FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME Bonner Analytical Testing Company

CITY/STATE Hattiesburg / MS

CASE NO. 42356 SDG NO. MF5H90

SDG NOs. TO FOLLOW MF5H91

MOD. REF. NO. N/A

667087

CONTRACT NO. EPW09037

SOW NO. ISM01.3

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.6)

		PAGE NOs.		CHECK	
		FROM	TO	LAB	REGION
1.	Inventory Sheet (DC-2)	1	2	✓	✓
2.	SDG Narrative	3	3	✓	✓
3.	Sample Log-In Sheet (DC-1)	4	5	✓	✓
4.	Traffic Report/Chain of Custody Record(s)	6	8	✓	✓
5.	Cover Page	9	9	✓	✓
Inorganic Analysis					
6.	Data Sheet (Form I-IN)	10	12	✓	✓
7.	Initial & Continuing Calibration Verification (Form IIA-IN)	13	14	✓	✓
8.	Blanks (Form III-IN)	15	16	✓	✓
9.	ICP-AES Interference Check Sample (Form IVA-IN)	17	17	✓	✓
10.	ICP-MS Interference Check Sample (Form IVB-IN)	N/A	N/A	✓	
11.	Matrix Spike Sample Recovery (Form VA-IN)	N/A	N/A	✓	
12.	Post-Digestion Spike Sample Recovery (Form VB-IN)	N/A	N/A	✓	
13.	Duplicates (Form VI-IN)	N/A	N/A	✓	
14.	Laboratory Control Sample (Form VII-IN)	18	18	✓	✓
15.	ICP-AES and ICP-MS Serial Dilutions (Form VIII-IN)	N/A	N/A	✓	
16.	Method Detection Limit (Annually) (Form IX-IN)	19	20	✓	✓
17.	ICP-AES Interelement Correction Factors (Annually) (Form XA-IN)	21	21	✓	✓
18.	ICP-AES Interelement Correction Factors (Annually) (Form XB-IN)	22	23	✓	✓
19.	Internal Standard Association (Form XI-IN)	N/A	N/A	✓	
20.	Preparation Log (Form XII-IN)	24	25	✓	✓
21.	Analysis Run Log (Form XIII-IN)	26	27	✓	✓
22.	ICP-MS Tune (Form XIV-IN)	N/A	N/A	✓	

FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
23.	ICP-MS Internal Standards Relative Intensity Summary (Form XV-IN)	N/A	N/A	✓	
24.	Initial Calibration (Form XVI-IN)	28	33	✓	✓
25.	ICP-AES Raw Data	34	78	✓	✓
26.	ICP-MS Raw Data	N/A	N/A	✓	
27.	Mercury Raw Data	79	82	✓	✓
28.	Cyanide Raw Data	N/A	N/A	✓	
29.	Preparation Logs Raw Data	83	84	✓	✓
30.	Percent Solids Determination Log	N/A	N/A	✓	
31.	USEPA Shipping/Receiving Documents	N/A	N/A	✓	
	Airbill (No. of Shipments 2)	85	86	✓	✓
	Sample Tags	N/A	N/A	✓	
	Sample Log-In Sheet (Lab)	87	89	✓	✓
32.	Misc. Shipping/Receiving Records (list all individual records) Communication Logs	90	92	✓	✓
	In House Chain / Digestate	N/A	N/A	✓	
33.	Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	N/A	N/A	✓	
		N/A	N/A	✓	
34.	Internal Original Sample Prep & Analysis Records (describe or list)	N/A	N/A	✓	
	Prep Records	93	104	✓	✓
	Analysis Records	105	106	✓	✓
	PE Instructions	N/A	N/A	✓	
	Description	N/A	N/A	✓	
35.	Other Records (describe or list)	N/A	N/A	✓	
	Communication Logs	107	108	✓	✓
		N/A	N/A	✓	

36. Comments:

Completed by: (CLP Lab) (Signature) Chris Bonner / CEO (Print Name & Title) 04/05/12 (Date)

Audited by: ~~(USEPA)~~ ESAT (Signature) Sonya Meekins / Data Reviewer (Print Name & Title) 4/18/12 (Date)

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

SDG NARRATIVE:

SDG Number: MF5H90
Case Number: 42356
Contract Number: EPW09037

Sample Receipt:
On March 21, 2012 we received 2 waters via FedEx air bill 8000 6268 8119. Custody seals were present and intact. Cooler temp was determined to be 5°C. Samples were in good condition with no discrepancies.

Samples MF5H91 & -92 had a pH level of 4, HNO_3 was added to bring pH level to 1.

Metals:
No Discrepancies

Mercury:
No Discrepancies

Sample Equation:

Lab ID 1203263-01 EPA Sample # MF5H90

Date & Time 3/30/12 @ 12:51

Metals: 4.8305 µg/L * 1 (Dilution Factor) = 4.8 ug/L
(Analyte Zn)

Lab ID 1203263-01 EPA Sample # MF5H90

Date & Time 3/23/12 @ 14:45

Hg: 0.0587 µg/L * 1 (Dilution Factor) = 0.059 ug/L

Authorized By
James McGlothin
Document Control Officer

SAMPLE LOG-IN SHEET

Lab Name BONNIER ANALYTICAL		Page 1 of 2
Received By (Print Name) Patricia Aiken		Log-in Date 3-20-12
Received By (Signature) Patricia Aiken		
Case Number 42356	Sample Delivery Group No. MF5H90	Mod. Ref. No. N/A

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal NOs.	N/A N/A
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	8000 6268 8049 N/A
6. Sample Tags Sample Tag Numbers	Present/Absent* Listed/Not Listed on Traffic Report/Chain of Custody Record
7. Sample Condition	Intact/Broken*/ Leaking
8. Cooler Temperature Indicator Bottle	Present/Absent*
9. Cooler Temperature	5°C
10. Does information on Traffic Reports/Chain of Custody Records and sample tags agree?	Yes/No*
11. Date Received at Lab	3-20-12
12. Time Received	0830

Sample Transfer	
Fraction TM/HG/CN	~~Fraction~~
Area# CL01	Area#
By P. Aiken	By
On 3-20-12	On

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MF5H90	3	378671	1203263-01	Ice Good
2	MF5H90	14	378672	1203263-01	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

* Contact SMO and attach record of resolution

PA 3-20-12

Reviewed By [illegible]	~~Logbook No.~~
Date 3-24-12	~~Logbook Page No.~~

PA

SAMPLE LOG-IN SHEET

Lab Name BONNIER ANALYTICAL		Page 2 of 2
Received By (Print Name) Patricia Aiken		Log-in Date 3-21-12
Received By (Signature) Patricia Aiken		
Case Number 42356	Sample Delivery Group No. MF5H90	Mod. Ref. No. N/A

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal NOs.	N/A N/A
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	8000 6268 8119 N/A
6. Sample Tags	Present/Absent*
Sample Tag Numbers	Listed/Not Listed on Traffic Report/Chain of Custody Record
7. Sample Condition	Intact/Broken*/ Leaking
8. Cooler Temperature Indicator Bottle	Present/Absent*
9. Cooler Temperature	5°C
10. Does information on Traffic Reports/Chain of Custody Records and sample tags agree?	Yes/No*
11. Date Received at Lab	3-21-12
12. Time Received	~~1027~~ 0827 PA

Sample Transfer	
Fraction TM/Hg/CN	Fraction
Area# CLP 01	Area#
By P. Aiken	By
On 3-21-12	On

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MF5H91	4	487271	1203263-02	OCC
2	MF5H91	14	487272	1203263-02	
3	MF5H92	4	345299	1203263-03	
4	MF5H92	14	345300	1203263-03	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

* Contact SMO and attach record of resolution

PA 3-21-12

Reviewed By	MKH	~~Logbook No.~~	
Date	3-26-12	~~Logbook Page No.~~	

PA

MF5H90

USEPA CLP Inorganics COC (LAB COPY)

DateShipped: 3/19/2012
CarrierName: FedEx
AirbillNo: 800062688049

CHAIN OF CUSTODY RECORD

Case #: 42356
Cooler #: 1 of 1

No: 6-031912-141340-0001

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Inorganic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Organic Sample #	For Lab Use Only
MF5H90	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-378671 (HNO3 pH<2), 6-378672 (NaOH pH>12) (2)	DECON-01	03/19/2012 14:40	F5H90	good

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #

Analysis Key: CLP TMHg=CLP TAL Total Metals Mercury, CN=CLP Cyanide

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/19/12 17:00	P. Aik	3-20-12	0830						

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MF5H90

USEPA CLP Inorganics COC (LAB COPY)

CHAIN OF CUSTODY RECORD

No: 6-032012-132416-0003

DateShipped: 3/20/2012
CarrierName: FedEx
AirbillNo: 800062688119

Case #: 42356
Cooler #: 1 of 1

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Inorganic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Organic Sample #	For Lab Use Only
MF5H91	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-487271 (HNO3 pH<2), 6-487272 (NaOH pH>12) (2)	DECON-02	03/20/2012 13:30	F5H91	good
MF5H92	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-345299 (HNO3 pH<2), 6-345300 (NaOH pH>12) (2)	DECON-03	03/20/2012 13:35	F5H92	↓

Special Instructions: 5°C

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: CLP TMHg=CLP TAL Total Metals Mercury, CN=CLP Cyanide

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/20/12 17:00	P Hill	3-21-12	0827 PM ~~1021~~						

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SAMPLE DELIVERY GROUP (SDG)
COVER SHEET

SDG Number: MF5H90

☒ ICP-AES Analysis ☒ Mercury ☐ Cyanide ☐ ICP-MS Analysis

Laboratory Name: Bonner Analytical Testing **Laboratory Code:** BONNER

Contract No.: EPW09037 **Case No.:** 42356

Analysis Price: $ 255.00 **SDG Turnaround:** 21 day

Modified Analysis (if applicable):

Modification Reference No.: N/A

EPA Sample Nmbers in SDG (Listed in Numerical Order)

1) MF5H90	7)	13)	19)
2) MF5H91	8)	14)	20)
3) MF5H92	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

PA
3-21-12

MF5H90	MF5H92
First Sample in SDG	Last Sample in SDG
03/20/2012	03/21/2012
First Sample Receipt Date	Last Sample Receipt Date

Note: There are a maximum of 20 samples (excluding PE Sample) in SDG. Attach TRs to this form in alphanumeric order (the order listed above on this form).

Patricia Aik
Signature

3-21-12
Date

USEPA - CLP

COVER PAGE

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: _____ SDG No.: MF5H90

SOW No.: ISM01.3

EPA Sample No.	Lab Sample ID
MF5H90	1203263-01
MF5H91	1203263-02
MF5H92	1203263-03

		ICP-AES	ICP-MS
Were ICP-AES and ICP interelement corrections applied?	(Yes/No)	Yes	
Were ICP-AES and ICP background corrections applied?	(Yes/No)	Yes	
If yes, were raw data generated before application of background corrections?	(Yes/No)	Yes	

The laboratory did not receive any instructions with this SDG to modify the SOW standard laboratory sample preparation procedures (e.g., subsampling). To aid in the determination of data usability with respect to project decisions, any modifications performed are described below.

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Maxwell S. Bonner For Chris Bonr

Date: 04/05/12 Title: CEO

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1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF5H90

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Matrix: Water Lab Sample ID: 1203263-01

% Solids: Date Received: 03/20/2012

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): ug/L

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	1.2	J		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	0.23	J		P
7439-97-6	Mercury	0.059	J		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	13.9	J		P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	4.8	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: NO

Comments:

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF5H91

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Matrix: Water Lab Sample ID: 1203263-02

% Solids: Date Received: 03/21/2012

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): ug/L

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	15.0	U		P
7439-97-6	Mercury	0.041	J		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	50.5	J		P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	4.0	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: NO

Comments:

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MF5H92

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Matrix: Water Lab Sample ID: 1203263-03

% Solids: Date Received: 03/21/2012

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): ug/L

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6.6	J		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	564	J		P
7440-47-3	Chromium	10	U		P
7440-48-4	Cobalt	0.13	J		P
7440-50-8	Copper	1.0	J		P
7439-89-6	Iron	3.2	J		P
7439-92-1	Lead	10	U		P
7439-95-4	Magnesium	22.5	J		P
7439-96-5	Manganese	0.31	J		P
7439-97-6	Mercury	0.048	J		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	102	J		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10	U		P
7440-23-5	Sodium	760	J		P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	1.3	J		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: NO

Comments:

USEPA - CLP

2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Initial Calibration Verification Source: USEPA, Lot: ICV-1 (0307)

Continuing Calibration Verification Source: In-House, Lot: B1J0047

Concentration Units: ug/L

	Initial Calibration Verification			Continuing Calibration Verification					M
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	2521.0	2490	99	20000	19200	96	19100	95	P
Antimony	994.00	1010	102	4000.0	3860	97	3920	98	P
Arsenic	999.00	931	93	2000.0	1830	91	1840	92	P
Barium	497.00	541	109	16000	16200	101	16200	101	P
Beryllium	495.00	485	98	400.00	390	98	395	99	P
Cadmium	496.00	523	105	1000.0	1010	101	983	98	P
Calcium	10026	10500	105	50000	51000	102	49200	98	P
Chromium	490.00	491	100	2000.0	1980	99	1970	99	P
Cobalt	499.00	527	106	2500.0	2480	99	2450	98	P
Copper	492.00	492	100	5000.0	5000	100	5020	100	P
Iron	5082.0	5440	107	20000	21200	106	20400	102	P
Lead	1002.0	975	97	2000.0	1820	91	1800	90	P
Magnesium	6074.0	5880	97	50000	49600	99	47400	95	P
Manganese	499.00	503	101	3000.0	3020	101	3030	101	P
Nickel	503.00	520	103	4000.0	3930	98	3910	98	P
Potassium	10021	9860	98	50000	47900	96	47400	95	P
Selenium	1029.0	1050	102	3500.0	3450	99	3490	100	P
Silver	501.00	490	98	1000.0	971	97	987	99	P
Sodium	10097	10100	100	50000	49700	100	49800	100	P
Thallium	1028.0	1080	105	4000.0	4090	102	4040	101	P
Vanadium	501.00	484	97	4000.0	3870	97	3880	97	P
Zinc	1025.0	1010	98	8000.0	7680	96	7400	93	P

(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Initial Calibration Verification Source: USEPA, Lot: EPA (0508)

Continuing Calibration Verification Source: Inorganic Ventures, Lot: B9H0160

Concentration Units: ug/L

	Initial Calibration Verification			Continuing Calibration Verification					M
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	4.0000	3.9	97	2.0000	2.1	102	2.0	101	CV

(1) Control Limits: Mercury 85-115; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

3-IN
BLANKS

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Preparation Blank Matrix (soil/water/wipe/filter): Water

Preparation Blank Concentration Units (ug/L, ug, or mg/kg): ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum	200	U	6.8	J	200	U			200	U	P
Antimony	60.0	U	60.0	U	60.0	U			60.0	U	P
Arsenic	10	U	0.81	J	10	U			10	U	P
Barium	200	U	1.2	J	1.1	J			0.39	J	P
Beryllium	5.0	U	5.0	U	5.0	U			5.0	U	P
Cadmium	5.0	U	5.0	U	5.0	U			5.0	U	P
Calcium	5000	U	5000	U	5000	U			5000	U	P
Chromium	10	U	10	U	10	U			10	U	P
Cobalt	50.0	U	0.13	J	0.35	J			50.0	U	P
Copper	1.1	J	0.99	J	25.0	U			0.89	J	P
Iron	7.4	J	6.1	J	100	U			100	U	P
Lead	10	U	10	U	10	U			10	U	P
Magnesium	4.5	J	9.0	J	5000	U			5000	U	P
Manganese	0.45	J	0.35	J	0.18	J			15.0	U	P
Nickel	40.0	U	40.0	U	40.0	U			40.0	U	P
Potassium	47.1	J	47.2	J	45.4	J			5000	U	P
Selenium	35.0	U	35.0	U	35.0	U			35.0	U	P
Silver	10	U	10	U	10	U			10	U	P
Sodium	5000	U	15.1	J	5000	U			5000	U	P
Thallium	25.0	U	25.0	U	25.0	U			25.0	U	P
Vanadium	50.0	U	50.0	U	50.0	U			50.0	U	P
Zinc	60.0	U	60.0	U	0.66	J			60.0	U	P

USEPA - CLP

3-IN
BLANKS

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Preparation Blank Matrix (soil/water/wipe/filter): Water

Preparation Blank Concentration Units (ug/L, ug, or mg/kg): ug/L

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Mercury	0.025	J	0.062	J	0.036	J			0.20	U	CV

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

ICP-AES Instrument ID: ICAPP02 ICSA Source: USEPA, Lot:Part A(1206)

ICSB Source: USEPA, Lot:Part B (0203)

Concentration Units: ug/L

Analyte	True		Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	244100	241100	236000	97	239000	99
Antimony	0	589	5.1		572	97
Arsenic	0	101	0.54		102	101
Barium	2	495	2.2	110	515	104
Beryllium	0	475	0.65		490	103
Cadmium	0	940	-0.60		958	102
Calcium	234900	231100	242000	103	250000	108
Chromium	43	511	39.8	93	522	102
Cobalt	4	461	4.5	113	472	102
Copper	23	548	23.7	103	520	95
Iron	95600	94800	95000	99	99100	105
Lead	10	61	3.3	33	50.6	83
Magnesium	247500	251100	240000	97	252000	100
Manganese	19	502	25.0	132	527	105
Nickel	21	984	17.4	83	1080	110
Potassium	0	0	82.5		67.3	
Selenium	0	53	3.4		50.5	95
Silver	0	206	0.73		204	99
Sodium	0	0	803		804	
Thallium	0	103	1.6		100	97
Vanadium	0	494	-0.17		483	98
Zinc	28	1028	33.1	118	1070	104

USEPA - CLP

7-IN
LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Analyte	Aqueous/Water (ug/L), Soil/Sediment (mg/kg), Wipe/Filter (ug)		
	True	Found	%R
Aluminum	400.00	383	96
Antimony	120.00	118	98
Arsenic	20.000	18.1	91
Barium	400.00	415	104
Beryllium	10.000	9.6	96
Cadmium	10.000	10.4	104
Calcium	10000	10300	103
Chromium	20.000	19.5	98
Cobalt	100.00	103	103
Copper	50.000	49.6	99
Iron	200.00	213	107
Lead	20.000	19.4	97
Magnesium	10000	9750	98
Manganese	30.000	29.8	99
Nickel	80.000	80.5	101
Potassium	10000	9530	95
Selenium	70.000	70.3	100
Silver	20.000	17.9	90
Sodium	10000	9920	99
Thallium	50.000	51.7	103
Vanadium	100.00	95.5	96
Zinc	120.00	115	96

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument Type: P Instrument ID: ICAPP02 Date: 03/28/2012

Preparation Method: 200.7

Concentration Units (ug/L, mg/kg, or ug): ug/L

Analyte	Wavelength/Mass	MDL
Aluminum	396.10 nm	5.07
Antimony	206.80 nm	1.58
Arsenic	189.00 nm	0.66
Barium	455.40 nm	0.24
Beryllium	313.10 nm	0.036
Cadmium	214.40 nm	0.35
Calcium	318.10 nm	33
Chromium	267.70 nm	1.34
Cobalt	228.60 nm	0.13
Copper	324.70 nm	0.83
Iron	238.20 nm	1.99
Lead	220.30 nm	1.6
Magnesium	279.00 nm	4.3
Manganese	257.60 nm	0.14
Nickel	231.60 nm	0.91
Potassium	766.40 nm	17
Selenium	196.00 nm	0.82
Silver	328.00 nm	1.4
Sodium	589.50 nm	12
Thallium	190.80 nm	1.03
Vanadium	292.40 nm	1.2
Zinc	206.20 nm	0.19

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument Type: CV Instrument ID: LM01 Date: 01/04/2012

Preparation Method: 7470A

Concentration Units (ug/L, mg/kg, or ug): ug/L

Analyte	Wavelength/Mass	MDL
Mercury	257.00 nm	0.019

Comments:

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

ICP-AES Instrument ID: ICAPP02 Date: 03/27/2012

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Sb
Aluminum	396.1		0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189	0.0000000	0.0000000	-0.000086	0.0000000	0.0000000
Barium	455.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	214.4	0.0000000	0.0000000	0.0000350	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000220	0.0000000	0.0000000	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	-0.000099	0.0000000	0.0000000
Iron	238.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0001670	0.0000000	0.0000550	0.0000000	0.0000000
Magnesium	279	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196	0.0000000	0.0000000	-0.000171	0.0000000	0.0000000
Silver	328	0.0000000	0.0000000	-0.000032	0.0000000	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	-0.000069	0.0000000	0.0000000
Vanadium	292.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

USEPA - CLP

10B-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

ICP-AES Instrument ID: ICAPP02 Date: 03/27/2012

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Cr	Co	Cu	Pb	Mn
Aluminum	396.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0053870	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	214.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0002850
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	238.2	0.0000000	-0.010921	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0048860	0.0000000	0.0000000	0.0012180
Vanadium	292.4	-0.002127	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.2	-0.001296	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

USEPA - CLP

10B-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

ICP-AES Instrument ID: ICAPP02 Date: 03/27/2012

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	K	V	Zn	
Aluminum	396.1	0.0000000	0.0000000	0.0000000	0.0000000	
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	
Arsenic	189	0.0000000	0.0000000	0.0000000	0.0000000	
Barium	455.4	0.0000000	0.0000000	0.0000000	0.0000000	
Beryllium	313.1	0.0000000	0.0000000	0.0000000	0.0000000	
Cadmium	214.4	0.0000000	0.0000000	0.0000000	0.0000000	
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	
Chromium	267.7	0.0000000	0.0000000	0.0000000	0.0000000	
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	
Iron	238.2	0.0000000	0.0000000	0.0000000	0.0000000	
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	
Magnesium	279	0.0000000	0.0000000	0.0000000	0.0000000	
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium	196	0.0000000	0.0000000	0.0000000	0.0000000	
Silver	328	0.0000000	0.0000000	-0.003597	0.0000000	
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	
Thallium	190.8	0.0000000	0.0000000	-0.019948	0.0000000	
Vanadium	292.4	0.0000000	0.0000000	0.0000000	0.0000000	
Zinc	206.2	0.0000000	0.0000000	0.0000000	0.0000000	

Comments:

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: _____ SDG No.: MF5H90

Preparation Method: 200.7

EPA Sample No.	Preparation Date	Initial Weight/Volume (g) or (mL)	Final Volume (mL)
LCS01	03/23/2012	50.00	50.00
MF5H90	03/23/2012	50.00	50.00
MF5H91	03/23/2012	50.00	50.00
MF5H92	03/23/2012	50.00	50.00
PBW01	03/23/2012	50.00	50.00

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: _____ SDG No.: MF5H90

Preparation Method: 7470A

EPA Sample No.	Preparation Date	Initial Weight/Volume (g) or (mL)	Final Volume (mL)
S0	03/23/2012	50.00	50.00
S0.2	03/23/2012	50.00	50.00
S0.5	03/23/2012	50.00	50.00
S1	03/23/2012	50.00	50.00
S2	03/23/2012	50.00	50.00
S6	03/23/2012	50.00	50.00
ICV01	03/23/2012	50.00	50.00
ICB01	03/23/2012	50.00	50.00
CCV01	03/23/2012	50.00	50.00
CCB01	03/23/2012	50.00	50.00
PBW01	03/23/2012	50.00	50.00
MF5H90	03/23/2012	50.00	50.00
MF5H91	03/23/2012	50.00	50.00
MF5H92	03/23/2012	50.00	50.00
CCV02	03/23/2012	50.00	50.00
CCB02	03/23/2012	50.00	50.00

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument ID: ICAPP02 Analysis Method: P

Start Date: 03/30/2012 End Date: 03/30/2012

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
S0	1.0	1134	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S	1.0	1138	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S	1.0	1142	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S	1.0	1146	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S	1.0	1151	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S	1.0	1155	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S	1.0	1159	X						X				X	X	X				X			X						
S	1.0	1204	X						X					X	X				X			X						
S	1.0	1208								X		X	X	X		X									X			
S	1.0	1213			X					X		X	X	X		X									X			
ICV01	1.0	1217	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICB01	1.0	1221	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSA01	1.0	1225	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSAB01	1.0	1230	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV01	1.0	1234	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB01	1.0	1238	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
PBW01	1.0	1242	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
LCS01	1.0	1247	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MF5H90	1.0	1251	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MF5H91	1.0	1255	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MF5H92	1.0	1259	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV02	1.0	1304	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB02	1.0	1308	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			

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13-IN
ANALYSIS RUN LOG

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument ID: LM01 Analysis Method: CV

Start Date: 03/23/2012 End Date: 03/23/2012

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
S0	1.0	1420															X											
S0.2	1.0	1423															X											
S0.5	1.0	1425															X											
S1	1.0	1427															X											
S2	1.0	1429															X											
S6	1.0	1432															X											
ICV01	1.0	1436															X											
ICB01	1.0	1438															X											
CCV01	1.0	1440															X											
CCB01	1.0	1442															X											
PBW01	1.0	1444															X											
MF5H90	1.0	1445															X											
MF5H91	1.0	1447															X											
MF5H92	1.0	1450															X											
CCV02	1.0	1452															X											
CCB02	1.0	1454															X											

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.:MF5H90

Instrument ID: ICAPP02 Start Date:03/30/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	0.0	23.9310000		100	112.574	-13	2000	1953.96	2
Antimony	0.0	1.0635300		20.0	20.9144	-5	400	390.179	2
Arsenic	0.0	2.5824200		10.0	12.2891	-23	200	180.259	10
Barium	0.0	-9.3758700		80.0	73.1026	9	1600	1706.66	-7
Beryllium	0.0	0.2722000		2.0	2.11616	-6	40.0	39.0788	2
Cadmium	0.0	-0.7503340		5.0	4.57519	8	100	104.603	-5
Calcium	0.0	-5.4987100		250	244.874	2	5000	5074.13	-1
Chromium	0.0	0.8482910		10.0	10.495	-5	200	196.798	2
Cobalt	0.0	-1.3439700		12.5	11.7946	6	250	257.869	-3
Copper	0.0	2.9502800		25.0	26.6549	-7	500	483.279	3
Iron	0.0	-15.7509000		100	86.4905	14	2000	2110.4	-6
Lead	0.0	2.4305900		10.0	12.2463	-22	200	189.746	5
Magnesium	0.0	51.9337000		250	284.129	-14	5000	4838.23	3
Manganese	0.0	0.4373910		15.0	14.9232	1	300	300.286	0
Nickel	0.0	-1.1472300		20.0	19.2463	4	400	405.372	-1
Potassium	0.0	49.9297000		250	281.848	-13	5000	4811.53	4
Selenium	0.0	-0.4465730		17.5	17.2332	2	350	352.705	-1
Silver	0.0	1.0539200		5.0	5.22991	-5	100	99.0738	1
Sodium	0.0	17.0080000		250	258.277	-3	5000	4985.06	0
Thallium	0.0	-1.3775800		20.0	18.9508	5	400	410.235	-3
Vanadium	0.0	3.0852900		20.0	21.5131	-8	400	386.225	3
Zinc	0.0	1.3612900		40.0	40.8776	-2	800	800.847	0

Control Limits +/- 30%

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.:MF5H90

Instrument ID: ICAPP02 Start Date:03/30/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	4000	3782.05	5	20000	19419.5	3	40000	38946.2	3
Antimony	800	784.517	2	4000	3961.1	1	8000	8063.29	-1
Arsenic	400	367.496	8	2000	1899.73	5	4000	3859.23	4
Barium	3200	3260.67	-2	16000	16179.5	-1	32000	31660.1	1
Beryllium	80.0	76.9597	4	400	398.518	0	800	805.327	-1
Cadmium	200	209.28	-5	1000	998.527	0	2000	1988.02	1
Calcium	10000	10185.2	-2	50000	49952.6	0	100000	98438.6	2
Chromium	400	387.924	3	2000	2003.99	0	4000	4028.85	-1
Cobalt	500	514.25	-3	2500	2503.7	0	5000	4974.88	1
Copper	1000	955.601	4	5000	5033.74	-1	10000	10106.1	-1
Iron	4000	4186.37	-5	20000	20526.7	-3	40000	39998.3	0
Lead	400	378.498	5	2000	1849.73	8	4000	3612.81	10
Magnesium	10000	9725.41	3	50000	47763.9	4	100000	95415.7	5
Manganese	600	586.009	2	3000	3047.57	-2	6000	6129.69	-2
Nickel	800	816.978	-2	4000	4045.87	-1	8000	7932.53	1
Potassium	10000	9522.84	5	50000	48211.2	4	100000	97675.7	2
Selenium	700	707.505	-1	3500	3487.51	0	7000	7002.55	0
Silver	200	191.294	4	1000	1004.22	0	2000	2005.18	0
Sodium	10000	9693.93	3	50000	50037.4	0	100000	98291.1	2
Thallium	800	821.897	-3	4000	4027.09	-1	8000	7941.83	1
Vanadium	800	766.086	4	4000	3963.25	1	8000	8082.93	-1
Zinc	1600	1614.02	-1	8000	7712.12	4	16000	15034.5	6

Control Limits +/- 30%

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument ID: ICAPP02 Start Date: 03/30/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	200000	200969	0	400000	400917	0			
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium	250000	250505	0	500000	500850	0			
Chromium							12500	12205.3	2
Cobalt									
Copper							20000	19851.8	1
Iron	175000	171194	2				200000	208506	-4
Lead	12500	12419	1	25000	25034	0	5000	4960.55	1
Magnesium	250000	249709	0	500000	507513	-2			
Manganese							12500	12413.9	1
Nickel									
Potassium	150000	150363	0	300000	304383	-1			
Selenium									
Silver									
Sodium	125000	127223	-2	250000	249761	0			
Thallium									
Vanadium									
Zinc							12500	12876.6	-3

Control Limits +/- 30%

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument ID: ICAPP02 Start Date: 03/30/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum									
Antimony									
Arsenic	8000	8290.99	-4						
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium	25000	25276.6	-1						
Cobalt									
Copper	40000	40067.8	0						
Iron	400000	394491	1						
Lead	10000	10653.4	-7						
Magnesium									
Manganese	25000	24922.6	0						
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc	25000	25861.1	-3						

Control Limits +/- 30%

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument ID: LM01 Start Date: 03/23/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0.0	0.0393766		0.20	0.194616	3	0.50	0.47306	5

Control Limits +/- 30%

USEPA - CLP

16-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Contract: EPW09037

Lab Code: BONNER Case No.: 42356 Mod. Ref. No.: SDG No.: MF5H90

Instrument ID: LM01 Start Date: 03/23/2012

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	1.0	0.98352	2	2.0	2.00639	0	6.0	6.00304	0

Control Limits +/- 30%

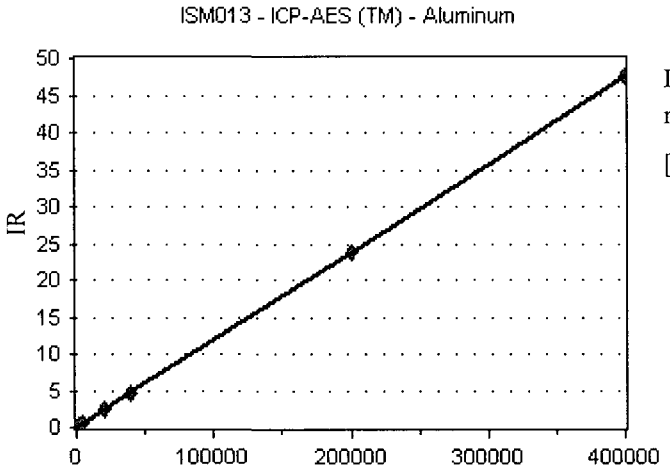
Bonner Analytical Testing

Instrument: ICAPP02 Calibration Date: 03/30/2012 16:06 By JMM

Calibration ID: B213008 Last Edit Date: 03/30/2012 16:15 By JMM

ISM013 - ICP-AES (TM)

Aluminum



Linear Regression Weighted 1/X

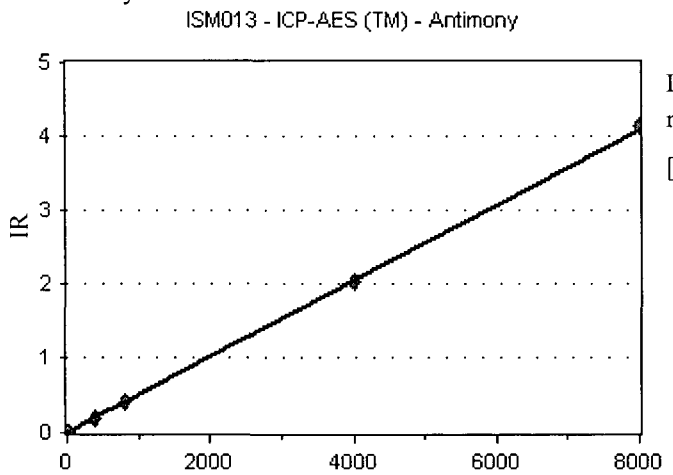
r2: 0.9999778

[Y] = 1.187908E-04 * [X] + -2.527831E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	23.93	0.00259	0.00
BC23003-CAL2	100	112.57	0.01312	-12.57
BC23003-CAL3	2000	1,953.96	0.23186	2.30
BC23003-CAL4	4000	3,782.05	0.44902	5.45
BC23003-CAL5	20000	19,419.46	2.3066	2.90
BC23003-CAL6	40000	38,946.22	4.6262	2.63
BC23003-CAL7	200000	200,968.87	23.873	-0.48
BC23003-CAL8	400000	400,917.01	47.625	-0.23

ISM013 - ICP-AES (TM)

Antimony



Linear Regression Weighted 1/X

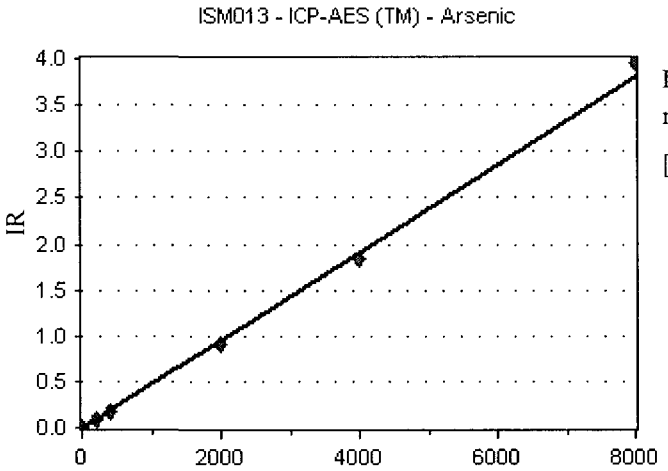
r2: 0.9998881

[Y] = 5.113131E-04 * [X] + -4.637945E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	1.06	0.00008	0.00
BC23003-CAL2	20	20.91	0.01023	-4.57
BC23003-CAL3	400	390.18	0.19904	2.46
BC23003-CAL4	800	784.52	0.40067	1.94
BC23003-CAL5	4000	3,961.10	2.0249	0.97
BC23003-CAL6	8000	8,063.29	4.1224	-0.79

ISM013 - ICP-AES (TM)

Arsenic

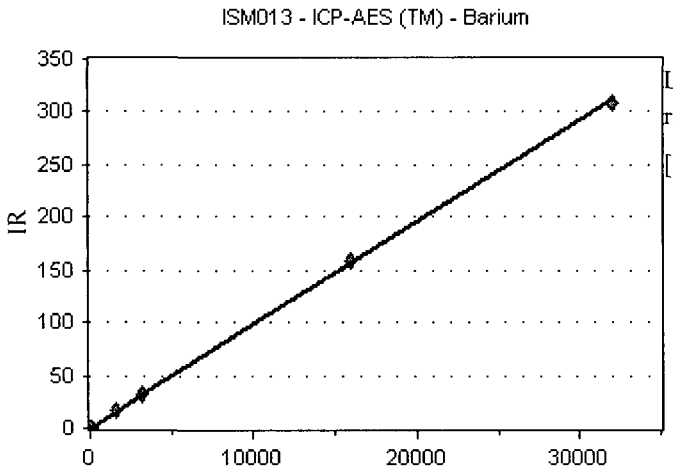


Linear Regression Weighted 1/X
r2: 0.9979615
[Y] = 4.769891E-04 * [X] + -1.811784E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	2.58	-0.00058	0.00
BC23003-CAL2	10	12.29	0.00405	-22.89
BC23003-CAL3	200	180.26	0.08417	9.87
BC23003-CAL4	400	367.50	0.17348	8.13
BC23003-CAL5	2000	1,899.73	0.90434	5.01
BC23003-CAL6	4000	3,859.23	1.839	3.52
BC23003-CALA	8000	8,290.99	3.9529	-3.64

ISM013 - ICP-AES (TM)

Barium

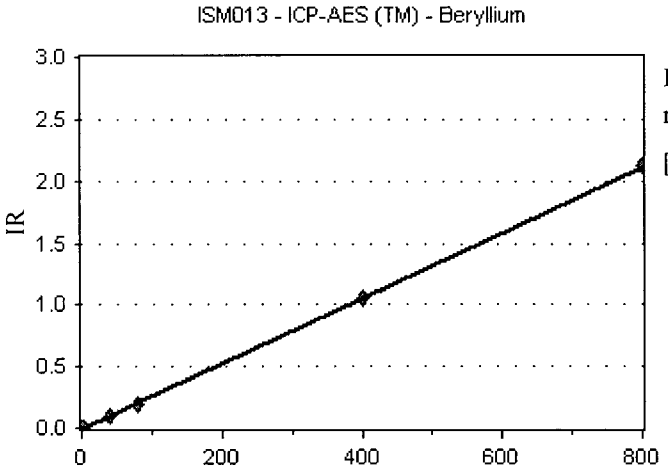


Linear Regression Weighted 1/X
r2: 0.9997993
[Y] = 9.759277E-03 * [X] + 0.1002117

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-9.38	0.00871	0.00
BC23003-CAL2	80	73.10	0.81364	8.62
BC23003-CAL3	1600	1,706.66	16.756	-6.67
BC23003-CAL4	3200	3,260.67	31.922	-1.90
BC23003-CAL5	16000	16,179.46	158	-1.12
BC23003-CAL6	32000	31,660.11	309.08	1.06

ISM013 - ICP-AES (TM)

Beryllium

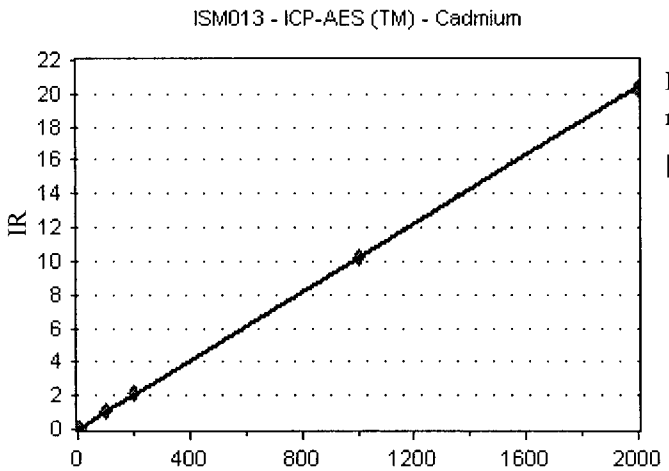


Linear Regression Weighted 1/X
r2: 0.9999221
[Y] = 2.635633E-03 * [X] + -7.474197E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	0.27	-0.00003	0.00
BC23003-CAL2	2	2.12	0.00483	-5.81
BC23003-CAL3	40	39.08	0.10225	2.30
BC23003-CAL4	80	76.96	0.20209	3.80
BC23003-CAL5	400	398.52	1.0496	0.37
BC23003-CAL6	800	805.33	2.1218	-0.67

ISM013 - ICP-AES (TM)

Cadmium

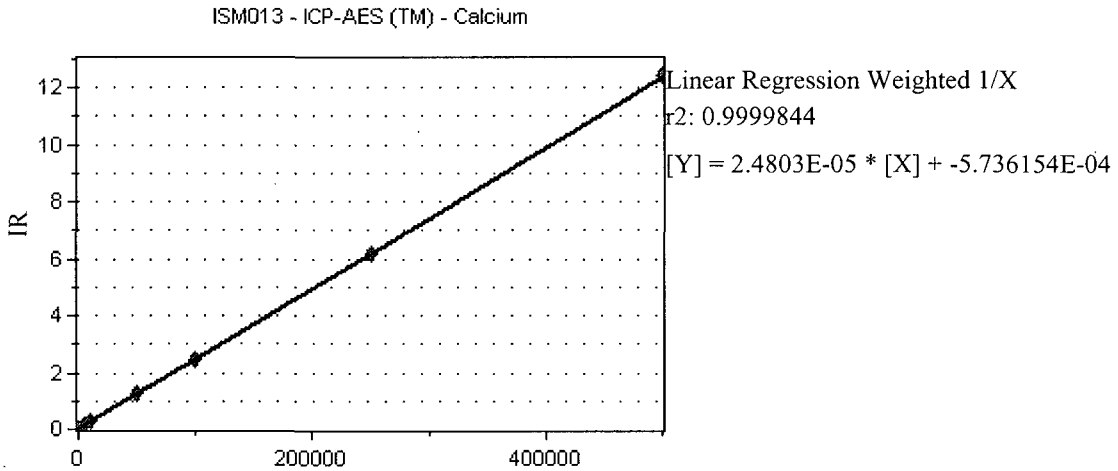


Linear Regression Weighted 1/X
r2: 0.9999203
[Y] = 1.019617E-02 * [X] + 7.850537E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-0.75	0.0002	0.00
BC23003-CAL2	5	4.58	0.0545	8.50
BC23003-CAL3	100	104.60	1.0744	-4.60
BC23003-CAL4	200	209.28	2.1417	-4.64
BC23003-CAL5	1000	998.53	10.189	0.15
BC23003-CAL6	2000	1,988.02	20.278	0.60

ISM013 - ICP-AES (TM)

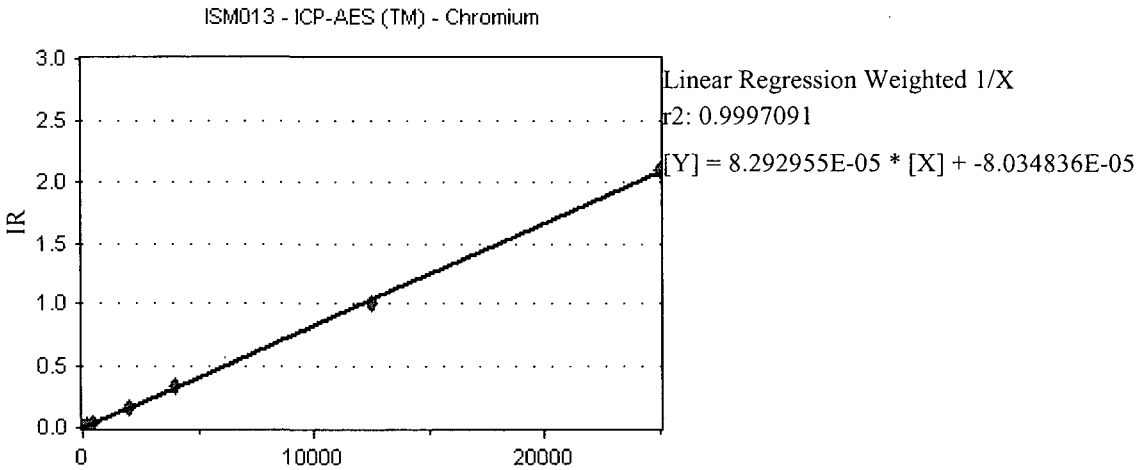
Calcium



Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-5.50	-0.00071	0.00
BC23003-CAL2	250	244.87	0.0055	2.05
BC23003-CAL3	5000	5,074.13	0.12528	-1.48
BC23003-CAL4	10000	10,185.20	0.25205	-1.85
BC23003-CAL5	50000	49,952.57	1.2384	0.09
BC23003-CAL6	100000	98,438.64	2.441	1.56
BC23003-CAL7	250000	250,504.92	6.2127	-0.20
BC23003-CAL8	500000	500,849.64	12.422	-0.17

ISM013 - ICP-AES (TM)

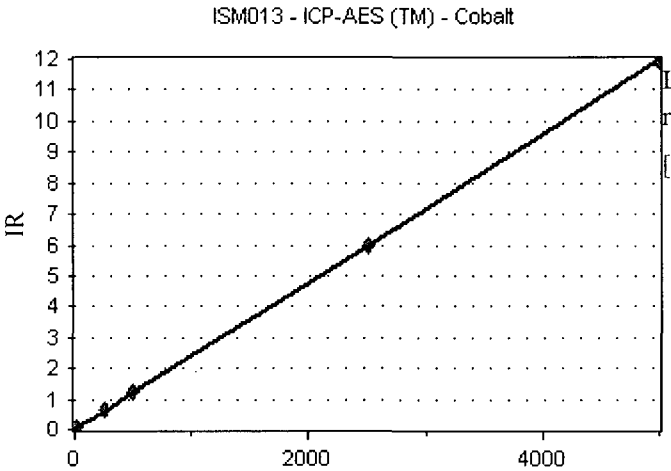
Chromium



Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	0.85	-0.00001	0.00
BC23003-CAL2	10	10.50	0.00079	-4.95
BC23003-CAL3	200	196.80	0.01624	1.60
BC23003-CAL4	400	387.92	0.03209	3.02
BC23003-CAL5	2000	2,003.99	0.16611	-0.20
BC23003-CAL6	4000	4,028.85	0.33403	-0.72
BC23003-CAL9	12500	12,205.30	1.0121	2.36
BC23003-CALA	25000	25,276.64	2.0961	-1.11

ISM013 - ICP-AES (TM)

Cobalt

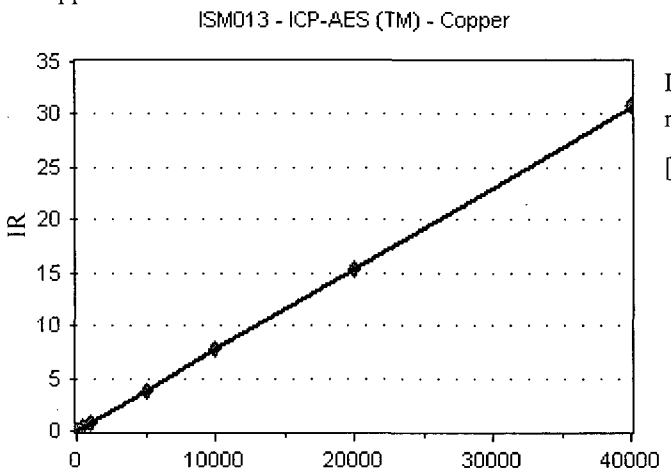


Linear Regression Weighted 1/X
r2: 0.9999544
[Y] = 2.39448E-03 * [X] + 4.738116E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-1.34	0.00152	0.00
BC23003-CAL2	12.5	11.79	0.03298	5.64
BC23003-CAL3	250	257.87	0.6222	-3.15
BC23003-CAL4	500	514.25	1.2361	-2.85
BC23003-CAL5	2500	2,503.70	5.9998	-0.15
BC23003-CAL6	5000	4,974.88	11.917	0.50

ISM013 - ICP-AES (TM)

Copper

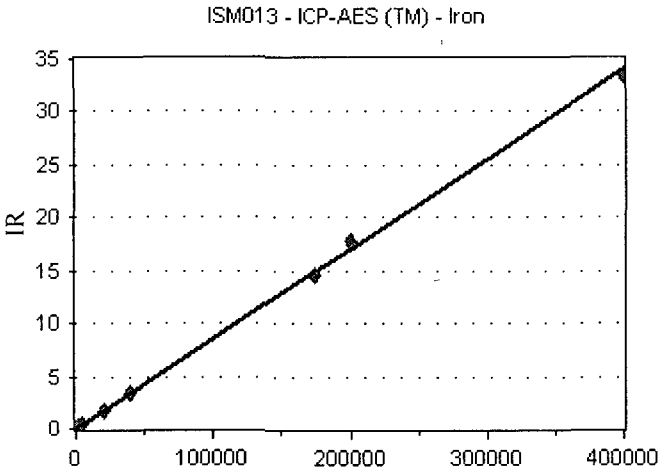


Linear Regression Weighted 1/X
r2: 0.9999705
[Y] = 7.682035E-04 * [X] + 4.763582E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	2.95	0.00703	0.00
BC23003-CAL2	25	26.65	0.02524	-6.62
BC23003-CAL3	500	483.28	0.37602	3.34
BC23003-CAL4	1000	955.60	0.73886	4.44
BC23003-CAL5	5000	5,033.74	3.8717	-0.67
BC23003-CAL6	10000	10,106.09	7.7683	-1.06
BC23003-CAL9	20000	19,851.82	15.255	0.74
BC23003-CALA	40000	40,067.82	30.785	-0.17

ISM013 - ICP-AES (TM)

Iron



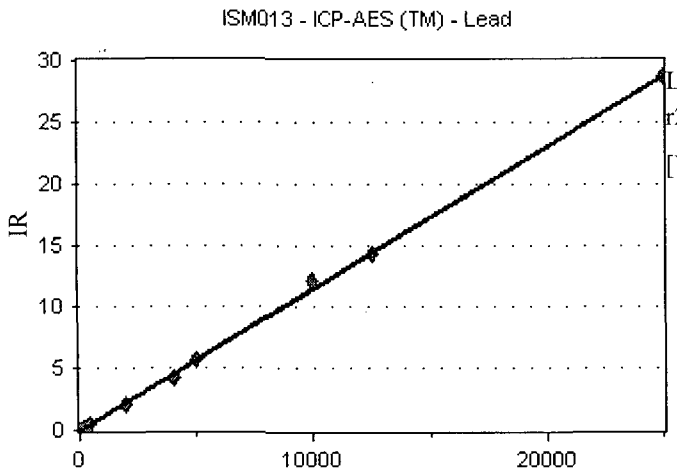
Linear Regression Weighted 1/X
r2: 0.9992261

[Y] = 8.509276E-05 * [X] + 1.630285E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-15.75	0.00029	0.00
BC23003-CAL2	100	86.49	0.00899	13.51
BC23003-CAL3	2000	2,110.40	0.18121	-5.52
BC23003-CAL4	4000	4,186.37	0.35786	-4.66
BC23003-CAL5	20000	20,526.65	1.7483	-2.63
BC23003-CAL6	40000	39,998.35	3.4052	0.00
BC23003-CAL7	175000	171,194.00	14.569	2.17
BC23003-CAL9	200000	208,506.22	17.744	-4.25
BC23003-CALA	400000	394,491.49	33.57	1.38

ISM013 - ICP-AES (TM)

Lead

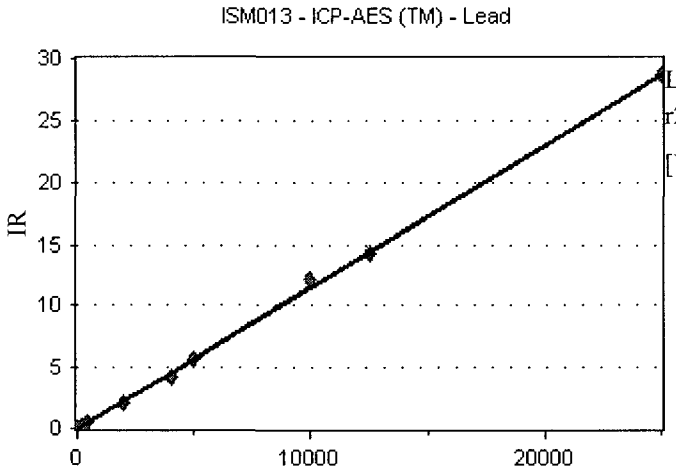


Linear Regression Weighted 1/X
r2: 0.9989608

[Y] = 1.149182E-03 * [X] + -2.673187E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	2.43	0.00012	0.00
BC23003-CAL2	10	12.25	0.0114	-22.46
BC23003-CAL3	200	189.75	0.21538	5.13
BC23003-CAL4	400	378.50	0.43229	5.38
BC23003-CAL5	2000	1,849.73	2.123	7.51
BC23003-CAL6	4000	3,612.81	4.1491	9.68
BC23003-CAL7	12500	12,418.98	14.269	0.65
BC23003-CAL8	25000	25,034.04	28.766	-0.14
BC23003-CAL9	5000	4,960.55	5.6979	0.79

Lead

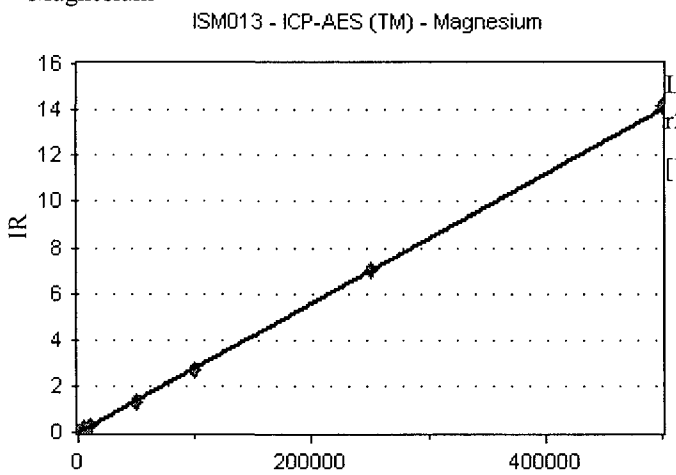


Linear Regression Weighted 1/X
r2: 0.9989608
[Y] = 1.149182E-03 * [X] + -2.673187E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CALA	10000	10,653.38	12.24	-6.53

ISM013 - ICP-AES (TM)

Magnesium

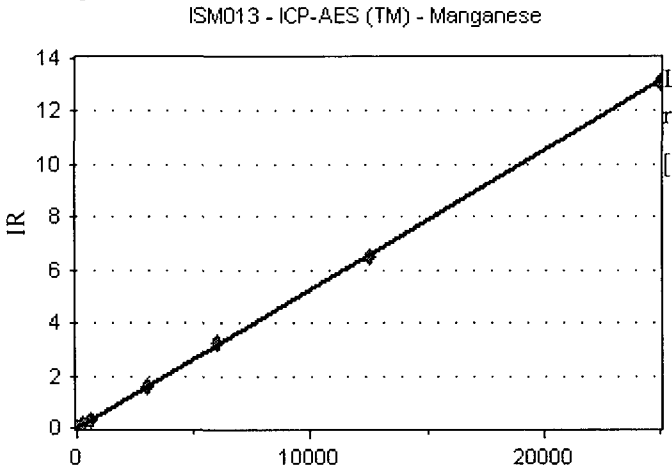


Linear Regression Weighted 1/X
r2: 0.9996354
[Y] = 2.795065E-05 * [X] + -1.331582E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	51.93	0.00012	0.00
BC23003-CAL2	250	284.13	0.00661	-13.65
BC23003-CAL3	5000	4,838.23	0.1339	3.24
BC23003-CAL4	10000	9,725.41	0.2705	2.75
BC23003-CAL5	50000	47,763.88	1.3337	4.47
BC23003-CAL6	100000	95,415.73	2.6656	4.58
BC23003-CAL7	250000	249,709.10	6.9782	0.12
BC23003-CAL8	500000	507,513.48	14.184	-1.50

ISM013 - ICP-AES (TM)

Manganese

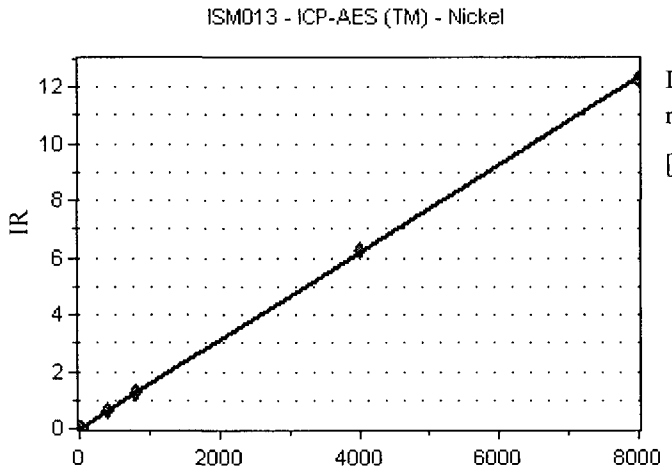


Linear Regression Weighted 1/X
r2: 0.9999397
[Y] = 5.260329E-04 * [X] + -1.200822E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	0.44	0.00011	0.00
BC23003-CAL2	15	14.92	0.00773	0.51
BC23003-CAL3	300	300.29	0.15784	-0.10
BC23003-CAL4	600	586.01	0.30814	2.33
BC23003-CAL5	3000	3,047.57	1.603	-1.59
BC23003-CAL6	6000	6,129.69	3.2243	-2.16
BC23003-CAL9	12500	12,413.90	6.53	0.69
BC23003-CALA	25000	24,922.62	13.11	0.31

ISM013 - ICP-AES (TM)

Nickel

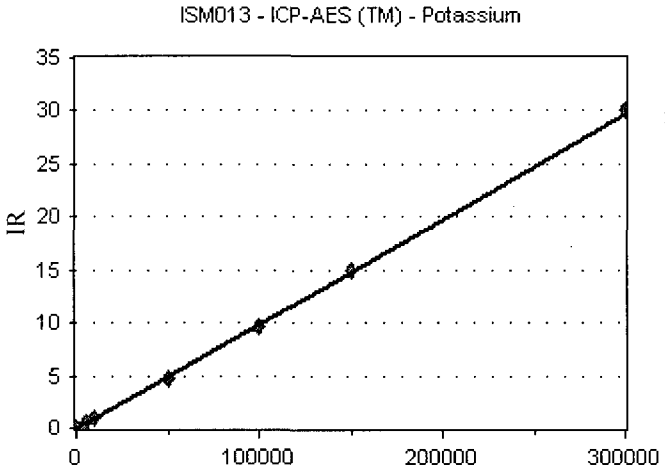


Linear Regression Weighted 1/X
r2: 0.9998632
[Y] = 1.547062E-03 * [X] + -1.151712E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-1.15	-0.00189	0.00
BC23003-CAL2	20	19.25	0.02966	3.77
BC23003-CAL3	400	405.37	0.62702	-1.34
BC23003-CAL4	800	816.98	1.2638	-2.12
BC23003-CAL5	4000	4,045.87	6.2591	-1.15
BC23003-CAL6	8000	7,932.53	12.272	0.84

ISM013 - ICP-AES (TM)

Potassium



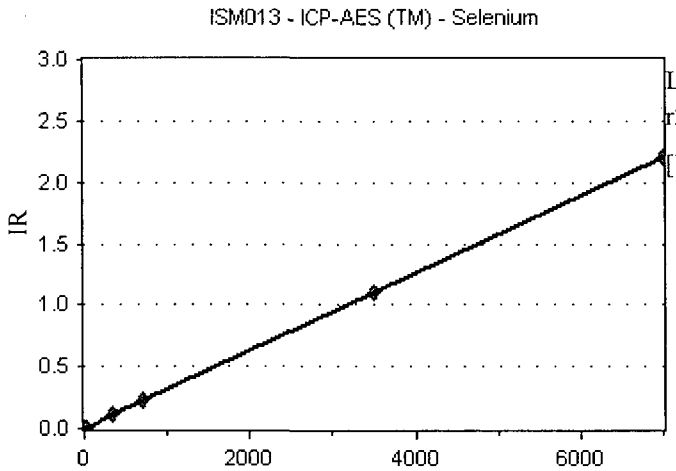
Linear Regression Weighted 1/X
r2: 0.9996469

[Y] = 9.900025E-05 * [X] + 9.769448E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	49.93	0.00592	0.00
BC23003-CAL2	250	281.85	0.02888	-12.74
BC23003-CAL3	5000	4,811.53	0.47732	3.77
BC23003-CAL4	10000	9,522.84	0.94374	4.77
BC23003-CAL5	50000	48,211.22	4.7739	3.58
BC23003-CAL6	100000	97,675.74	9.6709	2.32
BC23003-CAL7	150000	150,363.49	14.887	-0.24
BC23003-CAL8	300000	304,383.30	30.135	-1.46

ISM013 - ICP-AES (TM)

Selenium



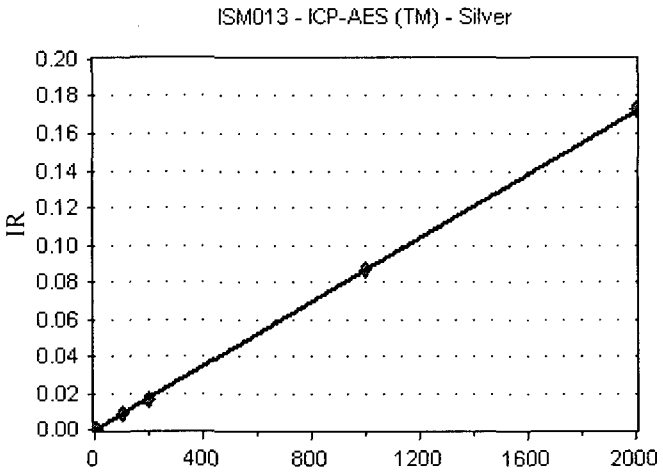
Linear Regression Weighted 1/X
r2: 0.9999943

[Y] = 3.156149E-04 * [X] + 1.190945E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-0.45	0.00105	0.00
BC23003-CAL2	17.5	17.23	0.00663	1.52
BC23003-CAL3	350	352.71	0.11251	-0.77
BC23003-CAL4	700	707.50	0.22449	-1.07
BC23003-CAL5	3500	3,487.51	1.1019	0.36
BC23003-CAL6	7000	7,002.55	2.2113	-0.04

ISM013 - ICP-AES (TM)

Silver

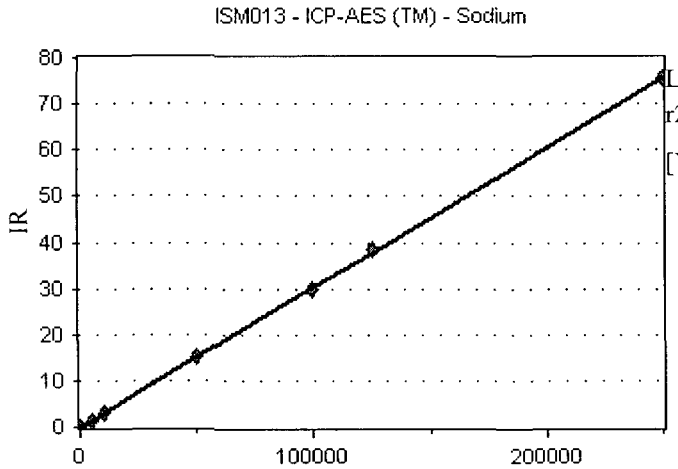


Linear Regression Weighted 1/X
r2: 0.9999624
[Y] = 8.620704E-05 * [X] + -9.085547E-05

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	1.05	0	0.00
BC23003-CAL2	5	5.23	0.00036	-4.60
BC23003-CAL3	100	99.07	0.00845	0.93
BC23003-CAL4	200	191.29	0.0164	4.35
BC23003-CAL5	1000	1,004.22	0.08648	-0.42
BC23003-CAL6	2000	2,005.18	0.17277	-0.26

ISM013 - ICP-AES (TM)

Sodium

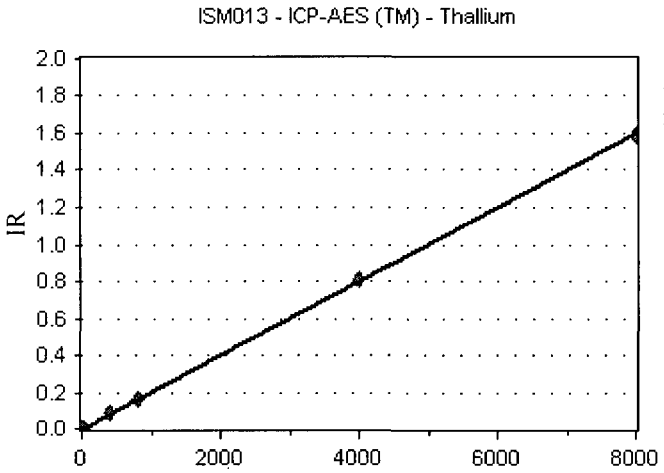


Linear Regression Weighted 1/X
r2: 0.9998525
[Y] = 3.021529E-04 * [X] + -1.949021E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	17.01	0.00319	0.00
BC23003-CAL2	250	258.28	0.07609	-3.31
BC23003-CAL3	5000	4,985.06	1.5043	0.30
BC23003-CAL4	10000	9,693.93	2.9271	3.06
BC23003-CAL5	50000	50,037.41	15.117	-0.07
BC23003-CAL6	100000	98,291.13	29.697	1.71
BC23003-CAL7	125000	127,223.50	38.439	-1.78
BC23003-CAL8	250000	249,760.80	75.464	0.10

ISM013 - ICP-AES (TM)

Thallium



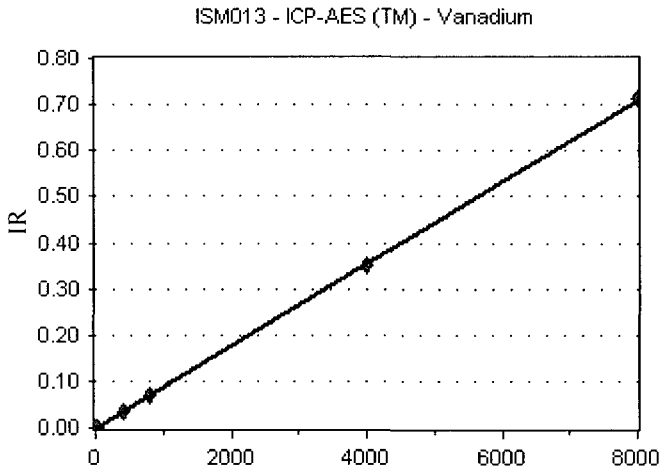
Linear Regression Weighted 1/X
r2: 0.9999078

[Y] = 2.002126E-04 * [X] + 3.458079E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	-1.38	0.00007	0.00
BC23003-CAL2	20	18.95	0.00414	5.25
BC23003-CAL3	400	410.23	0.08248	-2.56
BC23003-CAL4	800	821.90	0.1649	-2.74
BC23003-CAL5	4000	4,027.09	0.80662	-0.68
BC23003-CAL6	8000	7,941.83	1.5904	0.73

ISM013 - ICP-AES (TM)

Vanadium



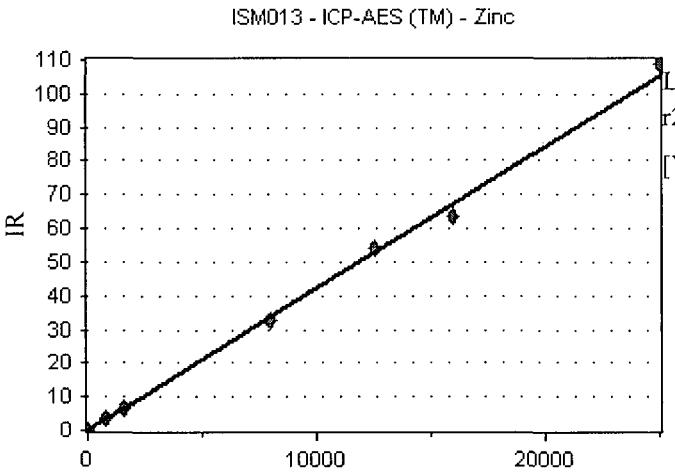
Linear Regression Weighted 1/X
r2: 0.999818

[Y] = 8.845344E-05 * [X] + -2.229047E-04

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	3.09	0.00005	0.00
BC23003-CAL2	20	21.51	0.00168	-7.57
BC23003-CAL3	400	386.22	0.03394	3.44
BC23003-CAL4	800	766.09	0.06754	4.24
BC23003-CAL5	4000	3,963.25	0.35034	0.92
BC23003-CAL6	8000	8,082.93	0.71474	-1.04

ISM013 - ICP-AES (TM)

Zinc



Linear Regression Weighted 1/X
r2: 0.9968992
[Y] = 4.215723E-03 * [X] + -3.148808E-03

Std. Name	Sataed Conc.	found Conc.	IR	Difference
BC23003-CAL1	0	1.36	0.00259	0.00
BC23003-CAL2	40	40.88	0.16918	-2.19
BC23003-CAL3	800	800.85	3.373	-0.11
BC23003-CAL4	1600	1,614.02	6.8011	-0.88
BC23003-CAL5	8000	7,712.12	32.509	3.60
BC23003-CAL6	16000	15,034.47	63.378	6.03
BC23003-CAL9	12500	12,876.59	54.281	-3.01
BC23003-CALA	25000	25,861.08	109.02	-3.44

Sample Name: SEQ-CAL1@S0 Acquired: 3/30/2012 11:34:15 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00000**	**.00259**	**-.00058**	**.0076**	**.00871**	**-.00003**	**-.00071**
#1	.00013	.00249	-.00027	.0080	.00907	-.00015	-.00059
#2	-.00007	.00294	-.00075	.0082	.00835	.00004	-.00072
#3	-.00006	.00234	-.00073	.0067	.00869	.00003	-.00084

Elem	Cd2144	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00020**	**.00152**	**-.00001**	**.00703**	**.00029**	**.00592**	**.0053**
#1	.00032	.00186	.00003	.00696	.00051	.00601	.0047
#2	-.00015	.00128	-.00001	.00720	.00024	.00542	.0057
#3	.00043	.00140	-.00004	.00692	.00013	.00633	.0054

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00012**	**.00011**	**.0004**	**.00319**	**-.00189**	**.00012**	**.00008**
#1	.00023	.00016	.0008	.00344	-.00186	.00054	-.00009
#2	.00011	.00009	.0000	.00211	-.00201	-.00046	.00006
#3	.00002	.00009	.0004	.00403	-.00179	.00029	.00027

Elem	Se1960	Sn1899	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00105**	**.0002**	**.00007**	**.00005**	**.00259**
#1	.00096	.0000	.00010	.00009	.00198
#2	.00129	.0003	.00009	-.00001	.00277
#3	.00090	.0003	.00001	.00009	.00302

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4649.3**	**1068.0**	**1665.9**	**24361.**	**9218.9**
#1	4645.4	1067.6	1661.3	24379.	9297.6
#2	4654.9	1062.8	1659.5	24279.	9154.9
#3	4647.5	1073.6	1676.9	24426.	9204.2

Sample Name: SEQ-CAL2@S Acquired: 3/30/2012 11:38:29 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00036**	**.01312**	**.00405**	**.0213**	**.81364**	**.00483**	**.00550**	**.05450**
#1	.00030	.01339	.00407	.0215	.81199	.00494	.00546	.05401
#2	.00038	.01282	.00408	.0214	.81485	.00483	.00547	.05422
#3	.00039	.01315	.00400	.0210	.81407	.00473	.00556	.05526

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.03298**	**.00079**	**.02524**	**.00899**	**.02888**	**.0171**	**.00661**	**.00773**
#1	.03299	.00081	.02507	.00908	.02870	.0158	.00657	.00785
#2	.03311	.00081	.02526	.00890	.02974	.0178	.00660	.00760
#3	.03282	.00075	.02537	.00899	.02819	.0178	.00665	.00774

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0160**	**.07609**	**.02966**	**.01140**	**.01023**	**.00663**	**.0109**	**.00414**
#1	.0160	.07673	.02963	.01207	.01020	.00684	.0110	.00425
#2	.0163	.07662	.02931	.01156	.01039	.00639	.0109	.00405
#3	.0158	.07492	.03004	.01057	.01009	.00667	.0109	.00412

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.00168**	**.16918**
#1	.00172	.16799
#2	.00159	.16884
#3	.00172	.17070

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4664.8**	**1077.5**	**1691.7**	**24366.**	**9385.3**
#1	4673.5	1079.9	1690.1	24426.	9539.1
#2	4679.9	1078.6	1694.3	24424.	9367.6
#3	4641.1	1074.2	1690.6	24249.	9249.2

Sample Name: SEQ-CAL3@S Acquired: 3/30/2012 11:42:45 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00845**	**.23186**	**.08417**	**.2752**	**16.756**	**.10225**	**.12528**	**1.0744**
#1	.00846	.23251	.08420	.2757	16.809	.10209	.12548	1.0729
#2	.00841	.23200	.08519	.2746	16.736	.10176	.12542	1.0670
#3	.00847	.23107	.08311	.2754	16.722	.10291	.12495	1.0835

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.62220**	**.01624**	**.37602**	**.18121**	**.47732**	**.2269**	**.13390**	**.15784**
#1	.62296	.01626	.37853	.18033	.47729	.2279	.13286	.15773
#2	.62239	.01617	.37723	.18229	.47742	.2282	.13489	.15701
#3	.62126	.01629	.37229	.18101	.47723	.2245	.13394	.15879

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.3142**	**1.5043**	**.62702**	**.21538**	**.19904**	**.11251**	**.2083**	**.08248**
#1	.3142	1.5103	.62680	.21550	.20107	.11347	.2093	.08245
#2	.3151	1.5020	.62606	.21410	.20003	.11327	.2079	.08231
#3	.3132	1.5006	.62820	.21653	.19602	.11079	.2078	.08266

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.03394**	**3.3730**
#1	.03368	3.3573
#2	.03396	3.3451
#3	.03417	3.4167

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4472.2**	**1050.9**	**1661.0**	**23843.**	**9222.9**
#1	4478.9	1051.0	1659.5	23922.	9253.5
#2	4487.3	1048.0	1657.4	23888.	9174.4
#3	4450.3	1053.8	1666.3	23720.	9240.8

Sample Name: SEQ-CAL4@S Acquired: 3/30/2012 11:46:51 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01640**	**.44902**	**.17348**	**.5340**	**31.922**	**.20209**	**.25205**	**2.1417**
#1	.01647	.44875	.17450	.5319	32.291	.20250	.25264	2.1313
#2	.01637	.44988	.17438	.5367	31.313	.20256	.25055	2.1302
#3	.01636	.44843	.17156	.5333	32.164	.20122	.25295	2.1635

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.2361**	**.03209**	**.73886**	**.35786**	**.94374**	**.4348**	**.27050**	**.30814**
#1	1.2375	.03211	.73649	.35679	.94522	.4368	.27067	.30778
#2	1.2326	.03215	.73682	.35603	.94253	.4355	.26852	.30866
#3	1.2382	.03201	.74328	.36075	.94348	.4320	.27232	.30797

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.6325**	**2.9271**	**1.2638**	**.43229**	**.40067**	**.22449**	**.4168**	**.16490**
#1	.6340	2.9234	1.2642	.43372	.40339	.22583	.4156	.16459
#2	.6313	2.9269	1.2635	.43295	.40283	.22512	.4156	.16461
#3	.6321	2.9311	1.2636	.43019	.39580	.22253	.4190	.16551

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.06754**	**6.8011**
#1	.06749	6.7574
#2	.06772	6.7812
#3	.06740	6.8648

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4395.5**	**1036.1**	**1659.5**	**23824.**	**9131.6**
#1	4410.5	1034.6	1659.1	23787.	9122.3
#2	4405.4	1033.2	1660.4	23933.	9206.3
#3	4370.5	1040.4	1659.2	23753.	9066.1

Sample Name: SEQ-CAL5@S Acquired: 3/30/2012 11:51:02 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.08648**	**2.3066**	**.90434**	**2.881**	**158.00**	**1.0496**	**1.2384**	**10.189**
#1	.08568	2.2855	.90680	2.855	153.15	1.0422	1.2255	10.123
#2	.08708	2.3174	.90818	2.910	159.16	1.0541	1.2439	10.142
#3	.08669	2.3171	.89805	2.877	161.70	1.0523	1.2459	10.303

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.9998**	**.16611**	**3.8717**	**1.7483**	**4.7739**	**2.215**	**1.3337**	**1.6030**
#1	5.9833	.16461	3.8849	1.7305	4.7422	2.200	1.3175	1.5913
#2	6.0164	.16669	3.8679	1.7571	4.7906	2.223	1.3407	1.6106
#3	5.9996	.16703	3.8624	1.7572	4.7888	2.220	1.3430	1.6072

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.167**	**15.117**	**6.2591**	**2.1230**	**2.0249**	**1.1019**	**2.010**	**.80662**
#1	3.164	15.006	6.2540	2.1198	2.0330	1.1060	2.003	.80781
#2	3.179	15.195	6.2650	2.1239	2.0415	1.1088	2.010	.80364
#3	3.157	15.151	6.2583	2.1254	2.0002	1.0910	2.017	.80842

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.35034**	**32.509**
#1	.34714	32.281
#2	.35175	32.254
#3	.35213	32.993

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3986.7**	**958.03**	**1578.7**	**23286.**	**9378.1**
#1	3990.8	957.40	1580.7	23272.	9397.5
#2	3994.1	954.20	1571.5	23315.	9381.7
#3	3975.1	962.49	1584.0	23271.	9355.0

Sample Name: SEQ-CAL6@S Acquired: 3/30/2012 11:55:12 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.17277**	**4.6262**	**1.8390**	**5.846**	**309.08**	**2.1218**	**2.4410**	**20.278**
#1	.17260	4.6043	1.8454	5.864	305.74	2.1109	2.4285	20.137
#2	.17295	4.6383	1.8496	5.839	312.14	2.1251	2.4447	20.102
#3	.17277	4.6361	1.8219	5.835	309.36	2.1293	2.4498	20.594

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**11.917**	**.33403**	**7.7683**	**3.4052**	**9.6709**	**4.453**	**2.6656**	**3.2243**
#1	11.934	.33306	7.7298	3.3946	9.5949	4.418	2.6560	3.2166
#2	11.894	.33477	7.8271	3.4125	9.6856	4.462	2.6722	3.2319
#3	11.924	.33427	7.7480	3.4085	9.7322	4.477	2.6688	3.2245

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6.374**	**29.697**	**12.272**	**4.1491**	**4.1224**	**2.2113**	**3.998**	**1.5904**
#1	6.391	29.736	12.280	4.1523	4.1591	2.2289	3.996	1.5853
#2	6.371	29.791	12.284	4.1418	4.1469	2.2228	3.982	1.5887
#3	6.359	29.565	12.253	4.1532	4.0611	2.1824	4.016	1.5972

Elem	V_2924	Zn2062
Units	Cts/S	Cts/S
Avg	**.71474**	**63.378**
#1	.71012	62.778
#2	.71509	62.715
#3	.71902	64.640

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3683.2**	**914.46**	**1498.6**	**22172.**	**9143.6**
#1	3686.4	909.35	1490.7	22210.	9168.5
#2	3686.7	911.54	1497.5	22100.	9114.8
#3	3676.5	922.47	1507.7	22206.	9147.5

Sample Name: SEQ-CAL7@S Acquired: 3/30/2012 11:59:32 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Al3961	Ca3181	Fe2382	K_7664	Mg2790	Na5895	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**23.873**	**6.2127**	**14.569**	**14.887**	**6.9782**	**38.439**	**14.269**
#1	23.269	6.1693	14.443	14.850	6.9159	38.037	14.334
#2	24.173	6.2475	14.659	14.919	7.0263	39.400	14.278
#3	24.178	6.2214	14.604	14.891	6.9925	37.879	14.195

Int. Std.	Sc2273	Y_3710
Units	Cts/S	Cts/S
Avg	**799.80**	**8879.4**
#1	790.38	8956.1
#2	794.75	8809.0
#3	814.26	8873.1

Sample Name: SEQ-CAL8@S Acquired: 3/30/2012 12:04:00 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Al3961	Ca3181	Fe2382	K_7664	Mg2790	Na5895	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**47.625**	**12.422**	**27.257**	**30.135**	**14.184**	**75.464**	**28.766**
#1	47.921	12.492	27.214	30.252	14.240	75.468	28.758
#2	47.072	12.410	27.307	30.170	14.183	75.771	28.821
#3	47.882	12.365	27.251	29.983	14.129	75.153	28.720

Int. Std.	Sc2273	Y_3710
Units	Cts/S	Cts/S
Avg	**707.80**	**8491.3**
#1	705.27	8455.8
#2	698.03	8514.3
#3	720.10	8503.9

Sample Name: SEQ-CAL9@S Acquired: 3/30/2012 12:08:41 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Cr2677	Cu3247	Fe2382	Mn2576	Pb2203	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.0121**	**15.255**	**17.744**	**6.5300**	**5.6979**	**54.281**
#1	1.0110	15.463	17.591	6.5155	5.6792	53.910
#2	1.0133	15.186	17.805	6.5481	5.6972	53.969
#3	1.0119	15.117	17.836	6.5265	5.7173	54.963

Int. Std.	Sc2273	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**1010.5**	**23967.**	**9059.4**
#1	1015.4	23961.	9116.0
#2	1009.9	23916.	9022.1
#3	1006.3	24024.	9040.1

Sample Name: SEQ-CALA@S Acquired: 3/30/2012 12:13:05 Type: Cal
Method: ISM1.3_4th_MDLs_2011(v47) Mode: IR Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	As1890	Cr2677	Cu3247	Fe2382	Mn2576	Pb2203	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.9529**	**2.0961**	**30.785**	**33.570**	**13.110**	**12.240**	**109.02**
#1	3.9375	2.0911	30.495	33.369	13.180	12.247	109.47
#2	3.9823	2.0915	31.056	34.155	13.097	12.223	107.57
#3	3.9389	2.1055	30.803	33.186	13.053	12.251	110.02

Int. Std.	Sc2273	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**918.61**	**23717.**	**9017.6**
#1	922.82	23662.	9008.7
#2	910.54	23694.	8933.6
#3	922.47	23797.	9110.5

Sample Name: SEQ-ICV@ICV01 Acquired: 3/30/2012 12:17:39 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**489.65**	**2490.8**	**931.20**	**-.1144**	**541.30**	**484.68**	**10547.**	**523.21**
Stddev	5.28	14.5	4.98	.6318	3.01	3.20	55.	3.69
%RSD	1.0787	.58339	.53527	552.1	.55607	.65945	.52587	.70502
#1	488.96	2496.9	934.71	-.5835	541.30	487.59	10560.	522.58
#2	484.75	2474.2	933.40	.6040	538.29	481.26	10486.	519.88
#3	495.24	2501.2	925.50	-.3637	544.31	485.18	10594.	527.18

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**527.38**	**490.57**	**492.28**	**5435.3**	**9857.9**	**1.003**	**5880.1**	**502.68**
Stddev	1.05	3.12	2.52	36.9	67.8	.463	23.7	2.81
%RSD	.19845	.63693	.51179	.67974	.68783	46.21	.40241	.55834
#1	526.18	489.98	490.69	5445.6	9926.6	1.462	5857.2	502.97
#2	528.12	487.78	490.96	5394.3	9791.0	.5354	5878.8	499.74
#3	527.83	493.94	495.18	5466.0	9856.2	1.010	5904.5	505.34

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.1354**	**10143.**	**520.18**	**975.05**	**1009.2**	**1050.0**	**-.0030**	**1082.0**
Stddev	.0514	66.	1.73	2.72	10.9	8.7	.1933	3.1
%RSD	37.97	.65046	.33258	.27930	1.0769	.83144	6502.	.28983
#1	-.0776	10145.	518.25	971.95	1011.0	1053.8	-.0905	1081.7
#2	-.1759	10076.	521.60	977.07	1019.0	1056.2	.2186	1085.3
#3	-.1528	10208.	520.68	976.13	997.52	1040.0	-.1370	1079.1

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**484.29**	**1007.2**
Stddev	1.09	12.1
%RSD	.22509	1.1991
#1	484.61	1004.8
#2	483.07	996.53
#3	485.18	1020.3

Sample Name: SEQ-ICV@ICV01 Acquired: 3/30/2012 12:17:39 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4610.8**	**1075.4**	**1712.0**	**24765.**	**9416.9**
Stddev	20.1	5.3	5.7	74.	17.5
%RSD	.43632	.49495	.33143	.29887	.18572
#1	4631.6	1081.4	1717.8	24692.	9406.1
#2	4609.4	1071.2	1706.4	24840.	9437.1
#3	4591.4	1073.6	1711.8	24762.	9407.5

Sample Name: SEQ-ICB@ICB01 Acquired: 3/30/2012 12:21:40 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.15759**	**.96277**	**.46441**	**1.457**	**.00356**	**.02783**	**5.4037**	**.03819**
Stddev	.63435	3.1099	.77452	1.091	.17470	.02723	2.7631	.02642
%RSD	402.55	323.02	166.78	74.88	4909.0	97.865	51.133	69.166
#1	-.24830	4.5046	1.3554	.8819	.20470	.05909	5.3112	.02462
#2	.88859	-.29488	-.04770	2.716	-.08373	.00929	2.6880	.06864
#3	-.16753	-1.3214	.08550	.7744	-.11029	.01510	8.2119	.02133

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.07945**	**.12768**	**1.1319**	**7.3765**	**47.116**	**1.059**	**4.5336**	**.45135**
Stddev	.12992	1.0778	.2434	3.0210	10.760	.437	6.9182	.13346
%RSD	163.52	844.14	21.501	40.954	22.837	41.22	152.60	29.568
#1	.04592	.44763	1.4095	10.857	52.132	.9622	11.879	.57362
#2	-.21348	1.0092	.95554	5.8388	54.451	.6793	3.5811	.47146
#3	-.07079	-1.0738	1.0306	5.4338	34.764	1.536	-1.8591	.30899

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.0397**	**11.342**	**-.05251**	**-.04529**	**.48221**	**-.58595**	**.0752**	**.00946**
Stddev	.0648	1.163	.20483	.33297	.44055	.75070	.1160	.44788
%RSD	163.0	10.256	390.07	735.18	91.360	128.12	154.3	4732.4
#1	-.0147	12.508	-.22919	-.23490	.71476	-.25455	.1276	-.22425
#2	.0087	10.182	.17200	.33917	-.02589	-.05797	.1558	.52586
#3	-.1133	11.335	-.10034	-.24015	.75775	-1.4453	-.0578	-.27322

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**-.07294**	**.01705**
Stddev	.38683	.06772
%RSD	530.35	397.27
#1	-.41412	.08783
#2	-.15202	.01042
#3	.34732	-.04711

Sample Name: SEQ-ICB@ICB01 Acquired: 3/30/2012 12:21:40 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4831.3**	**1115.2**	**1719.0**	**25173.**	**9760.0**
Stddev	18.3	1.7	4.2	57.	35.8
%RSD	.37971	.15235	.24595	.22588	.36669
#1	4839.1	1114.1	1721.2	25239.	9762.6
#2	4844.4	1117.1	1714.1	25141.	9723.0
#3	4810.3	1114.3	1721.7	25139.	9794.5

Sample Name: SEQ-IFA@ICSA01 Acquired: 3/30/2012 12:25:56 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.73020**	**235660.**	**.53974**	**-2.731**	**2.1993**	**.65132**	**242170.**
Stddev	.74476	3179.	2.3120	.914	.0930	.01216	1118.
%RSD	101.99	1.3491	428.36	33.47	4.2304	1.8670	.46144
#1	1.5745	232690.	2.9203	-2.486	2.3049	.66261	241320.
#2	.44963	239010.	-1.6971	-1.964	2.1635	.65288	243440.
#3	.16648	235270.	.39604	-3.742	2.1295	.63845	241750.

Elem	Cd2144	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.60115**	**4.5318**	**39.777**	**23.710**	**94969.**	**82.544**	**1.909**
Stddev	.07047	.0863	.700	.319	613.	8.359	.363
%RSD	11.723	1.9043	1.7600	1.3460	.64502	10.127	19.00
#1	-.62028	4.6051	40.565	23.944	94558.	77.888	1.521
#2	-.66008	4.4367	39.228	23.839	95673.	92.195	2.239
#3	-.52308	4.5538	39.537	23.346	94675.	77.550	1.967

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**240340.**	**24.964**	**.1112**	**803.26**	**17.448**	**3.3002**	**5.0567**
Stddev	1139.	.124	.1232	4.82	.248	1.3955	1.2486
%RSD	.47410	.49623	110.8	.59962	1.4202	42.284	24.692
#1	239810.	24.830	.0890	797.77	17.228	3.7104	6.3607
#2	241650.	24.986	.0006	806.77	17.401	1.7457	3.8721
#3	239560.	25.074	.2440	805.24	17.716	4.4447	4.9373

Elem	Se1960	Sn1899	Tl1908	V_2924	Zn2062
Units	ppb	ppb	ppb	ppb	ppb
Avg	**3.4428**	**1.507**	**1.6410**	**-.16602**	**33.091**
Stddev	1.9552	.498	.6420	.79524	.436
%RSD	56.790	33.02	39.123	478.99	1.3177
#1	2.3572	2.078	1.1737	.48786	33.018
#2	2.2713	1.276	1.3763	-1.0513	32.697
#3	5.6999	1.166	2.3730	.06537	33.560

Sample Name: SEQ-IFA@ICSA01 Acquired: 3/30/2012 12:25:56 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3759.4**	**864.95**	**1577.3**	**22734.**	**9416.0**
Stddev	3.8	4.92	4.2	159.	32.1
%RSD	.09984	.56892	.26718	.70033	.34138
#1	3761.4	860.96	1574.4	22876.	9421.5
#2	3761.8	863.45	1575.4	22764.	9381.5
#3	3755.1	870.45	1582.1	22562.	9445.1

Sample Name: SEQ-IFB@ICSAB01 Acquired: 3/30/2012 12:30:19 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**203.82**	**239160.**	**101.92**	**-5.926**	**515.08**	**489.70**	**250390.**
Stddev	1.81	3045.	1.00	.680	2.94	4.99	836.
%RSD	.88605	1.2733	.97793	11.48	.57022	1.0193	.33387
#1	201.93	237440.	102.59	-5.937	513.45	483.98	250190.
#2	205.52	237370.	102.39	-5.241	518.47	493.20	251310.
#3	204.01	242680.	100.77	-6.601	513.32	491.91	249670.

Elem	Cd2144	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**957.78**	**471.99**	**522.02**	**519.99**	**99120.**	**67.255**	**2.289**
Stddev	9.17	1.39	3.24	.53	235.	7.391	.152
%RSD	.95762	.29419	.62157	.10180	.23723	10.989	6.631
#1	952.46	471.25	518.30	519.53	99382.	75.788	2.125
#2	952.51	471.12	523.49	520.57	99048.	63.114	2.424
#3	968.37	473.59	524.26	519.88	98929.	62.863	2.319

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**251890.**	**527.01**	**.2324**	**804.01**	**1078.2**	**50.603**	**572.47**
Stddev	348.	5.19	.0625	6.18	1.2	1.390	6.75
%RSD	.13796	.98412	26.92	.76862	.10723	2.7466	1.1786
#1	252240.	521.72	.2978	804.23	1076.9	51.629	578.31
#2	251880.	532.08	.2261	810.07	1079.0	51.160	574.02
#3	251550.	527.25	.1732	797.72	1078.7	49.021	565.08

Elem	Se1960	Sn1899	Tl1908	V_2924	Zn2062
Units	ppb	ppb	ppb	ppb	ppb
Avg	**50.454**	**1.243**	**100.31**	**483.45**	**1074.9**
Stddev	1.515	.418	1.42	2.45	11.1
%RSD	3.0018	33.60	1.4150	.50761	1.0334
#1	51.544	.7634	98.677	480.67	1069.0
#2	48.724	1.528	101.26	484.37	1068.0
#3	51.093	1.437	100.99	485.31	1087.7

Sample Name: SEQ-IFB@ICSAB01 Acquired: 3/30/2012 12:30:19 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3801.5**	**878.64**	**1595.7**	**22673.**	**9111.2**
Stddev	4.6	5.15	5.6	37.	63.9
%RSD	.12027	.58612	.34946	.16329	.70085
#1	3802.9	873.84	1589.6	22715.	9038.1
#2	3805.3	877.99	1597.1	22660.	9156.2
#3	3796.5	884.08	1600.5	22644.	9139.3

Sample Name: SEQ-CCV@CCV01 Acquired: 3/30/2012 12:34:33 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**971.17**	**19222.**	**1828.6**	**1859.**	**16183.**	**390.28**	**50988.**	**1012.6**
Stddev	6.60	120.	18.2	7.	136.	1.96	255.	11.7
%RSD	.67938	.62318	.99682	.3558	.83958	.50297	.49983	1.1545
#1	974.06	19098.	1845.1	1865.	16044.	391.61	50699.	1007.5
#2	975.83	19337.	1831.6	1861.	16188.	391.19	51181.	1004.3
#3	963.62	19232.	1809.0	1852.	16316.	388.02	51084.	1026.0

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**2480.5**	**1981.2**	**5001.1**	**21153.**	**47903.**	**979.0**	**49619.**	**3023.6**
Stddev	4.7	9.5	19.0	137.	148.	3.5	352.	13.8
%RSD	.18971	.48195	.38034	.64585	.30822	.3621	.70951	.45773
#1	2480.0	1985.0	5022.3	20995.	47741.	975.5	49215.	3033.7
#2	2476.1	1988.2	4995.5	21228.	48031.	982.6	49789.	3029.4
#3	2485.4	1970.3	4985.6	21236.	47938.	978.9	49855.	3007.8

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**978.8**	**49747.**	**3932.7**	**1819.2**	**3861.0**	**3448.8**	**2004.**	**4090.0**
Stddev	1.4	236.	14.8	7.8	39.4	26.4	8.	7.1
%RSD	.1438	.47368	.37572	.42650	1.0202	.76484	.4025	.17398
#1	980.2	49515.	3949.7	1825.7	3892.5	3461.3	2001.	4087.6
#2	977.4	49986.	3922.8	1810.6	3873.7	3466.6	1997.	4084.5
#3	978.8	49739.	3925.5	1821.3	3816.8	3418.5	2013.	4098.0

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**3873.6**	**7676.9**
Stddev	22.7	95.0
%RSD	.58698	1.2375
#1	3881.7	7662.7
#2	3891.2	7589.7
#3	3847.9	7778.1

Sample Name: SEQ-CCV@CCV01 Acquired: 3/30/2012 12:34:33 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4122.7**	**1031.6**	**1657.2**	**23398.**	**9103.2**
Stddev	11.0	8.1	4.9	113.	43.5
%RSD	.26753	.78950	.29607	.48212	.47833
#1	4121.2	1022.7	1651.6	23295.	9153.0
#2	4134.4	1033.4	1658.8	23381.	9084.8
#3	4112.5	1038.7	1661.0	23519.	9072.0

Sample Name: SEQ-CCB@CCB01 Acquired: 3/30/2012 12:38:42 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.53012**	**6.7786**	**.81219**	**2.341**	**1.1645**	**.02223**	**13.989**	**.05568**
Stddev	.96966	3.9437	.21018	.221	.4768	.01135	18.983	.02066
%RSD	182.91	58.179	25.878	9.433	40.947	51.044	135.70	37.102
#1	.58938	9.4803	.65938	2.396	1.6235	.01191	34.738	.03384
#2	-1.1066	8.6025	.72530	2.098	1.1982	.03438	9.7341	.05829
#3	-1.0731	2.2531	1.0519	2.530	.67166	.02039	-2.5059	.07490

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.13068**	**.31073**	**.99363**	**6.0865**	**47.234**	**1.399**	**8.9683**	**.34558**
Stddev	.11563	.69126	.30299	3.8596	4.062	.302	3.7852	.23552
%RSD	88.485	222.47	30.493	63.412	8.5994	21.57	42.206	68.153
#1	.26110	1.0420	1.1498	10.196	51.919	1.051	9.5544	.61653
#2	.09026	.22221	.64442	5.5245	44.707	1.555	12.426	.18990
#3	.04069	-.33202	1.1867	2.5388	45.076	1.591	4.9243	.23030

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.1106**	**15.139**	**-.05041**	**-.43753**	**.41825**	**.33512**	**.2198**	**.23043**
Stddev	.0785	2.857	.10395	.13907	.49330	.67008	.1108	.43622
%RSD	70.99	18.872	206.22	31.786	117.95	199.95	50.43	189.31
#1	.1987	16.807	.06690	-.59212	.36897	-.41344	.1406	.39353
#2	.0478	16.770	-.13109	-.32257	-.04857	.87899	.1723	.56161
#3	.0853	11.840	-.08703	-.39790	.93434	.53980	.3465	-.26384

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**.14728**	**.08289**
Stddev	1.2740	.04190
%RSD	865.04	50.548
#1	1.6085	.06260
#2	-.43562	.05500
#3	-.73103	.13107

Sample Name: SEQ-CCB@CCB01 Acquired: 3/30/2012 12:38:42 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4855.2**	**1135.8**	**1731.1**	**25440.**	**9773.1**
Stddev	13.8	.8	3.1	112.	37.5
%RSD	.28493	.07481	.17858	.44115	.38375
#1	4865.6	1135.1	1731.7	25560.	9747.5
#2	4860.5	1135.5	1727.8	25420.	9755.5
#3	4839.5	1136.8	1733.9	25338.	9816.1

Sample Name: 2032307-BLK1 Acquired: 3/30/2012 12:42:57 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: PBW01 SDG: MF5H90 CASE: 42356
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.07562**	**2.2338**	**-.33123**	**3.995**	**.39089**	**.00520**	**19.904**	**.00917**
Stddev	1.0796	5.0381	.25484	.348	.09433	.04551	4.821	.00512
%RSD	1427.6	225.54	76.939	8.714	24.131	875.79	24.219	55.878
#1	-1.0642	-1.2768	-.55536	4.384	.33643	-.04605	25.368	.01468
#2	-.23898	-.02816	-.38430	3.712	.49981	.04089	18.096	.00827
#3	1.0763	8.0064	-.05403	3.888	.33643	.02075	16.249	.00456

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.00429**	**.30376**	**.88657**	**1.3284**	**.06255**	**.3632**	**-2.1922**	**.12592**
Stddev	.11373	.85061	.14154	1.5587	10.530	.1569	7.6377	.05575
%RSD	2649.9	280.02	15.965	117.34	16835.	43.21	348.41	44.276
#1	.12653	-.51235	.75698	2.9910	11.745	.2101	6.3857	.17516
#2	-.05974	1.1851	.86512	1.0938	-2.8593	.3558	-8.2560	.13720
#3	-.07966	.23852	1.0376	-.09976	-8.6984	.5237	-4.7061	.06539

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.0014**	**11.640**	**.13459**	**.33674**	**-.35038**	**-.84060**	**.0472**	**-.43874**
Stddev	.0958	.787	.17221	.90675	.44541	.02035	.1578	.51439
%RSD	6721.	6.7577	127.95	269.27	127.12	2.4209	334.6	117.24
#1	.1068	10.791	.31473	.37821	-.32049	-.84686	-.1189	-.32676
#2	-.0356	11.787	.11746	1.2220	.07933	-.85709	.1952	.01044
#3	-.0755	12.343	-.02841	-.59003	-.80999	-.81786	.0653	-.99990

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**-.24522**	**-.15667**
Stddev	.30362	.04932
%RSD	123.81	31.482
#1	-.45738	-.20466
#2	-.38086	-.15923
#3	.10257	-.10612

Sample Name: 2032307-BLK1 Acquired: 3/30/2012 12:42:57 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: PBW01 SDG: MF5H90 CASE: 42356
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4913.0**	**1181.9**	**1791.9**	**25550.**	**9663.9**
Stddev	28.2	3.4	7.2	65.	45.5
%RSD	.57492	.28959	.40227	.25336	.47055
#1	4944.7	1178.2	1783.8	25477.	9704.6
#2	4903.6	1184.9	1794.3	25598.	9672.4
#3	4890.6	1182.6	1797.6	25576.	9614.8

Sample Name: 2032307-BS1 Acquired: 3/30/2012 12:47:13 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: LCS01 SDG: MF5H90 CASE: 42356
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**17.859**	**382.85**	**18.053**	**4.779**	**415.11**	**9.5871**	**10269.**	**10.427**
Stddev	.482	5.24	.426	.426	1.64	.0300	26.	.078
%RSD	2.6976	1.3689	2.3603	8.923	.39611	.31268	.25327	.75005
#1	18.400	383.14	18.539	5.077	413.35	9.5733	10299.	10.409
#2	17.475	387.93	17.744	4.970	415.39	9.6215	10259.	10.359
#3	17.703	377.46	17.875	4.291	416.60	9.5666	10250.	10.513

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**102.92**	**19.477**	**49.603**	**213.42**	**9533.0**	**.2696**	**9749.3**	**29.797**
Stddev	.21	.627	.157	1.35	21.0	.4036	25.3	.011
%RSD	.20175	3.2196	.31603	.63297	.22035	149.7	.25953	.03666
#1	103.11	20.091	49.658	214.91	9509.4	-.0243	9735.8	29.802
#2	102.70	19.504	49.426	213.07	9539.7	.7298	9733.6	29.785
#3	102.96	18.838	49.725	212.28	9549.8	.1034	9778.5	29.805

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.2184**	**9920.1**	**80.495**	**19.405**	**118.46**	**70.295**	**.0013**	**51.699**
Stddev	.0830	45.5	.613	.253	.89	.782	.2307	.559
%RSD	38.02	.45888	.76165	1.3047	.75505	1.1123	17480.	1.0812
#1	.1426	9871.5	80.162	19.334	118.44	69.401	-.1077	51.311
#2	.3072	9926.9	80.119	19.196	119.37	70.853	.2663	52.340
#3	.2054	9961.8	81.202	19.687	117.58	70.630	-.1546	51.447

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**95.461**	**115.00**
Stddev	.785	1.72
%RSD	.82271	1.4951
#1	94.618	114.16
#2	95.593	113.87
#3	96.172	116.98

Sample Name: 2032307-BS1 Acquired: 3/30/2012 12:47:13 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: LCS01 SDG: MF5H90 CASE: 42356
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4683.0**	**1114.2**	**1739.2**	**25030.**	**9563.9**
Stddev	19.0	2.5	2.9	41.	36.0
%RSD	.40594	.22335	.16734	.16289	.37645
#1	4683.2	1116.9	1737.9	25076.	9592.8
#2	4701.9	1113.6	1737.2	25010.	9575.3
#3	4663.9	1112.0	1742.6	25003.	9523.6

Sample Name: 1203263-01 Acquired: 3/30/2012 12:51:24 Type: Unk
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: MF5H90 SDG: MF5H90 CASE: 42356
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.48680**	**-.16131**	**.10556**	**.0715**	**.01635**	**-.02824**	**30.597**	**.01607**
#1	.15266	3.7697	.13164	.2695	.11853	-.01639	44.196	-.00600
#2	-.69961	-4.0503	-.08436	-.3998	-.03305	-.02918	29.569	.03553
#3	-.91346	-.20329	.26939	.3448	-.03642	-.03915	18.026	.01868

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.03672**	**.61783**	**1.2380**	**1.0833**	**-4.1166**	**-.1044**	**1.9945**	**.22813**
#1	-.04533	.91034	1.1041	3.4303	-1.3257	-.3221	6.2767	.33797
#2	-.02026	.79039	1.3707	-.89405	-10.351	-.0653	3.8474	.08179
#3	-.04458	.15275	1.2392	.71363	-.6727	.0744	-4.1405	.26463

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.0604**	**13.885**	**.09168**	**-.13419**	**.59680**	**-.69335**	**.3059**	**-.31947**
#1	.0610	19.891	.55918	-.28073	.55373	-.40639	.2709	-.46786
#2	.1314	10.135	-.09609	.38649	.03189	.09247	.5940	-.10663
#3	-.0113	11.631	-.18806	-.50833	1.2048	-1.7661	.0528	-.38391

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**.23657**	**4.8305**
#1	1.4160	4.8690
#2	.16046	4.6848
#3	-.86673	4.9377

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4877.9**	**1148.2**	**1752.0**	**25586.**	**9759.1**
#1	4901.3	1150.9	1753.0	25587.	9735.7
#2	4899.3	1145.1	1746.7	25624.	9735.3
#3	4833.1	1148.6	1756.4	25545.	9806.2

Sample Name: 1203263-02 Acquired: 3/30/2012 12:55:41 Type: Unk
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: MF5H91 SDG: MF5H90 CASE: 42356
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.48713**	**.95781**	**-.12331**	**-1.004**	**-.12931**	**-.02177**	**15.859**	**-.00914**
#1	.79902	4.4046	.10237	-1.268	.03865	.01146	7.4106	-.01208
#2	.96710	.46938	-.64643	-1.292	-.22838	-.04102	18.552	.00351
#3	-.30474	-2.0006	.17414	-.4529	-.19821	-.03576	21.614	-.01885

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.06448**	**-.07119**	**.66975**	**-.06159**	**-23.171**	**.0095**	**1.7031**	**-.00191**
#1	-.17548	.30530	.61019	4.0968	-19.751	.4738	6.4381	-.02590
#2	.20895	-.05741	.69776	-2.3645	-29.962	-.3622	-.07762	.05318
#3	.15996	-.46147	.70130	-1.9171	-19.800	-.0829	-1.2511	-.03302

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.0346**	**50.513**	**.30535**	**-.00189**	**-.08662**	**-.36680**	**-.0193**	**-.65726**
#1	.0653	53.492	.88367	.62506	.06928	-.24691	-.0936	.15930
#2	.0610	46.927	.20961	-.32209	-.19318	-.48170	.1083	-.77957
#3	-.0224	51.118	-.17723	-.30863	-.13595	-.37181	-.0726	-1.3515

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**-.16340**	**3.9801**
#1	.46369	4.0178
#2	-1.2871	3.9232
#3	.33327	3.9991

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4954.1**	**1164.5**	**1779.7**	**25926.**	**9734.2**
#1	4970.2	1167.1	1781.2	25909.	9742.8
#2	4961.1	1161.4	1779.5	25955.	9701.1
#3	4930.9	1165.1	1778.5	25912.	9758.9

Sample Name: 1203263-03 Acquired: 3/30/2012 12:59:58 Type: Unk
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: MF5H92 SDG: MF5H90 CASE: 42356
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.59784**	**6.6422**	**.29596**	**-.4116**	**.21414**	**-.03606**	**564.43**	**-.01393**
#1	-.18001	13.186	.15403	.0992	.41428	-.04394	550.48	.01680
#2	-1.0331	2.5735	.29675	-.5687	.09228	-.04511	574.31	-.05599
#3	-.58041	4.1669	.43710	-.7652	.13586	-.01913	568.49	-.00260

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.13481**	**.51278**	**1.0083**	**3.1906**	**101.54**	**-.2020**	**22.492**	**.31206**
#1	.02558	.63242	1.0808	7.6739	103.72	-.4884	30.596	.48708
#2	.27508	.78147	1.0402	.53971	107.15	-.0002	17.578	.26448
#3	.10376	.12444	.90395	1.3583	93.739	-.1173	19.301	.18462

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.0269**	**760.48**	**.06972**	**-.13086**	**-.19701**	**-.42365**	**-.1087**	**-.29413**
#1	.0437	757.40	.07984	-1.7033	.74150	-.69394	-.1167	-.43581
#2	.0444	761.35	-.13958	.94436	-.54720	.61050	-.3415	-.00286
#3	-.0075	762.71	.26891	.36640	-.78532	-1.1875	.1320	-.44373

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**-.10469**	**1.3270**
#1	.14764	1.4177
#2	-.21549	1.2220
#3	-.24623	1.3411

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4929.8**	**1163.6**	**1778.6**	**25607.**	**9653.7**
#1	4936.2	1165.3	1780.7	25695.	9734.8
#2	4940.3	1165.5	1782.0	25568.	9627.0
#3	4912.9	1160.0	1773.1	25559.	9599.3

Sample Name: SEQ-CCV@CCV02 Acquired: 3/30/2012 13:04:17 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**987.36**	**19069.**	**1843.0**	**1944.**	**16208.**	**395.44**	**49223.**	**982.89**
Stddev	1.47	79.	5.9	10.	101.	.89	145.	8.24
%RSD	.14881	.41346	.32216	.5300	.62290	.22567	.29529	.83821
#1	985.91	18992.	1847.3	1951.	16098.	394.95	49063.	979.15
#2	987.33	19149.	1845.6	1948.	16229.	396.47	49261.	977.18
#3	988.85	19067.	1836.3	1932.	16296.	394.90	49346.	992.33

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**2450.4**	**1971.4**	**5017.7**	**20405.**	**47378.**	**994.1**	**47397.**	**3033.2**
Stddev	8.5	2.2	40.8	80.	103.	2.9	184.	4.6
%RSD	.34655	.11104	.81407	.39411	.21705	.2963	.38800	.15315
#1	2448.6	1969.3	4973.2	20323.	47261.	991.8	47273.	3033.5
#2	2442.9	1971.2	5026.4	20409.	47422.	997.4	47311.	3037.8
#3	2459.6	1973.6	5053.5	20484.	47452.	993.2	47609.	3028.5

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**974.3**	**49835.**	**3912.1**	**1804.1**	**3923.2**	**3486.1**	**1971.**	**4036.5**
Stddev	2.1	72.	5.8	1.6	19.3	5.8	9.	22.9
%RSD	.2111	.14389	.14774	.08940	.49153	.16727	.4593	.56834
#1	974.3	49769.	3910.6	1804.1	3934.2	3488.3	1966.	4019.0
#2	972.3	49911.	3907.2	1802.4	3934.4	3490.5	1965.	4028.1
#3	976.4	49825.	3918.5	1805.7	3900.9	3479.5	1981.	4062.5

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**3878.4**	**7396.1**
Stddev	7.3	50.2
%RSD	.18706	.67820
#1	3870.3	7379.3
#2	3884.4	7356.5
#3	3880.4	7452.5

Sample Name: SEQ-CCV@CCV02 Acquired: 3/30/2012 13:04:17 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4197.4**	**1033.8**	**1669.4**	**24260.**	**9716.9**
Stddev	11.3	6.3	4.7	23.	41.2
%RSD	.26837	.60823	.28374	.09572	.42435
#1	4201.4	1028.5	1664.0	24266.	9743.6
#2	4206.1	1032.2	1671.0	24279.	9737.7
#3	4184.7	1040.7	1673.1	24234.	9669.4

Sample Name: SEQ-CCB@CCB02 Acquired: 3/30/2012 13:08:29 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Elem	Ag3280	Al3961	As1890	B_2497	Ba4554	Be3131	Ca3181	Cd2144
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.12423**	**-1.9843**	**.37900**	**2.199**	**1.0953**	**.00705**	**-1.4254**	**.15995**
Stddev	.70030	3.1901	.06512	.449	.4374	.02819	9.2238	.00576
%RSD	563.69	160.77	17.182	20.42	39.928	400.05	647.10	3.5987
#1	.67435	1.6981	.42243	2.540	1.5274	.00968	5.0667	.16309
#2	.36245	-3.7439	.41045	1.690	1.1058	.03383	-11.984	.16346
#3	-.66410	-3.9070	.30413	2.366	.65287	-.02236	2.6408	.15331

Elem	Co2286	Cr2677	Cu3247	Fe2382	K_7664	Li6707	Mg2790	Mn2576
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.34831**	**.75288**	**.65522**	**.78658**	**45.433**	**1.270**	**2.8909**	**.18458**
Stddev	.12834	.54439	.22267	4.8339	8.390	.232	10.731	.15895
%RSD	36.846	72.307	33.985	614.55	18.467	18.24	371.21	86.114
#1	.21256	.61566	.74262	6.3516	38.724	1.536	12.926	.36069
#2	.46765	1.3527	.82093	-1.6217	54.840	1.157	-8.4226	.14125
#3	.36471	.29023	.40210	-2.3701	42.734	1.117	4.1696	.05179

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	Sn1899	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.3455**	**9.2100**	**.36974**	**.67005**	**1.1457**	**.45094**	**.4306**	**.51765**
Stddev	.0646	2.4554	.27341	.68259	.5863	.84387	.1721	.23011
%RSD	18.70	26.660	73.947	101.87	51.176	187.14	39.97	44.453
#1	.2927	11.985	.35839	.14392	.66585	-.00641	.4171	.73326
#2	.4176	7.3196	.64864	.42486	1.7993	-.06553	.6090	.27536
#3	.3261	8.3252	.10218	1.4414	.97205	1.4248	.2656	.54431

Elem	V_2924	Zn2062
Units	ppb	ppb
Avg	**.17446**	**.65741**
Stddev	.57701	.30408
%RSD	330.74	46.254
#1	.16707	.38708
#2	.75512	.98662
#3	-.39882	.59852

Sample Name: SEQ-CCB@CCB02 Acquired: 3/30/2012 13:08:29 Type: QC
Method: ISM1.3_4th_MDLs_2011(v47) Mode: CONC Corr. Factor: 1.000000
User: MSB2 EPA ID: SDG: CASE:
Comment:

Int. Std.	In2306	Sc2273	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4884.5**	**1171.8**	**1785.8**	**25213.**	**9769.5**
Stddev	26.4	3.5	4.8	75.	33.4
%RSD	.53962	.30043	.26968	.29671	.34212
#1	4903.5	1174.8	1790.5	25296.	9758.4
#2	4895.6	1172.6	1786.1	25150.	9743.1
#3	4854.4	1167.9	1780.9	25194.	9807.1

WinHg Database 1.5

File Utility Help

Protocol LM01 Dataset/Proto H032312B/LM01

Protocol | Line info | Cal Curve | Report | Ctrl Chart | Viewer

Reset

Calib Coeffs

New Cal

Update Coeffs

Spike Coeffs

A

B 1.29677e-4

C -4.42328e-2

Rho .999949

Type Linear

☑ Calibrated

☑ Accepted

Accept

µ Abs.
46630

Accepted

New

Include S1 Rep 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐

23-Mar-12 14:33 Conc 6.003

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
01	.00000	.0395	.0395	646	1	646		
02	.20000	.1948	-.0052	1843	0%	1843		
03	.50000	.4732	-.0268	3991	0%	3990		
04	1.0000	.9836	-.0164	7927	0%	7926		
05	2.0000	2.006	.0063	15813	0%	15813		
06	6.0000	6.003	.0026	46630	0%	46630		

Ready

Start | WinHg Runner 1.5 | WinHg Database 1... | WinHG Rack Editor 1... | Microsof

Bonner Analytical Testing Co.

Mercury Curve Percent Difference Check

File Name: LM01
lethod & Instrument: LM01
Analyst: KLP

Standards Prep Date: 3/23/2012
Standards Log Page No.: 36

SDG No.: MF5H90
Case No.: 42356

ID	Time	Date	Absorbance	Curve Conc.	Calc. Conc.	% Diff
S0	14:20:28	23 Mar 12	646	0	NA	NA
S0.2	14:23:13	23 Mar 12	1843	0.2	NA	NA
S0.5	14:25:26	23 Mar 12	3990	0.5	0.47317731	5%
S1	14:27:30	23 Mar 12	7926	1	0.9835849	2%
S2	14:29:23	23 Mar 12	15813	2	2.00634522	0%
S6	14:32:18	23 Mar 12	46630	6	6.00259285	0%

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-----------------------------------------------------------------------------

*** Standard: 1 Rep: 1              Seq:  1       14:20:28 23 Mar 12   HG

Hg    .0000   ppb      646  50
                                                                        =
*** Standard: 2 Rep: 1              Seq:  2       14:23:13 23 Mar 12   HG

Hg    .2000   ppb      1843 50.2
                                                                        =
*** Standard: 3 Rep: 1              Seq:  3       14:25:26 23 Mar 12   HG

Hg    .5000   ppb      3990 50.5
                                                                        =
*** Standard: 4 Rep: 1              Seq:  4       14:27:30 23 Mar 12   HG

Hg    1.000   ppb      7926 51
                                                                        =
*** Standard: 5 Rep: 1              Seq:  5       14:29:23 23 Mar 12   HG

Hg    2.000   ppb      15813 52
                                                                        =
*** Standard: 6 Rep: 1              Seq:  6       14:32:18 23 Mar 12   HG

Hg    6.000   ppb      46630 56
                                                                        =
*** Check Standard: 2  Ck2SEQ-ICV01 Seq:  7       14:36:20 23 Mar 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          96.53    3.861   4.000  ppb        .0000
                                                                        =
*** Sample ID: ICB01                Seq:  8       14:38:20 23 Mar 12   HG
                            SEQ-ICB01
Hg    .0248   ppb       .0000     .0248
                                                                        =
*** Check Standard: 3  Ck3SEQ-CCV01 Seq:  9       14:40:25 23 Mar 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.3    2.045   2.000  ppb        .0000
                                                                        =
*** Check Standard: 1  Ck1SEQ-CCB01 Seq:  10      14:42:17 23 Mar 12   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg          .0616    .2000    ppb        .0000
                                                                        =
*** Sample ID: PBW01                Seq:  11      14:44:07 23 Mar 12   HG
                            2032308-BLK1
Hg    .0058   ppb       .0000     .0058
                                                                        =
=============================================================================
*** Sample ID: MF5H90               Seq:  12      14:45:59 23 Mar 12   HG
                            1203263-01
Hg    .0587   ppb       .0000     .0587
                                                                        =
=============================================================================
```

KCP
3/27/12

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-----------------------------------------------------------------------------

*** Sample ID: MF5H91                Seq:  13     14:47:50 23 Mar 12   HG
                            1203263-02
Hg    .0411   ppb       .0000     .0411
                                                                        =
=============================================================================
*** Sample ID: MF5H92                Seq:  14     14:50:20 23 Mar 12   HG
                            1203263-03
Hg    .0476   ppb       .0000     .0476
                                                                        =
*** Check Standard: 3  Ck3SEQ-CCV02 Seq:  15      14:52:23 23 Mar 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          100.9    2.019   2.000  ppb        .0000
                                                                        =
*** Check Standard: 1  Ck1SEQ-CCB02 Seq:  16      14:54:29 23 Mar 12   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg          .0358    .2000    ppb        .0000
                                                                        =
```

KJ
3/23/12

PREPARATION BENCH SHEET

2032307

Bonner Analytical Testing

Analysis: ISM013 - ICP-AES (TM)
Prepared: 03/23/2012 10:20

CASE: 42356
SDG: MF5H90
Work Order: 1203263

Matrix: Water

Prepared using: METALS - 200.7

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	pH	Color Before	Color After	Clarity Before	Clarity After	Texture	Artifacts
1203263-01	MF5H90	50	50					< 2	colorless	colorless	clear	clear		
1203263-02	MF5H91	50	50					< 2	colorless	colorless	clear	clear		
1203263-03	MF5H92	50	50					< 2	colorless	colorless	clear	clear		
2032307-BS1	LCS01	50	50	B1J0097	250			< 2						
2032307-BLK1	PBW01	50	50					< 2						

Standard ID#	Description	Manufacture Lot#
B1G0040	R-Nitric Acid - 1:1	BA-072811JMM
B2B0002	R-Hydrochloric Acid - 1:1	BA-020112JMM
B9G0020	R-Distilled Water	NA

Block ID		1					
Temp. Start	Temp. Stop	96	98				
Time Start	Time Stop	10:35	16:55				

Comments:

JMM — 03/23/2012 — 04/03/12

Perpared By — Date — Preparation Reviewed By — Date

PREPARATION BENCH SHEET

2032308

Bonner Analytical Testing

Analysis: ISM013 - Mercury

Prepared: 03/23/2012 10:20

Case: 42356

Matrix: Water

Prepared using: METALS - 7470A

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	pH	Color Before	Color After	Clarity Before	Clarity After	Artifacts
1203263-01	MF5H90	50	50					< 2	colorless	colorless	clear	clear	
1203263-02	MF5H91	50	50					< 2	colorless	colorless	clear	clear	
1203263-03	MF5H92	50	50					< 2	colorless	colorless	clear	clear	
2032308-BLK1	PBW01	50	50					< 2					

Reagent ID	Concentration	Vendor	Lot Number
Sulfuric Acid	Neat	Mallinckrodt	J04F01
Stannous Chloride	NA	BATCO	Ba 031512 KUL-2
HNO3	Neat	~~Mallinckrodt~~	1110120
HCL	2 %	BATCO	Ba 122712 KUL-5
SCHS	NA	BATCO	Ba 122712 KUL-4
Potassium Persulfate	5%	BATCO	Ba 011812 KUL-3
Potassium Permanganate	5%	BATCO	Ba 030512 KUL-3
DI Water	Neat	BATCO	NA

EPA ID	Std. Discription	WATER		SOIL	
		Spike V. (uL)	F.V. (mL)	Spike V. (uL)	F.V. (mL)
S0/ICB/CCB	Cal Blank/ICB/CCB	0	50	0	100
S0.2/CRI	Cal Std / CRI 0.2 ppb	100	50	200	100
S0.5	Cal Std 0.5 ppb	250	50	500	100
S1	Cal Std 1 ppb	500	50	1000	100
S2/CCV	Cal Std / CCV 2 ppb	1000	50	2000	100
S6	Cal Std 6 ppb	3000	50	6000	100
ICV	ICV 4.0 ppb	500	50	1000	100

These are the spike values used for calibration curves for Water or Soil.
See Matrix type to determine which to be used.

Block ID		02					
Temp. Start	Temp. Stop	94	95				
Time Start	Time Stop	11:50	13:50				

Comments:

JMM 03/23/2012 10:20

Perpared By Date

04/03/12

Preparation Reviewed By Date

85

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8000 6268 8049 0200 Form ID No.

FedEx Retrieval Copy

Inorganic

1 From

Date 3/19/12 [redacted]

Sender's Name Stephen Ellis Phone 512 2395337

Company TCEQ

Address 12100 Park 35 Circle MC-136 Dept./Floor/Suite/Room

City AUSTIN State TX ZIP 78753

2 Your Internal Billing Reference 12-10479/4441/70635

3 To

Recipient's Name Chris Bonner Phone 601 264 2854

Company Bonner Analytical Testing Company

Address 2703 Oak Grove Road Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

01 ☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

31 ☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

City Hattisburg State MS ZIP 39402

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the new FedEx Express Freight US Airbill.*

Next Business Day

06 ☒ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

01 ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

49 ☐ **NEW** FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

03 ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

01 ☒ Sender — Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 1 Total Weight 42 lbs. [redacted] Credit Card Auth.

*Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

612

8000 6268 8049

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J. Aul 3-20-12 0830-5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICIAL SAMPLE SEAL

SAMPLE NO. cooler DATE 3/19/12

SIGNATURE

PRINT NAME AND TITLE (Inspector, Analyst or Technician) Stephen Ellis

SEAL BROKEN BY DATE

EPA FORM 7500-2(87-75)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICIAL SAMPLE SEAL

SAMPLE NO. cooler DATE 3/19/12

SIGNATURE

PRINT NAME AND TITLE (Inspector, Analyst or Technician) Stephen Ellis

SEAL BROKEN BY DATE

EPA FORM 7500-2(87-75)

FedEx Express

FO

FedEx First Overnight®

151969 REV 7/08 RRD

86

No original (6U)

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8000 6268 8119 0200 Form ID No.

FedEx Retrieval Copy

1 From

Date 3/20/12 [redacted]

Sender's Name Stephen Ellis Phone 512 239-5337

Company TCEQ

Address 12100 Park 35 Circle MC-136 Dept./Floor/Suite/Room

City Austin State TX ZIP 78753

2 Your Internal Billing Reference 12-10479/4441/70635

3 To

Recipient's Name Chris Bonner Phone 601 264-2854

Company Bonner Analytical Testing Company

Address 2703 Oak Grove Road Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Hattisburg State MS ZIP 39402

01 ☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

31 ☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

P. Ak 3-21-12 1037 0837 PM

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

- 06 ☒ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- 01 ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- 05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- 49 ☐ NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- 03 ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- 20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

1 ☐ Sender Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 1 Total Weight 42 lbs. [redacted] Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

612

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Signature Gary Gottus Date 3/20/12

TNRCC-10058 (2/98)

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Signature Gary Gottus Date 3/20/12

TNRCC-10058 (2/98)

WORK ORDER

Printed: 3/21/2012 4:27:1[illegible]PM

1203263

Bonner Analytical Testing

Client: Environmental Protection Agency, Region 6
Project: 42356

Project Manager: Chris Bonner
Project Number: 42356

Report To:
Environmental Protection Agency, Region 6
Ray Flores
10625 Fallstone Road
Houston, TC 77099-4303
Phone: (281) 983-2139
Fax: (281) 983-2248

Invoice To:
Environmental Protection Agency, Region 6
Ray Flores
10625 Fallstone Road
Houston, TC 77099-4303
Phone :(281) 983-2139
Fax: (281) 983-2248

Date Due: 04/09/2012 15:00 (14 day TAT)

Received By: Trisha Aiken
Date Received: 03/20/2012 08:30

Logged In By: Trisha Aiken
Date Logged In: 03/20/2012 10:02

Samples Received at: 5°C

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confin	Yes		

Analysis	Due	TAT	Expires	Comments
1203263-01 MF5H90 [Water] Sampled 03/19/2012 14:40 Central				
ISM013 - Mercury	04/09/2012 12:00	14	04/09/2012 14:40	
ISM013 - ICP-AES (TM)	04/09/2012 12:00	14	04/09/2012 14:40	
1203263-02 MF5H91 [Water] Sampled 03/20/2012 13:30 Central				
ISM013 - Mercury	04/09/2012 12:00	14	04/10/2012 13:30	
ISM013 - ICP-AES (TM)	04/09/2012 12:00	14	04/10/2012 13:30	
1203263-03 MF5H92 [Water] Sampled 03/20/2012 13:35 Central				
ISM013 - Mercury	04/09/2012 12:00	14	04/10/2012 13:35	
ISM013 - ICP-AES (TM)	04/09/2012 12:00	14	04/10/2012 13:35	

M Hornsby
Reviewed By

3-26-12
Date

Bonner Analytical Testing Company

22146

SAMPLE RECEIPT FORM

Client: CLP Date: 3-20-12

Sample Type: Grab Composite SDG#: MF5H90 Case#: 42356

Matrix: SW (stormwater) GW (groundwater) WW (wastewater) DW (drinkingwater) SL (sludge)

SO (soil) AS (asbestos) PE (petroleum) other _____

1) Does this project fall under NPDES, RCRA, CLP, Litigation or other EPA guidelines?	NA	YES	NO
2) Did Cooler come with airbill/sticker? Circle carrier: UPS, FedEx, other:_____ If YES, enter airbill number here: 8000 6268 8049	NA	YES	NO
3) Are custody seals intact? Custody Seal#: N/A Custody Seal#: N/A	NA	YES	NO
4) Are all bottles sealed in separate plastic bags?	NA	YES	NO
5) Are samples requiring no headspace, headspace free?	NA	YES	NO
6) Packing Material: Bubblewrap, peanuts, vermiculite, ice, other:_____		YES	NO
7) Are chains of custody filled out properly? (ink, signed, dates, QC listed, etc.)		YES	NO
8) Are all bottle labels complete and agree with COC? (ID, time, date, preservation)		YES	NO
9) Were all bottles received intact?		YES	NO
10) Were correct containers used for the tests indicated? Who's: BATCO/Client		YES	NO
11) Was a sufficient aliquot of sample sent for tests indicated?		YES	NO
12) Are samples within holding times for requested analysis?		YES	NO
13) Sample Preservation?			
A) If samples were collected within 6 hours of receipt, has chilling begun?	NA	YES	NO
B) If samples were received beyond 6 hours of collection:			
1) Is there a temperature blank?	NA	YES	NO
2) Temperature 5°C			
C) Were correct preservatives added to sample/s?	NA	YES	NO

14) Describe "NO" items for the above if # 1) response is NA or YES

N/A

15) Is there a Corrective Action and/or Client Contact form attached? YES NO

Signature: Patricia Ailk

Rev No. 1.4
Date: 07/15/05

Bonner Analytical Testing Company

SAMPLE RECEIPT FORM

22748

Client: CLP Date: 3-21-12

Sample Type: Grab Composite SDG#: MF5H90 Case#: 42356

Matrix: SW (stormwater) GW (groundwater) WW (wastewater) DW (drinkingwater) SL (sludge)

SO (soil) AS (asbestos) PE (petroleum) other water

1) Does this project fall under NPDES, RCRA, CLP, Litigation or other EPA guidelines?	NA	YES	NO
2) Did Cooler come with airbill/sticker? Circle carrier: UPS, FedEx, other:_____ If YES, enter airbill number here: 8000 6268 8119	NA	YES	NO
3) Are custody seals intact? Custody Seal#: N/A Custody Seal#: N/A	NA	YES	NO
4) Are all bottles sealed in separate plastic bags?	NA	YES	NO
5) Are samples requiring no headspace, headspace free?	NA	YES	NO
6) Packing Material: Bubblewrap, peanuts, vermiculite, ice, other:_____		YES	NO
7) Are chains of custody filled out properly? (ink, signed, dates, QC listed, etc.)		YES	NO
8) Are all bottle labels complete and agree with COC? (ID, time, date, preservation)		YES	NO
9) Were all bottles received intact?		YES	NO
10) Were correct containers used for the tests indicated? Who's: BATCO/Client		YES	NO
11) Was a sufficient aliquot of sample sent for tests indicated?		YES	NO
12) Are samples within holding times for requested analysis?		YES	NO
13) Sample Preservation?			
A) If samples were collected within 6 hours of receipt, has chilling begun?	NA	YES	NO
B) If samples were received beyond 6 hours of collection:			
1) Is there a temperature blank?	NA	YES	NO
2) Temperature 5°C			
C) Were correct preservatives added to sample/s?	NA	YES	NO
14) Describe "NO" items for the above if # 1) response is NA or YES: N/A			
15) Is there a Corrective Action and/or Client Contact form attached?		YES	NO

Signature: Patricia Ack

Bonner Analytical Testing Co.
Inhouse Chain of Custody
for Samples

SDG Number: MF5H90 **Case No.:** 42356

Work Order Number: 1203263

1) MF5H90	7)	13)	19)
2) MF5H91	8)	14)	20)
3) MF5H92	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: N/A

3-21-12 1640

Name:	Signature:	Date &Time	Purpose:
P. Aick	P. Aick	3-20-12 1431	S
Jess ML	[illegible]	3/23/12 10:20	M/A3
Jess ML	[illegible]	3/23/12 10:55	S

Purpose: S - Storage; W - Weigh; DP - Disposal; TS - Total Solids; P - Pour

Bonner Analytical Testing Co.
Digestate Chain of Custody
for Samples

SDG Number: MF5H90 **Case No.:** 42356

Work Order Number: 1203263

1) MF5H90	7)	13)	19)
2) MF5H91	8)	14)	20)
3) MF5H92	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: N/A

Name:	Signature:	Date &Time	Purpose:
Jess M		10:20 3/23/12	~~W~~ P/D
Jess M		~~12:50~~ 17:10 3/23/12	S
MAX Bonner		3/30/12 1000	A
MAX Bonner		3/30/12 16:00	S

Purpose: S - Storage; A - Analyze; DP - Disposal; D - Digest; W - Weigh; P-Pour

Bonner Analytical Testing Co.
Digestate Chain of Custody
for Samples

SDG Number: MF5H90 **Case No.:** 42356

Work Order Number: 1203263

1) MF5H90	7)	13)	19)
2) MF5H91	8)	14)	20)
3) MF5H92	9)	15)	21)
4)	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Sample to be used for QC: N/A

Name	Signature	Date &Time	Purpose
Joe Mh		3/23/12 10:20	P/D
[illegible]		3/23/12 1420	A
[illegible]		3/23/12 1510	DP

Purpose: S - Storage; A - Analyze; DP - Disposal; D - Digest; W - Weigh; P-Pour

Bonner Analytical Testing Co.
2703 Oak Grove Road
Hattiesburg, MS 39402

STANDARD & QC LOG (ISM)

099

for 03/29/12 ICP 01/02/03 Daily Analysis

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer	Lot#	Date Lot Expires	LIMS ID
Initial Calibration High	S9		50 mL	Inorganic Ventures	NA	72 hours	B1J0044
BAT-10		5 mL	Composite	Inorganic Ventures	E2-MEB378081	Oct-12	
Fe 10000 ppm		2 mL		Inorganic Ventures	D2-FE03122	Oct-12	
Initial Calibration High	S8		50 mL	Inorganic Ventures	NA	72 hours	B1J0045
BAT-10		2.5 mL	Composite	Inorganic Ventures	E2-MEB378081	Oct-12	
Fe 10000 ppm		1 mL		Inorganic Ventures	D2-FE03122	Oct-12	
Initial Calibration High	S7		50 mL	Inorganic Ventures	NA	72 hours	B1J0035
BAT-9		5 mL	Composite	Inorganic Ventures	E2-MEB378080	Oct-12	
Pb 1000 ppm		1.25 mL		Inorganic Ventures	E2-PB03029	Aug-12	
Initial Calibration High	S6		50 mL	Inorganic Ventures	NA	72 hours	B1J0036
BAT-9		2.5 mL	Composite	Inorganic Ventures	E2-MEB378080	Oct-12	
Pb 1000 ppm		0.625		Inorganic Ventures	E2-PB03029	Aug-12	
Initial Calibration High	S5		50 mL	Inorganic Ventures	NA	72 hours	B1J0046
BAT-5		5 mL	Composite	Inorganic Ventures	E2-MEB389077	Nov-12	
BAT-4		5 mL		Inorganic Ventures	E2-MEB389076	Nov-12	
~~Initial Calibration Mid~~	~~S4/CCV~~		~~50 mL~~	~~Inorganic Ventures~~	~~NA~~	~~72 hours~~	~~B1J0047~~
~~BAT-5~~		~~2.5 mL~~	Composite	~~Inorganic Ventures~~	~~E2-MEB389077~~	~~Nov-12~~	
~~BAT-4~~		~~2.5 mL~~		~~Inorganic Ventures~~	~~E2-MEB389076~~	~~Nov-12~~	
Initial Calibration Low	S3		50 mL	Inorganic Ventures	NA	72 hours	B1J0048
AT-5		0.5 mL	Composite	Inorganic Ventures	E2-MEB389077	Nov-12	
BAT-4		0.5 mL		Inorganic Ventures	E2-MEB389076	Nov-12	
Initial Calibration Low	S2	5.0 mL	50 mL	Inorganic Ventures	From S4	72 hours	B1J0049
Initial Calibration Low	S1	2.5 mL	50 mL	Inorganic Ventures	From S2	72 hours	B1J0050
Initial Calibration Blank	S0	NA	50 mL	In-house	BA100311MSB2	72 hours	B1J0051
Initial Calibration Verification	ICV	NA	50 mL	Inorganic Ventures	NA	72 hours	B9C0001
ICV-1		5.0mL	Composite	EPA REF MATERIAL	0307	NA	
Initial Calibration Blank	ICB	NA	50 mL	In-house	BA100311MSB2	72 hours	
Interelement Check Standard A	ICSA	25 mL	250 mL	EPA REF Material	1206	1 wk	B810015
Interelement Check Standard AB	ICSAB	NA	250 mL	EPA REF Material	NA	1 wk	B810016
ICS PART A		25 mL	Composite	EPA REF MATERIAL	1206	NA	
ICS PART B		25 mL		EPA REF MATERIAL	0203	NA	
Continuing Calibration Blank	CCB	NA	50 mL	In-house	BA100311MSB2	72 hours	
Matrix Spike	MS	NA	100 mL(soil) 50 mL (water)	Inorganic Ventures	NA	NA	
CLPP-SPK-1		200uL (soil)	Composite		D2-MEB324145	Nov-12	B1J0026
CLPP-SPK-5		50uL (water)			B2-MEB263095	Nov-12	B1J0025
Lab Control Sample	LCS	NA	100 mL(soil) 50 mL (water)	Inorganic Ventures	NA	NA	
BA-AES-CRQL-A		500uL (soil) 250uL (water)	Composite		E2-MEB368140	Dec-12	B1J0097

Dilutions of standards are made with the same Acid Water as the S0, CCB, & ICB.

Prepared By: _____ Analyst

Reviewed By: _____ 4/3/12 Supervisor/Date

REAGENTS PREPARATION LOG

ICP Reference Standards

Lims ID: B1L0026 Batch: BA-122711MSB2

Preparation Date: 12/27/2011 Prepared By: Max Bonner

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	~ 5 gallons	BATCO	NA	NA	NA
Indium (Chloride)	Neat	1.97 g	Sigma-Aldrich	41796T7	8/7/2010	NA
Scandium	1,000	190 mL	SCP Science	S110725007	10/17/2011	3/8/2012
Yttrium	1,000	46.9 mL	SCP Science	S110719029	10/17/2011	3/8/112

Instrument: **Thermo - iCAP**

Final Volume : **5 gallons**

Concentration: **In @ 50 ppm; Y @ 2.5 ppm; Sc @ 10 ppm**

Used For: **Internal Standards for ICP**

Expiration Date **1 year**

Comments

Reviewed By: 1/9/12
Supervisor/Date

Rev 1.0
02/04/02
CMB

REAGENTS PREPARATION LOG

Acidified Water

Lims ID: B2A0018 Batch: BA-010912MSB2

Preparation Date: 1/9/2012 Prepared By: Max Bonner

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	18800 mL	BATCO	NA	NA	NA
Nitric Acid	Neat	200 mL	Fischer	1110120	3/5/2011	10/1/2013
Hyrdochloric Acid	Neat	1000 mL	Fischer	4110080	6/4/2010	NA

Instrument: **ICP-AES**

Final Volume : **20 Liters**

Concentration **1%HNO_3/5%HCl**

Used For: **Preparation of standards and controls**

Expiration Dat **1 year**

Comments

Reviewed By: 1/9/12
Supervisor/Date

Rev 1.0
02/04/02
CMB

Bonner Analytical Testing Company
ICP-AES
ISM Standard Concentrations

Analyte	Wavelength (nm)	Stock Std. (ppm)	S1 (ppm)	S2 (ppm)	S3 (ppm)	S4/CCV (ppm)	S5 (ppm)	Stock Std. (ppm)	S6 (ppm)	S7 (ppm)	Stock Std. (ppm)	S8 (ppm)	S9 (ppm)	ICV	ICSA	ICSAB	MS Water	MS Soil (mg/kg)	CRQL
Ag	328.0	20	0.005	0.10	0.20	1.0	2.0							501	(0)	206	50	10	10
Al	396.1	400	0.10	2.00	4.00	20.0	40.0	10000	200	400				2521	244100	241100	2000		200
As	198.0	40	0.010	0.20	0.40	2.0	4.0				80		8	999	(0)	101	40	8	10
Ba	455.4	320	0.080	1.60	3.20	16.0	32.0							497	(2)	495	2000	400	200
Be	313.1	8	0.0020	0.04	0.08	0.4	0.8							495	(0)	475	50	10	5
B	249.7	40	0.010	0.20	0.40	2.0	4.0							999	(0)	101	40	8	10
Ca	318.1	1000	0.25	5.00	10.00	50.0	100.0	10000	250	500				10026	234900	231100			5000
Cd	214.4	20	0.0050	0.10	0.20	1.0	2.0							496	(0)	940	50	10	5
Co	228.6	50	0.013	0.25	0.50	2.5	5.0							499	(4)	461	500	100	50
Cr	267.7	40	0.010	0.20	0.40	2.0	4.0				400	12.5	25	490	43	511	200	40	10
Cu	324.7	100	0.025	0.50	1.00	5.0	10.0				250	20	40	492	(23)	548	250	50	25
Fe	238.2	400	0.100	2.00	4.00	20.0	40.0	10000	175	350	10000	200	400	5082	95600	94800	1000		100
K	766.4	1000	0.250	5.00	10.00	50.0	100.0	10000	150	300				10021					5000
Li	670.7	20	0.005	0.10	0.20	1.0	2.0							500	(0)	(0)	200		15
Mg	279.0	1000	0.25	5.00	10.00	50.0	100.0	10000	250	500				6074	247500	251100			5000
Mn	257.6	60	0.015	0.30	0.60	3.0	6.0				250	12.5	25	499	19	502	500	100	15
Na	589.5	1000	0.250	5.00	10.00	50 0	100.0	10000	125	250				10097	(0)				5000
Ni	231.6	80	0.020	0.40	0.80	4.0	8.0							503	(21)	984	500	100	40
Pb	220.3	40	0.010	0.20	0.40	2.0	4.0	1000	12.5	25	100	5	10	1002	10	61	20	4	10
Sb	206.8	80	0.020	0.40	0.80	4.0	8.0							994	(0)	589	100	20	60
Se	196.0	70	0.018	0.35	0.70	3.5	7.0							1029	(0)	53	50	10	35
Sn	189.9	40	0.10	2.00	4.00	20.0	40.0							999	(0)	(0)	100	100	7
Tl	190.8	80	0.020	0.40	0.80	4.0	8.0							1028	(0)	103	50	10	25
V	292.4	80	0.020	0.40	0.80	4.0	8.0							501	(0)	494	500	100	50
Zn	206.2	160	0.040	0.80	1.60	8.0	16.0				250	12.5	25	1025	(28)	1028	500	100	60

Units are in µg/L unless otherwise noted.

() Indicates analyte values that are less than the CRQL, and the value is to be used as a set point for the ± CRQL accptance criteria calculation.

Metals Weekly Digestion Block Temperature Verification

Date	3/19/12		3/26/12		4/2/12			
Initials	JMM		JMM		JMM			
	Temp Read Out	**Thermometer**	**Temp Read Out**	**Thermometer**	**Temp Read Out**	**Thermometer**	**Temp Read Out**	**Thermometer**
ICP Digester 01	94	94	96	96	97	97		
ICP Digester 02	113.5	95	113.5	95.5	113.4	95		
ICP Digester 03	97	97	98	97	96	95		
ICP Digester 04	Not in Use	Not in Use	Not in Use	Not in Use	Not in Use	Not in Use		
Reviewed/Date:	[signature] 3/19/12		[signature] 3/26/12		[signature] 4/2/12			

Date								
Initials								
	Temp Read Out	**Thermometer**	**Temp Read Out**	**Thermometer**	**Temp Read Out**	**Thermometer**	**Temp Read Out**	**Thermometer**
ICP Digester 01								
ICP Digester 02								
ICP Digester 03								
ICP Digester 04								
Reviewed/Date:								

If temperature does not agree with the certified thermometer than either recalibrate the digestion block or use the thermometer to regulate the digestion block and record the thermometer temperature on digestion logs.

A copy of this page must accompany each SDG digested during the week.

Date of certified thermometer: 7/7/11
****Cannot exceed 1 year**

STANDARDS LOG

Analyst: James Mahl Date: 3/23/12

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer/ ID Number	Initial Conc.	Lot#	Date Lot Expires	Final Conc.
Initial Calibration Working Standard	S-WS-A	0.25 mL	25 Ml	Inorganic Ventures C2-HG02070	1000 ppm	BA-0323125MM.1	Sep-12	10 ppm
Initial Calibration Working Standard	S-WS-B	1.0 mL	100 mL	S-SW-A	10 ppm	BA-032312 JMM. 2	2 weeks	100 ppb
Initial Calibration Blank	S0	NA	50 mL	In-house	NA	NA	1 Day	NA
Initial Calibration	S0.2	0.1 mL	50 mL	S-SW-B	100 ppb	NA	1 Day	0.2 ppb
Initial Calibration	S0.5	0.25 mL	50 mL	S-SW-B	100 ppb	NA	1 Day	0.5 ppb
Initial Calibration	S1	0.5 mL	50 mL	S-SW-B	100 ppb	NA	1 Day	1.0 ppb
Initial Calibration	S2	1.0 mL	50 mL	S-SW-B	100 ppb	NA	1 Day	2.0 ppb
Initial Calibration	S6	3.0 mL	50 mL	S-SW-B	100 ppb	NA	1 Day	6.0 ppb
Initial Calibration Verification	ICV	0.5 mL	50 mL	EPA ICV 0508	400 ppb	NA	NA	4.0 ppb
Initial Calibration Blank	ICB	NA	50 mL	In-house	NA	NA	1 Day	NA
Continuing Calibration Verification	CCV	1.0 mL	50 mL	B9H0160	100 ppb	NA	1 Day	2.0 ppb
Continuing Calibration Blank	CCB	NA	50 mL	In-house	NA	NA	1 Day	NA

Reviewed By: [signature] Date: 3/23/12

REAGENTS PREPARATION LOG

Potassium Persulfate

000009

Preparation Date: 1/18/12 Prepared By: Kent Perry Batch No.: BA- 011812 KP-3

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	2000 ml	BATCO	NA	NA	NA
Potassium Persulfate	Neat	100.000g	Fisher	095983	7/20/10	NA

Balance ID metth II

Instrument: Leeman Hydra HG

Final Volume : 2L

Concentration: 5%

Used For: Mercury Preparation

Expiration Date 6 months

Comments 5 grams potassium persulfate to 100 mL H2O

Reviewed By: 1/25/12
Supervisor/Date

REAGENTS PREPARATION LOG

Stannous Chloride

000039

Preparation Date: 3-15-12 Prepared By: Michelle Cranford Batch No.: BA-031512MLC-2

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	900mL	BATCO	NA	NA	NA
Stannous Chloride	Neat	100.00g	Fisher	104466	9-2-10	NA
Hydrochloric Acid	Neat	100mL	Fisher ~~Mallinckrodt~~	4111010	9-19-11	NA

Balance ID NA

Instrument: Leeman Hydra HG

Final Volume : 1L

Concentration: 10%

Used For: Mercury Analysis

Expiration Date 6 months

Comments 10 grams stannous chloride to 100 mL 10% HCl

Reviewed By: [signature] 3/16/12
Supervisor/Date

REAGENTS PREPARATION LOG

Potassium Permanganate

000065

Preparation Date: 3/5/12 Prepared By: Kerri Perry Batch No.: BA- 030512 KP.3

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	2000 mL.	BATCO	NA	NA	NA
Potassium Permanganate	Neat	100.000g	Fisher	100824	8/26/10	NA

Balance ID meth II

Instrument: Leeman Hydra HG

Final Volume : 2L

Concentration: 5%

Used For: Mercury Preparation

Expiration Date 6 months

Comments 5 grams to 100 mL of Distilled Water

Reviewed By: 3/8/12
Supervisor/Date

REAGENTS PREPARATION LOG

Sodium Chloride Hydroxylamine Sulfate

000083

Preparation Date: 12/27/4 Prepared By: [illegible] Batch No.: BA- 122711KS.4

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	2000ml.	BATCO	NA	NA	NA
Hydroxylamine Sulfate	Neat	240.000g	Fisher	097120	9/30/10	NA
Sodium Chloride	Neat	240.000g	Fisher	097128	6/2/10	NA

Balance ID [illegible]

Instrument: Leeman Hydra HG

Final Volume : 2L

Concentration: 24%

Used For: Mercury Preparation

Expiration Date 6 months

Comments

Reviewed By: [illegible] 12/28/4
Supervisor/Date

REAGENTS PREPARATION LOG

2% Hydrochloric Acid

000093

Preparation Date: 12/27/11 Prepared By: Ken Perez Batch No.: BA-122711 KP.5

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Hydrochloric Acid	Neat	400 ml.	Fisher ~~Mallinckrodt~~	4111010	9/15/11	NA
Distilled Water	Neat	19600 ml.	BATCO	NA	NA	NA

Instrument: Leeman Hydra HG

Final Volume : 20L

Concentration: 2%

Used For: Mercury Analysis

Expiration Date 6 months

Comments

Reviewed By: 12/28/11
Supervisor/Date

HG Weekly Digestion Block Temperature Verification

Date	2/13/12		2/23/12		3/5/12		3-15-12	
Initials	KLP		KLP		KLP		~~KLP~~ MLC	
	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer
HG Digester 01	94	94	56	94	55	96	55	96
HG Digester 02	58	96	58	97	56	95	50	97
HG Digester 03	93	95	93	94	93	96		
Reviewed/Date:	[signature] 2/14/12		[signature] 2/23/12		[signature] 3/8/12		[signature] 3/16/12	

Date	3/22/12							
Initials	KLP							
	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer	Temp Read Out	Thermometer
HG Digester 01	KLP 3/22/12 56	94						
HG Digester 02	52	95						
HG Digester 03	94	95						
Reviewed/Date:	[signature] 3/23/12							

If temperature does not agree with the certified thermometer than either recalibrate the digestion block or use the thermometer to regulate the digestion block and record the thermometer temperature on digestion logs.

A copy of this page must accompany each SDG digested during the week.

Date of certified thermometer: 7/8/11
**Cannot exceed 1 year

File Name: MF5H90 SDG No.: MF5H90 Standards Prep Date: 3/29/12

Instrument: ICAPP02 Case No.: 47356 Standards Log Page No.: 099

Analyst: MSB

Lab ID	EPA Sample #	Date&Time	Elements circled for S0-S# were used throughout this run unless otherwised noted. Al, As, Sb, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn
BC23003-CAL1	S0	3/30/12 11:34	
BC23003-CAL2	S	3/30/12 11:38	
BC23003-CAL3	S	3/30/12 11:42	
BC23003-CAL4	S	3/30/12 11:46	
BC23003-CAL5	S	3/30/12 11:51	
BC23003-CAL6	S	3/30/12 11:55	
BC23003-CAL7	S	3/30/12 11:59	Al, Ca, Fe, Pb, Mg, K, Na only
BC23003-CAL8	S	3/30/12 12:04	Al, Ca, Pb, Mg, K, Na only
BC23003-CAL9	S	3/30/12 12:08	Cr, Cu, Fe, Pb, Mn, Zn only
BC23003-CALA	S	3/30/12 12:13	As, Cr, Cu, Fe, Pb, Mn, Zn only
BC23003-ICV1	ICV01	3/30/12 12:17	
BC23003-ICB1	ICB01	3/30/12 12:21	
BC23003-IFA1	ICSA01	3/30/12 12:25	
BC23003-IFB1	ICSAB01	3/30/12 12:30	
BC23003-CCV1	CCV01	3/30/12 12:34	
BC23003-CCB1	CCB01	3/30/12 12:38	
2032307-BLK1	PBW01	3/30/12 12:42	
2032307-BS1	LCS01	3/30/12 12:47	
1203263-01	MF5H90	3/30/12 12:51	
1203263-02	MF5H91	3/30/12 12:55	
1203263-03	MF5H92	3/30/12 12:59	
BC23003-CCV2	CCV02	3/30/12 13:04	
BC23003-CCB2	CCB02	3/30/12 13:08	

Bonner Analytical Testing Co.

Mercury Analytical Run Log

File Name: H032312B
Method & Instrument: LM01
Analyst: KLP

Standards Prep Date: 3/23/2012
Standards Log Page No.: 36

SDG No.: MF5H90
Case No.: 42356

Seq No	ID	Date	Time
1	S0	23 Mar 12	14:20:28
2	S0.2	23 Mar 12	14:23:13
3	S0.5	23 Mar 12	14:25:26
4	S1	23 Mar 12	14:27:30
5	S2	23 Mar 12	14:29:23
6	S6	23 Mar 12	14:32:18
7	ICV01	23 Mar 12	14:36:20
8	ICB01	23 Mar 12	14:38:20
9	CCV01	23 Mar 12	14:40:25
10	CCB01	23 Mar 12	14:42:17
11	PBW01	23 Mar 12	14:44:07
12	MF5H90	23 Mar 12	14:45:59
13	MF5H91	23 Mar 12	14:47:50
14	MF5H92	23 Mar 12	14:50:20
15	CCV02	23 Mar 12	14:52:23
16	CCB02	23 Mar 12	14:54:29

Trisha Aiken

From: Blackmon, Jacqueline [jblackmon3@fedcsc.com]
Sent: Tuesday, March 20, 2012 10:25 AM
To: Chris Bonner; Max Bonner; Mike Bonner; Tricia Aiken
Cc: Marvelyn Humphrey; Abel Euresti; Myra Perez; Raymond Flores
Subject: Region 06 | Case 42356 | Lab BONNER | Issue pH outside allowable limits | FINAL

Tricia,

Summary Start
Issue: The one TM sample that was received was preserved with HNO_3 and had a pH of 3. The laboratory added HNO_3 to bring the pH to 1.

Resolution: In accordance with previous direction from Region 6, the laboratory will note the issue in the SDG Narrative, adjust the pH for Metals and/or Mercury analysis to <2 and/or adjust the pH for Cyanide analysis to >12. After adjusting the pH of the sample(s), allow the sample(s) to sit for at least 4 hours prior to analysis. This resolution will be applied to all Metals and/or Mercury samples received for this Case with a pH that is >2 and <7 and/or all Cyanide samples received for this Case with a pH that is >7.
Summary End

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your PO.
Thanks,
Jackie (Blackmon) Washington
Environmental Coordinator- Regions 6, 9 and ASB (QB/PE)
CSC

15000 Conference Center Drive, Chantilly VA 20151
Civil Division | office phone 703-818-4184 | fax 703-818-4601 | jblackmon3@fedcsc.com | www.csc.com

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From: Trisha Aiken [mailto:taiken@batco.com]
Sent: Tuesday, March 20, 2012 11:01 AM
To: Blackmon, Jacqueline
Cc: Max Bonner
Subject: Region 6 | Case 42356 | Sample Receipt

Jackie;

On March 20, 2012 we received 1 water via FedEx air bill 8000 6268 8049. Custody seals were present and intact. Cooler temp was determined to be 5°C. Sample was in good condition except for the following discrepancy.

1. The TM sample preserved with HNO_3 had a pH of 3; additional HNO_3 was added to bring the pH to 1. Please advise.

Thanks;
Tricia Aiken
Bonner Analytical

Trisha Aiken

From: Trisha Aiken
Sent: Thursday, March 22, 2012 9:18 AM
To: 'Blackmon, Jacqueline'
Cc: Max Bonner
Subject: Region 6 | Case 42356 | Sample Receipt

Jackie;

On March 21, 2012 we received 2 waters via FedEx air bill 8000 6268 8119. Custody seals were present and intact. Cooler temp was determined to be 5°C. Samples were in good condition with no discrepancies.

Thanks;
Tricia Aiken
Bonner Analytical

USEPA CLP Inorganics COC (REGION COPY)

DateShipped: 3/19/2012
CarrierName: FedEx
AirbillNo: 800062688049

CHAIN OF CUSTODY RECORD

MSI Decon
Case #: 42356
Cooler #: 1 of 1

No: 6-031912-141340-006

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Inorganic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Organic Sample #	Sample Type
MF5H90	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-378671 (HNO3 pH<2), 6-378672 (NaOH pH>12) (2)	DECON-01	03/19/2012 14:40	F5H90	Rinsate

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: CLP TMHg=CLP TAL Total Metals Mercury, CN=CLP Cyanide

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/19/12 17:00									

USEPA CLP Inorganics COC (REGION COPY)

DateShipped: 3/20/2012
CarrierName: FedEx
AirbillNo: 800062688119

CHAIN OF CUSTODY RECORD

MSI Decon
Case #: 42356
Cooler #: 1 of 1

No: 6-032012-132416-0003

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Inorganic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Organic Sample #	Sample Type
MF5H91	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-487271 (HNO3 pH<2), 6-487272 (NaOH pH>12) (2)	DECON-02	03/20/2012 13:30	F5H91	Rinsate
MF5H92	Water/ TCEQ	Grab	CLP TMHg(21), CN(21)	6-345299 (HNO3 pH<2), 6-345300 (NaOH pH>12) (2)	DECON-03	03/20/2012 13:35	F5H92	Duplicate Rinsate

Special Instructions:	**Shipment for Case Complete? Y**
	Samples Transferred From Chain of Custody #

Analysis Key: CLP TMHg=CLP TAL Total Metals Mercury, CN=CLP Cyanide

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/20/12 17:00									

Trisha Aiken

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Summary End

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your PO.
Thanks,
Jackie (Blackmon) Washington
Environmental Coordinator- Regions 6, 9 and ASB (QB/PE)
CSC

15000 Conference Center Drive, Chantilly VA 20151
Civil Division | office phone 703-818-4184 | fax 703-818-4601 | jblackmon3@fedcsc.com | www.csc.com

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NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

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Tricia Aiken
Bonner Analytical

Trisha Aiken

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Cc: Max Bonner
Subject: Region 6 | Case 42356 | Sample Receipt

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Thanks;
Tricia Aiken
Bonner Analytical

USEPA CLP Organics COC (REGION COPY)

DateShipped: 3/20/2012
CarrierName: FedEx
AirbillNo: 800062688120

CHAIN OF CUSTODY RECORD

MSI Decon
Case #: 42356
Cooler #: 1 of 2

No: 6-032012-132525-0004

Lab: ALS Laboratory Group
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Organic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Inorganic Sample #	Sample Type
F5H91	Water/ TCEQ	Grab	CLP ARO(21), CLP TVOA(21), CLP TVOA(21), CLP TVOA(21), CLP SVOA(21), CLP SVOA(21), CLP PEST(21), CLP PEST(21), CLP ARO(21)	6-356900 (None), 6-378694 (HCl), 6-378695 (HCl), 6-378696 (HCl), 6-378697 (None), 6-378698 (None), 6-378699 (None), 6-378700 (None), 6-487521 (None) (9)	DECON-02	03/20/2012 13:30	MF5H91	Rinsate
F5H94	Water/ TCEQ	Grab	CLP TVOA(21), CLP TVOA(21), CLP TVOA(21)	6-367550 (HCl), 6-367551 (HCl), 6-367552 (HCl) (3)	FB-2	03/20/2012 13:40		Field Blank

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: CLP ARO=CLP TCL Aroclors, CLP TVOA=CLP TCL Trace Volatiles, CLP SVOA=CLP TCL Semivolatiles, CLP PEST=CLP TCL Pesticides

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ell	3/20/12 17:00									

USEPA CLP Organics COC (REGION COPY)

DateShipped: 3/20/2012
CarrierName: FedEx
AirbillNo: 800062688130

CHAIN OF CUSTODY RECORD

MSI Decon
Case #: 42356
Cooler #: 2 of 2

No: 6-032012-132608-0005

Lab: ALS Laboratory Group
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Organic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Inorganic Sample #	Sample Type
F5H92	Water/ TCEQ	Grab	CLP ARO(21), CLP ARO(21), CLP TVOA(21), CLP TVOA(21), CLP TVOA(21), CLP SVOA(21), CLP SVOA(21), CLP PEST(21), CLP PEST(21)	6-345297 (None), 6-345298 (None), 6-359764 (HCl), 6-359765 (HCl), 6-359766 (HCl), 6-359767 (None), 6-359768 (None), 6-359769 (None), 6-359770 (None) (9)	DECON-03	03/20/2012 13:35	MF5H92	Duplicate Rinsate

Special Instructions:

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: CLP ARO=CLP TCL Aroclors, CLP TVOA=CLP TCL Trace Volatiles, CLP SVOA=CLP TCL Semivolatiles, CLP PEST=CLP TCL Pesticides

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/20/12 17:00									

USEPA CLP Organics COC (REGION COPY)

DateShipped: 3/19/2012
CarrierName: FedEx
AirbillNo: 800062688050

CHAIN OF CUSTODY RECORD

MSI Decon
Case #: 42356
Cooler #: 1 of 1

No: 6-031912-151509-0002

Lab: ALS Laboratory Group
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Organic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Inorganic Sample #	Sample Type
F5H90	Water/ TCEQ	Grab	CLP TVOA(21), CLP TVOA(21), CLP TVOA(21), CLP SVOA(21), CLP SVOA(21), CLP PEST(21), CLP PEST(21), CLP ARO(21), CLP ARO(21)	6-378593 (HCl), 6-378594 (HCl), 6-378595 (HCl), 6-378596 (None), 6-378597 (None), 6-378598 (None), 6-378599 (None), 6-378600 (None), 6-378670 (None) (9)	DECON-01	03/19/2012 14:40	MF5H90	Rinsate
F5H93	Water/ TCEQ	Grab	CLP TVOA(21), CLP TVOA(21), CLP TVOA(21)	6-359761 (HCl), 6-359762 (HCl), 6-359763 (HCl) (3)	FB-1	03/19/2012 14:45		Field Blank

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, CLP SVOA=CLP TCL Semivolatiles, CLP PEST=CLP TCL Pesticides, CLP ARO=CLP TCL Aroclors

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Stephen Ellis	3/19/12 17:00									

Designate: Grab ☐ Comp. ☐

Time: 1335

Month/Day/Year: 3/20/12

Station No.

Project Code / CLP Case No.

Samplers (Signatures)

Station Location

Preservative: _____

Yes ☐ No ☐

Volatile Organics (VOA)

Semi Volatiles (ABN)

Pesti

Cyan

Alkal

TCLP

Asbe

Dioxi

Oil a

CLP: MF5H92 Location: DECON-03
Analyses: CLP TAL Total Metals Mercury
Preservation: HNO3 pH<2
Tag: 345299 Case No: 42356

Remarks:

Concentration:

☐ L ☐ M ☐ H

Tag Number: **6-** 345299

Lab Sample No.

☆U.S. GOVERNMENT PRINTING OFFICE: 2003-561-005

Designate: Grab ☐ Comp. ☐

Time

Month/Day/Year

Station No.

Project Code / CLP Case No.

Samplers (Signatures)

Station Location

Preservative: _____

Yes ☐ No ☐

Volatile Organics (VOA)

Semi Volatiles (ABN)

Pesticides/PCB

Metals

C

Al

T

A

D

C

R

CLP: MF5H90 Location: DECON-01
Analyses: CLP TAL Total Metals Mercury
Preservation: HNO3 pH<2
Tag: 378671 Case No: 42356

Concentration:

☐ L ☐ M ☐ H

Tag Number: **6-** 378671

Lab Sample No.

☆U.S. GOVERNMENT PRINTING OFFICE: 2003-561-005

Designate: Grab X Comp. ☐

Time: 1330

Month/Day/Year: 3/20/2012

Station No.

Project Code / CLP Case No.

Samplers (Signatures)

Station Location

Preservative: _____

Yes ☐ No ☐

Volati A)

Semi

Pestic

Cyan

Alkali

TCL

Asbe

Diox

Oil and Grease

CLP: MF5H91 Location: DECON-02
Analyses: CLP TAL Total Metals Mercury
Preservation: HNO3 pH<2
Tag: 487271 Case No: 42356

Remarks:

Concentration:

☐ L ☐ M ☐ H

Tag Number: **6-** 487271

Lab Sample No.

GPO U.S. GOVERNMENT PRINTING OFFICE: 2009-546-765