:34:11

Mean Data: 245147004|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1898113.6	95.704 %		0.3146				0.33%
Sc RADIAL	54041.6	97.0 %		1.07				1.11%
Y 371.029	1349237.8	98.278 %		0.4425				0.45%
Ag 328.068†	6433.7	63.858 µg/L		0.7914	63.858 ppb		0.7914	1.24%
Al 396.153Radial†	109203.8	86264 µg/L		1487.3	86264 ppb		1487.3	1.72%
As 188.979†	9.6	24.767 µg/L		10.0158	24.767 ppb		10.0158	40.44%
B 249.677†	723.7	-26.964 µg/L		0.6921	-26.964 ppb		0.6921	2.57%
Ba 233.527†	42494.1	1211.0 µg/L		30.66	1211.0 ppb		30.66	2.53%
Be 313.107†	15432.0	9.4358 µg/L		0.29639	9.4358 ppb		0.29639	3.14%
Ca 317.933Radial†	47996.2	48609 µg/L		799.4	48609 ppb		799.4	1.64%
Cd 226.502†	366.8	-2.4328 µg/L		0.18081	-2.4328 ppb		0.18081	7.43%
Co 228.616†	939.3	41.984 µg/L		2.2574	41.984 ppb		2.2574	5.38%
Cr 267.716†	4805.3	113.94 µg/L		3.848	113.94 ppb		3.848	3.38%
Cu 324.752†	5819.0	60.711 µg/L		1.2465	60.711 ppb		1.2465	2.05%
Fe 238.204 Radial†	13333.6	118340 µg/L		1332.4	118340 ppb		1332.4	1.13%
K 766.490 Radial†	15087.9	11978 µg/L		159.6	11978 ppb		159.6	1.33%
Mg 279.077 IEC†	1518.0	14880 µg/L		204.9	14880 ppb		204.9	1.38%
Mn 257.610†	813294.2	3026.5 µg/L		53.97	3026.5 ppb		53.97	1.78%
Mo 202.031†	27.0	7.5054 µg/L		0.56610	7.5054 ppb		0.56610	7.54%
Na 589.592 Radial†	5665.4	2024.0 µg/L		28.68	2024.0 ppb		28.68	1.42%

Ni 231.604†	1082.4	65.709 µg/L	2.6561	65.709 ppb	2.6561	4.04%
P 214.914†	613.8	1354.0 µg/L	52.84	1354.0 ppb	52.84	3.90%
Pb 220.353†	417.3	121.11 µg/L	2.015	121.11 ppb	2.015	1.66%
S 181.975 Axial†	202.8	984.13 µg/L	26.103	984.13 ppb	26.103	2.65%
Sb 206.836†	14.6	10.041 µg/L	5.9413	10.041 ppb	5.9413	59.17%
Se 196.026†	-54.1	210.34 µg/L	6.732	210.34 ppb	6.732	3.20%
SiO2†	354146.5	83193 µg/L	1270.5	83193 ppb	1270.5	1.53%
Si 251.611†	430127.8	38608 µg/L	581.4	38608 ppb	581.4	1.51%
Sn 189.927†	-33.2	-27.800 µg/L	2.7262	-27.800 ppb	2.7262	9.81%
Sr 421.552†	26663.2	308.99 µg/L	4.900	308.99 ppb	4.900	1.59%
Ti 334.940†	1549232.2	4119.0 µg/L	76.93	4119.0 ppb	76.93	1.87%
Tl 190.801†	-36.2	12.188 µg/L	3.1314	12.188 ppb	3.1314	25.69%
U 409.014†	-1287.4	-142.28 µg/L	0.735	-142.28 ppb	0.735	0.52%
V 292.402†	16336.2	203.61 µg/L	5.940	203.61 ppb	5.940	2.92%
Zn 213.857†	13931.6	370.57 µg/L	9.272	370.57 ppb	9.272	2.50%

Sequence No.: 37

Sample ID: 245147005|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 331

Date Collected: 2/8/2010 15:34:40

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147005|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55157.9	55157.9	99.0 %		15:35:13
1	Al 396.153Radial†	105542.4	106621.1	84224 µg/L	84224 ppb	15:35:13
1	Ca 317.933Radial†	17688.0	17679.2	17905 µg/L	17905 ppb	15:35:33
1	Fe 238.204 Radial†	12692.0	12804.7	113650 µg/L	113650 ppb	15:35:33
1	K 766.490 Radial†	18922.5	18927.4	15027 µg/L	15027 ppb	15:35:13
1	Mg 279.077 IEC†	1639.2	1643.1	16122 µg/L	16122 ppb	15:35:33
1	Na 589.592 Radial†	2492.1	2046.1	730.98 µg/L	730.98 ppb	15:35:33
1	Sr 421.552†	20055.0	20220.1	234.32 µg/L	234.32 ppb	15:35:13
1	Sc 361.383	1894993.1	1894993.1	95.546 %		15:36:38
1	Y 371.029	1333441.1	1333441.1	97.127 %		15:36:38
1	Ag 328.068†	-1785.2	-1366.0	-3.1413 µg/L	-3.1413 ppb	15:36:44
1	As 188.979†	3.6	5.4	17.159 µg/L	17.159 ppb	15:37:04
1	B 249.677†	1032.1	765.8	-22.525 µg/L	-22.525 ppb	15:36:44
1	Ba 233.527†	43622.7	45677.1	1301.7 µg/L	1301.7 ppb	15:36:44
1	Be 313.107†	11327.7	15156.5	9.3752 µg/L	9.3752 ppb	15:36:44
1	Cd 226.502†	208.8	363.5	-1.9941 µg/L	-1.9941 ppb	15:37:04
1	Co 228.616†	1095.3	1154.6	54.319 µg/L	54.319 ppb	15:37:04
1	Cr 267.716†	3977.9	4206.0	99.759 µg/L	99.759 ppb	15:36:44
1	Cu 324.752†	8498.4	6405.7	64.521 µg/L	64.521 ppb	15:36:44
1	Mn 257.610†	773477.1	809794.9	3012.8 µg/L	3012.8 ppb	15:36:38
1	Mo 202.031†	-11.4	-5.2	3.7342 µg/L	3.7342 ppb	15:37:04
1	Ni 231.604†	1395.9	1153.8	69.871 µg/L	69.871 ppb	15:37:04
1	P 214.914†	331.2	325.4	684.77 µg/L	684.77 ppb	15:37:04
1	Pb 220.353†	433.6	362.4	105.25 µg/L	105.25 ppb	15:37:04
1	S 181.975 Axial†	92.5	82.2	399.12 µg/L	399.12 ppb	15:37:04
1	Sb 206.836†	36.6	13.7	11.859 µg/L	11.859 ppb	15:37:04
1	Se 196.026†	-32.1	-44.3	220.49 µg/L	220.49 ppb	15:37:04
1	SiO2†	317804.7	331278.4	77821 µg/L	77821 ppb	15:36:38
1	Si 251.611†	384571.3	402193.7	36101 µg/L	36101 ppb	15:36:38
1	Sn 189.927†	-30.6	-34.9	-27.840 µg/L	-27.840 ppb	15:37:04
1	Ti 334.940†	1352141.4	1415004.3	3761.5 µg/L	3761.5 ppb	15:36:38
1	Tl 190.801†	-63.9	-40.8	4.2524 µg/L	4.2524 ppb	15:37:04
1	U 409.014†	-1174.3	-1125.8	-124.33 µg/L	-124.33 ppb	15:36:44
1	V 292.402†	17550.0	18401.4	226.97 µg/L	226.97 ppb	15:36:44
1	Zn 213.857†	9428.8	9367.7	247.06 µg/L	247.06 ppb	15:36:44
2	Sc RADIAL	53458.6	53458.6	95.9 %		15:35:39
2	Al 396.153Radial†	107234.0	111773.1	88294 µg/L	88294 ppb	15:35:39
2	Ca 317.933Radial†	17802.1	18366.2	18601 µg/L	18601 ppb	15:35:59
2	Fe 238.204 Radial†	12764.6	13288.0	117940 µg/L	117940 ppb	15:35:59
2	K 766.490 Radial†	19121.3	19742.2	15673 µg/L	15673 ppb	15:35:39
2	Mg 279.077 IEC†	1655.2	1712.4	16802 µg/L	16802 ppb	15:35:59
2	Na 589.592 Radial†	2525.8	2161.3	772.14 µg/L	772.14 ppb	15:35:59
2	Sr 421.552†	20160.2	20973.7	243.06 µg/L	243.06 ppb	15:35:39
2	Sc 361.383	1909245.5	1909245.5	96.265 %		15:37:11
2	Y 371.029	1343577.5	1343577.5	97.865 %		15:37:11
2	Ag 328.068†	-1777.5	-1344.1	-2.7197 µg/L	-2.7197 ppb	15:37:17
2	As 188.979†	9.8	11.9	31.029 µg/L	31.029 ppb	15:37:38
2	B 249.677†	1013.2	738.1	-26.093 µg/L	-26.093 ppb	15:37:17
2	Ba 233.527†	42696.9	44374.6	1264.6 µg/L	1264.6 ppb	15:37:17
2	Be 313.107†	11143.1	14876.3	9.2025 µg/L	9.2025 ppb	15:37:17
2	Cd 226.502†	219.7	373.2	-2.1927 µg/L	-2.1927 ppb	15:37:38
2	Co 228.616†	1075.3	1125.3	52.890 µg/L	52.890 ppb	15:37:38
2	Cr 267.716†	3873.1	4066.2	96.443 µg/L	96.443 ppb	15:37:17
2	Cu 324.752†	8365.1	6200.9	63.559 µg/L	63.559 ppb	15:37:17
2	Mn 257.610†	762518.8	792368.2	2948.9 µg/L	2948.9 ppb	15:37:11
2	Mo 202.031†	-4.0	2.6	4.7710 µg/L	4.7710 ppb	15:37:38
2	Ni 231.604†	1387.9	1134.7	68.793 µg/L	68.793 ppb	15:37:38
2	P 214.914†	334.2	326.0	683.99 µg/L	683.99 ppb	15:37:38
2	Pb 220.353†	433.6	358.9	104.31 µg/L	104.31 ppb	15:37:38

2	S 181.975 Axial†	92.4	81.4	395.12 µg/L	395.12 ppb	15:37:38
2	Sb 206.836†	35.6	12.3	10.375 µg/L	10.375 ppb	15:37:38
2	Se 196.026†	-26.4	-38.2	241.26 µg/L	241.26 ppb	15:37:38
2	SiO2†	314542.5	325406.7	76442 µg/L	76442 ppb	15:37:11
2	Si 251.611†	380744.0	395213.3	35474 µg/L	35474 ppb	15:37:11
2	Sn 189.927†	-27.8	-31.7	-26.616 µg/L	-26.616 ppb	15:37:38
2	Ti 334.940†	1336547.0	1388240.6	3690.3 µg/L	3690.3 ppb	15:37:11
2	Tl 190.801†	-55.2	-31.2	18.792 µg/L	18.792 ppb	15:37:38
2	U 409.014†	-1087.2	-1026.2	-115.46 µg/L	-115.46 ppb	15:37:17
2	V 292.402†	17226.8	17928.6	222.00 µg/L	222.00 ppb	15:37:17
2	Zn 213.857†	9228.9	9086.4	239.21 µg/L	239.21 ppb	15:37:17
3	Sc RADIAL	54371.6	54371.6	97.6 %		15:36:05
3	Al 396.153Radial†	107368.1	110033.7	86920 µg/L	86920 ppb	15:36:05
3	Ca 317.933Radial†	17706.6	17956.7	18186 µg/L	18186 ppb	15:36:25
3	Fe 238.204 Radial†	12690.1	12988.1	115280 µg/L	115280 ppb	15:36:25
3	K 766.490 Radial†	19126.4	19412.8	15412 µg/L	15412 ppb	15:36:05
3	Mg 279.077 IEC†	1650.4	1678.6	16471 µg/L	16471 ppb	15:36:25
3	Na 589.592 Radial†	2533.4	2124.9	759.13 µg/L	759.13 ppb	15:36:25
3	Sr 421.552†	20227.8	20690.1	239.77 µg/L	239.77 ppb	15:36:05
3	Sc 361.383	1896515.1	1896515.1	95.623 %		15:37:45
3	Y 371.029	1333450.2	1333450.2	97.128 %		15:37:45
3	Ag 328.068†	-1733.1	-1310.1	-2.6384 µg/L	-2.6384 ppb	15:37:50
3	As 188.979†	6.8	8.8	24.449 µg/L	24.449 ppb	15:38:11
3	B 249.677†	1002.5	734.0	-24.906 µg/L	-24.906 ppb	15:37:50
3	Ba 233.527†	41804.9	43739.4	1246.5 µg/L	1246.5 ppb	15:37:50
3	Be 313.107†	10589.9	14375.4	8.8540 µg/L	8.8540 ppb	15:37:50
3	Cd 226.502†	179.7	332.9	-3.0926 µg/L	-3.0926 ppb	15:38:11
3	Co 228.616†	1005.8	1060.1	49.427 µg/L	49.427 ppb	15:38:11
3	Cr 267.716†	3738.7	3952.6	93.749 µg/L	93.749 ppb	15:37:50
3	Cu 324.752†	8223.5	6111.1	62.506 µg/L	62.506 ppb	15:37:50
3	Mn 257.610†	755143.0	789971.9	2939.6 µg/L	2939.6 ppb	15:37:45
3	Mo 202.031†	-14.8	-8.8	3.4006 µg/L	3.4006 ppb	15:38:11
3	Ni 231.604†	1285.6	1037.4	62.988 µg/L	62.988 ppb	15:38:11
3	P 214.914†	311.1	304.1	634.85 µg/L	634.85 ppb	15:38:11
3	Pb 220.353†	430.2	358.5	104.19 µg/L	104.19 ppb	15:38:11
3	S 181.975 Axial†	91.0	80.6	390.99 µg/L	390.99 ppb	15:38:11
3	Sb 206.836†	26.2	2.8	0.2984 µg/L	0.2984 ppb	15:38:11
3	Se 196.026†	-28.2	-40.2	231.15 µg/L	231.15 ppb	15:38:11
3	SiO2†	313360.7	326364.1	76667 µg/L	76667 ppb	15:37:45
3	Si 251.611†	379565.5	396635.9	35602 µg/L	35602 ppb	15:37:45
3	Sn 189.927†	-30.7	-34.9	-27.964 µg/L	-27.964 ppb	15:38:11
3	Ti 334.940†	1319544.1	1379779.1	3667.8 µg/L	3667.8 ppb	15:37:45
3	Tl 190.801†	-55.5	-32.0	16.947 µg/L	16.947 ppb	15:38:11
3	U 409.014†	-1055.9	-1001.0	-112.66 µg/L	-112.66 ppb	15:37:50
3	V 292.402†	16578.7	17370.9	215.20 µg/L	215.20 ppb	15:37:50
3	Zn 213.857†	9034.8	8947.8	235.62 µg/L	235.62 ppb	15:37:50

Mean Data: 245147005|944117|1

Analyte	Mean Corrected	Conc.	Calib.	Std.Dev.	Conc.	Sample	Std.Dev.	RSD
Sc 361.383	1900251.2	95.811	%	0.3946				0.41%
Sc RADIAL	54329.4	97.5	%	1.53				1.57%
Y 371.029	1336822.9	97.373	%	0.4261				0.44%
Ag 328.068†	-1340.0	-2.8331	µg/L	0.26996	-2.8331	ppb	0.26996	9.53%
Al 396.153Radial†	109476.0	86480	µg/L	2070.4	86480	ppb	2070.4	2.39%
As 188.979†	8.7	24.212	µg/L	6.9380	24.212	ppb	6.9380	28.65%
B 249.677†	746.0	-24.508	µg/L	1.8166	-24.508	ppb	1.8166	7.41%
Ba 233.527†	44597.0	1271.0	µg/L	28.15	1271.0	ppb	28.15	2.22%
Be 313.107†	14802.7	9.1439	µg/L	0.26554	9.1439	ppb	0.26554	2.90%
Ca 317.933Radial†	18000.7	18231	µg/L	350.0	18231	ppb	350.0	1.92%
Cd 226.502†	356.5	-2.4265	µg/L	0.58537	-2.4265	ppb	0.58537	24.12%
Co 228.616†	1113.3	52.212	µg/L	2.5154	52.212	ppb	2.5154	4.82%
Cr 267.716†	4074.9	96.650	µg/L	3.0108	96.650	ppb	3.0108	3.12%
Cu 324.752†	6239.2	63.529	µg/L	1.0076	63.529	ppb	1.0076	1.59%
Fe 238.204 Radial†	13026.9	115620	µg/L	2165.2	115620	ppb	2165.2	1.87%
K 766.490 Radial†	19360.8	15371	µg/L	325.4	15371	ppb	325.4	2.12%
Mg 279.077 IEC†	1678.0	16465	µg/L	340.2	16465	ppb	340.2	2.07%
Mn 257.610†	797378.3	2967.1	µg/L	39.87	2967.1	ppb	39.87	1.34%
Mo 202.031†	-3.8	3.9686	µg/L	0.71467	3.9686	ppb	0.71467	18.01%
Na 589.592 Radial†	2110.8	754.09	µg/L	21.039	754.09	ppb	21.039	2.79%

Ni 231.604†	1108.6	67.217 µg/L	3.7020	67.217 ppb	3.7020	5.51%
P 214.914†	318.5	667.87 µg/L	28.598	667.87 ppb	28.598	4.28%
Pb 220.353†	359.9	104.58 µg/L	0.579	104.58 ppb	0.579	0.55%
S 181.975 Axial†	81.4	395.08 µg/L	4.067	395.08 ppb	4.067	1.03%
Sb 206.836†	9.6	7.5108 µg/L	6.29001	7.5108 ppb	6.29001	83.75%
Se 196.026†	-40.9	230.97 µg/L	10.382	230.97 ppb	10.382	4.50%
SiO2†	327683.1	76976 µg/L	740.0	76976 ppb	740.0	0.96%
Si 251.611†	398014.3	35726 µg/L	331.1	35726 ppb	331.1	0.93%
Sn 189.927†	-33.8	-27.473 µg/L	0.7449	-27.473 ppb	0.7449	2.71%
Sr 421.552†	20628.0	239.05 µg/L	4.411	239.05 ppb	4.411	1.85%
Ti 334.940†	1394341.3	3706.5 µg/L	48.91	3706.5 ppb	48.91	1.32%
Tl 190.801†	-34.7	13.330 µg/L	7.9157	13.330 ppb	7.9157	59.38%
U 409.014†	-1051.0	-117.49 µg/L	6.092	-117.49 ppb	6.092	5.19%
V 292.402†	17900.3	221.39 µg/L	5.908	221.39 ppb	5.908	2.67%
Zn 213.857†	9134.0	240.63 µg/L	5.850	240.63 ppb	5.850	2.43%

Sequence No.: 38

Sample ID: 245147006|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 332

Date Collected: 2/8/2010 15:38:20

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147006|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55042.4	55042.4	98.8 %		15:38:53
1	Al 396.153Radial†	122065.4	123570.3	97613 µg/L	97613 ppb	15:38:53
1	Ca 317.933Radial†	19238.0	19285.8	19532 µg/L	19532 ppb	15:39:13
1	Fe 238.204 Radial†	14471.4	14632.8	129870 µg/L	129870 ppb	15:39:13
1	K 766.490 Radial†	21526.2	21603.1	17151 µg/L	17151 ppb	15:38:53
1	Mg 279.077 IEC†	1701.3	1709.4	16760 µg/L	16760 ppb	15:39:13
1	Na 589.592 Radial†	3045.1	2611.1	932.85 µg/L	932.85 ppb	15:39:13
1	Sr 421.552†	22465.6	22702.8	263.09 µg/L	263.09 ppb	15:38:53
1	Sc 361.383	1923412.6	1923412.6	96.979 %		15:40:19
1	Y 371.029	1365588.4	1365588.4	99.469 %		15:40:19
1	Ag 328.068†	-1949.3	-1507.6	-2.9523 µg/L	-2.9523 ppb	15:40:24
1	As 188.979†	10.1	12.1	32.095 µg/L	32.095 ppb	15:40:45
1	B 249.677†	1117.2	837.6	-27.551 µg/L	-27.551 ppb	15:40:24
1	Ba 233.527†	61017.9	62939.5	1793.7 µg/L	1793.7 ppb	15:40:24
1	Be 313.107†	15988.4	19787.3	12.083 µg/L	12.083 ppb	15:40:24
1	Cd 226.502†	279.2	432.9	-1.7553 µg/L	-1.7553 ppb	15:40:45
1	Co 228.616†	1594.9	1652.8	77.887 µg/L	77.887 ppb	15:40:45
1	Cr 267.716†	4219.8	4394.0	104.25 µg/L	104.25 ppb	15:40:24
1	Cu 324.752†	8587.3	6366.0	66.475 µg/L	66.475 ppb	15:40:24
1	Mn 257.610†	1378104.7	1421294.6	5279.1 µg/L	5279.1 ppb	15:40:19
1	Mo 202.031†	-12.1	-5.7	4.2971 µg/L	4.2971 ppb	15:40:45
1	Ni 231.604†	1650.3	1394.6	84.338 µg/L	84.338 ppb	15:40:45
1	P 214.914†	445.5	438.1	938.09 µg/L	938.09 ppb	15:40:45
1	Pb 220.353†	552.6	478.4	138.95 µg/L	138.95 ppb	15:40:45
1	S 181.975 Axial†	117.3	106.3	516.05 µg/L	516.05 ppb	15:40:45
1	Sb 206.836†	34.8	11.3	9.1082 µg/L	9.1082 ppb	15:40:45
1	Se 196.026†	-35.4	-47.2	259.18 µg/L	259.18 ppb	15:40:45
1	SiO2†	328898.3	337803.0	79354 µg/L	79354 ppb	15:40:19
1	Si 251.611†	398134.1	410231.9	36823 µg/L	36823 ppb	15:40:19
1	Sn 189.927†	-42.5	-46.6	-35.395 µg/L	-35.395 ppb	15:40:45
1	Ti 334.940†	1941965.2	2002290.4	5323.1 µg/L	5323.1 ppb	15:40:19
1	Tl 190.801†	-64.0	-39.9	31.673 µg/L	31.673 ppb	15:40:45
1	U 409.014†	-1232.8	-1167.9	-130.71 µg/L	-130.71 ppb	15:40:19
1	V 292.402†	22642.3	23380.9	286.66 µg/L	286.66 ppb	15:40:24
1	Zn 213.857†	9991.6	9802.2	257.96 µg/L	257.96 ppb	15:40:24
2	Sc RADIAL	54374.8	54374.8	97.6 %		15:39:19
2	Al 396.153Radial†	120856.7	123848.7	97833 µg/L	97833 ppb	15:39:19
2	Ca 317.933Radial†	19159.2	19444.1	19692 µg/L	19692 ppb	15:39:39
2	Fe 238.204 Radial†	14423.6	14763.7	131040 µg/L	131040 ppb	15:39:39
2	K 766.490 Radial†	21327.8	21667.3	17202 µg/L	17202 ppb	15:39:19
2	Mg 279.077 IEC†	1692.3	1721.3	16876 µg/L	16876 ppb	15:39:39
2	Na 589.592 Radial†	3040.2	2644.0	944.60 µg/L	944.60 ppb	15:39:39
2	Sr 421.552†	22133.6	22641.7	262.39 µg/L	262.39 ppb	15:39:19
2	Sc 361.383	1921393.7	1921393.7	96.877 %		15:40:53
2	Y 371.029	1363142.4	1363142.4	99.291 %		15:40:53
2	Ag 328.068†	-1858.4	-1415.9	-2.1124 µg/L	-2.1124 ppb	15:40:58
2	As 188.979†	7.4	9.4	26.478 µg/L	26.478 ppb	15:41:19
2	B 249.677†	1065.3	785.3	-30.665 µg/L	-30.665 ppb	15:40:58
2	Ba 233.527†	60306.6	62271.4	1774.6 µg/L	1774.6 ppb	15:40:58
2	Be 313.107†	15867.4	19679.7	12.018 µg/L	12.018 ppb	15:40:58
2	Cd 226.502†	275.7	429.6	-1.9875 µg/L	-1.9875 ppb	15:41:19
2	Co 228.616†	1565.5	1624.3	76.413 µg/L	76.413 ppb	15:41:19
2	Cr 267.716†	4140.3	4316.5	102.41 µg/L	102.41 ppb	15:40:58
2	Cu 324.752†	8533.3	6319.5	66.282 µg/L	66.282 ppb	15:40:58
2	Mn 257.610†	1372081.2	1416570.1	5261.8 µg/L	5261.8 ppb	15:40:53
2	Mo 202.031†	-18.4	-12.2	3.6172 µg/L	3.6172 ppb	15:41:19
2	Ni 231.604†	1615.6	1360.6	82.334 µg/L	82.334 ppb	15:41:19
2	P 214.914†	438.6	431.5	921.91 µg/L	921.91 ppb	15:41:19
2	Pb 220.353†	529.9	455.5	132.30 µg/L	132.30 ppb	15:41:19

2	S 181.975 Axial†	120.6	109.9	533.30 µg/L	533.30 ppb	15:41:19
2	Sb 206.836†	31.7	8.1	5.7505 µg/L	5.7505 ppb	15:41:19
2	Se 196.026†	-49.7	-62.1	238.56 µg/L	238.56 ppb	15:41:19
2	SiO2†	326544.8	335730.0	78867 µg/L	78867 ppb	15:40:53
2	Si 251.611†	395492.8	407936.8	36617 µg/L	36617 ppb	15:40:53
2	Sn 189.927†	-42.8	-47.0	-35.700 µg/L	-35.700 ppb	15:41:19
2	Ti 334.940†	1928851.8	1990858.4	5292.7 µg/L	5292.7 ppb	15:40:53
2	Tl 190.801†	-64.2	-40.2	31.074 µg/L	31.074 ppb	15:41:19
2	U 409.014†	-1185.2	-1120.1	-126.32 µg/L	-126.32 ppb	15:40:53
2	V 292.402†	22374.9	23129.4	283.87 µg/L	283.87 ppb	15:40:58
2	Zn 213.857†	9847.0	9663.8	254.16 µg/L	254.16 ppb	15:40:58
3	Sc RADIAL	55318.5	55318.5	99.3 %		15:39:45
3	Al 396.153Radial†	121598.6	122483.3	96755 µg/L	96755 ppb	15:39:45
3	Ca 317.933Radial†	18987.0	18935.7	19178 µg/L	19178 ppb	15:40:06
3	Fe 238.204 Radial†	14265.9	14352.7	127390 µg/L	127390 ppb	15:40:06
3	K 766.490 Radial†	21391.1	21358.3	16956 µg/L	16956 ppb	15:39:45
3	Mg 279.077 IEC†	1687.7	1687.2	16543 µg/L	16543 ppb	15:40:06
3	Na 589.592 Radial†	3019.2	2569.7	918.06 µg/L	918.06 ppb	15:40:06
3	Sr 421.552†	22354.0	22476.8	260.47 µg/L	260.47 ppb	15:39:45
3	Sc 361.383	1911800.0	1911800.0	96.394 %		15:41:26
3	Y 371.029	1355238.3	1355238.3	98.715 %		15:41:26
3	Ag 328.068†	-1836.9	-1403.2	-2.2912 µg/L	-2.2912 ppb	15:41:32
3	As 188.979†	9.6	11.6	31.010 µg/L	31.010 ppb	15:41:53
3	B 249.677†	1099.3	826.0	-26.816 µg/L	-26.816 ppb	15:41:32
3	Ba 233.527†	58789.6	61010.1	1738.7 µg/L	1738.7 ppb	15:41:32
3	Be 313.107†	15169.6	19037.9	11.585 µg/L	11.585 ppb	15:41:32
3	Cd 226.502†	241.6	395.7	-2.5851 µg/L	-2.5851 ppb	15:41:53
3	Co 228.616†	1471.3	1534.6	71.720 µg/L	71.720 ppb	15:41:53
3	Cr 267.716†	4010.3	4203.1	99.718 µg/L	99.718 ppb	15:41:32
3	Cu 324.752†	8361.5	6185.5	64.756 µg/L	64.756 ppb	15:41:32
3	Mn 257.610†	1353042.8	1403926.7	5214.5 µg/L	5214.5 ppb	15:41:26
3	Mo 202.031†	-15.0	-8.8	3.8551 µg/L	3.8551 ppb	15:41:53
3	Ni 231.604†	1531.7	1281.9	77.623 µg/L	77.623 ppb	15:41:53
3	P 214.914†	431.1	426.0	911.76 µg/L	911.76 ppb	15:41:53
3	Pb 220.353†	522.4	450.6	130.94 µg/L	130.94 ppb	15:41:53
3	S 181.975 Axial†	112.3	101.9	494.39 µg/L	494.39 ppb	15:41:53
3	Sb 206.836†	33.1	9.8	7.5507 µg/L	7.5507 ppb	15:41:53
3	Se 196.026†	-31.1	-42.9	259.52 µg/L	259.52 ppb	15:41:53
3	SiO2†	324004.1	334785.7	78645 µg/L	78645 ppb	15:41:26
3	Si 251.611†	392575.3	406958.9	36529 µg/L	36529 ppb	15:41:26
3	Sn 189.927†	-35.5	-39.7	-31.670 µg/L	-31.670 ppb	15:41:53
3	Ti 334.940†	1895554.9	1966307.1	5227.4 µg/L	5227.4 ppb	15:41:26
3	Tl 190.801†	-61.1	-37.3	34.169 µg/L	34.169 ppb	15:41:53
3	U 409.014†	-1222.9	-1165.4	-130.10 µg/L	-130.10 ppb	15:41:26
3	V 292.402†	21535.2	22374.2	274.67 µg/L	274.67 ppb	15:41:32
3	Zn 213.857†	9599.6	9458.1	248.80 µg/L	248.80 ppb	15:41:32

Mean Data: 245147006|944117|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	1918868.8	96.750 %	0.3128			0.32%
Sc RADIAL	54911.9	98.6 %	0.87			0.88%
Y 371.029	1361323.0	99.158 %	0.3940			0.40%
Ag 328.068†	-1442.3	-2.4520 µg/L	0.44240	-2.4520 ppb	0.44240	18.04%
Al 396.153Radial†	123300.8	97400 µg/L	569.9	97400 ppb	569.9	0.59%
As 188.979†	11.0	29.861 µg/L	2.9794	29.861 ppb	2.9794	9.98%
B 249.677†	816.3	-28.344 µg/L	2.0432	-28.344 ppb	2.0432	7.21%
Ba 233.527†	62073.7	1769.0 µg/L	27.93	1769.0 ppb	27.93	1.58%
Be 313.107†	19501.6	11.895 µg/L	0.2706	11.895 ppb	0.2706	2.28%
Ca 317.933Radial†	19221.9	19467 µg/L	263.5	19467 ppb	263.5	1.35%
Cd 226.502†	419.4	-2.1093 µg/L	0.42810	-2.1093 ppb	0.42810	20.30%
Co 228.616†	1603.9	75.340 µg/L	3.2205	75.340 ppb	3.2205	4.27%
Cr 267.716†	4304.5	102.13 µg/L	2.278	102.13 ppb	2.278	2.23%
Cu 324.752†	6290.3	65.838 µg/L	0.9416	65.838 ppb	0.9416	1.43%
Fe 238.204 Radial†	14583.1	129430 µg/L	1863.4	129430 ppb	1863.4	1.44%
K 766.490 Radial†	21542.9	17103 µg/L	129.5	17103 ppb	129.5	0.76%
Mg 279.077 IEC†	1706.0	16726 µg/L	169.5	16726 ppb	169.5	1.01%
Mn 257.610†	1413930.4	5251.8 µg/L	33.45	5251.8 ppb	33.45	0.64%
Mo 202.031†	-8.9	3.9231 µg/L	0.34497	3.9231 ppb	0.34497	8.79%
Na 589.592 Radial†	2608.3	931.83 µg/L	13.300	931.83 ppb	13.300	1.43%

Ni 231.604†	1345.7	81.431 µg/L	3.4472	81.431 ppb	3.4472	4.23%
P 214.914†	431.9	923.92 µg/L	13.280	923.92 ppb	13.280	1.44%
Pb 220.353†	461.5	134.06 µg/L	4.283	134.06 ppb	4.283	3.19%
S 181.975 Axial†	106.0	514.58 µg/L	19.494	514.58 ppb	19.494	3.79%
Sb 206.836†	9.7	7.4698 µg/L	1.68029	7.4698 ppb	1.68029	22.49%
Se 196.026†	-50.7	252.42 µg/L	12.003	252.42 ppb	12.003	4.76%
SiO2†	336106.2	78955 µg/L	362.6	78955 ppb	362.6	0.46%
Si 251.611†	408375.9	36656 µg/L	150.8	36656 ppb	150.8	0.41%
Sn 189.927†	-44.4	-34.255 µg/L	2.2442	-34.255 ppb	2.2442	6.55%
Sr 421.552†	22607.1	261.98 µg/L	1.354	261.98 ppb	1.354	0.52%
Ti 334.940†	1986485.3	5281.1 µg/L	48.88	5281.1 ppb	48.88	0.93%
Tl 190.801†	-39.2	32.305 µg/L	1.6415	32.305 ppb	1.6415	5.08%
U 409.014†	-1151.2	-129.04 µg/L	2.378	-129.04 ppb	2.378	1.84%
V 292.402†	22961.5	281.73 µg/L	6.272	281.73 ppb	6.272	2.23%
Zn 213.857†	9641.4	253.64 µg/L	4.602	253.64 ppb	4.602	1.81%

Sequence No.: 39

Sample ID: 245147007|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 333

Date Collected: 2/8/2010 15:42:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147007|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	56226.2	56226.2	101 %		15:42:35
1	Al 396.153Radial†	109919.3	108932.6	86050 µg/L	86050 ppb	15:42:35
1	Ca 317.933Radial†	29792.3	29334.4	29709 µg/L	29709 ppb	15:42:55
1	Fe 238.204 Radial†	10663.0	10550.5	93641 µg/L	93641 ppb	15:42:55
1	K 766.490 Radial†	18634.0	18278.3	14511 µg/L	14511 ppb	15:42:35
1	Mg 279.077 IEC†	1521.8	1495.3	14682 µg/L	14682 ppb	15:42:55
1	Na 589.592 Radial†	2412.1	1919.0	685.58 µg/L	685.58 ppb	15:42:55
1	Sr 421.552†	24155.9	23898.9	276.95 µg/L	276.95 ppb	15:42:35
1	Sc 361.383	1948731.8	1948731.8	98.256 %		15:44:00
1	Y 371.029	1371976.8	1371976.8	99.934 %		15:44:00
1	Ag 328.068†	-1500.4	-1024.7	-1.6052 µg/L	-1.6052 ppb	15:44:05
1	As 188.979†	5.1	6.9	18.481 µg/L	18.481 ppb	15:44:26
1	B 249.677†	1167.0	873.3	-6.9347 µg/L	-6.9347 ppb	15:44:05
1	Ba 233.527†	54797.1	55790.8	1589.9 µg/L	1589.9 ppb	15:44:05
1	Be 313.107†	13413.3	16952.2	10.363 µg/L	10.363 ppb	15:44:05
1	Cd 226.502†	185.8	334.1	-0.6119 µg/L	-0.6119 ppb	15:44:26
1	Co 228.616†	900.5	924.8	40.341 µg/L	40.341 ppb	15:44:26
1	Cr 267.716†	4409.2	4530.2	107.43 µg/L	107.43 ppb	15:44:05
1	Cu 324.752†	9431.4	7110.0	67.098 µg/L	67.098 ppb	15:44:05
1	Mn 257.610†	844757.6	860016.8	3196.2 µg/L	3196.2 ppb	15:44:00
1	Mo 202.031†	-12.1	-5.5	2.9392 µg/L	2.9392 ppb	15:44:26
1	Ni 231.604†	1342.4	1059.1	64.006 µg/L	64.006 ppb	15:44:26
1	P 214.914†	697.8	689.0	1548.2 µg/L	1548.2 ppb	15:44:26
1	Pb 220.353†	528.0	445.9	130.22 µg/L	130.22 ppb	15:44:26
1	S 181.975 Axial†	213.9	203.0	985.50 µg/L	985.50 ppb	15:44:26
1	Sb 206.836†	39.2	15.3	12.431 µg/L	12.431 ppb	15:44:26
1	Se 196.026†	-19.5	-30.5	185.80 µg/L	185.80 ppb	15:44:26
1	SiO2†	284469.6	288179.2	67697 µg/L	67697 ppb	15:44:00
1	Si 251.611†	344644.8	350459.1	31457 µg/L	31457 ppb	15:44:00
1	Sn 189.927†	-40.5	-44.0	-30.537 µg/L	-30.537 ppb	15:44:26
1	Ti 334.940†	1674076.1	1703628.8	4529.3 µg/L	4529.3 ppb	15:44:00
1	Tl 190.801†	-66.6	-41.8	6.5341 µg/L	6.5341 ppb	15:44:26
1	U 409.014†	-606.4	-513.9	-63.874 µg/L	-63.874 ppb	15:44:05
1	V 292.402†	16389.3	16713.6	205.11 µg/L	205.11 ppb	15:44:05
1	Zn 213.857†	9731.5	9403.7	249.09 µg/L	249.09 ppb	15:44:05
2	Sc RADIAL	56631.0	56631.0	102 %		15:43:01
2	Al 396.153Radial†	110304.8	108533.3	85735 µg/L	85735 ppb	15:43:01
2	Ca 317.933Radial†	30081.0	29407.4	29783 µg/L	29783 ppb	15:43:22
2	Fe 238.204 Radial†	10747.1	10557.7	93705 µg/L	93705 ppb	15:43:22
2	K 766.490 Radial†	18623.4	18135.9	14398 µg/L	14398 ppb	15:43:01
2	Mg 279.077 IEC†	1533.6	1496.2	14690 µg/L	14690 ppb	15:43:22
2	Na 589.592 Radial†	2429.6	1919.2	685.65 µg/L	685.65 ppb	15:43:22
2	Sr 421.552†	24138.6	23710.8	274.77 µg/L	274.77 ppb	15:43:01
2	Sc 361.383	1943639.0	1943639.0	97.999 %		15:44:33
2	Y 371.029	1367801.0	1367801.0	99.630 %		15:44:33
2	Ag 328.068†	-1529.4	-1058.2	-1.8720 µg/L	-1.8720 ppb	15:44:39
2	As 188.979†	4.2	6.0	16.656 µg/L	16.656 ppb	15:44:59
2	B 249.677†	1115.4	823.8	-9.3347 µg/L	-9.3347 ppb	15:44:39
2	Ba 233.527†	55148.7	56295.8	1604.2 µg/L	1604.2 ppb	15:44:39
2	Be 313.107†	13588.3	17166.5	10.509 µg/L	10.509 ppb	15:44:39
2	Cd 226.502†	170.4	318.9	-1.0683 µg/L	-1.0683 ppb	15:44:59
2	Co 228.616†	900.2	926.9	40.413 µg/L	40.413 ppb	15:44:59
2	Cr 267.716†	4400.1	4532.7	107.49 µg/L	107.49 ppb	15:44:39
2	Cu 324.752†	9525.6	7231.3	68.029 µg/L	68.029 ppb	15:44:39
2	Mn 257.610†	846565.5	864114.3	3211.4 µg/L	3211.4 ppb	15:44:33
2	Mo 202.031†	-8.1	-1.6	3.3856 µg/L	3.3856 ppb	15:44:59
2	Ni 231.604†	1335.1	1055.3	63.780 µg/L	63.780 ppb	15:44:59
2	P 214.914†	699.1	692.2	1555.5 µg/L	1555.5 ppb	15:44:59
2	Pb 220.353†	535.4	454.9	132.78 µg/L	132.78 ppb	15:44:59

2	S 181.975 Axial†	218.9	208.7	1013.1 µg/L	1013.1 ppb	15:44:59
2	Sb 206.836†	30.3	6.3	2.8536 µg/L	2.8536 ppb	15:44:59
2	Se 196.026†	-23.6	-34.8	179.22 µg/L	179.22 ppb	15:44:59
2	SiO2†	284793.7	289268.6	67952 µg/L	67952 ppb	15:44:33
2	Si 251.611†	344864.1	351602.0	31560 µg/L	31560 ppb	15:44:33
2	Sn 189.927†	-36.5	-40.1	-28.539 µg/L	-28.539 ppb	15:44:59
2	Ti 334.940†	1677170.2	1711250.4	4549.5 µg/L	4549.5 ppb	15:44:33
2	Tl 190.801†	-65.1	-40.4	8.8181 µg/L	8.8181 ppb	15:44:59
2	U 409.014†	-459.5	-365.7	-49.740 µg/L	-49.740 ppb	15:44:39
2	V 292.402†	16560.5	16931.9	207.67 µg/L	207.67 ppb	15:44:39
2	Zn 213.857†	9772.3	9471.2	250.91 µg/L	250.91 ppb	15:44:39
3	Sc RADIAL	56017.8	56017.8	101 %		15:43:27
3	Al 396.153Radial†	112010.7	111418.1	88014 µg/L	88014 ppb	15:43:27
3	Ca 317.933Radial†	30259.0	29908.4	30290 µg/L	30290 ppb	15:43:48
3	Fe 238.204 Radial†	10816.7	10742.7	95347 µg/L	95347 ppb	15:43:48
3	K 766.490 Radial†	18912.6	18624.2	14786 µg/L	14786 ppb	15:43:27
3	Mg 279.077 IEC†	1539.9	1518.9	14914 µg/L	14914 ppb	15:43:48
3	Na 589.592 Radial†	2425.2	1941.0	693.43 µg/L	693.43 ppb	15:43:48
3	Sr 421.552†	24628.5	24458.0	283.43 µg/L	283.43 ppb	15:43:27
3	Sc 361.383	1933754.8	1933754.8	97.501 %		15:45:07
3	Y 371.029	1362427.2	1362427.2	99.238 %		15:45:07
3	Ag 328.068†	-1491.2	-1027.0	-1.5529 µg/L	-1.5529 ppb	15:45:12
3	As 188.979†	10.7	12.6	30.725 µg/L	30.725 ppb	15:45:33
3	B 249.677†	1118.0	832.3	-9.7920 µg/L	-9.7920 ppb	15:45:12
3	Ba 233.527†	53249.8	54635.9	1556.9 µg/L	1556.9 ppb	15:45:12
3	Be 313.107†	12822.0	16451.5	10.029 µg/L	10.029 ppb	15:45:12
3	Cd 226.502†	149.2	298.1	-1.8769 µg/L	-1.8769 ppb	15:45:33
3	Co 228.616†	846.2	876.2	37.852 µg/L	37.852 ppb	15:45:33
3	Cr 267.716†	4201.0	4351.4	103.19 µg/L	103.19 ppb	15:45:12
3	Cu 324.752†	9237.7	6985.6	66.389 µg/L	66.389 ppb	15:45:12
3	Mn 257.610†	830749.0	852307.9	3167.9 µg/L	3167.9 ppb	15:45:07
3	Mo 202.031†	-7.7	-1.1	3.4986 µg/L	3.4986 ppb	15:45:33
3	Ni 231.604†	1259.7	984.9	59.628 µg/L	59.628 ppb	15:45:33
3	P 214.914†	651.4	646.9	1449.3 µg/L	1449.3 ppb	15:45:33
3	Pb 220.353†	504.9	426.4	124.61 µg/L	124.61 ppb	15:45:33
3	S 181.975 Axial†	196.9	187.3	909.20 µg/L	909.20 ppb	15:45:33
3	Sb 206.836†	35.5	11.8	8.7369 µg/L	8.7369 ppb	15:45:33
3	Se 196.026†	-24.0	-35.3	182.44 µg/L	182.44 ppb	15:45:33
3	SiO2†	280292.8	286137.7	67217 µg/L	67217 ppb	15:45:07
3	Si 251.611†	339514.0	347913.5	31229 µg/L	31229 ppb	15:45:07
3	Sn 189.927†	-35.6	-39.3	-28.334 µg/L	-28.334 ppb	15:45:33
3	Ti 334.940†	1639064.7	1680915.8	4468.9 µg/L	4468.9 ppb	15:45:07
3	Tl 190.801†	-64.2	-39.8	9.2872 µg/L	9.2872 ppb	15:45:33
3	U 409.014†	-526.6	-436.9	-56.794 µg/L	-56.794 ppb	15:45:12
3	V 292.402†	15816.2	16255.0	200.00 µg/L	200.00 ppb	15:45:12
3	Zn 213.857†	9471.0	9213.2	243.85 µg/L	243.85 ppb	15:45:12

Mean Data: 245147007|944117|1

Analyte	Mean Corrected	Conc.	Calib.	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1942041.8	97.918	%	0.3840				0.39%
Sc RADIAL	56291.7	101	%	0.6				0.55%
Y 371.029	1367401.7	99.601	%	0.3487				0.35%
Ag 328.068†	-1036.6	-1.6767	µg/L	0.17111	-1.6767	ppb	0.17111	10.21%
Al 396.153Radial†	109628.0	86600	µg/L	1234.7	86600	ppb	1234.7	1.43%
As 188.979†	8.5	21.954	µg/L	7.6504	21.954	ppb	7.6504	34.85%
B 249.677†	843.1	-8.6871	µg/L	1.53476	-8.6871	ppb	1.53476	17.67%
Ba 233.527†	55574.1	1583.7	µg/L	24.25	1583.7	ppb	24.25	1.53%
Be 313.107†	16856.7	10.300	µg/L	0.2457	10.300	ppb	0.2457	2.39%
Ca 317.933Radial†	29550.0	29927	µg/L	316.4	29927	ppb	316.4	1.06%
Cd 226.502†	317.0	-1.1857	µg/L	0.64061	-1.1857	ppb	0.64061	54.03%
Co 228.616†	909.3	39.535	µg/L	1.4584	39.535	ppb	1.4584	3.69%
Cr 267.716†	4471.5	106.03	µg/L	2.464	106.03	ppb	2.464	2.32%
Cu 324.752†	7109.0	67.172	µg/L	0.8225	67.172	ppb	0.8225	1.22%
Fe 238.204 Radial†	10617.0	94231	µg/L	967.0	94231	ppb	967.0	1.03%
K 766.490 Radial†	18346.1	14565	µg/L	199.3	14565	ppb	199.3	1.37%
Mg 279.077 IEC†	1503.5	14762	µg/L	131.3	14762	ppb	131.3	0.89%
Mn 257.610†	858813.0	3191.8	µg/L	22.08	3191.8	ppb	22.08	0.69%
Mo 202.031†	-2.7	3.2745	µg/L	0.29582	3.2745	ppb	0.29582	9.03%
Na 589.592 Radial†	1926.4	688.22	µg/L	4.511	688.22	ppb	4.511	0.66%

Ni 231.604†	1033.1	62.471 µg/L	2.4648	62.471 ppb	2.4648	3.95%
P 214.914†	676.0	1517.7 µg/L	59.30	1517.7 ppb	59.30	3.91%
Pb 220.353†	442.4	129.20 µg/L	4.179	129.20 ppb	4.179	3.23%
S 181.975 Axial†	199.7	969.27 µg/L	53.818	969.27 ppb	53.818	5.55%
Sb 206.836†	11.1	8.0073 µg/L	4.83041	8.0073 ppb	4.83041	60.33%
Se 196.026†	-33.6	182.49 µg/L	3.291	182.49 ppb	3.291	1.80%
SiO2†	287861.8	67622 µg/L	373.4	67622 ppb	373.4	0.55%
Si 251.611†	349991.6	31415 µg/L	169.5	31415 ppb	169.5	0.54%
Sn 189.927†	-41.1	-29.137 µg/L	1.2174	-29.137 ppb	1.2174	4.18%
Sr 421.552†	24022.6	278.39 µg/L	4.504	278.39 ppb	4.504	1.62%
Ti 334.940†	1698598.3	4515.9 µg/L	41.97	4515.9 ppb	41.97	0.93%
Tl 190.801†	-40.6	8.2132 µg/L	1.47288	8.2132 ppb	1.47288	17.93%
U 409.014†	-438.8	-56.803 µg/L	7.0672	-56.803 ppb	7.0672	12.44%
V 292.402†	16633.5	204.26 µg/L	3.909	204.26 ppb	3.909	1.91%
Zn 213.857†	9362.7	247.95 µg/L	3.663	247.95 ppb	3.663	1.48%

Sequence No.: 40

Sample ID: 245147008|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 334

Date Collected: 2/8/2010 15:45:42

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147008|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55144.9	55144.9	99.0 %		15:46:15
1	Al 396.153Radial†	105039.7	106138.3	83843 µg/L	83843 ppb	15:46:15
1	Ca 317.933Radial†	21608.6	21644.7	21921 µg/L	21921 ppb	15:46:15
1	Fe 238.204 Radial†	8862.4	8938.4	79333 µg/L	79333 ppb	15:46:35
1	K 766.490 Radial†	18318.1	18321.2	14545 µg/L	14545 ppb	15:46:15
1	Mg 279.077 IEC†	1186.4	1186.0	11639 µg/L	11639 ppb	15:46:35
1	Na 589.592 Radial†	3745.6	3313.2	1183.7 µg/L	1183.7 ppb	15:46:15
1	Sr 421.552†	17926.2	18074.0	209.45 µg/L	209.45 ppb	15:46:15
1	Sc 361.383	1921008.7	1921008.7	96.858 %		15:47:39
1	Y 371.029	1342438.6	1342438.6	97.782 %		15:47:39
1	Ag 328.068†	-1393.9	-936.7	-2.0640 µg/L	-2.0640 ppb	15:47:45
1	As 188.979†	0.7	2.4	8.5559 µg/L	8.5559 ppb	15:48:06
1	B 249.677†	955.7	672.3	-8.9036 µg/L	-8.9036 ppb	15:47:45
1	Ba 233.527†	44338.2	45797.5	1305.1 µg/L	1305.1 ppb	15:47:45
1	Be 313.107†	9508.3	13117.5	7.9648 µg/L	7.9648 ppb	15:47:45
1	Cd 226.502†	121.4	270.3	-0.8261 µg/L	-0.8261 ppb	15:48:06
1	Co 228.616†	673.1	703.3	30.263 µg/L	30.263 ppb	15:48:06
1	Cr 267.716†	8790.7	9118.7	216.08 µg/L	216.08 ppb	15:47:45
1	Cu 324.752†	6997.4	4735.5	47.047 µg/L	47.047 ppb	15:47:45
1	Mn 257.610†	543418.6	561310.2	2088.4 µg/L	2088.4 ppb	15:47:39
1	Mo 202.031†	67.5	76.5	11.548 µg/L	11.548 ppb	15:48:06
1	Ni 231.604†	2298.2	2065.7	123.56 µg/L	123.56 ppb	15:48:06
1	P 214.914†	657.5	657.6	1488.0 µg/L	1488.0 ppb	15:48:06
1	Pb 220.353†	408.2	330.0	97.122 µg/L	97.122 ppb	15:48:06
1	S 181.975 Axial†	157.5	148.0	718.41 µg/L	718.41 ppb	15:48:06
1	Sb 206.836†	38.3	14.9	11.611 µg/L	11.611 ppb	15:48:06
1	Se 196.026†	-26.2	-37.8	140.02 µg/L	140.02 ppb	15:48:06
1	SiO2†	269596.9	277002.3	65071 µg/L	65071 ppb	15:47:39
1	Si 251.611†	326264.0	336544.1	30208 µg/L	30208 ppb	15:47:39
1	Sn 189.927†	-27.5	-31.2	-22.861 µg/L	-22.861 ppb	15:48:06
1	Ti 334.940†	1328977.8	1371924.1	3647.4 µg/L	3647.4 ppb	15:47:39
1	Tl 190.801†	-56.5	-32.2	7.3680 µg/L	7.3680 ppb	15:48:06
1	U 409.014†	-490.6	-403.3	-50.850 µg/L	-50.850 ppb	15:47:45
1	V 292.402†	12218.5	12648.2	156.60 µg/L	156.60 ppb	15:47:45
1	Zn 213.857†	7865.0	7619.5	201.37 µg/L	201.37 ppb	15:47:45
2	Sc RADIAL	54930.7	54930.7	98.6 %		15:46:41
2	Al 396.153Radial†	104208.7	105709.1	83504 µg/L	83504 ppb	15:46:41
2	Ca 317.933Radial†	21377.0	21494.9	21769 µg/L	21769 ppb	15:46:41
2	Fe 238.204 Radial†	8777.0	8886.7	78874 µg/L	78874 ppb	15:47:01
2	K 766.490 Radial†	18134.5	18207.2	14455 µg/L	14455 ppb	15:46:41
2	Mg 279.077 IEC†	1180.4	1184.6	11626 µg/L	11626 ppb	15:47:01
2	Na 589.592 Radial†	3701.4	3283.1	1172.9 µg/L	1172.9 ppb	15:46:41
2	Sr 421.552†	17707.6	17922.8	207.70 µg/L	207.70 ppb	15:46:41
2	Sc 361.383	1960463.8	1960463.8	98.847 %		15:48:13
2	Y 371.029	1368514.4	1368514.4	99.682 %		15:48:13
2	Ag 328.068†	-1338.6	-851.9	-1.4118 µg/L	-1.4118 ppb	15:48:19
2	As 188.979†	6.5	8.2	20.895 µg/L	20.895 ppb	15:48:39
2	B 249.677†	909.9	606.1	-11.851 µg/L	-11.851 ppb	15:48:19
2	Ba 233.527†	42997.1	43519.5	1240.1 µg/L	1240.1 ppb	15:48:19
2	Be 313.107†	9281.8	12690.8	7.7009 µg/L	7.7009 ppb	15:48:19
2	Cd 226.502†	110.3	256.6	-1.1849 µg/L	-1.1849 ppb	15:48:39
2	Co 228.616†	672.8	689.0	29.714 µg/L	29.714 ppb	15:48:39
2	Cr 267.716†	8504.3	8646.2	204.88 µg/L	204.88 ppb	15:48:19
2	Cu 324.752†	6824.0	4414.7	44.544 µg/L	44.544 ppb	15:48:19
2	Mn 257.610†	538946.7	545494.8	2029.8 µg/L	2029.8 ppb	15:48:13
2	Mo 202.031†	62.7	70.2	10.832 µg/L	10.832 ppb	15:48:39
2	Ni 231.604†	2284.9	2004.4	119.92 µg/L	119.92 ppb	15:48:39
2	P 214.914†	650.4	636.7	1440.0 µg/L	1440.0 ppb	15:48:39
2	Pb 220.353†	401.3	314.5	92.649 µg/L	92.649 ppb	15:48:39

2	S 181.975 Axial†	156.8	144.0	698.94 µg/L	698.94 ppb	15:48:39
2	Sb 206.836†	42.6	18.5	15.547 µg/L	15.547 ppb	15:48:39
2	Se 196.026†	-28.2	-39.3	136.42 µg/L	136.42 ppb	15:48:39
2	SiO2†	267349.4	269126.8	63221 µg/L	63221 ppb	15:48:13
2	Si 251.611†	323639.7	327110.0	29361 µg/L	29361 ppb	15:48:13
2	Sn 189.927†	-23.7	-26.8	-20.610 µg/L	-20.610 ppb	15:48:39
2	Ti 334.940†	1316856.0	1332047.1	3541.3 µg/L	3541.3 ppb	15:48:13
2	Tl 190.801†	-46.8	-21.3	22.655 µg/L	22.655 ppb	15:48:39
2	U 409.014†	-443.4	-345.4	-45.252 µg/L	-45.252 ppb	15:48:19
2	V 292.402†	11867.3	12039.0	149.45 µg/L	149.45 ppb	15:48:19
2	Zn 213.857†	7602.2	7190.2	189.79 µg/L	189.79 ppb	15:48:19
3	Sc RADIAL	55694.2	55694.2	100.0 %		15:47:07
3	Al 396.153Radial†	104736.3	104788.0	82776 µg/L	82776 ppb	15:47:07
3	Ca 317.933Radial†	21504.1	21324.9	21597 µg/L	21597 ppb	15:47:07
3	Fe 238.204 Radial†	8777.2	8764.9	77793 µg/L	77793 ppb	15:47:27
3	K 766.490 Radial†	18198.9	18019.4	14306 µg/L	14306 ppb	15:47:07
3	Mg 279.077 IEC†	1174.3	1162.1	11405 µg/L	11405 ppb	15:47:27
3	Na 589.592 Radial†	3809.7	3340.0	1193.3 µg/L	1193.3 ppb	15:47:07
3	Sr 421.552†	17884.8	17854.0	206.90 µg/L	206.90 ppb	15:47:07
3	Sc 361.383	1951668.9	1951668.9	98.404 %		15:48:46
3	Y 371.029	1362499.5	1362499.5	99.244 %		15:48:46
3	Ag 328.068†	-1350.7	-870.2	-1.6542 µg/L	-1.6542 ppb	15:48:52
3	As 188.979†	5.5	7.3	18.871 µg/L	18.871 ppb	15:49:12
3	B 249.677†	938.5	639.3	-9.7052 µg/L	-9.7052 ppb	15:48:52
3	Ba 233.527†	42210.1	42915.8	1222.9 µg/L	1222.9 ppb	15:48:52
3	Be 313.107†	8819.7	12263.5	7.4085 µg/L	7.4085 ppb	15:48:52
3	Cd 226.502†	97.5	244.1	-1.4430 µg/L	-1.4430 ppb	15:49:12
3	Co 228.616†	622.9	641.3	27.213 µg/L	27.213 ppb	15:49:12
3	Cr 267.716†	8240.6	8417.0	199.45 µg/L	199.45 ppb	15:48:52
3	Cu 324.752†	6767.7	4388.7	44.195 µg/L	44.195 ppb	15:48:52
3	Mn 257.610†	532348.1	541246.1	2013.9 µg/L	2013.9 ppb	15:48:46
3	Mo 202.031†	63.7	71.5	10.933 µg/L	10.933 ppb	15:49:12
3	Ni 231.604†	2131.1	1858.6	111.26 µg/L	111.26 ppb	15:49:12
3	P 214.914†	609.0	597.7	1349.6 µg/L	1349.6 ppb	15:49:12
3	Pb 220.353†	378.7	293.4	86.536 µg/L	86.536 ppb	15:49:12
3	S 181.975 Axial†	154.1	142.0	689.16 µg/L	689.16 ppb	15:49:12
3	Sb 206.836†	33.3	9.2	5.7337 µg/L	5.7337 ppb	15:49:12
3	Se 196.026†	-10.1	-20.9	162.99 µg/L	162.99 ppb	15:49:12
3	SiO2†	265801.3	268772.4	63138 µg/L	63138 ppb	15:48:46
3	Si 251.611†	321709.9	326624.4	29318 µg/L	29318 ppb	15:48:46
3	Sn 189.927†	-33.3	-36.6	-25.474 µg/L	-25.474 ppb	15:49:12
3	Ti 334.940†	1299003.7	1319908.6	3509.1 µg/L	3509.1 ppb	15:48:46
3	Tl 190.801†	-56.3	-31.1	7.2472 µg/L	7.2472 ppb	15:49:12
3	U 409.014†	-471.7	-376.1	-48.023 µg/L	-48.023 ppb	15:48:52
3	V 292.402†	11591.6	11812.9	146.69 µg/L	146.69 ppb	15:48:52
3	Zn 213.857†	7473.7	7094.4	187.29 µg/L	187.29 ppb	15:48:52

Mean Data: 245147008|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1944380.5	98.036 %		1.0443				1.07%
Sc RADIAL	55256.6	99.2 %		0.71				0.71%
Y 371.029	1357817.5	98.903 %		0.9945				1.01%
Ag 328.068†	-886.2	-1.7100 µg/L		0.32967	-1.7100 ppb		0.32967	19.28%
Al 396.153Radial†	105545.1	83374 µg/L		545.0	83374 ppb		545.0	0.65%
As 188.979†	6.0	16.107 µg/L		6.6176	16.107 ppb		6.6176	41.08%
B 249.677†	639.2	-10.153 µg/L		1.5239	-10.153 ppb		1.5239	15.01%
Ba 233.527†	44077.6	1256.0 µg/L		43.31	1256.0 ppb		43.31	3.45%
Be 313.107†	12690.6	7.6914 µg/L		0.27827	7.6914 ppb		0.27827	3.62%
Ca 317.933Radial†	21488.1	21763 µg/L		162.1	21763 ppb		162.1	0.74%
Cd 226.502†	257.0	-1.1513 µg/L		0.30978	-1.1513 ppb		0.30978	26.91%
Co 228.616†	677.8	29.063 µg/L		1.6261	29.063 ppb		1.6261	5.59%
Cr 267.716†	8727.3	206.81 µg/L		8.478	206.81 ppb		8.478	4.10%
Cu 324.752†	4513.0	45.262 µg/L		1.5561	45.262 ppb		1.5561	3.44%
Fe 238.204 Radial†	8863.4	78667 µg/L		790.7	78667 ppb		790.7	1.01%
K 766.490 Radial†	18182.6	14435 µg/L		121.0	14435 ppb		121.0	0.84%
Mg 279.077 IEC†	1177.6	11557 µg/L		131.7	11557 ppb		131.7	1.14%
Mn 257.610†	549350.4	2044.0 µg/L		39.23	2044.0 ppb		39.23	1.92%
Mo 202.031†	72.7	11.104 µg/L		0.3878	11.104 ppb		0.3878	3.49%
Na 589.592 Radial†	3312.1	1183.3 µg/L		10.18	1183.3 ppb		10.18	0.86%

Ni 231.604†	1976.2	118.25 µg/L	6.320	118.25 ppb	6.320	5.34%
P 214.914†	630.7	1425.9 µg/L	70.31	1425.9 ppb	70.31	4.93%
Pb 220.353†	312.6	92.102 µg/L	5.3143	92.102 ppb	5.3143	5.77%
S 181.975 Axial†	144.7	702.17 µg/L	14.889	702.17 ppb	14.889	2.12%
Sb 206.836†	14.2	10.964 µg/L	4.9384	10.964 ppb	4.9384	45.04%
Se 196.026†	-32.7	146.48 µg/L	14.416	146.48 ppb	14.416	9.84%
SiO2†	271633.9	63810 µg/L	1092.9	63810 ppb	1092.9	1.71%
Si 251.611†	330092.8	29629 µg/L	502.0	29629 ppb	502.0	1.69%
Sn 189.927†	-31.5	-22.982 µg/L	2.4340	-22.982 ppb	2.4340	10.59%
Sr 421.552†	17950.3	208.02 µg/L	1.304	208.02 ppb	1.304	0.63%
Ti 334.940†	1341293.2	3565.9 µg/L	72.35	3565.9 ppb	72.35	2.03%
Tl 190.801†	-28.2	12.423 µg/L	8.8611	12.423 ppb	8.8611	71.33%
U 409.014†	-374.9	-48.042 µg/L	2.7990	-48.042 ppb	2.7990	5.83%
V 292.402†	12166.7	150.91 µg/L	5.115	150.91 ppb	5.115	3.39%
Zn 213.857†	7301.3	192.82 µg/L	7.514	192.82 ppb	7.514	3.90%

Sequence No.: 41

Sample ID: 245147009|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 335

Date Collected: 2/8/2010 15:49:21

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147009|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55626.8	55626.8	99.8 %		15:49:54
1	Al 396.153Radial†	106395.3	106576.8	84189 µg/L	84189 ppb	15:49:54
1	Ca 317.933Radial†	21869.2	21716.7	21994 µg/L	21994 ppb	15:50:14
1	Fe 238.204 Radial†	11417.4	11420.0	101360 µg/L	101360 ppb	15:50:14
1	K 766.490 Radial†	20444.9	20291.1	16109 µg/L	16109 ppb	15:49:54
1	Mg 279.077 IEC†	1468.0	1457.7	14302 µg/L	14302 ppb	15:50:14
1	Na 589.592 Radial†	4087.5	3622.9	1294.3 µg/L	1294.3 ppb	15:50:14
1	Sr 421.552†	21266.1	21262.4	246.40 µg/L	246.40 ppb	15:49:54
1	Sc 361.383	1949001.5	1949001.5	98.269 %		15:51:19
1	Y 371.029	1378165.9	1378165.9	100.38 %		15:51:19
1	Ag 328.068†	-1653.5	-1180.2	-2.3215 µg/L	-2.3215 ppb	15:51:24
1	As 188.979†	0.4	2.1	9.1670 µg/L	9.1670 ppb	15:51:45
1	B 249.677†	1046.9	750.9	-16.830 µg/L	-16.830 ppb	15:51:24
1	Ba 233.527†	57824.8	58864.2	1677.4 µg/L	1677.4 ppb	15:51:24
1	Be 313.107†	13457.6	16995.4	10.231 µg/L	10.231 ppb	15:51:24
1	Cd 226.502†	164.2	312.1	-2.1340 µg/L	-2.1340 ppb	15:51:45
1	Co 228.616†	852.4	875.7	36.809 µg/L	36.809 ppb	15:51:45
1	Cr 267.716†	3959.4	4071.9	96.581 µg/L	96.581 ppb	15:51:24
1	Cu 324.752†	7310.7	4950.6	51.745 µg/L	51.745 ppb	15:51:24
1	Mn 257.610†	500714.6	509796.0	1900.5 µg/L	1900.5 ppb	15:51:19
1	Mo 202.031†	-8.2	-1.6	3.6773 µg/L	3.6773 ppb	15:51:45
1	Ni 231.604†	1350.6	1067.3	64.593 µg/L	64.593 ppb	15:51:45
1	P 214.914†	471.2	458.3	1005.5 µg/L	1005.5 ppb	15:51:45
1	Pb 220.353†	413.8	329.7	96.230 µg/L	96.230 ppb	15:51:45
1	S 181.975 Axial†	203.6	192.5	934.53 µg/L	934.53 ppb	15:51:45
1	Sb 206.836†	40.1	16.2	14.159 µg/L	14.159 ppb	15:51:45
1	Se 196.026†	-31.8	-43.1	189.42 µg/L	189.42 ppb	15:51:45
1	SiO2†	302110.1	306090.4	71904 µg/L	71904 ppb	15:51:19
1	Si 251.611†	365683.0	371819.3	33375 µg/L	33375 ppb	15:51:19
1	Sn 189.927†	-46.6	-50.3	-34.485 µg/L	-34.485 ppb	15:51:45
1	Ti 334.940†	1832342.6	1864446.6	4956.8 µg/L	4956.8 ppb	15:51:19
1	Tl 190.801†	-65.2	-40.3	8.8610 µg/L	8.8610 ppb	15:51:45
1	U 409.014†	-924.5	-837.5	-95.360 µg/L	-95.360 ppb	15:51:24
1	V 292.402†	18072.1	18423.7	225.81 µg/L	225.81 ppb	15:51:24
1	Zn 213.857†	8437.1	8085.0	213.05 µg/L	213.05 ppb	15:51:24
2	Sc RADIAL	55429.8	55429.8	99.5 %		15:50:20
2	Al 396.153Radial†	107215.1	107779.5	85139 µg/L	85139 ppb	15:50:20
2	Ca 317.933Radial†	21527.2	21450.7	21725 µg/L	21725 ppb	15:50:40
2	Fe 238.204 Radial†	11209.2	11251.4	99862 µg/L	99862 ppb	15:50:40
2	K 766.490 Radial†	20547.9	20467.5	16249 µg/L	16249 ppb	15:50:20
2	Mg 279.077 IEC†	1451.2	1446.0	14188 µg/L	14188 ppb	15:50:40
2	Na 589.592 Radial†	4041.1	3590.7	1282.8 µg/L	1282.8 ppb	15:50:40
2	Sr 421.552†	21456.0	21529.0	249.49 µg/L	249.49 ppb	15:50:20
2	Sc 361.383	1963450.1	1963450.1	98.998 %		15:51:52
2	Y 371.029	1387391.7	1387391.7	101.06 %		15:51:52
2	Ag 328.068†	-1704.3	-1219.1	-2.7759 µg/L	-2.7759 ppb	15:51:58
2	As 188.979†	9.7	11.5	28.963 µg/L	28.963 ppb	15:52:18
2	B 249.677†	1069.9	766.3	-15.320 µg/L	-15.320 ppb	15:51:58
2	Ba 233.527†	56958.8	57556.4	1640.2 µg/L	1640.2 ppb	15:51:58
2	Be 313.107†	13139.5	16573.3	9.9758 µg/L	9.9758 ppb	15:51:58
2	Cd 226.502†	182.5	329.4	-1.4544 µg/L	-1.4544 ppb	15:52:18
2	Co 228.616†	846.1	862.9	36.367 µg/L	36.367 ppb	15:52:18
2	Cr 267.716†	3865.7	3947.6	93.636 µg/L	93.636 ppb	15:51:58
2	Cu 324.752†	7226.9	4811.2	50.477 µg/L	50.477 ppb	15:51:58
2	Mn 257.610†	492250.7	497496.9	1854.8 µg/L	1854.8 ppb	15:51:52
2	Mo 202.031†	-16.8	-10.3	2.6505 µg/L	2.6505 ppb	15:52:18
2	Ni 231.604†	1354.1	1060.7	64.184 µg/L	64.184 ppb	15:52:18
2	P 214.914†	466.7	450.3	988.39 µg/L	988.39 ppb	15:52:18
2	Pb 220.353†	407.6	320.2	93.620 µg/L	93.620 ppb	15:52:18

2	S 181.975 Axial†	200.1	187.5	910.25 µg/L	910.25 ppb	15:52:18
2	Sb 206.836†	33.2	8.9	6.5051 µg/L	6.5051 ppb	15:52:18
2	Se 196.026†	-22.4	-33.4	200.93 µg/L	200.93 ppb	15:52:18
2	SiO2†	297238.2	298906.9	70217 µg/L	70217 ppb	15:51:52
2	Si 251.611†	359788.6	363126.9	32594 µg/L	32594 ppb	15:51:52
2	Sn 189.927†	-41.3	-44.5	-31.456 µg/L	-31.456 ppb	15:52:18
2	Ti 334.940†	1801486.6	1819557.1	4837.4 µg/L	4837.4 ppb	15:51:52
2	Tl 190.801†	-62.6	-37.1	12.239 µg/L	12.239 ppb	15:52:18
2	U 409.014†	-1015.3	-922.3	-103.23 µg/L	-103.23 ppb	15:51:58
2	V 292.402†	17860.3	18074.5	221.56 µg/L	221.56 ppb	15:51:58
2	Zn 213.857†	8275.4	7858.5	206.99 µg/L	206.99 ppb	15:51:58
3	Sc RADIAL	56219.5	56219.5	101 %		15:50:46
3	Al 396.153Radial†	105766.6	104830.0	82810 µg/L	82810 ppb	15:50:46
3	Ca 317.933Radial†	21807.1	21424.1	21698 µg/L	21698 ppb	15:51:06
3	Fe 238.204 Radial†	11385.5	11267.8	100010 µg/L	100010 ppb	15:51:06
3	K 766.490 Radial†	20406.6	20037.2	15908 µg/L	15908 ppb	15:50:46
3	Mg 279.077 IEC†	1466.3	1440.5	14133 µg/L	14133 ppb	15:51:06
3	Na 589.592 Radial†	4083.5	3575.8	1277.5 µg/L	1277.5 ppb	15:51:06
3	Sr 421.552†	21165.0	20937.6	242.64 µg/L	242.64 ppb	15:50:46
3	Sc 361.383	1958218.4	1958218.4	98.734 %		15:52:25
3	Y 371.029	1382225.2	1382225.2	100.68 %		15:52:25
3	Ag 328.068†	-1633.2	-1151.7	-2.2300 µg/L	-2.2300 ppb	15:52:31
3	As 188.979†	2.4	4.1	13.418 µg/L	13.418 ppb	15:52:51
3	B 249.677†	1083.0	782.5	-14.626 µg/L	-14.626 ppb	15:52:31
3	Ba 233.527†	55528.7	56261.6	1603.3 µg/L	1603.3 ppb	15:52:31
3	Be 313.107†	12672.3	16135.6	9.6793 µg/L	9.6793 ppb	15:52:31
3	Cd 226.502†	146.0	292.9	-2.5571 µg/L	-2.5571 ppb	15:52:51
3	Co 228.616†	798.4	816.9	33.975 µg/L	33.975 ppb	15:52:51
3	Cr 267.716†	3737.5	3828.2	90.804 µg/L	90.804 ppb	15:52:31
3	Cu 324.752†	7102.0	4704.3	49.683 µg/L	49.683 ppb	15:52:31
3	Mn 257.610†	488346.3	494870.9	1845.1 µg/L	1845.1 ppb	15:52:25
3	Mo 202.031†	-18.5	-12.0	2.4631 µg/L	2.4631 ppb	15:52:51
3	Ni 231.604†	1289.7	999.1	60.536 µg/L	60.536 ppb	15:52:51
3	P 214.914†	445.5	430.0	940.59 µg/L	940.59 ppb	15:52:51
3	Pb 220.353†	396.4	310.1	90.537 µg/L	90.537 ppb	15:52:51
3	S 181.975 Axial†	194.1	181.9	883.13 µg/L	883.13 ppb	15:52:51
3	Sb 206.836†	36.9	12.7	10.567 µg/L	10.567 ppb	15:52:51
3	Se 196.026†	-20.7	-31.7	204.07 µg/L	204.07 ppb	15:52:51
3	SiO2†	296089.9	298545.9	70132 µg/L	70132 ppb	15:52:25
3	Si 251.611†	358769.2	363065.4	32589 µg/L	32589 ppb	15:52:25
3	Sn 189.927†	-33.3	-36.5	-27.450 µg/L	-27.450 ppb	15:52:51
3	Ti 334.940†	1781459.0	1804134.4	4796.4 µg/L	4796.4 ppb	15:52:25
3	Tl 190.801†	-56.5	-31.2	20.697 µg/L	20.697 ppb	15:52:51
3	U 409.014†	-959.4	-868.5	-98.110 µg/L	-98.110 ppb	15:52:31
3	V 292.402†	17287.4	17542.4	215.40 µg/L	215.40 ppb	15:52:31
3	Zn 213.857†	8088.9	7692.0	202.49 µg/L	202.49 ppb	15:52:31

Mean Data: 245147009|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1956890.0	98.667 %		0.3688				0.37%
Sc RADIAL	55758.7	100 %		0.7				0.74%
Y 371.029	1382594.3	100.71 %		0.337				0.33%
Ag 328.068†	-1183.7	-2.4425 µg/L		0.29237	-2.4425 ppb		0.29237	11.97%
Al 396.153Radial†	106395.4	84046 µg/L		1171.6	84046 ppb		1171.6	1.39%
As 188.979†	5.9	17.183 µg/L		10.4210	17.183 ppb		10.4210	60.65%
B 249.677†	766.6	-15.592 µg/L		1.1269	-15.592 ppb		1.1269	7.23%
Ba 233.527†	57560.7	1640.3 µg/L		37.08	1640.3 ppb		37.08	2.26%
Be 313.107†	16568.1	9.9622 µg/L		0.27629	9.9622 ppb		0.27629	2.77%
Ca 317.933Radial†	21530.5	21805 µg/L		163.8	21805 ppb		163.8	0.75%
Cd 226.502†	311.5	-2.0485 µg/L		0.55631	-2.0485 ppb		0.55631	27.16%
Co 228.616†	851.9	35.717 µg/L		1.5244	35.717 ppb		1.5244	4.27%
Cr 267.716†	3949.2	93.674 µg/L		2.8890	93.674 ppb		2.8890	3.08%
Cu 324.752†	4822.0	50.635 µg/L		1.0399	50.635 ppb		1.0399	2.05%
Fe 238.204 Radial†	11313.1	100410 µg/L		825.4	100410 ppb		825.4	0.82%
K 766.490 Radial†	20265.3	16089 µg/L		171.7	16089 ppb		171.7	1.07%
Mg 279.077 IEC†	1448.0	14207 µg/L		86.0	14207 ppb		86.0	0.61%
Mn 257.610†	500721.2	1866.8 µg/L		29.61	1866.8 ppb		29.61	1.59%
Mo 202.031†	-7.9	2.9303 µg/L		0.65367	2.9303 ppb		0.65367	22.31%
Na 589.592 Radial†	3596.5	1284.9 µg/L		8.61	1284.9 ppb		8.61	0.67%

Ni 231.604†	1042.4	63.104 µg/L	2.2335	63.104 ppb	2.2335	3.54%
P 214.914†	446.2	978.17 µg/L	33.652	978.17 ppb	33.652	3.44%
Pb 220.353†	320.0	93.462 µg/L	2.8496	93.462 ppb	2.8496	3.05%
S 181.975 Axial†	187.3	909.30 µg/L	25.711	909.30 ppb	25.711	2.83%
Sb 206.836†	12.6	10.410 µg/L	3.8293	10.410 ppb	3.8293	36.78%
Se 196.026†	-36.1	198.14 µg/L	7.717	198.14 ppb	7.717	3.89%
SiO2†	301181.0	70751 µg/L	999.6	70751 ppb	999.6	1.41%
Si 251.611†	366003.8	32853 µg/L	452.1	32853 ppb	452.1	1.38%
Sn 189.927†	-43.8	-31.131 µg/L	3.5288	-31.131 ppb	3.5288	11.34%
Sr 421.552†	21243.0	246.18 µg/L	3.432	246.18 ppb	3.432	1.39%
Ti 334.940†	1829379.4	4863.5 µg/L	83.31	4863.5 ppb	83.31	1.71%
Tl 190.801†	-36.2	13.932 µg/L	6.0971	13.932 ppb	6.0971	43.76%
U 409.014†	-876.1	-98.899 µg/L	3.9921	-98.899 ppb	3.9921	4.04%
V 292.402†	18013.5	220.92 µg/L	5.234	220.92 ppb	5.234	2.37%
Zn 213.857†	7878.5	207.51 µg/L	5.296	207.51 ppb	5.296	2.55%

Sequence No.: 42

Sample ID: 245147010|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 336

Date Collected: 2/8/2010 15:53:01

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147010|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55466.8	55466.8	99.6 %			15:53:34
1	Al 396.153Radial†	92896.9	93324.9	73721 µg/L		73721 ppb	15:53:34
1	Ca 317.933Radial†	17972.8	17865.9	18094 µg/L		18094 ppb	15:53:54
1	Fe 238.204 Radial†	13088.8	13131.9	116550 µg/L		116550 ppb	15:53:54
1	K 766.490 Radial†	15753.7	15637.9	12415 µg/L		12415 ppb	15:53:34
1	Mg 279.077 IEC†	1582.4	1576.9	15464 µg/L		15464 ppb	15:53:54
1	Na 589.592 Radial†	4203.3	3751.0	1340.1 µg/L		1340.1 ppb	15:53:54
1	Sr 421.552†	18379.3	18424.0	213.51 µg/L		213.51 ppb	15:53:34
1	Sc 361.383	1961914.6	1961914.6	98.920 %			15:54:59
1	Y 371.029	1398455.8	1398455.8	101.86 %			15:54:59
1	Ag 328.068†	-1799.8	-1317.0	-2.4195 µg/L		-2.4195 ppb	15:55:04
1	As 188.979†	10.9	12.7	32.697 µg/L		32.697 ppb	15:55:25
1	B 249.677†	887.4	582.7	-32.643 µg/L		-32.643 ppb	15:55:04
1	Ba 233.527†	38974.1	39420.5	1123.5 µg/L		1123.5 ppb	15:55:04
1	Be 313.107†	12034.5	15466.6	9.4577 µg/L		9.4577 ppb	15:55:04
1	Cd 226.502†	226.2	373.7	-1.9686 µg/L		-1.9686 ppb	15:55:25
1	Co 228.616†	1021.0	1040.5	47.416 µg/L		47.416 ppb	15:55:25
1	Cr 267.716†	8127.9	8259.4	195.78 µg/L		195.78 ppb	15:55:04
1	Cu 324.752†	11624.5	9262.5	86.655 µg/L		86.655 ppb	15:55:04
1	Mn 257.610†	747384.8	755804.4	2813.3 µg/L		2813.3 ppb	15:54:59
1	Mo 202.031†	19.4	26.4	7.3728 µg/L		7.3728 ppb	15:55:25
1	Ni 231.604†	2294.1	2012.1	120.84 µg/L		120.84 ppb	15:55:25
1	P 214.914†	486.3	470.4	1015.0 µg/L		1015.0 ppb	15:55:25
1	Pb 220.353†	459.4	373.0	107.61 µg/L		107.61 ppb	15:55:25
1	S 181.975 Axial†	115.5	102.1	495.62 µg/L		495.62 ppb	15:55:25
1	Sb 206.836†	38.9	14.7	11.886 µg/L		11.886 ppb	15:55:25
1	Se 196.026†	-30.1	-41.2	234.01 µg/L		234.01 ppb	15:55:25
1	SiO2†	280897.3	282622.6	66391 µg/L		66391 ppb	15:54:59
1	Si 251.611†	339883.3	343288.8	30814 µg/L		30814 ppb	15:54:59
1	Sn 189.927†	-33.4	-36.6	-29.095 µg/L		-29.095 ppb	15:55:25
1	Ti 334.940†	1535352.7	1551943.0	4125.7 µg/L		4125.7 ppb	15:54:59
1	Tl 190.801†	-62.3	-36.9	12.067 µg/L		12.067 ppb	15:55:25
1	U 409.014†	-1225.8	-1135.9	-125.71 µg/L		-125.71 ppb	15:54:59
1	V 292.402†	19712.1	19960.6	245.65 µg/L		245.65 ppb	15:55:04
1	Zn 213.857†	10607.1	10222.2	269.85 µg/L		269.85 ppb	15:55:04
2	Sc RADIAL	56192.9	56192.9	101 %			15:54:00
2	Al 396.153Radial†	92577.5	91802.5	72518 µg/L		72518 ppb	15:54:00
2	Ca 317.933Radial†	17885.0	17545.5	17769 µg/L		17769 ppb	15:54:20
2	Fe 238.204 Radial†	12994.7	12868.7	114220 µg/L		114220 ppb	15:54:20
2	K 766.490 Radial†	15755.3	15435.0	12254 µg/L		12254 ppb	15:54:00
2	Mg 279.077 IEC†	1563.6	1537.6	15078 µg/L		15078 ppb	15:54:20
2	Na 589.592 Radial†	4221.4	3714.4	1327.0 µg/L		1327.0 ppb	15:54:20
2	Sr 421.552†	18309.1	18115.8	209.94 µg/L		209.94 ppb	15:54:00
2	Sc 361.383	1978476.1	1978476.1	99.756 %			15:55:33
2	Y 371.029	1408684.2	1408684.2	102.61 %			15:55:33
2	Ag 328.068†	-1766.9	-1268.9	-2.1756 µg/L		-2.1756 ppb	15:55:38
2	As 188.979†	9.6	11.3	29.611 µg/L		29.611 ppb	15:55:59
2	B 249.677†	919.0	606.8	-30.273 µg/L		-30.273 ppb	15:55:38
2	Ba 233.527†	38916.0	39032.4	1112.5 µg/L		1112.5 ppb	15:55:38
2	Be 313.107†	11980.3	15310.4	9.3678 µg/L		9.3678 ppb	15:55:38
2	Cd 226.502†	224.2	369.8	-1.8224 µg/L		-1.8224 ppb	15:55:59
2	Co 228.616†	1029.4	1040.2	47.521 µg/L		47.521 ppb	15:55:59
2	Cr 267.716†	8109.7	8172.4	193.72 µg/L		193.72 ppb	15:55:38
2	Cu 324.752†	11606.6	9146.2	85.445 µg/L		85.445 ppb	15:55:38
2	Mn 257.610†	741746.1	743827.3	2768.7 µg/L		2768.7 ppb	15:55:33
2	Mo 202.031†	20.9	27.7	7.4310 µg/L		7.4310 ppb	15:55:59
2	Ni 231.604†	2286.7	1985.2	119.22 µg/L		119.22 ppb	15:55:59
2	P 214.914†	492.1	472.1	1020.7 µg/L		1020.7 ppb	15:55:59
2	Pb 220.353†	449.4	359.1	103.60 µg/L		103.60 ppb	15:55:59

2	S 181.975 Axial†	115.5	101.2	491.24 µg/L	491.24 ppb	15:55:59
2	Sb 206.836†	31.7	7.2	3.9127 µg/L	3.9127 ppb	15:55:59
2	Se 196.026†	-29.5	-40.3	229.48 µg/L	229.48 ppb	15:55:59
2	SiO2†	279558.3	278903.3	65517 µg/L	65517 ppb	15:55:33
2	Si 251.611†	338589.8	339116.0	30439 µg/L	30439 ppb	15:55:33
2	Sn 189.927†	-33.0	-35.9	-28.515 µg/L	-28.515 ppb	15:55:59
2	Ti 334.940†	1527192.7	1530770.6	4069.4 µg/L	4069.4 ppb	15:55:33
2	Tl 190.801†	-57.5	-31.5	19.117 µg/L	19.117 ppb	15:55:59
2	U 409.014†	-1244.5	-1144.3	-126.17 µg/L	-126.17 ppb	15:55:33
2	V 292.402†	19593.7	19675.1	242.06 µg/L	242.06 ppb	15:55:38
2	Zn 213.857†	10557.9	10083.2	266.22 µg/L	266.22 ppb	15:55:38
3	Sc RADIAL	55790.8	55790.8	100 %		15:54:26
3	Al 396.153Radial†	92131.4	92018.6	72689 µg/L	72689 ppb	15:54:26
3	Ca 317.933Radial†	17915.0	17703.3	17929 µg/L	17929 ppb	15:54:46
3	Fe 238.204 Radial†	13032.0	12998.8	115370 µg/L	115370 ppb	15:54:46
3	K 766.490 Radial†	15687.5	15479.9	12290 µg/L	12290 ppb	15:54:26
3	Mg 279.077 IEC†	1573.9	1559.2	15290 µg/L	15290 ppb	15:54:46
3	Na 589.592 Radial†	4205.9	3729.1	1332.3 µg/L	1332.3 ppb	15:54:46
3	Sr 421.552†	18200.7	18138.5	210.20 µg/L	210.20 ppb	15:54:26
3	Sc 361.383	1981042.5	1981042.5	99.885 %		15:56:07
3	Y 371.029	1411164.6	1411164.6	102.79 %		15:56:07
3	Ag 328.068†	-1740.0	-1239.6	-1.9044 µg/L	-1.9044 ppb	15:56:12
3	As 188.979†	6.7	8.4	23.503 µg/L	23.503 ppb	15:56:33
3	B 249.677†	851.7	538.3	-34.167 µg/L	-34.167 ppb	15:56:12
3	Ba 233.527†	37751.2	37815.6	1077.8 µg/L	1077.8 ppb	15:56:12
3	Be 313.107†	11392.3	14706.2	8.9611 µg/L	8.9611 ppb	15:56:12
3	Cd 226.502†	209.6	354.8	-2.4062 µg/L	-2.4062 ppb	15:56:33
3	Co 228.616†	959.7	969.1	43.823 µg/L	43.823 ppb	15:56:33
3	Cr 267.716†	7775.0	7826.7	185.52 µg/L	185.52 ppb	15:56:12
3	Cu 324.752†	11277.0	8801.2	82.982 µg/L	82.982 ppb	15:56:12
3	Mn 257.610†	734511.6	735621.2	2738.5 µg/L	2738.5 ppb	15:56:07
3	Mo 202.031†	26.1	32.9	8.0540 µg/L	8.0540 ppb	15:56:33
3	Ni 231.604†	2139.8	1835.2	110.34 µg/L	110.34 ppb	15:56:33
3	P 214.914†	462.4	441.7	949.24 µg/L	949.24 ppb	15:56:33
3	Pb 220.353†	443.8	352.8	101.76 µg/L	101.76 ppb	15:56:33
3	S 181.975 Axial†	110.2	95.7	464.65 µg/L	464.65 ppb	15:56:33
3	Sb 206.836†	33.1	8.6	5.4785 µg/L	5.4785 ppb	15:56:33
3	Se 196.026†	-37.1	-47.9	220.25 µg/L	220.25 ppb	15:56:33
3	SiO2†	277800.9	276780.8	65019 µg/L	65019 ppb	15:56:07
3	Si 251.611†	336304.2	336388.0	30194 µg/L	30194 ppb	15:56:07
3	Sn 189.927†	-31.8	-34.6	-27.980 µg/L	-27.980 ppb	15:56:33
3	Ti 334.940†	1505278.7	1506848.0	4005.8 µg/L	4005.8 ppb	15:56:07
3	Tl 190.801†	-54.1	-28.1	23.833 µg/L	23.833 ppb	15:56:33
3	U 409.014†	-1197.5	-1095.6	-121.69 µg/L	-121.69 ppb	15:56:07
3	V 292.402†	18930.2	18985.3	234.18 µg/L	234.18 ppb	15:56:12
3	Zn 213.857†	10272.0	9783.2	258.08 µg/L	258.08 ppb	15:56:12

Mean Data: 245147010|944117|1

	Mean Corrected	Calib.		Sample		
Analyte	Intensity	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	1973811.1	99.520 %	0.5235			0.53%
Sc RADIAL	55816.8	100 %	0.7			0.65%
Y 371.029	1406101.5	102.42 %	0.491			0.48%
Ag 328.068†	-1275.1	-2.1665 µg/L	0.25765	-2.1665 ppb	0.25765	11.89%
Al 396.153Radial†	92382.0	72976 µg/L	650.7	72976 ppb	650.7	0.89%
As 188.979†	10.8	28.603 µg/L	4.6791	28.603 ppb	4.6791	16.36%
B 249.677†	575.9	-32.361 µg/L	1.9621	-32.361 ppb	1.9621	6.06%
Ba 233.527†	38756.2	1104.6 µg/L	23.87	1104.6 ppb	23.87	2.16%
Be 313.107†	15161.1	9.2622 µg/L	0.26458	9.2622 ppb	0.26458	2.86%
Ca 317.933Radial†	17704.9	17931 µg/L	162.3	17931 ppb	162.3	0.90%
Cd 226.502†	366.1	-2.0657 µg/L	0.30374	-2.0657 ppb	0.30374	14.70%
Co 228.616†	1016.6	46.253 µg/L	2.1053	46.253 ppb	2.1053	4.55%
Cr 267.716†	8086.1	191.67 µg/L	5.425	191.67 ppb	5.425	2.83%
Cu 324.752†	9070.0	85.027 µg/L	1.8719	85.027 ppb	1.8719	2.20%
Fe 238.204 Radial†	12999.8	115380 µg/L	1168.2	115380 ppb	1168.2	1.01%
K 766.490 Radial†	15517.6	12319 µg/L	84.6	12319 ppb	84.6	0.69%
Mg 279.077 IEC†	1557.9	15277 µg/L	193.1	15277 ppb	193.1	1.26%
Mn 257.610†	745084.3	2773.5 µg/L	37.67	2773.5 ppb	37.67	1.36%
Mo 202.031†	29.0	7.6193 µg/L	0.37763	7.6193 ppb	0.37763	4.96%
Na 589.592 Radial†	3731.5	1333.1 µg/L	6.57	1333.1 ppb	6.57	0.49%

Ni 231.604†	1944.1	116.80 µg/L	5.655	116.80 ppb	5.655	4.84%
P 214.914†	461.4	994.95 µg/L	39.694	994.95 ppb	39.694	3.99%
Pb 220.353†	361.6	104.32 µg/L	2.992	104.32 ppb	2.992	2.87%
S 181.975 Axial†	99.7	483.84 µg/L	16.761	483.84 ppb	16.761	3.46%
Sb 206.836†	10.1	7.0924 µg/L	4.22467	7.0924 ppb	4.22467	59.57%
Se 196.026†	-43.1	227.91 µg/L	7.014	227.91 ppb	7.014	3.08%
SiO2†	279435.6	65643 µg/L	694.6	65643 ppb	694.6	1.06%
Si 251.611†	339597.6	30482 µg/L	312.0	30482 ppb	312.0	1.02%
Sn 189.927†	-35.7	-28.530 µg/L	0.5577	-28.530 ppb	0.5577	1.95%
Sr 421.552†	18226.1	211.21 µg/L	1.990	211.21 ppb	1.990	0.94%
Ti 334.940†	1529853.9	4067.0 µg/L	59.99	4067.0 ppb	59.99	1.47%
Tl 190.801†	-32.2	18.339 µg/L	5.9213	18.339 ppb	5.9213	32.29%
U 409.014†	-1125.3	-124.52 µg/L	2.462	-124.52 ppb	2.462	1.98%
V 292.402†	19540.3	240.63 µg/L	5.866	240.63 ppb	5.866	2.44%
Zn 213.857†	10029.5	264.72 µg/L	6.031	264.72 ppb	6.031	2.28%

Sequence No.: 43

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/8/2010 15:56:42

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	55895.3	55895.3	100 %		15:57:17
1	Al 396.153Radial†	6110.0	6100.3	4808.8 µg/L	4808.8 ppb	15:57:17
1	Ca 317.933Radial†	4836.4	4633.1	4692.2 µg/L	4692.2 ppb	15:57:37
1	Fe 238.204 Radial†	553.5	535.9	4767.1 µg/L	4767.1 ppb	15:57:37
1	K 766.490 Radial†	6592.9	6385.1	5069.1 µg/L	5069.1 ppb	15:57:17
1	Mg 279.077 IEC†	506.5	492.2	4868.8 µg/L	4868.8 ppb	15:57:37
1	Na 589.592 Radial†	28141.2	27580.0	9853.2 µg/L	9853.2 ppb	15:57:17
1	Sr 421.552†	42703.8	42529.2	492.85 µg/L	492.85 ppb	15:57:17
1	Sc 361.383	2002226.8	2002226.8	100.95 %		15:58:40
1	Y 371.029	1379970.2	1379970.2	100.52 %		15:58:40
1	Ag 328.068†	57070.9	57034.5	492.45 µg/L	492.45 ppb	15:58:45
1	As 188.979†	233.1	232.6	492.34 µg/L	492.34 ppb	15:59:06
1	B 249.677†	10352.5	9940.3	473.58 µg/L	473.58 ppb	15:58:45
1	Ba 233.527†	17148.0	17007.1	485.42 µg/L	485.42 ppb	15:58:45
1	Be 313.107†	685719.6	682546.9	486.57 µg/L	486.57 ppb	15:58:40
1	Cd 226.502†	16229.5	16221.3	480.97 µg/L	480.97 ppb	15:58:45
1	Co 228.616†	9103.0	9025.3	485.40 µg/L	485.40 ppb	15:58:45
1	Cr 267.716†	20848.0	20693.9	490.47 µg/L	490.47 ppb	15:58:45
1	Cu 324.752†	67797.1	64668.3	492.55 µg/L	492.55 ppb	15:58:45
1	Mn 257.610†	129923.6	128960.5	477.93 µg/L	477.93 ppb	15:58:45
1	Mo 202.031†	4420.7	4385.8	489.73 µg/L	489.73 ppb	15:59:06
1	Ni 231.604†	8581.4	8193.3	485.67 µg/L	485.67 ppb	15:58:45
1	P 214.914†	1104.0	1072.4	2451.9 µg/L	2451.9 ppb	15:59:06
1	Pb 220.353†	1821.6	1713.0	496.03 µg/L	496.03 ppb	15:59:06
1	S 181.975 Axial†	216.3	199.6	969.02 µg/L	969.02 ppb	15:59:06
1	Sb 206.836†	492.9	463.7	494.12 µg/L	494.12 ppb	15:59:06
1	Se 196.026†	321.3	307.5	498.06 µg/L	498.06 ppb	15:59:06
1	SiO2†	23613.5	22050.5	5179.9 µg/L	5179.9 ppb	15:58:45
1	Si 251.611†	27657.2	27092.5	2431.8 µg/L	2431.8 ppb	15:58:45
1	Sn 189.927†	1006.8	994.5	499.90 µg/L	499.90 ppb	15:59:06
1	Ti 334.940†	187710.3	185773.4	493.66 µg/L	493.66 ppb	15:58:40
1	Tl 190.801†	306.3	329.5	503.96 µg/L	503.96 ppb	15:59:06
1	U 409.014†	5170.1	5224.6	497.67 µg/L	497.67 ppb	15:58:45
1	V 292.402†	42540.4	42172.1	495.24 µg/L	495.24 ppb	15:58:45
1	Zn 213.857†	18604.7	17928.5	482.23 µg/L	482.23 ppb	15:58:45
2	Sc RADIAL	56271.0	56271.0	101 %		15:57:42
2	Al 396.153Radial†	6154.0	6103.1	4810.5 µg/L	4810.5 ppb	15:57:42
2	Ca 317.933Radial†	4849.1	4613.5	4672.4 µg/L	4672.4 ppb	15:58:03
2	Fe 238.204 Radial†	552.1	530.8	4722.0 µg/L	4722.0 ppb	15:58:03
2	K 766.490 Radial†	6575.8	6324.3	5020.8 µg/L	5020.8 ppb	15:57:42
2	Mg 279.077 IEC†	505.7	488.0	4828.1 µg/L	4828.1 ppb	15:58:03
2	Na 589.592 Radial†	28099.2	27351.1	9771.4 µg/L	9771.4 ppb	15:57:42
2	Sr 421.552†	42682.5	42223.9	489.32 µg/L	489.32 ppb	15:57:42
2	Sc 361.383	1998342.4	1998342.4	100.76 %		15:59:12
2	Y 371.029	1375967.5	1375967.5	100.22 %		15:59:12
2	Ag 328.068†	57301.9	57373.7	495.39 µg/L	495.39 ppb	15:59:18
2	As 188.979†	245.6	245.4	519.61 µg/L	519.61 ppb	15:59:39
2	B 249.677†	10460.7	10067.7	479.70 µg/L	479.70 ppb	15:59:18
2	Ba 233.527†	17230.7	17122.2	488.71 µg/L	488.71 ppb	15:59:18
2	Be 313.107†	682233.4	680407.2	485.04 µg/L	485.04 ppb	15:59:12
2	Cd 226.502†	16332.1	16354.4	484.92 µg/L	484.92 ppb	15:59:18
2	Co 228.616†	9206.3	9145.4	491.89 µg/L	491.89 ppb	15:59:18
2	Cr 267.716†	20985.7	20870.7	494.66 µg/L	494.66 ppb	15:59:18
2	Cu 324.752†	68219.8	65218.3	496.73 µg/L	496.73 ppb	15:59:18
2	Mn 257.610†	130978.8	130258.0	482.73 µg/L	482.73 ppb	15:59:18
2	Mo 202.031†	4648.8	4620.6	515.94 µg/L	515.94 ppb	15:59:39
2	Ni 231.604†	8618.0	8246.1	488.79 µg/L	488.79 ppb	15:59:18
2	P 214.914†	1152.5	1122.6	2569.0 µg/L	2569.0 ppb	15:59:39
2	Pb 220.353†	1911.6	1805.8	522.95 µg/L	522.95 ppb	15:59:39

2	S 181.975 Axial†	232.6	216.2	1049.4 µg/L	1049.4 ppb	15:59:39
2	Sb 206.836†	526.2	497.6	530.55 µg/L	530.55 ppb	15:59:39
2	Se 196.026†	330.5	317.3	513.56 µg/L	513.56 ppb	15:59:39
2	SiO2†	23804.0	22285.0	5235.0 µg/L	5235.0 ppb	15:59:18
2	Si 251.611†	27903.7	27390.4	2458.6 µg/L	2458.6 ppb	15:59:18
2	Sn 189.927†	1067.9	1057.1	531.36 µg/L	531.36 ppb	15:59:39
2	Ti 334.940†	186944.6	185374.9	492.61 µg/L	492.61 ppb	15:59:12
2	Tl 190.801†	315.0	338.7	517.81 µg/L	517.81 ppb	15:59:39
2	U 409.014†	5186.2	5250.5	500.14 µg/L	500.14 ppb	15:59:18
2	V 292.402†	42888.0	42599.1	500.40 µg/L	500.40 ppb	15:59:18
2	Zn 213.857†	18743.2	18101.7	486.90 µg/L	486.90 ppb	15:59:18
3	Sc RADIAL	56376.0	56376.0	101 %		15:58:08
3	Al 396.153Radial†	6157.1	6094.8	4805.6 µg/L	4805.6 ppb	15:58:08
3	Ca 317.933Radial†	4866.2	4621.4	4680.4 µg/L	4680.4 ppb	15:58:28
3	Fe 238.204 Radial†	550.9	528.6	4701.8 µg/L	4701.8 ppb	15:58:28
3	K 766.490 Radial†	6549.5	6286.2	4990.6 µg/L	4990.6 ppb	15:58:08
3	Mg 279.077 IEC†	511.3	492.6	4871.9 µg/L	4871.9 ppb	15:58:28
3	Na 589.592 Radial†	28216.2	27414.9	9794.2 µg/L	9794.2 ppb	15:58:08
3	Sr 421.552†	42866.9	42327.5	490.52 µg/L	490.52 ppb	15:58:08
3	Sc 361.383	1913761.6	1913761.6	96.493 %		15:59:45
3	Y 371.029	1317100.8	1317100.8	95.937 %		15:59:45
3	Ag 328.068†	54864.4	57361.1	495.13 µg/L	495.13 ppb	15:59:51
3	As 188.979†	199.6	208.5	441.49 µg/L	441.49 ppb	16:00:12
3	B 249.677†	9951.9	9999.2	476.38 µg/L	476.38 ppb	15:59:51
3	Ba 233.527†	16037.9	16641.9	474.99 µg/L	474.99 ppb	15:59:51
3	Be 313.107†	681654.2	709732.4	505.95 µg/L	505.95 ppb	15:59:45
3	Cd 226.502†	15159.9	15855.9	470.12 µg/L	470.12 ppb	15:59:51
3	Co 228.616†	8475.4	8791.8	472.73 µg/L	472.73 ppb	15:59:51
3	Cr 267.716†	18794.2	19520.1	462.65 µg/L	462.65 ppb	15:59:51
3	Cu 324.752†	63332.7	63145.9	480.96 µg/L	480.96 ppb	15:59:51
3	Mn 257.610†	120797.4	125451.7	464.93 µg/L	464.93 ppb	15:59:51
3	Mo 202.031†	3748.2	3891.2	434.52 µg/L	434.52 ppb	16:00:12
3	Ni 231.604†	7951.1	7933.0	470.24 µg/L	470.24 ppb	15:59:51
3	P 214.914†	944.3	957.4	2184.2 µg/L	2184.2 ppb	16:00:12
3	Pb 220.353†	1609.1	1576.2	456.32 µg/L	456.32 ppb	16:00:12
3	S 181.975 Axial†	196.9	189.4	919.50 µg/L	919.50 ppb	16:00:12
3	Sb 206.836†	438.9	430.2	458.02 µg/L	458.02 ppb	16:00:12
3	Se 196.026†	293.4	293.3	475.19 µg/L	475.19 ppb	16:00:12
3	SiO2†	22464.4	21940.9	5154.2 µg/L	5154.2 ppb	15:59:51
3	Si 251.611†	26209.5	26858.6	2410.8 µg/L	2410.8 ppb	15:59:51
3	Sn 189.927†	838.2	865.9	435.28 µg/L	435.28 ppb	16:00:12
3	Ti 334.940†	186199.6	192802.9	512.35 µg/L	512.35 ppb	15:59:45
3	Tl 190.801†	269.6	305.5	467.74 µg/L	467.74 ppb	16:00:12
3	U 409.014†	4667.3	4940.2	470.53 µg/L	470.53 ppb	15:59:51
3	V 292.402†	39249.2	40709.2	477.74 µg/L	477.74 ppb	15:59:51
3	Zn 213.857†	17361.1	17491.6	470.48 µg/L	470.48 ppb	15:59:51

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1971443.6	99.401 %	2.5206			2.54%
Sc RADIAL	56180.8	101 %	0.5			0.45%
Y 371.029	1357679.5	98.893 %	2.5639			2.59%
Ag 328.068†	57256.4	494.32 µg/L	1.627	494.32 ppb	1.627	0.33%
QC value within limits for Ag 328.068 Recovery = 98.86%						
Al 396.153Radial†	6099.4	4808.3 µg/L	2.47	4808.3 ppb	2.47	0.05%
QC value within limits for Al 396.153Radial Recovery = 96.17%						
As 188.979†	228.8	484.48 µg/L	39.647	484.48 ppb	39.647	8.18%
QC value within limits for As 188.979 Recovery = 96.90%						
B 249.677†	10002.4	476.55 µg/L	3.063	476.55 ppb	3.063	0.64%
QC value within limits for B 249.677 Recovery = 95.31%						
Ba 233.527†	16923.7	483.04 µg/L	7.166	483.04 ppb	7.166	1.48%
QC value within limits for Ba 233.527 Recovery = 96.61%						
Be 313.107†	690895.5	492.52 µg/L	11.654	492.52 ppb	11.654	2.37%
QC value within limits for Be 313.107 Recovery = 98.50%						
Ca 317.933Radial†	4622.7	4681.7 µg/L	9.98	4681.7 ppb	9.98	0.21%
QC value within limits for Ca 317.933Radial Recovery = 93.63%						
Cd 226.502†	16143.9	478.67 µg/L	7.662	478.67 ppb	7.662	1.60%
QC value within limits for Cd 226.502 Recovery = 95.73%						
Co 228.616†	8987.5	483.34 µg/L	9.742	483.34 ppb	9.742	2.02%

Cr	267.716†	20361.6	482.59 µg/L	17.394	482.59 ppb	17.394	3.60%
Cu	324.752†	64344.2	490.08 µg/L	8.168	490.08 ppb	8.168	1.67%
Fe	238.204 Radial†	531.8	4730.3 µg/L	33.39	4730.3 ppb	33.39	0.71%
K	766.490 Radial†	6331.9	5026.9 µg/L	39.61	5026.9 ppb	39.61	0.79%
Mg	279.077 IEC†	490.9	4856.3 µg/L	24.45	4856.3 ppb	24.45	0.50%
Mn	257.610†	128223.4	475.20 µg/L	9.210	475.20 ppb	9.210	1.94%
Mo	202.031†	4299.2	480.06 µg/L	41.560	480.06 ppb	41.560	8.66%
Na	589.592 Radial†	27448.7	9806.3 µg/L	42.20	9806.3 ppb	42.20	0.43%
Ni	231.604†	8124.1	481.57 µg/L	9.935	481.57 ppb	9.935	2.06%
P	214.914†	1050.8	2401.7 µg/L	197.25	2401.7 ppb	197.25	8.21%
Pb	220.353†	1698.3	491.77 µg/L	33.519	491.77 ppb	33.519	6.82%
S	181.975 Axial†	201.8	979.32 µg/L	65.578	979.32 ppb	65.578	6.70%
Sb	206.836†	463.8	494.23 µg/L	36.268	494.23 ppb	36.268	7.34%
Se	196.026†	306.1	495.60 µg/L	19.304	495.60 ppb	19.304	3.90%
SiO2†		22092.1	5189.7 µg/L	41.30	5189.7 ppb	41.30	0.80%
Si	251.611†	27113.8	2433.7 µg/L	23.92	2433.7 ppb	23.92	0.98%
Sn	189.927†	972.5	488.85 µg/L	48.986	488.85 ppb	48.986	10.02%
Sr	421.552†	42360.2	490.89 µg/L	1.799	490.89 ppb	1.799	0.37%
Ti	334.940†	187983.7	499.54 µg/L	11.109	499.54 ppb	11.109	2.22%
Tl	190.801†	324.6	496.50 µg/L	25.855	496.50 ppb	25.855	5.21%
U	409.014†	5138.4	489.45 µg/L	16.428	489.45 ppb	16.428	3.36%
V	292.402†	41826.8	491.13 µg/L	11.876	491.13 ppb	11.876	2.42%
Zn	213.857†	17840.6	479.87 µg/L	8.461	479.87 ppb	8.461	1.76%

QC value within limits for Co 228.616 Recovery = 96.67%

QC value within limits for Cr 267.716 Recovery = 96.52%

QC value within limits for Cu 324.752 Recovery = 98.02%

QC value within limits for Fe 238.204 Radial Recovery = 94.61%

QC value within limits for K 766.490 Radial Recovery = 100.54%

QC value within limits for Mg 279.077 IEC Recovery = 97.13%

QC value within limits for Mn 257.610 Recovery = 95.04%

QC value within limits for Mo 202.031 Recovery = 96.01%

QC value within limits for Na 589.592 Radial Recovery = 98.06%

QC value within limits for Ni 231.604 Recovery = 96.31%

QC value within limits for P 214.914 Recovery = 96.07%

QC value within limits for Pb 220.353 Recovery = 98.35%

QC value within limits for S 181.975 Axial Recovery = 97.93%

QC value within limits for Sb 206.836 Recovery = 98.85%

QC value within limits for Se 196.026 Recovery = 99.12%

QC value within limits for SiO2 Recovery = 97.05%

QC value within limits for Si 251.611 Recovery = 97.35%

QC value within limits for Sn 189.927 Recovery = 97.77%

QC value within limits for Sr 421.552 Recovery = 98.18%

QC value within limits for Ti 334.940 Recovery = 99.91%

QC value within limits for Tl 190.801 Recovery = 99.30%

QC value within limits for U 409.014 Recovery = 97.89%

QC value within limits for V 292.402 Recovery = 98.23%

QC value within limits for Zn 213.857 Recovery = 95.97%

All analyte(s) passed QC.

Sequence No.: 44  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 2/8/2010 16:00:21  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55002.4	55002.4	98.7 %		16:00:54
1	Al 396.153Radial†	-1.6	8.2	6.4541 µg/L	6.4541 ppb	16:00:54
1	Ca 317.933Radial†	185.5	0.1	0.0683 µg/L	0.0683 ppb	16:01:14
1	Fe 238.204 Radial†	18.5	2.9	26.104 µg/L	26.104 ppb	16:01:14
1	K 766.490 Radial†	119.8	-65.3	-51.879 µg/L	-51.879 ppb	16:00:54
1	Mg 279.077 IEC†	11.8	-0.8	-7.6371 µg/L	-7.6371 ppb	16:01:14
1	Na 589.592 Radial†	423.2	-42.5	-15.180 µg/L	-15.180 ppb	16:00:54
1	Sr 421.552†	49.6	12.2	0.1413 µg/L	0.1413 ppb	16:00:54
1	Sc 361.383	1982983.3	1982983.3	99.983 %		16:02:16
1	Y 371.029	1369601.1	1369601.1	99.761 %		16:02:16
1	Ag 328.068†	-502.0	0.3	0.0057 µg/L	0.0057 ppb	16:02:22
1	As 188.979†	-0.6	1.1	2.3168 µg/L	2.3168 ppb	16:02:42
1	B 249.677†	310.3	-4.1	-0.2083 µg/L	-0.2083 ppb	16:02:42
1	Ba 233.527†	-16.9	4.1	0.1163 µg/L	0.1163 ppb	16:02:42
1	Be 313.107†	-3198.7	101.5	0.0723 µg/L	0.0723 ppb	16:02:22
1	Cd 226.502†	-135.7	9.3	0.2726 µg/L	0.2726 ppb	16:02:42
1	Co 228.616†	-9.1	-0.8	-0.0431 µg/L	-0.0431 ppb	16:02:42
1	Cr 267.716†	-38.0	4.7	0.1124 µg/L	0.1124 ppb	16:02:42
1	Cu 324.752†	2443.2	-45.2	-0.3405 µg/L	-0.3405 ppb	16:02:22
1	Mn 257.610†	-203.6	59.9	0.2254 µg/L	0.2254 ppb	16:02:42
1	Mo 202.031†	-5.7	1.0	0.1178 µg/L	0.1178 ppb	16:02:42
1	Ni 231.604†	313.3	6.3	0.3717 µg/L	0.3717 ppb	16:02:42
1	P 214.914†	21.4	0.2	0.5176 µg/L	0.5176 ppb	16:02:42
1	Pb 220.353†	96.8	5.3	1.5519 µg/L	1.5519 ppb	16:02:42
1	S 181.975 Axial†	16.7	2.0	9.9365 µg/L	9.9365 ppb	16:02:42
1	Sb 206.836†	32.1	7.5	7.9458 µg/L	7.9458 ppb	16:02:42
1	Se 196.026†	14.7	4.0	6.4848 µg/L	6.4848 ppb	16:02:42
1	SiO2†	1402.8	63.0	14.790 µg/L	14.790 ppb	16:02:22
1	Si 251.611†	329.6	26.0	2.3346 µg/L	2.3346 ppb	16:02:42
1	Sn 189.927†	-4.8	-7.6	-3.8141 µg/L	-3.8141 ppb	16:02:42
1	Ti 334.940†	271.8	107.0	0.2851 µg/L	0.2851 ppb	16:02:22
1	Tl 190.801†	-28.1	-2.1	-3.1037 µg/L	-3.1037 ppb	16:02:42
1	U 409.014†	-138.4	-35.2	-3.3605 µg/L	-3.3605 ppb	16:02:22
1	V 292.402†	-15.1	18.2	0.2118 µg/L	0.2118 ppb	16:02:22
1	Zn 213.857†	493.1	-7.5	-0.2039 µg/L	-0.2039 ppb	16:02:42
2	Sc RADIAL	55571.7	55571.7	99.7 %		16:01:20
2	Al 396.153Radial†	-1.9	7.9	6.2000 µg/L	6.2000 ppb	16:01:20
2	Ca 317.933Radial†	184.5	-2.9	-2.9576 µg/L	-2.9576 ppb	16:01:40
2	Fe 238.204 Radial†	16.6	0.8	6.9789 µg/L	6.9789 ppb	16:01:40
2	K 766.490 Radial†	200.1	13.9	11.054 µg/L	11.054 ppb	16:01:20
2	Mg 279.077 IEC†	10.0	-2.7	-26.367 µg/L	-26.367 ppb	16:01:40
2	Na 589.592 Radial†	419.9	-50.2	-17.930 µg/L	-17.930 ppb	16:01:20
2	Sr 421.552†	38.8	0.9	0.0099 µg/L	0.0099 ppb	16:01:20
2	Sc 361.383	1979548.9	1979548.9	99.810 %		16:02:48
2	Y 371.029	1366434.4	1366434.4	99.530 %		16:02:48
2	Ag 328.068†	-500.8	0.6	0.0056 µg/L	0.0056 ppb	16:02:54
2	As 188.979†	-2.3	-0.6	-1.2508 µg/L	-1.2508 ppb	16:03:14
2	B 249.677†	296.6	-17.2	-0.8265 µg/L	-0.8265 ppb	16:03:14
2	Ba 233.527†	-21.3	-0.3	-0.0085 µg/L	-0.0085 ppb	16:03:14
2	Be 313.107†	-3165.4	129.4	0.0922 µg/L	0.0922 ppb	16:02:54
2	Cd 226.502†	-137.3	7.5	0.2215 µg/L	0.2215 ppb	16:03:14
2	Co 228.616†	-4.5	3.7	0.2015 µg/L	0.2015 ppb	16:03:14
2	Cr 267.716†	-35.1	7.6	0.1793 µg/L	0.1793 ppb	16:03:14
2	Cu 324.752†	2505.8	21.8	0.1666 µg/L	0.1666 ppb	16:02:54
2	Mn 257.610†	-185.2	77.9	0.2903 µg/L	0.2903 ppb	16:03:14
2	Mo 202.031†	-3.4	3.4	0.3769 µg/L	0.3769 ppb	16:03:14
2	Ni 231.604†	311.6	5.0	0.2990 µg/L	0.2990 ppb	16:03:14
2	P 214.914†	28.8	7.7	17.888 µg/L	17.888 ppb	16:03:14
2	Pb 220.353†	91.2	-0.0	-0.0173 µg/L	-0.0173 ppb	16:03:14

2	S 181.975 Axial†	14.2	-0.4	-2.0743 µg/L	-2.0743 ppb	16:03:14
2	Sb 206.836†	28.7	4.1	4.3676 µg/L	4.3676 ppb	16:03:14
2	Se 196.026†	21.0	10.3	16.435 µg/L	16.435 ppb	16:03:14
2	SiO2†	1388.1	50.7	11.899 µg/L	11.899 ppb	16:02:54
2	Si 251.611†	330.4	27.4	2.4562 µg/L	2.4562 ppb	16:03:14
2	Sn 189.927†	3.8	1.0	0.4916 µg/L	0.4916 ppb	16:03:14
2	Ti 334.940†	259.2	94.9	0.2543 µg/L	0.2543 ppb	16:02:54
2	Tl 190.801†	-25.4	0.6	0.9581 µg/L	0.9581 ppb	16:03:14
2	U 409.014†	-20.8	82.4	7.8632 µg/L	7.8632 ppb	16:02:54
2	V 292.402†	-35.2	-1.9	-0.0103 µg/L	-0.0103 ppb	16:02:54
2	Zn 213.857†	498.7	-1.0	-0.0268 µg/L	-0.0268 ppb	16:03:14
3	Sc RADIAL	55824.2	55824.2	100 %		16:01:45
3	Al 396.153Radial†	-35.2	-25.4	-20.032 µg/L	-20.032 ppb	16:01:45
3	Ca 317.933Radial†	185.8	-2.4	-2.4426 µg/L	-2.4426 ppb	16:02:06
3	Fe 238.204 Radial†	16.6	0.8	6.9318 µg/L	6.9318 ppb	16:02:06
3	K 766.490 Radial†	133.1	-53.9	-42.782 µg/L	-42.782 ppb	16:01:45
3	Mg 279.077 IEC†	8.0	-4.7	-46.468 µg/L	-46.468 ppb	16:02:06
3	Na 589.592 Radial†	448.7	-23.4	-8.3467 µg/L	-8.3467 ppb	16:01:45
3	Sr 421.552†	31.6	-6.5	-0.0749 µg/L	-0.0749 ppb	16:01:45
3	Sc 361.383	1962724.5	1962724.5	98.961 %		16:03:20
3	Y 371.029	1356780.9	1356780.9	98.827 %		16:03:20
3	Ag 328.068†	-488.8	8.5	0.0720 µg/L	0.0720 ppb	16:03:26
3	As 188.979†	-3.2	-1.5	-3.2752 µg/L	-3.2752 ppb	16:03:46
3	B 249.677†	311.6	0.5	0.0204 µg/L	0.0204 ppb	16:03:46
3	Ba 233.527†	-22.2	-1.4	-0.0414 µg/L	-0.0414 ppb	16:03:46
3	Be 313.107†	-3269.5	-3.1	-0.0023 µg/L	-0.0023 ppb	16:03:26
3	Cd 226.502†	-155.4	-12.0	-0.3566 µg/L	-0.3566 ppb	16:03:46
3	Co 228.616†	-0.6	7.7	0.4138 µg/L	0.4138 ppb	16:03:46
3	Cr 267.716†	-37.7	4.7	0.1106 µg/L	0.1106 ppb	16:03:46
3	Cu 324.752†	2466.7	3.8	0.0295 µg/L	0.0295 ppb	16:03:26
3	Mn 257.610†	-189.3	72.2	0.2702 µg/L	0.2702 ppb	16:03:46
3	Mo 202.031†	-10.2	-3.6	-0.3965 µg/L	-0.3965 ppb	16:03:46
3	Ni 231.604†	311.6	7.8	0.4631 µg/L	0.4631 ppb	16:03:46
3	P 214.914†	26.0	5.1	11.843 µg/L	11.843 ppb	16:03:46
3	Pb 220.353†	88.5	-2.0	-0.5916 µg/L	-0.5916 ppb	16:03:46
3	S 181.975 Axial†	17.8	3.3	16.126 µg/L	16.126 ppb	16:03:46
3	Sb 206.836†	28.4	4.1	4.3365 µg/L	4.3365 ppb	16:03:46
3	Se 196.026†	16.5	6.0	9.6020 µg/L	9.6020 ppb	16:03:46
3	SiO2†	1410.7	85.4	20.050 µg/L	20.050 ppb	16:03:26
3	Si 251.611†	336.5	36.4	3.2648 µg/L	3.2648 ppb	16:03:46
3	Sn 189.927†	-1.2	-4.0	-2.0388 µg/L	-2.0388 ppb	16:03:46
3	Ti 334.940†	299.7	138.0	0.3706 µg/L	0.3706 ppb	16:03:26
3	Tl 190.801†	-23.7	2.1	3.1542 µg/L	3.1542 ppb	16:03:46
3	U 409.014†	-51.5	51.2	4.8868 µg/L	4.8868 ppb	16:03:26
3	V 292.402†	-50.9	-18.1	-0.2064 µg/L	-0.2064 ppb	16:03:26
3	Zn 213.857†	501.3	6.0	0.1630 µg/L	0.1630 ppb	16:03:46

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1975085.5	99.585 %		0.5467				0.55%
Sc RADIAL	55466.1	99.6 %		0.76				0.76%
Y 371.029	1364272.2	99.373 %		0.4864				0.49%
Ag 328.068†	3.1	0.0278 µg/L		0.03832	0.0278 ppb		0.03832	137.96%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-3.1	-2.4593 µg/L		15.21892	-2.4593 ppb		15.21892	618.84%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.3	-0.7364 µg/L		2.83129	-0.7364 ppb		2.83129	384.47%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-6.9	-0.3381 µg/L		0.43808	-0.3381 ppb		0.43808	129.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.8	0.0221 µg/L		0.08318	0.0221 ppb		0.08318	376.09%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	75.9	0.0540 µg/L		0.04982	0.0540 ppb		0.04982	92.17%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.8	-1.7773 µg/L		1.61893	-1.7773 ppb		1.61893	91.09%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	1.6	0.0458 µg/L		0.34944	0.0458 ppb		0.34944	762.37%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	3.6	0.1907 µg/L		0.22863	0.1907 ppb		0.22863	119.88%

Cr 267.716†	QC value within limits for Co 228.616	Recovery = Not calculated				
	5.7	0.1341 µg/L	0.03918	0.1341 ppb	0.03918	29.22%
Cu 324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated				
	-6.6	-0.0481 µg/L	0.26234	-0.0481 ppb	0.26234	545.25%
Fe 238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated				
	1.5	13.338 µg/L	11.0557	13.338 ppb	11.0557	82.89%
K 766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated				
	-35.1	-27.869 µg/L	34.0139	-27.869 ppb	34.0139	122.05%
Mg 279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated				
	-2.7	-26.824 µg/L	19.4193	-26.824 ppb	19.4193	72.40%
Mn 257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated				
	70.0	0.2620 µg/L	0.03322	0.2620 ppb	0.03322	12.68%
Mo 202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated				
	0.3	0.0327 µg/L	0.39365	0.0327 ppb	0.39365	>999.9%
Na 589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated				
	-38.7	-13.819 µg/L	4.9345	-13.819 ppb	4.9345	35.71%
Ni 231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated				
	6.4	0.3779 µg/L	0.08225	0.3779 ppb	0.08225	21.76%
P 214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated				
	4.3	10.083 µg/L	8.8177	10.083 ppb	8.8177	87.45%
Pb 220.353†	QC value within limits for P 214.914	Recovery = Not calculated				
	1.1	0.3143 µg/L	1.10955	0.3143 ppb	1.10955	353.01%
S 181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated				
	1.6	7.9960 µg/L	9.25384	7.9960 ppb	9.25384	115.73%
Sb 206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated				
	5.2	5.5500 µg/L	2.07492	5.5500 ppb	2.07492	37.39%
Se 196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated				
	6.8	10.841 µg/L	5.0897	10.841 ppb	5.0897	46.95%
SiO2†	QC value within limits for Se 196.026	Recovery = Not calculated				
	66.3	15.580 µg/L	4.1325	15.580 ppb	4.1325	26.52%
Si 251.611†	QC value within limits for SiO2	Recovery = Not calculated				
	29.9	2.6852 µg/L	0.50562	2.6852 ppb	0.50562	18.83%
Sn 189.927†	QC value within limits for Si 251.611	Recovery = Not calculated				
	-3.5	-1.7871 µg/L	2.16383	-1.7871 ppb	2.16383	121.08%
Sr 421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated				
	2.2	0.0254 µg/L	0.10893	0.0254 ppb	0.10893	428.33%
Ti 334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated				
	113.3	0.3034 µg/L	0.06027	0.3034 ppb	0.06027	19.87%
Tl 190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated				
	0.2	0.3362 µg/L	3.17500	0.3362 ppb	3.17500	944.37%
U 409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated				
	32.8	3.1298 µg/L	5.81446	3.1298 ppb	5.81446	185.77%
V 292.402†	QC value within limits for U 409.014	Recovery = Not calculated				
	-0.6	-0.0016 µg/L	0.20924	-0.0016 ppb	0.20924	>999.9%
Zn 213.857†	QC value within limits for V 292.402	Recovery = Not calculated				
	-0.8	-0.0226 µg/L	0.18352	-0.0226 ppb	0.18352	812.57%
	QC value within limits for Zn 213.857	Recovery = Not calculated				

All analyte(s) passed QC.

Sequence No.: 45

Sample ID: 245147011|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 337

Date Collected: 2/8/2010 16:03:56

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147011|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55887.2	55887.2	100 %		16:04:31
1	Al 396.153Radial†	83059.9	82815.9	65420 µg/L	65420 ppb	16:04:31
1	Ca 317.933Radial†	18377.5	18133.5	18365 µg/L	18365 ppb	16:04:31
1	Fe 238.204 Radial†	10262.0	10214.8	90661 µg/L	90661 ppb	16:04:51
1	K 766.490 Radial†	16329.6	16093.0	12776 µg/L	12776 ppb	16:04:31
1	Mg 279.077 IEC†	1306.5	1289.8	12654 µg/L	12654 ppb	16:04:51
1	Na 589.592 Radial†	2242.0	1764.0	630.19 µg/L	630.19 ppb	16:04:31
1	Sr 421.552†	15040.4	14956.4	173.32 µg/L	173.32 ppb	16:04:31
1	Sc 361.383	1987558.9	1987558.9	100.21 %		16:05:55
1	Y 371.029	1392664.3	1392664.3	101.44 %		16:05:55
1	Ag 328.068†	-1179.8	-674.9	1.1007 µg/L	1.1007 ppb	16:06:01
1	As 188.979†	10.9	12.6	31.055 µg/L	31.055 ppb	16:06:22
1	B 249.677†	996.8	680.2	-14.624 µg/L	-14.624 ppb	16:06:01
1	Ba 233.527†	39399.3	39336.3	1121.0 µg/L	1121.0 ppb	16:06:01
1	Be 313.107†	9691.4	12971.5	7.8308 µg/L	7.8308 ppb	16:06:01
1	Cd 226.502†	185.4	330.1	-0.3872 µg/L	-0.3872 ppb	16:06:22
1	Co 228.616†	865.9	872.3	39.198 µg/L	39.198 ppb	16:06:22
1	Cr 267.716†	4148.1	4182.0	99.167 µg/L	99.167 ppb	16:06:01
1	Cu 324.752†	12005.2	9490.8	84.792 µg/L	84.792 ppb	16:06:01
1	Mn 257.610†	695606.8	694388.4	2582.6 µg/L	2582.6 ppb	16:05:55
1	Mo 202.031†	23.6	30.3	6.8238 µg/L	6.8238 ppb	16:06:22
1	Ni 231.604†	1487.0	1176.7	70.947 µg/L	70.947 ppb	16:06:22
1	P 214.914†	692.0	669.3	1497.0 µg/L	1497.0 ppb	16:06:22
1	Pb 220.353†	746.3	653.3	189.20 µg/L	189.20 ppb	16:06:22
1	S 181.975 Axial†	193.8	178.8	867.93 µg/L	867.93 ppb	16:06:22
1	Sb 206.836†	27.9	3.2	0.7570 µg/L	0.7570 ppb	16:06:22
1	Se 196.026†	-25.5	-36.2	173.65 µg/L	173.65 ppb	16:06:22
1	SiO2†	292045.9	290083.6	68144 µg/L	68144 ppb	16:05:55
1	Si 251.611†	353560.0	352503.1	31641 µg/L	31641 ppb	16:05:55
1	Sn 189.927†	-24.2	-26.9	-21.796 µg/L	-21.796 ppb	16:06:22
1	Ti 334.940†	1404573.1	1401416.1	3725.7 µg/L	3725.7 ppb	16:05:55
1	Tl 190.801†	-49.7	-23.5	23.604 µg/L	23.604 ppb	16:06:22
1	U 409.014†	-451.1	-346.9	-46.827 µg/L	-46.827 ppb	16:06:01
1	V 292.402†	15344.8	15345.5	188.92 µg/L	188.92 ppb	16:06:01
1	Zn 213.857†	14149.9	13619.2	363.48 µg/L	363.48 ppb	16:06:01
2	Sc RADIAL	56136.1	56136.1	101 %		16:04:57
2	Al 396.153Radial†	83908.5	83291.1	65795 µg/L	65795 ppb	16:04:57
2	Ca 317.933Radial†	18480.8	18154.7	18387 µg/L	18387 ppb	16:04:57
2	Fe 238.204 Radial†	10227.1	10134.8	89952 µg/L	89952 ppb	16:05:17
2	K 766.490 Radial†	16499.7	16189.7	12853 µg/L	12853 ppb	16:04:57
2	Mg 279.077 IEC†	1306.3	1283.9	12596 µg/L	12596 ppb	16:05:17
2	Na 589.592 Radial†	2221.6	1733.8	619.43 µg/L	619.43 ppb	16:04:57
2	Sr 421.552†	15161.4	15010.1	173.95 µg/L	173.95 ppb	16:04:57
2	Sc 361.383	1962787.7	1962787.7	98.965 %		16:06:29
2	Y 371.029	1377043.7	1377043.7	100.30 %		16:06:29
2	Ag 328.068†	-1228.1	-738.6	0.5484 µg/L	0.5484 ppb	16:06:34
2	As 188.979†	5.2	7.0	19.066 µg/L	19.066 ppb	16:06:55
2	B 249.677†	1044.6	741.1	-11.337 µg/L	-11.337 ppb	16:06:34
2	Ba 233.527†	39778.2	40215.4	1146.1 µg/L	1146.1 ppb	16:06:34
2	Be 313.107†	9850.4	13254.3	8.0041 µg/L	8.0041 ppb	16:06:34
2	Cd 226.502†	187.4	334.4	-0.1784 µg/L	-0.1784 ppb	16:06:55
2	Co 228.616†	869.3	886.7	39.818 µg/L	39.818 ppb	16:06:55
2	Cr 267.716†	4219.6	4306.5	102.12 µg/L	102.12 ppb	16:06:34
2	Cu 324.752†	12048.7	9686.0	86.179 µg/L	86.179 ppb	16:06:34
2	Mn 257.610†	701182.4	708782.5	2635.8 µg/L	2635.8 ppb	16:06:29
2	Mo 202.031†	21.1	28.0	6.5478 µg/L	6.5478 ppb	16:06:55
2	Ni 231.604†	1492.2	1200.7	72.364 µg/L	72.364 ppb	16:06:55
2	P 214.914†	678.7	664.6	1486.5 µg/L	1486.5 ppb	16:06:55
2	Pb 220.353†	731.7	647.9	187.69 µg/L	187.69 ppb	16:06:55

2	S 181.975 Axial†	196.1	183.5	890.61 µg/L	890.61 ppb	16:06:55
2	Sb 206.836†	33.0	8.7	6.5589 µg/L	6.5589 ppb	16:06:55
2	Se 196.026†	-25.8	-36.8	170.69 µg/L	170.69 ppb	16:06:55
2	SiO2†	293972.7	295708.4	69465 µg/L	69465 ppb	16:06:29
2	Si 251.611†	355858.2	359278.0	32249 µg/L	32249 ppb	16:06:29
2	Sn 189.927†	-24.5	-27.6	-22.081 µg/L	-22.081 ppb	16:06:55
2	Ti 334.940†	1414802.6	1429441.2	3800.2 µg/L	3800.2 ppb	16:06:29
2	Tl 190.801†	-56.8	-31.3	12.670 µg/L	12.670 ppb	16:06:55
2	U 409.014†	-487.1	-388.9	-50.742 µg/L	-50.742 ppb	16:06:34
2	V 292.402†	15648.4	15845.5	194.64 µg/L	194.64 ppb	16:06:34
2	Zn 213.857†	14285.1	13934.0	372.03 µg/L	372.03 ppb	16:06:34
3	Sc RADIAL	57137.5	57137.5	103 %		16:05:23
3	Al 396.153Radial†	83875.6	81799.5	64617 µg/L	64617 ppb	16:05:23
3	Ca 317.933Radial†	18517.2	17868.9	18097 µg/L	18097 ppb	16:05:23
3	Fe 238.204 Radial†	10104.2	9837.1	87310 µg/L	87310 ppb	16:05:43
3	K 766.490 Radial†	16482.7	15886.0	12612 µg/L	12612 ppb	16:05:23
3	Mg 279.077 IEC†	1301.0	1256.0	12323 µg/L	12323 ppb	16:05:43
3	Na 589.592 Radial†	2207.7	1681.6	600.77 µg/L	600.77 ppb	16:05:23
3	Sr 421.552†	15169.8	14754.5	170.98 µg/L	170.98 ppb	16:05:23
3	Sc 361.383	1969622.8	1969622.8	99.309 %		16:07:02
3	Y 371.029	1380203.1	1380203.1	100.53 %		16:07:02
3	Ag 328.068†	-1199.9	-705.8	0.6090 µg/L	0.6090 ppb	16:07:08
3	As 188.979†	4.5	6.2	17.295 µg/L	17.295 ppb	16:07:28
3	B 249.677†	942.2	634.4	-15.071 µg/L	-15.071 ppb	16:07:08
3	Ba 233.527†	38443.8	38732.2	1103.8 µg/L	1103.8 ppb	16:07:08
3	Be 313.107†	9383.3	12749.4	7.6915 µg/L	7.6915 ppb	16:07:08
3	Cd 226.502†	166.0	312.2	-0.5422 µg/L	-0.5422 ppb	16:07:28
3	Co 228.616†	817.6	831.6	37.111 µg/L	37.111 ppb	16:07:28
3	Cr 267.716†	4047.2	4118.1	97.652 µg/L	97.652 ppb	16:07:08
3	Cu 324.752†	11676.7	9269.1	82.640 µg/L	82.640 ppb	16:07:08
3	Mn 257.610†	680179.0	685174.2	2548.1 µg/L	2548.1 ppb	16:07:02
3	Mo 202.031†	27.8	34.8	7.1987 µg/L	7.1987 ppb	16:07:28
3	Ni 231.604†	1399.5	1102.1	66.481 µg/L	66.481 ppb	16:07:28
3	P 214.914†	634.7	617.9	1380.0 µg/L	1380.0 ppb	16:07:28
3	Pb 220.353†	719.6	633.1	183.45 µg/L	183.45 ppb	16:07:28
3	S 181.975 Axial†	184.9	171.6	832.90 µg/L	832.90 ppb	16:07:28
3	Sb 206.836†	36.9	12.6	10.718 µg/L	10.718 ppb	16:07:28
3	Se 196.026†	-17.6	-28.4	177.21 µg/L	177.21 ppb	16:07:28
3	SiO2†	287725.1	288386.6	67745 µg/L	67745 ppb	16:07:02
3	Si 251.611†	348483.9	350604.6	31470 µg/L	31470 ppb	16:07:02
3	Sn 189.927†	-21.5	-24.4	-20.223 µg/L	-20.223 ppb	16:07:28
3	Ti 334.940†	1373215.7	1382603.8	3675.7 µg/L	3675.7 ppb	16:07:02
3	Tl 190.801†	-55.7	-30.0	12.775 µg/L	12.775 ppb	16:07:28
3	U 409.014†	-486.8	-386.9	-50.166 µg/L	-50.166 ppb	16:07:08
3	V 292.402†	15004.1	15141.8	186.16 µg/L	186.16 ppb	16:07:08
3	Zn 213.857†	13805.4	13400.8	357.76 µg/L	357.76 ppb	16:07:08

Mean Data: 245147011|944117|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1973323.1	99.496 %		0.6450			0.65%
Sc RADIAL	56386.9	101 %		1.2			1.17%
Y 371.029	1383303.7	100.76 %		0.602			0.60%
Ag 328.068†	-706.4	0.7527 µg/L		0.30288	0.7527 ppb	0.30288	40.24%
Al 396.153Radial†	82635.5	65277 µg/L		601.9	65277 ppb	601.9	0.92%
As 188.979†	8.6	22.472 µg/L		7.4856	22.472 ppb	7.4856	33.31%
B 249.677†	685.2	-13.677 µg/L		2.0391	-13.677 ppb	2.0391	14.91%
Ba 233.527†	39428.0	1123.6 µg/L		21.26	1123.6 ppb	21.26	1.89%
Be 313.107†	12991.7	7.8421 µg/L		0.15662	7.8421 ppb	0.15662	2.00%
Ca 317.933Radial†	18052.4	18283 µg/L		161.3	18283 ppb	161.3	0.88%
Cd 226.502†	325.5	-0.3693 µg/L		0.18257	-0.3693 ppb	0.18257	49.44%
Co 228.616†	863.6	38.709 µg/L		1.4183	38.709 ppb	1.4183	3.66%
Cr 267.716†	4202.2	99.646 µg/L		2.2719	99.646 ppb	2.2719	2.28%
Cu 324.752†	9482.0	84.537 µg/L		1.7828	84.537 ppb	1.7828	2.11%
Fe 238.204 Radial†	10062.2	89308 µg/L		1766.3	89308 ppb	1766.3	1.98%
K 766.490 Radial†	16056.2	12747 µg/L		123.1	12747 ppb	123.1	0.97%
Mg 279.077 IEC†	1276.5	12524 µg/L		176.8	12524 ppb	176.8	1.41%
Mn 257.610†	696115.0	2588.8 µg/L		44.21	2588.8 ppb	44.21	1.71%
Mo 202.031†	31.0	6.8568 µg/L		0.32670	6.8568 ppb	0.32670	4.76%
Na 589.592 Radial†	1726.5	616.80 µg/L		14.887	616.80 ppb	14.887	2.41%

Ni 231.604†	1159.9	69.931 µg/L	3.0702	69.931 ppb	3.0702	4.39%
P 214.914†	650.6	1454.5 µg/L	64.73	1454.5 ppb	64.73	4.45%
Pb 220.353†	644.8	186.78 µg/L	2.982	186.78 ppb	2.982	1.60%
S 181.975 Axial†	178.0	863.81 µg/L	29.077	863.81 ppb	29.077	3.37%
Sb 206.836†	8.2	6.0113 µg/L	5.00298	6.0113 ppb	5.00298	83.23%
Se 196.026†	-33.8	173.85 µg/L	3.266	173.85 ppb	3.266	1.88%
SiO2†	291392.9	68451 µg/L	900.3	68451 ppb	900.3	1.32%
Si 251.611†	354128.6	31787 µg/L	409.3	31787 ppb	409.3	1.29%
Sn 189.927†	-26.3	-21.367 µg/L	1.0010	-21.367 ppb	1.0010	4.68%
Sr 421.552†	14907.0	172.75 µg/L	1.562	172.75 ppb	1.562	0.90%
Ti 334.940†	1404487.1	3733.8 µg/L	62.66	3733.8 ppb	62.66	1.68%
Tl 190.801†	-28.3	16.349 µg/L	6.2826	16.349 ppb	6.2826	38.43%
U 409.014†	-374.2	-49.245 µg/L	2.1141	-49.245 ppb	2.1141	4.29%
V 292.402†	15444.3	189.91 µg/L	4.325	189.91 ppb	4.325	2.28%
Zn 213.857†	13651.3	364.43 µg/L	7.183	364.43 ppb	7.183	1.97%

Sequence No.: 46

Sample ID: 245147012|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 338

Date Collected: 2/8/2010 16:07:37

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147012|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	54767.2	54767.2	98.3 %		16:08:10
1	Al 396.153Radial†	96787.4	98474.9	77789 µg/L	77789 ppb	16:08:10
1	Ca 317.933Radial†	20926.3	21101.2	21371 µg/L	21371 ppb	16:08:10
1	Fe 238.204 Radial†	8877.5	9015.5	80018 µg/L	80018 ppb	16:08:30
1	K 766.490 Radial†	20473.1	20641.3	16387 µg/L	16387 ppb	16:08:10
1	Mg 279.077 IEC†	1273.2	1282.6	12594 µg/L	12594 ppb	16:08:30
1	Na 589.592 Radial†	3656.0	3248.2	1160.4 µg/L	1160.4 ppb	16:08:10
1	Sr 421.552†	16677.0	16928.1	196.17 µg/L	196.17 ppb	16:08:10
1	Sc 361.383	1953369.7	1953369.7	98.490 %		16:09:35
1	Y 371.029	1373142.3	1373142.3	100.02 %		16:09:35
1	Ag 328.068†	-1331.6	-849.6	-1.3049 µg/L	-1.3049 ppb	16:09:41
1	As 188.979†	11.5	13.4	31.928 µg/L	31.928 ppb	16:10:01
1	B 249.677†	1163.7	867.1	-0.1917 µg/L	-0.1917 ppb	16:09:41
1	Ba 233.527†	42880.9	43559.4	1241.3 µg/L	1241.3 ppb	16:09:41
1	Be 313.107†	11278.7	14752.5	9.2556 µg/L	9.2556 ppb	16:09:41
1	Cd 226.502†	119.8	266.6	-1.0889 µg/L	-1.0889 ppb	16:10:01
1	Co 228.616†	737.8	757.4	33.855 µg/L	33.855 ppb	16:10:01
1	Cr 267.716†	2615.9	2698.8	64.014 µg/L	64.014 ppb	16:10:01
1	Cu 324.752†	7767.0	5397.3	52.176 µg/L	52.176 ppb	16:09:41
1	Mn 257.610†	451113.0	458294.3	1707.0 µg/L	1707.0 ppb	16:09:35
1	Mo 202.031†	8.1	15.0	4.7103 µg/L	4.7103 ppb	16:10:01
1	Ni 231.604†	1071.1	780.4	47.299 µg/L	47.299 ppb	16:10:01
1	P 214.914†	1012.4	1006.7	2298.7 µg/L	2298.7 ppb	16:10:01
1	Pb 220.353†	446.9	362.3	106.13 µg/L	106.13 ppb	16:10:01
1	S 181.975 Axial†	331.0	321.4	1560.2 µg/L	1560.2 ppb	16:10:01
1	Sb 206.836†	27.3	3.1	0.7637 µg/L	0.7637 ppb	16:10:01
1	Se 196.026†	-22.9	-34.0	147.30 µg/L	147.30 ppb	16:10:01
1	SiO2†	298004.9	301234.7	70763 µg/L	70763 ppb	16:09:35
1	Si 251.611†	361101.3	366335.2	32882 µg/L	32882 ppb	16:09:35
1	Sn 189.927†	-20.2	-23.4	-18.905 µg/L	-18.905 ppb	16:10:01
1	Ti 334.940†	1230070.6	1248769.0	3319.8 µg/L	3319.8 ppb	16:09:35
1	Tl 190.801†	-55.8	-30.6	5.0699 µg/L	5.0699 ppb	16:10:01
1	U 409.014†	-951.7	-863.1	-94.796 µg/L	-94.796 ppb	16:09:41
1	V 292.402†	12030.1	12247.9	151.59 µg/L	151.59 ppb	16:09:41
1	Zn 213.857†	8324.5	7951.5	210.61 µg/L	210.61 ppb	16:09:41
2	Sc RADIAL	55647.0	55647.0	99.9 %		16:08:36
2	Al 396.153Radial†	97091.0	97222.1	76800 µg/L	76800 ppb	16:08:36
2	Ca 317.933Radial†	20957.6	20795.9	21061 µg/L	21061 ppb	16:08:36
2	Fe 238.204 Radial†	8876.3	8871.6	78740 µg/L	78740 ppb	16:08:56
2	K 766.490 Radial†	20581.6	20420.6	16212 µg/L	16212 ppb	16:08:36
2	Mg 279.077 IEC†	1283.7	1272.6	12496 µg/L	12496 ppb	16:08:56
2	Na 589.592 Radial†	3619.3	3152.6	1126.3 µg/L	1126.3 ppb	16:08:36
2	Sr 421.552†	16694.5	16677.4	193.27 µg/L	193.27 ppb	16:08:36
2	Sc 361.383	1948775.2	1948775.2	98.258 %		16:10:08
2	Y 371.029	1370502.7	1370502.7	99.827 %		16:10:08
2	Ag 328.068†	-1405.0	-927.5	-2.0578 µg/L	-2.0578 ppb	16:10:14
2	As 188.979†	4.4	6.2	16.534 µg/L	16.534 ppb	16:10:35
2	B 249.677†	1194.2	900.9	2.0912 µg/L	2.0912 ppb	16:10:14
2	Ba 233.527†	42534.9	43310.0	1234.2 µg/L	1234.2 ppb	16:10:14
2	Be 313.107†	11326.0	14827.5	9.3213 µg/L	9.3213 ppb	16:10:14
2	Cd 226.502†	120.5	267.7	-0.9132 µg/L	-0.9132 ppb	16:10:35
2	Co 228.616†	747.1	768.6	34.524 µg/L	34.524 ppb	16:10:35
2	Cr 267.716†	2588.4	2677.0	63.497 µg/L	63.497 ppb	16:10:35
2	Cu 324.752†	7729.5	5377.8	51.850 µg/L	51.850 ppb	16:10:14
2	Mn 257.610†	445639.5	453803.7	1690.2 µg/L	1690.2 ppb	16:10:08
2	Mo 202.031†	-6.1	0.5	3.0527 µg/L	3.0527 ppb	16:10:35
2	Ni 231.604†	1060.7	772.4	46.807 µg/L	46.807 ppb	16:10:35
2	P 214.914†	1021.8	1018.8	2327.5 µg/L	2327.5 ppb	16:10:35
2	Pb 220.353†	436.5	352.8	103.37 µg/L	103.37 ppb	16:10:35

2	S 181.975 Axial†	334.9	326.3	1583.6 µg/L	1583.6 ppb	16:10:35
2	Sb 206.836†	33.0	8.9	6.9427 µg/L	6.9427 ppb	16:10:35
2	Se 196.026†	-27.2	-38.4	136.93 µg/L	136.93 ppb	16:10:35
2	SiO2†	294227.9	298104.2	70028 µg/L	70028 ppb	16:10:08
2	Si 251.611†	356360.6	362374.8	32527 µg/L	32527 ppb	16:10:08
2	Sn 189.927†	-21.3	-24.5	-19.326 µg/L	-19.326 ppb	16:10:35
2	Ti 334.940†	1215317.7	1236699.1	3287.7 µg/L	3287.7 ppb	16:10:08
2	Tl 190.801†	-49.0	-23.8	14.657 µg/L	14.657 ppb	16:10:35
2	U 409.014†	-945.6	-859.2	-94.224 µg/L	-94.224 ppb	16:10:14
2	V 292.402†	11942.7	12187.8	150.72 µg/L	150.72 ppb	16:10:14
2	Zn 213.857†	8264.8	7910.7	209.57 µg/L	209.57 ppb	16:10:14
3	Sc RADIAL	55980.7	55980.7	100 %		16:09:02
3	Al 396.153Radial†	97966.7	97514.2	77030 µg/L	77030 ppb	16:09:02
3	Ca 317.933Radial†	21163.8	20876.1	21143 µg/L	21143 ppb	16:09:02
3	Fe 238.204 Radial†	8874.5	8816.8	78254 µg/L	78254 ppb	16:09:22
3	K 766.490 Radial†	20749.6	20464.9	16247 µg/L	16247 ppb	16:09:02
3	Mg 279.077 IEC†	1279.7	1260.9	12382 µg/L	12382 ppb	16:09:22
3	Na 589.592 Radial†	3678.3	3189.8	1139.6 µg/L	1139.6 ppb	16:09:02
3	Sr 421.552†	16925.5	16807.6	194.78 µg/L	194.78 ppb	16:09:02
3	Sc 361.383	1951732.7	1951732.7	98.407 %		16:10:42
3	Y 371.029	1373245.3	1373245.3	100.03 %		16:10:42
3	Ag 328.068†	-1373.9	-893.8	-1.8112 µg/L	-1.8112 ppb	16:10:47
3	As 188.979†	3.4	5.2	14.461 µg/L	14.461 ppb	16:11:08
3	B 249.677†	1152.5	856.8	0.2296 µg/L	0.2296 ppb	16:10:47
3	Ba 233.527†	42057.0	42758.7	1218.5 µg/L	1218.5 ppb	16:10:47
3	Be 313.107†	10967.3	14445.6	9.0580 µg/L	9.0580 ppb	16:10:47
3	Cd 226.502†	92.6	239.1	-1.7087 µg/L	-1.7087 ppb	16:11:08
3	Co 228.616†	697.9	717.5	31.822 µg/L	31.822 ppb	16:11:08
3	Cr 267.716†	2472.0	2554.7	60.599 µg/L	60.599 ppb	16:11:08
3	Cu 324.752†	7681.4	5316.9	51.320 µg/L	51.320 ppb	16:10:47
3	Mn 257.610†	443526.9	450969.6	1679.7 µg/L	1679.7 ppb	16:10:42
3	Mo 202.031†	-1.1	5.6	3.5992 µg/L	3.5992 ppb	16:11:08
3	Ni 231.604†	1018.6	728.0	44.168 µg/L	44.168 ppb	16:11:08
3	P 214.914†	990.2	985.0	2249.4 µg/L	2249.4 ppb	16:11:08
3	Pb 220.353†	434.4	350.0	102.60 µg/L	102.60 ppb	16:11:08
3	S 181.975 Axial†	322.8	313.4	1521.3 µg/L	1521.3 ppb	16:11:08
3	Sb 206.836†	27.0	2.8	0.5060 µg/L	0.5060 ppb	16:11:08
3	Se 196.026†	-18.3	-29.4	150.10 µg/L	150.10 ppb	16:11:08
3	SiO2†	294273.2	297696.4	69932 µg/L	69932 ppb	16:10:42
3	Si 251.611†	356396.8	361862.1	32481 µg/L	32481 ppb	16:10:42
3	Sn 189.927†	-15.6	-18.7	-16.398 µg/L	-16.398 ppb	16:11:08
3	Ti 334.940†	1208337.8	1227732.0	3263.9 µg/L	3263.9 ppb	16:10:42
3	Tl 190.801†	-48.0	-22.7	16.015 µg/L	16.015 ppb	16:11:08
3	U 409.014†	-934.3	-846.2	-92.927 µg/L	-92.927 ppb	16:10:47
3	V 292.402†	11803.9	12028.3	148.82 µg/L	148.82 ppb	16:10:47
3	Zn 213.857†	8245.3	7878.1	208.73 µg/L	208.73 ppb	16:10:47

Mean Data: 245147012|944117|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	1951292.5	98.385 %		0.1174				0.12%
Sc RADIAL	55465.0	99.5 %		1.13				1.13%
Y 371.029	1372296.8	99.957 %		0.1132				0.11%
Ag 328.068†	-890.3	-1.7246 µg/L		0.38388	-1.7246 ppb		0.38388	22.26%
Al 396.153Radial†	97737.0	77206 µg/L		517.8	77206 ppb		517.8	0.67%
As 188.979†	8.2	20.974 µg/L		9.5424	20.974 ppb		9.5424	45.50%
B 249.677†	874.9	0.7097 µg/L		1.21479	0.7097 ppb		1.21479	171.17%
Ba 233.527†	43209.4	1231.3 µg/L		11.68	1231.3 ppb		11.68	0.95%
Be 313.107†	14675.2	9.2116 µg/L		0.13702	9.2116 ppb		0.13702	1.49%
Ca 317.933Radial†	20924.4	21192 µg/L		160.3	21192 ppb		160.3	0.76%
Cd 226.502†	257.8	-1.2369 µg/L		0.41794	-1.2369 ppb		0.41794	33.79%
Co 228.616†	747.8	33.400 µg/L		1.4071	33.400 ppb		1.4071	4.21%
Cr 267.716†	2643.5	62.703 µg/L		1.8404	62.703 ppb		1.8404	2.94%
Cu 324.752†	5364.0	51.782 µg/L		0.4323	51.782 ppb		0.4323	0.83%
Fe 238.204 Radial†	8901.3	79004 µg/L		911.0	79004 ppb		911.0	1.15%
K 766.490 Radial†	20508.9	16282 µg/L		92.7	16282 ppb		92.7	0.57%
Mg 279.077 IEC†	1272.0	12491 µg/L		106.1	12491 ppb		106.1	0.85%
Mn 257.610†	454355.9	1692.3 µg/L		13.79	1692.3 ppb		13.79	0.81%
Mo 202.031†	7.0	3.7874 µg/L		0.84467	3.7874 ppb		0.84467	22.30%
Na 589.592 Radial†	3196.9	1142.1 µg/L		17.21	1142.1 ppb		17.21	1.51%

Ni 231.604†	760.2	46.091 µg/L	1.6833	46.091 ppb	1.6833	3.65%
P 214.914†	1003.5	2291.9 µg/L	39.50	2291.9 ppb	39.50	1.72%
Pb 220.353†	355.0	104.03 µg/L	1.860	104.03 ppb	1.860	1.79%
S 181.975 Axial†	320.4	1555.0 µg/L	31.49	1555.0 ppb	31.49	2.02%
Sb 206.836†	5.0	2.7375 µg/L	3.64408	2.7375 ppb	3.64408	133.12%
Se 196.026†	-33.9	144.78 µg/L	6.935	144.78 ppb	6.935	4.79%
SiO2†	299011.8	70241 µg/L	454.8	70241 ppb	454.8	0.65%
Si 251.611†	363524.0	32630 µg/L	219.7	32630 ppb	219.7	0.67%
Sn 189.927†	-22.2	-18.210 µg/L	1.5832	-18.210 ppb	1.5832	8.69%
Sr 421.552†	16804.3	194.74 µg/L	1.453	194.74 ppb	1.453	0.75%
Ti 334.940†	1237733.4	3290.5 µg/L	28.06	3290.5 ppb	28.06	0.85%
Tl 190.801†	-25.7	11.914 µg/L	5.9661	11.914 ppb	5.9661	50.08%
U 409.014†	-856.2	-93.982 µg/L	0.9576	-93.982 ppb	0.9576	1.02%
V 292.402†	12154.6	150.37 µg/L	1.418	150.37 ppb	1.418	0.94%
Zn 213.857†	7913.5	209.64 µg/L	0.940	209.64 ppb	0.940	0.45%

Sequence No.: 47

Sample ID: 245147013|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 339

Date Collected: 2/8/2010 16:11:17

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147013|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	SC RADIAL	55416.4	55416.4	99.5 %		16:11:50
1	Al 396.153Radial†	69561.3	69947.7	55254 µg/L	55254 ppb	16:11:50
1	Ca 317.933Radial†	14720.8	14612.6	14799 µg/L	14799 ppb	16:11:50
1	Fe 238.204 Radial†	11585.9	11632.8	103250 µg/L	103250 ppb	16:12:10
1	K 766.490 Radial†	16177.0	16077.8	12764 µg/L	12764 ppb	16:11:50
1	Mg 279.077 IEC†	1049.3	1042.3	10193 µg/L	10193 ppb	16:12:10
1	Na 589.592 Radial†	4048.3	3599.0	1285.8 µg/L	1285.8 ppb	16:11:50
1	Sr 421.552†	12805.5	12836.9	148.76 µg/L	148.76 ppb	16:11:50
1	Sc 361.383	1935114.8	1935114.8	97.569 %		16:13:15
1	Y 371.029	1369375.7	1369375.7	99.745 %		16:13:15
1	Ag 328.068†	-1673.5	-1212.8	-2.9809 µg/L	-2.9809 ppb	16:13:20
1	As 188.979†	7.1	9.0	24.205 µg/L	24.205 ppb	16:13:41
1	B 249.677†	1032.2	743.5	-18.016 µg/L	-18.016 ppb	16:13:20
1	Ba 233.527†	28093.0	28813.9	821.17 µg/L	821.17 ppb	16:13:20
1	Be 313.107†	10078.3	13630.2	8.1137 µg/L	8.1137 ppb	16:13:20
1	Cd 226.502†	189.6	339.3	-1.4905 µg/L	-1.4905 ppb	16:13:41
1	Co 228.616†	689.9	715.4	29.732 µg/L	29.732 ppb	16:13:41
1	Cr 267.716†	7956.1	8197.0	194.24 µg/L	194.24 ppb	16:13:20
1	Cu 324.752†	5189.7	2830.2	35.879 µg/L	35.879 ppb	16:13:20
1	Mn 257.610†	639269.7	655459.5	2440.2 µg/L	2440.2 ppb	16:13:15
1	Mo 202.031†	86.1	95.0	14.522 µg/L	14.522 ppb	16:13:41
1	Ni 231.604†	2174.7	1921.8	115.33 µg/L	115.33 ppb	16:13:41
1	P 214.914†	650.6	645.6	1434.3 µg/L	1434.3 ppb	16:13:41
1	Pb 220.353†	358.0	275.5	78.989 µg/L	78.989 ppb	16:13:41
1	S 181.975 Axial†	162.9	152.3	739.26 µg/L	739.26 ppb	16:13:41
1	Sb 206.836†	40.5	16.9	14.637 µg/L	14.637 ppb	16:13:41
1	Se 196.026†	-44.2	-56.0	179.55 µg/L	179.55 ppb	16:13:41
1	SiO2†	274659.9	280162.4	65813 µg/L	65813 ppb	16:13:15
1	Si 251.611†	332465.9	340445.1	30558 µg/L	30558 ppb	16:13:15
1	Sn 189.927†	6.8	4.2	-7.7885 µg/L	-7.7885 ppb	16:13:41
1	Ti 334.940†	1547502.0	1585890.4	4216.3 µg/L	4216.3 ppb	16:13:15
1	Tl 190.801†	-60.6	-36.1	9.5300 µg/L	9.5300 ppb	16:13:41
1	U 409.014†	-1394.7	-1326.2	-141.82 µg/L	-141.82 ppb	16:13:15
1	V 292.402†	11583.7	11905.6	150.67 µg/L	150.67 ppb	16:13:20
1	Zn 213.857†	15489.9	15375.2	410.47 µg/L	410.47 ppb	16:13:20
2	SC RADIAL	55853.1	55853.1	100 %		16:12:16
2	Al 396.153Radial†	68525.1	68367.3	54006 µg/L	54006 ppb	16:12:16
2	Ca 317.933Radial†	14510.7	14287.3	14470 µg/L	14470 ppb	16:12:16
2	Fe 238.204 Radial†	11427.6	11383.9	101040 µg/L	101040 ppb	16:12:36
2	K 766.490 Radial†	15946.7	15721.0	12481 µg/L	12481 ppb	16:12:16
2	Mg 279.077 IEC†	1039.9	1024.7	10022 µg/L	10022 ppb	16:12:36
2	Na 589.592 Radial†	4039.0	3557.9	1271.1 µg/L	1271.1 ppb	16:12:16
2	Sr 421.552†	12618.2	12549.3	145.43 µg/L	145.43 ppb	16:12:16
2	Sc 361.383	1967755.8	1967755.8	99.215 %		16:13:48
2	Y 371.029	1392502.0	1392502.0	101.43 %		16:13:48
2	Ag 328.068†	-1654.9	-1165.6	-2.7451 µg/L	-2.7451 ppb	16:13:54
2	As 188.979†	10.5	12.3	31.106 µg/L	31.106 ppb	16:14:15
2	B 249.677†	1003.8	697.3	-19.078 µg/L	-19.078 ppb	16:13:54
2	Ba 233.527†	27607.4	27846.8	793.61 µg/L	793.61 ppb	16:13:54
2	Be 313.107†	9705.2	13082.8	7.7575 µg/L	7.7575 ppb	16:13:54
2	Cd 226.502†	187.2	333.7	-1.4087 µg/L	-1.4087 ppb	16:14:15
2	Co 228.616†	680.6	694.3	28.782 µg/L	28.782 ppb	16:14:15
2	Cr 267.716†	7827.5	7932.2	187.97 µg/L	187.97 ppb	16:13:54
2	Cu 324.752†	5046.9	2598.0	33.806 µg/L	33.806 ppb	16:13:54
2	Mn 257.610†	636759.3	642060.8	2390.3 µg/L	2390.3 ppb	16:13:48
2	Mo 202.031†	87.4	94.8	14.427 µg/L	14.427 ppb	16:14:15
2	Ni 231.604†	2186.7	1896.9	113.83 µg/L	113.83 ppb	16:14:15
2	P 214.914†	660.1	644.1	1432.2 µg/L	1432.2 ppb	16:14:15
2	Pb 220.353†	356.9	268.3	76.925 µg/L	76.925 ppb	16:14:15

2	S 181.975 Axial†	168.1	154.8	751.59 µg/L	751.59 ppb	16:14:15
2	Sb 206.836†	35.1	10.8	8.2148 µg/L	8.2148 ppb	16:14:15
2	Se 196.026†	-37.2	-48.2	186.30 µg/L	186.30 ppb	16:14:15
2	SiO2†	273733.5	274559.2	64497 µg/L	64497 ppb	16:13:48
2	Si 251.611†	331462.2	333781.1	29960 µg/L	29960 ppb	16:13:48
2	Sn 189.927†	-4.2	-7.1	-13.218 µg/L	-13.218 ppb	16:14:15
2	Ti 334.940†	1540105.2	1552125.8	4126.5 µg/L	4126.5 ppb	16:13:48
2	Tl 190.801†	-59.9	-34.4	10.760 µg/L	10.760 ppb	16:14:15
2	U 409.014†	-1443.4	-1351.6	-143.92 µg/L	-143.92 ppb	16:13:48
2	V 292.402†	11392.4	11515.9	145.87 µg/L	145.87 ppb	16:13:54
2	Zn 213.857†	15174.6	14794.1	394.86 µg/L	394.86 ppb	16:13:54
3	Sc RADIAL	55581.7	55581.7	99.8 %		16:12:41
3	Al 396.153Radial†	68901.9	69078.8	54568 µg/L	54568 ppb	16:12:41
3	Ca 317.933Radial†	14578.3	14425.8	14610 µg/L	14610 ppb	16:12:41
3	Fe 238.204 Radial†	11527.1	11539.3	102420 µg/L	102420 ppb	16:13:02
3	K 766.490 Radial†	16037.3	15889.5	12615 µg/L	12615 ppb	16:12:41
3	Mg 279.077 IEC†	1047.8	1037.6	10148 µg/L	10148 ppb	16:13:02
3	Na 589.592 Radial†	4083.9	3622.6	1294.2 µg/L	1294.2 ppb	16:12:41
3	Sr 421.552†	12732.0	12724.9	147.46 µg/L	147.46 ppb	16:12:41
3	Sc 361.383	1954508.3	1954508.3	98.547 %		16:14:23
3	Y 371.029	1381401.3	1381401.3	100.62 %		16:14:23
3	Ag 328.068†	-1594.9	-1116.0	-2.2646 µg/L	-2.2646 ppb	16:14:28
3	As 188.979†	4.9	6.7	19.352 µg/L	19.352 ppb	16:14:49
3	B 249.677†	939.8	639.3	-22.587 µg/L	-22.587 ppb	16:14:28
3	Ba 233.527†	26688.5	27103.0	772.41 µg/L	772.41 ppb	16:14:28
3	Be 313.107†	9310.2	12748.2	7.5391 µg/L	7.5391 ppb	16:14:28
3	Cd 226.502†	156.0	303.4	-2.4730 µg/L	-2.4730 ppb	16:14:49
3	Co 228.616†	635.5	653.1	26.676 µg/L	26.676 ppb	16:14:49
3	Cr 267.716†	7436.3	7588.7	179.83 µg/L	179.83 ppb	16:14:28
3	Cu 324.752†	4949.4	2533.5	33.507 µg/L	33.507 ppb	16:14:28
3	Mn 257.610†	626162.6	635658.0	2366.8 µg/L	2366.8 ppb	16:14:23
3	Mo 202.031†	83.3	91.3	14.081 µg/L	14.081 ppb	16:14:49
3	Ni 231.604†	2033.4	1756.3	105.51 µg/L	105.51 ppb	16:14:49
3	P 214.914†	613.9	601.8	1332.7 µg/L	1332.7 ppb	16:14:49
3	Pb 220.353†	339.6	253.1	72.512 µg/L	72.512 ppb	16:14:49
3	S 181.975 Axial†	155.8	143.4	696.27 µg/L	696.27 ppb	16:14:49
3	Sb 206.836†	35.1	11.0	8.5459 µg/L	8.5459 ppb	16:14:49
3	Se 196.026†	-23.2	-34.2	212.15 µg/L	212.15 ppb	16:14:49
3	SiO2†	270782.1	273434.3	64233 µg/L	64233 ppb	16:14:23
3	Si 251.611†	327812.1	332341.6	29831 µg/L	29831 ppb	16:14:23
3	Sn 189.927†	0.1	-2.7	-11.137 µg/L	-11.137 ppb	16:14:49
3	Ti 334.940†	1510057.7	1532156.6	4073.4 µg/L	4073.4 ppb	16:14:23
3	Tl 190.801†	-60.2	-35.0	9.5092 µg/L	9.5092 ppb	16:14:49
3	U 409.014†	-1358.6	-1275.4	-136.84 µg/L	-136.84 ppb	16:14:23
3	V 292.402†	10911.3	11105.5	141.26 µg/L	141.26 ppb	16:14:28
3	Zn 213.857†	14761.2	14478.2	386.26 µg/L	386.26 ppb	16:14:28

Mean Data: 245147013|944117|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	1952459.6	98.444 %	0.8277			0.84%
Sc RADIAL	55617.1	99.8 %	0.40			0.40%
Y 371.029	1381093.0	100.60 %	0.842			0.84%
Ag 328.068†	-1164.8	-2.6635 µg/L	0.36506	-2.6635 ppb	0.36506	13.71%
Al 396.153Radial†	69131.3	54609 µg/L	625.3	54609 ppb	625.3	1.14%
As 188.979†	9.3	24.888 µg/L	5.9065	24.888 ppb	5.9065	23.73%
B 249.677†	693.4	-19.894 µg/L	2.3918	-19.894 ppb	2.3918	12.02%
Ba 233.527†	27921.2	795.73 µg/L	24.450	795.73 ppb	24.450	3.07%
Be 313.107†	13153.7	7.8034 µg/L	0.29002	7.8034 ppb	0.29002	3.72%
Ca 317.933Radial†	14441.9	14626 µg/L	165.3	14626 ppb	165.3	1.13%
Cd 226.502†	325.5	-1.7907 µg/L	0.59228	-1.7907 ppb	0.59228	33.08%
Co 228.616†	687.6	28.397 µg/L	1.5642	28.397 ppb	1.5642	5.51%
Cr 267.716†	7906.0	187.35 µg/L	7.227	187.35 ppb	7.227	3.86%
Cu 324.752†	2653.9	34.397 µg/L	1.2918	34.397 ppb	1.2918	3.76%
Fe 238.204 Radial†	11518.7	102230 µg/L	1116.0	102230 ppb	1116.0	1.09%
K 766.490 Radial†	15896.1	12620 µg/L	141.7	12620 ppb	141.7	1.12%
Mg 279.077 IEC†	1034.9	10121 µg/L	88.7	10121 ppb	88.7	0.88%
Mn 257.610†	644392.7	2399.1 µg/L	37.49	2399.1 ppb	37.49	1.56%
Mo 202.031†	93.7	14.343 µg/L	0.2318	14.343 ppb	0.2318	1.62%
Na 589.592 Radial†	3593.2	1283.7 µg/L	11.69	1283.7 ppb	11.69	0.91%

Ni 231.604†	1858.3	111.56 µg/L	5.293	111.56 ppb	5.293	4.74%
P 214.914†	630.5	1399.7 µg/L	58.06	1399.7 ppb	58.06	4.15%
Pb 220.353†	265.6	76.142 µg/L	3.3085	76.142 ppb	3.3085	4.35%
S 181.975 Axial†	150.2	729.04 µg/L	29.041	729.04 ppb	29.041	3.98%
Sb 206.836†	12.9	10.466 µg/L	3.6162	10.466 ppb	3.6162	34.55%
Se 196.026†	-46.1	192.66 µg/L	17.208	192.66 ppb	17.208	8.93%
SiO2†	276052.0	64848 µg/L	846.6	64848 ppb	846.6	1.31%
Si 251.611†	335522.6	30117 µg/L	388.1	30117 ppb	388.1	1.29%
Sn 189.927†	-1.9	-10.714 µg/L	2.7392	-10.714 ppb	2.7392	25.57%
Sr 421.552†	12703.7	147.22 µg/L	1.680	147.22 ppb	1.680	1.14%
Ti 334.940†	1556724.3	4138.8 µg/L	72.22	4138.8 ppb	72.22	1.74%
Tl 190.801†	-35.1	9.9331 µg/L	0.71620	9.9331 ppb	0.71620	7.21%
U 409.014†	-1317.7	-140.86 µg/L	3.634	-140.86 ppb	3.634	2.58%
V 292.402†	11509.0	145.93 µg/L	4.706	145.93 ppb	4.706	3.22%
Zn 213.857†	14882.5	397.20 µg/L	12.274	397.20 ppb	12.274	3.09%

Sequence No.: 48  
 Sample ID: 245147014|944117|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 340  
 Date Collected: 2/8/2010 16:14:58  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245147014|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55406.3	55406.3	99.4 %		16:15:31
1	Al 396.153Radial†	105535.1	106135.8	83841 µg/L	83841 ppb	16:15:31
1	Ca 317.933Radial†	20060.5	19984.9	20240 µg/L	20240 ppb	16:15:31
1	Fe 238.204 Radial†	11594.1	11643.2	103340 µg/L	103340 ppb	16:15:51
1	K 766.490 Radial†	16733.9	16640.9	13211 µg/L	13211 ppb	16:15:31
1	Mg 279.077 IEC†	1508.8	1504.5	14763 µg/L	14763 ppb	16:15:51
1	Na 589.592 Radial†	2419.5	1961.8	700.88 µg/L	700.88 ppb	16:15:31
1	Sr 421.552†	18599.1	18665.2	216.30 µg/L	216.30 ppb	16:15:31
1	Sc 361.383	1940696.2	1940696.2	97.851 %		16:16:56
1	Y 371.029	1364525.1	1364525.1	99.391 %		16:16:56
1	Ag 328.068†	-1595.4	-1128.1	-1.8021 µg/L	-1.8021 ppb	16:17:01
1	As 188.979†	7.0	8.8	23.641 µg/L	23.641 ppb	16:17:22
1	B 249.677†	981.9	689.0	-20.768 µg/L	-20.768 ppb	16:17:01
1	Ba 233.527†	44051.9	45040.5	1283.6 µg/L	1283.6 ppb	16:17:01
1	Be 313.107†	11972.6	15536.4	9.4571 µg/L	9.4571 ppb	16:17:01
1	Cd 226.502†	216.2	366.0	-0.7447 µg/L	-0.7447 ppb	16:17:22
1	Co 228.616†	946.1	975.1	43.620 µg/L	43.620 ppb	16:17:22
1	Cr 267.716†	5371.2	5531.9	131.16 µg/L	131.16 ppb	16:17:01
1	Cu 324.752†	11338.7	9099.0	83.574 µg/L	83.574 ppb	16:17:01
1	Mn 257.610†	760644.0	777615.5	2892.4 µg/L	2892.4 ppb	16:16:56
1	Mo 202.031†	5.2	12.0	5.2700 µg/L	5.2700 ppb	16:17:22
1	Ni 231.604†	1621.3	1349.8	81.376 µg/L	81.376 ppb	16:17:22
1	P 214.914†	529.9	520.3	1145.0 µg/L	1145.0 ppb	16:17:22
1	Pb 220.353†	963.3	893.0	259.16 µg/L	259.16 ppb	16:17:22
1	S 181.975 Axial†	197.6	187.3	909.31 µg/L	909.31 ppb	16:17:22
1	Sb 206.836†	30.5	6.6	3.7542 µg/L	3.7542 ppb	16:17:22
1	Se 196.026†	-24.8	-36.1	206.01 µg/L	206.01 ppb	16:17:22
1	SiO2†	320958.6	326668.5	76738 µg/L	76738 ppb	16:16:56
1	Si 251.611†	388430.9	396659.4	35604 µg/L	35604 ppb	16:16:56
1	Sn 189.927†	-34.0	-37.6	-28.267 µg/L	-28.267 ppb	16:17:22
1	Ti 334.940†	1567397.9	1601661.9	4258.0 µg/L	4258.0 ppb	16:16:56
1	Tl 190.801†	-52.6	-27.7	26.285 µg/L	26.285 ppb	16:17:22
1	U 409.014†	-811.7	-726.3	-84.910 µg/L	-84.910 ppb	16:17:01
1	V 292.402†	17323.1	17736.9	218.18 µg/L	218.18 ppb	16:17:01
1	Zn 213.857†	11884.8	11645.2	309.24 µg/L	309.24 ppb	16:17:01
2	Sc RADIAL	56310.2	56310.2	101 %		16:15:57
2	Al 396.153Radial†	104809.6	103714.4	81928 µg/L	81928 ppb	16:15:57
2	Ca 317.933Radial†	19927.3	19529.4	19779 µg/L	19779 ppb	16:15:57
2	Fe 238.204 Radial†	11562.8	11425.1	101400 µg/L	101400 ppb	16:16:17
2	K 766.490 Radial†	16663.4	16301.0	12941 µg/L	12941 ppb	16:15:57
2	Mg 279.077 IEC†	1499.7	1471.2	14435 µg/L	14435 ppb	16:16:17
2	Na 589.592 Radial†	2434.1	1937.3	692.11 µg/L	692.11 ppb	16:15:57
2	Sr 421.552†	18497.8	18264.8	211.66 µg/L	211.66 ppb	16:15:57
2	Sc 361.383	1955668.4	1955668.4	98.606 %		16:17:29
2	Y 371.029	1373925.1	1373925.1	100.08 %		16:17:29
2	Ag 328.068†	-1661.6	-1182.7	-2.4080 µg/L	-2.4080 ppb	16:17:35
2	As 188.979†	11.3	13.2	32.751 µg/L	32.751 ppb	16:17:55
2	B 249.677†	987.5	687.0	-19.855 µg/L	-19.855 ppb	16:17:35
2	Ba 233.527†	43937.7	44580.0	1270.5 µg/L	1270.5 ppb	16:17:35
2	Be 313.107†	11972.1	15442.2	9.4105 µg/L	9.4105 ppb	16:17:35
2	Cd 226.502†	219.5	367.6	-0.4780 µg/L	-0.4780 ppb	16:17:55
2	Co 228.616†	954.4	976.2	43.793 µg/L	43.793 ppb	16:17:55
2	Cr 267.716†	5369.4	5488.1	130.12 µg/L	130.12 ppb	16:17:35
2	Cu 324.752†	11288.9	8959.8	82.246 µg/L	82.246 ppb	16:17:35
2	Mn 257.610†	756927.1	767894.7	2856.1 µg/L	2856.1 ppb	16:17:29
2	Mo 202.031†	5.6	12.4	5.2388 µg/L	5.2388 ppb	16:17:55
2	Ni 231.604†	1632.9	1348.9	81.299 µg/L	81.299 ppb	16:17:55
2	P 214.914†	539.2	525.6	1158.5 µg/L	1158.5 ppb	16:17:55
2	Pb 220.353†	978.0	900.4	261.28 µg/L	261.28 ppb	16:17:55

2	S 181.975 Axial†	203.2	191.5	929.35 µg/L	929.35 ppb	16:17:55
2	Sb 206.836†	24.7	0.4	-2.7115 µg/L	-2.7115 ppb	16:17:55
2	Se 196.026†	-28.0	-39.2	196.25 µg/L	196.25 ppb	16:17:55
2	SiO2†	319560.8	322739.8	75815 µg/L	75815 ppb	16:17:29
2	Si 251.611†	386780.2	391946.2	35181 µg/L	35181 ppb	16:17:29
2	Sn 189.927†	-28.7	-31.9	-25.235 µg/L	-25.235 ppb	16:17:55
2	Ti 334.940†	1559467.8	1581356.4	4204.0 µg/L	4204.0 ppb	16:17:29
2	Tl 190.801†	-58.4	-33.1	17.078 µg/L	17.078 ppb	16:17:55
2	U 409.014†	-864.9	-773.9	-89.157 µg/L	-89.157 ppb	16:17:35
2	V 292.402†	17256.8	17534.2	215.59 µg/L	215.59 ppb	16:17:35
2	Zn 213.857†	11841.8	11508.6	305.65 µg/L	305.65 ppb	16:17:35
3	Sc RADIAL	55623.0	55623.0	99.8 %		16:16:23
3	Al 396.153Radial†	105029.8	105216.1	83115 µg/L	83115 ppb	16:16:23
3	Ca 317.933Radial†	19894.0	19739.6	19992 µg/L	19992 ppb	16:16:23
3	Fe 238.204 Radial†	11637.2	11640.9	103320 µg/L	103320 ppb	16:16:43
3	K 766.490 Radial†	16663.1	16504.4	13103 µg/L	13103 ppb	16:16:23
3	Mg 279.077 IEC†	1512.0	1501.9	14736 µg/L	14736 ppb	16:16:43
3	Na 589.592 Radial†	2431.8	1964.7	701.90 µg/L	701.90 ppb	16:16:23
3	Sr 421.552†	18451.7	18444.7	213.75 µg/L	213.75 ppb	16:16:23
3	Sc 361.383	1931721.9	1931721.9	97.398 %		16:18:02
3	Y 371.029	1358420.5	1358420.5	98.947 %		16:18:02
3	Ag 328.068†	-1624.4	-1165.4	-2.1716 µg/L	-2.1716 ppb	16:18:08
3	As 188.979†	8.1	10.0	26.209 µg/L	26.209 ppb	16:18:29
3	B 249.677†	971.3	682.8	-21.064 µg/L	-21.064 ppb	16:18:08
3	Ba 233.527†	42464.9	43620.3	1243.1 µg/L	1243.1 ppb	16:18:08
3	Be 313.107†	11385.4	14990.4	9.1031 µg/L	9.1031 ppb	16:18:08
3	Cd 226.502†	170.7	320.3	-2.1018 µg/L	-2.1018 ppb	16:18:29
3	Co 228.616†	877.5	909.2	40.266 µg/L	40.266 ppb	16:18:29
3	Cr 267.716†	5112.5	5291.8	125.47 µg/L	125.47 ppb	16:18:08
3	Cu 324.752†	10954.1	8757.9	80.977 µg/L	80.977 ppb	16:18:08
3	Mn 257.610†	741252.2	761317.0	2832.0 µg/L	2832.0 ppb	16:18:02
3	Mo 202.031†	1.9	8.7	4.8977 µg/L	4.8977 ppb	16:18:29
3	Ni 231.604†	1552.1	1286.5	77.623 µg/L	77.623 ppb	16:18:29
3	P 214.914†	515.8	508.3	1117.3 µg/L	1117.3 ppb	16:18:29
3	Pb 220.353†	926.9	860.2	249.63 µg/L	249.63 ppb	16:18:29
3	S 181.975 Axial†	188.2	178.6	866.90 µg/L	866.90 ppb	16:18:29
3	Sb 206.836†	39.2	15.7	13.480 µg/L	13.480 ppb	16:18:29
3	Se 196.026†	-34.7	-46.4	189.65 µg/L	189.65 ppb	16:18:29
3	SiO2†	315239.8	322320.8	75717 µg/L	75717 ppb	16:18:02
3	Si 251.611†	381665.2	391557.1	35146 µg/L	35146 ppb	16:18:02
3	Sn 189.927†	-28.7	-32.3	-25.598 µg/L	-25.598 ppb	16:18:29
3	Ti 334.940†	1526082.9	1566685.0	4165.0 µg/L	4165.0 ppb	16:18:02
3	Tl 190.801†	-51.0	-26.3	27.261 µg/L	27.261 ppb	16:18:29
3	U 409.014†	-803.1	-721.4	-84.424 µg/L	-84.424 ppb	16:18:08
3	V 292.402†	16634.6	17112.3	210.91 µg/L	210.91 ppb	16:18:08
3	Zn 213.857†	11497.7	11304.2	300.03 µg/L	300.03 ppb	16:18:08

Mean Data: 245147014|944117|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	1942695.5	97.951 %	0.6100			0.62%
Sc RADIAL	55779.8	100 %	0.8			0.85%
Y 371.029	1365623.6	99.471 %	0.5689			0.57%
Ag 328.068†	-1158.7	-2.1272 µg/L	0.30536	-2.1272 ppb	0.30536	14.35%
Al 396.153Radial†	105022.1	82961 µg/L	965.5	82961 ppb	965.5	1.16%
As 188.979†	10.7	27.534 µg/L	4.6975	27.534 ppb	4.6975	17.06%
B 249.677†	686.3	-20.562 µg/L	0.6304	-20.562 ppb	0.6304	3.07%
Ba 233.527†	44413.6	1265.7 µg/L	20.65	1265.7 ppb	20.65	1.63%
Be 313.107†	15323.0	9.3236 µg/L	0.19231	9.3236 ppb	0.19231	2.06%
Ca 317.933Radial†	19751.3	20003 µg/L	230.9	20003 ppb	230.9	1.15%
Cd 226.502†	351.3	-1.1082 µg/L	0.87079	-1.1082 ppb	0.87079	78.58%
Co 228.616†	953.5	42.560 µg/L	1.9882	42.560 ppb	1.9882	4.67%
Cr 267.716†	5437.3	128.92 µg/L	3.031	128.92 ppb	3.031	2.35%
Cu 324.752†	8938.9	82.266 µg/L	1.2988	82.266 ppb	1.2988	1.58%
Fe 238.204 Radial†	11569.7	102690 µg/L	1111.8	102690 ppb	1111.8	1.08%
K 766.490 Radial†	16482.1	13085 µg/L	135.8	13085 ppb	135.8	1.04%
Mg 279.077 IEC†	1492.5	14645 µg/L	182.2	14645 ppb	182.2	1.24%
Mn 257.610†	768942.4	2860.2 µg/L	30.38	2860.2 ppb	30.38	1.06%
Mo 202.031†	11.1	5.1355 µg/L	0.20653	5.1355 ppb	0.20653	4.02%
Na 589.592 Radial†	1954.6	698.30 µg/L	5.385	698.30 ppb	5.385	0.77%

Ni 231.604†	1328.4	80.100 µg/L	2.1448	80.100 ppb	2.1448	2.68%
P 214.914†	518.1	1140.3 µg/L	21.02	1140.3 ppb	21.02	1.84%
Pb 220.353†	884.6	256.69 µg/L	6.204	256.69 ppb	6.204	2.42%
S 181.975 Axial†	185.8	901.85 µg/L	31.883	901.85 ppb	31.883	3.54%
Sb 206.836†	7.6	4.8411 µg/L	8.15050	4.8411 ppb	8.15050	168.36%
Se 196.026†	-40.5	197.30 µg/L	8.234	197.30 ppb	8.234	4.17%
SiO2†	323909.7	76090 µg/L	563.4	76090 ppb	563.4	0.74%
Si 251.611†	393387.6	35311 µg/L	254.9	35311 ppb	254.9	0.72%
Sn 189.927†	-33.9	-26.367 µg/L	1.6555	-26.367 ppb	1.6555	6.28%
Sr 421.552†	18458.2	213.90 µg/L	2.324	213.90 ppb	2.324	1.09%
Ti 334.940†	1583234.5	4209.0 µg/L	46.70	4209.0 ppb	46.70	1.11%
Tl 190.801†	-29.1	23.541 µg/L	5.6182	23.541 ppb	5.6182	23.87%
U 409.014†	-740.5	-86.164 µg/L	2.6040	-86.164 ppb	2.6040	3.02%
V 292.402†	17461.2	214.89 µg/L	3.682	214.89 ppb	3.682	1.71%
Zn 213.857†	11486.0	304.97 µg/L	4.645	304.97 ppb	4.645	1.52%

Sequence No.: 49

Sample ID: 245147015|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 341

Date Collected: 2/8/2010 16:18:38

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147015|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55301.0	55301.0	99.3 %		16:19:11
1	Al 396.153Radial†	119936.5	120847.5	95462 µg/L	95462 ppb	16:19:11
1	Ca 317.933Radial†	18677.5	18630.0	18868 µg/L	18868 ppb	16:19:31
1	Fe 238.204 Radial†	14579.6	14673.4	130230 µg/L	130230 ppb	16:19:31
1	K 766.490 Radial†	20960.5	20931.2	16617 µg/L	16617 ppb	16:19:11
1	Mg 279.077 IEC†	1617.0	1616.5	15841 µg/L	15841 ppb	16:19:31
1	Na 589.592 Radial†	3590.4	3146.2	1124.0 µg/L	1124.0 ppb	16:19:31
1	Sr 421.552†	20857.7	20976.4	243.09 µg/L	243.09 ppb	16:19:11
1	Sc 361.383	1953696.1	1953696.1	98.506 %		16:20:36
1	Y 371.029	1377028.7	1377028.7	100.30 %		16:20:36
1	Ag 328.068†	-1889.1	-1415.4	-2.1958 µg/L	-2.1958 ppb	16:20:41
1	As 188.979†	4.6	6.4	20.163 µg/L	20.163 ppb	16:21:02
1	B 249.677†	1107.0	809.4	-29.029 µg/L	-29.029 ppb	16:20:41
1	Ba 233.527†	41883.2	42539.4	1212.4 µg/L	1212.4 ppb	16:20:41
1	Be 313.107†	14514.0	18034.9	10.848 µg/L	10.848 ppb	16:20:41
1	Cd 226.502†	284.0	433.3	-1.7870 µg/L	-1.7870 ppb	16:21:02
1	Co 228.616†	1086.6	1111.4	48.814 µg/L	48.814 ppb	16:21:02
1	Cr 267.716†	5872.4	6004.2	142.38 µg/L	142.38 ppb	16:20:41
1	Cu 324.752†	8230.1	5866.1	62.722 µg/L	62.722 ppb	16:20:41
1	Mn 257.610†	716508.7	727638.4	2710.9 µg/L	2710.9 ppb	16:20:36
1	Mo 202.031†	-14.1	-7.6	4.1025 µg/L	4.1025 ppb	16:21:02
1	Ni 231.604†	1629.5	1347.1	81.556 µg/L	81.556 ppb	16:21:02
1	P 214.914†	428.8	414.1	881.56 µg/L	881.56 ppb	16:21:02
1	Pb 220.353†	520.9	437.3	126.93 µg/L	126.93 ppb	16:21:02
1	S 181.975 Axial†	120.9	108.1	524.59 µg/L	524.59 ppb	16:21:02
1	Sb 206.836†	35.5	11.4	8.8725 µg/L	8.8725 ppb	16:21:02
1	Se 196.026†	-32.4	-43.6	266.96 µg/L	266.96 ppb	16:21:02
1	SiO2†	324399.4	327979.0	77046 µg/L	77046 ppb	16:20:36
1	Si 251.611†	392839.4	398493.4	35769 µg/L	35769 ppb	16:20:36
1	Sn 189.927†	-40.9	-44.4	-34.418 µg/L	-34.418 ppb	16:21:02
1	Ti 334.940†	1958202.5	1987734.8	5284.4 µg/L	5284.4 ppb	16:20:36
1	Tl 190.801†	-63.0	-37.9	23.946 µg/L	23.946 ppb	16:21:02
1	U 409.014†	-1105.9	-1019.4	-116.54 µg/L	-116.54 ppb	16:20:41
1	V 292.402†	22265.0	22636.0	278.16 µg/L	278.16 ppb	16:20:41
1	Zn 213.857†	11004.7	10671.0	281.55 µg/L	281.55 ppb	16:20:41
2	Sc RADIAL	55386.4	55386.4	99.4 %		16:19:37
2	Al 396.153Radial†	120264.5	120991.0	95576 µg/L	95576 ppb	16:19:37
2	Ca 317.933Radial†	18684.2	18607.6	18845 µg/L	18845 ppb	16:19:57
2	Fe 238.204 Radial†	14558.6	14629.5	129840 µg/L	129840 ppb	16:19:57
2	K 766.490 Radial†	20948.5	20886.6	16582 µg/L	16582 ppb	16:19:37
2	Mg 279.077 IEC†	1612.2	1609.1	15769 µg/L	15769 ppb	16:19:57
2	Na 589.592 Radial†	3617.9	3168.2	1131.9 µg/L	1131.9 ppb	16:19:57
2	Sr 421.552†	20959.4	21046.3	243.90 µg/L	243.90 ppb	16:19:37
2	Sc 361.383	1952546.0	1952546.0	98.448 %		16:21:09
2	Y 371.029	1375525.3	1375525.3	100.19 %		16:21:09
2	Ag 328.068†	-1888.6	-1416.0	-2.2090 µg/L	-2.2090 ppb	16:21:14
2	As 188.979†	7.7	9.5	26.631 µg/L	26.631 ppb	16:21:35
2	B 249.677†	1122.5	825.7	-28.040 µg/L	-28.040 ppb	16:21:14
2	Ba 233.527†	42131.5	42816.7	1220.3 µg/L	1220.3 ppb	16:21:14
2	Be 313.107†	14667.3	18199.3	10.939 µg/L	10.939 ppb	16:21:14
2	Cd 226.502†	281.1	430.6	-1.8232 µg/L	-1.8232 ppb	16:21:35
2	Co 228.616†	1090.5	1116.0	48.915 µg/L	48.915 ppb	16:21:35
2	Cr 267.716†	5956.7	6093.3	144.49 µg/L	144.49 ppb	16:21:14
2	Cu 324.752†	8232.9	5873.9	62.727 µg/L	62.727 ppb	16:21:14
2	Mn 257.610†	723967.2	735642.9	2740.4 µg/L	2740.4 ppb	16:21:09
2	Mo 202.031†	-19.7	-13.2	3.4554 µg/L	3.4554 ppb	16:21:35
2	Ni 231.604†	1631.4	1350.0	81.725 µg/L	81.725 ppb	16:21:35
2	P 214.914†	428.9	414.5	882.88 µg/L	882.88 ppb	16:21:35
2	Pb 220.353†	522.1	438.9	127.41 µg/L	127.41 ppb	16:21:35

2	S 181.975 Axial†	125.0	112.4	545.42 µg/L	545.42 ppb	16:21:35
2	Sb 206.836†	41.2	17.2	14.957 µg/L	14.957 ppb	16:21:35
2	Se 196.026†	-48.7	-60.2	239.54 µg/L	239.54 ppb	16:21:35
2	SiO2†	328571.0	332410.3	78087 µg/L	78087 ppb	16:21:09
2	Si 251.611†	397838.3	403806.0	36246 µg/L	36246 ppb	16:21:09
2	Sn 189.927†	-40.4	-43.9	-34.132 µg/L	-34.132 ppb	16:21:35
2	Ti 334.940†	1982676.3	2013765.3	5353.7 µg/L	5353.7 ppb	16:21:09
2	Tl 190.801†	-67.7	-42.7	17.333 µg/L	17.333 ppb	16:21:35
2	U 409.014†	-1110.0	-1024.3	-116.95 µg/L	-116.95 ppb	16:21:14
2	V 292.402†	22466.5	22854.0	280.64 µg/L	280.64 ppb	16:21:14
2	Zn 213.857†	11047.6	10721.2	282.93 µg/L	282.93 ppb	16:21:14
3	Sc RADIAL	55730.4	55730.4	100 %		16:20:03
3	Al 396.153Radial†	121449.0	121428.5	95921 µg/L	95921 ppb	16:20:03
3	Ca 317.933Radial†	18563.3	18370.8	18605 µg/L	18605 ppb	16:20:23
3	Fe 238.204 Radial†	14513.3	14493.8	128640 µg/L	128640 ppb	16:20:23
3	K 766.490 Radial†	21220.0	21028.0	16694 µg/L	16694 ppb	16:20:03
3	Mg 279.077 IEC†	1613.6	1600.5	15684 µg/L	15684 ppb	16:20:23
3	Na 589.592 Radial†	3591.2	3119.1	1114.3 µg/L	1114.3 ppb	16:20:23
3	Sr 421.552†	21109.7	21066.4	244.13 µg/L	244.13 ppb	16:20:03
3	Sc 361.383	1957457.5	1957457.5	98.696 %		16:21:42
3	Y 371.029	1379190.2	1379190.2	100.46 %		16:21:42
3	Ag 328.068†	-1856.6	-1378.8	-2.0283 µg/L	-2.0283 ppb	16:21:48
3	As 188.979†	2.4	4.1	15.175 µg/L	15.175 ppb	16:22:08
3	B 249.677†	1089.3	789.3	-29.165 µg/L	-29.165 ppb	16:21:48
3	Ba 233.527†	41079.2	41643.0	1186.9 µg/L	1186.9 ppb	16:21:48
3	Be 313.107†	14176.8	17664.9	10.586 µg/L	10.586 ppb	16:21:48
3	Cd 226.502†	239.1	387.3	-2.9782 µg/L	-2.9782 ppb	16:22:08
3	Co 228.616†	1011.0	1032.6	44.586 µg/L	44.586 ppb	16:22:08
3	Cr 267.716†	5723.4	5841.7	138.53 µg/L	138.53 ppb	16:21:48
3	Cu 324.752†	8065.6	5683.4	61.111 µg/L	61.111 ppb	16:21:48
3	Mn 257.610†	718021.7	727773.6	2711.2 µg/L	2711.2 ppb	16:21:42
3	Mo 202.031†	-21.6	-15.1	3.2033 µg/L	3.2033 ppb	16:22:08
3	Ni 231.604†	1535.7	1248.9	75.715 µg/L	75.715 ppb	16:22:08
3	P 214.914†	409.7	393.9	836.28 µg/L	836.28 ppb	16:22:08
3	Pb 220.353†	500.3	415.5	120.68 µg/L	120.68 ppb	16:22:08
3	S 181.975 Axial†	117.2	104.1	505.35 µg/L	505.35 ppb	16:22:08
3	Sb 206.836†	29.8	5.6	2.7564 µg/L	2.7564 ppb	16:22:08
3	Se 196.026†	-39.1	-50.3	252.07 µg/L	252.07 ppb	16:22:08
3	SiO2†	327203.7	330187.4	77565 µg/L	77565 ppb	16:21:42
3	Si 251.611†	395999.0	400928.4	35987 µg/L	35987 ppb	16:21:42
3	Sn 189.927†	-34.3	-37.5	-30.823 µg/L	-30.823 ppb	16:22:08
3	Ti 334.940†	1959554.5	1985284.7	5277.9 µg/L	5277.9 ppb	16:21:42
3	Tl 190.801†	-70.8	-45.7	11.936 µg/L	11.936 ppb	16:22:08
3	U 409.014†	-1007.0	-917.1	-106.54 µg/L	-106.54 ppb	16:21:48
3	V 292.402†	21715.5	22035.8	271.00 µg/L	271.00 ppb	16:21:48
3	Zn 213.857†	10826.0	10468.5	276.18 µg/L	276.18 ppb	16:21:48

## Mean Data: 245147015|944117|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1954566.5	98.550 %	0.1295			0.13%
Sc RADIAL	55472.6	99.6 %	0.41			0.41%
Y 371.029	1377248.1	100.32 %	0.134			0.13%
Ag 328.068†	-1403.4	-2.1444 µg/L	0.10071	-2.1444 ppb	0.10071	4.70%
Al 396.153Radial†	121089.0	95653 µg/L	239.1	95653 ppb	239.1	0.25%
As 188.979†	6.7	20.656 µg/L	5.7439	20.656 ppb	5.7439	27.81%
B 249.677†	808.1	-28.745 µg/L	0.6141	-28.745 ppb	0.6141	2.14%
Ba 233.527†	42333.0	1206.6 µg/L	17.49	1206.6 ppb	17.49	1.45%
Be 313.107†	17966.4	10.791 µg/L	0.1829	10.791 ppb	0.1829	1.69%
Ca 317.933Radial†	18536.1	18773 µg/L	145.4	18773 ppb	145.4	0.77%
Cd 226.502†	417.1	-2.1961 µg/L	0.67751	-2.1961 ppb	0.67751	30.85%
Co 228.616†	1086.7	47.438 µg/L	2.4707	47.438 ppb	2.4707	5.21%
Cr 267.716†	5979.8	141.80 µg/L	3.025	141.80 ppb	3.025	2.13%
Cu 324.752†	5807.8	62.187 µg/L	0.9318	62.187 ppb	0.9318	1.50%
Fe 238.204 Radial†	14598.9	129570 µg/L	830.9	129570 ppb	830.9	0.64%
K 766.490 Radial†	20948.6	16631 µg/L	57.4	16631 ppb	57.4	0.34%
Mg 279.077 IEC†	1608.7	15765 µg/L	78.1	15765 ppb	78.1	0.50%
Mn 257.610†	730351.6	2720.8 µg/L	17.00	2720.8 ppb	17.00	0.62%
Mo 202.031†	-12.0	3.5871 µg/L	0.46380	3.5871 ppb	0.46380	12.93%
Na 589.592 Radial†	3144.5	1123.4 µg/L	8.80	1123.4 ppb	8.80	0.78%

Ni 231.604†	1315.3	79.665 µg/L	3.4224	79.665 ppb	3.4224	4.30%
P 214.914†	407.5	866.91 µg/L	26.533	866.91 ppb	26.533	3.06%
Pb 220.353†	430.6	125.01 µg/L	3.755	125.01 ppb	3.755	3.00%
S 181.975 Axial†	108.2	525.12 µg/L	20.039	525.12 ppb	20.039	3.82%
Sb 206.836†	11.4	8.8619 µg/L	6.10019	8.8619 ppb	6.10019	68.84%
Se 196.026†	-51.4	252.86 µg/L	13.731	252.86 ppb	13.731	5.43%
SiO2†	330192.2	77566 µg/L	520.5	77566 ppb	520.5	0.67%
Si 251.611†	401075.9	36001 µg/L	238.7	36001 ppb	238.7	0.66%
Sn 189.927†	-41.9	-33.124 µg/L	1.9981	-33.124 ppb	1.9981	6.03%
Sr 421.552†	21029.7	243.70 µg/L	0.548	243.70 ppb	0.548	0.22%
Ti 334.940†	1995594.9	5305.3 µg/L	41.97	5305.3 ppb	41.97	0.79%
Tl 190.801†	-42.1	17.738 µg/L	6.0151	17.738 ppb	6.0151	33.91%
U 409.014†	-986.9	-113.34 µg/L	5.895	-113.34 ppb	5.895	5.20%
V 292.402†	22508.6	276.60 µg/L	5.004	276.60 ppb	5.004	1.81%
Zn 213.857†	10620.2	280.22 µg/L	3.569	280.22 ppb	3.569	1.27%

Sequence No.: 50

Sample ID: 245147016|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 342

Date Collected: 2/8/2010 16:22:17

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147016|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55197.2	55197.2	99.1 %		16:22:50
1	Al 396.153Radial†	99721.3	100669.3	79523 µg/L	79523 ppb	16:22:50
1	Ca 317.933Radial†	20592.3	20598.2	20861 µg/L	20861 ppb	16:23:10
1	Fe 238.204 Radial†	10375.5	10457.3	92813 µg/L	92813 ppb	16:23:10
1	K 766.490 Radial†	22679.1	22705.8	18026 µg/L	18026 ppb	16:22:50
1	Mg 279.077 IEC†	1454.8	1455.8	14293 µg/L	14293 ppb	16:23:10
1	Na 589.592 Radial†	3969.8	3535.9	1263.2 µg/L	1263.2 ppb	16:23:10
1	Sr 421.552†	16215.2	16329.7	189.24 µg/L	189.24 ppb	16:22:50
1	Sc 361.383	1924353.3	1924353.3	97.027 %		16:24:14
1	Y 371.029	1353810.3	1353810.3	98.611 %		16:24:14
1	Ag 328.068†	-1514.4	-1058.4	-2.0221 µg/L	-2.0221 ppb	16:24:20
1	As 188.979†	8.1	10.0	25.505 µg/L	25.505 ppb	16:24:40
1	B 249.677†	1251.8	975.7	-1.6530 µg/L	-1.6530 ppb	16:24:20
1	Ba 233.527†	40996.1	42273.4	1204.7 µg/L	1204.7 ppb	16:24:20
1	Be 313.107†	11766.6	15428.0	9.2007 µg/L	9.2007 ppb	16:24:20
1	Cd 226.502†	156.5	306.3	-1.3513 µg/L	-1.3513 ppb	16:24:40
1	Co 228.616†	786.1	818.5	34.205 µg/L	34.205 ppb	16:24:40
1	Cr 267.716†	3129.6	3268.2	77.527 µg/L	77.527 ppb	16:24:20
1	Cu 324.752†	8182.0	5944.0	58.113 µg/L	58.113 ppb	16:24:20
1	Mn 257.610†	504698.0	520427.9	1938.7 µg/L	1938.7 ppb	16:24:14
1	Mo 202.031†	-5.0	1.6	3.7105 µg/L	3.7105 ppb	16:24:40
1	Ni 231.604†	1179.7	908.8	55.079 µg/L	55.079 ppb	16:24:40
1	P 214.914†	808.8	812.3	1835.3 µg/L	1835.3 ppb	16:24:40
1	Pb 220.353†	500.9	424.8	123.82 µg/L	123.82 ppb	16:24:40
1	S 181.975 Axial†	257.8	251.0	1218.5 µg/L	1218.5 ppb	16:24:40
1	Sb 206.836†	34.9	11.4	9.3615 µg/L	9.3615 ppb	16:24:40
1	Se 196.026†	-31.1	-42.8	166.78 µg/L	166.78 ppb	16:24:40
1	SiO2†	271367.9	278343.8	65386 µg/L	65386 ppb	16:24:14
1	Si 251.611†	328504.8	338268.1	30363 µg/L	30363 ppb	16:24:14
1	Sn 189.927†	-42.6	-46.7	-31.797 µg/L	-31.797 ppb	16:24:40
1	Ti 334.940†	1725750.1	1778470.6	4728.2 µg/L	4728.2 ppb	16:24:14
1	Tl 190.801†	-59.2	-34.9	13.684 µg/L	13.684 ppb	16:24:40
1	U 409.014†	-825.5	-747.6	-85.519 µg/L	-85.519 ppb	16:24:20
1	V 292.402†	15226.8	15726.8	193.48 µg/L	193.48 ppb	16:24:20
1	Zn 213.857†	10406.4	10224.7	271.44 µg/L	271.44 ppb	16:24:20
2	Sc RADIAL	56009.1	56009.1	101 %		16:23:16
2	Al 396.153Radial†	99571.3	99061.0	78252 µg/L	78252 ppb	16:23:16
2	Ca 317.933Radial†	20425.9	20131.4	20388 µg/L	20388 ppb	16:23:36
2	Fe 238.204 Radial†	10282.3	10212.8	90644 µg/L	90644 ppb	16:23:36
2	K 766.490 Radial†	22660.2	22355.1	17748 µg/L	17748 ppb	16:23:16
2	Mg 279.077 IEC†	1446.3	1426.1	14001 µg/L	14001 ppb	16:23:36
2	Na 589.592 Radial†	3950.9	3459.0	1235.8 µg/L	1235.8 ppb	16:23:36
2	Sr 421.552†	16140.9	16018.5	185.63 µg/L	185.63 ppb	16:23:16
2	Sc 361.383	1938214.8	1938214.8	97.726 %		16:24:47
2	Y 371.029	1362698.0	1362698.0	99.258 %		16:24:47
2	Ag 328.068†	-1494.1	-1026.4	-1.8920 µg/L	-1.8920 ppb	16:24:53
2	As 188.979†	8.1	9.9	25.292 µg/L	25.292 ppb	16:25:14
2	B 249.677†	1257.8	972.7	-0.6681 µg/L	-0.6681 ppb	16:24:53
2	Ba 233.527†	40983.6	41958.5	1195.7 µg/L	1195.7 ppb	16:24:53
2	Be 313.107†	11705.2	15278.4	9.1253 µg/L	9.1253 ppb	16:24:53
2	Cd 226.502†	170.3	319.3	-0.7213 µg/L	-0.7213 ppb	16:25:14
2	Co 228.616†	806.6	833.6	35.191 µg/L	35.191 ppb	16:25:14
2	Cr 267.716†	3139.7	3255.5	77.224 µg/L	77.224 ppb	16:24:53
2	Cu 324.752†	8179.6	5881.2	57.334 µg/L	57.334 ppb	16:24:53
2	Mn 257.610†	498072.8	509928.4	1899.6 µg/L	1899.6 ppb	16:24:47
2	Mo 202.031†	-2.1	4.6	3.9573 µg/L	3.9573 ppb	16:25:14
2	Ni 231.604†	1192.1	912.8	55.288 µg/L	55.288 ppb	16:25:14
2	P 214.914†	833.8	832.0	1882.7 µg/L	1882.7 ppb	16:25:14
2	Pb 220.353†	526.8	447.6	130.44 µg/L	130.44 ppb	16:25:14

2	S 181.975 Axial†	268.7	260.4	1263.8 µg/L	1263.8 ppb	16:25:14
2	Sb 206.836†	39.4	15.7	14.010 µg/L	14.010 ppb	16:25:14
2	Se 196.026†	-31.9	-43.4	160.32 µg/L	160.32 ppb	16:25:14
2	SiO2†	268743.4	273658.0	64285 µg/L	64285 ppb	16:24:47
2	Si 251.611†	325440.2	332710.8	29864 µg/L	29864 ppb	16:24:47
2	Sn 189.927†	-24.0	-27.4	-21.894 µg/L	-21.894 ppb	16:25:14
2	Ti 334.940†	1707998.0	1747585.2	4646.1 µg/L	4646.1 ppb	16:24:47
2	Tl 190.801†	-61.3	-36.7	9.7156 µg/L	9.7156 ppb	16:25:14
2	U 409.014†	-807.9	-723.5	-82.890 µg/L	-82.890 ppb	16:24:53
2	V 292.402†	15241.5	15629.6	192.10 µg/L	192.10 ppb	16:24:53
2	Zn 213.857†	10361.4	10102.0	268.24 µg/L	268.24 ppb	16:24:53
3	Sc RADIAL	55876.4	55876.4	100 %		16:23:42
3	Al 396.153Radial†	100280.8	100003.7	78997 µg/L	78997 ppb	16:23:42
3	Ca 317.933Radial†	20552.0	20305.3	20565 µg/L	20565 ppb	16:24:02
3	Fe 238.204 Radial†	10401.5	10355.9	91914 µg/L	91914 ppb	16:24:02
3	K 766.490 Radial†	22745.4	22493.6	17858 µg/L	17858 ppb	16:23:42
3	Mg 279.077 IEC†	1463.7	1446.8	14205 µg/L	14205 ppb	16:24:02
3	Na 589.592 Radial†	3967.3	3484.7	1244.9 µg/L	1244.9 ppb	16:24:02
3	Sr 421.552†	16254.6	16170.1	187.39 µg/L	187.39 ppb	16:23:42
3	Sc 361.383	1893286.5	1893286.5	95.460 %		16:25:21
3	Y 371.029	1331392.1	1331392.1	96.978 %		16:25:21
3	Ag 328.068†	-1495.7	-1064.4	-2.1200 µg/L	-2.1200 ppb	16:25:26
3	As 188.979†	10.8	13.0	31.776 µg/L	31.776 ppb	16:25:47
3	B 249.677†	1235.3	979.6	-0.9980 µg/L	-0.9980 ppb	16:25:26
3	Ba 233.527†	40801.9	42763.3	1218.7 µg/L	1218.7 ppb	16:25:26
3	Be 313.107†	11702.6	15559.9	9.2593 µg/L	9.2593 ppb	16:25:26
3	Cd 226.502†	137.8	289.4	-1.7517 µg/L	-1.7517 ppb	16:25:47
3	Co 228.616†	760.1	804.5	33.257 µg/L	33.257 ppb	16:25:47
3	Cr 267.716†	3094.9	3284.9	77.921 µg/L	77.921 ppb	16:25:26
3	Cu 324.752†	8165.9	6065.4	58.912 µg/L	58.912 ppb	16:25:26
3	Mn 257.610†	506245.6	530584.4	1976.2 µg/L	1976.2 ppb	16:25:21
3	Mo 202.031†	-3.5	3.0	3.8314 µg/L	3.8314 ppb	16:25:47
3	Ni 231.604†	1152.9	900.6	54.583 µg/L	54.583 ppb	16:25:47
3	P 214.914†	797.6	814.3	1840.4 µg/L	1840.4 ppb	16:25:47
3	Pb 220.353†	504.5	437.1	127.37 µg/L	127.37 ppb	16:25:47
3	S 181.975 Axial†	258.2	255.8	1241.7 µg/L	1241.7 ppb	16:25:47
3	Sb 206.836†	30.7	7.5	5.3081 µg/L	5.3081 ppb	16:25:47
3	Se 196.026†	-25.2	-37.1	173.54 µg/L	173.54 ppb	16:25:47
3	SiO2†	272863.2	284499.5	66832 µg/L	66832 ppb	16:25:21
3	Si 251.611†	330533.1	345948.5	31052 µg/L	31052 ppb	16:25:21
3	Sn 189.927†	-29.3	-33.6	-25.092 µg/L	-25.092 ppb	16:25:47
3	Ti 334.940†	1731303.8	1813474.0	4821.2 µg/L	4821.2 ppb	16:25:21
3	Tl 190.801†	-59.9	-36.7	11.851 µg/L	11.851 ppb	16:25:47
3	U 409.014†	-818.6	-754.3	-86.013 µg/L	-86.013 ppb	16:25:26
3	V 292.402†	15110.4	15862.4	194.95 µg/L	194.95 ppb	16:25:26
3	Zn 213.857†	10356.4	10348.3	274.84 µg/L	274.84 ppb	16:25:26

Mean Data: 245147016|944117|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1918618.2	96.737 %	1.1600			1.20%
Sc RADIAL	55694.2	100.0 %	0.78			0.78%
Y 371.029	1349300.1	98.282 %	1.1751			1.20%
Ag 328.068†	-1049.8	-2.0114 µg/L	0.11438	-2.0114 ppb	0.11438	5.69%
Al 396.153Radial†	99911.3	78924 µg/L	638.4	78924 ppb	638.4	0.81%
As 188.979†	11.0	27.524 µg/L	3.6837	27.524 ppb	3.6837	13.38%
B 249.677†	976.0	-1.1063 µg/L	0.50130	-1.1063 ppb	0.50130	45.31%
Ba 233.527†	42331.8	1206.4 µg/L	11.56	1206.4 ppb	11.56	0.96%
Be 313.107†	15422.1	9.1951 µg/L	0.06718	9.1951 ppb	0.06718	0.73%
Ca 317.933Radial†	20345.0	20605 µg/L	238.9	20605 ppb	238.9	1.16%
Cd 226.502†	305.0	-1.2747 µg/L	0.51942	-1.2747 ppb	0.51942	40.75%
Co 228.616†	818.9	34.218 µg/L	0.9670	34.218 ppb	0.9670	2.83%
Cr 267.716†	3269.5	77.557 µg/L	0.3497	77.557 ppb	0.3497	0.45%
Cu 324.752†	5963.5	58.120 µg/L	0.7889	58.120 ppb	0.7889	1.36%
Fe 238.204 Radial†	10342.0	91790 µg/L	1090.1	91790 ppb	1090.1	1.19%
K 766.490 Radial†	22518.2	17877 µg/L	140.2	17877 ppb	140.2	0.78%
Mg 279.077 IEC†	1442.9	14166 µg/L	149.7	14166 ppb	149.7	1.06%
Mn 257.610†	520313.5	1938.2 µg/L	38.32	1938.2 ppb	38.32	1.98%
Mo 202.031†	3.1	3.8331 µg/L	0.12343	3.8331 ppb	0.12343	3.22%
Na 589.592 Radial†	3493.2	1248.0 µg/L	13.99	1248.0 ppb	13.99	1.12%

Ni 231.604†	907.4	54.983 µg/L	0.3624	54.983 ppb	0.3624	0.66%
P 214.914†	819.5	1852.8 µg/L	26.01	1852.8 ppb	26.01	1.40%
Pb 220.353†	436.5	127.21 µg/L	3.310	127.21 ppb	3.310	2.60%
S 181.975 Axial†	255.8	1241.4 µg/L	22.65	1241.4 ppb	22.65	1.82%
Sb 206.836†	11.5	9.5599 µg/L	4.35439	9.5599 ppb	4.35439	45.55%
Se 196.026†	-41.1	166.88 µg/L	6.610	166.88 ppb	6.610	3.96%
SiO2†	278833.8	65501 µg/L	1277.3	65501 ppb	1277.3	1.95%
Si 251.611†	338975.8	30427 µg/L	596.7	30427 ppb	596.7	1.96%
Sn 189.927†	-35.9	-26.261 µg/L	5.0537	-26.261 ppb	5.0537	19.24%
Sr 421.552†	16172.8	187.42 µg/L	1.803	187.42 ppb	1.803	0.96%
Ti 334.940†	1779843.3	4731.8 µg/L	87.65	4731.8 ppb	87.65	1.85%
Tl 190.801†	-36.1	11.750 µg/L	1.9864	11.750 ppb	1.9864	16.90%
U 409.014†	-741.8	-84.807 µg/L	1.6791	-84.807 ppb	1.6791	1.98%
V 292.402†	15739.6	193.51 µg/L	1.424	193.51 ppb	1.424	0.74%
Zn 213.857†	10225.0	271.51 µg/L	3.301	271.51 ppb	3.301	1.22%

Sequence No.: 51  
 Sample ID: 245147017|944117|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 343  
 Date Collected: 2/8/2010 16:25:56  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 245147017|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Conc. Units	Sample Units	Analysis Time
1	Sc RADIAL	54739.8	54739.8	98.2	%			16:26:29
1	Al 396.153Radial†	90887.4	92518.9	73084	µg/L	73084	ppb	16:26:29
1	Ca 317.933Radial†	16811.8	16923.9	17140	µg/L	17140	ppb	16:26:29
1	Fe 238.204 Radial†	10124.1	10288.9	91319	µg/L	91319	ppb	16:26:49
1	K 766.490 Radial†	13939.3	14001.3	11116	µg/L	11116	ppb	16:26:29
1	Mg 279.077 IEC†	1182.4	1190.8	11674	µg/L	11674	ppb	16:26:49
1	Na 589.592 Radial†	3339.3	2927.7	1045.9	µg/L	1045.9	ppb	16:26:29
1	Sr 421.552†	14149.1	14363.5	166.45	µg/L	166.45	ppb	16:26:29
1	Sc 361.383	1933822.4	1933822.4	97.504	%			16:27:53
1	Y 371.029	1357810.5	1357810.5	98.902	%			16:27:53
1	Ag 328.068†	-1559.2	-1096.7	-2.3333	µg/L	-2.3333	ppb	16:27:58
1	As 188.979†	5.3	7.1	19.498	µg/L	19.498	ppb	16:28:19
1	B 249.677†	785.1	490.8	-24.037	µg/L	-24.037	ppb	16:27:58
1	Ba 233.527†	35024.4	35941.9	1024.4	µg/L	1024.4	ppb	16:27:58
1	Be 313.107†	10337.3	13902.7	8.0743	µg/L	8.0743	ppb	16:27:58
1	Cd 226.502†	149.8	298.7	-1.4010	µg/L	-1.4010	ppb	16:28:19
1	Co 228.616†	782.8	811.1	33.595	µg/L	33.595	ppb	16:28:19
1	Cr 267.716†	3765.1	3904.2	92.601	µg/L	92.601	ppb	16:27:58
1	Cu 324.752†	7984.7	5700.2	56.051	µg/L	56.051	ppb	16:27:58
1	Mn 257.610†	334405.5	343229.2	1282.5	µg/L	1282.5	ppb	16:27:53
1	Mo 202.031†	-17.5	-11.2	2.2155	µg/L	2.2155	ppb	16:28:19
1	Ni 231.604†	1297.1	1023.2	61.850	µg/L	61.850	ppb	16:28:19
1	P 214.914†	460.1	450.6	992.04	µg/L	992.04	ppb	16:28:19
1	Pb 220.353†	424.8	344.3	100.20	µg/L	100.20	ppb	16:28:19
1	S 181.975 Axial†	118.4	106.8	518.24	µg/L	518.24	ppb	16:28:19
1	Sb 206.836†	37.4	13.8	12.038	µg/L	12.038	ppb	16:28:19
1	Se 196.026†	-19.1	-30.3	185.99	µg/L	185.99	ppb	16:28:19
1	SiO2†	246839.9	251818.5	59155	µg/L	59155	ppb	16:27:53
1	Si 251.611†	298755.8	306099.8	27476	µg/L	27476	ppb	16:27:53
1	Sn 189.927†	-40.6	-44.5	-30.817	µg/L	-30.817	ppb	16:28:19
1	Ti 334.940†	1771415.3	1816595.6	4829.7	µg/L	4829.7	ppb	16:27:53
1	Tl 190.801†	-55.1	-30.5	18.164	µg/L	18.164	ppb	16:28:19
1	U 409.014†	-783.2	-700.1	-80.549	µg/L	-80.549	ppb	16:27:58
1	V 292.402†	16714.5	17175.7	210.14	µg/L	210.14	ppb	16:27:58
1	Zn 213.857†	8121.2	7828.4	206.72	µg/L	206.72	ppb	16:27:58
2	Sc RADIAL	54472.8	54472.8	97.8	%			16:26:55
2	Al 396.153Radial†	90124.5	92192.0	72826	µg/L	72826	ppb	16:26:55
2	Ca 317.933Radial†	16666.3	16859.0	17074	µg/L	17074	ppb	16:26:55
2	Fe 238.204 Radial†	10122.5	10337.8	91753	µg/L	91753	ppb	16:27:15
2	K 766.490 Radial†	13742.5	13869.6	11011	µg/L	11011	ppb	16:26:55
2	Mg 279.077 IEC†	1172.1	1186.2	11628	µg/L	11628	ppb	16:27:15
2	Na 589.592 Radial†	3318.7	2923.2	1044.3	µg/L	1044.3	ppb	16:26:55
2	Sr 421.552†	14024.0	14306.2	165.79	µg/L	165.79	ppb	16:26:55
2	Sc 361.383	1898593.8	1898593.8	95.728	%			16:28:26
2	Y 371.029	1332585.5	1332585.5	97.065	%			16:28:26
2	Ag 328.068†	-1581.1	-1149.3	-2.7172	µg/L	-2.7172	ppb	16:28:32
2	As 188.979†	-2.9	-1.3	1.7063	µg/L	1.7063	ppb	16:28:52
2	B 249.677†	810.0	531.8	-22.298	µg/L	-22.298	ppb	16:28:32
2	Ba 233.527†	35644.7	37256.5	1061.8	µg/L	1061.8	ppb	16:28:32
2	Be 313.107†	10568.9	14341.4	8.3660	µg/L	8.3660	ppb	16:28:32
2	Cd 226.502†	143.0	294.4	-1.5757	µg/L	-1.5757	ppb	16:28:52
2	Co 228.616†	776.4	819.3	33.922	µg/L	33.922	ppb	16:28:52
2	Cr 267.716†	3799.3	4011.6	95.148	µg/L	95.148	ppb	16:28:32
2	Cu 324.752†	8087.5	5959.6	58.084	µg/L	58.084	ppb	16:28:32
2	Mn 257.610†	331821.0	346893.1	1296.1	µg/L	1296.1	ppb	16:28:26
2	Mo 202.031†	-5.5	1.0	3.6028	µg/L	3.6028	ppb	16:28:52
2	Ni 231.604†	1313.4	1064.9	64.328	µg/L	64.328	ppb	16:28:52
2	P 214.914†	467.5	467.1	1029.9	µg/L	1029.9	ppb	16:28:52
2	Pb 220.353†	440.2	368.5	107.17	µg/L	107.17	ppb	16:28:52

2	S 181.975 Axial†	114.9	105.5	511.84 µg/L	511.84 ppb	16:28:52
2	Sb 206.836†	33.5	10.4	8.4676 µg/L	8.4676 ppb	16:28:52
2	Se 196.026†	-27.5	-39.5	172.61 µg/L	172.61 ppb	16:28:52
2	SiO2†	244897.1	254486.3	59782 µg/L	59782 ppb	16:28:26
2	Si 251.611†	296392.6	309316.4	27764 µg/L	27764 ppb	16:28:26
2	Sn 189.927†	-38.3	-42.8	-30.011 µg/L	-30.011 ppb	16:28:52
2	Ti 334.940†	1759138.1	1837480.6	4885.2 µg/L	4885.2 ppb	16:28:26
2	Tl 190.801†	-68.8	-45.8	-4.3891 µg/L	-4.3891 ppb	16:28:52
2	U 409.014†	-748.6	-678.8	-78.578 µg/L	-78.578 ppb	16:28:32
2	V 292.402†	16905.1	17692.9	216.21 µg/L	216.21 ppb	16:28:32
2	Zn 213.857†	8204.4	8070.0	213.23 µg/L	213.23 ppb	16:28:32
3	Sc RADIAL	54727.1	54727.1	98.2 %		16:27:20
3	Al 396.153Radial†	90235.0	91876.3	72577 µg/L	72577 ppb	16:27:20
3	Ca 317.933Radial†	16753.0	16868.0	17083 µg/L	17083 ppb	16:27:20
3	Fe 238.204 Radial†	10161.4	10329.2	91677 µg/L	91677 ppb	16:27:41
3	K 766.490 Radial†	13868.2	13932.2	11061 µg/L	11061 ppb	16:27:20
3	Mg 279.077 IEC†	1183.1	1191.8	11683 µg/L	11683 ppb	16:27:41
3	Na 589.592 Radial†	3317.8	2906.6	1038.4 µg/L	1038.4 ppb	16:27:20
3	Sr 421.552†	14098.0	14314.8	165.89 µg/L	165.89 ppb	16:27:20
3	Sc 361.383	1922107.0	1922107.0	96.913 %		16:29:00
3	Y 371.029	1348631.6	1348631.6	98.234 %		16:29:00
3	Ag 328.068†	-1478.6	-1023.3	-1.7343 µg/L	-1.7343 ppb	16:29:05
3	As 188.979†	4.1	5.9	16.953 µg/L	16.953 ppb	16:29:26
3	B 249.677†	781.3	491.8	-24.182 µg/L	-24.182 ppb	16:29:05
3	Ba 233.527†	34116.6	35224.2	1003.9 µg/L	1003.9 ppb	16:29:05
3	Be 313.107†	9762.2	13373.9	7.7453 µg/L	7.7453 ppb	16:29:05
3	Cd 226.502†	139.2	288.6	-1.7444 µg/L	-1.7444 ppb	16:29:26
3	Co 228.616†	718.4	749.6	30.545 µg/L	30.545 ppb	16:29:26
3	Cr 267.716†	3591.5	3748.6	88.911 µg/L	88.911 ppb	16:29:05
3	Cu 324.752†	7878.7	5640.8	55.649 µg/L	55.649 ppb	16:29:05
3	Mn 257.610†	325239.9	335862.0	1255.3 µg/L	1255.3 ppb	16:29:00
3	Mo 202.031†	-7.5	-1.0	3.3721 µg/L	3.3721 ppb	16:29:26
3	Ni 231.604†	1224.0	955.9	57.868 µg/L	57.868 ppb	16:29:26
3	P 214.914†	444.1	437.1	960.12 µg/L	960.12 ppb	16:29:26
3	Pb 220.353†	405.0	326.5	95.027 µg/L	95.027 ppb	16:29:26
3	S 181.975 Axial†	110.2	99.1	481.05 µg/L	481.05 ppb	16:29:26
3	Sb 206.836†	29.1	5.4	3.2327 µg/L	3.2327 ppb	16:29:26
3	Se 196.026†	-25.1	-36.6	177.01 µg/L	177.01 ppb	16:29:26
3	SiO2†	240650.9	246975.3	58017 µg/L	58017 ppb	16:29:00
3	Si 251.611†	291461.9	300441.1	26968 µg/L	26968 ppb	16:29:00
3	Sn 189.927†	-32.7	-36.6	-26.855 µg/L	-26.855 ppb	16:29:26
3	Ti 334.940†	1714630.5	1769075.6	4703.3 µg/L	4703.3 ppb	16:29:00
3	Tl 190.801†	-57.8	-33.5	12.366 µg/L	12.366 ppb	16:29:26
3	U 409.014†	-809.9	-732.5	-83.690 µg/L	-83.690 ppb	16:29:05
3	V 292.402†	15951.2	16492.6	202.26 µg/L	202.26 ppb	16:29:05
3	Zn 213.857†	7909.9	7661.2	202.19 µg/L	202.19 ppb	16:29:05

Mean Data: 245147017|944117|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1918174.4	96.715 %	0.9046			0.94%
Sc RADIAL	54646.5	98.1 %	0.27			0.28%
Y 371.029	1346342.5	98.067 %	0.9300			0.95%
Ag 328.068†	-1089.8	-2.2616 µg/L	0.49537	-2.2616 ppb	0.49537	21.90%
Al 396.153Radial†	92195.7	72829 µg/L	253.9	72829 ppb	253.9	0.35%
As 188.979†	3.9	12.719 µg/L	9.6217	12.719 ppb	9.6217	75.65%
B 249.677†	504.8	-23.506 µg/L	1.0483	-23.506 ppb	1.0483	4.46%
Ba 233.527†	36140.9	1030.0 µg/L	29.38	1030.0 ppb	29.38	2.85%
Be 313.107†	13872.7	8.0619 µg/L	0.31051	8.0619 ppb	0.31051	3.85%
Ca 317.933Radial†	16883.6	17099 µg/L	35.6	17099 ppb	35.6	0.21%
Cd 226.502†	293.9	-1.5737 µg/L	0.17172	-1.5737 ppb	0.17172	10.91%
Co 228.616†	793.3	32.687 µg/L	1.8625	32.687 ppb	1.8625	5.70%
Cr 267.716†	3888.1	92.220 µg/L	3.1356	92.220 ppb	3.1356	3.40%
Cu 324.752†	5766.9	56.595 µg/L	1.3053	56.595 ppb	1.3053	2.31%
Fe 238.204 Radial†	10318.6	91583 µg/L	231.7	91583 ppb	231.7	0.25%
K 766.490 Radial†	13934.4	11063 µg/L	52.3	11063 ppb	52.3	0.47%
Mg 279.077 IEC†	1189.6	11662 µg/L	29.4	11662 ppb	29.4	0.25%
Mn 257.610†	341994.8	1278.0 µg/L	20.80	1278.0 ppb	20.80	1.63%
Mo 202.031†	-3.7	3.0634 µg/L	0.74337	3.0634 ppb	0.74337	24.27%
Na 589.592 Radial†	2919.2	1042.9 µg/L	3.97	1042.9 ppb	3.97	0.38%

Ni 231.604†	1014.7	61.348 µg/L	3.2593	61.348 ppb	3.2593	5.31%
P 214.914†	451.6	994.02 µg/L	34.929	994.02 ppb	34.929	3.51%
Pb 220.353†	346.4	100.80 µg/L	6.094	100.80 ppb	6.094	6.05%
S 181.975 Axial†	103.8	503.71 µg/L	19.886	503.71 ppb	19.886	3.95%
Sb 206.836†	9.8	7.9127 µg/L	4.42880	7.9127 ppb	4.42880	55.97%
Se 196.026†	-35.5	178.54 µg/L	6.817	178.54 ppb	6.817	3.82%
SiO2†	251093.4	58985 µg/L	894.5	58985 ppb	894.5	1.52%
Si 251.611†	305285.8	27403 µg/L	403.3	27403 ppb	403.3	1.47%
Sn 189.927†	-41.3	-29.228 µg/L	2.0939	-29.228 ppb	2.0939	7.16%
Sr 421.552†	14328.2	166.04 µg/L	0.358	166.04 ppb	0.358	0.22%
Ti 334.940†	1807717.2	4806.1 µg/L	93.22	4806.1 ppb	93.22	1.94%
Tl 190.801†	-36.6	8.7139 µg/L	11.71193	8.7139 ppb	11.71193	134.41%
U 409.014†	-703.8	-80.939 µg/L	2.5781	-80.939 ppb	2.5781	3.19%
V 292.402†	17120.4	209.54 µg/L	6.998	209.54 ppb	6.998	3.34%
Zn 213.857†	7853.2	207.38 µg/L	5.549	207.38 ppb	5.549	2.68%

Sequence No.: 52

Sample ID: 245147018|944117|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 344

Date Collected: 2/8/2010 16:29:36

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245147018|944117|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	55435.4	55435.4	99.5 %		16:30:08
1	Al 396.153Radial†	93481.9	93965.8	74227 µg/L	74227 ppb	16:30:08
1	Ca 317.933Radial†	17156.5	17055.6	17273 µg/L	17273 ppb	16:30:08
1	Fe 238.204 Radial†	10880.2	10919.5	96916 µg/L	96916 ppb	16:30:28
1	K 766.490 Radial†	16181.5	16076.9	12763 µg/L	12763 ppb	16:30:08
1	Mg 279.077 IEC†	1342.7	1336.8	13111 µg/L	13111 ppb	16:30:28
1	Na 589.592 Radial†	2655.6	2197.9	785.21 µg/L	785.21 ppb	16:30:08
1	Sr 421.552†	15702.6	15744.2	182.45 µg/L	182.45 ppb	16:30:08
1	Sc 361.383	1956321.6	1956321.6	98.638 %		16:31:33
1	Y 371.029	1373189.4	1373189.4	100.02 %		16:31:33
1	Ag 328.068†	-1303.4	-819.0	0.4090 µg/L	0.4090 ppb	16:31:38
1	As 188.979†	5.8	7.6	20.774 µg/L	20.774 ppb	16:31:59
1	B 249.677†	940.8	639.4	-19.683 µg/L	-19.683 ppb	16:31:38
1	Ba 233.527†	40842.7	41427.5	1180.6 µg/L	1180.6 ppb	16:31:38
1	Be 313.107†	10423.5	13868.2	8.4095 µg/L	8.4095 ppb	16:31:38
1	Cd 226.502†	201.6	349.4	-0.4808 µg/L	-0.4808 ppb	16:31:59
1	Co 228.616†	915.5	936.4	42.316 µg/L	42.316 ppb	16:31:59
1	Cr 267.716†	8181.0	8336.7	197.59 µg/L	197.59 ppb	16:31:38
1	Cu 324.752†	14299.8	12008.3	104.81 µg/L	104.81 ppb	16:31:38
1	Mn 257.610†	681028.4	690692.2	2569.7 µg/L	2569.7 ppb	16:31:33
1	Mo 202.031†	15.1	22.0	6.1406 µg/L	6.1406 ppb	16:31:59
1	Ni 231.604†	2111.4	1833.4	109.99 µg/L	109.99 ppb	16:31:59
1	P 214.914†	590.7	577.6	1278.8 µg/L	1278.8 ppb	16:31:59
1	Pb 220.353†	751.6	670.5	194.42 µg/L	194.42 ppb	16:31:59
1	S 181.975 Axial†	183.2	171.1	830.54 µg/L	830.54 ppb	16:31:59
1	Sb 206.836†	34.1	10.0	6.8995 µg/L	6.8995 ppb	16:31:59
1	Se 196.026†	-22.9	-33.9	194.23 µg/L	194.23 ppb	16:31:59
1	SiO2†	300627.4	303436.8	71281 µg/L	71281 ppb	16:31:33
1	Si 251.611†	364242.4	368966.4	33119 µg/L	33119 ppb	16:31:33
1	Sn 189.927†	-20.0	-23.1	-20.463 µg/L	-20.463 ppb	16:31:59
1	Ti 334.940†	1441685.9	1461420.8	3885.2 µg/L	3885.2 ppb	16:31:33
1	Tl 190.801†	-56.5	-31.2	14.979 µg/L	14.979 ppb	16:31:59
1	U 409.014†	-690.3	-596.6	-71.464 µg/L	-71.464 ppb	16:31:38
1	V 292.402†	17034.3	17302.7	212.56 µg/L	212.56 ppb	16:31:38
1	Zn 213.857†	12967.1	12645.5	336.58 µg/L	336.58 ppb	16:31:38
2	Sc RADIAL	55258.5	55258.5	99.2 %		16:30:34
2	Al 396.153Radial†	93501.1	94285.9	74480 µg/L	74480 ppb	16:30:34
2	Ca 317.933Radial†	17123.2	17077.2	17295 µg/L	17295 ppb	16:30:34
2	Fe 238.204 Radial†	10807.7	10881.5	96578 µg/L	96578 ppb	16:30:54
2	K 766.490 Radial†	16301.8	16250.1	12901 µg/L	12901 ppb	16:30:34
2	Mg 279.077 IEC†	1343.7	1342.1	13165 µg/L	13165 ppb	16:30:54
2	Na 589.592 Radial†	2644.7	2195.4	784.33 µg/L	784.33 ppb	16:30:34
2	Sr 421.552†	15685.8	15777.8	182.84 µg/L	182.84 ppb	16:30:34
2	Sc 361.383	1943566.5	1943566.5	97.995 %		16:32:06
2	Y 371.029	1364142.8	1364142.8	99.363 %		16:32:06
2	Ag 328.068†	-1322.0	-846.6	0.1597 µg/L	0.1597 ppb	16:32:12
2	As 188.979†	7.7	9.5	24.857 µg/L	24.857 ppb	16:32:32
2	B 249.677†	912.3	616.6	-20.597 µg/L	-20.597 ppb	16:32:12
2	Ba 233.527†	40787.1	41642.4	1186.8 µg/L	1186.8 ppb	16:32:12
2	Be 313.107†	10502.4	14018.0	8.4941 µg/L	8.4941 ppb	16:32:12
2	Cd 226.502†	210.7	360.0	-0.1280 µg/L	-0.1280 ppb	16:32:32
2	Co 228.616†	892.2	918.7	41.241 µg/L	41.241 ppb	16:32:32
2	Cr 267.716†	8165.9	8375.7	198.51 µg/L	198.51 ppb	16:32:12
2	Cu 324.752†	14233.7	12036.1	104.98 µg/L	104.98 ppb	16:32:12
2	Mn 257.610†	685190.4	699470.3	2602.2 µg/L	2602.2 ppb	16:32:06
2	Mo 202.031†	14.0	21.1	6.0221 µg/L	6.0221 ppb	16:32:32
2	Ni 231.604†	2094.3	1830.0	109.79 µg/L	109.79 ppb	16:32:32
2	P 214.914†	586.5	577.3	1278.3 µg/L	1278.3 ppb	16:32:32
2	Pb 220.353†	741.9	665.7	193.04 µg/L	193.04 ppb	16:32:32

2	S 181.975 Axial†	187.9	177.1	859.71 µg/L	859.71 ppb	16:32:32
2	Sb 206.836†	32.3	8.4	5.1912 µg/L	5.1912 ppb	16:32:32
2	Se 196.026†	-31.1	-42.4	179.66 µg/L	179.66 ppb	16:32:32
2	SiO2†	303011.8	307870.2	72322 µg/L	72322 ppb	16:32:06
2	Si 251.611†	367088.1	374293.7	33597 µg/L	33597 ppb	16:32:06
2	Sn 189.927†	-22.8	-26.1	-21.963 µg/L	-21.963 ppb	16:32:32
2	Ti 334.940†	1453831.6	1483406.8	3943.6 µg/L	3943.6 ppb	16:32:06
2	Tl 190.801†	-57.9	-33.0	12.890 µg/L	12.890 ppb	16:32:32
2	U 409.014†	-702.2	-613.3	-73.010 µg/L	-73.010 ppb	16:32:12
2	V 292.402†	17032.5	17414.3	213.81 µg/L	213.81 ppb	16:32:12
2	Zn 213.857†	12979.5	12744.4	339.27 µg/L	339.27 ppb	16:32:12
3	Sc RADIAL	54644.0	54644.0	98.1 %		16:31:00
3	Al 396.153Radial†	93278.2	95118.8	75138 µg/L	75138 ppb	16:31:00
3	Ca 317.933Radial†	17025.4	17171.7	17391 µg/L	17391 ppb	16:31:00
3	Fe 238.204 Radial†	10928.2	11126.9	98757 µg/L	98757 ppb	16:31:20
3	K 766.490 Radial†	16176.6	16307.4	12946 µg/L	12946 ppb	16:31:00
3	Mg 279.077 IEC†	1351.2	1365.1	13389 µg/L	13389 ppb	16:31:20
3	Na 589.592 Radial†	2643.3	2224.0	794.55 µg/L	794.55 ppb	16:31:00
3	Sr 421.552†	15617.2	15885.6	184.09 µg/L	184.09 ppb	16:31:00
3	Sc 361.383	1975946.4	1975946.4	99.628 %		16:32:39
3	Y 371.029	1384859.3	1384859.3	100.87 %		16:32:39
3	Ag 328.068†	-1270.8	-773.1	0.8432 µg/L	0.8432 ppb	16:32:45
3	As 188.979†	10.9	12.6	31.536 µg/L	31.536 ppb	16:33:05
3	B 249.677†	867.0	555.8	-24.660 µg/L	-24.660 ppb	16:32:45
3	Ba 233.527†	39054.5	39221.3	1117.8 µg/L	1117.8 ppb	16:32:45
3	Be 313.107†	9695.0	13032.0	7.8529 µg/L	7.8529 ppb	16:32:45
3	Cd 226.502†	181.2	326.9	-1.3652 µg/L	-1.3652 ppb	16:33:05
3	Co 228.616†	854.3	865.8	38.729 µg/L	38.729 ppb	16:33:05
3	Cr 267.716†	7709.7	7781.2	184.43 µg/L	184.43 ppb	16:32:45
3	Cu 324.752†	13693.6	11255.9	99.344 µg/L	99.344 ppb	16:32:45
3	Mn 257.610†	669325.7	672088.5	2501.1 µg/L	2501.1 ppb	16:32:39
3	Mo 202.031†	13.5	20.3	6.0162 µg/L	6.0162 ppb	16:33:05
3	Ni 231.604†	1971.6	1671.8	100.43 µg/L	100.43 ppb	16:33:05
3	P 214.914†	553.9	534.8	1178.3 µg/L	1178.3 ppb	16:33:05
3	Pb 220.353†	716.6	627.8	182.04 µg/L	182.04 ppb	16:33:05
3	S 181.975 Axial†	180.0	166.0	805.83 µg/L	805.83 ppb	16:33:05
3	Sb 206.836†	36.4	11.9	9.1153 µg/L	9.1153 ppb	16:33:05
3	Se 196.026†	-30.0	-40.8	187.97 µg/L	187.97 ppb	16:33:05
3	SiO2†	297964.4	297736.9	69942 µg/L	69942 ppb	16:32:39
3	Si 251.611†	360584.1	361626.9	32460 µg/L	32460 ppb	16:32:39
3	Sn 189.927†	-25.3	-28.2	-23.225 µg/L	-23.225 ppb	16:33:05
3	Ti 334.940†	1417028.7	1422155.3	3780.7 µg/L	3780.7 ppb	16:32:39
3	Tl 190.801†	-57.6	-31.8	13.350 µg/L	13.350 ppb	16:33:05
3	U 409.014†	-680.1	-579.4	-70.082 µg/L	-70.082 ppb	16:32:45
3	V 292.402†	16225.1	16319.0	201.33 µg/L	201.33 ppb	16:32:45
3	Zn 213.857†	12451.7	11997.5	318.97 µg/L	318.97 ppb	16:32:45

Mean Data: 245147018|944117|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	1958611.5	98.754 %	0.8224			0.83%
Sc RADIAL	55112.6	98.9 %	0.75			0.75%
Y 371.029	1374063.9	100.09 %	0.757			0.76%
Ag 328.068†	-812.9	0.4707 µg/L	0.34589	0.4707 ppb	0.34589	73.49%
Al 396.153Radial†	94456.8	74615 µg/L	470.2	74615 ppb	470.2	0.63%
As 188.979†	9.9	25.722 µg/L	5.4328	25.722 ppb	5.4328	21.12%
B 249.677†	603.9	-21.647 µg/L	2.6495	-21.647 ppb	2.6495	12.24%
Ba 233.527†	40763.7	1161.7 µg/L	38.19	1161.7 ppb	38.19	3.29%
Be 313.107†	13639.4	8.2522 µg/L	0.34833	8.2522 ppb	0.34833	4.22%
Ca 317.933Radial†	17101.5	17320 µg/L	62.5	17320 ppb	62.5	0.36%
Cd 226.502†	345.5	-0.6580 µg/L	0.63733	-0.6580 ppb	0.63733	96.86%
Co 228.616†	907.0	40.762 µg/L	1.8408	40.762 ppb	1.8408	4.52%
Cr 267.716†	8164.5	193.51 µg/L	7.880	193.51 ppb	7.880	4.07%
Cu 324.752†	11766.8	103.04 µg/L	3.205	103.04 ppb	3.205	3.11%
Fe 238.204 Radial†	10976.0	97417 µg/L	1172.3	97417 ppb	1172.3	1.20%
K 766.490 Radial†	16211.5	12870 µg/L	95.3	12870 ppb	95.3	0.74%
Mg 279.077 IEC†	1348.0	13222 µg/L	147.4	13222 ppb	147.4	1.11%
Mn 257.610†	687417.0	2557.7 µg/L	51.62	2557.7 ppb	51.62	2.02%
Mo 202.031†	21.1	6.0596 µg/L	0.07015	6.0596 ppb	0.07015	1.16%
Na 589.592 Radial†	2205.8	788.03 µg/L	5.664	788.03 ppb	5.664	0.72%

Ni 231.604†	1778.4	106.74 µg/L	5.462	106.74 ppb	5.462	5.12%
P 214.914†	563.2	1245.1 µg/L	57.89	1245.1 ppb	57.89	4.65%
Pb 220.353†	654.7	189.83 µg/L	6.784	189.83 ppb	6.784	3.57%
S 181.975 Axial†	171.4	832.02 µg/L	26.971	832.02 ppb	26.971	3.24%
Sb 206.836†	10.1	7.0686 µg/L	1.96753	7.0686 ppb	1.96753	27.83%
Se 196.026†	-39.1	187.29 µg/L	7.311	187.29 ppb	7.311	3.90%
SiO2†	303014.6	71182 µg/L	1193.3	71182 ppb	1193.3	1.68%
Si 251.611†	368295.7	33058 µg/L	570.9	33058 ppb	570.9	1.73%
Sn 189.927†	-25.8	-21.884 µg/L	1.3828	-21.884 ppb	1.3828	6.32%
Sr 421.552†	15802.5	183.13 µg/L	0.857	183.13 ppb	0.857	0.47%
Ti 334.940†	1455661.0	3869.8 µg/L	82.52	3869.8 ppb	82.52	2.13%
Tl 190.801†	-32.0	13.740 µg/L	1.0979	13.740 ppb	1.0979	7.99%
U 409.014†	-596.4	-71.519 µg/L	1.4645	-71.519 ppb	1.4645	2.05%
V 292.402†	17012.0	209.23 µg/L	6.872	209.23 ppb	6.872	3.28%
Zn 213.857†	12462.5	331.61 µg/L	11.024	331.61 ppb	11.024	3.32%

Sequence No.: 53

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/8/2010 16:33:15

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	55491.0	55491.0	99.6 %		16:33:53
1	Al 396.153Radial†	6157.1	6191.9	4881.0 µg/L	4881.0 ppb	16:33:53
1	Ca 317.933Radial†	4920.4	4752.5	4813.2 µg/L	4813.2 ppb	16:34:14
1	Fe 238.204 Radial†	564.9	551.4	4904.4 µg/L	4904.4 ppb	16:34:14
1	K 766.490 Radial†	6603.4	6443.5	5115.5 µg/L	5115.5 ppb	16:33:53
1	Mg 279.077 IEC†	519.0	508.4	5029.4 µg/L	5029.4 ppb	16:34:14
1	Na 589.592 Radial†	28263.6	27907.3	9970.1 µg/L	9970.1 ppb	16:33:53
1	Sr 421.552†	42886.0	43022.3	498.57 µg/L	498.57 ppb	16:33:53
1	Sc 361.383	2000213.4	2000213.4	100.85 %		16:35:17
1	Y 371.029	1376948.8	1376948.8	100.30 %		16:35:17
1	Ag 328.068†	58087.7	58099.6	501.66 µg/L	501.66 ppb	16:35:23
1	As 188.979†	240.6	240.3	508.76 µg/L	508.76 ppb	16:35:43
1	B 249.677†	10555.4	10151.9	483.64 µg/L	483.64 ppb	16:35:23
1	Ba 233.527†	17464.4	17338.0	494.87 µg/L	494.87 ppb	16:35:23
1	Be 313.107†	698559.9	695962.5	496.13 µg/L	496.13 ppb	16:35:17
1	Cd 226.502†	16602.3	16607.2	492.40 µg/L	492.40 ppb	16:35:23
1	Co 228.616†	9342.3	9271.7	498.65 µg/L	498.65 ppb	16:35:23
1	Cr 267.716†	21204.8	21068.5	499.35 µg/L	499.35 ppb	16:35:23
1	Cu 324.752†	68858.8	65788.6	501.09 µg/L	501.09 ppb	16:35:23
1	Mn 257.610†	132555.5	131699.7	488.08 µg/L	488.08 ppb	16:35:23
1	Mo 202.031†	4498.2	4466.9	498.79 µg/L	498.79 ppb	16:35:43
1	Ni 231.604†	8734.4	8353.5	495.16 µg/L	495.16 ppb	16:35:23
1	P 214.914†	1121.8	1091.1	2494.7 µg/L	2494.7 ppb	16:35:43
1	Pb 220.353†	1839.6	1732.6	501.71 µg/L	501.71 ppb	16:35:43
1	S 181.975 Axial†	225.0	208.5	1012.1 µg/L	1012.1 ppb	16:35:43
1	Sb 206.836†	508.8	479.9	511.40 µg/L	511.40 ppb	16:35:43
1	Se 196.026†	319.9	306.5	496.51 µg/L	496.51 ppb	16:35:43
1	SiO2†	24120.4	22576.6	5303.5 µg/L	5303.5 ppb	16:35:23
1	Si 251.611†	28183.3	27641.7	2481.1 µg/L	2481.1 ppb	16:35:23
1	Sn 189.927†	1037.3	1025.7	515.59 µg/L	515.59 ppb	16:35:43
1	Ti 334.940†	191197.9	189418.7	503.35 µg/L	503.35 ppb	16:35:17
1	Tl 190.801†	302.8	326.3	499.26 µg/L	499.26 ppb	16:35:43
1	U 409.014†	5183.7	5243.2	499.41 µg/L	499.41 ppb	16:35:23
1	V 292.402†	43371.3	43038.4	505.40 µg/L	505.40 ppb	16:35:23
1	Zn 213.857†	18997.3	18336.3	493.20 µg/L	493.20 ppb	16:35:23
2	Sc RADIAL	55055.7	55055.7	98.8 %		16:34:19
2	Al 396.153Radial†	6233.4	6318.0	4980.6 µg/L	4980.6 ppb	16:34:19
2	Ca 317.933Radial†	4845.9	4716.2	4776.4 µg/L	4776.4 ppb	16:34:40
2	Fe 238.204 Radial†	553.9	544.7	4845.4 µg/L	4845.4 ppb	16:34:40
2	K 766.490 Radial†	6643.6	6536.6	5189.4 µg/L	5189.4 ppb	16:34:19
2	Mg 279.077 IEC†	505.6	499.0	4936.3 µg/L	4936.3 ppb	16:34:40
2	Na 589.592 Radial†	28376.1	28245.5	10091 µg/L	10091 ppb	16:34:19
2	Sr 421.552†	43268.1	43749.4	506.99 µg/L	506.99 ppb	16:34:19
2	Sc 361.383	1980821.4	1980821.4	99.874 %		16:35:50
2	Y 371.029	1362442.6	1362442.6	99.240 %		16:35:50
2	Ag 328.068†	57967.8	58543.5	505.48 µg/L	505.48 ppb	16:35:55
2	As 188.979†	235.7	237.7	503.16 µg/L	503.16 ppb	16:36:16
2	B 249.677†	10610.7	10309.7	491.22 µg/L	491.22 ppb	16:35:55
2	Ba 233.527†	17452.1	17495.2	499.35 µg/L	499.35 ppb	16:35:55
2	Be 313.107†	692421.6	696597.5	496.58 µg/L	496.58 ppb	16:35:50
2	Cd 226.502†	16616.5	16782.5	497.62 µg/L	497.62 ppb	16:35:55
2	Co 228.616†	9337.4	9357.5	503.27 µg/L	503.27 ppb	16:35:55
2	Cr 267.716†	21166.3	21235.8	503.31 µg/L	503.31 ppb	16:35:55
2	Cu 324.752†	68757.6	66355.7	505.40 µg/L	505.40 ppb	16:35:55
2	Mn 257.610†	132506.2	132937.1	492.66 µg/L	492.66 ppb	16:35:55
2	Mo 202.031†	4471.4	4483.8	500.67 µg/L	500.67 ppb	16:36:16
2	Ni 231.604†	8772.2	8476.2	502.43 µg/L	502.43 ppb	16:35:55
2	P 214.914†	1095.5	1075.7	2458.3 µg/L	2458.3 ppb	16:36:16
2	Pb 220.353†	1849.8	1760.7	509.86 µg/L	509.86 ppb	16:36:16

2	S 181.975 Axial†	224.2	209.8	1018.4 µg/L	1018.4 ppb	16:36:16
2	Sb 206.836†	509.9	485.9	517.74 µg/L	517.74 ppb	16:36:16
2	Se 196.026†	315.1	304.8	493.81 µg/L	493.81 ppb	16:36:16
2	SiO2†	24070.8	22761.1	5346.8 µg/L	5346.8 ppb	16:35:55
2	Si 251.611†	28167.1	27899.0	2504.2 µg/L	2504.2 ppb	16:35:55
2	Sn 189.927†	1017.4	1015.8	510.63 µg/L	510.63 ppb	16:36:16
2	Ti 334.940†	189582.3	189657.0	503.99 µg/L	503.99 ppb	16:35:50
2	Tl 190.801†	314.2	340.6	520.91 µg/L	520.91 ppb	16:36:16
2	U 409.014†	5134.0	5243.8	499.48 µg/L	499.48 ppb	16:35:55
2	V 292.402†	43241.5	43329.5	508.79 µg/L	508.79 ppb	16:35:55
2	Zn 213.857†	19001.6	18525.0	498.28 µg/L	498.28 ppb	16:35:55
3	Sc RADIAL	55871.7	55871.7	100 %		16:34:45
3	Al 396.153Radial†	6189.1	6181.7	4874.5 µg/L	4874.5 ppb	16:34:45
3	Ca 317.933Radial†	4891.1	4689.6	4749.5 µg/L	4749.5 ppb	16:35:06
3	Fe 238.204 Radial†	560.6	543.3	4831.4 µg/L	4831.4 ppb	16:35:06
3	K 766.490 Radial†	6570.5	6365.5	5053.6 µg/L	5053.6 ppb	16:34:45
3	Mg 279.077 IEC†	513.7	499.6	4941.1 µg/L	4941.1 ppb	16:35:06
3	Na 589.592 Radial†	28352.6	27802.6	9932.7 µg/L	9932.7 ppb	16:34:45
3	Sr 421.552†	43237.1	43079.0	499.22 µg/L	499.22 ppb	16:34:45
3	Sc 361.383	1970476.8	1970476.8	99.352 %		16:36:23
3	Y 371.029	1358100.8	1358100.8	98.923 %		16:36:23
3	Ag 328.068†	54870.7	55730.8	481.08 µg/L	481.08 ppb	16:36:28
3	As 188.979†	202.3	205.3	434.59 µg/L	434.59 ppb	16:36:49
3	B 249.677†	9938.1	9688.4	461.44 µg/L	461.44 ppb	16:36:28
3	Ba 233.527†	16122.5	16248.6	463.76 µg/L	463.76 ppb	16:36:28
3	Be 313.107†	654307.8	661874.9	471.83 µg/L	471.83 ppb	16:36:23
3	Cd 226.502†	15254.7	15499.2	459.52 µg/L	459.52 ppb	16:36:28
3	Co 228.616†	8479.7	8543.3	459.42 µg/L	459.42 ppb	16:36:28
3	Cr 267.716†	18878.5	19044.4	451.38 µg/L	451.38 ppb	16:36:28
3	Cu 324.752†	63114.5	61037.2	464.94 µg/L	464.94 ppb	16:36:28
3	Mn 257.610†	120434.4	121483.1	450.25 µg/L	450.25 ppb	16:36:28
3	Mo 202.031†	3766.4	3797.7	424.09 µg/L	424.09 ppb	16:36:49
3	Ni 231.604†	7986.8	7731.8	458.31 µg/L	458.31 ppb	16:36:28
3	P 214.914†	967.1	952.2	2173.6 µg/L	2173.6 ppb	16:36:49
3	Pb 220.353†	1621.7	1540.8	446.08 µg/L	446.08 ppb	16:36:49
3	S 181.975 Axial†	196.4	183.0	888.43 µg/L	888.43 ppb	16:36:49
3	Sb 206.836†	440.5	418.7	445.80 µg/L	445.80 ppb	16:36:49
3	Se 196.026†	283.4	274.5	445.48 µg/L	445.48 ppb	16:36:49
3	SiO2†	22478.5	21285.0	5000.1 µg/L	5000.1 ppb	16:36:28
3	Si 251.611†	26197.2	26064.4	2339.5 µg/L	2339.5 ppb	16:36:28
3	Sn 189.927†	847.2	849.9	427.26 µg/L	427.26 ppb	16:36:49
3	Ti 334.940†	178433.0	179431.6	476.80 µg/L	476.80 ppb	16:36:23
3	Tl 190.801†	268.1	295.9	452.90 µg/L	452.90 ppb	16:36:49
3	U 409.014†	4673.7	4807.4	457.84 µg/L	457.84 ppb	16:36:28
3	V 292.402†	39284.2	39573.7	464.46 µg/L	464.46 ppb	16:36:28
3	Zn 213.857†	17370.1	16982.8	456.77 µg/L	456.77 ppb	16:36:28

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1983837.2	100.03 %	0.761			0.76%
Sc RADIAL	55472.8	99.6 %	0.73			0.74%
Y 371.029	1365830.7	99.486 %	0.7189			0.72%
Ag 328.068†	57458.0	496.07 µg/L	13.123	496.07 ppb	13.123	2.65%
QC value within limits for Ag 328.068 Recovery = 99.21%						
Al 396.153Radial†	6230.5	4912.0 µg/L	59.48	4912.0 ppb	59.48	1.21%
QC value within limits for Al 396.153Radial Recovery = 98.24%						
As 188.979†	227.7	482.17 µg/L	41.303	482.17 ppb	41.303	8.57%
QC value within limits for As 188.979 Recovery = 96.43%						
B 249.677†	10050.0	478.77 µg/L	15.476	478.77 ppb	15.476	3.23%
QC value within limits for B 249.677 Recovery = 95.75%						
Ba 233.527†	17027.3	485.99 µg/L	19.385	485.99 ppb	19.385	3.99%
QC value within limits for Ba 233.527 Recovery = 97.20%						
Be 313.107†	684811.6	488.18 µg/L	14.162	488.18 ppb	14.162	2.90%
QC value within limits for Be 313.107 Recovery = 97.64%						
Ca 317.933Radial†	4719.4	4779.7 µg/L	32.00	4779.7 ppb	32.00	0.67%
QC value within limits for Ca 317.933Radial Recovery = 95.59%						
Cd 226.502†	16296.3	483.18 µg/L	20.656	483.18 ppb	20.656	4.28%
QC value within limits for Cd 226.502 Recovery = 96.64%						
Co 228.616†	9057.5	487.11 µg/L	24.097	487.11 ppb	24.097	4.95%

QC value within limits for Co 228.616 Recovery = 97.42%					
Cr 267.716†	20449.6	484.68 µg/L	28.908	484.68 ppb	28.908 5.96%
QC value within limits for Cr 267.716 Recovery = 96.94%					
Cu 324.752†	64393.8	490.48 µg/L	22.219	490.48 ppb	22.219 4.53%
QC value within limits for Cu 324.752 Recovery = 98.10%					
Fe 238.204 Radial†	546.5	4860.4 µg/L	38.73	4860.4 ppb	38.73 0.80%
QC value within limits for Fe 238.204 Radial Recovery = 97.21%					
K 766.490 Radial†	6448.6	5119.5 µg/L	68.00	5119.5 ppb	68.00 1.33%
QC value within limits for K 766.490 Radial Recovery = 102.39%					
Mg 279.077 IEC†	502.3	4969.0 µg/L	52.42	4969.0 ppb	52.42 1.06%
QC value within limits for Mg 279.077 IEC Recovery = 99.38%					
Mn 257.610†	128706.7	477.00 µg/L	23.278	477.00 ppb	23.278 4.88%
QC value within limits for Mn 257.610 Recovery = 95.40%					
Mo 202.031†	4249.5	474.52 µg/L	43.681	474.52 ppb	43.681 9.21%
QC value within limits for Mo 202.031 Recovery = 94.90%					
Na 589.592 Radial†	27985.1	9997.9 µg/L	82.69	9997.9 ppb	82.69 0.83%
QC value within limits for Na 589.592 Radial Recovery = 99.98%					
Ni 231.604†	8187.2	485.30 µg/L	23.656	485.30 ppb	23.656 4.87%
QC value within limits for Ni 231.604 Recovery = 97.06%					
P 214.914†	1039.7	2375.5 µg/L	175.83	2375.5 ppb	175.83 7.40%
QC value within limits for P 214.914 Recovery = 95.02%					
Pb 220.353†	1678.0	485.89 µg/L	34.710	485.89 ppb	34.710 7.14%
QC value within limits for Pb 220.353 Recovery = 97.18%					
S 181.975 Axial†	200.5	972.99 µg/L	73.301	972.99 ppb	73.301 7.53%
QC value within limits for S 181.975 Axial Recovery = 97.30%					
Sb 206.836†	461.5	491.65 µg/L	39.829	491.65 ppb	39.829 8.10%
QC value within limits for Sb 206.836 Recovery = 98.33%					
Se 196.026†	295.3	478.60 µg/L	28.714	478.60 ppb	28.714 6.00%
QC value within limits for Se 196.026 Recovery = 95.72%					
SiO2†	22207.6	5216.8 µg/L	188.94	5216.8 ppb	188.94 3.62%
QC value within limits for SiO2 Recovery = 97.56%					
Si 251.611†	27201.7	2441.6 µg/L	89.16	2441.6 ppb	89.16 3.65%
QC value within limits for Si 251.611 Recovery = 97.67%					
Sn 189.927†	963.8	484.49 µg/L	49.632	484.49 ppb	49.632 10.24%
QC value within limits for Sn 189.927 Recovery = 96.90%					
Sr 421.552†	43283.6	501.60 µg/L	4.687	501.60 ppb	4.687 0.93%
QC value within limits for Sr 421.552 Recovery = 100.32%					
Ti 334.940†	186169.1	494.71 µg/L	15.517	494.71 ppb	15.517 3.14%
QC value within limits for Ti 334.940 Recovery = 98.94%					
Tl 190.801†	321.0	491.02 µg/L	34.744	491.02 ppb	34.744 7.08%
QC value within limits for Tl 190.801 Recovery = 98.20%					
U 409.014†	5098.1	485.58 µg/L	24.023	485.58 ppb	24.023 4.95%
QC value within limits for U 409.014 Recovery = 97.12%					
V 292.402†	41980.5	492.88 µg/L	24.671	492.88 ppb	24.671 5.01%
QC value within limits for V 292.402 Recovery = 98.58%					
Zn 213.857†	17948.0	482.75 µg/L	22.646	482.75 ppb	22.646 4.69%
QC value within limits for Zn 213.857 Recovery = 96.55%					
All analyte(s) passed QC.					

Sequence No.: 54

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/8/2010 16:36:58

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	55687.8	55687.8	99.9 %		16:37:31
1	Al 396.153Radial†	-12.9	-3.1	-2.4583 µg/L	-2.4583 ppb	16:37:31
1	Ca 317.933Radial†	190.0	2.2	2.2650 µg/L	2.2650 ppb	16:37:51
1	Fe 238.204 Radial†	15.9	0.0	0.3993 µg/L	0.3993 ppb	16:37:51
1	K 766.490 Radial†	123.3	-63.3	-50.289 µg/L	-50.289 ppb	16:37:31
1	Mg 279.077 IEC†	8.1	-4.6	-45.333 µg/L	-45.333 ppb	16:37:51
1	Na 589.592 Radial†	457.1	-13.8	-4.9452 µg/L	-4.9452 ppb	16:37:31
1	Sr 421.552†	21.0	-17.1	-0.1977 µg/L	-0.1977 ppb	16:37:31
1	Sc 361.383	1985023.6	1985023.6	100.09 %		16:38:53
1	Y 371.029	1369383.2	1369383.2	99.745 %		16:38:53
1	Ag 328.068†	-511.3	-8.4	-0.0715 µg/L	-0.0715 ppb	16:38:58
1	As 188.979†	0.6	2.2	4.7706 µg/L	4.7706 ppb	16:39:19
1	B 249.677†	301.5	-13.2	-0.6303 µg/L	-0.6303 ppb	16:39:19
1	Ba 233.527†	-20.6	0.4	0.0129 µg/L	0.0129 ppb	16:39:19
1	Be 313.107†	-3173.3	130.2	0.0928 µg/L	0.0928 ppb	16:38:58
1	Cd 226.502†	-145.1	0.0	0.0008 µg/L	0.0008 ppb	16:39:19
1	Co 228.616†	-0.6	7.7	0.4162 µg/L	0.4162 ppb	16:39:19
1	Cr 267.716†	-45.2	-2.4	-0.0570 µg/L	-0.0570 ppb	16:39:19
1	Cu 324.752†	2408.9	-82.0	-0.6238 µg/L	-0.6238 ppb	16:38:58
1	Mn 257.610†	-219.8	43.8	0.1640 µg/L	0.1640 ppb	16:39:19
1	Mo 202.031†	-1.6	5.1	0.5697 µg/L	0.5697 ppb	16:39:19
1	Ni 231.604†	320.4	13.0	0.7722 µg/L	0.7722 ppb	16:39:19
1	P 214.914†	29.1	7.9	18.513 µg/L	18.513 ppb	16:39:19
1	Pb 220.353†	91.8	0.3	0.0918 µg/L	0.0918 ppb	16:39:19
1	S 181.975 Axial†	17.8	3.2	15.334 µg/L	15.334 ppb	16:39:19
1	Sb 206.836†	24.7	0.0	0.0368 µg/L	0.0368 ppb	16:39:19
1	Se 196.026†	10.5	-0.2	-0.2996 µg/L	-0.2996 ppb	16:39:19
1	SiO2†	1379.2	37.9	8.9068 µg/L	8.9068 ppb	16:38:58
1	Si 251.611†	323.5	19.6	1.7575 µg/L	1.7575 ppb	16:39:19
1	Sn 189.927†	2.1	-0.7	-0.3540 µg/L	-0.3540 ppb	16:39:19
1	Ti 334.940†	231.4	66.3	0.1800 µg/L	0.1800 ppb	16:38:58
1	Tl 190.801†	-27.4	-1.3	-1.9390 µg/L	-1.9390 ppb	16:39:19
1	U 409.014†	-43.6	59.7	5.6977 µg/L	5.6977 ppb	16:38:58
1	V 292.402†	-23.4	9.9	0.1254 µg/L	0.1254 ppb	16:38:58
1	Zn 213.857†	500.1	-1.0	-0.0257 µg/L	-0.0257 ppb	16:39:19
2	Sc RADIAL	54541.7	54541.7	97.9 %		16:37:57
2	Al 396.153Radial†	4.6	14.5	11.432 µg/L	11.432 ppb	16:37:57
2	Ca 317.933Radial†	189.7	5.9	5.9897 µg/L	5.9897 ppb	16:38:17
2	Fe 238.204 Radial†	17.6	2.2	19.246 µg/L	19.246 ppb	16:38:17
2	K 766.490 Radial†	189.7	7.0	5.5920 µg/L	5.5920 ppb	16:37:57
2	Mg 279.077 IEC†	11.7	-0.8	-7.7093 µg/L	-7.7093 ppb	16:38:17
2	Na 589.592 Radial†	426.7	-35.3	-12.608 µg/L	-12.608 ppb	16:37:57
2	Sr 421.552†	42.6	5.5	0.0634 µg/L	0.0634 ppb	16:37:57
2	Sc 361.383	1979920.3	1979920.3	99.828 %		16:39:25
2	Y 371.029	1367165.1	1367165.1	99.584 %		16:39:25
2	Ag 328.068†	-495.4	6.1	0.0553 µg/L	0.0553 ppb	16:39:30
2	As 188.979†	-3.2	-1.5	-3.2566 µg/L	-3.2566 ppb	16:39:51
2	B 249.677†	303.5	-10.4	-0.5085 µg/L	-0.5085 ppb	16:39:51
2	Ba 233.527†	-17.9	3.1	0.0888 µg/L	0.0888 ppb	16:39:51
2	Be 313.107†	-3100.1	195.4	0.1393 µg/L	0.1393 ppb	16:39:30
2	Cd 226.502†	-143.8	1.0	0.0273 µg/L	0.0273 ppb	16:39:51
2	Co 228.616†	-15.3	-7.0	-0.3767 µg/L	-0.3767 ppb	16:39:51
2	Cr 267.716†	-40.3	2.4	0.0561 µg/L	0.0561 ppb	16:39:51
2	Cu 324.752†	2446.2	-38.4	-0.2893 µg/L	-0.2893 ppb	16:39:30
2	Mn 257.610†	-230.1	33.0	0.1250 µg/L	0.1250 ppb	16:39:51
2	Mo 202.031†	-1.6	5.2	0.5773 µg/L	0.5773 ppb	16:39:51
2	Ni 231.604†	300.8	-5.8	-0.3418 µg/L	-0.3418 ppb	16:39:51
2	P 214.914†	19.9	-1.3	-3.0035 µg/L	-3.0035 ppb	16:39:51
2	Pb 220.353†	91.8	0.5	0.1384 µg/L	0.1384 ppb	16:39:51

2	S 181.975 Axial†	15.5	0.9	4.5834 µg/L	4.5834 ppb	16:39:51
2	Sb 206.836†	31.5	7.0	7.4199 µg/L	7.4199 ppb	16:39:51
2	Se 196.026†	8.4	-2.3	-3.5562 µg/L	-3.5562 ppb	16:39:51
2	SiO2†	1329.4	-8.5	-1.9920 µg/L	-1.9920 ppb	16:39:30
2	Si 251.611†	320.9	17.8	1.5978 µg/L	1.5978 ppb	16:39:51
2	Sn 189.927†	2.1	-0.7	-0.3720 µg/L	-0.3720 ppb	16:39:51
2	Ti 334.940†	163.5	-1.0	-0.0020 µg/L	-0.0020 ppb	16:39:30
2	Tl 190.801†	-23.7	2.3	3.4664 µg/L	3.4664 ppb	16:39:51
2	U 409.014†	-69.6	33.5	3.1922 µg/L	3.1922 ppb	16:39:30
2	V 292.402†	-13.0	20.3	0.2455 µg/L	0.2455 ppb	16:39:30
2	Zn 213.857†	501.5	1.8	0.0495 µg/L	0.0495 ppb	16:39:51
3	Sc RADIAL	55655.8	55655.8	99.9 %		16:38:23
3	Al 396.153Radial†	-0.2	9.6	7.5773 µg/L	7.5773 ppb	16:38:23
3	Ca 317.933Radial†	184.6	-3.1	-3.1017 µg/L	-3.1017 ppb	16:38:43
3	Fe 238.204 Radial†	17.3	1.5	13.283 µg/L	13.283 ppb	16:38:43
3	K 766.490 Radial†	173.5	-13.1	-10.379 µg/L	-10.379 ppb	16:38:23
3	Mg 279.077 IEC†	8.1	-4.6	-45.492 µg/L	-45.492 ppb	16:38:43
3	Na 589.592 Radial†	444.1	-26.7	-9.5213 µg/L	-9.5213 ppb	16:38:23
3	Sr 421.552†	0.7	-37.4	-0.4331 µg/L	-0.4331 ppb	16:38:23
3	Sc 361.383	1977474.5	1977474.5	99.705 %		16:39:57
3	Y 371.029	1365089.7	1365089.7	99.432 %		16:39:57
3	Ag 328.068†	-481.1	19.9	0.1719 µg/L	0.1719 ppb	16:40:03
3	As 188.979†	4.1	5.8	12.218 µg/L	12.218 ppb	16:40:23
3	B 249.677†	287.3	-26.3	-1.2649 µg/L	-1.2649 ppb	16:40:23
3	Ba 233.527†	-26.1	-5.2	-0.1481 µg/L	-0.1481 ppb	16:40:23
3	Be 313.107†	-3207.9	83.4	0.0594 µg/L	0.0594 ppb	16:40:03
3	Cd 226.502†	-142.3	2.3	0.0664 µg/L	0.0664 ppb	16:40:23
3	Co 228.616†	-9.1	-0.9	-0.0479 µg/L	-0.0479 ppb	16:40:23
3	Cr 267.716†	-41.8	0.8	0.0189 µg/L	0.0189 ppb	16:40:23
3	Cu 324.752†	2465.4	-16.1	-0.1208 µg/L	-0.1208 ppb	16:40:03
3	Mn 257.610†	-227.2	35.6	0.1353 µg/L	0.1353 ppb	16:40:23
3	Mo 202.031†	-8.4	-1.7	-0.1870 µg/L	-0.1870 ppb	16:40:23
3	Ni 231.604†	310.1	3.9	0.2311 µg/L	0.2311 ppb	16:40:23
3	P 214.914†	17.4	-3.7	-8.6770 µg/L	-8.6770 ppb	16:40:23
3	Pb 220.353†	83.1	-8.1	-2.3357 µg/L	-2.3357 ppb	16:40:23
3	S 181.975 Axial†	12.0	-2.6	-12.455 µg/L	-12.455 ppb	16:40:23
3	Sb 206.836†	30.4	5.9	6.2700 µg/L	6.2700 ppb	16:40:23
3	Se 196.026†	11.4	0.7	1.2619 µg/L	1.2619 ppb	16:40:23
3	SiO2†	1387.2	51.2	12.016 µg/L	12.016 ppb	16:40:03
3	Si 251.611†	313.1	10.4	0.9319 µg/L	0.9319 ppb	16:40:23
3	Sn 189.927†	0.1	-2.8	-1.3991 µg/L	-1.3991 ppb	16:40:23
3	Ti 334.940†	223.1	58.9	0.1601 µg/L	0.1601 ppb	16:40:03
3	Tl 190.801†	-26.5	-0.5	-0.7985 µg/L	-0.7985 ppb	16:40:23
3	U 409.014†	-130.1	-27.2	-2.6007 µg/L	-2.6007 ppb	16:40:03
3	V 292.402†	-23.6	9.6	0.1090 µg/L	0.1090 ppb	16:40:03
3	Zn 213.857†	498.0	-1.1	-0.0284 µg/L	-0.0284 ppb	16:40:23

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1980806.1	99.873 %	0.1942			0.19%
Sc RADIAL	55295.1	99.2 %	1.17			1.18%
Y 371.029	1367212.7	99.587 %	0.1564			0.16%
Ag 328.068†	5.9	0.0519 µg/L	0.12170	0.0519 ppb	0.12170	234.48%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	7.0	5.5169 µg/L	7.17066	5.5169 ppb	7.17066	129.98%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.2	4.5772 µg/L	7.73901	4.5772 ppb	7.73901	169.08%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-16.6	-0.8013 µg/L	0.40612	-0.8013 ppb	0.40612	50.69%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-0.6	-0.0154 µg/L	0.12095	-0.0154 ppb	0.12095	783.21%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	136.3	0.0972 µg/L	0.04015	0.0972 ppb	0.04015	41.31%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1.7	1.7177 µg/L	4.57034	1.7177 ppb	4.57034	266.08%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.1	0.0315 µg/L	0.03300	0.0315 ppb	0.03300	104.75%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.1	-0.0028 µg/L	0.39837	-0.0028 ppb	0.39837	>999.9%

QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	0.3	0.0060 µg/L	0.05766	0.0060 ppb	0.05766	957.15%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-45.5	-0.3446 µg/L	0.25601	-0.3446 ppb	0.25601	74.28%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.2	10.976 µg/L	9.6327	10.976 ppb	9.6327	87.76%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-23.1	-18.359 µg/L	28.7824	-18.359 ppb	28.7824	156.78%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-3.3	-32.844 µg/L	21.7678	-32.844 ppb	21.7678	66.28%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	37.5	0.1415 µg/L	0.02022	0.1415 ppb	0.02022	14.29%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	2.9	0.3200 µg/L	0.43910	0.3200 ppb	0.43910	137.21%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-25.3	-9.0247 µg/L	3.85522	-9.0247 ppb	3.85522	42.72%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	3.7	0.2205 µg/L	0.55709	0.2205 ppb	0.55709	252.62%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	1.0	2.2775 µg/L	14.34370	2.2775 ppb	14.34370	629.79%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-2.4	-0.7018 µg/L	1.41520	-0.7018 ppb	1.41520	201.64%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	0.5	2.4871 µg/L	14.01260	2.4871 ppb	14.01260	563.40%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	4.3	4.5755 µg/L	3.97251	4.5755 ppb	3.97251	86.82%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-0.6	-0.8646 µg/L	2.45826	-0.8646 ppb	2.45826	284.32%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	26.9	6.3103 µg/L	7.35617	6.3103 ppb	7.35617	116.57%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	15.9	1.4291 µg/L	0.43788	1.4291 ppb	0.43788	30.64%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-1.4	-0.7084 µg/L	0.59829	-0.7084 ppb	0.59829	84.46%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-16.3	-0.1891 µg/L	0.24833	-0.1891 ppb	0.24833	131.29%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	41.4	0.1127 µg/L	0.09984	0.1127 ppb	0.09984	88.60%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.2	0.2430 µg/L	2.84920	0.2430 ppb	2.84920	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	22.0	2.0964 µg/L	4.25634	2.0964 ppb	4.25634	203.03%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	13.3	0.1600 µg/L	0.07448	0.1600 ppb	0.07448	46.56%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-0.1	-0.0015 µg/L	0.04420	-0.0015 ppb	0.04420	>999.9%
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: Wednesday, February 10, 2010 10:47:22

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.314

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	1534.1	1534.082	47.744	3.1
Mg	24.0	18920.1	18920.122	185.160	1.0
Co	58.9	60195.2	60195.171	768.167	1.3
Rh	102.9	118389.8	118389.750	605.100	0.5
In	114.9	153385.3	153385.261	647.556	0.4
Pb	208.0	63660.9	63660.931	237.242	0.4
[> Ba	137.9	127197.1	127197.141	997.216	0.8
[ Ba++	69.0	1615.5	0.013	0.000	2.7
[> Ce	139.9	149084.1	149084.093	833.408	0.6
[ CeO	155.9	3997.4	0.027	0.000	1.8
Bkgd	220.0	1.9	1.900	0.652	34.3

### Current Optimization File Data

Current Value	Description
0.93	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	1386.1
Co	59	17	5.3	47803.5
In	115	17	6.0	121965.8

## 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	605	2060	0.709
Be	9.0	9.1	2043	2045	0.733
Mg	24.0	24.0	5674	2065	0.708
Mg	25.0	25.0	5937	2080	0.695
Mg	26.0	26.1	6164	2085	0.674
Co	58.9	58.9	14168	2140	0.665
Rh	102.9	102.9	24871	2230	0.673
In	114.9	114.9	27767	2255	0.688
Ce	139.9	140.0	33857	2310	0.650
Pb	206.0	206.0	49934	2500	0.633
Pb	207.0	207.0	50101	2375	0.643
Pb	208.0	208.0	50436	2570	0.613
U	238.1	238.1	57689	2510	0.666

## ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Wednesday, February 10, 2010 15:50:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\Blank.078

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		12	
Be	9		ug/L		3	
B	11		ug/L		386	
Na	23		ug/L		34041	
Mg	24		ug/L		1000	
Al	27		ug/L		6001	
P	31		ug/L		3647	
K	39		ug/L		389234	
Ca	43		ug/L		207	
> Sc	45		ug/L		513386	
Ti	47		ug/L		246	
V	51		ug/L		-9035	
Cr	52		ug/L		11500	
Cr	53		ug/L		66660	
Mn	55		ug/L		781	
Fe	57		ug/L		10857	
Co	59		ug/L		96	
Ni	60		ug/L		111	
Cu	63		ug/L		192	
Cu	65		ug/L		128	
Zn	66		ug/L		463	
Zn	67		ug/L		3896	
Zn	68		ug/L		803	
> Ge	74		ug/L		336433	
As	75		ug/L		-692	
Se	77		ug/L		5729	
Se	82		ug/L		24	
Kr	83		ug/L		53	
Sr	88		ug/L		258	
Y	89		ug/L		29	
Zr	90		ug/L		428	
Mo	98		ug/L		214	
Ag	107		ug/L		102	
Cd	111		ug/L		23	
Cd	114		ug/L		78	
> In	115		ug/L		231624	
Sn	120		ug/L		307	
Sb	121		ug/L		555	
Sb	123		ug/L		443	
Ba	135		ug/L		25	
Ba	137		ug/L		32	
Ho	165		ug/L		4	
> Lu	175		ug/L		193770	
Tl	205		ug/L		451	
Pb	208		ug/L		677	
Th	232		ug/L		599	
U	238		ug/L		266	

Sample ID: Blank

Report Date/Time: Wednesday, February 10, 2010 15:53:05

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## Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	
Be	9Linear Thru Zero	
B	11Linear Thru Zero	
Na	23Linear Thru Zero	
Mg	24Linear Thru Zero	
Al	27Linear Thru Zero	
P	31Linear Thru Zero	
K	39Linear Thru Zero	
Ca	43Linear Thru Zero	
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	
V	51Linear Thru Zero	
Cr	52Linear Thru Zero	
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	
Fe	57Linear Thru Zero	
Co	59Linear Thru Zero	
Ni	60Linear Thru Zero	
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	
Zn	66Linear Thru Zero	
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	
Mo	98Linear Thru Zero	
Ag	107Linear Thru Zero	
Cd	111Linear Thru Zero	
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	
Sb	121Linear Thru Zero	
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	
Pb	208Linear Thru Zero	
Th	232Linear Thru Zero	
U	238Linear Thru Zero	

### 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					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
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					
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
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: Blank

Report Date/Time: Wednesday, February 10, 2010 15:53:05

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## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Wednesday, February 10, 2010 15:56:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\Standard 1.079

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	4.046	5772	0.011
Be	9	10.000	ug/L	4.398	1335	0.002
B	11	20.000	ug/L	4.082	5038	0.009
Na	23	1000.000	ug/L	5.683	3216405	5.941
Mg	24	1000.000	ug/L	23.613	2019485	3.784
Al	27	1000.000	ug/L	7.466	3030808	5.652
P	31	1000.000	ug/L	2.681	178529	0.326
K	39	1000.000	ug/L	6.535	5946611	10.351
Ca	43	1000.000	ug/L	1.505	12012	0.022
> Sc	45		ug/L		535830	535930.465
Ti	47	10.000	ug/L	2.858	5847	0.010
V	51	10.000	ug/L	8.979	27398	0.069
Cr	52	10.000	ug/L	3.204	68690	0.106
Cr	53		ug/L		168718	0.185
Mn	55	10.000	ug/L	4.618	88703	0.164
Fe	57	1000.000	ug/L	3.578	195707	0.344
Co	59	10.000	ug/L	3.463	67802	0.126
Ni	60	10.000	ug/L	3.486	14301	0.026
Cu	63		ug/L		31350	0.058
Cu	65	10.000	ug/L	4.357	15267	0.028
Zn	66	10.000	ug/L	2.001	8343	0.024
Zn	67		ug/L		10654	0.020
Zn	68		ug/L		6828	0.018
> Ge	74		ug/L		335090	335089.839
As	75	10.000	ug/L	14.762	8246	0.027
Se	77		ug/L		16561	0.032
Se	82	10.000	ug/L	3.695	1159	0.003
Kr	83		ug/L		45	-0.000
Sr	88	10.000	ug/L	2.231	145884	0.658
Y	89		ug/L		39	0.000
Zr	90	10.000	ug/L	2.087	75623	0.340
Mo	98	10.000	ug/L	1.416	32383	0.145
Ag	107	10.000	ug/L	1.553	59142	0.267
Cd	111	10.000	ug/L	0.960	12189	0.055
Cd	114		ug/L		28728	0.129
> In	115		ug/L		221548	221548.402
Sn	120	10.000	ug/L	1.005	53209	0.239
Sb	121	10.000	ug/L	1.339	36435	0.162
Sb	123		ug/L		28052	0.125
Ba	135		ug/L		12192	0.064
Ba	137	10.000	ug/L	0.487	20897	0.111
Ho	165		ug/L		7	0.000
> Lu	175		ug/L		188750	188749.678
Tl	205	10.000	ug/L	0.880	34082	0.178
Pb	208	10.000	ug/L	1.059	120830	0.637
Th	232	10.000	ug/L	1.999	141922	0.749
U	238	10.000	ug/L	1.579	154028	0.815

Sample ID: Standard 1

Report Date/Time: Wednesday, February 10, 2010 15:59:10

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	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: Wednesday, February 10, 2010 15:59:10

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## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Wednesday, February 10, 2010 16:02:34

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\Standard 2.080

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	99.995	ug/L	2.417	56290	0.107
Be	9	100.015	ug/L	3.747	13283	0.025
B	11	199.989	ug/L	2.986	45627	0.086
Na	23	10007.572	ug/L	6.845	33839512	64.328
Mg	24	9999.233	ug/L	5.300	19750512	37.550
Al	27	10007.212	ug/L	2.092	32063901	60.960
P	31	9996.427	ug/L	3.250	1658858	3.148
K	39	9999.250	ug/L	7.945	54353788	102.732
Ca	43	9996.627	ug/L	2.785	112150	0.213
> Sc	45		ug/L		526080	526080.014
Ti	47	99.974	ug/L	3.619	53717	0.102
V	51	100.244	ug/L	4.695	469018	0.910
Cr	52	99.837	ug/L	4.784	489135	0.908
Cr	53		ug/L		175633	0.204
Mn	55	99.942	ug/L	3.698	816226	1.551
Fe	57	9994.026	ug/L	3.218	1718084	3.247
Co	59	99.960	ug/L	2.409	639005	1.215
Ni	60	99.969	ug/L	1.831	135236	0.257
Cu	63		ug/L		294526	0.560
Cu	65	99.953	ug/L	2.833	141971	0.270
Zn	66	100.029	ug/L	0.796	78675	0.242
Zn	67		ug/L		20524	0.052
Zn	68		ug/L		57663	0.176
> Ge	74		ug/L		323016	323016.479
As	75	100.059	ug/L	0.866	90881	0.283
Se	77		ug/L		19062	0.042
Se	82	99.948	ug/L	1.145	10423	0.032
Kr	83		ug/L		49	-0.000
Sr	88	99.979	ug/L	0.323	1397254	6.441
Y	89		ug/L		170	0.001
Zr	90	99.994	ug/L	1.195	732628	3.376
Mo	98	99.999	ug/L	1.337	315003	1.451
Ag	107	99.964	ug/L	0.492	557959	2.572
Cd	111	100.015	ug/L	1.229	120933	0.557
Cd	114		ug/L		287623	1.326
> In	115		ug/L		216908	216908.170
Sn	120	99.997	ug/L	0.912	516902	2.382
Sb	121	99.979	ug/L	3.441	344806	1.587
Sb	123		ug/L		264534	1.218
Ba	135		ug/L		119370	0.641
Ba	137	100.001	ug/L	2.249	205851	1.106
Ho	165		ug/L		6	0.000
> Lu	175		ug/L		186071	186070.858
Tl	205	100.001	ug/L	0.497	332508	1.785
Pb	208	99.982	ug/L	0.492	1164128	6.253
Th	232	100.006	ug/L	0.890	1402003	7.532
U	238	99.979	ug/L	0.886	1485034	7.980

Sample ID: Standard 2

Report Date/Time: Wednesday, February 10, 2010 16:05:16

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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

Sample ID: Standard 2

Report Date/Time: Wednesday, February 10, 2010 16:05:16

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### 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: Wednesday, February 10, 2010 16:05:16

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## ICPMS#4 - Summary Report

Sample ID: QC Std 1  
 Sample Date/Time: Wednesday, February 10, 2010 16:08:40  
 Sample Type:  
 Sample Description:  
 Number of Replicates: 3  
 Batch ID:  
 Method File: c:\elandata\Method\6020.mth  
 Dataset File: C:\elandata\Dataset\100210\QC Std 1.081

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	50.694	ug/L	2.672	28413	0.054
Be	9	50.675	ug/L	4.572	6700	0.013
B	11	105.562	ug/L	4.638	24153	0.045
Na	23	4699.414	ug/L	2.894	15854280	30.208
Mg	24	5445.127	ug/L	11.371	10685696	20.448
Al	27	4830.979	ug/L	9.288	15386701	29.428
P	31	4971.271	ug/L	2.870	823216	1.566
K	39	4964.561	ug/L	10.072	27070318	51.006
Ca	43	4952.983	ug/L	2.911	55425	0.105
> Sc	45		ug/L		523726	523726.175
Ti	47	50.331	ug/L	3.021	27050	0.051
V	51	47.798	ug/L	2.242	218047	0.434
Cr	52	52.171	ug/L	3.779	260106	0.475
Cr	53		ug/L		183863	0.222
Mn	55	51.359	ug/L	4.026	417920	0.797
Fe	57	4964.745	ug/L	4.148	855005	1.613
Co	59	49.483	ug/L	4.630	314783	0.601
Ni	60	50.960	ug/L	4.763	68638	0.131
Cu	63		ug/L		146629	0.280
Cu	65	49.843	ug/L	3.730	70530	0.135
Zn	66	48.702	ug/L	1.560	38419	0.118
Zn	67		ug/L		16226	0.039
Zn	68		ug/L		28924	0.087
> Ge	74		ug/L		322053	322052.548
As	75	48.353	ug/L	0.708	43442	0.137
Se	77		ug/L		18728	0.041
Se	82	47.946	ug/L	3.682	4997	0.015
Kr	83		ug/L		49	-0.000
Sr	88	51.252	ug/L	1.409	707271	3.302
Y	89		ug/L		68	0.000
Zr	90	50.136	ug/L	0.927	362926	1.693
Mo	98	49.184	ug/L	0.426	153090	0.714
Ag	107	50.479	ug/L	0.663	278248	1.299
Cd	111	49.079	ug/L	1.275	58603	0.274
Cd	114		ug/L		138623	0.647
> In	115		ug/L		214184	214184.315
Sn	120	50.658	ug/L	1.652	258668	1.207
Sb	121	53.973	ug/L	1.919	184015	0.857
Sb	123		ug/L		140717	0.655
Ba	135		ug/L		58929	0.319
Ba	137	49.956	ug/L	2.787	102110	0.553
Ho	165		ug/L		11	0.000
> Lu	175		ug/L		184739	184739.072
Tl	205	46.548	ug/L	0.886	153897	0.831
Pb	208	49.406	ug/L	0.404	571470	3.090
Th	232	50.444	ug/L	0.314	702423	3.799
U	238	51.753	ug/L	1.006	763317	4.131

Sample ID: QC Std 1  
 Report Date/Time: Wednesday, February 10, 2010 16:11:23  
 Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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	101.387				
Be	9	101.349				
B	11	105.562				
Na	23	93.988				
Mg	24	108.903				
Al	27	95.663				
P	31	99.425				
K	39	99.291				
Ca	43	99.060				
> Sc	45		102.0			
Ti	47	100.661				
V	51	95.597				
Cr	52	104.341				
Cr	53					
Mn	55	102.718				
Fe	57	99.295				
Co	59	98.967				
Ni	60	101.921				
Cu	63					
Cu	65	99.685				
Zn	66	97.404				
Zn	67					
Zn	68					
> Ge	74		95.7			
As	75	96.706				
Se	77					
Se	82	95.892				
Kr	83					
Sr	88	102.505				
Y	89					
Zr	90	100.272				
Mo	98	98.369				
Ag	107	100.959				
Cd	111	98.158				
Cd	114					
> In	115		92.5			
Sn	120	101.315				
Sb	121	107.945				
Sb	123					
Ba	135					
Ba	137	99.912				
Ho	165					
> Lu	175		95.3			
Tl	205	93.096				
Pb	208	98.812				
Th	232	100.888				
U	238	103.506				

### 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: Wednesday, February 10, 2010 16:11:23

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## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Wednesday, February 10, 2010 16:14:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 2.082

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.027	ug/L	53.609	27	0.000
Be	9	0.033	ug/L	36.891	7	0.000
B	11	3.194	ug/L	20.760	1088	0.001
Na	23	0.122	ug/L	1020.319	34375	0.001
Mg	24	5.167	ug/L	80.301	11006	0.019
Al	27	2.131	ug/L	139.988	12674	0.013
P	31	3.010	ug/L	69.694	4121	0.001
K	39	4.347	ug/L	38.183	411519	0.045
Ca	43	4.889	ug/L	31.575	260	0.000
> Sc	45		ug/L		512394	512393.544
Ti	47	-0.159	ug/L	21.798	162	-0.000
V	51	0.427	ug/L	64.814	-7035	0.004
Cr	52	-0.054	ug/L	93.903	11223	-0.000
Cr	53		ug/L		66010	-0.001
Mn	55	0.022	ug/L	58.902	958	0.000
Fe	57	-2.060	ug/L	28.903	10492	-0.001
Co	59	0.026	ug/L	47.374	261	0.000
Ni	60	0.015	ug/L	128.154	131	0.000
Cu	63		ug/L		273	0.000
Cu	65	0.018	ug/L	121.677	153	0.000
Zn	66	0.044	ug/L	79.175	508	0.000
Zn	67		ug/L		4033	0.000
Zn	68		ug/L		882	0.000
> Ge	74		ug/L		342461	342461.018
As	75	-0.142	ug/L	225.725	-842	-0.000
Se	77		ug/L		5639	-0.001
Se	82	0.108	ug/L	66.091	36	0.000
Kr	83		ug/L		48	-0.000
Sr	88	0.027	ug/L	51.700	669	0.002
Y	89		ug/L		24	-0.000
Zr	90	0.065	ug/L	17.567	940	0.002
Mo	98	0.028	ug/L	25.505	311	0.000
Ag	107	0.035	ug/L	32.065	312	0.001
Cd	111	0.035	ug/L	27.106	69	0.000
Cd	114		ug/L		150	0.000
> In	115		ug/L		232991	232991.046
Sn	120	0.059	ug/L	12.674	638	0.001
Sb	121	0.284	ug/L	11.149	1609	0.005
Sb	123		ug/L		1233	0.003
Ba	135		ug/L		63	0.000
Ba	137	0.029	ug/L	38.817	93	0.000
Ho	165		ug/L		3	-0.000
> Lu	175		ug/L		192519	192519.482
Tl	205	0.365	ug/L	19.744	1705	0.007
Pb	208	0.025	ug/L	53.541	977	0.002
Th	232	0.093	ug/L	4.406	1938	0.007
U	238	0.028	ug/L	54.925	690	0.002

Sample ID: QC Std 2

Report Date/Time: Wednesday, February 10, 2010 16:17:34

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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			99.8		
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			101.8		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			100.6		
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 MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Wednesday, February 10, 2010 16:17:34

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## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Wednesday, February 10, 2010 16:20:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 3.083

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.036	ug/L	2.917	6271	0.012
Be	9	0.562	ug/L	3.809	78	0.000
B	11	17.208	ug/L	3.913	4321	0.007
Na	23	253.163	ug/L	6.598	897002	1.627
Mg	24	17.211	ug/L	32.315	35380	0.065
Al	27	27.391	ug/L	5.799	94647	0.167
P	31	62.100	ug/L	4.170	14128	0.020
K	39	329.574	ug/L	4.426	2198131	3.386
Ca	43	223.425	ug/L	8.910	2732	0.005
> Sc	45		ug/L		530177	530177.213
Ti	47	8.620	ug/L	4.158	4900	0.009
V	51	10.015	ug/L	5.866	38926	0.091
Cr	52	11.523	ug/L	3.275	67420	0.105
Cr	53		ug/L		103464	0.065
Mn	55	5.783	ug/L	3.849	48358	0.090
Fe	57	108.016	ug/L	5.469	29796	0.035
Co	59	1.123	ug/L	5.587	7331	0.014
Ni	60	2.186	ug/L	2.833	3091	0.006
Cu	63		ug/L		3680	0.007
Cu	65	1.181	ug/L	5.303	1820	0.003
Zn	66	11.241	ug/L	3.005	9568	0.027
Zn	67		ug/L		6958	0.009
Zn	68		ug/L		7356	0.020
> Ge	74		ug/L		334672	334672.320
As	75	5.391	ug/L	8.990	4423	0.015
Se	77		ug/L		10141	0.013
Se	82	5.881	ug/L	2.787	657	0.002
Kr	83		ug/L		45	-0.000
Sr	88	11.111	ug/L	0.069	162268	0.716
Y	89		ug/L		32	0.000
Zr	90	1.826	ug/L	4.476	14375	0.062
Mo	98	0.525	ug/L	3.031	1935	0.008
Ag	107	1.052	ug/L	2.365	6228	0.027
Cd	111	1.142	ug/L	3.694	1464	0.006
Cd	114		ug/L		3400	0.015
> In	115		ug/L		226364	226364.156
Sn	120	5.363	ug/L	1.368	29213	0.128
Sb	121	2.778	ug/L	11.636	10532	0.044
Sb	123		ug/L		8052	0.034
Ba	135		ug/L		2655	0.014
Ba	137	2.246	ug/L	2.212	4727	0.025
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		189035	189035.153
Tl	205	1.097	ug/L	1.353	4139	0.020
Pb	208	2.226	ug/L	1.754	26977	0.139
Th	232	1.103	ug/L	1.749	16295	0.083
U	238	0.247	ug/L	1.660	3985	0.020

Sample ID: QC Std 3

Report Date/Time: Wednesday, February 10, 2010 16:23:41

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	110.360				
Be	9	112.401				
B	11	114.719				
Na	23	101.265				
Mg	24	114.743				
Al	27	91.303				
P	31	124.201				
K	39	109.858				
Ca	43	111.713				
> Sc	45		103.3			
Ti	47	86.201				
V	51	100.151				
Cr	52	115.230				
Cr	53					
Mn	55	115.660				
Fe	57	108.016				
Co	59	112.347				
Ni	60	109.288				
Cu	63					
Cu	65	118.085				
Zn	66	112.406				
Zn	67					
Zn	68					
> Ge	74		99.5			
As	75	107.813				
Se	77					
Se	82	117.618				
Kr	83					
Sr	88	111.107				
Y	89					
Zr	90	91.299				
Mo	98	105.014				
Ag	107	105.241				
Cd	111	114.245				
Cd	114					
> In	115		97.7			
Sn	120	107.256				
Sb	121	92.584				
Sb	123					
Ba	135					
Ba	137	112.302				
Ho	165					
> Lu	175		97.6			
Tl	205	109.652				
Pb	208	111.312				
Th	232	110.332				
U	238	123.480				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 3

Report Date/Time: Wednesday, February 10, 2010 16:23:41

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## ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Wednesday, February 10, 2010 16:27:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 4.084

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.041	ug/L	20.942	31	0.000
Be	9	0.128	ug/L	18.804	17	0.000
B	11	1.497	ug/L	7.715	646	0.001
Na	23	94832.494	ug/L	2.822	282052760	609.577
Mg	24	97594.857	ug/L	2.672	169540614	366.497
Al	27	90342.798	ug/L	8.009	254228016	550.331
P	31	91086.167	ug/L	2.742	13270500	28.687
K	39	91754.314	ug/L	17.465	434975184	942.683
Ca	43	95291.426	ug/L	3.691	938530	2.029
> Sc	45		ug/L		462741	462741.253
Ti	47	1754.270	ug/L	2.937	825553	1.785
V	51	-2.500	ug/L	34.547	-18724	-0.023
Cr	52	6.066	ug/L	3.031	35891	0.055
Cr	53		ug/L		124238	0.139
Mn	55	5.557	ug/L	2.393	40596	0.086
Fe	57	94791.994	ug/L	1.448	14255513	30.795
Co	59	0.401	ug/L	3.714	2338	0.005
Ni	60	5.126	ug/L	4.364	6191	0.013
Cu	63		ug/L		8634	0.018
Cu	65	3.371	ug/L	2.053	4326	0.009
Zn	66	5.545	ug/L	0.682	3946	0.013
Zn	67		ug/L		9190	0.023
Zn	68		ug/L		1524	0.003
> Ge	74		ug/L		266556	266556.488
As	75	-1.478	ug/L	59.020	-1665	-0.004
Se	77		ug/L		16403	0.045
Se	82	-0.894	ug/L	34.708	-58	-0.000
Kr	83		ug/L		209	0.001
Sr	88	2.883	ug/L	1.580	36084	0.186
Y	89		ug/L		456	0.002
Zr	90	0.608	ug/L	40.955	4327	0.021
Mo	98	2026.162	ug/L	2.912	5678831	29.408
Ag	107	0.117	ug/L	3.432	666	0.003
Cd	111	0.074	ug/L	108.191	98	0.000
Cd	114		ug/L		8800	0.045
> In	115		ug/L		193129	193129.389
Sn	120	0.447	ug/L	0.896	2312	0.011
Sb	121	0.331	ug/L	9.767	1480	0.005
Sb	123		ug/L		1125	0.004
Ba	135		ug/L		845	0.005
Ba	137	0.723	ug/L	2.675	1397	0.008
Ho	165		ug/L		4069	0.024
> Lu	175		ug/L		171056	171055.712
Tl	205	-0.015	ug/L	19.113	353	-0.000
Pb	208	0.183	ug/L	0.721	2560	0.011
Th	232	0.191	ug/L	42.107	2974	0.014
U	238	-0.011	ug/L	8.069	90	-0.001

Sample ID: QC Std 4

Report Date/Time: Wednesday, February 10, 2010 16:29:49

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	94.832				
Mg	24	97.595				
Al	27	90.343				
P	31	91.086				
K	39	91.754				
Ca	43	95.291				
> Sc	45			90.1		
Ti	47	87.713				
V	51					
Cr	52	183.832				
Cr	53					
Mn	55	95.807				
Fe	57	94.792				
Co	59	170.510				
Ni	60	154.855				
Cu	63					
Cu	65	100.937				
Zn	66	147.477				
Zn	67					
Zn	68					
> Ge	74			79.2		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88	97.409				
Y	89					
Zr	90					
Mo	98	101.308				
Ag	107					
Cd	111	16.562				
Cd	114					
> In	115			83.4		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137	90.644				
Ho	165					
> Lu	175			88.3		
Tl	205					
Pb	208	97.029				
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 Ge 74 Int Std for QCGe 74

### QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Wednesday, February 10, 2010 16:33:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 5.085

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	20.639	ug/L	3.498	10233	0.022
Be	9	19.135	ug/L	3.374	2240	0.005
B	11	19.653	ug/L	3.282	4261	0.008
Na	23	94808.795	ug/L	7.455	281711808	609.425
Mg	24	99326.896	ug/L	5.806	172493961	373.001
Al	27	91088.585	ug/L	8.184	256411935	554.874
P	31	95375.163	ug/L	5.346	13895390	30.038
K	39	88203.039	ug/L	7.189	419433398	906.197
Ca	43	94871.538	ug/L	5.896	934514	2.020
> Sc	45		ug/L		463208	463207.679
Ti	47	1767.095	ug/L	4.440	831858	1.798
V	51	20.621	ug/L	5.596	78443	0.187
Cr	52	25.672	ug/L	5.245	118397	0.234
Cr	53		ug/L		91310	0.068
Mn	55	24.856	ug/L	4.489	179178	0.386
Fe	57	95908.673	ug/L	4.579	14423208	31.157
Co	59	19.126	ug/L	4.332	107634	0.232
Ni	60	22.895	ug/L	4.402	27323	0.059
Cu	63		ug/L		53162	0.115
Cu	65	20.725	ug/L	5.504	25985	0.056
Zn	66	22.956	ug/L	1.664	15433	0.056
Zn	67		ug/L		8068	0.018
Zn	68		ug/L		9711	0.033
> Ge	74		ug/L		270973	270972.897
As	75	20.605	ug/L	4.133	15259	0.058
Se	77		ug/L		11421	0.025
Se	82	20.675	ug/L	4.173	1824	0.007
Kr	83		ug/L		185	0.001
Sr	88	23.320	ug/L	0.615	298890	1.502
Y	89		ug/L		403	0.002
Zr	90	20.710	ug/L	1.275	139361	0.699
Mo	98	2044.273	ug/L	0.219	5899318	29.670
Ag	107	17.855	ug/L	1.422	91413	0.459
Cd	111	18.359	ug/L	0.116	20365	0.102
Cd	114		ug/L		57575	0.289
> In	115		ug/L		198820	198819.765
Sn	120	20.136	ug/L	1.195	95613	0.480
Sb	121	20.935	ug/L	1.159	66581	0.332
Sb	123		ug/L		50833	0.254
Ba	135		ug/L		22445	0.129
Ba	137	20.403	ug/L	1.044	39238	0.226
Ho	165		ug/L		4220	0.024
> Lu	175		ug/L		173722	173722.087
Tl	205	17.461	ug/L	0.822	54543	0.312
Pb	208	18.308	ug/L	0.801	199511	1.145
Th	232	19.780	ug/L	0.759	259330	1.490
U	238	20.319	ug/L	0.947	281955	1.622

Sample ID: QC Std 5

Report Date/Time: Wednesday, February 10, 2010 16:35:58

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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	103.195				
Be	9	95.673				
B	11	98.265				
Na	23	94.809				
Mg	24	99.327				
Al	27	91.089				
P	31	95.375				
K	39	88.203				
Ca	43	94.872				
> Sc	45		90.2			
Ti	47	88.355				
V	51	103.105				
Cr	52	110.179				
Cr	53					
Mn	55	96.341				
Fe	57	95.909				
Co	59	94.518				
Ni	60	98.219				
Cu	63					
Cu	65	88.798				
Zn	66	96.618				
Zn	67					
Zn	68					
> Ge	74		80.5			
As	75	103.023				
Se	77					
Se	82	103.375				
Kr	83					
Sr	88	101.570				
Y	89					
Zr	90	103.548				
Mo	98	102.214				
Ag	107	89.274				
Cd	111	89.803				
Cd	114					
> In	115		85.8			
Sn	120	100.679				
Sb	121	104.677				
Sb	123					
Ba	135					
Ba	137	98.103				
Ho	165					
> Lu	175		89.7			
Tl	205	87.307				
Pb	208	90.685				
Th	232	98.902				
U	238	101.594				

### 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 10, 2010 16:35:58

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 10, 2010 16:39:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 6.086

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.316	ug/L	0.450	30722	0.057
Be	9	52.006	ug/L	1.270	7072	0.013
B	11	104.596	ug/L	1.566	24616	0.045
Na	23	4916.881	ug/L	5.319	17047613	31.605
Mg	24	5065.950	ug/L	4.740	10235772	19.024
Al	27	4762.626	ug/L	9.527	15610057	29.012
P	31	4970.765	ug/L	0.704	846304	1.566
K	39	5074.059	ug/L	3.137	28455807	52.131
Ca	43	5087.731	ug/L	0.557	58524	0.108
> Sc	45		ug/L		538125	538124.663
Ti	47	54.292	ug/L	2.039	29983	0.055
V	51	48.144	ug/L	2.038	225716	0.437
Cr	52	53.103	ug/L	1.405	272014	0.483
Cr	53		ug/L		181595	0.208
Mn	55	52.885	ug/L	0.640	442525	0.821
Fe	57	5087.323	ug/L	0.617	900715	1.653
Co	59	50.418	ug/L	0.866	329866	0.613
Ni	60	51.503	ug/L	0.623	71350	0.132
Cu	63		ug/L		151796	0.282
Cu	65	50.381	ug/L	1.318	73304	0.136
Zn	66	49.474	ug/L	0.431	39635	0.120
Zn	67		ug/L		15665	0.036
Zn	68		ug/L		29691	0.088
> Ge	74		ug/L		327116	327116.019
As	75	46.935	ug/L	2.063	42811	0.133
Se	77		ug/L		19049	0.041
Se	82	47.600	ug/L	1.199	5039	0.015
Kr	83		ug/L		50	-0.000
Sr	88	51.817	ug/L	0.891	701271	3.338
Y	89		ug/L		72	0.000
Zr	90	50.609	ug/L	1.447	359243	1.709
Mo	98	50.263	ug/L	0.379	153410	0.730
Ag	107	51.163	ug/L	0.784	276555	1.316
Cd	111	49.326	ug/L	0.950	57762	0.275
Cd	114		ug/L		135977	0.647
> In	115		ug/L		210028	210027.712
Sn	120	50.835	ug/L	1.214	254573	1.211
Sb	121	50.507	ug/L	0.789	168930	0.802
Sb	123		ug/L		129464	0.614
Ba	135		ug/L		58661	0.314
Ba	137	49.021	ug/L	0.643	101414	0.542
Ho	165		ug/L		13	0.000
> Lu	175		ug/L		186947	186946.829
Tl	205	47.324	ug/L	1.163	158327	0.845
Pb	208	49.536	ug/L	0.869	579803	3.098
Th	232	49.421	ug/L	0.715	696411	3.722
U	238	51.112	ug/L	1.009	762895	4.080

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 10, 2010 16:42:07

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	106.633				
Be	9	104.012				
B	11	104.596				
Na	23	98.338				
Mg	24	101.319				
Al	27	94.309				
P	31	99.415				
K	39	101.481				
Ca	43	101.755				
> Sc	45		104.8			
Ti	47	108.584				
V	51	96.288				
Cr	52	106.206				
Cr	53					
Mn	55	105.770				
Fe	57	101.746				
Co	59	100.836				
Ni	60	103.006				
Cu	63					
Cu	65	100.763				
Zn	66	98.948				
Zn	67					
Zn	68					
> Ge	74		97.2			
As	75	93.870				
Se	77					
Se	82	95.200				
Kr	83					
Sr	88	103.635				
Y	89					
Zr	90	101.217				
Mo	98	100.525				
Ag	107	102.326				
Cd	111	98.653				
Cd	114					
> In	115		90.7			
Sn	120	101.669				
Sb	121	101.013				
Sb	123					
Ba	135					
Ba	137	98.042				
Ho	165					
> Lu	175		96.5			
Tl	205	94.648				
Pb	208	99.072				
Th	232	98.842				
U	238	102.224				

### 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 10, 2010 16:42:07

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 10, 2010 16:45:33

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 7.087

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.005	ug/L	51.928	16	0.000
Be	9	-0.014	ug/L	2.452	1	-0.000
B	11	1.648	ug/L	16.181	829	0.001
Na	23	0.589	ug/L	587.811	39390	0.004
Mg	24	2.777	ug/L	88.748	7002	0.010
Al	27	-0.062	ug/L	1429.514	6335	-0.000
P	31	2.705	ug/L	57.944	4506	0.001
K	39	-6.743	ug/L	63.460	390618	-0.069
Ca	43	0.340	ug/L	482.235	233	0.000
> Sc	45		ug/L		567330	567329.715
Ti	47	0.260	ug/L	27.235	421	0.000
V	51	0.051	ug/L	176.966	-9717	0.000
Cr	52	-0.220	ug/L	51.539	11555	-0.002
Cr	53		ug/L		73400	-0.000
Mn	55	-0.005	ug/L	193.974	815	-0.000
Fe	57	-2.393	ug/L	194.769	11538	-0.001
Co	59	-0.001	ug/L	835.598	101	-0.000
Ni	60	-0.016	ug/L	58.272	98	-0.000
Cu	63		ug/L		206	-0.000
Cu	65	-0.003	ug/L	511.423	136	-0.000
Zn	66	-0.022	ug/L	109.197	459	-0.000
Zn	67		ug/L		4209	0.001
Zn	68		ug/L		792	-0.000
> Ge	74		ug/L		346566	346566.484
As	75	-0.364	ug/L	88.914	-1070	-0.001
Se	77		ug/L		6538	0.002
Se	82	0.040	ug/L	228.540	29	0.000
Kr	83		ug/L		58	0.000
Sr	88	-0.001	ug/L	604.453	239	-0.000
Y	89		ug/L		26	-0.000
Zr	90	0.057	ug/L	21.123	867	0.002
Mo	98	0.048	ug/L	29.256	375	0.001
Ag	107	0.006	ug/L	149.623	136	0.000
Cd	111	0.003	ug/L	528.582	27	0.000
Cd	114		ug/L		75	-0.000
> In	115		ug/L		230344	230344.009
Sn	120	0.029	ug/L	13.675	462	0.001
Sb	121	0.299	ug/L	18.044	1646	0.005
Sb	123		ug/L		1299	0.004
Ba	135		ug/L		27	0.000
Ba	137	0.004	ug/L	138.022	40	0.000
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		194513	194513.040
Tl	205	0.158	ug/L	23.490	1000	0.003
Pb	208	-0.008	ug/L	73.979	578	-0.001
Th	232	0.063	ug/L	18.986	1531	0.005
U	238	-0.002	ug/L	262.452	238	-0.000

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 16:48:18

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		110.5			
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		103.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.4			
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: Wednesday, February 10, 2010 16:48:18

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## ICPMS#4 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Wednesday, February 10, 2010 16:51:41

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 10.088

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	1034.072	ug/L	4.423	517458	1.107
Be	9	1002.836	ug/L	4.395	118437	0.253
B	11	1.016	ug/L	31.103	556	0.000
Na	23	48910.278	ug/L	3.962	147035664	314.392
Mg	24	51968.758	ug/L	2.566	91278901	195.158
Al	27	48576.940	ug/L	1.710	138480313	295.910
P	31	23567.269	ug/L	3.472	3474026	7.422
K	39	50992.790	ug/L	6.107	245231504	523.899
Ca	43	48758.489	ug/L	4.495	485643	1.038
> Sc	45		ug/L		467930	467930.078
Ti	47	44.393	ug/L	5.427	21333	0.045
V	51	1064.375	ug/L	2.750	4510645	9.662
Cr	52	984.555	ug/L	3.380	4198989	8.957
Cr	53		ug/L		609372	1.174
Mn	55	973.358	ug/L	4.572	7063455	15.108
Fe	57	48800.710	ug/L	3.929	7422349	15.854
Co	59	953.340	ug/L	2.976	5419119	11.588
Ni	60	886.517	ug/L	3.296	1065575	2.279
Cu	63		ug/L		2367256	5.062
Cu	65	859.233	ug/L	3.930	1084417	2.319
Zn	66	2155.212	ug/L	1.035	1421832	5.218
Zn	67		ug/L		238693	0.865
Zn	68		ug/L		1025554	3.763
> Ge	74		ug/L		272386	272386.385
As	75	868.570	ug/L	0.171	669526	2.460
Se	77		ug/L		44391	0.146
Se	82	456.944	ug/L	0.368	40112	0.147
Kr	83		ug/L		106	0.000
Sr	88	1061.601	ug/L	0.128	12469735	68.387
Y	89		ug/L		511	0.003
Zr	90	543.853	ug/L	0.496	3348148	18.360
Mo	98	1081.627	ug/L	0.986	2862689	15.699
Ag	107	242.451	ug/L	1.030	1137485	6.238
Cd	111	947.003	ug/L	1.020	962449	5.278
Cd	114		ug/L		2406317	13.197
> In	115		ug/L		182339	182338.733
Sn	120	1086.128	ug/L	1.169	4717418	25.870
Sb	121	252.874	ug/L	1.331	732531	4.015
Sb	123		ug/L		565810	3.101
Ba	135		ug/L		1011243	6.003
Ba	137	926.500	ug/L	0.432	1726542	10.250
Ho	165		ug/L		146	0.001
> Lu	175		ug/L		168444	168443.972
Tl	205	438.147	ug/L	0.318	1317541	7.820
Pb	208	4647.270	ug/L	1.053	48956655	290.647
Th	232	2347.627	ug/L	1.448	29782442	176.814
U	238	4862.104	ug/L	1.619	65366145	388.079

Sample ID: QC Std 10

Report Date/Time: Wednesday, February 10, 2010 16:54:24

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	103.407				
Be	9	100.284				
B	11					
Na	23	97.821				
Mg	24	103.938				
Al	27	97.154				
P	31	94.269				
K	39	101.986				
Ca	43	97.517				
> Sc	45		91.1			
Ti	47					
V	51	106.438				
Cr	52	98.456				
Cr	53					
Mn	55	97.336				
Fe	57	97.601				
Co	59	95.334				
Ni	60	88.652				
Cu	63					
Cu	65	85.923				
Zn	66	86.208				
Zn	67					
Zn	68					
> Ge	74		81.0			
As	75	86.857				
Se	77					
Se	82	91.389				
Kr	83					
Sr	88	106.160				
Y	89					
Zr	90	108.771				
Mo	98	108.163				
Ag	107	96.980				
Cd	111	94.700				
Cd	114					
> In	115		78.7			
Sn	120	108.613				
Sb	121	101.150				
Sb	123					
Ba	135					
Ba	137	92.650				
Ho	165					
> Lu	175		86.9			
Tl	205	87.629				
Pb	208	92.945				
Th	232	93.905				
U	238	97.242				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	Ni	60LRS is out of limits ( +/- 10%)
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%)
In 115 Int Std for QCIn		115
QC Std 10	Tl	205LRS is out of limits ( +/- 10%)

Sample ID: QC Std 10

Report Date/Time: Wednesday, February 10, 2010 16:54:24

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 10

Report Date/Time: Wednesday, February 10, 2010 16:54:24

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## ICPMS#4 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Wednesday, February 10, 2010 16:57:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\1100210\QC Std 11.089

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	49.908	ug/L	5.977	29184	0.053
Be	9	49.562	ug/L	4.407	6843	0.013
B	11	101.940	ug/L	5.279	24364	0.044
Na	23	4496.151	ug/L	2.798	15854280	28.901
Mg	24	5300.117	ug/L	3.070	10880375	19.903
Al	27	4891.615	ug/L	6.188	16280123	29.798
P	31	4786.947	ug/L	3.204	827898	1.508
K	39	4949.009	ug/L	4.739	28242655	50.846
Ca	43	4821.542	ug/L	3.828	56333	0.103
Sc	45		ug/L		547104	547104.096
Ti	47	48.522	ug/L	3.419	27241	0.049
V	51	46.826	ug/L	6.285	222589	0.425
Cr	52	50.614	ug/L	4.880	263804	0.460
Cr	53		ug/L		174504	0.190
Mn	55	50.095	ug/L	4.943	425572	0.778
Fe	57	4833.210	ug/L	5.217	869233	1.570
Co	59	47.945	ug/L	5.148	318427	0.583
Ni	60	49.251	ug/L	5.296	69263	0.127
Cu	63		ug/L		148348	0.271
Cu	65	48.612	ug/L	3.814	71834	0.131
Zn	66	48.738	ug/L	0.496	38745	0.118
Zn	67		ug/L		15730	0.037
Zn	68		ug/L		29053	0.087
Ge	74		ug/L		324539	324539.279
As	75	47.695	ug/L	2.699	43173	0.135
Se	77		ug/L		18125	0.039
Se	82	46.668	ug/L	1.365	4901	0.015
Kr	83		ug/L		50	-0.000
Sr	88	50.446	ug/L	2.457	691609	3.250
Y	89		ug/L		77	0.000
Zr	90	50.943	ug/L	3.125	366266	1.720
Mo	98	48.774	ug/L	3.213	150794	0.708
Ag	107	50.571	ug/L	2.516	276916	1.301
Cd	111	48.262	ug/L	1.963	57256	0.269
Cd	114		ug/L		135733	0.638
In	115		ug/L		212819	212819.297
Sn	120	51.548	ug/L	1.674	261532	1.228
Sb	121	54.171	ug/L	1.958	183510	0.860
Sb	123		ug/L		140703	0.659
Ba	135		ug/L		58406	0.312
Ba	137	48.419	ug/L	0.671	100171	0.536
Ho	165		ug/L		13	0.000
Lu	175		ug/L		186947	186946.838
Tl	205	47.044	ug/L	0.818	157399	0.840
Pb	208	48.994	ug/L	0.272	573483	3.064
Th	232	49.568	ug/L	0.845	698466	3.733
U	238	50.780	ug/L	0.883	757946	4.053

Sample ID: QC Std 11

Report Date/Time: Wednesday, February 10, 2010 17:00:31

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	99.816				
Be	9	99.124				
B	11	101.940				
Na	23	89.923				
Mg	24	106.002				
Al	27	96.864				
P	31	95.739				
K	39	98.980				
Ca	43	96.431				
> Sc	45		106.6			
Ti	47	97.044				
V	51	93.651				
Cr	52	101.229				
Cr	53					
Mn	55	100.190				
Fe	57	96.664				
Co	59	95.889				
Ni	60	98.502				
Cu	63					
Cu	65	97.224				
Zn	66	97.477				
Zn	67					
Zn	68					
> Ge	74		96.5			
As	75	95.391				
Se	77					
Se	82	93.335				
Kr	83					
Sr	88	100.891				
Y	89					
Zr	90	101.885				
Mo	98	97.548				
Ag	107	101.143				
Cd	111	96.524				
Cd	114					
> In	115		91.9			
Sn	120	103.097				
Sb	121	108.342				
Sb	123					
Ba	135					
Ba	137	96.838				
Ho	165					
> Lu	175		96.5			
Tl	205	94.087				
Pb	208	97.988				
Th	232	99.135				
U	238	101.561				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 QC Std 11 Na 23CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 11

Report Date/Time: Wednesday, February 10, 2010 17:00:31

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## ICPMS#4 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Wednesday, February 10, 2010 17:03:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 12.090

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.043	ug/L	64.524	38	0.000
Be	9	0.023	ug/L	147.652	6	0.000
B	11	1.571	ug/L	22.205	792	0.001
Na	23	-0.807	ug/L	253.975	33707	-0.005
Mg	24	1.919	ug/L	102.825	5001	0.007
Al	27	0.789	ug/L	371.259	9005	0.005
P	31	1.889	ug/L	150.143	4252	0.001
K	39	-6.662	ug/L	34.440	381704	-0.068
Ca	43	-0.132	ug/L	2850.123	221	-0.000
> Sc	45		ug/L		553456	553455.566
Ti	47	-0.143	ug/L	15.908	184	-0.000
V	51	0.113	ug/L	371.676	-9202	0.001
Cr	52	-0.124	ug/L	117.181	11759	-0.001
Cr	53		ug/L		72014	0.000
Mn	55	0.022	ug/L	125.255	1027	0.000
Fe	57	-2.351	ug/L	142.416	11273	-0.001
Co	59	0.022	ug/L	101.833	252	0.000
Ni	60	0.008	ug/L	355.087	131	0.000
Cu	63		ug/L		336	0.000
Cu	65	0.028	ug/L	85.722	180	0.000
Zn	66	0.124	ug/L	11.261	577	0.000
Zn	67		ug/L		4247	0.001
Zn	68		ug/L		929	0.000
> Ge	74		ug/L		344379	344379.067
As	75	-0.080	ug/L	423.434	-785	-0.000
Se	77		ug/L		6470	0.002
Se	82	0.188	ug/L	38.498	45	0.000
Kr	83		ug/L		53	-0.000
Sr	88	0.023	ug/L	108.424	588	0.001
Y	89		ug/L		27	-0.000
Zr	90	0.102	ug/L	19.501	1204	0.003
Mo	98	0.069	ug/L	23.899	438	0.001
Ag	107	0.023	ug/L	62.351	236	0.001
Cd	111	0.034	ug/L	76.329	66	0.000
Cd	114		ug/L		166	0.000
> In	115		ug/L		227906	227906.332
Sn	120	0.132	ug/L	14.366	1019	0.003
Sb	121	0.532	ug/L	3.464	2470	0.008
Sb	123		ug/L		1828	0.006
Ba	135		ug/L		54	0.000
Ba	137	0.027	ug/L	73.396	89	0.000
Ho	165		ug/L		6	0.000
> Lu	175		ug/L		192106	192106.350
Tl	205	0.629	ug/L	14.875	2607	0.011
Pb	208	0.181	ug/L	36.542	2847	0.011
Th	232	0.186	ug/L	5.680	3289	0.014
U	238	0.109	ug/L	62.095	1926	0.009

Sample ID: QC Std 12

Report Date/Time: Wednesday, February 10, 2010 17:06:42

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		107.8			
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		102.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.1			
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: Wednesday, February 10, 2010 17:06:42

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 10, 2010 17:47:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 6.097

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.660	ug/L	3.231	33512	0.057
Be	9	50.998	ug/L	4.425	7515	0.013
B	11	102.844	ug/L	2.132	26258	0.044
Na	23	4813.617	ug/L	6.236	18070470	30.942
Mg	24	5183.349	ug/L	4.207	11351930	19.465
Al	27	5135.573	ug/L	3.582	18265504	31.284
P	31	4749.296	ug/L	3.950	876325	1.496
K	39	5079.542	ug/L	6.575	30907056	52.187
Ca	43	4911.688	ug/L	3.426	61242	0.105
> Sc	45		ug/L		583866	583866.082
Ti	47	47.886	ug/L	4.358	28684	0.049
V	51	45.593	ug/L	2.755	231209	0.414
Cr	52	49.502	ug/L	4.312	275658	0.450
Cr	53		ug/L		191868	0.200
Mn	55	49.612	ug/L	4.705	449798	0.770
Fe	57	4769.589	ug/L	5.300	915443	1.549
Co	59	47.425	ug/L	5.482	336065	0.576
Ni	60	48.129	ug/L	5.077	72230	0.124
Cu	63		ug/L		152886	0.262
Cu	65	46.671	ug/L	5.158	73567	0.126
Zn	66	49.694	ug/L	1.233	40291	0.120
Zn	67		ug/L		17105	0.040
Zn	68		ug/L		29952	0.088
> Ge	74		ug/L		331103	331102.706
As	75	45.473	ug/L	2.066	41956	0.129
Se	77		ug/L		19823	0.043
Se	82	47.069	ug/L	0.308	5043	0.015
Kr	83		ug/L		51	-0.000
Sr	88	52.321	ug/L	0.929	709130	3.370
Y	89		ug/L		70	0.000
Zr	90	50.784	ug/L	0.517	360996	1.714
Mo	98	49.946	ug/L	0.480	152666	0.725
Ag	107	50.719	ug/L	0.273	274562	1.305
Cd	111	49.175	ug/L	1.249	57668	0.274
Cd	114		ug/L		136111	0.647
> In	115		ug/L		210333	210333.159
Sn	120	50.810	ug/L	1.627	254830	1.210
Sb	121	50.339	ug/L	2.189	168620	0.799
Sb	123		ug/L		129301	0.613
Ba	135		ug/L		58630	0.306
Ba	137	48.105	ug/L	0.642	101920	0.532
Ho	165		ug/L		18	0.000
> Lu	175		ug/L		191464	191463.829
Tl	205	47.218	ug/L	0.559	161786	0.843
Pb	208	48.776	ug/L	0.537	584712	3.051
Th	232	48.753	ug/L	1.128	703630	3.672
U	238	50.567	ug/L	1.047	773008	4.036

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 10, 2010 17:50:03

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	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	0.9997
Cr	52Linear Thru Zero	0.9999
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	107.320				
Be	9	101.997				
B	11	102.844				
Na	23	96.272				
Mg	24	103.667				
Al	27	101.695				
P	31	94.986				
K	39	101.591				
Ca	43	98.234				
> Sc	45		113.7			
Ti	47	95.773				
V	51	91.186				
Cr	52	99.003				
Cr	53					
Mn	55	99.224				
Fe	57	95.392				
Co	59	94.849				
Ni	60	96.259				
Cu	63					
Cu	65	93.342				
Zn	66	99.388				
Zn	67					
Zn	68					
> Ge	74		98.4			
As	75	90.946				
Se	77					
Se	82	94.138				
Kr	83					
Sr	88	104.643				
Y	89					
Zr	90	101.568				
Mo	98	99.891				
Ag	107	101.438				
Cd	111	98.349				
Cd	114					
> In	115		90.8			
Sn	120	101.619				
Sb	121	100.677				
Sb	123					
Ba	135					
Ba	137	96.210				
Ho	165					
> Lu	175		98.8			
Tl	205	94.435				
Pb	208	97.552				
Th	232	97.505				
U	238	101.135				

### 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 10, 2010 17:50:03

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 10, 2010 17:53:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 7.098

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.000	ug/L	3028.944	13	-0.000
Be	9	0.002	ug/L	451.610	3	0.000
B	11	1.539	ug/L	29.042	815	0.001
Na	23	-0.789	ug/L	278.561	35379	-0.005
Mg	24	0.862	ug/L	91.374	3000	0.003
Al	27	-1.352	ug/L	20.612	2000	-0.008
P	31	0.687	ug/L	291.267	4222	0.000
K	39	-8.765	ug/L	49.072	385477	-0.090
Ca	43	-2.493	ug/L	144.815	202	-0.000
> Sc	45		ug/L		577181	577181.225
Ti	47	-0.209	ug/L	6.400	153	-0.000
V	51	-0.078	ug/L	505.810	-10589	-0.001
Cr	52	-0.175	ug/L	24.726	12008	-0.002
Cr	53		ug/L		76604	0.003
Mn	55	-0.004	ug/L	120.636	847	-0.000
Fe	57	-5.708	ug/L	22.627	11134	-0.002
Co	59	0.001	ug/L	623.939	113	0.000
Ni	60	-0.017	ug/L	65.752	100	-0.000
Cu	63		ug/L		230	0.000
Cu	65	-0.011	ug/L	155.735	127	-0.000
Zn	66	0.039	ug/L	39.066	516	0.000
Zn	67		ug/L		4770	0.002
Zn	68		ug/L		924	0.000
> Ge	74		ug/L		350849	350849.104
As	75	-0.177	ug/L	84.505	-898	-0.001
Se	77		ug/L		6729	0.002
Se	82	0.164	ug/L	124.338	43	0.000
Kr	83		ug/L		59	0.000
Sr	88	0.000	ug/L	2410.653	257	0.000
Y	89		ug/L		25	-0.000
Zr	90	0.094	ug/L	19.875	1142	0.003
Mo	98	-0.010	ug/L	73.876	177	-0.000
Ag	107	0.008	ug/L	68.973	145	0.000
Cd	111	0.014	ug/L	54.119	41	0.000
Cd	114		ug/L		75	-0.000
> In	115		ug/L		228161	228160.598
Sn	120	0.030	ug/L	15.294	467	0.001
Sb	121	0.297	ug/L	22.360	1623	0.005
Sb	123		ug/L		1267	0.004
Ba	135		ug/L		22	-0.000
Ba	137	0.006	ug/L	123.663	45	0.000
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		196486	196485.661
Tl	205	0.227	ug/L	16.620	1254	0.004
Pb	208	0.002	ug/L	230.880	717	0.000
Th	232	0.120	ug/L	20.885	2381	0.009
U	238	0.000	ug/L	1650.276	273	0.000

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 17:56:14

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	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	0.9997
Cr	52Linear Thru Zero	0.9999
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		112.4			
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		104.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.5			
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: Wednesday, February 10, 2010 17:56:14

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# ICPMS#4 - Summary Report

Sample ID: 1202021595

Sample Date/Time: Wednesday, February 10, 2010 18:02:04

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\1202021595.099

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.005	ug/L	99.447	11	-0.000
Be	9	-0.007	ug/L	4.269	2	-0.000
B	11	-0.008	ug/L	1461.715	446	-0.000
Na	23	9.077	ug/L	13.646	74193	0.058
Mg	24	2.286	ug/L	109.852	6336	0.009
Al	27	9.225	ug/L	10.611	40391	0.056
P	31	30.485	ug/L	8.430	9943	0.010
K	39	-5.369	ug/L	59.321	418373	-0.055
Ca	43	15.106	ug/L	27.095	431	0.000
Sc	45		ug/L		595542	595542.210
Ti	47	0.680	ug/L	59.650	699	0.001
V	51	0.257	ug/L	91.836	-9083	0.002
Cr	52	0.476	ug/L	6.743	15915	0.004
Cr	53		ug/L		70828	-0.011
Mn	55	0.628	ug/L	3.000	6705	0.010
Fe	57	111.104	ug/L	5.430	34073	0.036
Co	59	-0.001	ug/L	112.870	103	-0.000
Ni	60	0.063	ug/L	14.484	225	0.000
Cu	63		ug/L		955	0.001
Cu	65	0.208	ug/L	1.652	483	0.001
Zn	66	0.832	ug/L	8.958	1173	0.002
Zn	67		ug/L		4188	0.001
Zn	68		ug/L		1374	0.002
Ge	74		ug/L		346054	346054.140
As	75	-0.104	ug/L	615.421	-817	-0.000
Se	77		ug/L		6239	0.001
Se	82	0.567	ug/L	23.650	87	0.000
Kr	83		ug/L		37	-0.000
Sr	88	0.047	ug/L	5.393	946	0.003
Y	89		ug/L		63	0.000
Zr	90	0.466	ug/L	23.996	3990	0.016
Mo	98	0.053	ug/L	27.869	385	0.001
Ag	107	-0.003	ug/L	60.728	80	-0.000
Cd	111	0.003	ug/L	219.910	27	0.000
Cd	114		ug/L		38	-0.000
In	115		ug/L		226963	226963.245
Sn	120	0.705	ug/L	2.998	4111	0.017
Sb	121	0.044	ug/L	9.608	705	0.001
Sb	123		ug/L		508	0.000
Ba	135		ug/L		165	0.001
Ba	137	0.121	ug/L	7.551	298	0.001
Ho	165		ug/L		5	0.000
Lu	175		ug/L		197307	197307.196
Tl	205	0.072	ug/L	5.376	713	0.001
Pb	208	0.036	ug/L	9.387	1135	0.002
Th	232	0.122	ug/L	18.816	2414	0.009
U	238	-0.008	ug/L	13.856	137	-0.001

Sample ID: 1202021595

Report Date/Time: Wednesday, February 10, 2010 18:04:47

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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			116.0		
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			102.9		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			98.0		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			101.8		
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: 1202021595

Report Date/Time: Wednesday, February 10, 2010 18:04:47

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## ICPMS#4 - Summary Report

Sample ID: 1202021600

Sample Date/Time: Wednesday, February 10, 2010 18:08:12

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 944120|40|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\1202021600.100

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	2.687	ug/L	0.717	1736	0.003
Be	9	22.782	ug/L	1.506	3450	0.006
B	11	42.277	ug/L	2.955	11344	0.018
Na	23	223.826	ug/L	6.354	901287	1.439
Mg	24	1064.015	ug/L	14.969	2393827	3.996
Al	27	2536.020	ug/L	4.089	9259940	15.448
P	31	196.800	ug/L	0.994	41377	0.062
K	39	1137.720	ug/L	9.445	7456993	11.689
Ca	43	2574.019	ug/L	3.490	33068	0.055
Sc	45		ug/L		598912	598912.045
Ti	47	108.452	ug/L	1.681	66361	0.110
V	51	22.321	ug/L	3.967	110811	0.203
Cr	52	67.553	ug/L	0.935	381506	0.615
Cr	53		ug/L		121273	0.073
Mn	55	140.919	ug/L	0.790	1310838	2.187
Fe	57	3969.774	ug/L	0.463	785042	1.290
Co	59	25.228	ug/L	1.313	183757	0.307
Ni	60	37.662	ug/L	2.191	58101	0.097
Cu	63		ug/L		148734	0.248
Cu	65	44.236	ug/L	0.724	71654	0.119
Zn	66	178.023	ug/L	1.727	149792	0.431
Zn	67		ug/L		27391	0.067
Zn	68		ug/L		107587	0.308
Ge	74		ug/L		346421	346421.069
As	75	28.776	ug/L	2.138	27521	0.082
Se	77		ug/L		14084	0.024
Se	82	83.342	ug/L	0.615	9324	0.027
Kr	83		ug/L		50	-0.000
Sr	88	61.506	ug/L	1.609	889242	3.962
Y	89		ug/L		38510	0.172
Zr	90	2.075	ug/L	1.722	16134	0.070
Mo	98	14.282	ug/L	1.252	46718	0.207
Ag	107	5.831	ug/L	2.470	33759	0.150
Cd	111	17.575	ug/L	1.505	22004	0.098
Cd	114		ug/L		52250	0.233
In	115		ug/L		224402	224402.381
Sn	120	6.484	ug/L	0.111	34954	0.154
Sb	121	19.337	ug/L	1.292	69428	0.307
Sb	123		ug/L		53279	0.236
Ba	135		ug/L		58459	0.295
Ba	137	46.116	ug/L	0.551	101016	0.510
Ho	165		ug/L		1404	0.007
Lu	175		ug/L		197940	197939.875
Tl	205	30.470	ug/L	1.652	108107	0.544
Pb	208	20.767	ug/L	0.847	257775	1.299
Th	232	1.803	ug/L	3.335	27491	0.136
U	238	0.441	ug/L	1.592	7234	0.035

Sample ID: 1202021600

Report Date/Time: Wednesday, February 10, 2010 18:10:55

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		116.7			
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		103.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		96.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		102.2			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte

Ti 47 Upper, S, EETi

MassOut of Limits Message

47Sample is out of limits (over linear range)\_

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202021600

Report Date/Time: Wednesday, February 10, 2010 18:10:55

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## ICPMS#4 - Summary Report

Sample ID: 245147001

Sample Date/Time: Wednesday, February 10, 2010 18:14:20

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147001.101

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	65.319	ug/L	3.116	48163	0.070
Be	9	3.776	ug/L	7.326	660	0.001
B	11	18.003	ug/L	4.153	5850	0.008
Na	23	1042.272	ug/L	10.362	4653466	6.700
Mg	24	9891.373	ug/L	5.582	25564916	37.145
Al	27	65081.182	ug/L	13.061	272493520	396.447
P	31	443.207	ug/L	2.668	101019	0.140
K	39	8354.509	ug/L	5.015	59682591	85.834
Ca	43	8423.741	ug/L	3.239	123831	0.179
> Sc	45		ug/L		689006	689005.983
Ti	47	1348.996	ug/L	4.354	945054	1.372
V	51	82.177	ug/L	3.379	501536	0.746
Cr	52	37.498	ug/L	2.233	250382	0.341
Cr	53		ug/L		81408	-0.012
Mn	55	888.330	ug/L	3.828	9494204	13.788
Fe	57	41796.676	ug/L	2.321	9365829	13.578
Co	59	16.620	ug/L	2.357	139247	0.202
Ni	60	27.900	ug/L	2.963	49527	0.072
Cu	63		ug/L		84151	0.122
Cu	65	22.513	ug/L	3.525	42007	0.061
Zn	66	123.064	ug/L	0.678	90783	0.298
Zn	67		ug/L		21335	0.059
Zn	68		ug/L		75277	0.246
> Ge	74		ug/L		303277	303277.423
As	75	8.447	ug/L	3.212	6631	0.024
Se	77		ug/L		4983	-0.001
Se	82	2.268	ug/L	19.233	243	0.001
Kr	83		ug/L		181	0.000
Sr	88	122.255	ug/L	0.759	1603255	7.876
Y	89		ug/L		710224	3.489
Zr	90	75.088	ug/L	1.177	516395	2.535
Mo	98	1.178	ug/L	0.437	3669	0.017
Ag	107	8.631	ug/L	0.518	45290	0.222
Cd	111	0.952	ug/L	10.491	1100	0.005
Cd	114		ug/L		777	0.003
> In	115		ug/L		203552	203551.509
Sn	120	0.821	ug/L	0.793	4250	0.020
Sb	121	0.259	ug/L	10.467	1324	0.004
Sb	123		ug/L		1046	0.003
Ba	135		ug/L		867823	4.416
Ba	137	683.088	ug/L	0.599	1485039	7.557
Ho	165		ug/L		26473	0.135
> Lu	175		ug/L		196511	196510.999
Tl	205	1.133	ug/L	5.905	4432	0.020
Pb	208	47.053	ug/L	0.498	578958	2.943
Th	232	28.927	ug/L	0.340	428744	2.179
U	238	3.999	ug/L	0.850	62989	0.319

Sample ID: 245147001

Report Date/Time: Wednesday, February 10, 2010 18:17:04

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		134.2			
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		90.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		87.9			
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
AI 27 Upper, S, EEEAI		27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
TI 47 Upper, S, EEETI		47	Sample is out of limits (over linear range)_

### QC Action

Sample ID: 245147001  
 Report Date/Time: Wednesday, February 10, 2010 18:17:04  
 Page 3

QC Action Line: Continue

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Sample ID: 245147001

Report Date/Time: Wednesday, February 10, 2010 18:17:04

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## ICPMS#4 - Summary Report

Sample ID: 1202021596

Sample Date/Time: Wednesday, February 10, 2010 18:20:29

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\1202021596.102

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Li	7	69.913 ug/L	0.817	50968	0.075
	Be	9	3.983 ug/L	1.929	689	0.001
	B	11	17.329 ug/L	2.169	5588	0.007
	Na	23	996.161 ug/L	1.116	4404411	6.403
	Mg	24	9816.598 ug/L	7.987	25103455	36.864
	Al	27	65223.327 ug/L	3.484	270408870	397.313
	P	31	439.286 ug/L	1.141	99021	0.138
	K	39	7836.564 ug/L	3.296	55312973	80.513
	Ca	43	8405.212 ug/L	1.101	122137	0.179
>	Sc	45	ug/L		680840	680840.275
	Ti	47	1284.433 ug/L	0.991	889906	1.307
	V	51	79.598 ug/L	1.915	479989	0.723
	Cr	52	39.147 ug/L	2.694	257678	0.356
	Cr	53	ug/L		80381	-0.012
	Mn	55	896.233 ug/L	1.567	9470560	13.911
	Fe	57	41789.522 ug/L	1.881	9255939	13.576
	Co	59	16.462 ug/L	2.964	136314	0.200
	Ni	60	27.352 ug/L	2.651	47998	0.070
	Cu	63	ug/L		79313	0.116
	Cu	65	21.414 ug/L	1.241	39517	0.058
[	Zn	66	117.358 ug/L	0.610	88650	0.284
	Zn	67	ug/L		20269	0.054
	Zn	68	ug/L		71109	0.227
>	Ge	74	ug/L		310489	310489.145
	As	75	8.049 ug/L	0.357	6439	0.023
	Se	77	ug/L		4916	-0.001
	Se	82	2.081 ug/L	14.689	230	0.001
	Kr	83	ug/L		189	0.000
[	Sr	88	111.495 ug/L	0.331	1478364	7.182
	Y	89	ug/L		677431	3.291
	Zr	90	75.839 ug/L	0.486	527316	2.560
	Mo	98	1.219 ug/L	2.055	3832	0.018
	Ag	107	14.638 ug/L	1.499	77589	0.377
	Cd	111	1.004 ug/L	3.996	1173	0.006
	Cd	114	ug/L		794	0.004
>	In	115	ug/L		205808	205807.946
	Sn	120	1.201 ug/L	1.699	6159	0.029
	Sb	121	0.130 ug/L	9.557	919	0.002
	Sb	123	ug/L		730	0.002
[	Ba	135	ug/L		669683	3.340
	Ba	137	517.985 ug/L	0.278	1148875	5.730
	Ho	165	ug/L		25396	0.127
>	Lu	175	ug/L		200482	200481.694
	Tl	205	0.917 ug/L	0.777	3750	0.016
	Pb	208	55.615 ug/L	0.206	698037	3.478
	Th	232	27.916 ug/L	0.524	422139	2.103
[	U	238	4.051 ug/L	0.853	65095	0.323

Sample ID: 1202021596

Report Date/Time: Wednesday, February 10, 2010 18:23:13

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		132.6			
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		92.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		88.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.5			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEEAI		27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
Ti 47 Upper, S, EEETi		47	Sample is out of limits (over linear range)

### QC Action

Sample ID: 1202021596  
 Report Date/Time: Wednesday, February 10, 2010 18:23:13  
 Page 3

QC Action Line: Continue

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Sample ID: 1202021596

Report Date/Time: Wednesday, February 10, 2010 18:23:13

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## ICPMS#4 - Summary Report

Sample ID: 1202021598

Sample Date/Time: Wednesday, February 10, 2010 18:26:39

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\1202021598.103

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	141.277	ug/L	0.931	100380	0.151
Be	9	23.744	ug/L	1.717	3985	0.006
B	11	63.618	ug/L	2.620	18665	0.027
Na	23	2014.196	ug/L	1.531	8637013	12.947
Mg	24	12847.077	ug/L	6.339	32025364	48.245
Al	27	76897.584	ug/L	1.774	310910639	468.428
P	31	1104.287	ug/L	0.712	235550	0.348
K	39	10975.894	ug/L	1.024	75349271	112.766
Ca	43	9255.570	ug/L	0.321	131096	0.197
> Sc	45		ug/L		663715	663715.331
Ti	47	1638.088	ug/L	0.522	1106387	1.666
V	51	139.111	ug/L	1.461	826480	1.263
Cr	52	66.609	ug/L	0.978	417084	0.606
Cr	53		ug/L		98423	0.018
Mn	55	1512.656	ug/L	1.219	15584114	23.478
Fe	57	50192.012	ug/L	1.959	10836558	16.306
Co	59	40.035	ug/L	1.558	323105	0.487
Ni	60	52.554	ug/L	1.051	89795	0.135
Cu	63		ug/L		150399	0.226
Cu	65	41.343	ug/L	0.871	74227	0.112
Zn	66	151.657	ug/L	1.284	113582	0.367
Zn	67		ug/L		25583	0.071
Zn	68		ug/L		91357	0.294
> Ge	74		ug/L		308193	308192.916
As	75	39.860	ug/L	2.006	34157	0.113
Se	77		ug/L		5734	0.002
Se	82	8.487	ug/L	7.419	864	0.003
Kr	83		ug/L		228	0.001
Sr	88	153.190	ug/L	2.185	2071117	9.868
Y	89		ug/L		697833	3.326
Zr	90	134.409	ug/L	0.562	952427	4.538
Mo	98	23.842	ug/L	1.141	72800	0.346
Ag	107	33.331	ug/L	0.661	180013	0.858
Cd	111	5.694	ug/L	1.228	6681	0.032
Cd	114		ug/L		12643	0.060
> In	115		ug/L		209822	209822.085
Sn	120	15.436	ug/L	1.493	77418	0.368
Sb	121	33.662	ug/L	0.750	112642	0.534
Sb	123		ug/L		86252	0.409
Ba	135		ug/L		825414	4.250
Ba	137	652.751	ug/L	0.894	1402668	7.221
Ho	165		ug/L		26043	0.134
> Lu	175		ug/L		194236	194235.658
Tl	205	44.050	ug/L	0.548	153158	0.786
Pb	208	144.158	ug/L	0.231	1751839	9.016
Th	232	50.390	ug/L	0.730	737726	3.795
U	238	27.107	ug/L	0.545	420502	2.164

Sample ID: 1202021598

Report Date/Time: Wednesday, February 10, 2010 18:29:23

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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		129.3			
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		91.6			
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		90.6			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.2			
Tl	205					
Pb	208					
Th	232					
L U	238					

### QC Out Of Limits

#### Measurement Type Analyte

Al 27 Upper, S, EEEAl  
 Sc 45 Int Std for sanSc  
 Ti 47 Upper, S, EEETi  
 V 51 Upper, S, EEE V  
 Mn 55 Upper, S, EEIMn  
 Fe 57 Upper, S, EEEFe

#### MassOut of Limits Message

27Sample is out of limits (over linear range)  
 45  
 47Sample is out of limits (over linear range)  
 51Sample is out of limits (over linear range)  
 55Sample is out of limits (over linear range)  
 57Sample is out of limits (over linear range)

Sample ID: 1202021598

Report Date/Time: Wednesday, February 10, 2010 18:29:23

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## QC Action

QC Action Line: Continue

# ICPMS#4 - Summary Report

Sample ID: 1202021599

Sample Date/Time: Wednesday, February 10, 2010 18:32:49

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\1202021599.104

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	89.081	ug/L	2.916	69196	0.095
Be 9	24.032	ug/L	2.904	4408	0.006
B 11	59.210	ug/L	1.200	19028	0.025
Na 23	1821.700	ug/L	3.516	8545116	11.710
Mg 24	9888.837	ug/L	4.566	26949297	37.135
Al 27	64122.957	ug/L	5.569	283413115	390.610
P 31	1133.613	ug/L	1.673	264200	0.357
K 39	8731.229	ug/L	8.861	65650850	89.705
Ca 43	8957.591	ug/L	1.450	138710	0.191
> Sc 45		ug/L		725606	725606.053
Ti 47	1258.734	ug/L	0.985	929523	1.281
V 51	97.541	ug/L	0.305	629744	0.885
Cr 52	62.401	ug/L	0.388	428194	0.568
Cr 53		ug/L		100537	0.009
Mn 55	985.024	ug/L	2.107	11095665	15.289
Fe 57	40241.984	ug/L	2.159	9501982	13.073
Co 59	34.443	ug/L	1.848	303924	0.419
Ni 60	45.008	ug/L	0.854	84098	0.116
Cu 63		ug/L		157276	0.216
Cu 65	39.010	ug/L	0.610	76580	0.105
Zn 66	143.543	ug/L	1.299	111024	0.348
Zn 67		ug/L		24948	0.067
Zn 68		ug/L		89753	0.280
> Ge 74		ug/L		318218	318218.444
As 75	41.920	ug/L	0.893	37125	0.119
Se 77		ug/L		5495	0.000
Se 82	9.199	ug/L	2.915	965	0.003
Kr 83		ug/L		181	0.000
Sr 88	144.177	ug/L	1.009	1966370	9.288
Y 89		ug/L		670655	3.168
Zr 90	112.699	ug/L	1.314	805838	3.805
Mo 98	21.961	ug/L	1.525	67669	0.319
Ag 107	38.219	ug/L	0.956	208253	0.983
Cd 111	5.728	ug/L	2.983	6779	0.032
Cd 114		ug/L		13706	0.064
> In 115		ug/L		211701	211701.367
Sn 120	8.368	ug/L	0.328	42475	0.199
Sb 121	27.710	ug/L	0.109	93648	0.440
Sb 123		ug/L		72245	0.339
Ba 135		ug/L		819568	4.100
Ba 137	633.194	ug/L	1.567	1400126	7.005
Ho 165		ug/L		24604	0.123
> Lu 175		ug/L		199913	199913.405
Tl 205	43.116	ug/L	1.331	154272	0.769
Pb 208	135.407	ug/L	1.755	1693310	8.469
Th 232	49.387	ug/L	1.280	744123	3.720
U 238	27.170	ug/L	1.603	433723	2.169

Sample ID: 1202021599

Report Date/Time: Wednesday, February 10, 2010 18:35:34

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		141.3			
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		94.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		91.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.2			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEEAl		27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
Ti 47 Upper, S, EEE Ti		47	Sample is out of limits (over linear range)_

### QC Action

Sample ID: 1202021599  
 Report Date/Time: Wednesday, February 10, 2010 18:35:34  
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QC Action Line: Continue

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Sample ID: 1202021599

Report Date/Time: Wednesday, February 10, 2010 18:35:34

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## ICPMS#4 - Summary Report

Sample ID: 1202021597

Sample Date/Time: Wednesday, February 10, 2010 18:38:59

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 944120|10|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\1202021597.105

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	16.448	ug/L	6.428	10992	0.018
Be	9	1.087	ug/L	14.230	174	0.000
B	11	5.946	ug/L	7.918	2065	0.003
Na	23	217.374	ug/L	14.770	910238	1.397
Mg	24	2506.121	ug/L	14.962	5853339	9.411
Al	27	15172.418	ug/L	9.037	57675313	92.424
P	31	118.620	ug/L	7.089	27729	0.037
K	39	2041.982	ug/L	4.944	13576790	20.979
Ca	43	2035.391	ug/L	3.321	27311	0.043
> Sc	45		ug/L		624893	624893.167
Ti	47	327.066	ug/L	5.788	207817	0.333
V	51	19.459	ug/L	5.510	99246	0.177
Cr	52	8.320	ug/L	5.960	61202	0.076
Cr	53		ug/L		73796	-0.012
Mn	55	205.444	ug/L	5.113	1990072	3.189
Fe	57	9421.743	ug/L	4.931	1922634	3.061
Co	59	4.001	ug/L	4.803	30453	0.049
Ni	60	6.841	ug/L	6.964	11098	0.018
Cu	63		ug/L		19645	0.031
Cu	65	5.671	ug/L	6.640	9699	0.015
Zn	66	28.251	ug/L	0.658	22972	0.068
Zn	67		ug/L		8105	0.013
Zn	68		ug/L		18946	0.055
> Ge	74		ug/L		329205	329204.753
As	75	1.848	ug/L	9.889	1047	0.005
Se	77		ug/L		6309	0.002
Se	82	1.532	ug/L	5.941	185	0.000
Kr	83		ug/L		64	0.000
Sr	88	25.060	ug/L	1.049	340254	1.614
Y	89		ug/L		146963	0.698
Zr	90	14.114	ug/L	2.033	100749	0.476
Mo	98	0.209	ug/L	2.960	833	0.003
Ag	107	1.810	ug/L	3.151	9897	0.047
Cd	111	0.172	ug/L	21.653	223	0.001
Cd	114		ug/L		184	0.001
> In	115		ug/L		210644	210643.521
Sn	120	0.179	ug/L	3.344	1178	0.004
Sb	121	0.096	ug/L	15.577	827	0.002
Sb	123		ug/L		612	0.001
Ba	135		ug/L		179310	0.919
Ba	137	143.772	ug/L	1.236	310369	1.591
Ho	165		ug/L		5499	0.028
> Lu	175		ug/L		195127	195127.270
Tl	205	0.414	ug/L	4.676	1896	0.007
Pb	208	10.060	ug/L	1.593	123439	0.629
Th	232	5.991	ug/L	2.848	88635	0.451
U	238	0.836	ug/L	2.710	13284	0.067

Sample ID: 1202021597

Report Date/Time: Wednesday, February 10, 2010 18:41:45

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	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	0.9997
Cr	52Linear Thru Zero	0.9999
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		121.7			
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		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		90.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.7			
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 Upper, S, EEETi		47	Sample is out of limits (over linear range)

### QC Action

QC Action Line: Continue

Sample ID: 1202021597  
 Report Date/Time: Wednesday, February 10, 2010 18:41:45  
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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 10, 2010 18:45:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 6.106

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	58.675	ug/L	6.105	38270	0.063
Be	9	54.791	ug/L	5.798	8435	0.014
B	11	107.752	ug/L	6.602	28691	0.046
Na	23	5397.859	ug/L	3.936	21224278	34.697
Mg	24	5201.273	ug/L	2.867	11928756	19.532
Al	27	4910.390	ug/L	3.003	18265504	29.912
P	31	4799.878	ug/L	4.777	925690	1.512
K	39	4946.919	ug/L	8.436	31439936	50.825
Ca	43	5061.957	ug/L	4.965	65945	0.108
Sc	45		ug/L		610549	610548.898
Ti	47	48.611	ug/L	3.379	30450	0.049
V	51	45.686	ug/L	3.256	242384	0.415
Cr	52	49.802	ug/L	3.963	289917	0.453
Cr	53		ug/L		181833	0.168
Mn	55	50.022	ug/L	5.385	474024	0.776
Fe	57	4759.436	ug/L	5.456	955014	1.546
Co	59	46.622	ug/L	4.758	345517	0.567
Ni	60	47.319	ug/L	3.787	74289	0.122
Cu	63		ug/L		158056	0.259
Cu	65	46.054	ug/L	4.662	75914	0.124
Zn	66	50.740	ug/L	1.151	41189	0.123
Zn	67		ug/L		15088	0.034
Zn	68		ug/L		30282	0.089
Ge	74		ug/L		331599	331599.489
As	75	46.122	ug/L	1.100	42640	0.131
Se	77		ug/L		18812	0.040
Se	82	46.788	ug/L	1.578	5022	0.015
Kr	83		ug/L		49	-0.000
Sr	88	52.802	ug/L	0.546	704876	3.401
Y	89		ug/L		82	0.000
Zr	90	52.619	ug/L	2.362	368294	1.776
Mo	98	50.599	ug/L	0.934	152329	0.734
Ag	107	51.497	ug/L	0.926	274548	1.325
Cd	111	49.518	ug/L	0.954	57199	0.276
Cd	114		ug/L		134943	0.651
In	115		ug/L		207166	207165.533
Sn	120	50.969	ug/L	0.450	251786	1.214
Sb	121	51.021	ug/L	1.250	168337	0.810
Sb	123		ug/L		129630	0.624
Ba	135		ug/L		58408	0.306
Ba	137	47.258	ug/L	1.249	99776	0.523
Ho	165		ug/L		12	0.000
Lu	175		ug/L		190781	190780.700
Tl	205	47.248	ug/L	1.303	161322	0.843
Pb	208	47.910	ug/L	0.668	572319	2.996
Th	232	47.865	ug/L	0.847	688370	3.605
U	238	49.655	ug/L	0.518	756401	3.963

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 10, 2010 18:47:54

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	117.350				
Be	9	109.581				
B	11	107.752				
Na	23	107.957				
Mg	24	104.025				
Al	27	97.235				
P	31	95.998				
K	39	98.938				
Ca	43	101.239				
> Sc	45		118.9			
Ti	47	97.221				
V	51	91.371				
Cr	52	99.604				
Cr	53					
Mn	55	100.044				
Fe	57	95.189				
Co	59	93.244				
Ni	60	94.638				
Cu	63					
Cu	65	92.109				
Zn	66	101.479				
Zn	67					
Zn	68					
> Ge	74		98.6			
As	75	92.245				
Se	77					
Se	82	93.576				
Kr	83					
Sr	88	105.604				
Y	89					
Zr	90	105.237				
Mo	98	101.198				
Ag	107	102.994				
Cd	111	99.037				
Cd	114					
> In	115		89.4			
Sn	120	101.939				
Sb	121	102.042				
Sb	123					
Ba	135					
Ba	137	94.517				
Ho	165					
> Lu	175		98.5			
Tl	205	94.496				
Pb	208	95.819				
Th	232	95.730				
U	238	99.311				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 QC Std 6 Li 7CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 10, 2010 18:51:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 7.107

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.038	ug/L	22.118	40	0.000
Be	9	0.013	ug/L	141.228	5	0.000
B	11	1.831	ug/L	28.433	950	0.001
Na	23	-1.664	ug/L	12.817	34375	-0.011
Mg	24	1.337	ug/L	44.856	4334	0.005
Al	27	0.109	ug/L	450.184	7669	0.001
P	31	0.489	ug/L	146.897	4486	0.000
K	39	-8.275	ug/L	57.222	415991	-0.085
Ca	43	-4.565	ug/L	19.170	189	-0.000
> Sc	45		ug/L		618032	618032.276
Ti	47	-0.137	ug/L	26.950	210	-0.000
V	51	0.606	ug/L	128.351	-7415	0.005
Cr	52	-0.179	ug/L	22.916	12836	-0.002
Cr	53		ug/L		71500	-0.014
Mn	55	0.014	ug/L	59.826	1074	0.000
Fe	57	-3.278	ug/L	25.069	12411	-0.001
Co	59	0.005	ug/L	105.268	156	0.000
Ni	60	-0.007	ug/L	72.202	123	-0.000
Cu	63		ug/L		250	0.000
Cu	65	-0.016	ug/L	8.801	128	-0.000
Zn	66	-0.014	ug/L	222.318	485	-0.000
Zn	67		ug/L		3862	-0.001
Zn	68		ug/L		783	-0.000
> Ge	74		ug/L		360712	360711.828
As	75	0.054	ug/L	165.821	-687	0.000
Se	77		ug/L		6618	0.001
Se	82	0.748	ug/L	20.744	112	0.000
Kr	83		ug/L		59	0.000
Sr	88	0.011	ug/L	88.514	408	0.001
Y	89		ug/L		35	0.000
Zr	90	0.085	ug/L	15.283	1071	0.003
Mo	98	-0.011	ug/L	42.010	175	-0.000
Ag	107	0.015	ug/L	54.739	190	0.000
Cd	111	0.008	ug/L	13.614	32	0.000
Cd	114		ug/L		89	0.000
> In	115		ug/L		226955	226955.045
Sn	120	0.033	ug/L	21.993	478	0.001
Sb	121	0.258	ug/L	12.896	1474	0.004
Sb	123		ug/L		1120	0.003
Ba	135		ug/L		41	0.000
Ba	137	0.022	ug/L	40.421	81	0.000
Ho	165		ug/L		4	-0.000
> Lu	175		ug/L		196271	196270.769
Tl	205	0.230	ug/L	2.826	1262	0.004
Pb	208	0.001	ug/L	876.834	696	0.000
Th	232	0.078	ug/L	15.645	1755	0.006
U	238	0.006	ug/L	114.227	368	0.001

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 18:54:05

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		120.4			
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		107.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte ~ MassOut of Limits Message  
 Sc 45 Int Std for QC Sc 45

### QC Action

QC Action Line: Continue

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 18:54:05

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## ICPMS#4 - Summary Report

Sample ID: 245147002

Sample Date/Time: Wednesday, February 10, 2010 18:57:29

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147002.108

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	64.999	ug/L	2.685	47065	0.070
Be	9	3.910	ug/L	4.631	671	0.001
B	11	18.527	ug/L	2.531	5899	0.008
Na	23	1180.374	ug/L	6.002	5178213	7.587
Mg	24	7701.239	ug/L	6.873	19565928	28.920
Al	27	58285.417	ug/L	3.345	240231081	355.050
P	31	450.517	ug/L	2.014	100769	0.142
K	39	9154.255	ug/L	5.898	64158786	94.051
Ca	43	7244.582	ug/L	0.775	104635	0.154
> Sc	45		ug/L		676421	676420.786
Ti	47	1288.091	ug/L	1.295	886734	1.310
V	51	69.405	ug/L	1.275	414307	0.630
Cr	52	28.112	ug/L	1.200	188149	0.256
Cr	53		ug/L		74441	-0.020
Mn	55	881.163	ug/L	3.194	9250298	13.677
Fe	57	36853.837	ug/L	3.179	8110560	11.973
Co	59	15.595	ug/L	3.277	128312	0.190
Ni	60	22.926	ug/L	1.684	39998	0.059
Cu	63		ug/L		71049	0.105
Cu	65	19.254	ug/L	2.112	35315	0.052
Zn	66	106.468	ug/L	2.406	80763	0.258
Zn	67		ug/L		18430	0.048
Zn	68		ug/L		64390	0.204
> Ge	74		ug/L		311686	311685.651
As	75	7.862	ug/L	2.593	6300	0.022
Se	77		ug/L		4948	-0.001
Se	82	2.046	ug/L	5.598	227	0.001
Kr	83		ug/L		192	0.000
Sr	88	95.573	ug/L	2.544	1262041	6.157
Y	89		ug/L		747674	3.648
Zr	90	80.843	ug/L	1.635	559767	2.729
Mo	98	1.489	ug/L	2.797	4621	0.022
Ag	107	3.097	ug/L	0.441	16423	0.080
Cd	111	1.026	ug/L	13.172	1192	0.006
Cd	114		ug/L		586	0.003
> In	115		ug/L		204966	204966.133
Sn	120	0.956	ug/L	1.128	4940	0.023
Sb	121	0.334	ug/L	3.259	1579	0.005
Sb	123		ug/L		1238	0.004
Ba	135		ug/L		528260	2.628
Ba	137	407.302	ug/L	0.612	905648	4.506
Ho	165		ug/L		27810	0.138
> Lu	175		ug/L		200989	200988.807
Tl	205	0.835	ug/L	0.934	3464	0.015
Pb	208	43.163	ug/L	0.632	543249	2.700
Th	232	29.069	ug/L	1.133	440636	2.189
U	238	4.773	ug/L	1.169	76843	0.381

Sample ID: 245147002

Report Date/Time: Wednesday, February 10, 2010 19:00:13

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		131.8			
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		92.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		88.5			
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

Al 27 Upper, S, EEEAI

Sc 45 Int Std for sanSc

Ti 47 Upper, S, EEETi

MassOut of Limits Message

27Sample is out of limits (over linear range)

45

47Sample is out of limits (over linear range)\_

### QC Action

Sample ID: 245147002

Report Date/Time: Wednesday, February 10, 2010 19:00:13

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QC Action Line: Continue

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Sample ID: 245147002

Report Date/Time: Wednesday, February 10, 2010 19:00:13

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## ICPMS#4 - Summary Report

Sample ID: 245147003

Sample Date/Time: Wednesday, February 10, 2010 19:03:37

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147003.109

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	48.969	ug/L	3.264	34901	0.052
Be	9	3.248	ug/L	6.545	549	0.001
B	11	15.857	ug/L	2.694	5041	0.007
Na	23	474.054	ug/L	8.626	2072353	3.047
Mg	24	7093.103	ug/L	8.433	17720086	26.637
Al	27	50814.289	ug/L	4.879	206082531	309.539
P	31	629.888	ug/L	2.531	136773	0.198
K	39	8234.589	ug/L	11.900	56911614	84.602
Ca	43	9328.844	ug/L	1.722	132527	0.199
> Sc	45		ug/L		665811	665810.944
Ti	47	1025.411	ug/L	2.234	694697	1.043
V	51	59.855	ug/L	2.210	349970	0.543
Cr	52	25.540	ug/L	1.944	169587	0.232
Cr	53		ug/L		71595	-0.022
Mn	55	1047.801	ug/L	1.685	10827059	16.263
Fe	57	30535.808	ug/L	2.614	6617154	9.920
Co	59	13.754	ug/L	2.567	111399	0.167
Ni	60	21.832	ug/L	2.503	37493	0.056
Cu	63		ug/L		101187	0.152
Cu	65	27.635	ug/L	1.409	49819	0.075
Zn	66	99.001	ug/L	0.205	75819	0.240
Zn	67		ug/L		17832	0.045
Zn	68		ug/L		62689	0.197
> Ge	74		ug/L		314498	314497.685
As	75	6.556	ug/L	6.624	5191	0.019
Se	77		ug/L		4700	-0.002
Se	82	1.542	ug/L	27.558	178	0.000
Kr	83		ug/L		143	0.000
Sr	88	104.797	ug/L	3.309	1366180	6.751
Y	89		ug/L		563929	2.787
Zr	90	66.791	ug/L	2.766	456624	2.255
Mo	98	1.549	ug/L	3.151	4737	0.022
Ag	107	2.430	ug/L	1.906	12742	0.063
Cd	111	1.193	ug/L	9.054	1366	0.007
Cd	114		ug/L		1530	0.007
> In	115		ug/L		202415	202414.664
Sn	120	0.761	ug/L	1.605	3938	0.018
Sb	121	0.290	ug/L	4.558	1419	0.005
Sb	123		ug/L		1063	0.003
Ba	135		ug/L		643240	3.252
Ba	137	506.444	ug/L	3.821	1107993	5.603
Ho	165		ug/L		20366	0.103
> Lu	175		ug/L		197796	197795.658
Tl	205	0.653	ug/L	5.724	2766	0.012
Pb	208	65.665	ug/L	2.207	812873	4.107
Th	232	21.502	ug/L	1.566	320908	1.619
U	238	43.692	ug/L	2.069	689992	3.487

Sample ID: 245147003

Report Date/Time: Wednesday, February 10, 2010 19:06:21

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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

Sample ID: 245147003

Report Date/Time: Wednesday, February 10, 2010 19:06:21

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### 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		129.7			
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		93.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		87.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		102.1			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Al 27 Upper, S, EEEAI		27Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45
Ti 47 Upper, S, EEETi		47Sample is out of limits (over linear range)
Mn 55 Upper, S, EEIMn		55Sample is out of limits (over linear range)

Sample ID: 245147003

Report Date/Time: Wednesday, February 10, 2010 19:06:21

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## QC Action

QC Action Line: Continue

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Sample ID: 245147003

Report Date/Time: Wednesday, February 10, 2010 19:06:21

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# ICPMS#4 - Summary Report

Sample ID: 245147004

Sample Date/Time: Wednesday, February 10, 2010 19:09:46

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147004.110

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	67.076	ug/L	2.776	49064	0.072
Be	9	3.814	ug/L	6.393	661	0.001
B	11	15.312	ug/L	3.826	5013	0.007
Na	23	1112.468	ug/L	8.114	4923830	7.151
Mg	24	8717.399	ug/L	7.875	22334692	32.736
Al	27	62238.618	ug/L	9.467	259191468	379.132
P	31	462.375	ug/L	3.042	104337	0.146
K	39	7879.027	ug/L	4.030	55845853	80.949
Ca	43	13929.074	ug/L	2.884	202929	0.297
Sc	45		ug/L		683697	683696.799
Ti	47	1215.057	ug/L	2.819	844797	1.236
V	51	75.154	ug/L	4.803	453827	0.682
Cr	52	40.206	ug/L	4.217	265138	0.366
Cr	53		ug/L		82275	-0.009
Mn	55	936.555	ug/L	4.572	9927946	14.537
Fe	57	39748.865	ug/L	4.883	8832947	12.913
Co	59	15.063	ug/L	4.746	125157	0.183
Ni	60	26.189	ug/L	4.025	46120	0.067
Cu	63		ug/L		87194	0.127
Cu	65	23.326	ug/L	4.923	43158	0.063
Zn	66	171.126	ug/L	1.011	129081	0.414
Zn	67		ug/L		25909	0.072
Zn	68		ug/L		99448	0.318
Ge	74		ug/L		310501	310500.848
As	75	7.884	ug/L	5.246	6295	0.022
Se	77		ug/L		4722	-0.002
Se	82	1.123	ug/L	32.070	134	0.000
Kr	83		ug/L		182	0.000
Sr	88	130.453	ug/L	1.583	1718974	8.404
Y	89		ug/L		747210	3.653
Zr	90	72.569	ug/L	1.621	501472	2.450
Mo	98	1.528	ug/L	3.095	4725	0.022
Ag	107	23.232	ug/L	1.168	122343	0.598
Cd	111	1.042	ug/L	11.247	1208	0.006
Cd	114		ug/L		1197	0.006
In	115		ug/L		204532	204531.572
Sn	120	1.095	ug/L	0.184	5607	0.026
Sb	121	0.152	ug/L	3.378	984	0.002
Sb	123		ug/L		783	0.002
Ba	135		ug/L		625551	3.188
Ba	137	495.677	ug/L	1.469	1076098	5.484
Ho	165		ug/L		27190	0.139
Lu	175		ug/L		196267	196266.622
Tl	205	0.818	ug/L	2.851	3325	0.015
Pb	208	48.208	ug/L	0.486	592398	3.015
Th	232	27.059	ug/L	0.751	400549	2.038
U	238	3.935	ug/L	1.192	61912	0.314

Sample ID: 245147004

Report Date/Time: Wednesday, February 10, 2010 19:12:31

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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		133.2			
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		92.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		88.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEEAI		27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
Ti 47 Upper, S, EEE Ti		47	Sample is out of limits (over linear range)_

### QC Action

Sample ID: 245147004  
 Report Date/Time: Wednesday, February 10, 2010 19:12:31  
 Page 3

QC Action Line: Continue

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Sample ID: 245147004

Report Date/Time: Wednesday, February 10, 2010 19:12:31

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## ICPMS#4 - Summary Report

Sample ID: 245147005

Sample Date/Time: Wednesday, February 10, 2010 19:15:56

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147005.111

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.351	ug/L	6.037	38149	0.056
Be	9	3.296	ug/L	7.273	572	0.001
B	11	15.468	ug/L	4.553	5044	0.007
Na	23	463.377	ug/L	10.976	2072893	2.979
Mg	24	8911.997	ug/L	3.732	22796152	33.467
Al	27	63203.778	ug/L	11.691	261971002	385.011
P	31	298.945	ug/L	6.654	68902	0.094
K	39	9645.892	ug/L	4.682	67995524	99.102
Ca	43	7911.142	ug/L	5.432	114958	0.168
> Sc	45		ug/L		682042	682041.627
Ti	47	1225.210	ug/L	5.046	848913	1.246
V	51	85.162	ug/L	5.851	514181	0.773
Cr	52	36.743	ug/L	7.172	242682	0.334
Cr	53		ug/L		81061	-0.011
Mn	55	899.955	ug/L	4.557	9512114	13.968
Fe	57	42784.123	ug/L	4.588	9478084	13.899
Co	59	16.532	ug/L	4.434	136957	0.201
Ni	60	24.225	ug/L	5.544	42527	0.062
Cu	63		ug/L		77442	0.113
Cu	65	20.854	ug/L	4.803	38492	0.056
Zn	66	99.313	ug/L	4.893	72855	0.240
Zn	67		ug/L		17996	0.048
Zn	68		ug/L		59848	0.196
> Ge	74		ug/L		301799	301798.910
As	75	8.507	ug/L	8.474	6629	0.024
Se	77		ug/L		4983	-0.000
Se	82	0.673	ug/L	42.506	85	0.000
Kr	83		ug/L		212	0.001
Sr	88	119.640	ug/L	6.705	1534936	7.707
Y	89		ug/L		673160	3.382
Zr	90	85.376	ug/L	8.106	573888	2.882
Mo	98	1.684	ug/L	7.006	5051	0.024
Ag	107	0.460	ug/L	8.354	2443	0.012
Cd	111	0.883	ug/L	20.066	994	0.005
Cd	114		ug/L		450	0.002
> In	115		ug/L		199833	199833.183
Sn	120	1.241	ug/L	4.244	6156	0.030
Sb	121	0.211	ug/L	11.705	1144	0.003
Sb	123		ug/L		899	0.003
Ba	135		ug/L		649240	3.460
Ba	137	533.726	ug/L	3.386	1107774	5.905
Ho	165		ug/L		24072	0.128
> Lu	175		ug/L		187795	187795.052
Tl	205	0.819	ug/L	3.421	3178	0.015
Pb	208	38.897	ug/L	4.447	456900	2.433
Th	232	27.029	ug/L	3.163	382528	2.036
U	238	3.608	ug/L	2.790	54296	0.288

Sample ID: 245147005

Report Date/Time: Wednesday, February 10, 2010 19:18:40

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		132.9			
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		89.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		86.3			
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
Al 27 Upper, S, EEEAl		27Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45
Ti 47 Upper, S, EEETi		47Sample is out of limits (over linear range)_

### QC Action

Sample ID: 245147005  
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QC Action Line: Continue

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Sample ID: 245147005

Report Date/Time: Wednesday, February 10, 2010 19:18:40

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## ICPMS#4 - Summary Report

Sample ID: 245147006

Sample Date/Time: Wednesday, February 10, 2010 19:22:06

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147006.112

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	59.256	ug/L	0.998	42448	0.063
Be	9	4.825	ug/L	2.356	819	0.001
B	11	14.367	ug/L	1.796	4639	0.006
Na	23	682.960	ug/L	3.133	2982000	4.390
Mg	24	10397.692	ug/L	4.036	26118668	39.046
Al	27	67076.073	ug/L	5.322	273287672	408.599
P	31	327.899	ug/L	0.929	73841	0.103
K	39	10175.196	ug/L	0.270	70446773	104.540
Ca	43	9114.945	ug/L	1.281	130132	0.194
> Sc	45		ug/L		669034	669034.221
Ti	47	1395.173	ug/L	0.275	949899	1.419
V	51	82.020	ug/L	1.171	486338	0.745
Cr	52	33.376	ug/L	0.622	218140	0.304
Cr	53		ug/L		73377	-0.020
Mn	55	1021.628	ug/L	0.926	10609803	15.857
Fe	57	42354.051	ug/L	0.826	9219180	13.759
Co	59	20.208	ug/L	0.606	164451	0.246
Ni	60	27.392	ug/L	1.650	47242	0.070
Cu	63		ug/L		90281	0.135
Cu	65	24.606	ug/L	1.797	44594	0.066
Zn	66	104.184	ug/L	0.307	78679	0.252
Zn	67		ug/L		18948	0.050
Zn	68		ug/L		66826	0.213
> Ge	74		ug/L		310208	310208.010
As	75	8.088	ug/L	1.639	6468	0.023
Se	77		ug/L		4435	-0.003
Se	82	0.797	ug/L	62.917	101	0.000
Kr	83		ug/L		211	0.001
Sr	88	133.232	ug/L	1.090	1743609	8.583
Y	89		ug/L		866128	4.264
Zr	90	80.022	ug/L	0.428	549140	2.702
Mo	98	1.208	ug/L	2.956	3751	0.018
Ag	107	0.474	ug/L	4.037	2569	0.012
Cd	111	1.001	ug/L	2.432	1153	0.006
Cd	114		ug/L		615	0.003
> In	115		ug/L		203138	203137.733
Sn	120	0.551	ug/L	1.312	2936	0.013
Sb	121	0.156	ug/L	6.992	990	0.002
Sb	123		ug/L		753	0.002
Ba	135		ug/L		843543	4.284
Ba	137	659.405	ug/L	1.133	1436315	7.295
Ho	165		ug/L		31157	0.158
> Lu	175		ug/L		196916	196916.158
Tl	205	0.888	ug/L	4.316	3580	0.016
Pb	208	46.657	ug/L	1.127	575226	2.918
Th	232	32.567	ug/L	0.844	483567	2.453
U	238	4.637	ug/L	2.076	73137	0.370

Sample ID: 245147006

Report Date/Time: Wednesday, February 10, 2010 19:24:51

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		130.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		87.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.6			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEEAl		27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
Ti 47 Upper, S, EEETi		47	Sample is out of limits (over linear range)_
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

Sample ID: 245147006

Report Date/Time: Wednesday, February 10, 2010 19:24:51

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## QC Action

QC Action Line: Continue

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Sample ID: 245147006

Report Date/Time: Wednesday, February 10, 2010 19:24:51

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## ICPMS#4 - Summary Report

Sample ID: 245147007

Sample Date/Time: Wednesday, February 10, 2010 19:28:17

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147007.113

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.507	ug/L	3.300	40150	0.060
Be	9	3.646	ug/L	6.719	614	0.001
B	11	18.351	ug/L	6.544	5734	0.008
Na	23	583.843	ug/L	5.492	2533169	3.753
Mg	24	7875.680	ug/L	3.464	19658220	29.575
Al	27	63462.331	ug/L	3.593	256610473	386.586
P	31	670.629	ug/L	5.875	144771	0.211
K	39	8564.753	ug/L	4.528	58936559	87.994
Ca	43	12634.379	ug/L	2.776	178848	0.269
> Sc	45		ug/L		664236	664236.193
Ti	47	1159.523	ug/L	3.644	783023	1.180
V	51	54.135	ug/L	3.505	314431	0.491
Cr	52	26.110	ug/L	3.802	172492	0.238
Cr	53		ug/L		69055	-0.026
Mn	55	1242.924	ug/L	3.035	12803791	19.292
Fe	57	31335.242	ug/L	3.712	6768377	10.180
Co	59	13.686	ug/L	4.235	110484	0.166
Ni	60	21.762	ug/L	5.614	37235	0.056
Cu	63		ug/L		91972	0.138
Cu	65	25.115	ug/L	3.898	45140	0.068
Zn	66	115.995	ug/L	1.597	86214	0.281
Zn	67		ug/L		19859	0.053
Zn	68		ug/L		71350	0.231
> Ge	74		ug/L		305526	305526.431
As	75	6.299	ug/L	0.742	4823	0.018
Se	77		ug/L		4386	-0.003
Se	82	0.781	ug/L	38.460	98	0.000
Kr	83		ug/L		166	0.000
Sr	88	130.332	ug/L	0.952	1686088	8.396
Y	89		ug/L		564867	2.813
Zr	90	83.122	ug/L	1.373	563833	2.806
Mo	98	1.352	ug/L	4.156	4125	0.020
Ag	107	0.704	ug/L	4.935	3723	0.018
Cd	111	1.245	ug/L	8.225	1414	0.007
Cd	114		ug/L		1451	0.007
> In	115		ug/L		200817	200817.287
Sn	120	0.706	ug/L	1.505	3642	0.017
Sb	121	0.205	ug/L	10.477	1135	0.003
Sb	123		ug/L		919	0.003
Ba	135		ug/L		793973	4.097
Ba	137	634.198	ug/L	0.482	1359711	7.016
Ho	165		ug/L		20193	0.104
> Lu	175		ug/L		193797	193796.616
Tl	205	0.636	ug/L	2.837	2652	0.011
Pb	208	54.363	ug/L	1.172	659606	3.400
Th	232	25.221	ug/L	1.277	368741	1.900
U	238	20.188	ug/L	0.860	312546	1.611

Sample ID: 245147007

Report Date/Time: Wednesday, February 10, 2010 19:31:02

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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		129.4			
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		90.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		86.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.0			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEEAl		27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
Ti 47 Upper, S, EEETi		47	Sample is out of limits (over linear range)_
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

Sample ID: 245147007

Report Date/Time: Wednesday, February 10, 2010 19:31:02

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## QC Action

QC Action Line: Continue

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Sample ID: 245147007

Report Date/Time: Wednesday, February 10, 2010 19:31:02

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 10, 2010 19:34:27

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 6.114

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.621	ug/L	2.769	35746	0.061
Be	9	55.009	ug/L	4.067	8196	0.014
B	11	103.564	ug/L	5.415	26697	0.045
Na	23	4486.729	ug/L	3.228	17047613	28.840
Mg	24	4939.997	ug/L	5.267	10936616	18.551
Al	27	4661.982	ug/L	3.654	16776468	28.399
P	31	4775.643	ug/L	3.796	890754	1.504
K	39	4773.595	ug/L	10.326	29308415	49.044
Ca	43	4982.881	ug/L	4.740	62773	0.106
> Sc	45		ug/L		589980	589980.336
Ti	47	48.495	ug/L	3.397	29365	0.049
V	51	47.014	ug/L	4.368	241218	0.427
Cr	52	50.418	ug/L	3.542	283634	0.459
Cr	53		ug/L		182460	0.180
Mn	55	50.212	ug/L	3.489	460381	0.779
Fe	57	4816.681	ug/L	3.240	934943	1.565
Co	59	46.916	ug/L	3.707	336311	0.570
Ni	60	47.579	ug/L	4.152	72211	0.122
Cu	63		ug/L		152961	0.259
Cu	65	46.175	ug/L	4.083	73611	0.125
Zn	66	50.879	ug/L	0.953	40674	0.123
Zn	67		ug/L		14696	0.033
Zn	68		ug/L		29845	0.089
> Ge	74		ug/L		326577	326577.440
As	75	46.561	ug/L	2.752	42383	0.132
Se	77		ug/L		18259	0.039
Se	82	46.693	ug/L	3.301	4932	0.015
Kr	83		ug/L		55	0.000
Sr	88	53.053	ug/L	0.928	694110	3.418
Y	89		ug/L		94	0.000
Zr	90	52.450	ug/L	1.033	359897	1.771
Mo	98	51.006	ug/L	1.730	150508	0.740
Ag	107	51.351	ug/L	1.014	268330	1.321
Cd	111	49.432	ug/L	0.743	55958	0.276
Cd	114		ug/L		132686	0.653
> In	115		ug/L		203020	203020.064
Sn	120	50.885	ug/L	0.078	246331	1.212
Sb	121	51.712	ug/L	1.046	167192	0.821
Sb	123		ug/L		128476	0.631
Ba	135		ug/L		57308	0.311
Ba	137	48.209	ug/L	0.430	98189	0.533
Ho	165		ug/L		15	0.000
> Lu	175		ug/L		184044	184043.566
Tl	205	47.272	ug/L	1.091	155714	0.844
Pb	208	48.849	ug/L	0.924	562913	3.055
Th	232	49.342	ug/L	1.346	684521	3.716
U	238	51.077	ug/L	1.105	750521	4.077

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 10, 2010 19:37:11

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	113.242				
Be	9	110.017				
B	11	103.564				
Na	23	89.735				
Mg	24	98.800				
Al	27	92.316				
P	31	95.513				
K	39	95.472				
Ca	43	99.658				
> Sc	45		114.9			
Ti	47	96.989				
V	51	94.029				
Cr	52	100.836				
Cr	53					
Mn	55	100.424				
Fe	57	96.334				
Co	59	93.832				
Ni	60	95.157				
Cu	63					
Cu	65	92.351				
Zn	66	101.757				
Zn	67					
Zn	68					
> Ge	74		97.1			
As	75	93.121				
Se	77					
Se	82	93.386				
Kr	83					
Sr	88	106.106				
Y	89					
Zr	90	104.901				
Mo	98	102.012				
Ag	107	102.701				
Cd	111	98.864				
Cd	114					
> In	115		87.7			
Sn	120	101.770				
Sb	121	103.425				
Sb	123					
Ba	135					
Ba	137	96.417				
Ho	165					
> Lu	175		95.0			
Tl	205	94.544				
Pb	208	97.698				
Th	232	98.684				
U	238	102.155				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)
QC Std 6	Na	23CCV is out of limits ( +/- 10%)

### QC Action

Sample ID: QC Std 6  
Report Date/Time: Wednesday, February 10, 2010 19:37:11  
Page 3

QC Action Line: Continue

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Sample ID: QC Std 6

Report Date/Time: Wednesday, February 10, 2010 19:37:11

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 10, 2010 19:40:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 7.115

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.048	ug/L	28.940	42	0.000
Be	9	0.003	ug/L	345.423	3	0.000
B	11	1.539	ug/L	29.711	788	0.001
Na	23	-1.766	ug/L	183.888	30703	-0.011
Mg	24	1.414	ug/L	104.166	4001	0.005
Al	27	0.355	ug/L	430.283	7669	0.002
P	31	0.453	ug/L	264.322	4031	0.000
K	39	-2.160	ug/L	111.543	409453	-0.022
Ca	43	-0.858	ug/L	61.590	215	-0.000
> Sc	45		ug/L		556566	556566.308
Ti	47	-0.016	ug/L	186.281	257	-0.000
V	51	-0.312	ug/L	196.266	-11334	-0.003
Cr	52	-0.047	ug/L	87.246	12229	-0.000
Cr	53		ug/L		72694	0.001
Mn	55	0.032	ug/L	60.119	1118	0.000
Fe	57	4.521	ug/L	111.215	12577	0.001
Co	59	0.002	ug/L	314.119	117	0.000
Ni	60	-0.011	ug/L	32.903	105	-0.000
Cu	63		ug/L		221	0.000
Cu	65	-0.004	ug/L	148.737	133	-0.000
Zn	66	-0.002	ug/L	1175.520	473	-0.000
Zn	67		ug/L		3721	-0.001
Zn	68		ug/L		709	-0.000
> Ge	74		ug/L		344733	344732.845
As	75	0.076	ug/L	482.109	-637	0.000
Se	77		ug/L		6305	0.001
Se	82	0.191	ug/L	73.042	45	0.000
Kr	83		ug/L		50	-0.000
Sr	88	0.003	ug/L	258.326	284	0.000
Y	89		ug/L		41	0.000
Zr	90	0.081	ug/L	21.586	1002	0.003
Mo	98	-0.017	ug/L	18.213	149	-0.000
Ag	107	0.008	ug/L	70.826	141	0.000
Cd	111	0.006	ug/L	39.019	29	0.000
Cd	114		ug/L		61	-0.000
> In	115		ug/L		218420	218419.547
Sn	120	0.024	ug/L	9.003	416	0.001
Sb	121	0.229	ug/L	26.651	1318	0.004
Sb	123		ug/L		1030	0.003
Ba	135		ug/L		33	0.000
Ba	137	0.019	ug/L	33.544	71	0.000
Ho	165		ug/L		5	0.000
> Lu	175		ug/L		189159	189158.685
Tl	205	0.182	ug/L	18.220	1056	0.003
Pb	208	-0.004	ug/L	71.016	613	-0.000
Th	232	0.073	ug/L	20.028	1625	0.005
U	238	0.002	ug/L	282.333	287	0.000

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 19:43:22

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		108.4			
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		102.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.6			
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: Wednesday, February 10, 2010 19:43:22

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## ICPMS#4 - Summary Report

Sample ID: 245147008

Sample Date/Time: Wednesday, February 10, 2010 19:46:48

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147008.116

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	46.356	ug/L	5.108	32490	0.050
Be	9	3.403	ug/L	7.221	568	0.001
B	11	15.205	ug/L	4.283	4780	0.007
Na	23	555.228	ug/L	3.860	2382670	3.569
Mg	24	7250.208	ug/L	6.405	17812378	27.227
Al	27	48658.155	ug/L	3.498	194170246	296.405
P	31	526.771	ug/L	4.363	113271	0.166
K	39	7782.003	ug/L	3.432	52861724	79.952
Ca	43	10881.055	ug/L	4.731	151951	0.232
Sc	45		ug/L		655520	655520.169
Ti	47	1021.718	ug/L	4.143	680794	1.039
V	51	49.299	ug/L	3.062	281545	0.448
Cr	52	40.292	ug/L	3.913	254681	0.367
Cr	53		ug/L		82535	-0.004
Mn	55	981.970	ug/L	3.552	9980874	15.241
Fe	57	28457.515	ug/L	3.949	6066480	9.245
Co	59	13.510	ug/L	4.715	107612	0.164
Ni	60	27.342	ug/L	5.348	46129	0.070
Cu	63		ug/L		71211	0.108
Cu	65	19.661	ug/L	4.234	34902	0.053
Zn	66	87.272	ug/L	0.690	64646	0.211
Zn	67		ug/L		16005	0.041
Zn	68		ug/L		54485	0.177
Ge	74		ug/L		303959	303958.715
As	75	6.050	ug/L	5.463	4582	0.017
Se	77		ug/L		4901	-0.001
Se	82	0.680	ug/L	18.157	88	0.000
Kr	83		ug/L		143	0.000
Sr	88	112.480	ug/L	1.985	1423343	7.246
Y	89		ug/L		546949	2.785
Zr	90	67.980	ug/L	1.876	451085	2.295
Mo	98	2.171	ug/L	0.585	6371	0.032
Ag	107	0.359	ug/L	4.196	1901	0.009
Cd	111	1.038	ug/L	6.636	1156	0.006
Cd	114		ug/L		1063	0.005
In	115		ug/L		196421	196421.488
Sn	120	0.558	ug/L	4.751	2874	0.013
Sb	121	0.333	ug/L	0.973	1508	0.005
Sb	123		ug/L		1195	0.004
Ba	135		ug/L		622660	3.234
Ba	137	504.482	ug/L	0.231	1074555	5.581
Ho	165		ug/L		19866	0.103
Lu	175		ug/L		192529	192529.372
Tl	205	0.650	ug/L	1.519	2681	0.012
Pb	208	43.533	ug/L	0.443	524845	2.723
Th	232	22.415	ug/L	0.424	325611	1.688
U	238	10.321	ug/L	0.690	158862	0.824

Sample ID: 245147008

Report Date/Time: Wednesday, February 10, 2010 19:49:34

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		127.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		90.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		84.8			
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 sanSc		45	
Ti 47 Upper, S, EEETi		47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

Sample ID: 245147008

Report Date/Time: Wednesday, February 10, 2010 19:49:34

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## ICPMS#4 - Summary Report

Sample ID: 245147009

Sample Date/Time: Wednesday, February 10, 2010 19:52:58

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147009.117

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.261	ug/L	2.919	36977	0.056
Be	9	3.680	ug/L	3.501	618	0.001
B	11	15.918	ug/L	1.289	5024	0.007
Na	23	841.507	ug/L	8.159	3625281	5.409
Mg	24	9191.486	ug/L	6.049	22796152	34.517
Al	27	55370.357	ug/L	2.148	222958268	337.293
P	31	449.268	ug/L	4.355	98155	0.141
K	39	10012.045	ug/L	5.695	68421828	102.864
Ca	43	9018.023	ug/L	4.115	127121	0.192
Sc	45		ug/L		661133	661133.375
Ti	47	1429.623	ug/L	3.877	961003	1.454
V	51	56.941	ug/L	2.676	329979	0.517
Cr	52	23.657	ug/L	3.575	156986	0.215
Cr	53		ug/L		67957	-0.027
Mn	55	961.806	ug/L	2.408	9865851	14.928
Fe	57	30556.675	ug/L	2.770	6572930	9.927
Co	59	16.234	ug/L	3.007	130490	0.197
Ni	60	24.471	ug/L	2.198	41705	0.063
Cu	63		ug/L		66861	0.101
Cu	65	18.597	ug/L	2.250	33335	0.050
Zn	66	85.346	ug/L	1.387	63173	0.207
Zn	67		ug/L		16226	0.042
Zn	68		ug/L		55563	0.181
Ge	74		ug/L		303704	303704.466
As	75	5.451	ug/L	1.039	4064	0.015
Se	77		ug/L		4398	-0.003
Se	82	0.613	ug/L	2.544	81	0.000
Kr	83		ug/L		166	0.000
Sr	88	107.984	ug/L	1.991	1376604	6.956
Y	89		ug/L		618552	3.126
Zr	90	79.128	ug/L	1.269	528969	2.671
Mo	98	1.018	ug/L	0.467	3107	0.015
Ag	107	0.460	ug/L	1.076	2427	0.012
Cd	111	0.848	ug/L	14.090	954	0.005
Cd	114		ug/L		571	0.003
In	115		ug/L		197902	197901.916
Sn	120	0.681	ug/L	1.665	3474	0.016
Sb	121	0.228	ug/L	3.347	1190	0.004
Sb	123		ug/L		880	0.003
Ba	135		ug/L		789408	4.070
Ba	137	625.008	ug/L	0.051	1340964	6.914
Ho	165		ug/L		22452	0.116
Lu	175		ug/L		193934	193933.792
Tl	205	0.896	ug/L	3.077	3553	0.016
Pb	208	38.940	ug/L	0.388	472982	2.435
Th	232	22.914	ug/L	1.261	335302	1.726
U	238	5.732	ug/L	1.147	89004	0.458

Sample ID: 245147009

Report Date/Time: Wednesday, February 10, 2010 19:55:42

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	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	0.9997
Cr	52Linear Thru Zero	0.9999
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		128.8			
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		90.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		85.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.1			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
AI 27 Upper, S, EEEAI		27Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45
Ti 47 Upper, S, EEETi		47Sample is out of limits (over linear range)_

### QC Action

Sample ID: 245147009  
 Report Date/Time: Wednesday, February 10, 2010 19:55:42  
 Page 3

QC Action Line: Continue

Sample ID: 245147009

Report Date/Time: Wednesday, February 10, 2010 19:55:42

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## ICPMS#4 - Summary Report

Sample ID: 245147010

Sample Date/Time: Wednesday, February 10, 2010 19:59:07

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 9441202|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147010.118

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	41.731	ug/L	3.020	29834	0.045
Be	9	3.178	ug/L	5.626	539	0.001
B	11	10.785	ug/L	7.564	3595	0.005
Na	23	962.496	ug/L	8.387	4171338	6.187
Mg	24	7911.085	ug/L	1.197	19842805	29.708
Al	27	46550.340	ug/L	10.502	189008256	283.565
P	31	390.662	ug/L	5.915	86800	0.123
K	39	6811.445	ug/L	7.826	47213193	69.981
Ca	43	7268.839	ug/L	3.489	103588	0.155
> Sc	45		ug/L		668076	668076.231
Ti	47	963.509	ug/L	4.441	654326	0.980
V	51	68.905	ug/L	4.407	405605	0.626
Cr	52	32.331	ug/L	4.592	211214	0.294
Cr	53		ug/L		71120	-0.023
Mn	55	1068.594	ug/L	2.930	11072183	16.586
Fe	57	33119.674	ug/L	2.285	7197745	10.759
Co	59	17.015	ug/L	3.730	138148	0.207
Ni	60	26.930	ug/L	4.125	46330	0.069
Cu	63		ug/L		97516	0.146
Cu	65	26.373	ug/L	4.325	47661	0.071
Zn	66	96.266	ug/L	1.568	70448	0.233
Zn	67		ug/L		16328	0.043
Zn	68		ug/L		58236	0.191
> Ge	74		ug/L		300503	300503.351
As	75	8.107	ug/L	4.109	6283	0.023
Se	77		ug/L		4142	-0.003
Se	82	0.891	ug/L	26.998	107	0.000
Kr	83		ug/L		147	0.000
Sr	88	98.635	ug/L	1.586	1249398	6.354
Y	89		ug/L		715575	3.640
Zr	90	57.550	ug/L	1.815	382323	1.943
Mo	98	1.638	ug/L	1.930	4857	0.024
Ag	107	0.343	ug/L	2.642	1824	0.009
Cd	111	0.848	ug/L	11.063	948	0.005
Cd	114		ug/L		686	0.003
> In	115		ug/L		196608	196608.034
Sn	120	0.502	ug/L	5.432	2613	0.012
Sb	121	0.233	ug/L	3.222	1198	0.004
Sb	123		ug/L		894	0.003
Ba	135		ug/L		556847	2.925
Ba	137	450.410	ug/L	0.634	948730	4.983
Ho	165		ug/L		25860	0.136
> Lu	175		ug/L		190402	190402.088
Tl	205	0.657	ug/L	1.508	2676	0.012
Pb	208	44.460	ug/L	0.111	530096	2.781
Th	232	21.924	ug/L	0.440	314989	1.651
U	238	2.552	ug/L	0.196	39040	0.204

Sample ID: 245147010

Report Date/Time: Wednesday, February 10, 2010 20:01:51

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		130.1			
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		89.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		84.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.3			
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 Upper, S, EEETi		47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

### QC Action

Sample ID: 245147010  
 Report Date/Time: Wednesday, February 10, 2010 20:01:51  
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QC Action Line: Continue

Sample ID: 245147010

Report Date/Time: Wednesday, February 10, 2010 20:01:51

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## ICPMS#4 - Summary Report

Sample ID: 245147011

Sample Date/Time: Wednesday, February 10, 2010 20:05:17

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147011.119

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Li	7	53.953 ug/L	6.578	37174	0.058
	Be	9	3.219 ug/L	7.700	527	0.001
	B	11	17.306 ug/L	9.530	5271	0.007
	Na	23	554.338 ug/L	2.903	2338719	3.563
	Mg	24	7254.687 ug/L	6.438	17535502	27.243
	Al	27	49493.967 ug/L	5.591	194269515	301.497
	P	31	572.647 ug/L	5.296	120688	0.180
	K	39	7247.908 ug/L	7.769	48385529	74.465
	Ca	43	7998.445 ug/L	3.323	110003	0.170
>	Sc	45	ug/L		645013	645012.921
	Ti	47	922.724 ug/L	5.759	604539	0.939
	V	51	61.992 ug/L	5.571	350904	0.563
	Cr	52	26.741 ug/L	6.170	171018	0.243
	Cr	53	ug/L		65847	-0.028
	Mn	55	980.912 ug/L	6.500	9798129	15.225
	Fe	57	30357.628 ug/L	6.547	6359827	9.862
	Co	59	15.254 ug/L	6.417	119433	0.185
	Ni	60	22.810 ug/L	6.137	37874	0.059
	Cu	63	ug/L		110215	0.171
	Cu	65	30.921 ug/L	6.943	53859	0.083
	Zn	66	153.828 ug/L	1.546	112608	0.372
	Zn	67	ug/L		22543	0.063
	Zn	68	ug/L		87838	0.289
>	Ge	74	ug/L		301230	301230.482
	As	75	6.946 ug/L	2.037	5307	0.020
	Se	77	ug/L		4112	-0.003
	Se	82	0.671 ug/L	17.290	86	0.000
	Kr	83	ug/L		131	0.000
	Sr	88	86.987 ug/L	1.552	1097619	5.604
	Y	89	ug/L		500954	2.558
	Zr	90	66.424 ug/L	1.548	439517	2.242
	Mo	98	1.826 ug/L	1.685	5371	0.027
	Ag	107	1.308 ug/L	2.530	6675	0.034
	Cd	111	1.310 ug/L	3.112	1450	0.007
	Cd	114	ug/L		1826	0.009
>	In	115	ug/L		195877	195877.341
	Sn	120	0.944 ug/L	2.116	4664	0.022
	Sb	121	0.214 ug/L	5.324	1136	0.003
	Sb	123	ug/L		861	0.002
	Ba	135	ug/L		550409	2.887
	Ba	137	449.408 ug/L	0.555	947718	4.972
	Ho	165	ug/L		18876	0.099
>	Lu	175	ug/L		190617	190616.567
	Tl	205	0.580 ug/L	3.795	2419	0.010
	Pb	208	79.158 ug/L	0.663	944355	4.951
	Th	232	20.465 ug/L	1.018	294393	1.541
	U	238	13.859 ug/L	1.135	211129	1.106

Sample ID: 245147011

Report Date/Time: Wednesday, February 10, 2010 20:08:01

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		125.6			
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		89.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		84.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.4			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte  
Sc 45 Int Std for sanSc  
Ti 47 Upper, S, EETi

Mass Out of Limits Message  
45  
47 Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: Continue

Sample ID: 245147011  
Report Date/Time: Wednesday, February 10, 2010 20:08:01  
Page 3

## ICPMS#4 - Summary Report

Sample ID: 245147012

Sample Date/Time: Wednesday, February 10, 2010 20:11:27

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147012.120

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	51.704	ug/L	4.546	35389	0.055
Be 9	3.601	ug/L	3.010	585	0.001
B 11	21.604	ug/L	4.556	6423	0.009
Na 23	663.096	ug/L	4.391	2767573	4.262
Mg 24	7190.579	ug/L	5.621	17258625	27.003
Al 27	50756.003	ug/L	5.585	197843201	309.184
P 31	1003.109	ug/L	2.655	206592	0.316
K 39	8948.560	ug/L	4.567	59256287	91.937
Ca 43	9767.204	ug/L	4.070	133236	0.208
> Sc 45		ug/L		639995	639994.650
Ti 47	1114.391	ug/L	4.377	725009	1.134
V 51	57.277	ug/L	4.930	321062	0.520
Cr 52	23.937	ug/L	4.776	153533	0.218
Cr 53		ug/L		64573	-0.029
Mn 55	632.259	ug/L	5.298	6272436	9.813
Fe 57	31560.736	ug/L	5.492	6565550	10.253
Co 59	14.154	ug/L	5.593	110059	0.172
Ni 60	21.591	ug/L	5.086	35606	0.055
Cu 63		ug/L		74227	0.116
Cu 65	21.208	ug/L	4.585	36748	0.057
Zn 66	97.071	ug/L	0.509	69798	0.235
Zn 67		ug/L		16705	0.045
Zn 68		ug/L		58722	0.197
> Ge 74		ug/L		295243	295243.294
As 75	6.639	ug/L	6.109	4944	0.019
Se 77		ug/L		4222	-0.003
Se 82	1.305	ug/L	25.176	145	0.000
Kr 83		ug/L		144	0.000
Sr 88	105.794	ug/L	0.529	1314725	6.815
Y 89		ug/L		631156	3.272
Zr 90	79.642	ug/L	0.426	518947	2.689
Mo 98	1.506	ug/L	0.372	4396	0.022
Ag 107	0.457	ug/L	1.319	2354	0.012
Cd 111	1.005	ug/L	9.375	1099	0.006
Cd 114		ug/L		1195	0.006
> In 115		ug/L		192879	192878.926
Sn 120	0.902	ug/L	3.059	4399	0.021
Sb 121	0.254	ug/L	5.715	1241	0.004
Sb 123		ug/L		981	0.003
Ba 135		ug/L		696018	3.659
Ba 137	568.354	ug/L	1.210	1196037	6.288
Ho 165		ug/L		23159	0.122
> Lu 175		ug/L		190243	190242.836
Tl 205	0.614	ug/L	0.650	2529	0.011
Pb 208	43.809	ug/L	1.088	521846	2.740
Th 232	24.677	ug/L	1.205	354129	1.859
U 238	9.933	ug/L	2.188	151057	0.793

Sample ID: 245147012

Report Date/Time: Wednesday, February 10, 2010 20:14:12

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		124.7			
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		87.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		83.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.2			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte

Al 27 Upper, S, EEEAl

Sc 45 Int Std for sanSc

Ti 47 Upper, S, EEE Ti

Mass Out of Limits Message

27 Sample is out of limits (over linear range)

45

47 Sample is out of limits (over linear range)

## QC Action

Sample ID: 245147012

Report Date/Time: Wednesday, February 10, 2010 20:14:12

Page 3

QC Action Line: Continue

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Sample ID: 245147012

Report Date/Time: Wednesday, February 10, 2010 20:14:12

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## ICPMS#4 - Summary Report

Sample ID: 245147013

Sample Date/Time: Wednesday, February 10, 2010 20:17:38

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147013.121

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	61.663	ug/L	3.849	44089	0.066
Be	9	2.842	ug/L	8.449	482	0.001
B	11	12.938	ug/L	4.138	4219	0.006
Na	23	797.322	ug/L	3.812	3485460	5.125
Mg	24	5853.125	ug/L	7.063	14685983	21.980
Al	27	35769.549	ug/L	5.492	145429146	217.893
P	31	568.545	ug/L	2.336	124289	0.179
K	39	6628.081	ug/L	10.254	45934280	68.097
Ca	43	6543.089	ug/L	3.958	93278	0.139
> Sc	45		ug/L		667859	667859.153
Ti	47	996.761	ug/L	4.023	677141	1.014
V	51	43.861	ug/L	3.790	254028	0.398
Cr	52	21.979	ug/L	3.909	148429	0.200
Cr	53		ug/L		62450	-0.036
Mn	55	866.059	ug/L	3.468	8974397	13.442
Fe	57	31361.140	ug/L	3.157	6815248	10.188
Co	59	9.019	ug/L	2.365	73314	0.110
Ni	60	18.171	ug/L	2.456	31326	0.047
Cu	63		ug/L		48010	0.072
Cu	65	13.042	ug/L	1.933	23670	0.035
Zn	66	126.416	ug/L	1.496	90791	0.306
Zn	67		ug/L		18208	0.050
Zn	68		ug/L		69218	0.232
> Ge	74		ug/L		295328	295328.298
As	75	6.383	ug/L	5.194	4730	0.018
Se	77		ug/L		4070	-0.003
Se	82	1.302	ug/L	15.948	145	0.000
Kr	83		ug/L		142	0.000
Sr	88	71.961	ug/L	0.916	906512	4.636
Y	89		ug/L		756612	3.870
Zr	90	76.685	ug/L	0.566	506508	2.589
Mo	98	2.239	ug/L	2.251	6533	0.032
Ag	107	0.389	ug/L	3.328	2046	0.010
Cd	111	0.927	ug/L	2.036	1030	0.005
Cd	114		ug/L		554	0.002
> In	115		ug/L		195509	195508.716
Sn	120	4.315	ug/L	1.115	20356	0.103
Sb	121	0.264	ug/L	5.104	1289	0.004
Sb	123		ug/L		1026	0.003
Ba	135		ug/L		392761	2.009
Ba	137	312.090	ug/L	0.592	674941	3.453
Ho	165		ug/L		30231	0.155
> Lu	175		ug/L		195482	195482.183
Tl	205	0.411	ug/L	4.816	1890	0.007
Pb	208	33.245	ug/L	0.597	407111	2.079
Th	232	23.457	ug/L	0.699	345950	1.767
U	238	4.718	ug/L	0.299	73881	0.377

Sample ID: 245147013

Report Date/Time: Wednesday, February 10, 2010 20:20:23

Page 1

## 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	0.9997
Cr	52Linear Thru Zero	0.9999
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		130.1			
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		87.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		84.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.9			
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 sanSc	45	
Ti 47 Upper, S, EETi	47	Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 245147013

Report Date/Time: Wednesday, February 10, 2010 20:20:23

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 10, 2010 20:23:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 6.122

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	58.813	ug/L	4.143	35747	0.063
Be	9	56.503	ug/L	3.285	8107	0.014
B	11	107.540	ug/L	3.276	26694	0.046
Na	23	4963.210	ug/L	3.338	18155708	31.903
Mg	24	5274.079	ug/L	6.557	11272617	19.806
Al	27	4610.987	ug/L	3.765	15982316	28.088
P	31	4843.659	ug/L	3.337	870155	1.525
K	39	5064.071	ug/L	9.964	29947872	52.028
Ca	43	4976.812	ug/L	4.121	60395	0.106
> Sc	45		ug/L		568245	568245.363
Ti	47	48.153	ug/L	3.500	28084	0.049
V	51	47.384	ug/L	4.353	234206	0.430
Cr	52	50.158	ug/L	3.761	271854	0.456
Cr	53		ug/L		169857	0.169
Mn	55	49.558	ug/L	3.087	437654	0.769
Fe	57	4764.170	ug/L	3.641	890764	1.548
Co	59	46.370	ug/L	3.057	320195	0.564
Ni	60	46.993	ug/L	3.111	68708	0.121
Cu	63		ug/L		144216	0.254
Cu	65	45.360	ug/L	3.199	69655	0.122
Zn	66	50.217	ug/L	0.623	38174	0.122
Zn	67		ug/L		13821	0.033
Zn	68		ug/L		28070	0.088
> Ge	74		ug/L		310466	310465.997
As	75	45.398	ug/L	0.922	39277	0.129
Se	77		ug/L		16677	0.037
Se	82	46.062	ug/L	2.196	4627	0.015
Kr	83		ug/L		44	-0.000
Sr	88	52.271	ug/L	0.891	649706	3.367
Y	89		ug/L		132	0.001
Zr	90	52.042	ug/L	0.583	339216	1.757
Mo	98	50.361	ug/L	1.125	141154	0.731
Ag	107	50.819	ug/L	0.198	252269	1.308
Cd	111	49.585	ug/L	1.067	53320	0.276
Cd	114		ug/L		125568	0.651
> In	115		ug/L		192879	192879.437
Sn	120	51.207	ug/L	0.389	235496	1.220
Sb	121	51.327	ug/L	0.680	157651	0.815
Sb	123		ug/L		120743	0.624
Ba	135		ug/L		53875	0.297
Ba	137	46.132	ug/L	1.327	92615	0.510
Ho	165		ug/L		19	0.000
> Lu	175		ug/L		181416	181416.458
Tl	205	46.425	ug/L	2.112	150739	0.829
Pb	208	47.751	ug/L	1.173	542426	2.986
Th	232	47.860	ug/L	1.165	654510	3.605
U	238	49.935	ug/L	1.103	723319	3.986

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 10, 2010 20:26:32

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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	117.625				
Be	9	113.006				
B	11	107.540				
Na	23	99.264				
Mg	24	105.482				
Al	27	91.307				
P	31	96.873				
K	39	101.281				
Ca	43	99.536				
> Sc	45		110.7			
Ti	47	96.306				
V	51	94.767				
Cr	52	100.316				
Cr	53					
Mn	55	99.115				
Fe	57	95.283				
Co	59	92.740				
Ni	60	93.986				
Cu	63					
Cu	65	90.719				
Zn	66	100.433				
Zn	67					
Zn	68					
> Ge	74		92.3			
As	75	90.796				
Se	77					
Se	82	92.124				
Kr	83					
Sr	88	104.541				
Y	89					
Zr	90	104.085				
Mo	98	100.721				
Ag	107	101.638				
Cd	111	99.171				
Cd	114					
> In	115		83.3			
Sn	120	102.415				
Sb	121	102.654				
Sb	123					
Ba	135					
Ba	137	92.263				
Ho	165					
> Lu	175		93.6			
Ti	205	92.851				
Pb	208	95.501				
Th	232	95.720				
U	238	99.869				

### 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	Be	9	9CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 6  
 Report Date/Time: Wednesday, February 10, 2010 20:26:32  
 Page 3

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 10, 2010 20:29:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 7.123

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.033	ug/L	25.974	34	0.000
Be	9	0.009	ug/L	161.944	4	0.000
B	11	1.667	ug/L	20.257	860	0.001
Na	23	-4.823	ug/L	18.622	20682	-0.031
Mg	24	1.502	ug/L	117.750	4334	0.006
Al	27	0.266	ug/L	718.563	7670	0.002
P	31	-0.947	ug/L	222.174	3965	-0.000
K	39	-10.145	ug/L	41.941	381361	-0.104
Ca	43	-3.982	ug/L	74.313	186	-0.000
Sc	45		ug/L		584049	584049.438
Ti	47	-0.106	ug/L	44.992	216	-0.000
V	51	0.293	ug/L	200.740	-8676	0.003
Cr	52	-0.183	ug/L	34.266	12104	-0.002
Cr	53		ug/L		68374	-0.013
Mn	55	0.020	ug/L	66.633	1069	0.000
Fe	57	2.153	ug/L	106.063	12752	0.001
Co	59	0.001	ug/L	293.284	118	0.000
Ni	60	-0.020	ug/L	68.064	95	-0.000
Cu	63		ug/L		220	0.000
Cu	65	-0.020	ug/L	30.606	115	-0.000
Zn	66	0.015	ug/L	219.597	476	0.000
Zn	67		ug/L		3522	-0.001
Zn	68		ug/L		659	-0.000
Ge	74		ug/L		336764	336764.475
As	75	-0.077	ug/L	93.558	-766	-0.000
Se	77		ug/L		6001	0.001
Se	82	0.091	ug/L	114.891	34	0.000
Kr	83		ug/L		55	0.000
Sr	88	0.002	ug/L	281.899	263	0.000
Y	89		ug/L		35	0.000
Zr	90	0.074	ug/L	27.415	922	0.002
Mo	98	-0.011	ug/L	22.257	163	-0.000
Ag	107	0.006	ug/L	58.219	127	0.000
Cd	111	0.001	ug/L	320.831	23	0.000
Cd	114		ug/L		66	-0.000
In	115		ug/L		212777	212776.568
Sn	120	0.023	ug/L	16.011	400	0.001
Sb	121	0.233	ug/L	19.662	1297	0.004
Sb	123		ug/L		1023	0.003
Ba	135		ug/L		36	0.000
Ba	137	0.018	ug/L	43.496	68	0.000
Ho	165		ug/L		3	-0.000
Lu	175		ug/L		188036	188035.979
Tl	205	0.183	ug/L	32.301	1050	0.003
Pb	208	-0.005	ug/L	146.068	604	-0.000
Th	232	0.068	ug/L	17.990	1544	0.005
U	238	0.002	ug/L	377.091	283	0.000

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 20:32:43

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		113.8			
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		100.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		91.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.0			
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: Wednesday, February 10, 2010 20:32:43

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## ICPMS#4 - Summary Report

Sample ID: 245147014

Sample Date/Time: Wednesday, February 10, 2010 20:36:09

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147014.124

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.945	ug/L	8.896	36981	0.061
Be	9	3.916	ug/L	6.224	604	0.001
B	11	15.900	ug/L	9.939	4604	0.007
Na	23	671.167	ug/L	3.027	2666353	4.314
Mg	24	8972.821	ug/L	4.746	20488849	33.696
Al	27	61125.051	ug/L	12.402	225340725	372.348
P	31	528.276	ug/L	8.568	105243	0.166
K	39	8461.804	ug/L	9.102	53288028	86.936
Ca	43	8792.645	ug/L	7.380	113905	0.187
> Sc	45		ug/L		609715	609715.042
Ti	47	1135.198	ug/L	8.893	700613	1.155
V	51	71.838	ug/L	8.393	384864	0.652
Cr	52	34.882	ug/L	10.495	205915	0.317
Cr	53		ug/L		72893	-0.010
Mn	55	1009.377	ug/L	10.297	9494050	15.667
Fe	57	38129.513	ug/L	9.039	7524432	12.387
Co	59	16.105	ug/L	9.097	118807	0.196
Ni	60	27.786	ug/L	8.577	43449	0.071
Cu	63		ug/L		112338	0.185
Cu	65	33.270	ug/L	9.194	54594	0.090
Zn	66	135.128	ug/L	4.190	93985	0.327
Zn	67		ug/L		20537	0.060
Zn	68		ug/L		75732	0.262
> Ge	74		ug/L		286358	286358.111
As	75	8.658	ug/L	9.549	6416	0.025
Se	77		ug/L		4446	-0.001
Se	82	0.502	ug/L	68.728	67	0.000
Kr	83		ug/L		147	0.000
Sr	88	105.811	ug/L	6.009	1261029	6.816
Y	89		ug/L		532017	2.876
Zr	90	77.514	ug/L	5.839	484419	2.617
Mo	98	1.578	ug/L	7.537	4407	0.023
Ag	107	0.552	ug/L	6.868	2706	0.014
Cd	111	1.283	ug/L	14.853	1338	0.007
Cd	114		ug/L		1424	0.007
> In	115		ug/L		185347	185346.724
Sn	120	1.085	ug/L	5.916	5025	0.026
Sb	121	0.415	ug/L	11.121	1660	0.007
Sb	123		ug/L		1268	0.005
Ba	135		ug/L		652727	3.624
Ba	137	558.124	ug/L	2.459	1112364	6.174
Ho	165		ug/L		19684	0.109
> Lu	175		ug/L		180267	180266.830
Tl	205	0.741	ug/L	8.101	2801	0.013
Pb	208	105.641	ug/L	4.655	1190256	6.607
Th	232	25.356	ug/L	4.552	344421	1.910
U	238	11.934	ug/L	4.888	171742	0.953

Sample ID: 245147014

Report Date/Time: Wednesday, February 10, 2010 20:38:54

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		118.8			
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		85.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		80.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		93.0			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

#### Measurement Type Analyte

Al 27 Upper, S, EEEAl

Ti 47 Upper, S, EEETi

Mn 55 Upper, S, EEIMn

#### Mass Out of Limits Message

27Sample is out of limits (over linear range)

47Sample is out of limits (over linear range)

55Sample is out of limits (over linear range)

### QC Action

Sample ID: 245147014

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QC Action Line: Continue

Sample ID: 245147014

Report Date/Time: Wednesday, February 10, 2010 20:38:54

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## ICPMS#4 - Summary Report

Sample ID: 245147015

Sample Date/Time: Wednesday, February 10, 2010 20:42:21

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147015.125

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	58.672	ug/L	5.803	40534	0.063
Be	9	3.905	ug/L	11.132	639	0.001
B	11	14.645	ug/L	3.560	4553	0.006
Na	23	663.204	ug/L	5.357	2794210	4.263
Mg	24	9553.235	ug/L	3.864	23165321	35.875
Al	27	66806.659	ug/L	7.201	262566616	406.958
P	31	313.761	ug/L	3.728	68380	0.099
K	39	9387.504	ug/L	9.845	62666721	96.447
Ca	43	7828.656	ug/L	4.982	107856	0.167
Sc	45		ug/L		646117	646117.218
Ti	47	1199.198	ug/L	4.250	787750	1.220
V	51	71.245	ug/L	4.091	406098	0.647
Cr	52	32.989	ug/L	3.543	208226	0.300
Cr	53		ug/L		72314	-0.018
Mn	55	955.217	ug/L	5.087	9568657	14.826
Fe	57	39446.134	ug/L	4.511	8284485	12.815
Co	59	15.723	ug/L	5.032	123460	0.191
Ni	60	24.771	ug/L	3.873	41240	0.064
Cu	63		ug/L		81045	0.125
Cu	65	22.601	ug/L	5.272	39527	0.061
Zn	66	110.012	ug/L	0.822	79483	0.266
Zn	67		ug/L		17959	0.049
Zn	68		ug/L		64244	0.214
Ge	74		ug/L		296867	296866.847
As	75	7.086	ug/L	8.111	5349	0.020
Se	77		ug/L		4257	-0.003
Se	82	0.314	ug/L	30.233	51	0.000
Kr	83		ug/L		176	0.000
Sr	88	115.587	ug/L	0.478	1427290	7.446
Y	89		ug/L		630857	3.290
Zr	90	77.045	ug/L	0.593	498861	2.601
Mo	98	1.171	ug/L	2.796	3435	0.017
Ag	107	0.472	ug/L	3.719	2410	0.012
Cd	111	0.864	ug/L	8.953	943	0.005
Cd	114		ug/L		676	0.003
In	115		ug/L		191658	191657.514
Sn	120	0.889	ug/L	1.563	4313	0.021
Sb	121	0.169	ug/L	4.206	974	0.003
Sb	123		ug/L		816	0.002
Ba	135		ug/L		591623	3.149
Ba	137	486.676	ug/L	0.412	1011406	5.384
Ho	165		ug/L		23130	0.123
Lu	175		ug/L		187846	187845.534
Tl	205	0.759	ug/L	2.148	2981	0.014
Pb	208	56.633	ug/L	0.908	665980	3.542
Th	232	28.557	ug/L	0.861	404596	2.151
U	238	6.434	ug/L	0.800	96720	0.514

Sample ID: 245147015

Report Date/Time: Wednesday, February 10, 2010 20:45:07

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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

Sample ID: 245147015

Report Date/Time: Wednesday, February 10, 2010 20:45:07

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### 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		125.9			
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		88.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		82.7			
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	Mass	Out of Limits Message
AI 27 Upper, S, EEEAI		27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
Ti 47 Upper, S, EEETi		47	Sample is out of limits (over linear range)_

### QC Action

Sample ID: 245147015  
 Report Date/Time: Wednesday, February 10, 2010 20:45:07  
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QC Action Line: Continue

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Sample ID: 245147015

Report Date/Time: Wednesday, February 10, 2010 20:45:07

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## ICPMS#4 - Summary Report

Sample ID: 245147016

Sample Date/Time: Wednesday, February 10, 2010 20:48:32

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147016.126

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	54.177	ug/L	0.820	38343	0.058
Be	9	3.456	ug/L	7.703	580	0.001
B	11	19.473	ug/L	2.466	6035	0.008
Na	23	826.823	ug/L	4.609	3556026	5.315
Mg	24	8029.388	ug/L	4.023	19935097	30.153
Al	27	56696.426	ug/L	1.434	228318796	345.371
P	31	704.872	ug/L	0.733	151440	0.222
K	39	9780.910	ug/L	2.527	66929763	100.489
Ca	43	9248.302	ug/L	1.184	130464	0.197
> Sc	45		ug/L		660971	660970.747
Ti	47	1123.730	ug/L	0.931	755862	1.143
V	51	55.894	ug/L	0.511	323744	0.507
Cr	52	24.227	ug/L	0.059	160493	0.220
Cr	53		ug/L		65121	-0.031
Mn	55	764.562	ug/L	0.592	7844440	11.867
Fe	57	31169.537	ug/L	0.238	6706886	10.126
Co	59	12.763	ug/L	1.355	102654	0.155
Ni	60	21.914	ug/L	1.413	37368	0.056
Cu	63		ug/L		75715	0.114
Cu	65	20.971	ug/L	0.952	37577	0.057
Zn	66	120.154	ug/L	1.306	85379	0.291
Zn	67		ug/L		18982	0.053
Zn	68		ug/L		69131	0.234
> Ge	74		ug/L		292135	292135.011
As	75	7.630	ug/L	6.335	5709	0.022
Se	77		ug/L		4215	-0.003
Se	82	0.493	ug/L	35.781	67	0.000
Kr	83		ug/L		151	0.000
Sr	88	101.959	ug/L	0.736	1252532	6.568
Y	89		ug/L		560139	2.938
Zr	90	90.503	ug/L	1.333	582869	3.055
Mo	98	1.314	ug/L	1.792	3811	0.019
Ag	107	0.483	ug/L	2.796	2455	0.012
Cd	111	1.140	ug/L	10.852	1230	0.006
Cd	114		ug/L		947	0.005
> In	115		ug/L		190679	190678.623
Sn	120	1.198	ug/L	1.808	5692	0.029
Sb	121	0.198	ug/L	7.838	1056	0.003
Sb	123		ug/L		821	0.002
Ba	135		ug/L		627842	3.382
Ba	137	522.299	ug/L	1.187	1072665	5.778
Ho	165		ug/L		20515	0.110
> Lu	175		ug/L		185663	185662.908
Tl	205	0.691	ug/L	3.503	2722	0.012
Pb	208	54.391	ug/L	0.612	632161	3.402
Th	232	24.284	ug/L	0.678	340124	1.829
U	238	16.906	ug/L	0.523	250766	1.349

Sample ID: 245147016

Report Date/Time: Wednesday, February 10, 2010 20:51:16

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		128.7			
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		86.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		82.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		95.8			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte

Al 27 Upper, S, EEEAl

Sc 45 Int Std for sanSc

Ti 47 Upper, S, EEE Ti

Mass Out of Limits Message

27Sample is out of limits (over linear range)

45

47Sample is out of limits (over linear range)\_

### QC Action

Sample ID: 245147016

Report Date/Time: Wednesday, February 10, 2010 20:51:16

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QC Action Line: Continue

Sample ID: 245147016

Report Date/Time: Wednesday, February 10, 2010 20:51:16

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## ICPMS#4 - Summary Report

Sample ID: 245147017

Sample Date/Time: Wednesday, February 10, 2010 20:54:41

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147017.127

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	40.353	ug/L	2.796	26787	0.043
Be	9	3.200	ug/L	6.064	504	0.001
B	11	9.818	ug/L	2.873	3084	0.004
Na	23	723.139	ug/L	9.427	2916740	4.648
Mg	24	6514.120	ug/L	12.676	15135907	24.462
Al	27	46142.052	ug/L	2.531	174217169	281.078
P	31	418.376	ug/L	3.593	86046	0.132
K	39	6224.810	ug/L	5.693	40072597	63.954
Ca	43	8108.963	ug/L	3.427	107255	0.173
> Sc	45		ug/L		620192	620191.539
Ti	47	1047.360	ug/L	4.428	660331	1.066
V	51	50.807	ug/L	3.149	274893	0.461
Cr	52	20.463	ug/L	3.997	129231	0.186
Cr	53		ug/L		61204	-0.031
Mn	55	435.289	ug/L	4.131	4186441	6.756
Fe	57	26220.382	ug/L	2.778	5292015	8.518
Co	59	10.676	ug/L	3.266	80529	0.130
Ni	60	19.867	ug/L	2.789	31778	0.051
Cu	63		ug/L		73788	0.119
Cu	65	21.526	ug/L	3.760	36151	0.058
Zn	66	81.993	ug/L	2.030	58957	0.199
Zn	67		ug/L		13993	0.036
Zn	68		ug/L		48829	0.163
> Ge	74		ug/L		295001	295000.719
As	75	6.683	ug/L	11.098	4973	0.019
Se	77		ug/L		4002	-0.003
Se	82	0.658	ug/L	20.105	83	0.000
Kr	83		ug/L		121	0.000
Sr	88	86.026	ug/L	0.824	1047915	5.542
Y	89		ug/L		528911	2.798
Zr	90	61.872	ug/L	0.710	395255	2.089
Mo	98	1.070	ug/L	1.994	3111	0.016
Ag	107	0.363	ug/L	4.117	1849	0.009
Cd	111	0.791	ug/L	11.300	853	0.004
Cd	114		ug/L		576	0.003
> In	115		ug/L		189068	189067.771
Sn	120	0.734	ug/L	2.305	3554	0.017
Sb	121	0.470	ug/L	2.789	1864	0.007
Sb	123		ug/L		1453	0.006
Ba	135		ug/L		513066	2.756
Ba	137	426.136	ug/L	1.466	877654	4.714
Ho	165		ug/L		19554	0.105
> Lu	175		ug/L		186178	186178.260
Tl	205	0.519	ug/L	2.913	2157	0.009
Pb	208	41.227	ug/L	1.213	480682	2.578
Th	232	18.710	ug/L	1.285	262926	1.409
U	238	2.752	ug/L	2.172	41147	0.220

Sample ID: 245147017

Report Date/Time: Wednesday, February 10, 2010 20:57:26

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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	0.9997
Cr	52Linear Thru Zero	0.9999
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		120.8			
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		87.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		81.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.1			
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 Upper, S, EETi		47	Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: 245147018

Sample Date/Time: Wednesday, February 10, 2010 21:00:52

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 944120|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\245147018.128

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.184	ug/L	1.678	34828	0.057
Be	9	3.408	ug/L	3.868	530	0.001
B	11	13.225	ug/L	1.659	3940	0.006
Na	23	649.403	ug/L	9.264	2594434	4.174
Mg	24	7876.178	ug/L	8.543	18089254	29.577
Al	27	55188.468	ug/L	4.066	205586186	338.185
P	31	484.323	ug/L	2.011	97637	0.153
K	39	8272.020	ug/L	7.890	52435419	84.987
Ca	43	7251.603	ug/L	0.804	94698	0.154
> Sc	45		ug/L		611601	611601.189
Ti	47	1139.939	ug/L	1.217	709553	1.160
V	51	65.228	ug/L	2.300	351369	0.592
Cr	52	33.385	ug/L	1.398	199459	0.304
Cr	53		ug/L		68786	-0.017
Mn	55	976.799	ug/L	1.808	9273540	15.161
Fe	57	33069.078	ug/L	2.500	6582890	10.743
Co	59	16.563	ug/L	2.084	123233	0.201
Ni	60	28.677	ug/L	0.910	45210	0.074
Cu	63		ug/L		129284	0.211
Cu	65	37.972	ug/L	0.704	62836	0.102
Zn	66	143.194	ug/L	1.539	101301	0.347
Zn	67		ug/L		20621	0.059
Zn	68		ug/L		78968	0.269
> Ge	74		ug/L		291005	291004.536
As	75	6.328	ug/L	2.690	4616	0.018
Se	77		ug/L		3985	-0.003
Se	82	0.336	ug/L	22.648	52	0.000
Kr	83		ug/L		141	0.000
Sr	88	81.971	ug/L	0.236	994731	5.280
Y	89		ug/L		496223	2.634
Zr	90	66.483	ug/L	1.620	423092	2.244
Mo	98	2.051	ug/L	3.165	5781	0.030
Ag	107	1.408	ug/L	0.907	6906	0.036
Cd	111	1.154	ug/L	6.773	1231	0.006
Cd	114		ug/L		1726	0.009
> In	115		ug/L		188342	188341.979
Sn	120	1.244	ug/L	1.607	5830	0.030
Sb	121	0.136	ug/L	15.729	857	0.002
Sb	123		ug/L		684	0.002
Ba	135		ug/L		570087	3.056
Ba	137	473.477	ug/L	0.705	977084	5.238
Ho	165		ug/L		18687	0.100
> Lu	175		ug/L		186544	186543.836
Tl	205	0.607	ug/L	1.527	2456	0.011
Pb	208	72.815	ug/L	0.849	850114	4.554
Th	232	21.392	ug/L	0.735	301127	1.611
U	238	15.255	ug/L	0.759	227394	1.218

Sample ID: 245147018

Report Date/Time: Wednesday, February 10, 2010 21:03:37

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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		119.1			
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		86.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		81.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte

Al 27 Upper, S, EEEAl

Ti 47 Upper, S, EEE Ti

MassOut of Limits Message

27Sample is out of limits (over linear range)

47Sample is out of limits (over linear range)\_

### QC Action

QC Action Line: Continue

Sample ID: 245147018

Report Date/Time: Wednesday, February 10, 2010 21:03:37

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Wednesday, February 10, 2010 21:07:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 6.129

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.541	ug/L	3.132	33236	0.061
Be	9	55.885	ug/L	4.872	7750	0.014
B	11	105.797	ug/L	4.195	25396	0.046
Na	23	4873.509	ug/L	6.727	17218089	31.327
Mg	24	4928.954	ug/L	15.044	10130502	18.510
Al	27	5014.810	ug/L	4.818	16776468	30.548
P	31	4821.852	ug/L	2.741	837722	1.519
K	39	5068.898	ug/L	5.387	28988687	52.078
Ca	43	5014.431	ug/L	2.785	58856	0.107
> Sc	45		ug/L		549458	549457.712
Ti	47	48.361	ug/L	4.641	27262	0.049
V	51	46.988	ug/L	5.269	224399	0.427
Cr	52	50.366	ug/L	3.923	263847	0.458
Cr	53		ug/L		169590	0.179
Mn	55	50.093	ug/L	3.491	427639	0.778
Fe	57	4806.896	ug/L	3.756	868831	1.562
Co	59	47.339	ug/L	4.458	315904	0.575
Ni	60	48.294	ug/L	2.970	68272	0.124
Cu	63		ug/L		143460	0.261
Cu	65	46.403	ug/L	4.008	68879	0.125
Zn	66	50.113	ug/L	0.621	37499	0.121
Zn	67		ug/L		13527	0.033
Zn	68		ug/L		27762	0.088
> Ge	74		ug/L		305597	305596.851
As	75	45.410	ug/L	1.832	38670	0.129
Se	77		ug/L		16576	0.037
Se	82	46.517	ug/L	2.186	4601	0.015
Kr	83		ug/L		43	-0.000
Sr	88	51.660	ug/L	0.566	638927	3.328
Y	89		ug/L		131	0.001
Zr	90	51.413	ug/L	1.311	333453	1.736
Mo	98	50.690	ug/L	1.155	141379	0.736
Ag	107	50.569	ug/L	0.738	249798	1.301
Cd	111	49.171	ug/L	1.401	52617	0.274
Cd	114		ug/L		124831	0.650
> In	115		ug/L		191936	191935.714
Sn	120	50.624	ug/L	0.444	231684	1.206
Sb	121	51.574	ug/L	1.030	157629	0.819
Sb	123		ug/L		120846	0.628
Ba	135		ug/L		52859	0.301
Ba	137	46.869	ug/L	0.857	91050	0.519
Ho	165		ug/L		16	0.000
> Lu	175		ug/L		175547	175547.449
Tl	205	46.978	ug/L	1.547	147601	0.838
Pb	208	48.286	ug/L	1.007	530731	3.020
Th	232	48.727	ug/L	0.774	644780	3.670
U	238	50.657	ug/L	0.037	710025	4.043

Sample ID: QC Std 6

Report Date/Time: Wednesday, February 10, 2010 21:09:46

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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	113.083				
Be	9	111.770				
B	11	105.797				
Na	23	97.470				
Mg	24	98.579				
Al	27	99.303				
P	31	96.437				
K	39	101.378				
Ca	43	100.289				
> Sc	45		107.0			
Ti	47	96.722				
V	51	93.976				
Cr	52	100.732				
Cr	53					
Mn	55	100.187				
Fe	57	96.138				
Co	59	94.678				
Ni	60	96.589				
Cu	63					
Cu	65	92.806				
Zn	66	100.227				
Zn	67					
Zn	68					
> Ge	74		90.8			
As	75	90.820				
Se	77					
Se	82	93.035				
Kr	83					
Sr	88	103.321				
Y	89					
Zr	90	102.827				
Mo	98	101.381				
Ag	107	101.137				
Cd	111	98.342				
Cd	114					
> In	115		82.9			
Sn	120	101.248				
Sb	121	103.149				
Sb	123					
Ba	135					
Ba	137	93.739				
Ho	165					
> Lu	175		90.6			
Tl	205	93.957				
Pb	208	96.572				
Th	232	97.455				
U	238	101.313				

### 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	Be	9	9CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 6  
 Report Date/Time: Wednesday, February 10, 2010 21:09:46  
 Page 3

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, February 10, 2010 21:13:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100210\QC Std 7.130

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.018	ug/L	15.672	25	0.000
Be	9	0.002	ug/L	661.272	3	0.000
B	11	1.408	ug/L	36.642	789	0.001
Na	23	-2.649	ug/L	19.462	28696	-0.017
Mg	24	0.545	ug/L	127.173	2334	0.002
Al	27	0.235	ug/L	376.540	7669	0.001
P	31	-0.933	ug/L	35.523	3964	-0.000
K	39	-6.474	ug/L	53.796	402602	-0.067
Ca	43	-4.280	ug/L	24.692	182	-0.000
> Sc	45		ug/L		582251	582251.474
Ti	47	-0.037	ug/L	29.087	257	-0.000
V	51	0.062	ug/L	134.390	-9924	0.001
Cr	52	-0.195	ug/L	18.280	12010	-0.002
Cr	53		ug/L		69313	-0.011
Mn	55	0.016	ug/L	74.723	1035	0.000
Fe	57	3.287	ug/L	34.585	12936	0.001
Co	59	0.004	ug/L	106.462	136	0.000
Ni	60	-0.012	ug/L	58.641	108	-0.000
Cu	63		ug/L		230	0.000
Cu	65	-0.010	ug/L	79.979	130	-0.000
Zn	66	-0.007	ug/L	321.032	451	-0.000
Zn	67		ug/L		3464	-0.001
Zn	68		ug/L		648	-0.000
> Ge	74		ug/L		331274	331273.567
As	75	-0.134	ug/L	214.644	-808	-0.000
Se	77		ug/L		5838	0.001
Se	82	0.204	ug/L	83.185	45	0.000
Kr	83		ug/L		37	-0.000
Sr	88	0.004	ug/L	160.933	284	0.000
Y	89		ug/L		37	0.000
Zr	90	0.083	ug/L	14.500	969	0.003
Mo	98	-0.016	ug/L	20.667	143	-0.000
Ag	107	0.007	ug/L	93.938	132	0.000
Cd	111	0.006	ug/L	181.102	27	0.000
Cd	114		ug/L		59	-0.000
> In	115		ug/L		208720	208720.011
Sn	120	0.031	ug/L	22.725	429	0.001
Sb	121	0.239	ug/L	18.890	1294	0.004
Sb	123		ug/L		987	0.003
Ba	135		ug/L		38	0.000
Ba	137	0.015	ug/L	77.597	61	0.000
Ho	165		ug/L		3	-0.000
> Lu	175		ug/L		183434	183433.959
Tl	205	0.202	ug/L	29.070	1086	0.004
Pb	208	0.000	ug/L	1110.646	647	0.000
Th	232	0.066	ug/L	26.143	1480	0.005
U	238	0.002	ug/L	239.358	276	0.000

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 21:15:57

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9997
Cr	52Linear Thru Zero	0.9999
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		113.4			
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		98.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		90.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		94.7			
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

Sample ID: QC Std 7

Report Date/Time: Wednesday, February 10, 2010 21:15:57

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## ICPMS #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Tuesday, February 16, 2010 09:56:53

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.508

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	5824.6	5824.587	64.472	1.1
Mg	24.0	52397.9	52397.926	530.155	1.0
Co	58.9	134585.5	134585.498	1964.389	1.5
Rh	102.9	275204.4	275204.428	1970.292	0.7
In	114.9	356296.0	356295.987	2535.045	0.7
Pb	208.0	294149.8	294149.815	2195.918	0.7
[> Ba	137.9	332978.1	332978.115	1837.484	0.6
[ Ba++	69.0	6438.4	0.019	0.000	1.3
[> Ce	139.9	400965.9	400965.863	1522.954	0.4
[ CeO	155.9	10970.0	0.027	0.000	1.5
Bkgd	220.0	20.3	20.300	1.987	9.8

### Current Optimization File Data

Current Value	Description
0.88	Nebulizer Gas Flow
5.75	Lens Voltage
1450.00	ICP RF Power
-1750.00	Analog Stage Voltage
1250.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	9	5.5	5921.9
Co	59	9	5.8	140865.1
In	115	9	6.0	365896.9

## ICPMS #5 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	594	2072	0.632
Be	9.0	9.0	2046	2088	0.623
Mg	24.0	24.0	5689	2100	0.582
Mg	25.0	25.0	5941	2100	0.611
Mg	26.0	26.0	6150	2100	0.606
Co	58.9	58.9	14170	2125	0.608
Rh	102.9	102.9	24881	2180	0.593
In	114.9	114.9	27783	2200	0.584
Ce	139.9	139.9	33867	2220	0.601
Pb	206.0	206.0	49948	2305	0.598
Pb	207.0	207.0	50159	2240	0.638
Pb	208.0	208.0	50451	2265	0.715
U	238.1	238.0	57719	2275	0.751

## ICPMS#5 - Summary Report

Sample ID: Blank  
Sample Date/Time: Tuesday, February 16, 2010 11:05:28  
Sample Type:  
Sample Description:  
Number of Replicates: 3  
Batch ID:  
Method File: c:\elandata\Method\be and ni.mth  
Dataset File: C:\elandata\Dataset\100216\Blank.032

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9		ug/L		14	
>	Sc	45		ug/L		1676296	
[	Ni	60		ug/L		194	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Simple Linear	
Sc	45Simple Linear	
Ni	60Simple Linear	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45					
[	Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, February 16, 2010 11:07:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\Standard 1.033

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	10.000 ug/L	2.012	5581	0.003
>	Sc	45	ug/L		1611084	1611084.364
[	Ni	60	10.000 ug/L	1.430	26405	0.016

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[	Be	9					
>	Sc	45					
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, February 16, 2010 11:09:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\Standard 2.034

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	99.920	ug/L	0.147	53102	0.032
>	Sc	45		ug/L		1660521	1660521.194
[	Ni	60	99.958	ug/L	3.773	259309	0.156

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45					
[	Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, February 16, 2010 11:12:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 1.035

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	51.032	ug/L	0.725	27134	0.016
>	Sc	45		ug/L		1660970	1660970.223
[	Ni	60	52.547	ug/L	0.888	136498	0.082

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	102.064				
>	Sc	45		99.1			
[	Ni	60	105.094				

### 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: Tuesday, February 16, 2010 11:12:14

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, February 16, 2010 11:14:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 2.036

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.008	ug/L	116.877	19	0.000
>	Sc	45		ug/L		1699343	1699343.481
[	Ni	60	0.012	ug/L	26.476	229	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		101.4			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Tuesday, February 16, 2010 11:14:29

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, February 16, 2010 11:16:27

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 3.037

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.583	ug/L	6.625	329	0.000
>	Sc	45		ug/L		1685093	1685093.051
[	Ni	60	2.246	ug/L	3.059	6104	0.004

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9	116.676				
>	Sc	45		100.5			
[	Ni	60	112.302				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, February 16, 2010 11:18:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 4.038

### Concentration Results

	Analyte	Mass	Conc.	Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.103		ug/L	20.595	60	0.000
>	Sc	45			ug/L		1462312	1462312.372
L	Ni	60	3.533		ug/L	6.213	8228	0.006

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		87.2			
L	Ni	60	106.751				

### QC Out Of Limits

Measurement Type   Analyte   Mass   Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, February 16, 2010 11:20:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 5.039

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	18.755	ug/L	0.804	8382	0.006
>	Sc	45		ug/L		1394827	1394827.076
L	Ni	60	23.924	ug/L	1.193	52281	0.037

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9	93.775				
>	Sc	45		83.2			
L	Ni	60	102.636				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 5

Report Date/Time: Tuesday, February 16, 2010 11:21:05

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## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 11:23:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 6.040

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	50.760	ug/L	1.821	25990	0.018
>	Sc	45		ug/L		1599678	1599677.784
[	Ni	60	52.016	ug/L	2.116	130116	0.081

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[	Be	9	101.520					
>	Sc	45		95.4				
[	Ni	60	104.031					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Tuesday, February 16, 2010 11:23:18

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 11:25:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and nl.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 7.041

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.004	ug/L	119.608	16	0.000
>	Sc	45		ug/L		1671703	1671703.260
L	Ni	60	0.012	ug/L	49.311	224	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		99.7			
L	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Tuesday, February 16, 2010 11:25:33

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Tuesday, February 16, 2010 11:27:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 10.042

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	939.643	ug/L	1.268	439527	0.301
>	Sc	45		ug/L		1462050	1462050.438
[	Ni	60	819.984	ug/L	1.374	1872345	1.281

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	93.964				
>	Sc	45		87.2			
[	Ni	60	81.998				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Ni	60	60LRS is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 10

Report Date/Time: Tuesday, February 16, 2010 11:27:43

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Tuesday, February 16, 2010 11:29:41

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 11.043

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	49.017	ug/L	1.518	26987	0.016
>	Sc	45		ug/L		1720102	1720101.711
[	Ni	60	49.820	ug/L	3.673	133983	0.078

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9	98.033				
>	Sc	45		102.6			
[	Ni	60	99.640				

### 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 11

Report Date/Time: Tuesday, February 16, 2010 11:29:54

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Tuesday, February 16, 2010 11:31:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 12.044

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.015	ug/L	16.460	23	0.000
Sc	45		ug/L		1714299	1714298.636
Ni	60	0.018	ug/L	65.224	246	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		102.3			
Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202043958

Sample Date/Time: Tuesday, February 16, 2010 11:34:07

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\1202043958.045

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.002	ug/L	247.599	17	0.000
>	Sc	45		ug/L		1831982	1831981.617
[	Ni	60	0.077	ug/L	16.557	433	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		109.3			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202043959

Sample Date/Time: Tuesday, February 16, 2010 11:36:19

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 953457|40|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\1202043959.046

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	19.641 ug/L	2.596	11244	0.006
>	Sc	45	ug/L		1787525	1787524.641
[	Ni	60	35.910 ug/L	4.220	100393	0.056

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	106.6			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202043959

Report Date/Time: Tuesday, February 16, 2010 11:36:33

Page 1

## ICPMS#5 - Summary Report

Sample ID: 245147001

Sample Date/Time: Tuesday, February 16, 2010 11:38:32

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147001.047

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.472	ug/L	7.030	2657	0.001
>	Sc	45		ug/L		1849010	1849010.412
L	Ni	60	43.589	ug/L	4.807	125955	0.068

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		110.3			
L	Ni	60					

### 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: 245147001

Report Date/Time: Tuesday, February 16, 2010 11:38:46

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202043960

Sample Date/Time: Tuesday, February 16, 2010 11:40:45

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 953457[2]ba]

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\1202043960.048

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.309	ug/L	3.043	2541	0.001
>	Sc	45		ug/L		1831271	1831270.654
[	Ni	60	36.928	ug/L	0.762	105830	0.058

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		109.2			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202043961

Sample Date/Time: Tuesday, February 16, 2010 11:42:58

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 953457|2|baj

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\1202043961.049

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	24.987 ug/L	1.537	14790	0.008
>	Sc	45	ug/L		1847972	1847972.033
[	Ni	60	62.177 ug/L	1.778	179661	0.097

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	110.2			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202043963

Sample Date/Time: Tuesday, February 16, 2010 11:45:13

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 953457|2|baj

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\1202043963.050

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	26.148	ug/L	1.192	15106	0.008
>	Sc	45		ug/L		1803818	1803817.529
[	Ni	60	63.939	ug/L	0.668	180341	0.100

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % DI	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		107.6			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202043962

Sample Date/Time: Tuesday, February 16, 2010 11:47:28

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 953457|10|ba|

Method File: c:\elandata\Method\be and nl.mth

Dataset File: C:\elandata\Dataset\100216\1202043962.051

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.979	ug/L	3.589	573	0.000
>	Sc	45		ug/L		1779573	1779573.088
[	Ni	60	9.100	ug/L	2.269	25492	0.014

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % DI	Duplicate Rel.	% Difference
[	Be	9						
>	Sc	45		106.2				
[	Ni	60						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245147002

Sample Date/Time: Tuesday, February 16, 2010 11:49:41

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457[2]ba]

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147002.052

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.924	ug/L	1.310	2364	0.001
>	Sc	45		ug/L		1869915	1869915.200
[	Ni	60	30.697	ug/L	1.276	89863	0.048

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		111.6			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245147002

Report Date/Time: Tuesday, February 16, 2010 11:49:55

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, February 16, 2010 11:51:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 8.053

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	46.522	ug/L	2.577	27024	0.015
>	Sc	45		ug/L		1815106	1815105.615
[	Ni	60	48.598	ug/L	1.700	137952	0.076

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9	93.044					
>	Sc	45		108.3				
[	Ni	60	97.197					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 8

Report Date/Time: Tuesday, February 16, 2010 11:52:08

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## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, February 16, 2010 11:54:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 9.054

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.007	ug/L	141.084	20	0.000
>	Sc	45		ug/L		1803160	1803159.577
[	Ni	60	0.007	ug/L	38.776	228	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		107.6			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 9

Report Date/Time: Tuesday, February 16, 2010 11:54:23

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## ICPMS#5 - Summary Report

Sample ID: 245147003

Sample Date/Time: Tuesday, February 16, 2010 11:56:22

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147003.055

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.275 ug/L	2.636	1994	0.001
>	Sc	45	ug/L		1888001	1888001.085
[	Ni	60	30.063 ug/L	1.260	88858	0.047

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	112.6			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245147004

Sample Date/Time: Tuesday, February 16, 2010 11:58:35

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457[2]ba]

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147004.056

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.592 ug/L	0.474	2249	0.001
>	Sc	45	ug/L		1941984	1941984.332
[	Ni	60	34.176 ug/L	0.878	103887	0.053

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	115.8			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245147004

Report Date/Time: Tuesday, February 16, 2010 11:58:49

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## ICPMS#5 - Summary Report

Sample ID: 245147005

Sample Date/Time: Tuesday, February 16, 2010 12:00:49

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147005.057

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.334 ug/L	2.367	2014	0.001
>	Sc	45	ug/L		1872946	1872946.145
L	Ni	60	29.446 ug/L	1.627	86340	0.046

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	111.7			
L	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245147005

Report Date/Time: Tuesday, February 16, 2010 12:01:03

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## ICPMS#5 - Summary Report

Sample ID: 245147006

Sample Date/Time: Tuesday, February 16, 2010 12:03:03

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457[2]baj

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147006.058

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.386 ug/L	1.933	2671	0.001
>	Sc	45	ug/L		1892806	1892806.317
[	Ni	60	31.370 ug/L	1.532	92934	0.049

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	112.9			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245147006

Report Date/Time: Tuesday, February 16, 2010 12:03:18

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## ICPMS#5 - Summary Report

Sample ID: 245147007

Sample Date/Time: Tuesday, February 16, 2010 12:05:18

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and nl.mth

Dataset File: C:\elandata\Dataset\100216\245147007.059

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.337 ug/L	4.061	2637	0.001
>	Sc	45	ug/L		1888999	1888998.927
[	Ni	60	32.431 ug/L	0.656	95896	0.051

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	112.7			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 245147007

Report Date/Time: Tuesday, February 16, 2010 12:05:33

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## ICPMS#5 - Summary Report

Sample ID: 245147008

Sample Date/Time: Tuesday, February 16, 2010 12:07:33

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457[2]ba]

Method File: c:\elandata\Method\be and nl.mth

Dataset File: C:\elandata\Dataset\100216\245147008.060

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.085	ug/L	1.531	1866	0.001
>	Sc	45		ug/L		1874225	1874224.630
L	Ni	60	32.805	ug/L	1.826	96235	0.051

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		111.8			
L	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245147009

Sample Date/Time: Tuesday, February 16, 2010 12:09:48

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147009.061

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.603	ug/L	2.775	2144	0.001
>	Sc	45		ug/L		1845462	1845461.837
[	Ni	60	31.757	ug/L	1.134	91750	0.050

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		110.1			
[	Ni	60					

### 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: 245147009

Report Date/Time: Tuesday, February 16, 2010 12:10:01

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## ICPMS#5 - Summary Report

Sample ID: 245147010

Sample Date/Time: Tuesday, February 16, 2010 12:12:01

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147010.062

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.341	ug/L	2.545	2038	0.001
>	Sc	45		ug/L		1892473	1892472.664
]	Ni	60	36.173	ug/L	0.211	107136	0.056

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		112.9			
]	Ni	60					

### 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: 245147010

Report Date/Time: Tuesday, February 16, 2010 12:12:15

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, February 16, 2010 12:14:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 8.063

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	47.896	ug/L	0.983	27327	0.015
>	Sc	45		ug/L		1782295	1782295.326
]	Ni	60	48.978	ug/L	2.610	136509	0.076

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9	95.791				
>	Sc	45		106.3			
]	Ni	60	97.955				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 8

Report Date/Time: Tuesday, February 16, 2010 12:14:28

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## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, February 16, 2010 12:16:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 9.064

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.009	ug/L	70.979	21	0.000
>	Sc	45		ug/L		1801251	1801251.204
L	Ni	60	0.002	ug/L	226.949	214	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		107.5			
L	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 9

Report Date/Time: Tuesday, February 16, 2010 12:16:43

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## ICPMS#5 - Summary Report

Sample ID: 245147011

Sample Date/Time: Tuesday, February 16, 2010 12:18:42

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457[2]ba]

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147011.065

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.060	ug/L	4.218	1866	0.001
>	Sc	45		ug/L		1890156	1890155.800
[	Ni	60	32.523	ug/L	0.677	96224	0.051

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		112.8			
[	Ni	60					

### 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: 245147011

Report Date/Time: Tuesday, February 16, 2010 12:18:57

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## ICPMS#5 - Summary Report

Sample ID: 245147012

Sample Date/Time: Tuesday, February 16, 2010 12:20:57

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|be|

Method File: c:\elandata\Method\be and nl.mth

Dataset File: C:\elandata\Dataset\100216\245147012.066

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	3.978	ug/L	4.802	2398	0.001
>	Sc	45		ug/L		1871630	1871630.241
	Ni	60	30.371	ug/L	2.511	88969	0.047

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		111.7			
	Ni	60					

### 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: 245147012

Report Date/Time: Tuesday, February 16, 2010 12:21:11

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## ICPMS#5 - Summary Report

Sample ID: 245147013

Sample Date/Time: Tuesday, February 16, 2010 12:23:11

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|ba|

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147013.067

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.568	ug/L	1.443	1599	0.001
>	Sc	45		ug/L		1925922	1925922.196
[	Ni	60	24.906	ug/L	3.155	75114	0.039

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		114.9			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245147014

Sample Date/Time: Tuesday, February 16, 2010 12:25:27

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|baj

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147014.068

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.878	ug/L	0.711	2362	0.001
>	Sc	45		ug/L		1890792	1890791.924
[	Ni	60	36.811	ug/L	1.335	108917	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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		112.8			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245147015

Sample Date/Time: Tuesday, February 16, 2010 12:27:43

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|baj

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147015.069

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.114	ug/L	1.853	2549	0.001
>	Sc	45		ug/L		1923668	1923667.697
[	Ni	60	34.664	ug/L	2.175	104340	0.054

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		114.8			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245147016

Sample Date/Time: Tuesday, February 16, 2010 12:29:58

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 9534572|baj

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147016.070

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.656	ug/L	2.318	2246	0.001
>	Sc	45		ug/L		1905429	1905429.018
[	Ni	60	30.242	ug/L	0.816	90222	0.047

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		113.7			
[	Ni	60					

### 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: 245147016

Report Date/Time: Tuesday, February 16, 2010 12:30:12

Page 1

## ICPMS#5 - Summary Report

Sample ID: 245147017

Sample Date/Time: Tuesday, February 16, 2010 12:32:11

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457[2]ba]

Method File: c:\elandata\Method\be and nl.mth

Dataset File: C:\elandata\Dataset\100216\245147017.071

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.969	ug/L	7.674	1758	0.001
>	Sc	45		ug/L		1837245	1837245.233
[	Ni	60	26.364	ug/L	3.238	75808	0.041

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9					
>	Sc	45		109.6			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 245147018

Sample Date/Time: Tuesday, February 16, 2010 12:34:26

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 953457|2|baj

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\245147018.072

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.216 ug/L	2.675	1939	0.001
>	Sc	45	ug/L		1868927	1868926.713
[	Ni	60	37.492 ug/L	1.573	109646	0.059

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	111.5			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 16, 2010 12:36:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 6.073

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	48.447	ug/L	0.794	27138	0.016
>	Sc	45		ug/L		1749713	1749712.669
[	Ni	60	50.448	ug/L	0.613	138064	0.079

### 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

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	96.893				
>	Sc	45		104.4			
[	Ni	60	100.896				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Tuesday, February 16, 2010 12:36:54

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 16, 2010 12:38:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be and ni.mth

Dataset File: C:\elandata\Dataset\100216\QC Std 7.074

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.003	ug/L	209.702	17	0.000
Sc	45		ug/L		1789969	1789969.354
Ni	60	0.006	ug/L	105.876	224	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
Be	9						
Sc	45		106.8				
Ni	60						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Tuesday, February 16, 2010 12:39:09

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=====  
Analysis BegunLogged In Analyst: Administrator  
Spectrometer Model: FIMS-100, S/N B050-9550Technique: AA FIMS-MHS  
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\020310S1.SIF

Batch ID:

Results Data Set: 020310S2

Results Library: C:\data-AA\Administrator\Results\Results.mdb

=====  
Sequence No.: 1

Sample ID: Calib Blank

Analyst:

Autosampler Location: 1

Date Collected: 2/3/2010 09:19:49

Data Type: Original

-----  
Replicate Data: Calib Blank

Repl	SampleConc	StdndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.00]	0.0001	-0.0009	0.0001	09:20:39	Yes
2		[0.00]	0.0003	0.0002	0.0003	09:21:09	Yes
Mean:		[0.00]	0.0002				
SD:		0.00	0.0001				
%RSD:		0.00	67.05				

Auto-zero performed.

=====  
Sequence No.: 2

Sample ID: S0.2

Analyst:

Autosampler Location: 2

Date Collected: 2/3/2010 09:21:28

Data Type: Original

-----  
Replicate Data: S0.2

Repl	SampleConc	StdndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.2]	0.0024	0.0085	0.0026	09:22:19	Yes
2		[0.2]	0.0024	0.0096	0.0026	09:22:48	Yes
Mean:		[0.2]	0.0024				
SD:		0.0	0.0000				
%RSD:		0.0	0.55				

Standard number 1 applied. [0.2]

Correlation Coef.: 1.000000 Slope: 0.01200 Intercept: 0.00000

=====  
Sequence No.: 3

Sample ID: S0.5

Analyst:

Autosampler Location: 3

Date Collected: 2/3/2010 09:23:07

Data Type: Original

-----  
Replicate Data: S0.5

Repl	SampleConc	StdndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.5]	0.0058	0.0230	0.0060	09:23:58	Yes
2		[0.5]	0.0057	0.0227	0.0059	09:24:28	Yes
Mean:		[0.5]	0.0058				
SD:		0.0	0.0001				
%RSD:		0.0	1.29				

Standard number 2 applied. [0.5]

Correlation Coef.: 0.999812 Slope: 0.01148 Intercept: 0.00004

=====  
Sequence No.: 4

Sample ID: S2.0

Analyst:

Autosampler Location: 4

Date Collected: 2/3/2010 09:24:47

Data Type: Original

-----  
Replicate Data: S2.0

Repl	SampleConc	StdndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored

1	[2.0]	0.0226	0.0920	0.0228	09:25:39	Yes
2	[2.0]	0.0225	0.0925	0.0227	09:26:08	Yes
Mean:	[2.0]	0.0226				
SD:	0.0	0.0001				
%RSD:	0.0	0.31				

Standard number 3 applied. [2.0]  
Correlation Coef.: 0.999978 Slope: 0.01125 Intercept: 0.00009

Sequence No.: 5 Autosampler Location: 5  
Sample ID: S5.0 Date Collected: 2/3/2010 09:26:28  
Analyst: Data Type: Original

## Replicate Data: S5.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	[5.0]	0.0560	0.2306	0.0561	09:27:20	Yes	
2	[5.0]	0.0555	0.2282	0.0556	09:27:50	Yes	
Mean:	[5.0]	0.0557					
SD:	0.0	0.0004					
%RSD:	0.0	0.64					

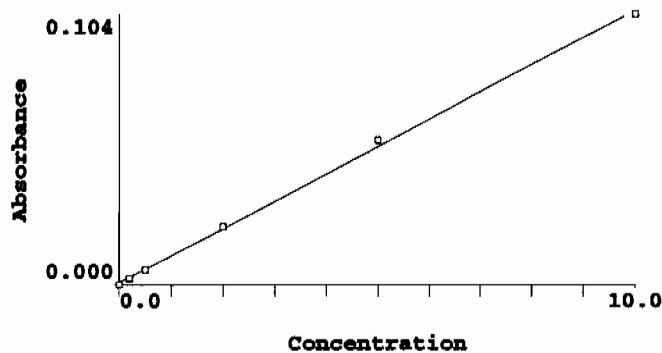
Standard number 4 applied. [5.0]  
Correlation Coef.: 0.999987 Slope: 0.01113 Intercept: 0.00015

Sequence No.: 6 Autosampler Location: 6  
Sample ID: S10.0 Date Collected: 2/3/2010 09:28:11  
Analyst: Data Type: Original

## Replicate Data: S10.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	[10.0]	0.1049	0.4339	0.1051	09:29:00	Yes	
2	[10.0]	0.1040	0.4300	0.1041	09:29:30	Yes	
Mean:	[10.0]	0.1044					
SD:	0.0	0.0007					
%RSD:	0.0	0.64					

Standard number 5 applied. [10.0]  
Correlation Coef.: 0.999455 Slope: 0.01049 Intercept: 0.00087



## Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.083	0.00	67.1
S0.2	0.0024	0.2	0.145	0.00	0.5
S0.5	0.0058	0.5	0.465	0.00	1.3
S2.0	0.0226	2.0	2.069	0.00	0.3
S5.0	0.0557	5.0	5.229	0.00	0.6
S10.0	0.1044	10.0	9.875	0.00	0.6

Correlation Coef.: 0.999455 Slope: 0.01049 Intercept: 0.00087

Sequence No.: 7  
Sample ID: ICV  
Analyst:

Autosampler Location: 9  
Date Collected: 2/3/2010 09:29:49  
Data Type: Original

-----  
Replicate Data: ICV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.359	5.359	0.0571	0.2351	0.0573	09:30:40	Yes
2	5.335	5.335	0.0568	0.2337	0.0570	09:31:10	Yes
Mean:	5.347	5.347	0.0570				
SD:	0.017	0.017	0.0002				
%RSD:	0.322	0.322	0.32				

QC value within limits for Hg 253.7 Recovery = 106.94%  
All analyte(s) passed QC.

Sequence No.: 8  
Sample ID: ICB  
Analyst:

Autosampler Location: 10  
Date Collected: 2/3/2010 09:31:29  
Data Type: Original

-----  
Replicate Data: ICB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.080	-0.080	0.0000	-0.0002	0.0002	09:32:20	Yes
2	-0.080	-0.080	0.0000	0.0000	0.0002	09:32:50	Yes
Mean:	-0.080	-0.080	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.030	0.030	0.84				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 9  
Sample ID: CRDL  
Analyst:

Autosampler Location: 11  
Date Collected: 2/3/2010 09:33:10  
Data Type: Original

-----  
Replicate Data: CRDL

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.178	0.178	0.0027	0.0111	0.0029	09:34:01	Yes
2	0.179	0.179	0.0028	0.0115	0.0029	09:34:31	Yes
Mean:	0.179	0.179	0.0027				
SD:	0.001	0.001	0.0000				
%RSD:	0.677	0.677	0.46				

QC value within limits for Hg 253.7 Recovery = 89.27%  
All analyte(s) passed QC.

Sequence No.: 10  
Sample ID: CCV  
Analyst:

Autosampler Location: 7  
Date Collected: 2/3/2010 09:34:51  
Data Type: Original

-----  
Replicate Data: CCV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.247	5.247	0.0559	0.2299	0.0561	09:35:41	Yes
2	5.215	5.215	0.0556	0.2284	0.0558	09:36:11	Yes
Mean:	5.231	5.231	0.0557				
SD:	0.022	0.022	0.0002				
%RSD:	0.421	0.421	0.41				

QC value within limits for Hg 253.7 Recovery = 104.62%  
All analyte(s) passed QC.

Sequence No.: 11  
Sample ID: CCB  
Analyst:

Autosampler Location: 8  
Date Collected: 2/3/2010 09:36:30  
Data Type: Original

-----  
Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.090	-0.090	-0.0001	-0.0003	0.0001	09:37:21	Yes
2	-0.094	-0.094	-0.0001	-0.0005	0.0001	09:37:51	Yes
Mean:	-0.092	-0.092	-0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	2.528	2.528	26.79				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

## =====

Sequence No.: 12  
Sample ID: 1202019790|943326|1  
Analyst: JXL

Autosampler Location: 12  
Date Collected: 2/3/2010 09:38:10  
Data Type: Original

-----  
Replicate Data: 1202019790|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.089	-0.089	-0.0001	-0.0001	0.0001	09:39:02	Yes
2	-0.090	-0.090	-0.0001	-0.0003	0.0001	09:39:32	Yes
Mean:	-0.090	-0.090	-0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	0.778	0.778	10.92				

## =====

Sequence No.: 13  
Sample ID: 1202019791|943326|10  
Analyst: JXL

Autosampler Location: 13  
Date Collected: 2/3/2010 09:39:52  
Data Type: Original

-----  
Replicate Data: 1202019791|943326|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.572	3.572	0.0383	0.1583	0.0385	09:40:44	Yes
2	3.582	3.582	0.0384	0.1572	0.0386	09:41:14	Yes
Mean:	3.577	3.577	0.0384				
SD:	0.007	0.007	0.0001				
%RSD:	0.185	0.185	0.18				

## =====

Sequence No.: 14  
Sample ID: 244899001|943326|1  
Analyst: JXL

Autosampler Location: 14  
Date Collected: 2/3/2010 09:41:34  
Data Type: Original

-----  
Replicate Data: 244899001|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.086	0.086	0.0018	0.0073	0.0019	09:42:25	Yes
2	0.090	0.090	0.0018	0.0077	0.0020	09:42:55	Yes
Mean:	0.088	0.088	0.0018				
SD:	0.003	0.003	0.0000				
%RSD:	3.122	3.122	1.60				

## =====

Sequence No.: 15  
Sample ID: 1202019792|943326|1  
Analyst: JXL

Autosampler Location: 15  
Date Collected: 2/3/2010 09:43:14  
Data Type: Original

-----  
Replicate Data: 1202019792|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.104	0.104	0.0020	0.0084	0.0021	09:44:04	Yes
2	0.106	0.106	0.0020	0.0085	0.0022	09:44:34	Yes
Mean:	0.105	0.105	0.0020				
SD:	0.002	0.002	0.0000				

1	0.016	0.016	0.0010	0.0059	0.0012	09:52:21	Yes
2	0.024	0.024	0.0011	0.0071	0.0013	09:52:51	Yes
Mean:	0.020	0.020	0.0011				
SD:	0.006	0.006	0.0001				
%RSD:	29.04	29.04	5.58				

Sequence No.: 21

Sample ID: 244899004|943326|1

Analyst: JXL

Autosampler Location: 21

Date Collected: 2/3/2010 09:53:10

Data Type: Original

Replicate Data: 244899004|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.823	0.823	0.0095	0.0395	0.0097	09:54:02	Yes
2	0.819	0.819	0.0095	0.0391	0.0096	09:54:32	Yes
Mean:	0.821	0.821	0.0095				
SD:	0.003	0.003	0.0000				
%RSD:	0.329	0.329	0.30				

Sequence No.: 22

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/3/2010 09:54:51

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.279	5.279	0.0562	0.2307	0.0564	09:55:42	Yes
2	5.288	5.288	0.0563	0.2308	0.0565	09:56:12	Yes
Mean:	5.284	5.284	0.0563				
SD:	0.006	0.006	0.0001				
%RSD:	0.118	0.118	0.12				

QC value within limits for Hg 253.7 Recovery = 105.67%  
All analyte(s) passed QC.

Sequence No.: 23

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/3/2010 09:56:31

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.092	-0.092	-0.0001	-0.0002	0.0001	09:57:22	Yes
2	-0.089	-0.089	-0.0001	0.0001	0.0001	09:57:52	Yes
Mean:	-0.091	-0.091	-0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	2.486	2.486	30.70				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 24

Sample ID: 244899005|943326|1

Analyst: JXL

Autosampler Location: 22

Date Collected: 2/3/2010 09:58:11

Data Type: Original

Replicate Data: 244899005|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.234	0.234	0.0033	0.0141	0.0035	09:59:02	Yes
2	0.237	0.237	0.0034	0.0141	0.0035	09:59:32	Yes
Mean:	0.236	0.236	0.0033				
SD:	0.002	0.002	0.0000				
%RSD:	0.884	0.884	0.65				

SD: 0.002 0.002 0.0000  
%RSD: 0.346 0.346 0.31

Sequence No.: 30

Sample ID: 244899011|943326|1

Analyst: JXL

Autosampler Location: 28

Date Collected: 2/3/2010 10:08:18

Data Type: Original

Replicate Data: 244899011|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.964	0.964	0.0110	0.0461	0.0112	10:09:08	Yes
2	0.967	0.967	0.0110	0.0460	0.0112	10:09:38	Yes
Mean:	0.966	0.966	0.0110				
SD:	0.002	0.002	0.0000				
%RSD:	0.227	0.227	0.21				

Sequence No.: 31

Sample ID: 244899012|943326|1

Analyst: JXL

Autosampler Location: 29

Date Collected: 2/3/2010 10:09:58

Data Type: Original

Replicate Data: 244899012|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.772	0.772	0.0090	0.0371	0.0091	10:10:48	Yes
2	0.768	0.768	0.0089	0.0369	0.0091	10:11:18	Yes
Mean:	0.770	0.770	0.0090				
SD:	0.003	0.003	0.0000				
%RSD:	0.404	0.404	0.36				

Sequence No.: 32

Sample ID: 244899013|943326|1

Analyst: JXL

Autosampler Location: 30

Date Collected: 2/3/2010 10:11:37

Data Type: Original

Replicate Data: 244899013|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.621	0.621	0.0074	0.0310	0.0076	10:12:28	Yes
2	0.617	0.617	0.0073	0.0305	0.0075	10:12:58	Yes
Mean:	0.619	0.619	0.0074				
SD:	0.003	0.003	0.0000				
%RSD:	0.533	0.533	0.47				

Sequence No.: 33

Sample ID: 244899014|943326|1

Analyst: JXL

Autosampler Location: 31

Date Collected: 2/3/2010 10:13:17

Data Type: Original

Replicate Data: 244899014|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.948	0.948	0.0108	0.0453	0.0110	10:14:07	Yes
2	0.951	0.951	0.0108	0.0450	0.0110	10:14:37	Yes
Mean:	0.950	0.950	0.0108				
SD:	0.002	0.002	0.0000				
%RSD:	0.164	0.164	0.15				

Sequence No.: 34

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/3/2010 10:14:56

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
------	------------	---------	---------	------	------	------	------

#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.278	5.278	0.0562	0.2314	0.0564	10:15:46	Yes
2	5.264	5.264	0.0561	0.2302	0.0563	10:16:16	Yes
Mean:	5.271	5.271	0.0562				
SD:	0.010	0.010	0.0001				
%RSD:	0.186	0.186	0.18				

QC value within limits for Hg 253.7 Recovery = 105.42%  
All analyte(s) passed QC.

Sequence No.: 35

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/3/2010 10:16:35

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.084	-0.084	-0.0000	0.0010	0.0002	10:17:26	Yes
2	-0.086	-0.086	-0.0000	0.0010	0.0001	10:17:55	Yes
Mean:	-0.085	-0.085	-0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	2.210	2.210	119.72				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 36

Sample ID: 244899015|943326|1

Analyst: JXL

Autosampler Location: 32

Date Collected: 2/3/2010 10:18:15

Data Type: Original

Replicate Data: 244899015|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.982	0.982	0.0112	0.0470	0.0114	10:19:06	Yes
2	0.972	0.972	0.0111	0.0465	0.0112	10:19:36	Yes
Mean:	0.977	0.977	0.0111				
SD:	0.007	0.007	0.0001				
%RSD:	0.745	0.745	0.69				

Sequence No.: 37

Sample ID: 244899016|943326|1

Analyst: JXL

Autosampler Location: 33

Date Collected: 2/3/2010 10:19:55

Data Type: Original

Replicate Data: 244899016|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.262	0.262	0.0036	0.0161	0.0038	10:20:46	Yes
2	0.258	0.258	0.0036	0.0159	0.0038	10:21:16	Yes
Mean:	0.260	0.260	0.0036				
SD:	0.003	0.003	0.0000				
%RSD:	1.151	1.151	0.87				

Sequence No.: 38

Sample ID: 244899017|943326|1

Analyst: JXL

Autosampler Location: 34

Date Collected: 2/3/2010 10:21:36

Data Type: Original

Replicate Data: 244899017|943326|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.845	0.845	0.0097	0.0413	0.0099	10:22:27	Yes
2	0.849	0.849	0.0098	0.0409	0.0100	10:22:57	Yes
Mean:	0.847	0.847	0.0098				
SD:	0.003	0.003	0.0000				
%RSD:	0.386	0.386	0.35				

Mean: 4.124 4.124 0.0441  
SD: 0.010 0.010 0.0001  
%RSD: 0.250 0.250 0.25

Sequence No.: 44

Sample ID: 245113001|945588|1

Analyst: JXL

Autosampler Location: 40

Date Collected: 2/3/2010 10:31:43

Data Type: Original

Replicate Data: 245113001|945588|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.333	0.333	0.0044	0.0189	0.0045	10:32:34	Yes
2	0.328	0.328	0.0043	0.0191	0.0045	10:33:04	Yes
Mean:	0.330	0.330	0.0043				
SD:	0.003	0.003	0.0000				
%RSD:	0.981	0.981	0.78				

Sequence No.: 45

Sample ID: 245113002|945588|1

Analyst: JXL

Autosampler Location: 41

Date Collected: 2/3/2010 10:33:24

Data Type: Original

Replicate Data: 245113002|945588|1

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.103	0.103	0.0020	0.0089	0.0021	10:34:14	Yes
2	0.107	0.107	0.0020	0.0091	0.0022	10:34:44	Yes
Mean:	0.105	0.105	0.0020				
SD:	0.003	0.003	0.0000				
%RSD:	2.397	2.397	1.34				

Sequence No.: 46

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/3/2010 10:35:04

Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.169	5.169	0.0551	0.2268	0.0553	10:35:54	Yes
2	5.142	5.142	0.0548	0.2246	0.0550	10:36:24	Yes
Mean:	5.156	5.156	0.0549				
SD:	0.019	0.019	0.0002				
%RSD:	0.365	0.365	0.36				

QC value within limits for Hg 253.7 Recovery = 103.11%  
All analyte(s) passed QC.

Sequence No.: 47

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/3/2010 10:36:43

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StdndConc ug/L	BlndCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.088	-0.088	-0.0000	0.0006	0.0001	10:37:33	Yes
2	-0.077	-0.077	0.0001	0.0020	0.0002	10:38:03	Yes
Mean:	-0.082	-0.082	0.0000				
SD:	0.007	0.007	0.0001				
%RSD:	9.041	9.041	833.25				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 48

Sample ID: 245113003|945588|1

Autosampler Location: 42

Date Collected: 2/3/2010 10:38:22

2	1.111	1.111	0.0125	0.0513	0.0127	10:54:50	Yes
Mean:	1.108	1.108	0.0125				
SD:	0.004	0.004	0.0000				
%RSD:	0.355	0.355	0.33				

Sequence No.: 58

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/3/2010 10:55:09

Analyst:

Data Type: Original

## Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.176	5.176	0.0552	0.2242	0.0553	10:56:00	Yes
2	5.154	5.154	0.0549	0.2240	0.0551	10:56:30	Yes
Mean:	5.165	5.165	0.0550				
SD:	0.016	0.016	0.0002				
%RSD:	0.302	0.302	0.30				

QC value within limits for Hg 253.7 Recovery = 103.30%  
All analyte(s) passed QC.

Sequence No.: 59

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/3/2010 10:56:49

Analyst:

Data Type: Original

## Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.082	-0.082	0.0000	0.0007	0.0002	10:57:39	Yes
2	-0.078	-0.078	0.0001	0.0013	0.0002	10:58:09	Yes
Mean:	-0.080	-0.080	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	2.836	2.836	67.68				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 60

Autosampler Location: 52

Sample ID: 245113013|945588|1

Date Collected: 2/3/2010 10:58:29

Analyst: JXL

Data Type: Original

## Replicate Data: 245113013|945588|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.409	0.409	0.0052	0.0216	0.0053	10:59:20	Yes
2	0.408	0.408	0.0052	0.0214	0.0053	10:59:50	Yes
Mean:	0.408	0.408	0.0052				
SD:	0.001	0.001	0.0000				
%RSD:	0.181	0.181	0.15				

Sequence No.: 61

Autosampler Location: 53

Sample ID: 245113014|945588|1

Date Collected: 2/3/2010 11:00:09

Analyst: JXL

Data Type: Original

## Replicate Data: 245113014|945588|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.687	2.687	0.0291	0.1189	0.0292	11:01:00	Yes
2	2.676	2.676	0.0289	0.1184	0.0291	11:01:30	Yes
Mean:	2.682	2.682	0.0290				
SD:	0.008	0.008	0.0001				
%RSD:	0.304	0.304	0.29				

Sequence No.: 62

Autosampler Location: 54

%RSD: 0.744 0.744 0.72

Sequence No.: 67

Sample ID: 1202025229|945588|1

Analyst: JXL

Autosampler Location: 59

Date Collected: 2/3/2010 11:10:13

Data Type: Original

Replicate Data: 1202025229|945588|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.269	2.269	0.0247	0.1009	0.0248	11:11:05	Yes
2	2.270	2.270	0.0247	0.1007	0.0249	11:11:34	Yes
Mean:	2.270	2.270	0.0247				
SD:	0.001	0.001	0.0000				
%RSD:	0.058	0.058	0.06				

Sequence No.: 68

Sample ID: 1202025228|945588|5

Analyst: JXL

Autosampler Location: 60

Date Collected: 2/3/2010 11:11:54

Data Type: Original

Replicate Data: 1202025228|945588|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.049	-0.049	0.0004	0.0017	0.0005	11:12:46	Yes
2	-0.044	-0.044	0.0004	0.0017	0.0006	11:13:16	Yes
Mean:	-0.047	-0.047	0.0004				
SD:	0.003	0.003	0.0000				
%RSD:	7.346	7.346	9.29				

Sequence No.: 69

Sample ID: 245372003|945588|1

Analyst: JXL

Autosampler Location: 61

Date Collected: 2/3/2010 11:13:36

Data Type: Original

Replicate Data: 245372003|945588|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.005	0.005	0.0009	0.0039	0.0011	11:14:28	Yes
2	0.005	0.005	0.0009	0.0032	0.0011	11:14:58	Yes
Mean:	0.005	0.005	0.0009				
SD:	0.000	0.000	0.0000				
%RSD:	4.923	4.923	0.27				

Sequence No.: 70

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/3/2010 11:15:18

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.024	5.024	0.0536	0.2211	0.0537	11:16:09	Yes
2	5.023	5.023	0.0536	0.2205	0.0537	11:16:39	Yes
Mean:	5.024	5.024	0.0536				
SD:	0.001	0.001	0.0000				
%RSD:	0.019	0.019	0.02				

QC value within limits for Hg 253.7 Recovery = 100.47%

All analyte(s) passed QC.

Sequence No.: 71

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/3/2010 11:16:58

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.082	-0.082	0.0000	-0.0001	0.0002	11:17:49	Yes
2	-0.083	-0.083	0.0000	-0.0004	0.0002	11:18:19	Yes
Mean:	-0.082	-0.082	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.522	0.522	39.97				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 72

Autosampler Location: 62

Sample ID: 245372004|945588|1

Date Collected: 2/3/2010 11:18:38

Analyst: JXL

Data Type: Original

Replicate Data: 245372004|945588|1

Repl #	SampleConc ug/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.024	0.024	0.0011	0.0047	0.0013	11:19:29	Yes
2	0.034	0.034	0.0012	0.0053	0.0014	11:19:59	Yes
Mean:	0.029	0.029	0.0012				
SD:	0.007	0.007	0.0001				
%RSD:	23.94	23.94	6.23				

Sequence No.: 73

Autosampler Location: 63

Sample ID: 1202025236|945594|1

Date Collected: 2/3/2010 11:20:19

Analyst: JXL

Data Type: Original

Replicate Data: 1202025236|945594|1

Repl #	SampleConc ug/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.082	-0.082	0.0000	0.0003	0.0002	11:21:11	Yes
2	-0.081	-0.081	0.0000	0.0001	0.0002	11:21:40	Yes
Mean:	-0.081	-0.081	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	0.749	0.749	31.94				

Sequence No.: 74

Autosampler Location: 64

Sample ID: 1202025237|945594|10

Date Collected: 2/3/2010 11:22:00

Analyst: JXL

Data Type: Original

Replicate Data: 1202025237|945594|10

Repl #	SampleConc ug/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.164	4.164	0.0446	0.1841	0.0447	11:22:52	Yes
2	4.151	4.151	0.0444	0.1819	0.0446	11:23:22	Yes
Mean:	4.158	4.158	0.0445				
SD:	0.010	0.010	0.0001				
%RSD:	0.233	0.233	0.23				

Sequence No.: 75

Autosampler Location: 65

Sample ID: 245147001|945594|1

Date Collected: 2/3/2010 11:23:41

Analyst: JXL

Data Type: Original

Replicate Data: 245147001|945594|1

Repl #	SampleConc ug/L	StdConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.241	0.241	0.0034	0.0146	0.0036	11:24:33	Yes
2	0.230	0.230	0.0033	0.0141	0.0035	11:25:03	Yes
Mean:	0.235	0.235	0.0033				
SD:	0.008	0.008	0.0001				
%RSD:	3.295	3.295	2.43				

Sequence No.: 76  
Sample ID: 1202025238|945594|1  
Analyst: JXL

Autosampler Location: 66  
Date Collected: 2/3/2010 11:25:23  
Data Type: Original

-----  
Replicate Data: 1202025238|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.240	0.240	0.0034	0.0136	0.0036	11:26:14	Yes
2	0.237	0.237	0.0034	0.0138	0.0035	11:26:43	Yes
Mean:	0.238	0.238	0.0034				
SD:	0.002	0.002	0.0000				
%RSD:	0.815	0.815	0.60				

Sequence No.: 77  
Sample ID: 1202025239|945594|1  
Analyst: JXL

Autosampler Location: 67  
Date Collected: 2/3/2010 11:27:03  
Data Type: Original

-----  
Replicate Data: 1202025239|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.468	2.468	0.0268	0.1102	0.0269	11:27:55	Yes
2	2.470	2.470	0.0268	0.1106	0.0270	11:28:25	Yes
Mean:	2.469	2.469	0.0268				
SD:	0.001	0.001	0.0000				
%RSD:	0.058	0.058	0.06				

Sequence No.: 78  
Sample ID: 1202025241|945594|1  
Analyst: JXL

Autosampler Location: 68  
Date Collected: 2/3/2010 11:28:44  
Data Type: Original

-----  
Replicate Data: 1202025241|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.511	2.511	0.0272	0.1122	0.0274	11:29:36	Yes
2	2.491	2.491	0.0270	0.1124	0.0272	11:30:06	Yes
Mean:	2.501	2.501	0.0271				
SD:	0.014	0.014	0.0002				
%RSD:	0.573	0.573	0.55				

Sequence No.: 79  
Sample ID: 1202025240|945594|5  
Analyst: JXL

Autosampler Location: 69  
Date Collected: 2/3/2010 11:30:26  
Data Type: Original

-----  
Replicate Data: 1202025240|945594|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.019	-0.019	0.0007	0.0027	0.0008	11:31:17	Yes
2	-0.011	-0.011	0.0008	0.0035	0.0009	11:31:47	Yes
Mean:	-0.015	-0.015	0.0007				
SD:	0.006	0.006	0.0001				
%RSD:	40.36	40.36	8.74				

Sequence No.: 80  
Sample ID: 245147002|945594|1  
Analyst: JXL

Autosampler Location: 70  
Date Collected: 2/3/2010 11:32:07  
Data Type: Original

-----  
Replicate Data: 245147002|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.204	0.204	0.0030	0.0124	0.0032	11:32:58	Yes
2	0.205	0.205	0.0030	0.0126	0.0032	11:33:28	Yes
Mean:	0.204	0.204	0.0030				

SD: 0.000 0.000 0.0000  
%RSD: 0.228 0.228 0.16

Sequence No.: 81

Sample ID: 245147003|945594|1

Analyst: JXL

Autosampler Location: 71

Date Collected: 2/3/2010 11:33:48

Data Type: Original

Replicate Data: 245147003|945594|1

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.531	0.531	0.0064	0.0268	0.0066	11:34:39	Yes
2	0.526	0.526	0.0064	0.0267	0.0066	11:35:09	Yes
Mean:	0.528	0.528	0.0064				
SD:	0.003	0.003	0.0000				
%RSD:	0.636	0.636	0.55				

Sequence No.: 82

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/3/2010 11:35:29

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.134	5.134	0.0547	0.2278	0.0549	11:36:19	Yes
2	5.086	5.086	0.0542	0.2250	0.0544	11:36:49	Yes
Mean:	5.110	5.110	0.0545				
SD:	0.034	0.034	0.0004				
%RSD:	0.658	0.658	0.65				

QC value within limits for Hg 253.7 Recovery = 102.20%  
All analyte(s) passed QC.

Sequence No.: 83

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/3/2010 11:37:08

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.088	-0.088	-0.0000	-0.0006	0.0001	11:37:59	Yes
2	-0.086	-0.086	-0.0000	-0.0004	0.0001	11:38:29	Yes
Mean:	-0.087	-0.087	-0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	1.318	1.318	30.04				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 84

Sample ID: 245147004|945594|1

Analyst: JXL

Autosampler Location: 72

Date Collected: 2/3/2010 11:38:48

Data Type: Original

Replicate Data: 245147004|945594|1

Repl	SampleConc	StdConc	BlnkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.247	0.247	0.0035	0.0146	0.0036	11:39:40	Yes
2	0.240	0.240	0.0034	0.0143	0.0036	11:40:10	Yes
Mean:	0.244	0.244	0.0034				
SD:	0.005	0.005	0.0001				
%RSD:	2.206	2.206	1.64				

Sequence No.: 85

Sample ID: 245147005|945594|1

Analyst: JXL

Autosampler Location: 73

Date Collected: 2/3/2010 11:40:30

Data Type: Original

-----  
Replicate Data: 245147005|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.151	0.151	0.0025	0.0101	0.0026	11:41:22	Yes
2	0.148	0.148	0.0024	0.0098	0.0026	11:41:51	Yes
Mean:	0.149	0.149	0.0024				
SD:	0.002	0.002	0.0000				
%RSD:	1.323	1.323	0.85				

Sequence No.: 86

Autosampler Location: 74

Sample ID: 245147006|945594|1

Date Collected: 2/3/2010 11:42:12

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 245147006|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.208	0.208	0.0031	0.0132	0.0032	11:43:03	Yes
2	0.205	0.205	0.0030	0.0126	0.0032	11:43:33	Yes
Mean:	0.207	0.207	0.0030				
SD:	0.002	0.002	0.0000				
%RSD:	1.204	1.204	0.86				

Sequence No.: 87

Autosampler Location: 75

Sample ID: 245147007|945594|1

Date Collected: 2/3/2010 11:43:53

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 245147007|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.357	0.357	0.0046	0.0193	0.0048	11:44:44	Yes
2	0.352	0.352	0.0046	0.0189	0.0047	11:45:14	Yes
Mean:	0.355	0.355	0.0046				
SD:	0.003	0.003	0.0000				
%RSD:	0.950	0.950	0.77				

Sequence No.: 88

Autosampler Location: 76

Sample ID: 245147008|945594|1

Date Collected: 2/3/2010 11:45:34

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 245147008|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.215	0.215	0.0031	0.0135	0.0033	11:46:25	Yes
2	0.212	0.212	0.0031	0.0132	0.0033	11:46:55	Yes
Mean:	0.213	0.213	0.0031				
SD:	0.003	0.003	0.0000				
%RSD:	1.190	1.190	0.86				

Sequence No.: 89

Autosampler Location: 77

Sample ID: 245147009|945594|1

Date Collected: 2/3/2010 11:47:15

Analyst: JXL

Data Type: Original

-----  
Replicate Data: 245147009|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.300	0.300	0.0040	0.0168	0.0042	11:48:06	Yes
2	0.300	0.300	0.0040	0.0178	0.0042	11:48:36	Yes
Mean:	0.300	0.300	0.0040				
SD:	0.000	0.000	0.0000				
%RSD:	0.123	0.123	0.10				

Sequence No.: 90

Sample ID: 245147010|945594|1

Analyst: JXL

Autosampler Location: 78

Date Collected: 2/3/2010 11:48:56

Data Type: Original

Replicate Data: 245147010|945594|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.324	0.324	0.0043	0.0179	0.0045	11:49:47	Yes
2	0.327	0.327	0.0043	0.0181	0.0045	11:50:17	Yes
Mean:	0.326	0.326	0.0043				
SD:	0.002	0.002	0.0000				
%RSD:	0.700	0.700	0.56				

Sequence No.: 91

Sample ID: 245147011|945594|1

Analyst: JXL

Autosampler Location: 79

Date Collected: 2/3/2010 11:50:37

Data Type: Original

Replicate Data: 245147011|945594|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	1.664	1.664	0.0183	0.0763	0.0185	11:51:28	Yes
2	1.665	1.665	0.0183	0.0761	0.0185	11:51:58	Yes
Mean:	1.665	1.665	0.0183				
SD:	0.001	0.001	0.0000				
%RSD:	0.051	0.051	0.05				

Sequence No.: 92

Sample ID: 245147012|945594|1

Analyst: JXL

Autosampler Location: 80

Date Collected: 2/3/2010 11:52:18

Data Type: Original

Replicate Data: 245147012|945594|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.233	0.233	0.0033	0.0141	0.0035	11:53:09	Yes
2	0.243	0.243	0.0034	0.0156	0.0036	11:53:39	Yes
Mean:	0.238	0.238	0.0034				
SD:	0.007	0.007	0.0001				
%RSD:	2.864	2.864	2.12				

Sequence No.: 93

Sample ID: 245147013|945594|1

Analyst: JXL

Autosampler Location: 81

Date Collected: 2/3/2010 11:53:59

Data Type: Original

Replicate Data: 245147013|945594|1

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.132	0.132	0.0023	0.0099	0.0024	11:54:51	Yes
2	0.130	0.130	0.0022	0.0096	0.0024	11:55:20	Yes
Mean:	0.131	0.131	0.0022				
SD:	0.001	0.001	0.0000				
%RSD:	1.108	1.108	0.68				

Sequence No.: 94

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/3/2010 11:55:40

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StndConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.060	5.060	0.0539	0.2247	0.0541	11:56:31	Yes
2	5.083	5.083	0.0542	0.2251	0.0544	11:57:01	Yes

Mean: 5.071 5.071 0.0541  
SD: 0.017 0.017 0.0002  
%RSD: 0.328 0.328 0.32

QC value within limits for Hg 253.7 Recovery = 101.43%  
All analyte(s) passed QC.

Sequence No.: 95

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/3/2010 11:57:20

Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.085	-0.085	-0.0000	0.0004	0.0002	11:58:11	Yes
2	-0.079	-0.079	0.0000	0.0017	0.0002	11:58:41	Yes
Mean:	-0.082	-0.082	0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	5.464	5.464	309.92				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 96

Sample ID: 245147014|945594|1

Analyst: JXL

Autosampler Location: 82

Date Collected: 2/3/2010 11:59:00

Data Type: Original

Replicate Data: 245147014|945594|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.987	2.987	0.0322	0.1328	0.0324	11:59:52	Yes
2	2.981	2.981	0.0321	0.1327	0.0323	12:00:22	Yes
Mean:	2.984	2.984	0.0322				
SD:	0.004	0.004	0.0000				
%RSD:	0.144	0.144	0.14				

Sequence No.: 97

Sample ID: 245147015|945594|1

Analyst: JXL

Autosampler Location: 83

Date Collected: 2/3/2010 12:00:42

Data Type: Original

Replicate Data: 245147015|945594|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.595	0.595	0.0071	0.0299	0.0073	12:01:33	Yes
2	0.589	0.589	0.0071	0.0297	0.0072	12:02:03	Yes
Mean:	0.592	0.592	0.0071				
SD:	0.004	0.004	0.0000				
%RSD:	0.686	0.686	0.60				

Sequence No.: 98

Sample ID: 245147016|945594|1

Analyst: JXL

Autosampler Location: 84

Date Collected: 2/3/2010 12:02:23

Data Type: Original

Replicate Data: 245147016|945594|1

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.260	0.260	0.0036	0.0154	0.0038	12:03:15	Yes
2	0.260	0.260	0.0036	0.0154	0.0038	12:03:45	Yes
Mean:	0.260	0.260	0.0036				
SD:	0.000	0.000	0.0000				
%RSD:	0.079	0.079	0.06				

Sequence No.: 99

Sample ID: 245147017|945594|1

Autosampler Location: 85

Date Collected: 2/3/2010 12:04:05

Analyst: JXL

Data Type: Original

Replicate Data: 245147017|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.460	0.460	0.0057	0.0242	0.0059	12:04:57	Yes
2	0.457	0.457	0.0057	0.0243	0.0058	12:05:27	Yes
Mean:	0.459	0.459	0.0057				
SD:	0.002	0.002	0.0000				
%RSD:	0.388	0.388	0.33				

Sequence No.: 100

Sample ID: 245147018|945594|1

Analyst: JXL

Autosampler Location: 86

Date Collected: 2/3/2010 12:05:47

Data Type: Original

Replicate Data: 245147018|945594|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.450	2.450	0.0266	0.1093	0.0267	12:06:38	Yes
2	2.446	2.446	0.0265	0.1090	0.0267	12:07:08	Yes
Mean:	2.448	2.448	0.0265				
SD:	0.003	0.003	0.0000				
%RSD:	0.135	0.135	0.13				

Sequence No.: 101

Sample ID: 1202029907|947616|1

Analyst: JXL

Autosampler Location: 87

Date Collected: 2/3/2010 12:07:28

Data Type: Original

Replicate Data: 1202029907|947616|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.090	-0.090	-0.0001	0.0004	0.0001	12:08:20	Yes
2	-0.088	-0.088	-0.0001	0.0005	0.0001	12:08:50	Yes
Mean:	-0.089	-0.089	-0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	1.229	1.229	18.79				

Sequence No.: 102

Sample ID: 1202029908|947616|1

Analyst: JXL

Autosampler Location: 88

Date Collected: 2/3/2010 12:09:10

Data Type: Original

Replicate Data: 1202029908|947616|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.091	2.091	0.0228	0.0943	0.0230	12:10:01	Yes
2	2.090	2.090	0.0228	0.0936	0.0230	12:10:31	Yes
Mean:	2.090	2.090	0.0228				
SD:	0.001	0.001	0.0000				
%RSD:	0.029	0.029	0.03				

Sequence No.: 103

Sample ID: 245829028|947616|1

Analyst: JXL

Autosampler Location: 89

Date Collected: 2/3/2010 12:10:52

Data Type: Original

Replicate Data: 245829028|947616|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.246	0.246	0.0035	0.0151	0.0036	12:11:43	Yes
2	0.243	0.243	0.0034	0.0148	0.0036	12:12:13	Yes
Mean:	0.244	0.244	0.0034				
SD:	0.002	0.002	0.0000				
%RSD:	0.714	0.714	0.53				

Sequence No.: 104

Sample ID: 1202029909|947616|1

Analyst: JXL

Autosampler Location: 90

Date Collected: 2/3/2010 12:12:34

Data Type: Original

Replicate Data: 1202029909|947616|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.197	0.197	0.0029	0.0129	0.0031	12:13:25	Yes
2	0.196	0.196	0.0029	0.0129	0.0031	12:13:55	Yes
Mean:	0.196	0.196	0.0029				
SD:	0.001	0.001	0.0000				
%RSD:	0.300	0.300	0.21				

Sequence No.: 105

Sample ID: 1202029910|947616|1

Analyst: JXL

Autosampler Location: 91

Date Collected: 2/3/2010 12:14:15

Data Type: Original

Replicate Data: 1202029910|947616|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.299	2.299	0.0250	0.1032	0.0252	12:15:07	Yes
2	2.281	2.281	0.0248	0.1031	0.0250	12:15:37	Yes
Mean:	2.290	2.290	0.0249				
SD:	0.013	0.013	0.0001				
%RSD:	0.568	0.568	0.55				

Sequence No.: 106

Sample ID: CCV

Analyst:

Autosampler Location: 7

Date Collected: 2/3/2010 12:15:57

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.876	4.876	0.0520	0.2158	0.0522	12:16:47	Yes
2	4.874	4.874	0.0520	0.2144	0.0522	12:17:17	Yes
Mean:	4.875	4.875	0.0520				
SD:	0.001	0.001	0.0000				
%RSD:	0.031	0.031	0.03				

QC value within limits for Hg 253.7 Recovery = 97.50%  
All analyte(s) passed QC.

Sequence No.: 107

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/3/2010 12:17:36

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.086	-0.086	-0.0000	0.0009	0.0002	12:18:27	Yes
2	-0.085	-0.085	-0.0000	0.0008	0.0002	12:18:56	Yes
Mean:	-0.085	-0.085	-0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	0.811	0.811	38.45				

QC value within limits for Hg 253.7 Recovery = Not calculated  
All analyte(s) passed QC.

Sequence No.: 108

Sample ID: 1202029912|947616|1

Analyst: JXL

Autosampler Location: 92

Date Collected: 2/3/2010 12:19:16

Data Type: Original

# Miscellaneous

# Prep LogBook

Analyst: FGA  
Batch: 944119  
Lab SOP: GL-MA-E-009 REV# 19

Verified by: \_\_\_\_\_

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202021600	U1062540-MS	.507	g
MS	1202021598	U1091015-A	.5	mL
MS	1202021598	U1091015-B	.5	mL
MSD	1202021599	U1091015-A	.5	mL
MSD	1202021599	U1091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202021595		SW846 3050B	28-JAN-2010 13:30	0.513 g	50 mL	97.46589	SOIL
LCS	1202021600		SW846 3050B	28-JAN-2010 13:30	0.507 g	50 mL	98.61933	SOIL
SAMPLE	245147001		SW846 3050B	28-JAN-2010 13:30	0.508 g	50 mL	98.4252	SOIL
DUP	1202021596	245147001	SW846 3050B	28-JAN-2010 13:30	0.501 g	50 mL	99.8004	SOIL
SDILT	1202021597	245147001	SW846 3050B	28-JAN-2010 13:30	0.508 g	50 mL	98.4252	SOIL
MS	1202021598	245147001	SW846 3050B	28-JAN-2010 13:30	0.5 g	50 mL	100	SOIL
MSD	1202021599	245147001	SW846 3050B	28-JAN-2010 13:30	0.515 g	50 mL	97.08738	SOIL
SAMPLE	245147002		SW846 3050B	28-JAN-2010 13:30	0.507 g	50 mL	98.61933	SOIL
SAMPLE	245147003		SW846 3050B	28-JAN-2010 13:30	0.515 g	50 mL	97.08738	SOIL
SAMPLE	245147004		SW846 3050B	28-JAN-2010 13:30	0.505 g	50 mL	99.0099	SOIL
SAMPLE	245147005		SW846 3050B	28-JAN-2010 13:30	0.515 g	50 mL	97.08738	SOIL
SAMPLE	245147006		SW846 3050B	28-JAN-2010 13:30	0.523 g	50 mL	95.60229	SOIL
SAMPLE	245147007		SW846 3050B	28-JAN-2010 13:30	0.514 g	50 mL	97.27626	SOIL
SAMPLE	245147008		SW846 3050B	28-JAN-2010 13:30	0.537 g	50 mL	93.10987	SOIL
SAMPLE	245147009		SW846 3050B	28-JAN-2010 13:30	0.511 g	50 mL	97.84736	SOIL
SAMPLE	245147010		SW846 3050B	28-JAN-2010 13:30	0.5 g	50 mL	100	SOIL
SAMPLE	245147011		SW846 3050B	28-JAN-2010 13:30	0.508 g	50 mL	98.4252	SOIL
SAMPLE	245147012		SW846 3050B	28-JAN-2010 13:30	0.509 g	50 mL	98.23183	SOIL
SAMPLE	245147013		SW846 3050B	28-JAN-2010 13:30	0.506 g	50 mL	98.81423	SOIL
SAMPLE	245147014		SW846 3050B	28-JAN-2010 13:30	0.515 g	50 mL	97.08738	SOIL
SAMPLE	245147015		SW846 3050B	28-JAN-2010 13:30	0.507 g	50 mL	98.61933	SOIL
SAMPLE	245147016		SW846 3050B	28-JAN-2010 13:30	0.541 g	50 mL	92.42144	SOIL
SAMPLE	245147017		SW846 3050B	28-JAN-2010 13:30	0.509 g	50 mL	98.23183	SOIL
SAMPLE	245147018		SW846 3050B	28-JAN-2010 13:30	0.504 g	50 mL	99.20635	SOIL

Comments: Clumpy, brown, soil w/rocks.

Reagent/Solvent Lot ID	Amount	Description
1203655-02	1.5 mL	Hydrogen Peroxide 30%
1234886	5 mL	Nitric Acid CONC.

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GEL Laboratories LLC

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# Prep LogBook

Analyst: BXA1  
 Batch: 953455  
 Lab SOP: GL-MA-E-009 REV# 19

Verified by: \_\_\_\_\_

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202043959	U1062540-MS	.523	g
MS	1202043961	U1091015-A	.5	mL
MS	1202043961	U1091015-B	.5	mL
MSD	1202043963	U1091015-A	.5	mL
MSD	1202043963	U1091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202043958		SW846 3050B	15-FEB-2010 22:48	0.501 g	50 mL	99.8004	SOIL
LCS	1202043959		SW846 3050B	15-FEB-2010 22:48	0.523 g	50 mL	95.60229	SOIL
SAMPLE	245147001		SW846 3050B	15-FEB-2010 22:48	0.565 g	50 mL	88.49558	SOIL
DUP	1202043960	245147001	SW846 3050B	15-FEB-2010 22:48	0.542 g	50 mL	92.25092	SOIL
MS	1202043961	245147001	SW846 3050B	15-FEB-2010 22:48	0.56 g	50 mL	89.28571	SOIL
MSD	1202043963	245147001	SW846 3050B	15-FEB-2010 22:48	0.594 g	50 mL	84.17508	SOIL
SDILT	1202043962	245147001	SW846 3050B	15-FEB-2010 22:48	0.565 g	50 mL	88.49558	SOIL
SAMPLE	245147002		SW846 3050B	15-FEB-2010 22:48	0.575 g	50 mL	86.95652	SOIL
SAMPLE	245147003		SW846 3050B	15-FEB-2010 22:48	0.543 g	50 mL	92.08103	SOIL
SAMPLE	245147004		SW846 3050B	15-FEB-2010 22:48	0.513 g	50 mL	97.46589	SOIL
SAMPLE	245147005		SW846 3050B	15-FEB-2010 22:48	0.512 g	50 mL	97.65625	SOIL
SAMPLE	245147006		SW846 3050B	15-FEB-2010 22:48	0.517 g	50 mL	96.7118	SOIL
SAMPLE	245147007		SW846 3050B	15-FEB-2010 22:48	0.538 g	50 mL	92.9368	SOIL
SAMPLE	245147008		SW846 3050B	15-FEB-2010 22:48	0.544 g	50 mL	91.91176	SOIL
SAMPLE	245147009		SW846 3050B	15-FEB-2010 22:48	0.505 g	50 mL	99.0099	SOIL
SAMPLE	245147010		SW846 3050B	15-FEB-2010 22:48	0.516 g	50 mL	96.89922	SOIL
SAMPLE	245147011		SW846 3050B	15-FEB-2010 22:48	0.52 g	50 mL	96.15385	SOIL
SAMPLE	245147012		SW846 3050B	15-FEB-2010 22:48	0.559 g	50 mL	89.44544	SOIL
SAMPLE	245147013		SW846 3050B	15-FEB-2010 22:48	0.511 g	50 mL	97.84736	SOIL
SAMPLE	245147014		SW846 3050B	15-FEB-2010 22:48	0.508 g	50 mL	98.4252	SOIL
SAMPLE	245147015		SW846 3050B	15-FEB-2010 22:48	0.532 g	50 mL	93.98496	SOIL
SAMPLE	245147016		SW846 3050B	15-FEB-2010 22:48	0.511 g	50 mL	97.84736	SOIL
SAMPLE	245147017		SW846 3050B	15-FEB-2010 22:48	0.52 g	50 mL	96.15385	SOIL
SAMPLE	245147018		SW846 3050B	15-FEB-2010 22:48	0.502 g	50 mL	99.60159	SOIL

Comments: sample#245147001 is a brown, clumpy soil with rocks.

Reagent/Solvent Lot ID	Amount	Description
1250038-02	1.5 mL	Hydrogen Peroxide 30%
1268732	5 mL	Nitric Acid CONC.

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GEL Laboratories LLC

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# Prep LogBook

Analyst: AXG2  
 Batch: 944116  
 Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202021588	U1062540-1	.515	g
MS	1202021586	U1091216-01	.25	mL
MS	1202021586	U1091216-06	.25	mL
MSD	1202021587	U1091216-01	.25	mL
MSD	1202021587	U1091216-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202021583		SW846 3050B	27-JAN-2010 08:30	0.5 g	50 mL	100	SOIL
LCS	1202021588		SW846 3050B	27-JAN-2010 08:30	0.515 g	50 mL	97.08738	SOIL
SAMPLE	245147001		SW846 3050B	27-JAN-2010 08:30	0.524 g	50 mL	95.41985	SOIL
DUP	1202021584	245147001	SW846 3050B	27-JAN-2010 08:30	0.517 g	50 mL	96.7118	SOIL
SDILT	1202021585	245147001	SW846 3050B	27-JAN-2010 08:30	0.524 g	50 mL	95.41985	SOIL
MS	1202021586	245147001	SW846 3050B	27-JAN-2010 08:30	0.525 g	50 mL	95.2381	SOIL
MSD	1202021587	245147001	SW846 3050B	27-JAN-2010 08:30	0.518 g	50 mL	96.5251	SOIL
SAMPLE	245147002		SW846 3050B	27-JAN-2010 08:30	0.522 g	50 mL	95.78544	SOIL
SAMPLE	245147003		SW846 3050B	27-JAN-2010 08:30	0.509 g	50 mL	98.23183	SOIL
SAMPLE	245147004		SW846 3050B	27-JAN-2010 08:30	0.509 g	50 mL	98.23183	SOIL
SAMPLE	245147005		SW846 3050B	27-JAN-2010 08:30	0.5 g	50 mL	100	SOIL
SAMPLE	245147006		SW846 3050B	27-JAN-2010 08:30	0.502 g	50 mL	99.60159	SOIL
SAMPLE	245147007		SW846 3050B	27-JAN-2010 08:30	0.502 g	50 mL	99.60159	SOIL
SAMPLE	245147008		SW846 3050B	27-JAN-2010 08:30	0.511 g	50 mL	97.84736	SOIL
SAMPLE	245147009		SW846 3050B	27-JAN-2010 08:30	0.502 g	50 mL	99.60159	SOIL
SAMPLE	245147010		SW846 3050B	27-JAN-2010 08:30	0.505 g	50 mL	99.0099	SOIL
SAMPLE	245147011		SW846 3050B	27-JAN-2010 08:30	0.519 g	50 mL	96.33911	SOIL
SAMPLE	245147012		SW846 3050B	27-JAN-2010 08:30	0.523 g	50 mL	95.60229	SOIL
SAMPLE	245147013		SW846 3050B	27-JAN-2010 08:30	0.507 g	50 mL	98.61933	SOIL
SAMPLE	245147014		SW846 3050B	27-JAN-2010 08:30	0.508 g	50 mL	98.4252	SOIL
SAMPLE	245147015		SW846 3050B	27-JAN-2010 08:30	0.506 g	50 mL	98.81423	SOIL
SAMPLE	245147016		SW846 3050B	27-JAN-2010 08:30	0.5 g	50 mL	100	SOIL
SAMPLE	245147017		SW846 3050B	27-JAN-2010 08:30	0.501 g	50 mL	99.8004	SOIL
SAMPLE	245147018		SW846 3050B	27-JAN-2010 08:30	0.523 g	50 mL	95.60229	SOIL

Comments Sample 245147001 consist of clumpy, brown soil with rocks.

Reagent/Solvent Lot ID	Amount	Description
1252838	10 mL	HYDROCHLORIC ACID
1234886	1.25 mL	Nitric Acid CONC.

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# Prep LogBook

Analyst: TXB3 Verified by: \_\_\_\_\_

Batch: 945593

Lab SOP: GL-MA-E-010 REV# 23

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Type	Sample Id	Lot. Id	Prep Factor	Spike Amount	Spike Units
MB	1202025236		SW846 7471A Prep	02-FEB-2010 14:00	LCS	1202025237	U1031809A	.205		g
LCS	1202025237		SW846 7471A Prep	02-FEB-2010 14:00	MS	1202025239	WHG100202-14	.3		mL
SAMPLE	245147001		SW846 7471A Prep	02-FEB-2010 14:00	MSD	1202025241	WHG100202-14	.3		mL
DUP	1202025238	245147001	SW846 7471A Prep	02-FEB-2010 14:00						
MS	1202025239	245147001	SW846 7471A Prep	02-FEB-2010 14:00						
MSD	1202025241	245147001	SW846 7471A Prep	02-FEB-2010 14:00						
SDILT	1202025240	245147001	SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147002		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147003		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147004		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147005		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147006		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147007		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147008		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147009		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147010		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147011		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147012		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147013		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147014		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147015		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147016		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147017		SW846 7471A Prep	02-FEB-2010 14:00						
SAMPLE	245147018		SW846 7471A Prep	02-FEB-2010 14:00						

Reagent/Solvent Lot ID	Amount	Description
1236355-A	1.125 mL	Hydrochloric Acid Conc.
1257474-1	.375 mL	NITRIC ACID
1255535-C	7.5 mL	5% KMnO4 solution
1255532-C	2 mL	Hg reducing agent
WHG100202-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100202-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5

Prep Data Logbook Version 1:1

Comments: Sample 245147001 is a clumpy brown rocky soil.  
Digestion Start Date: 02-FEB-10 14:00  
Digestion End Date: 02-FEB-10 14:30

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Prep LogBook

WHG100202-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100202-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100202-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100202-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 10-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> 944117	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 245147(10-1306)</b> <b>Application Issues:</b> Failed Recovery for MS/PS Failed Recovery for MSD/PSD			
<b>Specification and Requirements Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/PS: QC 1202021586MS 2. Failed Recovery for MSD/PSD: QC 1202021587MSD		1. The matrix spike recovery failed outside of the control limits for magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.  2. The matrix spike duplicate recovery failed outside of the control limits for antimony, magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

**Originator's Name:**

Helen Camello 11-FEB-10

**Data Validator/Group Leader:**

Louise Smith 11-FEB-10

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 15-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> 944120	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 245147(10-1306)</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 1202021598MS  2. Failed Recovery for MSD/PSD: QC 1202021599MSD		The matrix spike and matrix spike duplicate recovery failed outside of the control limits for Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

**Originator's Name:**

Samantha Jacobs 15-FEB-10

**Data Validator/Group Leader:**

Rose Jenkins 16-FEB-10

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 16-FEB-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> ICP/MS	<b>Test / Method:</b> SW846 3050B/6020	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 953457	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 245147(10-1306) <b>Application Issues:</b> Failed Recovery for MSD/PSD			
<b>Specification and Requirements Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MSD/PSD: QC 1202043963MSD		The matrix spike duplicate recovery failed outside of the control limits for 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:**  
Elizabeth Janssen 16-FEB-10

**Data Validator/Group Leader:**  
Samantha Jacobs 16-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 ICSEA 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 ICSEA SOLN A mg/L +/- 0.5% IN 5% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

**Serial ID:** UI090610-03      **Opened:** 10-JUN-09      **Catalog Number :** 060074-06-01  
**Name:** ICPMS Tungsten - 10mg/L      **Received:** 10-JUN-09      **Lot Number :** 1016338  
**Type:** Source Material      **Expires:** 10-JUN-10      **Solvent :** 2% HNO3  
**Employee:** Paul Boyd  
**Supplier:** O2SI  
**Description:** ICPMS Tungsten standard SPIKE - 10mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

**Serial ID:** UI090701-09      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #1      **Received:** 01-JUL-09      **Catalog Number :** 160044-09-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016477  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** O2SI  
**Description:** ICPMS CRDL Master Soln #1  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UI090701-10      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #2      **Received:** 01-JUL-09      **Catalog Number :** 160044-08-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016476  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS CRDL Soln #2  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI090701-40      **Opened:** 01-JUL-09      **Amount :** 500 mL  
**Name:** TRACE ICP Stock PQL St      **Received:** 30-JUN-09      **Catalog Number :** 160543-01-03  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016475  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3+TrHF  
**Supplier:** 02si  
**Description:** TRACE ICP Stock PQL Standard  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

**Serial ID:** UI090828-42      **Opened:** 16-SEP-09      **Amount :** 500 mL  
**Name:** TRACE ICP Na-1000SOUR      **Received:** 27-AUG-09      **Catalog Number :** 060011-02-03  
**Type:** Source Material      **Expires:** 16-SEP-10      **Lot Number :** 1017098  
**Employee:** Helen Camello      **Solvent :** 1%HNO3  
**Supplier:** Q2SI  
**Description:** Sodium 1000 +/- 3 ug/mL in 1% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

**Serial ID:** UI090925-40      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX38-500N  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909129  
**Employee:** Helen Camello      **Solvent :** 5%HNO3  
**Supplier:** SPECTRO PURE  
**Description:** SECOND SOURCE STD #1A 5%HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

**Serial ID:** UI090925-41      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX39-500B  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909130  
**Employee:** Helen Camello      **Solvent :** 5%HNO3,TR.HF  
**Supplier:** SPECTRO PURE  
**Description:** SECOND SOURCE STD #1B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

**Serial ID:** UI091015-42      **Opened:** 28-OCT-09      **Amount :** 500 mL  
**Name:** SI 1000mg/L      **Received:** 15-OCT-09      **Catalog Number :** 060014-02-03  
**Type:** Source Material      **Expires:** 28-OCT-10      **Lot Number :** 1017581  
**Employee:** Helen Camello      **Solvent :** 0.3% $\text{H}_2\text{O}$ ( $\text{NH}_4$ ) $_2$ SiF $_6$   
**Supplier:** o2si  
**Description:** Silicon 1000mg/L+/-0.3%in  $\text{H}_2\text{O}$ ( $\text{NH}_4$ ) $_2$ SiF $_6$   
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091015-A      **Opened:** 15-OCT-09      **Catalog Number :** 160067-03  
**Name:** ICP-MS DOE SOIL SPIKE      **Received:** 15-OCT-09      **Lot Number :** 1017142  
**Type:** Source Material      **Expires:** 15-OCT-10  
**Employee:** Francena Armstrong  
**Supplier:** 02si  
**Description:** ICP-MS Spike for soil products.  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

# Standard Logbook

**Serial ID:** UI091015-B      **Opened:** 15-OCT-09      **Catalog Number :** 160067-03  
**Name:** ICP-MS DOE SOIL SPIKE      **Received:** 15-OCT-09      **Lot Number :** 1017142  
**Type:** Source Material      **Expires:** 15-OCT-10  
**Employee:** Francena Armstrong  
**Supplier:** 02si  
**Description:** ICP-MS Spike for Soil Products  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

**Serial ID:** UI091102-40      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1A SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-1-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930215  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Std #1A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

**Serial ID:** UI091102-41      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1B SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-2-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930216  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Standard #1B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L

# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Tin	200 mg/L	Titanium	200 mg/L

**Serial ID:** UI091102-42      **Opened:** 17-NOV-09      **Amount :** 200 mL  
**Name:** SILICON      **Received:** 02-NOV-09      **Catalog Number :** HP100050-4F  
**Type:** Source Material      **Expires:** 17-NOV-10      **Lot Number :** 0921924  
**Employee:** Helen Camello      **Solvent :** H2O/tr HF  
**Supplier:** ENVIRONMENTAL EXPRESS  
**Description:** SILICON 1000mg/L H2O/tr HF  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091212-60      **Opened:** 12-DEC-09      **Amount :** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number :** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1018064  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

**Serial ID:** UI091212-61      **Opened:** 12-DEC-09      **Amount :** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number :** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1018064  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard B  
**Comments:** None

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

**Serial ID:** UI091216-01      **Opened:** 16-DEC-09      **Lot Number :** 1018095  
**Name:** METALSPIKE-1      **Received:** 16-DEC-09  
**Type:** Source Material      **Expires:** 16-DEC-10  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix I  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

**Serial ID:** UI091216-06      **Opened:** 16-DEC-09      **Lot Number :** 1018096  
**Name:** METALSPIKE-2      **Received:** 16-DEC-09  
**Type:** Source Material      **Expires:** 16-DEC-10  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix II  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

# Standard Logbook

**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  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L

# Standard Logbook

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Zirconium	20 mg/L		

**Serial ID:** 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

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI100114-48      **Opened:** 22-JAN-10      **Amount :** 1000 mL  
**Name:** Trace ICP ICSEA      **Received:** 18-JAN-10      **Catalog Number :** 160005-02  
**Type:** Source Material      **Expires:** 22-JAN-11      **Lot Number :** 1018466  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard A  
**Comments:** None

<b>Analyte</b>	<b>Concentration</b>	<b>Analyte</b>	<b>Concentration</b>
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# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

**Serial ID:** UI100114-49.13      **Opened:** 08-FEB-10      **Amount :** 100 ml  
**Name:** Trace ICP ICSAB      **Received:** 18-JAN-10      **Catalog Number :** 160066-04  
**Type:** Source Material      **Expires:** 09-FEB-10      **Lot Number :** 1018458  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2sl  
**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:** UI100126-11      **Opened:** 26-JAN-10      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 26-JAN-10      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 26-JAN-11      **Lot Number :** 1018321  
**Employee:** Elizabeth Janssen      **Solvent :** 2% HNO3  
**Supplier:** O2SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

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

# Standard Logbook

**Serial ID:** UI100128-40      **Opened:** 28-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 28-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 28-JAN-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** Q2SI  
**Description:** ICP HIGH RANGE STD SOLUTION A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

**Serial ID:** UI100128-41      **Opened:** 28-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 28-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 28-JAN-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%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:** ICPMS CalSPIKEB      **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

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UMS090303-02      **Opened:** 03-MAR-09      **Catalog Number :** ZGEL-102-250  
**Name:** 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

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

**Serial ID:** 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

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

**Serial ID:** IHG100202-01      **Opened:** 02-FEB-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 02-FEB-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 03-FEB-10      **Solvent :** 1mL HNO3 + Typel H2O  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 1st Source 200 ug/L  
**Comments:** Prepare fresh daily

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG100202-02      Opened: 02-FEB-10      Pipet Id : Minou1  
 Name: MHGINTER2      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Intermediate      Expires: 03-FEB-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Intermediate 2nd Source 200 ug/L  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG100202-07      Opened: 02-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS0.2CRA      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 09-FEB-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working Standard 1st Source CAL S 0.2/CRA  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100202-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG100202-08      Opened: 02-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS0.5      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 09-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working Standard 1st Source CAL S 0.5  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100202-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG100202-09      Opened: 02-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS2.0      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 09-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL S 2.0  
 Comments: None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100202-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG100202-10      Opened: 02-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS5.0CCV      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 09-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL S 5.0/CCV  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100202-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100202-11      Opened: 02-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS10.0      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 09-FEB-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL S 10.0  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100202-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

Serial ID: WHG100202-12      Opened: 02-FEB-10      Pipet Id : Hg1289245  
 Name: MHGWORKS5.0ICV      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 09-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 2nd Source S 5.0/ICV  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100202-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100202-14      Opened: 02-FEB-10      Pipet Id : Hg1289245  
 Name: MHGSOILMSSPIKE      Received: 02-FEB-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 09-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury soil working intermediate standard for MS  
 Comments: None

# Standard Logbook

<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

**Serial ID:** WI100208-42      **Opened:** 08-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.1 PPM STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 09-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.1 PPM CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100208-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100208-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100208-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100208-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100208-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100208-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100208-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100208-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100208-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100208-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100208-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100208-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

# Standard Logbook

**Serial ID:** WI100208-43      **Opened:** 08-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.5/CCV STD.      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 09-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.5/CCV CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	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:** WI100208-44      **Opened:** 08-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP SCAL 1.0      **Received:** 02-NOV-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 09-FEB-10      **Solvent :** 3%HCL and 1 %HNO3-1266496  
**Employee:** Helen Camello  
**Supplier:** o2si  
**Description:** Trace ICP Calibration Standard 1.0ppm  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
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:** W1100208-45      **Opened:** 08-FEB-10      **Balance Id :** 216  
**Name:** TRACE ICP S-10 STD      **Received:** 22-APR-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 09-FEB-10      **Solvent :** 3%HCL and 1%HNO3 -1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP S-10 CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090828-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

**Serial ID:** W1100208-46      **Opened:** 08-FEB-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 09-FEB-10      **Solvent :** 3%HCL AND 1%HNO3-1266496  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** Initial Calibration Verification ICP Trace Metals  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

**Serial ID:** WI100208-47      **Opened:** 08-FEB-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 3581809  
**Type:** Working      **Expires:** 09-FEB-10      **Solvent :** 3%HCL & 1%HNO3-1266496  
**Employee:** Helen Camello  
**Supplier:** 02si  
**Description:** PQL Working Standard  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS100210-04      Opened: 10-FEB-10      Amount : 50 mL  
 Name: ICPMS Cal Standard 100      Received: 10-FEB-10      Balance Id : 4025216  
 Type: Working      Expires: 11-FEB-10      Pipet Id : 3541598  
 Employee: Paul Boyd      Solvent : 2%HNO3/1%HCl-1266278  
 Supplier: GEL  
 Description: ICPMS Calibration Standard (100 ppb)  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100210-04A      Opened: 10-FEB-10      Balance Id : 4025216  
 Name: ICPMS Cal Standard 10      Received: 10-FEB-10      Pipet Id : 3541598  
 Type: Working      Expires: 11-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.	Allquot	Final Vol.	Final Conc.
WMS100210-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100210-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100210-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100210-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100210-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100210-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100210-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100210-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100210-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100210-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100210-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

<b>Parent Material</b>	<b>Analyte</b>	<b>Parent Conc.</b>	<b>Allquot</b>	<b>Final Vol.</b>	<b>Final Conc.</b>
WMS100210-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

<b>Serial ID:</b> <u>WMS100210-05</u>	<b>Opened:</b> <u>10-FEB-10</u>	<b>Balance Id :</b> <u>40245216</u>
<b>Name:</b> <u>ICPMS ICV</u>	<b>Received:</b> <u>10-FEB-10</u>	<b>Pipet Id :</b> <u>3541598</u>
<b>Type:</b> <u>Working</u>	<b>Expires:</b> <u>11-FEB-10</u>	<b>Solvent :</b> <u>2%HNO3/1%HCl - 1266278</u>
<b>Employee:</b> <u>Paul Boyd</u>		
<b>Supplier:</b> <u>GEL</u>		
<b>Description:</b> <u>ICPMS ICV</u>		
<b>Comments:</b> <u>None</u>		

Parent Material	Analyte	Parent Conc.	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:** WMS100210-06      **Opened:** 10-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 10-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 11-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:** WMS100210-07      **Opened:** 10-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 10-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 11-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:** WMS100210-08      **Opened:** 10-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 10-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 11-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.	Allquot	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:** WMS100210-70      **Opened:** 10-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS LINEAR RANGE ST      **Received:** 10-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 11-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.	Allquot	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:** 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

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:** 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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
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      **Expires:** 17-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**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

# 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:** WMS100216-08      **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
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:** 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
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

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	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:** WMS100216-70      **Opened:** 16-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS LINEAR RANGE ST      **Received:** 16-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 17-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1269792  
**Employee:** Paul Boyd  
**Supplier:** 02SI  
**Description:** ICPMS LINEAR RANGE STANDARD  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	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.	Aliquot	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: 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

# Standard Logbook

Serial ID: 1156689-A      Opened: 20-JUL-09      Lot Number : 41226920  
Name: B-KMnO4(VWR)-MER      Received: 20-JUL-09  
Type: Reagent/Solvent      Expires: 20-JUL-10  
Employee: Tara Griffin      Verified: 07-AUG-07  
Supplier: VWR  
Description: Potassium Permanganate  
Comments: None

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Serial ID: 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

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Serial ID: 1228372-A      Opened: 12-NOV-09      Lot Number : 49215936  
Name: B-NH2OH.HCl-MER      Received: 12-NOV-09  
Type: Reagent/Solvent      Expires: 12-NOV-10  
Employee: Tara Griffin  
Supplier: Fisher Scientific  
Description: Hydroxylamine Hydrochloride  
Comments: None

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Serial ID: 1234886      Opened: 27-NOV-09      Lot Number : H20053 L  
Name: I-HNO3      Received: 27-NOV-09  
Type: Reagent/Solvent      Expires: 27-NOV-10  
Employee: Bryan Davis  
Supplier: BAKER  
Description: Nitric Acid CONC.  
Comments: None

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Serial ID: 1236355-A      Opened: 01-DEC-09      Lot Number : 200930201  
Name: B-HCl-MER      Received: 01-DEC-09  
Type: Reagent/Solvent      Expires: 01-DEC-10  
Employee: Tara Griffin  
Supplier: Aristar  
Description: Hydrochloric Acid Conc.  
Comments: None

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# Standard Logbook

Serial ID: 1250038-02      Opened: 04-JAN-10      Lot Number : ZU74081198 mL  
 Name: B-H2O2      Received: 04-JAN-10  
 Type: Reagent/Solvent      Expires: 04-JAN-11  
 Employee: Bryan Davis  
 Supplier: EM SCIENCE  
 Description: Hydrogen Peroxide 30%  
 Comments: None

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.	Allquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1255535-C      Opened: 15-JAN-10      Balance Id : BAL-002  
 Name: B-KMnO4-MER      Received: 15-JAN-10  
 Type: Reagent/Solvent      Expires: 15-JUL-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: 5% KMnO4 solution  
 Comments: None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1257474-1      Opened: 20-JAN-10      Instrument Id : MERCURY  
 Name: B-HNO3-MER      Received: 20-JAN-10      Lot Number : H20053  
 Type: Reagent/Solvent      Expires: 20-JAN-11  
 Employee: Tara Griffin  
 Supplier: Mallinckrodt Chemicals  
 Description: NITRIC ACID  
 Comments: None

Serial ID: 1266278      Opened: 08-FEB-10      Solvent : Type I Water  
 Name: B-2%HNO3/1%HCL-ICPMS      Received: 08-FEB-10  
 Type: Reagent/Solvent      Expires: 15-FEB-10  
 Employee: Paul Boyd  
 Supplier: GEL  
 Description: 2%HNO3/1%HCL Solution (Type I Water)  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
1252836	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1252838	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1266496      Opened: 08-FEB-10      Amount : 20 L  
 Name: B-ICP-RINSE SOLN      Received: 20-JAN-10      Lot Number : H04040+G34050  
 Type: Reagent/Solvent      Expires: 14-FEB-10      Solvent : 3%HCL+1%HNO3  
 Employee: Helen Camello  
 Supplier: GEL  
 Description: 3%HCL+1%HNO3 RINSE SOLN.  
 Comments: None

Serial ID: 1268732      Opened: 11-FEB-10      Lot Number : H12022 L  
 Name: I-HNO3      Received: 11-FEB-10  
 Type: Reagent/Solvent      Expires: 11-FEB-11  
 Employee: Bryan Davis  
 Supplier: BAKER  
 Description: Nitric Acid CONC.  
 Comments: None

## Standard Logbook

Serial ID: 1268792      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

# **General Chemistry Analysis**

# Case Narrative

**General Chemistry Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1306**

**Method/Analysis Information**

**Product:**               Cyanide, Total

**Analytical Batch:** 944392 and 944401   **Method:** SW9012A Cyanide and Total

**Prep Batch :** 944391 and 944400   **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>
245147001	RE15-10-7165
245147002	RE15-10-7171
245147003	RE15-10-7170
245147004	RE15-10-7164
245147005	RE15-10-7167
245147006	RE15-10-7169
245147007	RE15-10-7168
245147008	RE15-10-7166
245147009	RE15-10-7177
245147010	RE15-10-7181
245147011	RE15-10-7178
245147012	RE15-10-7182
245147013	RE15-10-7183
245147014	RE15-10-7184
245147015	RE15-10-7185
245147016	RE15-10-7176
245147017	RE15-10-7180
245147018	RE15-10-7179
1202022248	Method Blank (MB)
1202022249	245136001(RE15-10-7194) Sample Duplicate (DUP)
1202022250	245136002(RE15-10-7186) Sample Duplicate (DUP)
1202022251	245136001(RE15-10-7194) Matrix Spike (MS)
1202022252	245136002(RE15-10-7186) Matrix Spike (MS)
1202022253	245136001(RE15-10-7194) Matrix Spike Duplicate (MSD)
1202022254	245136002(RE15-10-7186) Matrix Spike Duplicate (MSD)
1202022255	Laboratory Control Sample (LCS)
1202022282	Method Blank (MB)
1202022283	245147008(RE15-10-7166) Sample Duplicate (DUP)
1202022284	245147009(RE15-10-7177) Sample Duplicate (DUP)
1202022285	245147008(RE15-10-7166) Matrix Spike (MS)
1202022286	245147009(RE15-10-7177) Matrix Spike (MS)
1202022287	245147008(RE15-10-7166) Matrix Spike Duplicate (MSD)
1202022288	245147009(RE15-10-7177) Matrix Spike Duplicate (MSD)
1202022289	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: 245136001 (RE15-10-7194), 245136002 (RE15-10-7186)- Batch 944392, 245147008 (RE15-10-7166) and 245147009 (RE15-10-7177)- Batch 944401.

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The MS/PS recoveries for this sample set were within the required acceptance limits.

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

The MSD recoveries for this sample set were within the required acceptance limits.

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

The RPDs between the spike and spike duplicate met the acceptance limits.

**Duplicate Relative Percent Difference (RPD) Statement**

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202022249 (RE15-10-7194), 1202022250 (RE15-10-7186)- Batch 944392, 1202022283 (RE15-10-7166), 1202022284 (RE15-10-7177), 245147008 (RE15-10-7166) and 245147009 (RE15-10-7177)- Batch 944401.

**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: 1202022255 (LCS)- Batch 944392 and 1202022289 (LCS)- Batch 944401.

**Sample Re-analysis**

The following samples were re-analyzed due to CCB failure: 245147011 (RE15-10-7178), 245147012 (RE15-10-7182), 245147013 (RE15-10-7183), 245147014 (RE15-10-7184), 245147015 (RE15-10-7185), 245147016 (RE15-10-7176), 245147017 (RE15-10-7180) and 245147018 (RE15-10-7179)- Batch 944401.

**Miscellaneous Information****Data Exception (DER) Documentation**

A DER was not required for this SDG.

**Additional Comments**

Additional comments were not required for this SDG.

**Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

**Certification Statement**

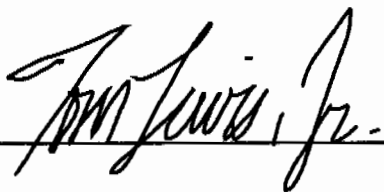
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**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:**

10Feb10

# **Sample Data Summary**

## **GEL LABORATORIES LLC**

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### **Certificate of Analysis Report for**

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1306 GEL Work Order: 245147

**The Qualifiers in this report are defined as follows:**

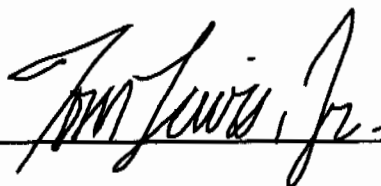
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

A handwritten signature in black ink, appearing to read "Tom Lewis, Jr.", is written over a horizontal line.

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## Certificate of Analysis

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

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7166  
Sample ID: 245147008  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 31.6%

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	139	93.7	345	ug/kg	1	AXC2	01/26/10	0920	944401	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	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7177  
Sample ID: 245147009  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 7.46%

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	93.0	70.7	260	ug/kg	1	AXC2	01/26/10	0924	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7181  
Sample ID: 245147010  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 12.1%

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	73.0	268	ug/kg	1	AXC2	01/26/10	0927	944401	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	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7178  
Sample ID: 245147011  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 21.4%

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	188	86.5	318	ug/kg	1	AXC2	01/26/10	1003	944401	1
----------------	---	-----	------	-----	-------	---	------	----------	------	--------	---

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7182  
Sample ID: 245147012  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 18%

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		631	74.0	272	ug/kg	1	AXC2	01/26/10	1004	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7183  
Sample ID: 245147013  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 12.2%

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	207	77.5	285	ug/kg	1	AXC2	01/26/10	1005	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7168  
Sample ID: 245147007  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 19.2%

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		305	79.4	292	ug/kg	1	AXC2	01/27/10	1404	944392	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	01/26/10	1606	944391

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7184  
Sample ID: 245147014  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 17.2%

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	U	ND	80.5	296	ug/kg	1	AXC2	01/26/10	1006	944401	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	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7185  
Sample ID: 245147015  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 9.42%

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	68.2	251	ug/kg	1	AXC2	01/26/10	1010	944401	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	01/25/10	1602	944400

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: LANL ER Project

Report Date: February 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7176  
Sample ID: 245147016  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 4.66%

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		396	67.3	247	ug/kg	1	AXC2	01/26/10	1008	944401	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	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7180  
Sample ID: 245147017  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 13.4%

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	75.5	277	ug/kg	1	AXC2	01/26/10	1016	944401	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	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7179  
Sample ID: 245147018  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 20.3%

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	J	101	73.6	270	ug/kg	1	AXC2	01/26/10	1010	944401	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/25/10	1602	944400

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7165  
Sample ID: 245147001  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 19.4%

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	81.2	298	ug/kg	1	AXC2	01/27/10	1355	944392	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7171  
Sample ID: 245147002  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 7.8%

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	63.6	234	ug/kg	1	AXC2	01/27/10	1356	944392	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	01/26/10	1606	944391

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7170  
Sample ID: 245147003  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 23.2%

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	U	ND	85.1	313	ug/kg	1	AXC2	01/27/10	1357	944392	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	01/26/10	1606	944391

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7164  
Sample ID: 245147004  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 17.7%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
-----------	-----------	--------	----	----	-------	----	---------	------	------	-------	--------

### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	79.5	292	ug/kg	1	AXC2	01/27/10	1401	944392	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	01/26/10	1606	944391

### 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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7167  
Sample ID: 245147005  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 22%

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	87.2	320	ug/kg	1	AXC2	01/27/10	1402	944392	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/26/10	1606	944391

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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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 8, 2010

Client SDG: 10-1306

Client Sample ID: RE15-10-7169  
Sample ID: 245147006  
Matrix: R  
Collect Date: 13-JAN-10 12:00  
Receive Date: 20-JAN-10  
Collector: Client  
Moisture: 8.93%

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	74.7	275	ug/kg	1	AXC2	01/27/10	1403	944392	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	01/26/10	1606	944391

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

# **Quality Control Summary**

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: February 8, 2010

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

Contact: Ms. Joylene Valdez

Workorder: 245147

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Flow Injection Analysis</b>											
Batch	944392										
QC1202022249	245136001	DUP									
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	01/27/10	13:32
QC1202022250	245136002	DUP									
Cyanide, Total		U	ND	J	153	ug/kg	200	(+/-265)		01/27/10	13:39
QC1202022255	LCS										
Cyanide, Total	67900				74000	ug/kg	109	(46%-145%)		01/27/10	13:30
QC1202022248	MB										
Cyanide, Total			U		250	ug/kg				01/27/10	13:29
QC1202022251	245136001	MS									
Cyanide, Total	6180	U	ND		5950	ug/kg	96	(50%-130%)		01/27/10	13:36
QC1202022252	245136002	MS									
Cyanide, Total	5900	U	ND		6080	ug/kg	103	(50%-130%)		01/27/10	13:40
QC1202022253	245136001	MSD									
Cyanide, Total	5730	U	ND		5560	ug/kg	6.72	96.8	(0%-30%)	01/27/10	13:37
QC1202022254	245136002	MSD									
Cyanide, Total	5690	U	ND		5520	ug/kg	9.67	96.8	(0%-30%)	01/27/10	13:41
Batch	944401										
QC1202022283	245147008	DUP									
Cyanide, Total		J	139	U	ND	ug/kg	200 ^		AXC2	01/26/10	09:21
QC1202022284	245147009	DUP									
Cyanide, Total		J	93.0	U	ND	ug/kg	200 ^			01/26/10	09:25
QC1202022289	LCS										
Cyanide, Total	67900				60500	ug/kg	89.1	(46%-145%)		01/26/10	09:08
QC1202022282	MB										
Cyanide, Total			U		250	ug/kg				01/26/10	09:07
QC1202022285	245147008	MS									
Cyanide, Total	7310	J	139		7300	ug/kg	98	(50%-130%)		01/26/10	09:22
QC1202022286	245147009	MS									
Cyanide, Total	5400	J	93.0		5250	ug/kg	95.5	(50%-130%)		01/26/10	09:26
QC1202022287	245147008	MSD									
Cyanide, Total	7160	J	139		7120	ug/kg	2.48	97.5	(0%-30%)	01/26/10	09:23
QC1202022288	245147009	MSD									
Cyanide, Total	5400	J	93.0		5340	ug/kg	1.73	97.2	(0%-30%)	01/26/10	09:26

### 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: 245147

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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: 08-FEB-2010 18:17

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1306

Flow Injection Analysis

Method: SW846 9012A

Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	26-JAN-2010 09:01:56	OM_1-26-2010_08-51-25	147	150	98	(90%-110%)	Yes
CCV	26-JAN-2010 09:16:14	OM_1-26-2010_08-51-25	101	100	101	(90%-110%)	Yes
CCV	26-JAN-2010 09:28:40	OM_1-26-2010_08-51-25	103	100	103	(90%-110%)	Yes
CCV	26-JAN-2010 10:00:18	OM_1-26-2010_09-58-45	102	100	102	(90%-110%)	Yes
CCV	26-JAN-2010 10:12:41	OM_1-26-2010_09-58-45	101	100	101	(90%-110%)	Yes
CCV	26-JAN-2010 10:25:10	OM_1-26-2010_09-58-45	102	100	102	(90%-110%)	Yes
ICV	27-JAN-2010 13:18:50	OM_1-27-2010_13-08-21	149	150	99	(90%-110%)	Yes
CCV	27-JAN-2010 13:33:07	OM_1-27-2010_13-08-21	100	100	100	(90%-110%)	Yes
CCV	27-JAN-2010 13:45:31	OM_1-27-2010_13-08-21	100	100	100	(90%-110%)	Yes
CCV	27-JAN-2010 13:57:54	OM_1-27-2010_13-08-21	101	100	101	(90%-110%)	Yes
CCV	27-JAN-2010 14:10:25	OM_1-27-2010_13-08-21	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	26-JAN-2010 09:03:46	OM_1-26-2010_08-51-25	-1.27	5	Yes
CCB	26-JAN-2010 09:18:04	OM_1-26-2010_08-51-25	-1.21	5	Yes
CCB	26-JAN-2010 09:30:29	OM_1-26-2010_08-51-25	-1.63	5	Yes
CCB	26-JAN-2010 10:02:07	OM_1-26-2010_09-58-45	2.83	5	Yes
CCB	26-JAN-2010 10:14:31	OM_1-26-2010_09-58-45	-1.42	5	Yes
CCB	26-JAN-2010 10:27:00	OM_1-26-2010_09-58-45	-1.45	5	Yes
ICB	27-JAN-2010 13:20:39	OM_1-27-2010_13-08-21	-0.897	5	Yes
CCB	27-JAN-2010 13:34:57	OM_1-27-2010_13-08-21	-1.05	5	Yes
CCB	27-JAN-2010 13:47:22	OM_1-27-2010_13-08-21	-0.915	5	Yes
CCB	27-JAN-2010 13:59:44	OM_1-27-2010_13-08-21	-1.25	5	Yes
CCB	27-JAN-2010 14:12:15	OM_1-27-2010_13-08-21	-1.23	5	Yes

# Cyanide, Total

# Prep LogBook

Analyst: AXS5  
 Batch: 944400  
 Lab SOP: GL-GC-E-067 REV# 13

Verified by: \_\_\_\_\_

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202022289	URF1200957-01	.25	g
MS	1202022285	URF1184831-02	.025	mL
MS	1202022286	URF1184831-02	.025	mL
MSD	1202022287	URF1184831-02	.025	mL
MSD	1202022288	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202022282		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.5 g	25 mL	50	SOIL
LCS	1202022289		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.25 g	25 mL	100	SOIL
SAMPLE	245113001		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245113002		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245113003		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	245113004		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245113005		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	245113006		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245113007		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245113009		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	245113010		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245147008		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.53 g	25 mL	47.16981	SOIL
DUP	1202022283	245147008	SW846 9010B Prep	25-JAN-2010 16:02	>12	0.51 g	25 mL	49.01961	SOIL
MS	1202022285	245147008	SW846 9010B Prep	25-JAN-2010 16:02	>12	0.5 g	25 mL	50	SOIL
MSD	1202022287	245147008	SW846 9010B Prep	25-JAN-2010 16:02	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	245147009		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1202022284	245147009	SW846 9010B Prep	25-JAN-2010 16:02	>12	0.57 g	25 mL	43.85965	SOIL
MS	1202022286	245147009	SW846 9010B Prep	25-JAN-2010 16:02	>12	0.5 g	25 mL	50	SOIL
MSD	1202022288	245147009	SW846 9010B Prep	25-JAN-2010 16:02	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245147010		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245147011		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245147012		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	245147013		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.5 g	25 mL	50	SOIL
SAMPLE	245147014		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	245147015		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	245147016		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	245147017		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	245147018		SW846 9010B Prep	25-JAN-2010 16:02	>12	0.58 g	25 mL	43.10345	SOIL

# Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
0912111-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100125-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1238146-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

# Prep LogBook

Analyst: AXS5 Verified by: \_\_\_\_\_

Batch: 944391

Lab SOP: GL-GC-E-067 REV# 13

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202022248		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.5 g	25 mL	50	25	g
LCS	1202022255		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.25 g	25 mL	100	.025	mL
SAMPLE	245136001		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.51 g	25 mL	49.01961	.025	mL
DUP	1202022249	245136001	SW846 9010B Prep	26-JAN-2010 16:06	>12	0.51 g	25 mL	49.01961	.025	mL
MS	1202022251	245136001	SW846 9010B Prep	26-JAN-2010 16:06	>12	0.55 g	25 mL	45.45455	.025	mL
MSD	1202022253	245136001	SW846 9010B Prep	26-JAN-2010 16:06	>12	0.56 g	25 mL	44.64286	.025	mL
SAMPLE	245136002		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.58 g	25 mL	43.10345	.025	mL
DUP	1202022250	245136002	SW846 9010B Prep	26-JAN-2010 16:06	>12	0.52 g	25 mL	48.07692	.025	mL
MS	1202022252	245136002	SW846 9010B Prep	26-JAN-2010 16:06	>12	0.54 g	25 mL	46.2963	.025	mL
MSD	1202022254	245136002	SW846 9010B Prep	26-JAN-2010 16:06	>12	0.51 g	25 mL	49.01961	.025	mL
SAMPLE	245136003		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.56 g	25 mL	44.64286	.025	mL
SAMPLE	245136004		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245136005		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.55 g	25 mL	45.45455	.025	mL
SAMPLE	245136006		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.55 g	25 mL	45.45455	.025	mL
SAMPLE	245136007		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245136008		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.51 g	25 mL	49.01961	.025	mL
SAMPLE	245136009		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.52 g	25 mL	48.07692	.025	mL
SAMPLE	245136010		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.58 g	25 mL	43.10345	.025	mL
SAMPLE	245136011		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245136012		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.51 g	25 mL	49.01961	.025	mL
SAMPLE	245136013		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.52 g	25 mL	48.07692	.025	mL
SAMPLE	245147001		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.58 g	25 mL	43.10345	.025	mL
SAMPLE	245147002		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.52 g	25 mL	48.07692	.025	mL
SAMPLE	245147003		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.52 g	25 mL	48.07692	.025	mL
SAMPLE	245147004		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.52 g	25 mL	48.07692	.025	mL
SAMPLE	245147005		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245147006		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245147007		SW846 9010B Prep	26-JAN-2010 16:06	>12	0.53 g	25 mL	47.16981	.025	mL

Prep Data Logbook Version 1:1

GEL Laboratories LLC

Page#

**Prep LogBook**

Reagent/Solvent Lot ID	Amount	Description	Comments
091211-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100126-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1260189-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/26/2010 8:54:47	OM_1-26-2010_08-51-25
150 ppb		1	axc2	1/26/2010 8:55:39	OM_1-26-2010_08-51-25
100 ppb		1	axc2	1/26/2010 8:56:31	OM_1-26-2010_08-51-25
50 ppb		1	axc2	1/26/2010 8:57:24	OM_1-26-2010_08-51-25
10 ppb		1	axc2	1/26/2010 8:58:18	OM_1-26-2010_08-51-25
CRDL 5.0 ppb		1	axc2	1/26/2010 8:59:11	OM_1-26-2010_08-51-25
ICAL-00		1	axc2	1/26/2010 9:00:05	OM_1-26-2010_08-51-25
ICV		1	axc2	1/26/2010 9:01:56	OM_1-26-2010_08-51-25
ICB		1	axc2	1/26/2010 9:03:46	OM_1-26-2010_08-51-25
CRDL		1	axc2	1/26/2010 9:05:36	OM_1-26-2010_08-51-25
1202022282	944401	1	axc2	1/26/2010 9:07:26	OM_1-26-2010_08-51-25
1202022289	944401	25	axc2	1/26/2010 9:08:19	OM_1-26-2010_08-51-25
245113001	944401	1	axc2	1/26/2010 9:09:13	OM_1-26-2010_08-51-25
245113002	944401	1	axc2	1/26/2010 9:10:06	OM_1-26-2010_08-51-25
245113003	944401	1	axc2	1/26/2010 9:10:59	OM_1-26-2010_08-51-25
245113004	944401	1	axc2	1/26/2010 9:11:51	OM_1-26-2010_08-51-25
245113005	944401	1	axc2	1/26/2010 9:12:44	OM_1-26-2010_08-51-25
245113006	944401	1	axc2	1/26/2010 9:13:37	OM_1-26-2010_08-51-25
245113007	944401	1	axc2	1/26/2010 9:14:29	OM_1-26-2010_08-51-25
245113009	944401	1	axc2	1/26/2010 9:15:22	OM_1-26-2010_08-51-25
CCV		1	axc2	1/26/2010 9:16:14	OM_1-26-2010_08-51-25
CCB		1	axc2	1/26/2010 9:18:04	OM_1-26-2010_08-51-25
245113010	944401	1	axc2	1/26/2010 9:19:52	OM_1-26-2010_08-51-25
245147008	944401	1	axc2	1/26/2010 9:20:45	OM_1-26-2010_08-51-25
1202022283	944401	1	axc2	1/26/2010 9:21:36	OM_1-26-2010_08-51-25
1202022285	944401	1	axc2	1/26/2010 9:22:28	OM_1-26-2010_08-51-25
1202022287	944401	1	axc2	1/26/2010 9:23:20	OM_1-26-2010_08-51-25
245147009	944401	1	axc2	1/26/2010 9:24:13	OM_1-26-2010_08-51-25
1202022284	944401	1	axc2	1/26/2010 9:25:07	OM_1-26-2010_08-51-25
1202022286	944401	1	axc2	1/26/2010 9:26:00	OM_1-26-2010_08-51-25
1202022288	944401	1	axc2	1/26/2010 9:26:53	OM_1-26-2010_08-51-25
245147010	944401	1	axc2	1/26/2010 9:27:47	OM_1-26-2010_08-51-25
CCV		1	axc2	1/26/2010 9:28:40	OM_1-26-2010_08-51-25
CCB		1	axc2	1/26/2010 9:30:29	OM_1-26-2010_08-51-25
245147011*	944401	1	axc2	1/26/2010 9:32:18	OM_1-26-2010_08-51-25
245147012*	944401	1	axc2	1/26/2010 9:33:11	OM_1-26-2010_08-51-25
245147013*	944401	1	axc2	1/26/2010 9:34:04	OM_1-26-2010_08-51-25
245147014*	944401	1	axc2	1/26/2010 9:34:56	OM_1-26-2010_08-51-25
245147015*	944401	1	axc2	1/26/2010 9:35:49	OM_1-26-2010_08-51-25
245147016*	944401	1	axc2	1/26/2010 9:36:41	OM_1-26-2010_08-51-25
245147017*	944401	1	axc2	1/26/2010 9:37:33	OM_1-26-2010_08-51-25
245147018*	944401	1	axc2	1/26/2010 9:38:26	OM_1-26-2010_08-51-25
1202022256*	944394	1	axc2	1/26/2010 9:39:18	OM_1-26-2010_08-51-25
1202022263*	944394	1	axc2	1/26/2010 9:40:09	OM_1-26-2010_08-51-25
CCV		1	axc2	1/26/2010 9:41:02	OM_1-26-2010_08-51-25
CCB		1	axc2	1/26/2010 9:42:53	OM_1-26-2010_08-51-25

Original Run Filename: OM\_1-26-2010\_08-51-25.OMN created 1/26/2010 08:51:25  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-26-2010\_08-51-25.OMN last modified 1/26/2010 09:43:57  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100126-01	1	S1	200	8.68	1/26/2010@08:54:47			200 ppb
WCN100126-02	1	S2	150	6.65	1/26/2010@08:55:39			150 ppb
WCN100126-03	1	S3	100	4.23	1/26/2010@08:56:31			100 ppb
WCN100126-04	1	S4	50.0	2.33	1/26/2010@08:57:24			50 ppb
WCN100126-05	1	S5	10.0	0.535	1/26/2010@08:58:18			10 ppb
WCN100126-06	1	S6	5.00	0.332	1/26/2010@08:59:11			CRDL 5.0 ppb
WCN100126-08	1	S7	0.00	0.0443	1/26/2010@09:00:05			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99965 > 0.99500					
Message			Pass					
Action			Continue					
WCN100126-07	1	S8	147	6.42	1/26/2010@09:01:56			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-1.9 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-1.9 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100126-08	1	S7	-1.27	0.0330	1/26/2010@09:03:46			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.27 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.27 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100126-06	1	S6	5.62	0.330	1/26/2010@09:05:36			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.62 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.62 > 2.50					
Message			Pass					
Action			None					
1202022282 944401 MB	1	1	-1.64	0.0171	1/26/2010@09:07:26			
1202022289 LCS	1	2	24.2	1.13	1/26/2010@09:08:19		25.00	
245113001	1	3	12.9	0.642	1/26/2010@09:09:13			
245113002	1	4	0.109	0.0924	1/26/2010@09:10:06			
245113003	1	5	-0.503	0.0660	1/26/2010@09:10:59			
245113004	1	6	-0.778	0.0541	1/26/2010@09:11:51			
245113005	1	7	0.853	0.124	1/26/2010@09:12:44			
245113006	1	8	-0.727	0.0563	1/26/2010@09:13:37			
245113007	1	9	0.715	0.118	1/26/2010@09:14:29			
245113009	1	10	0.323	0.102	1/26/2010@09:15:22			
WCN100126-03	1	S3	101	4.46	1/26/2010@09:16:14			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			1.5 < 10.0					
Message			CCV Passed					

		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100126-08	1	S7	-1.21	0.0353	1/26/2010@09:18:04			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.21 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.21 > -5.00					
		Message	CCB Passed					
		Action	Continue					
245113010	1	11	0.237	0.0979	1/26/2010@09:19:52			
245147008	1	12	2.01	0.174	1/26/2010@09:20:45			
1202022283  DUP	1	13	0.898	0.126	1/26/2010@09:21:36			
1202022285  MS	1	14	99.9	4.39	1/26/2010@09:22:28			
1202022287  MSD	1	15	99.4	4.37	1/26/2010@09:23:20			
245147009	1	16	1.79	0.165	1/26/2010@09:24:13			
1202022284  DUP	1	17	0.819	0.123	1/26/2010@09:25:07			
1202022286  MS	1	18	97.2	4.28	1/26/2010@09:26:00			
1202022288  MSD	1	19	98.9	4.35	1/26/2010@09:26:53			
245147010	1	20	-0.567	0.0633	1/26/2010@09:27:47			
WCN100126-03	1	S3	103	4.50	1/26/2010@09:28:40			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100126-08	1	S7	-1.63	0.0175	1/26/2010@09:30:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.63 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.63 > -5.00					
		Message	CCB Passed					
		Action	Continue					
245147011	1	21	2.89	0.212	1/26/2010@09:32:18			
245147012	1	22	11.2	0.572	1/26/2010@09:33:11			
245147013	1	23	3.03	0.218	1/26/2010@09:34:04			
245147014	1	24	0.384	0.104	1/26/2010@09:34:56			
245147015	1	25	-0.655	0.0595	1/26/2010@09:35:49			
245147016	1	26	7.81	0.424	1/26/2010@09:36:41			
245147017	1	27	-0.657	0.0594	1/26/2010@09:37:33			
245147018	1	28	0.543	0.111	1/26/2010@09:38:26			
1202022256 944394 MB	1	29	-1.01	0.0440	1/26/2010@09:39:18			
1202022263  LCS	1	30	49.2	2.21	1/26/2010@09:40:09			
WCN100126-03	1	S3	103	4.54	1/26/2010@09:41:02			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	3.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	3.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100126-08	1	S7	5.78	0.337	1/26/2010@09:42:53			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								

Result:	5.78 > 5.00				
Message	CCB Failed				
Action	Stop Run				
DQM Test: < - Concentration Limit					
Result:	5.78 > -5.00				
Message	CCB Passed				
Action	Continue				

Analyte Properties Table for OM\_1-26-2010\_08-51-25.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

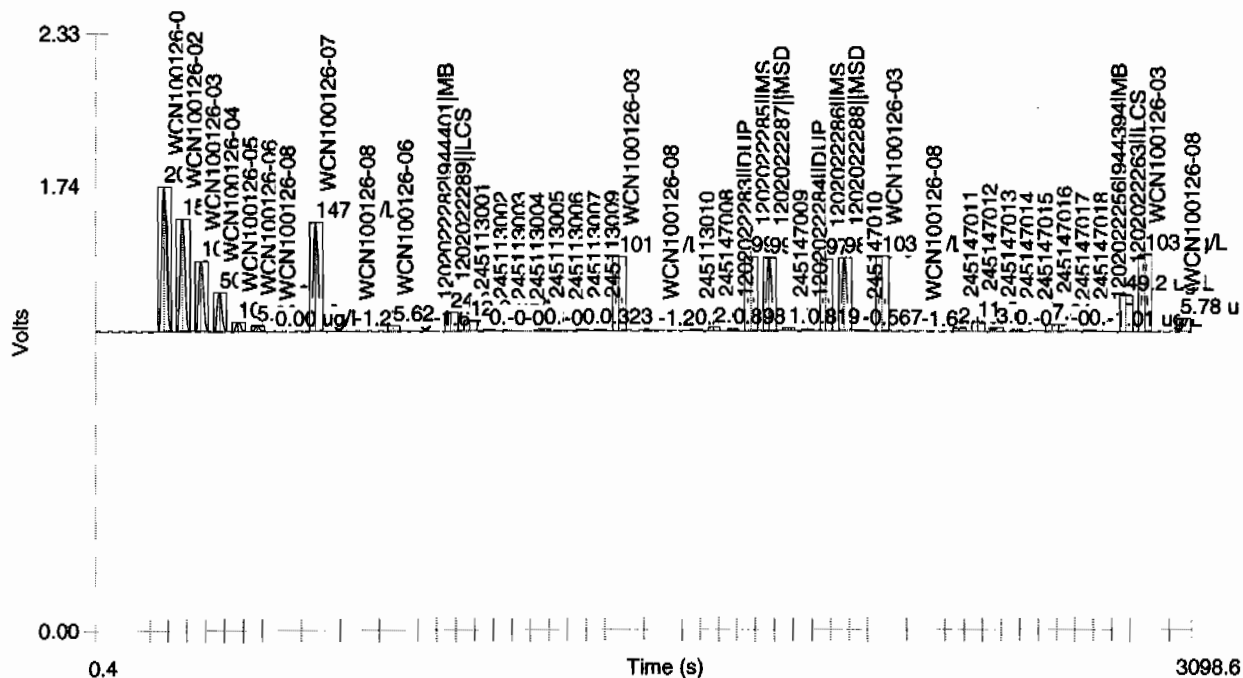
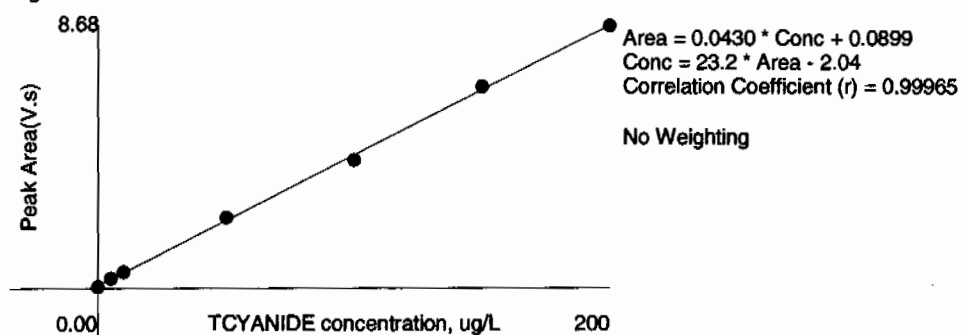


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.68	0.566	0.2	1/26/2010	08:55:50
2	150	1	6.65	0.437	-1.5	1/26/2010	08:56:42
3	100	1	4.23	0.275	3.8	1/26/2010	08:57:34
4	50.0	1	2.33	0.152	-3.8	1/26/2010	08:58:27
5	10.0	1	0.535	0.0337	-2.9	1/26/2010	08:59:21
6	5.00	1	0.332	0.0213	-8.8	1/26/2010	09:00:14
7	0.00	1	0.0443	8.65e-4		1/26/2010	09:01:08

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	1/26/2010 10:00:18	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:02:07	OM_1-26-2010_09-58-45
245147011	944401	1	axc2	1/26/2010 10:03:57	OM_1-26-2010_09-58-45
245147012	944401	1	axc2	1/26/2010 10:04:50	OM_1-26-2010_09-58-45
245147013	944401	1	axc2	1/26/2010 10:05:43	OM_1-26-2010_09-58-45
245147014	944401	1	axc2	1/26/2010 10:06:35	OM_1-26-2010_09-58-45
245147015	944401	1	axc2	1/26/2010 10:07:28	OM_1-26-2010_09-58-45
245147016	944401	1	axc2	1/26/2010 10:08:20	OM_1-26-2010_09-58-45
245147017	944401	1	axc2	1/26/2010 10:09:12	OM_1-26-2010_09-58-45
245147018	944401	1	axc2	1/26/2010 10:10:04	OM_1-26-2010_09-58-45
245147015	944401	1	axc2	1/26/2010 10:10:57	OM_1-26-2010_09-58-45
1202022256	944394	1	axc2	1/26/2010 10:11:49	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:12:41	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:14:31	OM_1-26-2010_09-58-45
245147017	944401	1	axc2	1/26/2010 10:16:19	OM_1-26-2010_09-58-45
1202022263	944394	1	axc2	1/26/2010 10:17:10	OM_1-26-2010_09-58-45
244447003	944394	1	axc2	1/26/2010 10:18:05	OM_1-26-2010_09-58-45
1202024087	944394	1	axc2	1/26/2010 10:18:58	OM_1-26-2010_09-58-45
1202024088	944394	1	axc2	1/26/2010 10:19:52	OM_1-26-2010_09-58-45
1202024089	944394	1	axc2	1/26/2010 10:20:45	OM_1-26-2010_09-58-45
245089001	944394	1	axc2	1/26/2010 10:21:39	OM_1-26-2010_09-58-45
245089002	944394	1	axc2	1/26/2010 10:22:32	OM_1-26-2010_09-58-45
245089003	944394	1	axc2	1/26/2010 10:23:25	OM_1-26-2010_09-58-45
245089004	944394	1	axc2	1/26/2010 10:24:18	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:25:10	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:27:00	OM_1-26-2010_09-58-45
245112001	944394	1	axc2	1/26/2010 10:28:48	OM_1-26-2010_09-58-45
245120001	944394	1	axc2	1/26/2010 10:29:41	OM_1-26-2010_09-58-45
245135001	944394	1	axc2	1/26/2010 10:30:34	OM_1-26-2010_09-58-45
245135002	944394	1	axc2	1/26/2010 10:31:26	OM_1-26-2010_09-58-45
245137001	944394	1	axc2	1/26/2010 10:32:18	OM_1-26-2010_09-58-45
1202022257	944394	1	axc2	1/26/2010 10:33:11	OM_1-26-2010_09-58-45
1202022259	944394	1	axc2	1/26/2010 10:34:02	OM_1-26-2010_09-58-45
1202022261	944394	1	axc2	1/26/2010 10:34:57	OM_1-26-2010_09-58-45
245137002	944394	1	axc2	1/26/2010 10:35:50	OM_1-26-2010_09-58-45
245137003	944394	1	axc2	1/26/2010 10:36:44	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:37:37	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:39:27	OM_1-26-2010_09-58-45
245142005	944394	1	axc2	1/26/2010 10:41:16	OM_1-26-2010_09-58-45
245175001	944394	1	axc2	1/26/2010 10:42:10	OM_1-26-2010_09-58-45
245175002	944394	1	axc2	1/26/2010 10:43:03	OM_1-26-2010_09-58-45
245175003	944394	1	axc2	1/26/2010 10:43:56	OM_1-26-2010_09-58-45
245185003	944394	1	axc2	1/26/2010 10:44:49	OM_1-26-2010_09-58-45
1202022258	944394	1	axc2	1/26/2010 10:45:43	OM_1-26-2010_09-58-45
1202022260	944394	1	axc2	1/26/2010 10:46:35	OM_1-26-2010_09-58-45
1202022262	944394	1	axc2	1/26/2010 10:47:27	OM_1-26-2010_09-58-45
245185014	944394	1	axc2	1/26/2010 10:48:20	OM_1-26-2010_09-58-45
245270001	944394	1	axc2	1/26/2010 10:49:12	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010 10:50:05	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010 10:51:54	OM_1-26-2010_09-58-45
1202020944	943824	1	axc2	1/26/2010 10:53:44	OM_1-26-2010_09-58-45
1202020948	943824	1	axc2	1/26/2010 10:54:36	OM_1-26-2010_09-58-45
245032001	943824	1	axc2	1/26/2010 10:55:30	OM_1-26-2010_09-58-45
245127001*	943824	1	axc2	1/26/2010 10:56:24	OM_1-26-2010_09-58-45
245130001	943824	1	axc2	1/26/2010 10:57:18	OM_1-26-2010_09-58-45
245323003	943824	1	axc2	1/26/2010 10:58:12	OM_1-26-2010_09-58-45
1202020945	943824	1	axc2	1/26/2010 10:59:06	OM_1-26-2010_09-58-45
1202020946	943824	1	axc2	1/26/2010 11:00:00	OM_1-26-2010_09-58-45

1202020947	943824	1	axc2	1/26/2010	11:00:53	OM_1-26-2010_09-58-45
245323014	943824	1	axc2	1/26/2010	11:01:46	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010	11:02:38	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010	11:04:28	OM_1-26-2010_09-58-45
245323025	943824	1	axc2	1/26/2010	11:06:17	OM_1-26-2010_09-58-45
245341001	943824	1	axc2	1/26/2010	11:07:10	OM_1-26-2010_09-58-45
245341003	943824	1	axc2	1/26/2010	11:08:03	OM_1-26-2010_09-58-45
245341005	943824	1	axc2	1/26/2010	11:08:55	OM_1-26-2010_09-58-45
245341007	943824	1	axc2	1/26/2010	11:09:48	OM_1-26-2010_09-58-45
245341009	943824	1	axc2	1/26/2010	11:10:40	OM_1-26-2010_09-58-45
245341010	943824	1	axc2	1/26/2010	11:11:32	OM_1-26-2010_09-58-45
245355007	943824	1	axc2	1/26/2010	11:12:27	OM_1-26-2010_09-58-45
245362002	943824	1	axc2	1/26/2010	11:13:21	OM_1-26-2010_09-58-45
245378002	943824	1	axc2	1/26/2010	11:14:16	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010	11:15:08	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010	11:16:58	OM_1-26-2010_09-58-45
1202023391	943824	1	axc2	1/26/2010	11:18:48	OM_1-26-2010_09-58-45
1202023392	943824	1	axc2	1/26/2010	11:19:41	OM_1-26-2010_09-58-45
1202023393	943824	1	axc2	1/26/2010	11:20:35	OM_1-26-2010_09-58-45
245382001	943824	1	axc2	1/26/2010	11:21:28	OM_1-26-2010_09-58-45
245386001	943824	1	axc2	1/26/2010	11:22:22	OM_1-26-2010_09-58-45
245127001	943824	1	axc2	1/26/2010	11:23:16	OM_1-26-2010_09-58-45
245390001	943824	1	axc2	1/26/2010	11:24:09	OM_1-26-2010_09-58-45
245392001	943824	1	axc2	1/26/2010	11:25:03	OM_1-26-2010_09-58-45
245392002	943824	1	axc2	1/26/2010	11:25:55	OM_1-26-2010_09-58-45
CCV		1	axc2	1/26/2010	11:26:48	OM_1-26-2010_09-58-45
CCB		1	axc2	1/26/2010	11:28:38	OM_1-26-2010_09-58-45

Original Run Filename: OM\_1-26-2010\_09-58-45.OMN created 1/26/2010 09:58:45  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-26-2010\_09-58-45.OMN last modified 1/26/2010 11:29:43  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE	Area				
			Conc. (ug/L)	(Vs)				
WCN100126-03	1	S3	102	4.46	1/26/2010@10:00:18			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			1.6 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			1.6 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100126-08	1	S7	2.83	0.210	1/26/2010@10:02:07			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			2.83 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			2.83 > -5.00					
Message			CCB Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
245147011 944401	1	21	2.95	0.215	1/26/2010@10:03:57			
245147012	1	22	11.6	0.586	1/26/2010@10:04:50			
245147013	1	23	3.64	0.245	1/26/2010@10:05:43			
245147014	1	24	0.385	0.104	1/26/2010@10:06:35			
245147015	1	25	2.58	0.199	1/26/2010@10:07:28			
245147016	1	26	8.00	0.432	1/26/2010@10:08:20			
245147017	1	27	3.47	0.237	1/26/2010@10:09:12			
245147018	1	28	1.87	0.168	1/26/2010@10:10:04			
245147015	1	25	0.130	0.0933	1/26/2010@10:10:57			
1202022256 944394 MB	1	29	-0.422	0.0695	1/26/2010@10:11:49			
WCN100126-03	1	S3	101	4.45	1/26/2010@10:12:41			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			1.2 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			1.2 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100126-08	1	S7	-1.42	0.0263	1/26/2010@10:14:31			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.42 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.42 > -5.00					
Message			CCB Passed					
Action			Continue					
245147017 944401	1	27	-0.706	0.0572	1/26/2010@10:16:19			
1202022263 944394 LCS	1	30	49.7	2.23	1/26/2010@10:17:10			
244447003	1	31	-1.57	0.0199	1/26/2010@10:18:05			
1202024087 DUP	1	32	-1.41	0.0270	1/26/2010@10:18:58			
1202024088 MS	1	33	107	4.68	1/26/2010@10:19:52			
1202024089 MSD	1	34	104	4.55	1/26/2010@10:20:45			

245089001	1	35	-1.51	0.0226	1/26/2010@10:21:39			
245089002	1	36	-1.45	0.0252	1/26/2010@10:22:32			
245089003	1	37	-1.32	0.0307	1/26/2010@10:23:25			
245089004	1	38	-1.41	0.0271	1/26/2010@10:24:18			
WCN100126-03	1	S3	102	4.48	1/26/2010@10:25:10			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			2.0 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			2.0 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100126-08	1	S7	-1.45	0.0252	1/26/2010@10:27:00			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.45 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.45 > -5.00					
Message			CCB Passed					
Action			Continue					
245112001	1	39	-1.32	0.0309	1/26/2010@10:28:48			
245120001	1	40	-1.68	0.0151	1/26/2010@10:29:41			
245135001	1	41	-1.58	0.0196	1/26/2010@10:30:34			
245135002	1	42	-1.93	0.00472	1/26/2010@10:31:26			
245137001	1	43	-1.47	0.0245	1/26/2010@10:32:18			
1202022257  DUP	1	44	-1.40	0.0273	1/26/2010@10:33:11			
1202022259  MS	1	45	105	4.60	1/26/2010@10:34:02			
1202022261  MSD	1	46	102	4.48	1/26/2010@10:34:57			
245137002	1	47	-0.835	0.0517	1/26/2010@10:35:50			
245137003	1	48	-1.51	0.0224	1/26/2010@10:36:44			
WCN100126-03	1	S3	101	4.45	1/26/2010@10:37:37			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			1.2 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			1.2 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100126-08	1	S7	-1.77	0.0114	1/26/2010@10:39:27			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.77 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.77 > -5.00					
Message			CCB Passed					
Action			Continue					
245142005	1	49	-0.822	0.0523	1/26/2010@10:41:16			
245175001	1	50	1.04	0.132	1/26/2010@10:42:10			
245175002	1	51	16.2	0.787	1/26/2010@10:43:03			
245175003	1	52	2.88	0.212	1/26/2010@10:43:56			
245185003	1	53	-7.41e-4	0.0876	1/26/2010@10:44:49			
1202022258  DUP	1	54	-1.09	0.0406	1/26/2010@10:45:43			
1202022260  MS	1	55	106	4.67	1/26/2010@10:46:35			
1202022262  MSD	1	56	105	4.62	1/26/2010@10:47:27			
245185014	1	57	-0.743	0.0557	1/26/2010@10:48:20			
245270001	1	58	8.01	0.433	1/26/2010@10:49:12			
WCN100126-03	1	S3	102	4.46	1/26/2010@10:50:05			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			1.6 < 10.0					

Message						
Action						
DQM Test: < - Percent Relative Difference						
Result: 1.6 < 10.0						
Message						
Action						
WCN100126-08	1	S7	-1.71	0.0141	1/26/2010@10:51:54	CCB
Known Conc: 0.00						
DQM Test: > + Concentration Limit						
Result: -1.71 < 5.00						
Message						
Action						
DQM Test: < - Concentration Limit						
Result: -1.71 > -5.00						
Message						
Action						
1202020944 943824 MB	1	59	-1.90	0.00597	1/26/2010@10:53:44	
1202020948 LCS	1	60	50.5	2.26	1/26/2010@10:54:36	
245032001	1	61	-0.813	0.0526	1/26/2010@10:55:30	
245127001	1	62	5.79	0.337	1/26/2010@10:56:24	
245130001	1	63	-1.19	0.0366	1/26/2010@10:57:18	
245323003	1	64	-1.30	0.0316	1/26/2010@10:58:12	
1202020945 DUP	1	65	-1.49	0.0236	1/26/2010@10:59:06	
1202020946 MS	1	66	107	4.70	1/26/2010@11:00:00	
1202020947 MSD	1	67	107	4.69	1/26/2010@11:00:53	
245323014	1	68	-1.45	0.0252	1/26/2010@11:01:46	
WCN100126-03	1	S3	101	4.46	1/26/2010@11:02:38	CCV
Known Conc: 100						
DQM Test: > + Percent Relative Difference						
Result: 1.5 < 10.0						
Message						
Action						
DQM Test: < - Percent Relative Difference						
Result: 1.5 < 10.0						
Message						
Action						
WCN100126-08	1	S7	-1.27	0.0331	1/26/2010@11:04:28	CCB
Known Conc: 0.00						
DQM Test: > + Concentration Limit						
Result: -1.27 < 5.00						
Message						
Action						
DQM Test: < - Concentration Limit						
Result: -1.27 > -5.00						
Message						
Action						
245323025	1	69	-1.07	0.0417	1/26/2010@11:06:17	
245341001	1	70	-0.612	0.0613	1/26/2010@11:07:10	
245341003	1	71	-1.34	0.0299	1/26/2010@11:08:03	
245341005	1	72	-1.33	0.0302	1/26/2010@11:08:55	
245341007	1	73	-1.74	0.0128	1/26/2010@11:09:48	
245341009	1	74	-1.57	0.0201	1/26/2010@11:10:40	
245341010	1	75	-1.09	0.0408	1/26/2010@11:11:32	
245355007	1	76	-0.933	0.0475	1/26/2010@11:12:27	
245362002	1	77	0.794	0.122	1/26/2010@11:13:21	
245378002	1	78	-0.745	0.0556	1/26/2010@11:14:16	
WCN100126-03	1	S3	102	4.47	1/26/2010@11:15:08	CCV
Known Conc: 100						
DQM Test: > + Percent Relative Difference						
Result: 1.8 < 10.0						
Message						
Action						
DQM Test: < - Percent Relative Difference						
Result: 1.8 < 10.0						
Message						
Action						
WCN100126-08	1	S7	-1.40	0.0274	1/26/2010@11:16:58	CCB
Known Conc: 0.00						

DQM Test: > + Concentration Limit						
Result:		-1.40 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.40 > -5.00				
Message		CCB Passed				
Action		Continue				
1202023391	DUP	1	79	-1.50	0.0229	1/26/2010@11:18:48
1202023392	MS	1	80	104	4.57	1/26/2010@11:19:41
1202023393	MSD	1	81	104	4.57	1/26/2010@11:20:35
245382001		1	82	-1.27	0.0331	1/26/2010@11:21:28
245386001		1	83	-2.03	2.70e-4	1/26/2010@11:22:22
245127001		1	62	-0.758	0.0550	1/26/2010@11:23:16
245390001		1	84	-1.68	0.0154	1/26/2010@11:24:09
245392001		1	85	-1.33	0.0306	1/26/2010@11:25:03
245392002		1	86	-1.86	0.00771	1/26/2010@11:25:55
WCN100126-03		1	S3	101	4.44	1/26/2010@11:26:48
Known Conc:		100				CCV
DQM Test: > + Percent Relative Difference						
Result:		1.0 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		1.0 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100126-08		1	S7	-1.17	0.0373	1/26/2010@11:28:38
Known Conc:		0.00				CCB
DQM Test: > + Concentration Limit						
Result:		-1.17 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-1.17 > -5.00				
Message		CCB Passed				
Action		Continue				

Analyte Properties Table for OM\_1-26-2010\_09-58-45.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

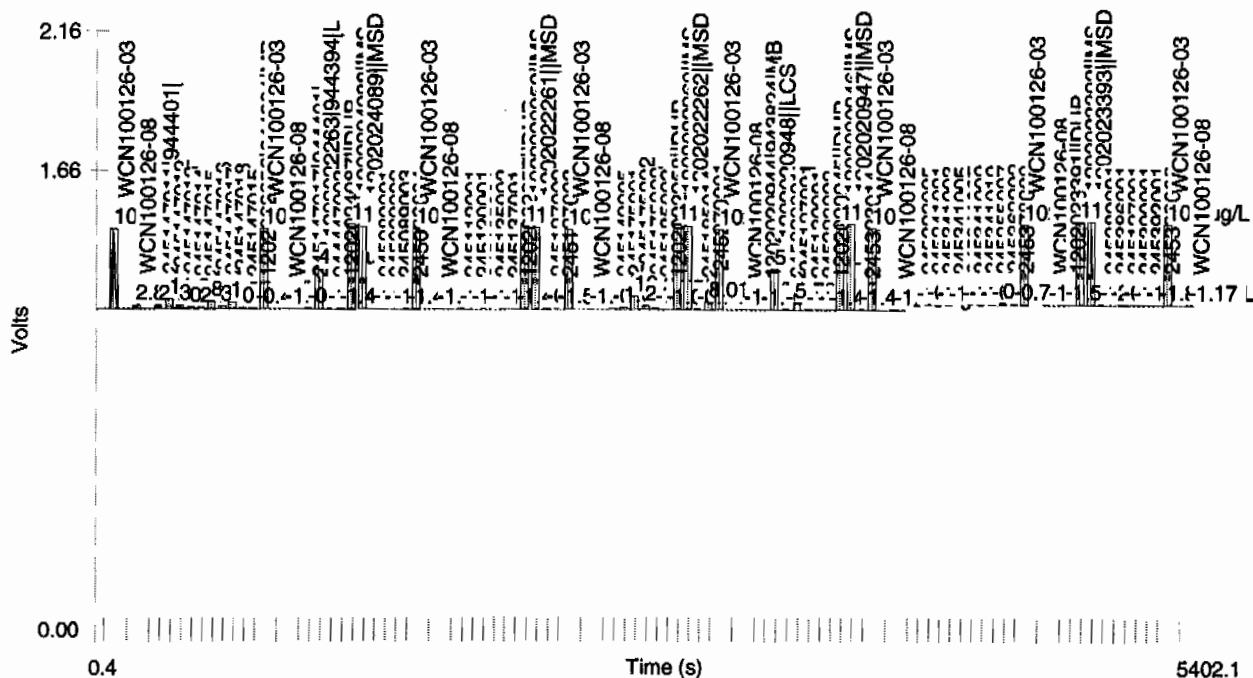
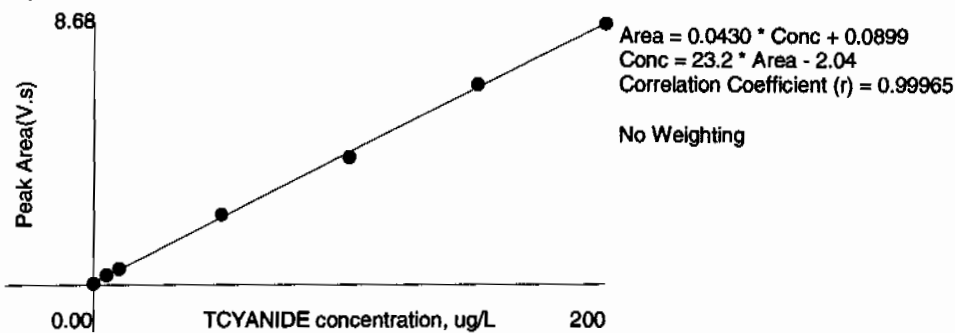


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.68	0.566	0.2	1/26/2010	08:55:50
2	150	1	6.65	0.437	-1.5	1/26/2010	08:56:42
3	100	1	4.23	0.275	3.8	1/26/2010	08:57:34
4	50.0	1	2.33	0.152	-3.8	1/26/2010	08:58:27
5	10.0	1	0.535	0.0337	-2.9	1/26/2010	08:59:21
6	5.00	1	0.332	0.0213	-8.8	1/26/2010	09:00:14
7	0.00	1	0.0443	8.65e-4		1/26/2010	09:01:08

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/27/2010 13:11:41	OM_1-27-2010_13-08-21
150 ppb		1	axc2	1/27/2010 13:12:33	OM_1-27-2010_13-08-21
100 ppb		1	axc2	1/27/2010 13:13:25	OM_1-27-2010_13-08-21
50 ppb		1	axc2	1/27/2010 13:14:18	OM_1-27-2010_13-08-21
10 ppb		1	axc2	1/27/2010 13:15:11	OM_1-27-2010_13-08-21
CRDL 5.0 ppb		1	axc2	1/27/2010 13:16:05	OM_1-27-2010_13-08-21
ICAL-00		1	axc2	1/27/2010 13:16:59	OM_1-27-2010_13-08-21
ICV		1	axc2	1/27/2010 13:18:50	OM_1-27-2010_13-08-21
ICB		1	axc2	1/27/2010 13:20:39	OM_1-27-2010_13-08-21
CRDL		1	axc2	1/27/2010 13:22:29	OM_1-27-2010_13-08-21
1202024544	945298	1	axc2	1/27/2010 13:24:19	OM_1-27-2010_13-08-21
1202024545	945298	25	axc2	1/27/2010 13:25:12	OM_1-27-2010_13-08-21
244519001	945298	1	axc2	1/27/2010 13:26:05	OM_1-27-2010_13-08-21
1202015101	945298	1	axc2	1/27/2010 13:26:58	OM_1-27-2010_13-08-21
1202015103	945298	1	axc2	1/27/2010 13:27:51	OM_1-27-2010_13-08-21
1202015105	945298	1	axc2	1/27/2010 13:28:44	OM_1-27-2010_13-08-21
1202022248	944392	1	axc2	1/27/2010 13:29:37	OM_1-27-2010_13-08-21
1202022255	944392	25	axc2	1/27/2010 13:30:29	OM_1-27-2010_13-08-21
245136001	944392	1	axc2	1/27/2010 13:31:22	OM_1-27-2010_13-08-21
1202022249	944392	1	axc2	1/27/2010 13:32:14	OM_1-27-2010_13-08-21
CCV		1	axc2	1/27/2010 13:33:07	OM_1-27-2010_13-08-21
CCB		1	axc2	1/27/2010 13:34:57	OM_1-27-2010_13-08-21
1202022251	944392	1	axc2	1/27/2010 13:36:45	OM_1-27-2010_13-08-21
1202022253	944392	1	axc2	1/27/2010 13:37:36	OM_1-27-2010_13-08-21
245136002	944392	1	axc2	1/27/2010 13:38:28	OM_1-27-2010_13-08-21
1202022250	944392	1	axc2	1/27/2010 13:39:20	OM_1-27-2010_13-08-21
1202022252	944392	1	axc2	1/27/2010 13:40:11	OM_1-27-2010_13-08-21
1202022254	944392	1	axc2	1/27/2010 13:41:05	OM_1-27-2010_13-08-21
245136003	944392	1	axc2	1/27/2010 13:41:59	OM_1-27-2010_13-08-21
245136004	944392	1	axc2	1/27/2010 13:42:53	OM_1-27-2010_13-08-21
245136005	944392	1	axc2	1/27/2010 13:43:46	OM_1-27-2010_13-08-21
245136006	944392	1	axc2	1/27/2010 13:44:39	OM_1-27-2010_13-08-21
CCV		1	axc2	1/27/2010 13:45:31	OM_1-27-2010_13-08-21
CCB		1	axc2	1/27/2010 13:47:22	OM_1-27-2010_13-08-21
245136007	944392	1	axc2	1/27/2010 13:49:10	OM_1-27-2010_13-08-21
245136008	944392	1	axc2	1/27/2010 13:50:04	OM_1-27-2010_13-08-21
245136009	944392	1	axc2	1/27/2010 13:50:56	OM_1-27-2010_13-08-21
245136010	944392	1	axc2	1/27/2010 13:51:49	OM_1-27-2010_13-08-21
245136011	944392	1	axc2	1/27/2010 13:52:41	OM_1-27-2010_13-08-21
245136012	944392	1	axc2	1/27/2010 13:53:34	OM_1-27-2010_13-08-21
245136013	944392	1	axc2	1/27/2010 13:54:26	OM_1-27-2010_13-08-21
245147001	944392	1	axc2	1/27/2010 13:55:18	OM_1-27-2010_13-08-21
245147002	944392	1	axc2	1/27/2010 13:56:10	OM_1-27-2010_13-08-21
245147003	944392	1	axc2	1/27/2010 13:57:02	OM_1-27-2010_13-08-21
CCV		1	axc2	1/27/2010 13:57:54	OM_1-27-2010_13-08-21
CCB		1	axc2	1/27/2010 13:59:44	OM_1-27-2010_13-08-21
245147004	944392	1	axc2	1/27/2010 14:01:35	OM_1-27-2010_13-08-21
245147005	944392	1	axc2	1/27/2010 14:02:28	OM_1-27-2010_13-08-21
245147006	944392	1	axc2	1/27/2010 14:03:22	OM_1-27-2010_13-08-21
245147007	944392	1	axc2	1/27/2010 14:04:15	OM_1-27-2010_13-08-21
1202017584	942470	1	axc2	1/27/2010 14:05:08	OM_1-27-2010_13-08-21
1202017588	942470	25	axc2	1/27/2010 14:06:01	OM_1-27-2010_13-08-21
244899017	942470	1	axc2	1/27/2010 14:06:54	OM_1-27-2010_13-08-21
1202017585	942470	1	axc2	1/27/2010 14:07:47	OM_1-27-2010_13-08-21
1202017586	942470	1	axc2	1/27/2010 14:08:40	OM_1-27-2010_13-08-21
1202017587	942470	1	axc2	1/27/2010 14:09:32	OM_1-27-2010_13-08-21
CCV		1	axc2	1/27/2010 14:10:25	OM_1-27-2010_13-08-21
CCB		1	axc2	1/27/2010 14:12:15	OM_1-27-2010_13-08-21

244899018*	942470	1	axc2	1/27/2010	14:14:04	OM_1-27-2010_13-08-21
244899019*	942470	1	axc2	1/27/2010	14:14:56	OM_1-27-2010_13-08-21
244899020*	942470	1	axc2	1/27/2010	14:15:48	OM_1-27-2010_13-08-21
244902001*	942470	1	axc2	1/27/2010	14:16:40	OM_1-27-2010_13-08-21
1202022245*	942470	1	axc2	1/27/2010	14:17:32	OM_1-27-2010_13-08-21
1202022246*	942470	1	axc2	1/27/2010	14:18:27	OM_1-27-2010_13-08-21
1202022247*	942470	1	axc2	1/27/2010	14:19:20	OM_1-27-2010_13-08-21
245092001*	942470	1	axc2	1/27/2010	14:20:14	OM_1-27-2010_13-08-21
245092002*	942470	1	axc2	1/27/2010	14:21:08	OM_1-27-2010_13-08-21
245092003*	942470	1	axc2	1/27/2010	14:22:01	OM_1-27-2010_13-08-21
CCV		1	axc2	1/27/2010	14:22:54	OM_1-27-2010_13-08-21

Original Run Filename: OM\_1-27-2010\_13-08-21.OMN created 1/27/2010 13:08:21  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-27-2010\_13-08-21.OMN last modified 1/27/2010 14:24:00  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE Conc. (ug/L)	Area (Vs)				
WCN100127-01	1	S1	200	8.60	1/27/2010@13:11:41			200 ppb
WCN100127-02	1	S2	150	6.55	1/27/2010@13:12:33			150 ppb
WCN100127-03	1	S3	100	4.12	1/27/2010@13:13:25			100 ppb
WCN100127-04	1	S4	50.0	2.28	1/27/2010@13:14:18			50 ppb
WCN100127-05	1	S5	10.0	0.546	1/27/2010@13:15:11			10 ppb
WCN100127-06	1	S6	5.00	0.337	1/27/2010@13:16:05			CRDL 5.0 ppb
WCN100127-08	1	S7	0.00	0.0388	1/27/2010@13:16:59			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99952 > 0.99500					
Message			Pass					
Action			Continue					
WCN100127-07	1	S8	149	6.41	1/27/2010@13:18:50			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-0.7 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-0.7 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100127-08	1	S7	-0.897	0.0423	1/27/2010@13:20:39			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.897 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.897 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100127-06	1	S6	6.11	0.340	1/27/2010@13:22:29			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			6.11 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			6.11 > 2.50					
Message			Pass					
Action			None					
1202024544 945298 MB	1	1	-1.48	0.0176	1/27/2010@13:24:19			
1202024545 LCS	1	2	29.9	1.35	1/27/2010@13:25:12		25.00	
244519001	1	3	1.67	0.152	1/27/2010@13:26:05			
1202015101 DUP	1	4	0.824	0.115	1/27/2010@13:26:58			
1202015103 MS	1	5	97.7	4.24	1/27/2010@13:27:51			
1202015105 MSD	1	6	99.0	4.29	1/27/2010@13:28:44			
1202022248 944392 MB	1	7	-1.05	0.0358	1/27/2010@13:29:37			
1202022255 LCS	1	8	29.6	1.34	1/27/2010@13:30:29		25.00	
245136001	1	9	0.313	0.0938	1/27/2010@13:31:22			
1202022249 DUP	1	10	0.563	0.104	1/27/2010@13:32:14			
WCN100127-03	1	S3	100	4.33	1/27/2010@13:33:07			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-0.0 < 10.0					
Message			CCV Passed					

		Action	Continue						
DQM Test: < - Percent Relative Difference									
		Result:	-0.0 < 10.0						
		Message	CCV Passed						
		Action	Continue						
WCN100127-08	1	S7	-1.05	0.0360	1/27/2010@13:34:57				CCB
		Known Conc:	0.00						
DQM Test: > + Concentration Limit									
		Result:	-1.05 < 5.00						
		Message	CCB Passed						
		Action	Continue						
DQM Test: < - Concentration Limit									
		Result:	-1.05 > -5.00						
		Message	CCB Passed						
		Action	Continue						
1202022251	MS	1	11	96.3	4.18	1/27/2010@13:36:45			
1202022253	MSD	1	12	97.1	4.21	1/27/2010@13:37:36			
245136002		1	13	0.263	0.0916	1/27/2010@13:38:28			
1202022250	DUP	1	14	2.89	0.203	1/27/2010@13:39:20			
1202022252	MS	1	15	103	4.45	1/27/2010@13:40:11			
1202022254	MSD	1	16	97.1	4.21	1/27/2010@13:41:05			
245136003		1	17	0.547	0.104	1/27/2010@13:41:59			
245136004		1	18	-0.464	0.0607	1/27/2010@13:42:53			
245136005		1	19	2.02	0.166	1/27/2010@13:43:46			
245136006		1	20	-5.99	-0.174	1/27/2010@13:44:39			
WCN100127-03	1	S3	100	4.34	1/27/2010@13:45:31				CCV
		Known Conc:	100						
DQM Test: > + Percent Relative Difference									
		Result:	0.2 < 10.0						
		Message	CCV Passed						
		Action	Continue						
DQM Test: < - Percent Relative Difference									
		Result:	0.2 < 10.0						
		Message	CCV Passed						
		Action	Continue						
WCN100127-08	1	S7	-0.915	0.0415	1/27/2010@13:47:22				CCB
		Known Conc:	0.00						
DQM Test: > + Concentration Limit									
		Result:	-0.915 < 5.00						
		Message	CCB Passed						
		Action	Continue						
DQM Test: < - Concentration Limit									
		Result:	-0.915 > -5.00						
		Message	CCB Passed						
		Action	Continue						
245136007	1	21	0.467	0.100	1/27/2010@13:49:10				
245136008	1	22	0.214	0.0896	1/27/2010@13:50:04				
245136009	1	23	0.582	0.105	1/27/2010@13:50:56				
245136010	1	24	2.36	0.181	1/27/2010@13:51:49				
245136011	1	25	3.87	0.245	1/27/2010@13:52:41				
245136012	1	26	-0.0592	0.0779	1/27/2010@13:53:34				
245136013	1	27	1.06	0.125	1/27/2010@13:54:26				
245147001	1	28	-1.01	0.0373	1/27/2010@13:55:18				
245147002	1	29	-0.604	0.0547	1/27/2010@13:56:10				
245147003	1	30	1.14	0.129	1/27/2010@13:57:02				
WCN100127-03	1	S3	101	4.39	1/27/2010@13:57:54				CCV
		Known Conc:	100						
DQM Test: > + Percent Relative Difference									
		Result:	1.3 < 10.0						
		Message	CCV Passed						
		Action	Continue						
DQM Test: < - Percent Relative Difference									
		Result:	1.3 < 10.0						
		Message	CCV Passed						
		Action	Continue						
WCN100127-08	1	S7	-1.25	0.0272	1/27/2010@13:59:44				CCB
		Known Conc:	0.00						
DQM Test: > + Concentration Limit									

Result:			-1.25 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.25 > -5.00				
Message			CCB Passed				
Action			Continue				
245147004	1	31	-1.23	0.0281	1/27/2010@14:01:35		
245147005	1	32	-0.965	0.0394	1/27/2010@14:02:28		
245147006	1	33	-0.840	0.0447	1/27/2010@14:03:22		
245147007	1	34	5.23	0.303	1/27/2010@14:04:15		
1202017584	942470	MB	1	35	-1.39	0.0212	1/27/2010@14:05:08
1202017588	ILCS	1	36	25.7	1.17	1/27/2010@14:06:01	25.00
244899017		1	37	-0.845	0.0445	1/27/2010@14:06:54	
1202017585	DUP	1	38	-0.905	0.0419	1/27/2010@14:07:47	
1202017586	MS	1	39	98.0	4.25	1/27/2010@14:08:40	
1202017587	MSD	1	40	102	4.43	1/27/2010@14:09:32	
WCN100127-03		1	S3	102	4.42	1/27/2010@14:10:25	CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			2.0 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			2.0 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100127-08	1	S7	-1.23	0.0280	1/27/2010@14:12:15		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.23 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.23 > -5.00				
Message			CCB Passed				
Action			Continue				
244899018	1	41	-0.517	0.0585	1/27/2010@14:14:04		
244899019	1	42	-1.20	0.0294	1/27/2010@14:14:56		
244899020	1	43	0.180	0.0881	1/27/2010@14:15:48		
244902001	1	44	-0.638	0.0533	1/27/2010@14:16:40		
1202022245	DUP	1	45	72.6	3.17	1/27/2010@14:17:32	
1202022246	MS	1	46	95.2	4.13	1/27/2010@14:18:27	
1202022247	MSD	1	47	95.4	4.14	1/27/2010@14:19:20	
245092001	1	48	-0.996	0.0381	1/27/2010@14:20:14		
245092002	1	49	-1.21	0.0292	1/27/2010@14:21:08		
245092003	1	50	155	6.67	1/27/2010@14:22:01		
WCN100127-03		1	S3	-321	-13.6	1/27/2010@14:22:54	CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			-420.9 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-420.9 < 10.0				
Message			CCV Failed				
Action			Stop Run				

Analyte Properties Table for OM\_1-27-2010\_13-08-21.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

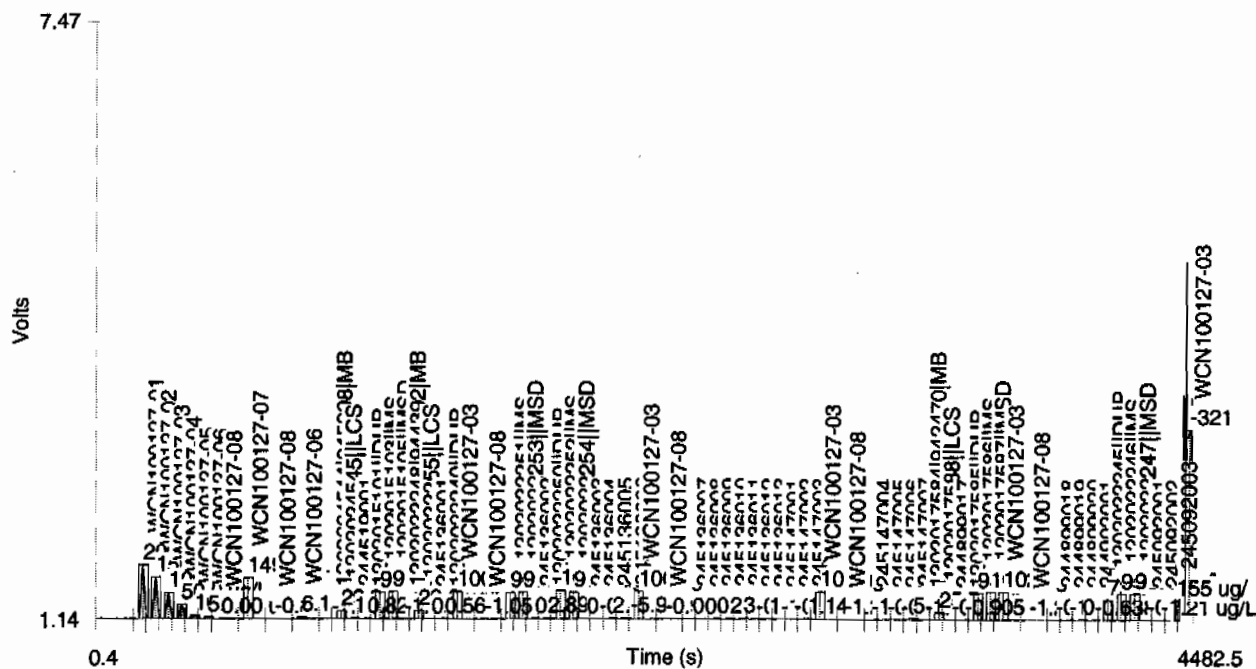


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.60	0.564	-0.2	1/27/2010	13:12:44
2	150	1	6.55	0.434	-1.5	1/27/2010	13:13:36
3	100	1	4.12	0.273	4.9	1/27/2010	13:14:28
4	50.0	1	2.28	0.151	-3.2	1/27/2010	13:15:21
5	10.0	1	0.546	0.0351	-7.3	1/27/2010	13:16:14
6	5.00	1	0.337	0.0212	-13.7	1/27/2010	13:17:08
7	0.00	1	0.0388	0.00202		1/27/2010	13:18:02

Figure 1: TCYANIDE

