1085979 - R8 SDMS

CSF CHAIN OF CUSTODY FORM

U.S. Environmental Protection Agency - Region 8
Environmental Services Division, Multi-Media Branch
Analytical Operations Section

Audit Number: 08-58-08

Case Number: 37402

Date CSF Received: 6/25/08

Site Name: Richardson Flat Tailings

Auditor: Carl Berg

Lab Name: DATAC

Date of Audit: 6/30/08

SDG Number: MN2608

Date of Transfer:

Comments:

Transfer to: Kathryn Hernandez

Affiliation: EPA

Transfer from (AOS): RSCC

CSF Relinquished By:

Print Name	Date	Signature
Don Goodrich	10/2/2008	Don Goodrich

CSF Received By:

Print Name	Date	Signature

CSF Relinquished By:

Print Name	Date	Signature

CSF Received By:

Print Name	Date	Signature

CSF Relinquished By:

Print Name	Date	Signature

CSF Received By:

Print Name	Date	Signature

08-08-08

CSF Relinquished By:

Print Name	Date	Signature

CSF Received By:

Print Name	Date	Signature

CSF Relinquished By:

Print Name	Date	Signature

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CSF Relinquished By:

Print Name	Date	Signature

CSF Received By:

Print Name	Date	Signature

CSF CHAIN OF CUSTODY FORM

U.S. Environmental Protection Agency - Region 8
Environmental Services Division, Multi-Media Branch
Analytical Operations Section

Audit Number: 08-58-08
Case Number: 37402
Date CSF Received: 6/25/08
Site Name: Richardson Flat Tailings
Auditor: Carl Berg
Lab Name: DATAC
Date of Audit: 6/30/08
SDG Number: MH2608

Date of Transfer:
Comments:
Transfer to: Kathryn Hernandez
Affiliation: EPA
Transfer from (AOS): RSCC

CSF Relinquished By:

Print Name | Date | Signature

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Print Name | Date | Signature

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Rev. 07/05/95

08-58-08

CSF Relinquished By:

Print Name	Date	Signature

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CSF Received By:

Print Name	Date	Signature

CSF Relinquished By:

Print Name	Date	Signature

CSF Received By:

Print Name	Date	Signature

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA Sample No.
MH2608

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Matrix: (soil/water) WATER Lab Sample ID: 8155033001

Level: (low/med) LOW Date Received: 06/03/2008

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	129.	J		P
7440-36-0	Antimony	237.			P
7440-38-2	Arsenic	45.9			P
7440-39-3	Barium	685.			P
7440-41-7	Beryllium	5.6	U		P
7440-43-9	Cadmium	5.6			P
7440-70-2	Calcium	13700			P
7440-47-3	Chromium	2.5	J		P
7440-48-4	Cobalt	55.6	U		P
7440-50-8	Copper	48.5			P
7439-89-6	Iron	562.			P
7439-92-1	Lead	455.			P
7439-95-4	Magnesium	1280	J		P
7439-96-5	Manganese	157.			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	1.0	J		P
7440-09-7	Potassium	445.	J		P
7782-49-2	Selenium	2.7	J		P
7440-22-4	Silver	5.6	J		P
7440-23-5	Sodium	5680			P
7440-28-0	Thallium	27.8	U		P
7440-62-2	Vanadium	2.2	J		P
7440-66-6	Zinc	426.			P
57-12-5	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA Sample No.
MH2609

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Matrix: (soil/water) WATER Lab Sample ID: 8155033002

Level: (low/med) LOW Date Received: 06/03/2008

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	480.			P
7440-36-0	Antimony	156.			P
7440-38-2	Arsenic	77.0			P
7440-39-3	Barium	267.			P
7440-41-7	Beryllium	5.6	U		P
7440-43-9	Cadmium	2.6	J		P
7440-70-2	Calcium	24900			P
7440-47-3	Chromium	2.7	J		P
7440-48-4	Cobalt	55.6	U		P
7440-50-8	Copper	33.5			P
7439-89-6	Iron	2100			P
7439-92-1	Lead	454.			P
7439-95-4	Magnesium	1770	J		P
7439-96-5	Manganese	57.9			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	44.4	U		P
7440-09-7	Potassium	544.	J		P
7782-49-2	Selenium	38.9	U		P
7440-22-4	Silver	4.8	J		P
7440-23-5	Sodium	2450	J		P
7440-28-0	Thallium	1.1	J		P
7440-62-2	Vanadium	6.6	J		P
7440-66-6	Zinc	598.			P
57-12-5	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA Sample No.
MH2610

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Matrix: (soil/water) WATER Lab Sample ID: 8155033003

Level: (low/med) LOW Date Received: 06/03/2008

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	245.			P
7440-36-0	Antimony	121.			P
7440-38-2	Arsenic	34.2			P
7440-39-3	Barium	206.	J		P
7440-41-7	Beryllium	5.6	U		P
7440-43-9	Cadmium	6.7			P
7440-70-2	Calcium	8830			P
7440-47-3	Chromium	2.0	J		P
7440-48-4	Cobalt	55.6	U		P
7440-50-8	Copper	95.7			P
7439-89-6	Iron	855.			P
7439-92-1	Lead	737.			P
7439-95-4	Magnesium	1240	J		P
7439-96-5	Manganese	145.			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	1.1	J		P
7440-09-7	Potassium	430.	J		P
7782-49-2	Selenium	38.9	U		P
7440-22-4	Silver	8.2	J		P
7440-23-5	Sodium	3580	J		P
7440-28-0	Thallium	27.8	U		P
7440-62-2	Vanadium	0.99	J		P
7440-66-6	Zinc	629.			P
57-12-5	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA Sample No.
MH2611

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Matrix: (soil/water) WATER Lab Sample ID: 8155033004

Level: (low/med) LOW Date Received: 06/03/2008

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	346.			P
7440-36-0	Antimony	75.2			P
7440-38-2	Arsenic	42.3			P
7440-39-3	Barium	196.	J		P
7440-41-7	Beryllium	5.6	U		P
7440-43-9	Cadmium	6.2			P
7440-70-2	Calcium	10100			P
7440-47-3	Chromium	2.7	J		P
7440-48-4	Cobalt	55.6	U		P
7440-50-8	Copper	92.7			P
7439-89-6	Iron	1020			P
7439-92-1	Lead	819.			P
7439-95-4	Magnesium	1690	J		P
7439-96-5	Manganese	110.			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	1.3	J		P
7440-09-7	Potassium	400.	J		P
7782-49-2	Selenium	2.8	J		P
7440-22-4	Silver	6.3	J		P
7440-23-5	Sodium	3510	J		P
7440-28-0	Thallium	27.8	U		P
7440-62-2	Vanadium	1.0	J		P
7440-66-6	Zinc	812.			P
57-12-5	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

USEPA - CLP

2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Initial Calibration Verification Source: ICV-1(1201)

Continuing Calibration Verification Source: C.P.I.

Concentration Units: ug/L

	Initial Calibration Verification			Continuing Calibration Verification					M
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	2482	2484	100	25000	25120	100	24744	99	P
Antimony	992.0	992.33	100	5000	5090	102	5063	101	P
Arsenic	996.0	996.76	100	750.0	751.58	100	745.79	99	P
Barium	502.0	511.93	102	5000	5180	104	5163	103	P
Beryllium	493.0	498.84	101	750.0	783.75	105	769.21	103	P
Cadmium	494.0	495.26	100	750.0	792.14	106	775.64	103	P
Calcium	10180	10039	99	25000	25448	102	24430	98	P
Chromium	490.0	492.72	101	5000	5020	100	4995	100	P
Cobalt	496.0	496.17	100	5000	4998	100	4927	99	P
Copper	490.0	491.24	100	5000	5018	100	5041	101	P
Iron	5107	5155	101	25000	25691	103	25008	100	P
Lead	996.0	989.60	99	750.0	774.61	103	768.04	102	P
Magnesium	6003	5875	98	25000	25021	100	24584	98	P
Manganese	495.0	508.97	103	5000	5089	102	4963	99	P
Mercury									NR
Nickel	492.0	493.19	100	5000	5029	101	4930	99	P
Potassium	10008	9937	99	25000	25484	102	25432	102	P
Selenium	1005	1005	100	750.0	777.44	104	781.30	104	P
Silver	495.0	499.91	101	750.0	786.89	105	786.16	105	P
Sodium	10039	9823	98	25000	25079	100	25188	101	P
Thallium	1027	1042	101	750.0	732.90	98	736.30	98	P
Vanadium	501.0	499.34	100	5000	5241	105	5146	103	P
Zinc	1000	1009	101	5000	5057	101	4919	98	P
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Initial Calibration Verification Source: _____

Continuing Calibration Verification Source: C.P.I.

Concentration Units: ug/L

	Initial Calibration Verification			Continuing Calibration Verification					M
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				25000	24664	99			P
Antimony				5000	5019	100			P
Arsenic				750.0	741.10	99			P
Barium				5000	5122	102			P
Beryllium				750.0	765.36	102			P
Cadmium				750.0	768.72	102			P
Calcium				25000	24210	97			P
Chromium				5000	4989	100			P
Cobalt				5000	4893	98			P
Copper				5000	5015	100			P
Iron				25000	24792	99			P
Lead				750.0	766.70	102			P
Magnesium				25000	24536	98			P
Manganese				5000	4933	99			P
Mercury									NR
Nickel				5000	4876	98			P
Potassium				25000	25348	101			P
Selenium				750.0	776.78	104			P
Silver				750.0	783.55	104			P
Sodium				25000	25189	101			P
Thallium				750.0	729.29	97			P
Vanadium				5000	5054	101			P
Zinc				5000	4880	98			P
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2B-IN
CRQL CHECK STANDARD

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

CRQL Check Standard Source: I.V.

Concentration Units: ug/L

	CRDL Check Standard				
	Initial			Final	
Analyte	True	Found*	%R(1)	Found*	%R(1)
Aluminum	200.00	186.59J	93	164.76J	82
Antimony	60.00	60.40	101	60.41	101
Arsenic	10.00	11.26	113	10.48	105
Barium	200.00	213.56	107	210.49	105
Beryllium	5.00	5.17	103	5.06	101
Cadmium	5.00	5.00J	100	5.03	101
Calcium	5000.00	5161.23	103	4835.70J	97
Chromium	10.00	10.42	104	10.41	104
Cobalt	50.00	50.92	102	50.11	100
Copper	25.00	24.47J	98	25.37	101
Iron	100.00	100.80	101	95.90J	96
Lead	10.00	8.33J	83	7.72J	77
Magnesium	5000.00	4983.60J	100	4860.60J	97
Manganese	15.00	15.69	105	15.10	101
Mercury					
Nickel	40.00	41.26	103	39.86J	100
Potassium	5000.00	5036.37	101	5024.10	100
Selenium	35.00	34.73J	99	36.34	104
Silver	10.00	12.62	126	9.44J	94
Sodium	5000.00	4936.87J	99	4988.60J	100
Thallium	25.00	26.39	106	27.38	110
Vanadium	50.00	51.79	104	50.12	100
Zinc	60.00	62.37	104	58.92J	98
Cyanide					

(1) Control Limits: 70-130 with the following exceptions:
ICP-AES - Antimony, Lead, and Thallium: 50-150.
ICP-MS - Cobalt, Manganese, and Zinc: 50-150.

* If applicable, enter the concentration qualifier "J" or "U" after the concentration in these columns (e.g., 0.20U for Mercury).

USEPA - CLP

3-IN
BLANKS

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Preparation Blank Matrix (soil/water): WATER

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

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Aluminum	200.000	U	-21.242	J	200.000	U	200.000	U	222.222	U	P
Antimony	60.000	U	60.000	U	60.000	U	60.000	U	66.667	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	-2.061	J	P
Barium	200.000	U	0.526	J	0.393	J	0.557	J	222.222	U	P
Beryllium	5.000	U	5.000	U	5.000	U	5.000	U	5.556	U	P
Cadmium	5.000	U	0.094	J	5.000	U	0.122	J	0.205	J	P
Calcium	5000.000	U	5000.000	U	5000.000	U	7.556	J	66.193	J	P
Chromium	10.000	U	10.000	U	0.802	J	10.000	U	0.622	J	P
Cobalt	50.000	U	0.606	J	0.876	J	0.621	J	-0.443	J	P
Copper	25.000	U	25.000	U	25.000	U	25.000	U	27.778	U	P
Iron	100.000	U	100.000	U	100.000	U	100.000	U	35.651	J	P
Lead	-1.107	J	-2.205	J	-0.979	J	10.000	U	11.111	U	P
Magnesium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5555.556	U	P
Manganese	15.000	U	15.000	U	0.355	J	0.350	J	16.667	U	P
Mercury											NR
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	0.891	J	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5555.556	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	38.889	U	P
Silver	1.378	J	1.455	J	-1.422	J	-1.450	J	11.111	U	P
Sodium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	96.534	J	P
Thallium	25.000	U	25.000	U	1.112	J	1.359	J	27.778	U	P
Vanadium	50.000	U	0.400	J	0.438	J	50.000	U	55.556	U	P
Zinc	60.000	U	60.000	U	60.000	U	60.000	U	4.932	J	P
Cyanide											NR

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000		260000	107			255000	104		
Antimony	0.0		-5.5				-3.7			
Arsenic	0.0		2.2				-1.3			
Barium	2.0		3.1	155			2.6	130		
Beryllium	0.0		0.52				0.40			
Cadmium	0.0		2.3				2.6			
Calcium	235000		258000	110			243000	103		
Chromium	32.0		48.5	152			48.4	151		
Cobalt	4.0		3.5	88			3.0	75		
Copper	23.0		25.9	113			26.4	115		
Iron	95600		102000	107			97600	102		
Lead	10.0		8.0	80			6.3	63		
Magnesium	248000		271000	109			266000	107		
Manganese	19.0		20.8	109			19.6	103		
Nickel	21.0		24.3	116			25.3	120		
Potassium	0.0		-57.3				-29.2			
Selenium	0.0		-0.039				4.0			
Silver	0.0		13.3				10.3			
Sodium	0.0		837.				845.			
Thallium	0.0		4.8				4.6			
Vanadium	0.0		-13.5				-14.9			
Zinc	28.0		34.8	124			33.8	121		

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000			260000	108			255000	106
Antimony		589.			669.	114			664.	113
Arsenic		101.			114.	113			110.	109
Barium		495.			537.	108			529.	107
Beryllium		475.			527.	111			512.	108
Cadmium		940.			1070	114			1040	111
Calcium		231000			257000	111			242000	105
Chromium		511.			581.	114			578.	113
Cobalt		461.			533.	116			523.	113
Copper		548.			567.	103			566.	103
Iron		94800			102000	108			97700	103
Lead		61.0			64.2	105			63.2	104
Magnesium		251000			272000	108			267000	106
Manganese		502.			546.	109			525.	105
Nickel		984.			1110	113			1080	110
Potassium		0.0			-34.1				-19.2	
Selenium		53.0			58.0	109			59.5	112
Silver		206.			229.	111			227.	110
Sodium		0.0			847.				855.	
Thallium		103.			116.	113			114.	111
Vanadium		494.			506.	102			482.	98
Zinc		1030			1090	106			1060	103

USEPA - CLP

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

EPA Sample No.

MH2610S

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Matrix: (soil/water) WATER Level: (low/med) LOW

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2244.1111		245.0370		2000.00	100		P
Antimony	75-125	223.6703		121.2630		100.00	102		P
Arsenic	75-125	76.1856		34.1659		40.00	105		P
Barium	75-125	2383.3703		205.8408	J	2000.00	109		P
Beryllium	75-125	51.7522		5.5556	U	50.00	104		P
Cadmium	75-125	59.6533		6.6658		50.00	106		P
Calcium									NR
Chromium	75-125	220.7852		1.9842	J	200.00	109		P
Cobalt	75-125	532.5667		55.5556	U	500.00	107		P
Copper	75-125	357.3408		95.6730		250.00	105		P
Iron	75-125	1906.9259		854.8519		1000.00	105		P
Lead		753.9408		736.9444		20.00	85		P
Magnesium									NR
Manganese	75-125	667.7667		144.8444		500.00	105		P
Mercury									NR
Nickel	75-125	529.4037		1.1207	J	500.00	106		P
Potassium									NR
Selenium	75-125	55.6163		38.8889	U	50.00	111		P
Silver	75-125	58.4397		8.1964	J	50.00	100		P
Sodium									NR
Thallium	75-125	53.4919		27.7778	U	50.00	107		P
Vanadium	75-125	520.8481		0.9902	J	500.00	104		P
Zinc	75-125	1121.1852		628.9963		500.00	98		P
Cyanide									NR

Comments:

USEPA - CLP

6-IN
DUPLICATES

EPA Sample No.

MH2610D

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Matrix: (soil/water) WATER Level: (low/med) LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	222.222	245.0370		234.6074		4		P
Antimony	66.667	121.2630		121.5852		0		P
Arsenic	11.111	34.1659		35.5837		4		P
Barium		205.8408	J	208.7148	J	1		P
Beryllium		5.5556	U	5.5556	U			P
Cadmium	5.556	6.6658		6.5098		2		P
Calcium	5555.556	8832.9259		8563.5556		3		P
Chromium		1.9842	J	2.6902	J	30		P
Cobalt		55.5556	U	55.5556	U			P
Copper	27.778	95.6730		97.4437		2		P
Iron		854.8519		875.5037		2		P
Lead		736.9444		732.3926		1		P
Magnesium		1240.7408	J	1215.0000	J	2		P
Manganese		144.8444		142.9556		1		P
Mercury								NR
Nickel		1.1207	J	1.0160	J	10		P
Potassium		429.6148	J	416.7444	J	3		P
Selenium		38.8889	U	3.3980	J	200		P
Silver		8.1964	J	5.8447	J	33		P
Sodium		3582.5556	J	3615.9259	J	1		P
Thallium		27.7778	U	27.7778	U			P
Vanadium		0.9902	J	1.0627	J	7		P
Zinc		628.9963		605.4741		4		P
Cyanide								NR

USEPA - CLP

7-IN
LABORATORY CONTROL SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Solid LCS Source: _____

Aqueous LCS Source: ICV-1(1201)

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	2482.0	2493.59	100						
Antimony	992.0	1024.75	103						
Arsenic	996.0	1020.06	102						
Barium	502.0	537.04	107						
Beryllium	493.0	495.10	100						
Cadmium	494.0	508.73	103						
Calcium	10180.0	9752.33	96						
Chromium	490.0	526.53	107						
Cobalt	496.0	515.86	104						
Copper	490.0	510.37	104						
Iron	5107.0	5185.78	102						
Lead	996.0	1025.47	103						
Magnesium	6003.0	5846.15	97						
Manganese	495.0	507.47	103						
Mercury									
Nickel	492.0	511.28	104						
Potassium	10008.0	10265.74	103						
Selenium	1005.0	1027.77	102						
Silver	495.0	509.79	103						
Sodium	10039.0	10349.48	103						
Thallium	1027.0	1081.94	105						
Vanadium	501.0	504.64	101						
Zinc	1000.0	1020.90	102						
Cyanide									

USEPA - CLP

8-IN

ICP-AES and ICP-MS SERIAL DILUTIONS

EPA Sample No.

MH2610L

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Matrix: (soil/water) WATER Level: (low/med) LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	220.53		134.70	J	39		P
Antimony	109.14		107.68	J	1		P
Arsenic	30.75		35.62	J	16		P
Barium	185.26	J	191.17	J	3		P
Beryllium	5.00	U	25.00	U			P
Cadmium	6.00		5.85	J	3		P
Calcium	7949.63		8090.83	J	2		P
Chromium	1.79	J	50.00	U	100		P
Cobalt	50.00	U	250.00	U			P
Copper	86.11		99.24	J	15		P
Iron	769.37		756.27		2		P
Lead	663.25		660.10		0		P
Magnesium	1116.67	J	1178.60	J	6		P
Manganese	130.36		133.70		3		P
Nickel	1.01	J	200.00	U	100		P
Potassium	386.65	J	408.12	J	6		P
Selenium	35.00	U	175.00	U			P
Silver	7.38	J	5.12	J	31		P
Sodium	3224.30	J	3315.50	J	3		P
Thallium	25.00	U	125.00	U			P
Vanadium	0.89	J	250.00	U	100		P
Zinc	566.10		548.77		3		P

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Instrument Type: P Instrument ID: ICP07 Date: 01/12/2008

Preparation Method: NP1

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

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.22	200	20.0
Antimony	206.83	60	1.8
Arsenic	189.04	10	1.5
Barium	455.40	200	0.33
Beryllium	313.11	5.0	0.089
Cadmium	214.44	5.0	0.084
Calcium	317.93	5000	5.9
Chromium	205.55	10	0.73
Cobalt	228.62	50	0.32
Copper	324.75	25	2.6
Iron	259.94	100	9.0
Lead	220.35	10	0.94
Magnesium	279.08	5000	26.7
Manganese	257.61	15	0.26
Mercury			
Nickel	231.60	40	1.7
Potassium	766.49	5000	80.4
Selenium	196.09	35	2.6
Silver	328.07	10	0.28
Sodium	589.59	5000	41.6
Thallium	190.86	25	0.77
Vanadium	292.40	50	0.40
Zinc	206.20	60	2.7
Cyanide			

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Instrument Type: P Instrument ID: ICP07 Date: 01/09/2008

Preparation Method: MW1

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

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.22	200	25.7
Antimony	206.83	60	1.8
Arsenic	189.04	10	1.5
Barium	455.40	200	0.34
Beryllium	313.11	5.0	0.14
Cadmium	214.44	5.0	0.12
Calcium	317.93	5000	23.3
Chromium	205.55	10	0.37
Cobalt	228.62	50	0.44
Copper	324.75	25	2.9
Iron	259.94	100	3.3
Lead	220.35	10	1.2
Magnesium	279.08	5000	23.7
Manganese	257.61	15	0.57
Mercury			
Nickel	231.60	40	0.89
Potassium	766.49	5000	40.8
Selenium	196.09	35	2.4
Silver	328.07	10	0.48
Sodium	589.59	5000	13.0
Thallium	190.86	25	0.81
Vanadium	292.40	50	0.81
Zinc	206.20	60	2.3
Cyanide			

Comments:

USEPA - CLP

10A-IN

ICP-AES INTERELEMENT CORRECTION FACTORS (QUARTERLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

ICP-AES Instrument ID: ICP07 Date: 04/16/2008

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	V
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0281000
Antimony	206.83	0.0000000	0.0000000	0.0001380	0.0000000	0.0000000
Arsenic	189.04	-0.0000240	0.0000000	-0.0000900	0.0000000	0.0000000
Barium	455.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.11	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	214.44	-0.0000070	0.0000000	0.0000490	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	205.55	0.0000050	0.0000000	-0.0000070	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0001480	0.0000000	0.0000710	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000230	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	-0.0000080	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000000	0.0000000	-0.0002300	0.0000000	0.0019970
Vanadium	292.40	0.0000000	0.0000000	0.0000090	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.0000100	0.0000000	0.0000000

Comments:

USEPA - CLP

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

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

ICP-AES Instrument ID: ICP07 Date: 04/16/2008

Analyte	Wave-length (nm)	Interelement Correction Factors for: Cr	Cu	Co	Mn	Be
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.83	0.0053630	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.11	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	214.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	205.55	0.0000000	0.0000000	0.0000000	0.0000000	0.0003400
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0000000	-0.0000040	0.0001810	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0005780	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000320	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0002270	0.0000000	0.0031730	0.0008690	0.0000000
Vanadium	292.40	-0.0014760	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.20	-0.0004230	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

USEPA - CLP

10B-IN

ICP-AES INTERELEMENT CORRECTION FACTORS (QUARTERLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

ICP-AES Instrument ID: ICP07 Date: 04/16/2008

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	Mo	Ti		
Aluminum	308.22	0.0000000	0.0000000	0.0000000		
Antimony	206.83	0.0000000	0.0000000	0.0000000		
Arsenic	189.04	0.0000000	0.0000000	0.0000000		
Barium	455.40	0.0000000	0.0000000	0.0000000		
Beryllium	313.11	0.0000000	0.0000000	0.0000000		
Cadmium	214.44	0.0000000	0.0000000	0.0000000		
Calcium	317.93	0.0000000	0.0000000	0.0000000		
Chromium	205.55	-0.0005380	0.0000000	0.0000000		
Cobalt	228.62	0.0000000	0.0000000	0.0022060		
Copper	324.75	0.0000000	0.0000000	0.0000000		
Iron	259.94	0.0000000	0.0000000	0.0000000		
Lead	220.35	0.0002310	-0.0021710	0.0000000		
Magnesium	279.08	0.0000000	0.0000000	0.0000000		
Manganese	257.61	0.0000000	0.0000000	0.0000000		
Molybdenum	202.03	0.0000000	0.0000000	0.0000000		
Nickel	231.60	0.0000000	0.0000000	0.0000000		
Potassium	766.49	0.0000000	0.0000000	0.0000000		
Selenium	196.09	0.0000000	0.0000000	0.0000000		
Silver	328.07	0.0000000	0.0000000	0.0004470		
Sodium	589.59	0.0000000	0.0000000	0.0000000		
Titanium	334.94	0.0000000	0.0000000	0.0000000		
Thallium	190.86	0.0000000	-0.0089620	0.0000000		
Vanadium	292.40	0.0000000	0.0000000	0.0000000		
Zinc	206.20	0.0000000	0.0000000	0.0000000		

Comments:

USEPA - CLP

11-IN
ICP-AES and ICP-MS LINEAR RANGES (QUARTERLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

ICP Instrument ID: ICP07 Date: 04/16/2008

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	8.00	500000	P
Antimony	20.00	90000	P
Arsenic	20.00	10000	P
Barium	8.00	40000	P
Beryllium	8.00	40000	P
Cadmium	20.00	7000	P
Calcium	8.00	700000	P
Chromium	20.00	40000	P
Cobalt	20.00	70000	P
Copper	20.00	30000	P
Iron	8.00	220000	P
Lead	20.00	50000	P
Magnesium	8.00	1000000	P
Manganese	20.00	75000	P
Nickel	20.00	90000	P
Potassium	8.00	250000	P
Selenium	20.00	20000	P
Silver	8.00	2000	P
Sodium	8.00	250000	P
Thallium	20.00	17500	P
Vanadium	8.00	17500	P
Zinc	20.00	12500	P

Comments:

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Preparation Method: MW1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBW	06/16/2008		50
LCSW	06/16/2008		50
MH2608	06/16/2008		50
MH2609	06/16/2008		50
MH2610	06/16/2008		50
MH2610D	06/16/2008		50
MH2610S	06/16/2008		50
MH2611	06/16/2008		50

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608

Instrument ID: ICP07 Analysis Method: P

Start Date: 06/18/2008 End Date: 06/18/2008

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	0937	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
S1500	1.0	0942			X		X	X						X						X	X		X					
S10000	1.0	0947		X		X				X	X	X				X		X						X	X			
S50000	1.0	0952	X						X				X		X				X			X						
ICV	1.0	0957	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICB	1.0	1002	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CRII	1.0	1007	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSAI	1.0	1012	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSABI	1.0	1017	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV	1.0	1022	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB	1.0	1026	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ZZZZZZ	1.0	1031																										
PBW	1.0	1036	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ZZZZZZ	1.0	1041																										
MH2608	1.0	1046	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH2609	1.0	1051	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH2610	1.0	1056	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH2610S	1.0	1101	X	X	X	X	X	X		X	X	X	X	X		X		X		X	X		X	X	X			
MH2610D	1.0	1105	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH2610L	5.0	1110	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
MH2611	1.0	1115	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV2	1.0	1120	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB2	1.0	1125	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
LCSW	1.0	1130	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CRIF	1.0	1135	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSAF	1.0	1139	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
ICSABF	1.0	1145	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCV3	1.0	1149	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			
CCB3	1.0	1154	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			

Sample Name: S0 Acquired: 6/18/2008 9:37:52 Type: Cal
Method: ICP07 ILM05.4 2008(v2) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

i 08145
Joanna C. Sanchez
6/19/08

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00039**	**-.00070**	**-.00216**	**.00092**	**.00000**	**.00065**	**.00031**
Stddev	.00003	.00016	.00021	.00003	.0001	.00007	.00004
%RSD	8.5700	22.728	9.8982	3.1021	3196.3	10.230	13.530
#1	.00043	-.00054	-.00239	.00095	.00003	.00061	.00031
#2	.00036	-.00086	-.00211	.00090	.00004	.00073	.00036
#3	.00039	-.00069	-.00197	.00090	-.00008	.00062	.00027

Elem	Cr2055	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00053**	**-.00075**	**.00064**	**.00023**	**.00069**	**-.00005**	**.00000**
Stddev	.00021	.00030	.00001	.00001	.00038	.00003	.00001
%RSD	39.762	40.545	1.8161	5.6814	55.168	65.127	463.34
#1	.00048	-.00104	.00064	.00022	.00061	-.00003	-.00001
#2	.00035	-.00079	.00065	.00025	.00110	-.00003	.00001
#3	.00076	-.00043	.00063	.00022	.00036	-.00009	.00000

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895	Ti3349
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0008**	**.00192**	**-.00148**	**.00089**	**.00199**	**-.00050**	**.0001**
Stddev	.0003	.00023	.00016	.00022	.00001	.00003	.0000
%RSD	37.39	12.157	11.127	25.102	.29174	6.1627	36.93
#1	.0011	.00182	-.00158	.00113	.00198	-.00046	.0001
#2	.0008	.00174	-.00129	.00069	.00200	-.00051	.0001
#3	.0005	.00218	-.00157	.00084	.00199	-.00052	.0000

Elem	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S
Avg	**-.00012**	**.00002**	**.00079**
Stddev	.00026	.00000	.00017
%RSD	215.87	11.204	21.808
#1	-.00041	.00002	.00060
#2	.00010	.00002	.00085
#3	-.00005	.00002	.00093

Sample Name: S0 Acquired: 6/18/2008 9:37:52 Type: Cal
Method: ICP07 ILM05.4 2008(v2) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1941.7**	**67243.**	**379560.**
Stddev	2.6	204.	1329.
%RSD	.13635	.30275	.35006
#1	1939.2	67009.	380360.
#2	1941.3	67351.	378020.
#3	1944.5	67370.	380290.

Sample Name: S1500 Acquired: 6/18/2008 9:42:50 Type: Cal
Method: ICP07 ILM05.4 2008(v2) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	As1890	Be3131	Cd2144	Pb2203	Se1960	Ag3280	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.22593**	**1.1424**	**4.4922**	**.45020**	**.15287**	**.05118**	**.33864**
Stddev	.00027	.0018	.0076	.00061	.00011	.00025	.00020
%RSD	.11753	.15460	.16914	.13657	.06992	.48687	.05870
#1	.22570	1.1444	4.4862	.44994	.15299	.05096	.33857
#2	.22587	1.1411	4.4896	.44976	.15278	.05113	.33849
#3	.22622	1.1416	4.5007	.45090	.15283	.05145	.33887

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1956.6**	**67559.**	**381050.**
Stddev	3.4	56.	2402.
%RSD	.17513	.08353	.63037
#1	1955.3	67497.	383500.
#2	1954.1	67574.	380960.
#3	1960.5	67606.	378690.

Sample Name: S10000 Acquired: 6/18/2008 9:47:43 Type: Cal
Method: ICP07 ILM05.4 2008(v2) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Sb2068	Ba4554	Cr2055	Co2286	Cu3247	Mn2576	Mo2020	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.0866**	**6.0023**	**16.314**	**9.6704**	**.66193**	**1.2748**	**11.32**	**4.5967**
Stddev	.0025	.0203	.035	.0207	.00362	.0031	.03	.0056
%RSD	.12172	.33883	.21356	.21431	.54679	.24643	.2490	.12066
#1	2.0837	5.9914	16.278	9.6468	.65937	1.2775	11.28	4.5904
#2	2.0886	5.9897	16.315	9.6790	.66036	1.2713	11.32	4.6011
#3	2.0874	6.0258	16.348	9.6854	.66607	1.2754	11.34	4.5984

Elem	Ti3349	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S
Avg	**1.487**	**.15282**	**6.5227**
Stddev	.003	.00097	.0124
%RSD	.1706	.63717	.18949
#1	1.490	.15225	6.5119
#2	1.485	.15227	6.5202
#3	1.486	.15395	6.5362

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1927.5**	**67132.**	**377230.**
Stddev	1.9	218.	1728.
%RSD	.10090	.32451	.45806
#1	1929.5	67041.	378430.
#2	1927.5	67381.	378020.
#3	1925.6	66975.	375250.

Sample Name: S50000 Acquired: 6/18/2008 9:52:40 Type: Cal
Method: ICP07 ILM05.4 2008(v2) Mode: IR Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Ca3179	Fe2599	Mg2790	K_7664	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.13675**	**.94890**	**1.2356**	**.11701**	**.31689**	**1.4353**
Stddev	.00016	.00109	.0019	.00015	.00088	.0037
%RSD	.11973	.11461	.15677	.13198	.27685	.26055
#1	.13669	.94782	1.2355	.11719	.31745	1.4391
#2	.13693	.94999	1.2375	.11691	.31734	1.4350
#3	.13662	.94888	1.2337	.11693	.31588	1.4317

Int. Std.	Sc3613
Units	Cts/S
Avg	**66633.**
Stddev	92.
%RSD	.13873
#1	66526.
#2	66682.
#3	66690.

Sample Name: ICV Acquired: 6/18/2008 9:57:34 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2484.2**	**992.33**	**996.76**	**511.93**	**498.84**	**495.26**	**10039.**	**492.72**	**496.17**
Stddev	9.6	2.50	3.58	.24	.63	.65	28.	1.13	.82
%RSD	.38840	.25216	.35940	.04629	.12725	.13044	.28329	.22965	.16620
#1	2481.6	993.15	999.71	511.70	499.12	495.85	10014.	491.43	495.31
#2	2476.1	994.32	992.77	512.18	499.28	495.37	10070.	493.17	496.95
#3	2494.9	989.52	997.79	511.92	498.11	494.57	10032.	493.55	496.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**491.24**	**5154.8**	**989.60**	**5875.4**	**508.97**	**-.1575**	**493.19**	**9936.9**	**1004.9**
Stddev	1.15	.7	.90	22.1	.61	.0565	.98	29.7	1.3
%RSD	.23486	.01273	.09097	.37674	.11909	35.85	.19885	.29840	.13371
#1	490.85	5155.5	988.56	5867.4	508.37	-.0930	492.93	9970.4	1003.4
#2	492.54	5154.5	990.10	5858.4	509.59	-.1978	494.28	9913.9	1005.1
#3	490.33	5154.3	990.15	5900.5	508.96	-.1819	492.37	9926.4	1006.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**499.91**	**9822.8**	**3.013**	**1042.4**	**499.34**	**1009.0**
Stddev	2.29	30.7	.692	1.6	1.03	.9
%RSD	.45817	.31265	22.97	.14966	.20723	.08470
#1	500.79	9854.3	2.968	1040.7	499.13	1008.2
#2	501.62	9792.9	2.344	1042.7	500.46	1008.8
#3	497.31	9821.2	3.727	1043.8	498.42	1009.9
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ICV Acquired: 6/18/2008 9:57:34 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1946.8**	**66800.**	**374320.**
Stddev	2.2	123.	1247.
%RSD	.11456	.18454	.33317
#1	1944.8	66812.	374720.
#2	1946.4	66672.	372920.
#3	1949.2	66918.	375320.

Sample Name: ICB Acquired: 6/18/2008 10:02:15 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-18.864**	**-.42122**	**1.1378**	**.16961**	**.01712**	**-.00328**	**.31220**	**.19023**
Stddev	34.718	1.2102	.8251	.16951	.04220	.06291	.47926	.24701
%RSD	184.04	287.30	72.517	99.942	246.43	1920.5	153.51	129.85
#1	21.137	-.03406	.18638	.32570	-.02951	.06738	.54066	.39790
#2	-36.570	.54801	1.5703	-.01071	.02822	-.02399	.63449	-.08293
#3	-41.160	-1.7776	1.6569	.19383	.05266	-.05322	-.23855	.25572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.25056**	**-.63071**	**-4.5470**	**-1.1069**	**8.0935**	**.03159**	**.0919**	**-.54323**
Stddev	.11641	.10526	.4751	.5326	28.302	.08284	.1954	.41420
%RSD	46.459	16.689	10.448	48.115	349.68	262.23	212.6	76.249
#1	.20512	-.63669	-4.8226	-1.2502	26.986	.12278	.3169	-.88010
#2	.16373	-.73285	-4.8199	-1.5531	-24.446	-.03903	-.0344	-.08076
#3	.38284	-.52259	-3.9984	-.51730	21.741	.01102	-.0068	-.66881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-18.451**	**-.52524**	**1.3783**	**-1.6101**	**-.0017**	**.05027**	**.06993**	**.17577**
Stddev	22.027	.66025	.1611	6.0195	.3355	.64355	.48248	.35892
%RSD	119.38	125.70	11.686	373.87	19260.	1280.2	689.91	204.20
#1	-43.749	-1.1200	1.5338	4.6794	-.3283	-.46865	-.19067	.52386
#2	-8.0825	-.64095	1.2122	-2.1922	.3421	-.15093	.62668	.19653
#3	-3.5213	.18521	1.3889	-7.3173	-.0191	.77038	-.22621	-.19308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 6/18/2008 10:02:15 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1971.7**	**67132.**	**379460.**
Stddev	1.3	140.	95.
%RSD	.06607	.20852	.02493
#1	1970.8	67029.	379550.
#2	1973.2	67292.	379460.
#3	1971.1	67076.	379360.

Sample Name: CRII Acquired: 6/18/2008 10:07:13 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**186.59**	**60.396**	**11.257**	**213.56**	**5.1674**	**4.9974**	**5161.2**	**10.422**	**50.918**
Stddev	21.01	1.934	.325	.20	.0202	.0909	11.8	.142	.323
%RSD	11.261	3.2022	2.8836	.09313	.39066	1.8195	.22939	1.3636	.63532
#1	205.44	58.832	10.931	213.74	5.1880	5.0226	5166.3	10.286	50.792
#2	190.39	59.798	11.580	213.60	5.1666	5.0731	5147.7	10.410	50.676
#3	163.94	62.558	11.260	213.35	5.1476	4.8966	5169.7	10.569	51.285
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**24.474**	**100.80**	**8.3346**	**4983.6**	**15.688**	**.1009**	**41.261**	**5036.3**	**34.726**
Stddev	.313	1.10	1.6421	29.7	.057	.1756	.174	16.7	.754
%RSD	1.2782	1.0878	19.702	.59578	.36029	174.0	.42066	.33191	2.1717
#1	24.832	99.542	9.7040	5007.9	15.633	.2951	41.260	5017.1	34.475
#2	24.251	101.31	6.5142	4992.4	15.746	.0543	41.088	5046.8	35.573
#3	24.339	101.55	8.7856	4950.5	15.685	-.0467	41.435	5045.2	34.129
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**12.622**	**4936.9**	**.5904**	**26.388**	**51.790**	**62.368**
Stddev	.244	6.4	.3023	1.108	.425	.228
%RSD	1.9312	.13000	51.19	4.2002	.82136	.36587
#1	12.345	4939.2	.5823	26.843	51.381	62.330
#2	12.803	4941.8	.8967	25.125	51.759	62.161
#3	12.718	4929.6	.2923	27.197	52.230	62.613
Check ?	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CRII Acquired: 6/18/2008 10:07:13 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1954.0**	**66419.**	**375230.**
Stddev	2.7	68.	901.
%RSD	.13906	.10269	.24009
#1	1956.2	66344.	376170.
#2	1954.9	66433.	375130.
#3	1950.9	66478.	374380.

Sample Name: ICSAI Acquired: 6/18/2008 10:12:09 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**260150.**	**-5.4980**	**2.1791**	**3.1161**	**.52373**	**2.3041**	**257650.**
Stddev	146.	3.2287	2.5122	.0648	.05494	.2059	515.
%RSD	.05618	58.726	115.29	2.0780	10.491	8.9354	.19997
#1	260250.	-4.6466	4.2710	3.0480	.58655	2.4145	257280.
#2	260220.	-2.7802	-.60730	3.1769	.50002	2.0666	258240.
#3	259980.	-9.0671	2.8735	3.1234	.48463	2.4313	257420.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cr2055	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**48.453**	**3.5404**	**25.922**	**101560.**	**8.0209**	**270930.**	**20.806**
Stddev	.354	.3250	.288	272.	1.0558	378.	.513
%RSD	.73008	9.1802	1.1099	.26777	13.163	.13964	2.4645
#1	48.590	3.4871	26.227	101810.	7.7920	271360.	21.371
#2	48.051	3.8888	25.883	101590.	7.0983	270750.	20.371
#3	48.718	3.2454	25.655	101270.	9.1723	270670.	20.677
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895	Ti3349
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.075**	**24.344**	**-57.323**	**-.03874**	**13.253**	**837.11**	**10.41**
Stddev	.345	.569	22.159	4.8621	.392	3.52	.48
%RSD	32.13	2.3357	38.656	12550.	2.9584	.42005	4.622
#1	-1.112	24.009	-62.663	-.81966	13.498	834.65	9.872
#2	-.7128	25.000	-32.983	5.1666	13.461	835.54	10.56
#3	-1.401	24.022	-76.324	-4.4631	12.801	841.14	10.80
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSAI Acquired: 6/18/2008 10:12:09 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L
Avg	**4.7764**	**-13.470**	**34.779**
Stddev	1.9174	.076	.156
%RSD	40.143	.56417	.44887
#1	2.5666	-13.511	34.957
#2	5.7624	-13.383	34.710
#3	6.0001	-13.518	34.669
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1696.0**	**63511.**	**346240.**
Stddev	.8	134.	1964.
%RSD	.04491	.21125	.56735
#1	1695.9	63416.	345160.
#2	1696.7	63453.	345050.
#3	1695.2	63665.	348510.

Sample Name: ICSABI Acquired: 6/18/2008 10:17:11 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**260180.**	**669.06**	**113.50**	**536.68**	**526.52**	**1070.7**	**257250.**
Stddev	137.	3.02	.81	.66	.26	2.1	568.
%RSD	.05259	.45188	.71499	.12216	.04913	.19567	.22067
#1	260230.	670.90	112.76	537.41	526.41	1069.3	256610.
#2	260280.	665.57	114.37	536.48	526.81	1069.6	257450.
#3	260020.	670.71	113.37	536.15	526.33	1073.1	257680.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cr2055	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**580.99**	**532.71**	**566.60**	**101870.**	**64.233**	**272170.**	**545.68**
Stddev	1.67	1.36	.79	54.	1.734	112.	1.59
%RSD	.28810	.25621	.13910	.05342	2.7001	.04115	.29088
#1	579.80	531.65	567.51	101850.	62.524	272050.	544.40
#2	580.26	532.23	566.10	101930.	65.991	272210.	545.18
#3	582.90	534.25	566.19	101830.	64.185	272260.	547.45
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895	Ti3349
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.9972**	**1106.0**	**-34.066**	**57.958**	**229.33**	**846.66**	**11.08**
Stddev	.1362	3.8	21.945	4.515	.71	1.38	.35
%RSD	13.66	.34280	64.418	7.7897	.30749	.16306	3.194
#1	-.8592	1104.5	-58.617	54.506	230.03	846.97	10.91
#2	-1.001	1103.2	-16.357	56.302	229.34	847.86	10.84
#3	-1.132	1110.3	-27.225	63.067	228.62	845.15	11.49
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSABI Acquired: 6/18/2008 10:17:11 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L
Avg	**115.68**	**506.24**	**1093.2**
Stddev	1.75	.73	3.0
%RSD	1.5098	.14348	.27541
#1	117.70	506.47	1090.5
#2	114.65	505.42	1092.8
#3	114.70	506.82	1096.4
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1690.9**	**63444.**	**345480.**
Stddev	4.6	63.	299.
%RSD	.27257	.09939	.08640
#1	1689.0	63444.	345140.
#2	1696.2	63380.	345620.
#3	1687.6	63507.	345690.

Sample Name: CCV Acquired: 6/18/2008 10:22:05 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**25120.**	**5090.0**	**751.58**	**5179.9**	**783.75**	**792.14**	**25448.**	**5019.7**	**4998.5**
Stddev	51.	12.3	1.74	14.4	1.34	.99	41.	5.9	4.6
%RSD	.20293	.24087	.23112	.27887	.17042	.12472	.16046	.11838	.09202
#1	25127.	5079.6	753.37	5189.4	785.20	791.05	25482.	5016.1	4994.2
#2	25167.	5086.8	749.90	5187.2	783.46	792.97	25403.	5026.6	5003.3
#3	25066.	5103.5	751.47	5163.3	782.58	792.41	25460.	5016.5	4997.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5018.3**	**25691.**	**774.61**	**25021.**	**5089.2**	**-1.932**	**5029.2**	**25484.**	**777.44**
Stddev	9.2	27.	1.66	15.	7.8	.127	5.0	77.	1.09
%RSD	.18370	.10694	.21468	.05965	.15375	6.597	.10040	.30348	.13974
#1	5012.1	25722.	775.16	25019.	5098.2	-2.058	5023.3	25523.	776.50
#2	5028.9	25675.	772.74	25008.	5085.0	-1.803	5032.0	25535.	777.19
#3	5013.9	25675.	775.93	25037.	5084.4	-1.934	5032.1	25395.	778.63
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**786.89**	**25079.**	**5.606**	**732.90**	**5240.6**	**5057.0**
Stddev	.74	50.	.252	1.27	7.9	8.7
%RSD	.09384	.19914	4.494	.17270	.15005	.17168
#1	786.28	25116.	5.481	731.60	5246.4	5054.6
#2	787.71	25098.	5.442	734.13	5243.8	5066.6
#3	786.68	25022.	5.896	732.97	5231.7	5049.8
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV Acquired: 6/18/2008 10:22:05 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1894.9**	**66228.**	**368600.**
Stddev	3.0	107.	602.
%RSD	.16022	.16090	.16334
#1	1897.6	66111.	369180.
#2	1895.4	66255.	367980.
#3	1891.6	66319.	368630.

Sample Name: CCB Acquired: 6/18/2008 10:26:47 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-21.242**	**1.1181**	**.23450**	**.52601**	**-.00446**	**.09351**	**3.9104**	**.49252**
Stddev	8.760	.2864	1.5251	.07378	.02443	.06001	1.6567	.10904
%RSD	41.236	25.619	650.35	14.025	547.94	64.180	42.368	22.140
#1	-21.577	1.4488	-.30733	.60255	-.00927	.02640	5.5931	.61292
#2	-29.830	.94763	1.9565	.52014	-.02612	.14203	2.2809	.40041
#3	-12.320	.95782	-.94567	.45535	.02202	.11209	3.8571	.46423
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.60588**	**-.04191**	**.14597**	**-2.2045**	**10.139**	**.14103**	**.1252**	**.29651**
Stddev	.11002	.77930	1.3491	.7384	6.545	.12348	.2751	.49949
%RSD	18.158	1859.3	924.19	33.496	64.548	87.552	219.8	168.46
#1	.60121	-.46449	1.1694	-1.4355	4.1122	.22513	-.0663	.75274
#2	.49828	-.51865	.65132	-2.9080	9.2046	-.00073	.4405	.37397
#3	.71816	.85740	-1.3828	-2.2701	17.101	.19869	.0014	-.23719
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-25.890**	**-.76031**	**1.4547**	**.70241**	**.3910**	**-.13566**	**.40022**	**.45334**
Stddev	17.195	.34927	.1773	5.8518	.5735	.15010	.37516	.17977
%RSD	66.414	45.939	12.190	833.11	146.7	110.65	93.737	39.655
#1	-44.762	-1.1385	1.3614	-5.0438	.2821	-.15696	.08454	.36030
#2	-21.797	-.69245	1.3434	6.6545	1.011	.02395	.30115	.33917
#3	-11.111	-.44994	1.6592	.49657	-.1204	-.27397	.81497	.66057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 6/18/2008 10:26:47 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1933.7**	**66368.**	**372840.**
Stddev	2.8	98.	715.
%RSD	.14307	.14691	.19189
#1	1932.4	66419.	372100.
#2	1936.8	66429.	373520.
#3	1931.7	66256.	372900.

Sample Name: ZZZZZZ Acquired: 6/18/2008 10:31:46 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment: RB

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-29.130**	**-.94234**	**-2.5040**	**.21127**	**-.02237**	**.01344**	**2.4677**	**.19950**
Stddev	5.159	.45753	1.0174	.12442	.05627	.07847	2.9929	.09910
%RSD	17.711	48.552	40.631	58.893	251.59	583.79	121.28	49.672
#1	-34.562	-.49808	-1.6184	.07812	-.08626	.07873	5.6488	.11206
#2	-28.533	-.91687	-2.2784	.23110	-.00063	-.07361	-.29249	.17931
#3	-24.296	-1.4121	-3.6153	.32457	.01980	.03520	2.0469	.30714

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.24154**	**-.59560**	**36.354**	**-.91779**	**18.620**	**.36660**	**.3190**	**.30278**
Stddev	.08760	.12326	.790	1.0388	6.921	.08790	.1606	.46213
%RSD	36.266	20.695	2.1736	113.19	37.171	23.976	50.33	152.63
#1	-.32025	-.61608	36.253	-2.0402	11.060	.26956	.1445	.17101
#2	-.14717	-.46338	35.618	-.72300	20.158	.44087	.4605	-.07915
#3	-.25722	-.70732	37.189	.00983	24.643	.38937	.3521	.81648

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-14.642**	**1.9917**	**-.03367**	**36.377**	**.3036**	**.70429**	**.09384**	**1.8018**
Stddev	18.423	2.6719	.16849	4.876	.2402	.74758	.40945	.2056
%RSD	125.83	134.15	500.35	13.405	79.11	106.15	436.33	11.413
#1	-.0557	-1.0726	-.19964	30.790	.5805	-.07204	-.37895	1.6014
#2	-35.345	3.2129	-.03861	39.776	.1778	1.4194	.33190	2.0122
#3	-8.5242	3.8348	.13723	38.566	.1524	.76555	.32856	1.7917

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1867.6**	**66889.**	**374970.**
Stddev	4.8	22.	554.
%RSD	.25962	.03219	.14763
#1	1870.0	66914.	375610.
#2	1870.9	66873.	374670.
#3	1862.1	66880.	374640.

Sample Name: PBW Acquired: 6/18/2008 10:36:46 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-14.787**	**-.90116**	**-1.8552**	**.28246**	**-.10592**	**.18467**	**59.574**	**.55950**
Stddev	13.152	1.7658	.8323	.12575	.07938	.04016	3.361	.18626
%RSD	88.943	195.95	44.864	44.520	74.945	21.746	5.6409	33.290
#1	-17.055	.79028	-1.0088	.22281	-.19474	.21380	59.341	.42073
#2	-26.658	-2.7330	-2.6727	.42694	-.04190	.13886	56.336	.77118
#3	-.6486	-.76079	-1.8841	.19764	-.08113	.20134	63.045	.48658

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.39873**	**-.47941**	**32.086**	**1.0388**	**16.105**	**.19263**	**.2551**	**.80204**
Stddev	.12846	.21259	.478	2.3119	8.042	.05480	.2577	.23125
%RSD	32.219	44.345	1.4886	222.55	49.934	28.447	101.0	28.832
#1	-.54699	-.50266	32.251	-1.5575	15.242	.21242	.1989	.85363
#2	-.32854	-.25614	32.460	2.8749	24.544	.13069	.0301	1.0031
#3	-.32064	-.67941	31.548	1.7992	8.5297	.23479	.5363	.54935

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-26.784**	**1.5915**	**.07072**	**86.880**	**.7746**	**.57092**	**.03401**	**4.4384**
Stddev	6.667	1.0559	.08428	2.470	.6359	.42190	.36452	.2762
%RSD	24.894	66.343	119.18	2.8434	82.09	73.899	1071.9	6.2223
#1	-30.865	2.7525	-.02520	84.029	.0734	.08492	.36310	4.6612
#2	-30.397	1.3333	.10443	88.239	1.314	.78474	-.35780	4.5246
#3	-19.090	.68871	.13293	88.373	.9367	.84311	.09673	4.1294

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1877.3**	**66830.**	**376410.**
Stddev	5.1	264.	1288.
%RSD	.26926	.39454	.34204
#1	1871.4	66580.	375090.
#2	1880.4	66805.	377660.
#3	1879.9	67105.	376470.

Sample Name: ZZZZZZ Acquired: 6/18/2008 10:41:44 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment: Bad RSD.

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2269.0**	**917.15**	**922.16**	**480.65**	**452.34**	**467.33**	**9146.8**
Stddev	22.6	4.16	10.37	.92	.66	3.02	28.3
%RSD	.99749	.45305	1.1246	.19039	.14514	.64710	.30895
#1	2278.3	915.48	934.03	479.69	452.88	470.78	9162.1
#2	2285.5	921.88	917.57	480.75	451.61	466.11	9114.2
#3	2243.2	914.09	914.87	481.51	452.53	465.11	9164.2

Elem	Cr2055	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**477.71**	**471.27**	**452.52**	**4739.0**	**926.22**	**5401.6**	**466.18**
Stddev	.88	4.89	1.73	12.5	12.52	7.5	.78
%RSD	.18489	1.0367	.38263	.26447	1.3521	.13940	.16656
#1	478.63	476.86	450.61	4750.5	912.59	5396.8	466.93
#2	477.62	469.18	452.96	4725.6	937.22	5397.8	465.38
#3	476.87	467.78	453.98	4740.8	928.85	5410.3	466.24

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895	Ti3349
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.4315**	**467.40**	**10405.**	**928.40**	F **591.34**	**9945.7**	**2.396**
Stddev	1.001	5.74	340.	18.42	59.24	207.9	.501
%RSD	232.1	1.2274	3.2676	1.9838	10.018	2.0900	20.92
#1	-1.583	473.64	10053.	949.42	533.34	9726.8	1.819
#2	.0483	466.20	10431.	920.70	588.93	9969.7	2.721
#3	.2397	462.35	10732.	915.08	651.74	10140.	2.650

Elem	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L
Avg	**984.08**	**472.68**	**951.28**
Stddev	24.01	6.34	12.91
%RSD	2.4398	1.3415	1.3569
#1	1011.8	467.08	966.03
#2	971.70	471.39	945.77
#3	968.79	479.57	942.04

Sample Name: ZZZZZZ Acquired: 6/18/2008 10:41:44 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment: Bad RSD.

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1835.4**	**61622.**	**328430.**
Stddev	66.0	1124.	6059.
%RSD	3.5958	1.8243	1.8448
#1	1759.7	62732.	334610.
#2	1865.6	61650.	328170.
#3	1880.9	60485.	322500.

Sample Name: MH2608 Acquired: 6/18/2008 10:46:27 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**116.18**	**212.86**	**41.321**	**616.39**	**-.01077**	**5.0425**	**12334.**	**2.2931**
Stddev	8.12	1.52	1.555	.33	.07331	.1163	29.	.1757
%RSD	6.9854	.71599	3.7621	.05370	680.67	2.3057	.23861	7.6623
#1	116.58	211.97	42.417	616.76	-.08709	4.9157	12300.	2.1997
#2	124.09	214.62	42.003	616.24	.05910	5.0678	12353.	2.4958
#3	107.87	211.99	39.542	616.15	-.00432	5.1441	12348.	2.1838

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.03479**	**43.613**	**505.44**	**409.52**	**1151.2**	**141.47**	**1.669**	**.93101**
Stddev	.25001	.300	.75	1.25	9.4	.36	.187	.65585
%RSD	718.55	.68855	.14929	.30526	.81543	.25448	11.22	70.445
#1	.08159	43.361	505.05	408.36	1158.2	141.52	1.878	.17675
#2	-.23531	43.532	506.31	409.36	1154.9	141.09	1.613	1.3669
#3	.25810	43.945	504.96	410.84	1140.5	141.80	1.516	1.2494

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**400.44**	**2.3933**	**5.0274**	**5112.5**	**4.764**	**-.18525**	**1.9909**	**383.69**
Stddev	14.15	1.0246	.3932	20.7	.234	1.5827	.2216	.70
%RSD	3.5340	42.810	7.8206	.40560	4.918	854.33	11.128	.18187
#1	416.76	3.2538	4.5787	5136.1	5.033	1.2618	1.8115	383.78
#2	391.59	1.2599	5.3117	5104.2	4.657	-1.8754	1.9227	384.34
#3	392.96	2.6662	5.1918	5097.2	4.602	.05791	2.2385	382.95

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1859.2**	**66753.**	**373490.**
Stddev	4.5	111.	1077.
%RSD	.24058	.16685	.28839
#1	1854.7	66625.	374390.
#2	1859.4	66827.	373780.
#3	1863.6	66808.	372300.

Sample Name: MH2609 Acquired: 6/18/2008 10:51:24 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**432.21**	**140.54**	**69.341**	**240.42**	**.04421**	**2.3626**	**22421.**	**2.4321**
Stddev	8.31	.55	.343	.36	.08162	.0411	58.	.0511
%RSD	1.9215	.39013	.49437	.14947	184.62	1.7402	.26052	2.1002
#1	426.32	140.17	69.370	240.05	-.04129	2.4087	22487.	2.4043
#2	441.71	140.27	69.669	240.45	.05261	2.3496	22398.	2.4911
#3	428.60	141.17	68.985	240.76	.12131	2.3297	22377.	2.4010

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.06702**	**30.111**	**1886.9**	**408.54**	**1594.9**	**52.116**	**1.509**	**.74929**
Stddev	.30145	.076	2.3	.98	16.6	.458	.221	.79298
%RSD	449.79	.25250	.12228	.24032	1.0411	.87956	14.63	105.83
#1	-.34848	30.180	1884.4	409.34	1600.7	52.476	1.260	.12729
#2	.25106	30.029	1887.5	408.84	1607.8	52.273	1.586	.47835
#3	-.10364	30.124	1888.9	407.45	1576.1	51.600	1.680	1.6422

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**489.62**	**.72947**	**4.3219**	**2200.9**	**13.47**	**.96947**	**5.9753**	**538.63**
Stddev	24.65	1.0118	.3242	1.7	.09	.53914	.6064	.69
%RSD	5.0351	138.70	7.5004	.07786	.6622	55.612	10.148	.12718
#1	461.21	.89558	3.9557	2199.0	13.45	.48832	6.1285	539.24
#2	502.29	1.6479	4.5721	2201.4	13.39	1.5522	5.3070	538.75
#3	505.36	-.35510	4.4381	2202.3	13.57	.86792	6.4904	537.89

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1851.0**	**66652.**	**373080.**
Stddev	3.0	160.	81.
%RSD	.16442	.24060	.02169
#1	1847.5	66471.	373140.
#2	1853.0	66711.	372990.
#3	1852.5	66775.	373100.

Sample Name: MH2610 Acquired: 6/18/2008 10:56:18 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**220.53**	**109.14**	**30.749**	**185.26**	**.02834**	**5.9992**	**7949.6**	**1.7858**	**.09832**
Stddev	7.46	1.16	1.025	.48	.03967	.0509	36.8	.2806	.11875
%RSD	3.3830	1.0656	3.3325	.25665	139.94	.84867	.46324	15.711	120.78
#1	226.53	110.02	30.949	185.75	.07406	6.0022	7942.1	2.0856	.20312
#2	222.89	107.82	31.660	184.81	.00305	5.9468	7989.6	1.5295	.12250
#3	212.18	109.57	29.639	185.21	.00793	6.0485	7917.2	1.7423	-.03066

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**86.106**	**769.37**	**663.25**	**1116.6**	**130.36**	**.8275**	**1.0085**	**386.65**	**2.1524**
Stddev	.379	1.64	3.51	12.2	.64	.0604	.5499	36.61	.8614
%RSD	.44022	.21295	.52943	1.0944	.49214	7.299	54.521	9.4698	40.020
#1	86.452	768.70	667.24	1109.2	129.68	.8612	.51126	375.38	3.0522
#2	85.701	771.23	661.89	1110.0	130.96	.7578	1.5991	357.00	2.0696
#3	86.164	768.17	660.62	1130.8	130.44	.8636	.91530	427.58	1.3354

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**7.3768**	**3224.3**	**7.312**	**.59841**	**.89119**	**566.10**
Stddev	.3766	16.5	.604	.15550	.50779	1.19
%RSD	5.1054	.51022	8.264	25.985	56.979	.20964
#1	7.3760	3241.6	6.805	.71101	1.4221	567.34
#2	7.0006	3208.8	7.151	.66324	.84113	564.97
#3	7.7539	3222.5	7.981	.42099	.41028	565.98

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1869.3**	**67001.**	**374770.**
Stddev	6.1	99.	799.
%RSD	.32702	.14787	.21310
#1	1862.3	66935.	374590.
#2	1873.1	66953.	375640.
#3	1872.6	67115.	374080.

Sample Name: MH2610S Acquired: 6/18/2008 11:01:10 Type: RQC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2019.7**	**201.30**	**68.567**	**2145.1**	**46.577**	**53.688**	**7743.6**	**198.71**	**479.31**
Stddev	14.4	1.28	.573	13.1	.072	.150	95.9	.46	.96
%RSD	.71337	.63356	.83592	.60888	.15361	.27898	1.2384	.23255	.20004
#1	2033.5	200.17	68.109	2130.0	46.648	53.841	7854.3	199.24	480.41
#2	2020.8	201.06	68.382	2153.9	46.579	53.682	7687.1	198.41	478.85
#3	2004.8	202.68	69.210	2151.2	46.504	53.541	7689.3	198.47	478.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value									
Range									
Recovery	1799.2	92.168	37.818	1959.8	46.549	47.689	None	196.92	479.21
% Recover	99.953%	102.41%	104.94%	108.88%	103.34%	105.87%		109.29%	106.39%

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**321.61**	**1716.2**	**678.54**	**1095.5**	**600.99**	**1.014**	**476.46**	**362.86**	**50.055**
Stddev	1.09	6.1	2.52	12.4	2.90	.086	.64	22.88	1.571
%RSD	.33870	.35804	.37157	1.1334	.48274	8.516	.13448	6.3049	3.1379
#1	322.46	1723.2	678.71	1107.5	604.30	.9568	476.97	363.39	49.584
#2	321.98	1711.6	680.98	1082.7	599.78	.9727	476.67	339.72	48.773
#3	320.38	1713.9	675.95	1096.2	598.89	1.114	475.75	385.47	51.807
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value									
Range									
Recovery	235.50	946.88	15.296	None	470.63	None	475.46	None	47.902
% Recover	104.67%	105.10%	84.891%		104.48%		105.55%		106.34%

Sample Name: MH2610S Acquired: 6/18/2008 11:01:10 Type: RQC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**52.595**	**3237.5**	**6.514**	**48.143**	**468.77**	**1009.1**
Stddev	.555	37.7	.370	1.015	1.64	1.6
%RSD	1.0559	1.1631	5.673	2.1088	.34919	.15600
#1	52.581	3194.3	6.939	46.975	469.90	1010.7
#2	53.158	3254.2	6.270	48.815	469.50	1008.9
#3	52.048	3263.9	6.332	48.638	466.89	1007.6
Check ?	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value						
Range						
Recovery	45.219	None	None	47.544	467.87	442.97
% Recover	100.39%			105.55%	103.87%	98.340%

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1865.3**	**66913.**	**374600.**
Stddev	3.3	174.	1730.
%RSD	.17684	.25954	.46173
#1	1861.5	66725.	373370.
#2	1866.6	66947.	373860.
#3	1867.6	67067.	376580.

Sample Name: MH2610D Acquired: 6/18/2008 11:05:55 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**211.15**	**109.43**	**32.025**	**187.84**	**-.00642**	**5.8588**	**7707.2**	**2.4212**
Stddev	6.85	.81	1.681	.40	.03167	.0317	12.9	.1446
%RSD	3.2449	.74166	5.2480	.21469	493.32	.54147	.16722	5.9737
#1	206.04	110.10	30.647	187.58	-.03875	5.8223	7692.4	2.5135
#2	218.93	109.66	31.531	187.64	-.00506	5.8743	7715.8	2.2545
#3	208.47	108.52	33.898	188.31	.02455	5.8798	7713.4	2.4956

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.27025**	**87.700**	**787.95**	**659.15**	**1093.5**	**128.66**	**.9465**	**.91445**
Stddev	.22476	.292	2.33	1.65	20.6	.47	.0848	.51942
%RSD	83.167	.33280	.29563	.24998	1.8867	.36782	8.958	56.802
#1	-.36169	87.883	786.27	660.16	1070.5	129.17	1.044	1.4347
#2	-.43489	87.852	786.98	657.25	1110.4	128.56	.9079	.39589
#3	-.01418	87.363	790.61	660.05	1099.6	128.25	.8879	.91273

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**375.07**	**3.0582**	**5.2603**	**3254.3**	**6.727**	**.30303**	**.95640**	**544.93**
Stddev	25.39	.0280	.0902	11.6	.191	1.2369	.14319	.44
%RSD	6.7680	.91441	1.7139	.35770	2.835	408.19	14.971	.08134
#1	346.79	3.0638	5.2332	3259.4	6.578	-.18273	.80979	545.44
#2	395.89	3.0829	5.3608	3241.0	6.942	1.7091	1.0959	544.68
#3	382.53	3.0278	5.1867	3262.6	6.661	-.61729	.96351	544.66

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1864.2**	**67306.**	**374970.**
Stddev	1.8	67.	1031.
%RSD	.09458	.09935	.27490
#1	1863.3	67243.	375010.
#2	1863.1	67376.	373920.
#3	1866.2	67300.	375980.

Sample Name: MH2610L Acquired: 6/18/2008 11:10:48 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**26.940**	**21.535**	**7.1246**	**38.234**	**.05325**	**1.1708**	**1618.2**	**.37501**
Stddev	13.901	.658	1.1064	.129	.04289	.0336	4.3	.21151
%RSD	51.601	3.0575	15.529	.33703	80.533	2.8656	.26450	56.402
#1	12.939	22.260	5.8773	38.168	.09319	1.2083	1621.7	.18375
#2	27.141	21.370	7.5093	38.383	.00793	1.1435	1619.4	.33910
#3	40.739	20.975	7.9873	38.151	.05865	1.1607	1613.4	.60217

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.10572**	**19.847**	**151.25**	**132.02**	**235.72**	**26.740**	**.3015**	**.01954**
Stddev	.31158	.181	1.12	1.57	4.03	.367	.1526	.12060
%RSD	294.73	.91238	.74111	1.1876	1.7086	1.3740	50.62	617.18
#1	-.45222	19.642	152.44	133.36	237.12	27.041	.2653	.06967
#2	-.01632	19.913	150.21	130.30	231.18	26.331	.4690	-.11804
#3	.15139	19.986	151.11	132.40	238.86	26.847	.1702	.10699

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**81.624**	**1.7771**	**1.0237**	**663.10**	**1.480**	**.24852**	**.22428**	**109.75**
Stddev	11.282	2.5329	.3342	5.56	.202	.79168	.17751	.54
%RSD	13.822	142.53	32.646	.83852	13.63	318.55	79.145	.49139
#1	92.048	3.2955	.75093	656.92	1.530	.60031	.42897	109.52
#2	69.646	-1.1469	1.3965	667.70	1.652	-.65808	.13136	109.37
#3	83.178	3.1828	.92363	664.68	1.258	.80334	.11253	110.37

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1940.3**	**67133.**	**377620.**
Stddev	4.0	154.	1022.
%RSD	.20838	.22886	.27052
#1	1937.4	66957.	378560.
#2	1944.9	67204.	376530.
#3	1938.4	67239.	377780.

Sample Name: MH2611 Acquired: 6/18/2008 11:15:45 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**311.76**	**67.688**	**38.027**	**176.34**	**.06619**	**5.6084**	**9110.1**	**2.4148**
Stddev	11.68	1.748	1.101	.93	.08303	.0481	19.5	.2337
%RSD	3.7483	2.5825	2.8954	.52460	125.45	.85697	.21450	9.6768
#1	317.31	69.703	39.222	177.05	.02134	5.5800	9092.3	2.6834
#2	298.33	66.782	37.053	176.67	.16200	5.6639	9131.0	2.3035
#3	319.63	66.579	37.807	175.29	.01523	5.5813	9106.9	2.2577

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.31529**	**83.402**	**913.71**	**737.29**	**1523.9**	**99.094**	**.8717**	**1.1340**
Stddev	.13989	.500	3.03	2.48	7.1	.710	.1531	.1514
%RSD	44.369	.59919	.33147	.33611	.46778	.71610	17.56	13.352
#1	-.25360	82.827	916.86	734.47	1525.6	98.374	1.007	1.0014
#2	-.47542	83.732	910.81	738.29	1530.1	99.793	.7057	1.2989
#3	-.21684	83.648	913.46	739.11	1516.1	99.115	.9020	1.1016

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**359.97**	**2.5609**	**5.6826**	**3161.3**	**7.903**	**.39813**	**.94468**	**730.54**
Stddev	14.09	1.3578	.1111	6.4	.430	.39828	.19886	.92
%RSD	3.9136	53.021	1.9543	.20364	5.447	100.04	21.050	.12581
#1	369.21	2.1307	5.5771	3156.5	7.662	.78382	1.0025	731.48
#2	343.76	1.4703	5.6724	3168.6	8.400	.42221	1.1082	729.64
#3	366.95	4.0818	5.7985	3158.9	7.648	-.01165	.72331	730.50

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1859.9**	**67205.**	**374780.**
Stddev	.9	96.	2038.
%RSD	.05044	.14326	.54375
#1	1859.9	67125.	375970.
#2	1860.8	67179.	372430.
#3	1859.0	67312.	375950.

Sample Name: CCV2 Acquired: 6/18/2008 11:20:37 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**24744.**	**5062.8**	**745.79**	**5163.4**	**769.20**	**775.64**	**24430.**	**4994.6**	**4927.0**
Stddev	77.	18.1	3.05	9.5	.92	1.82	20.	9.9	9.1
%RSD	.30967	.35794	.40886	.18450	.11958	.23522	.08293	.19851	.18569
#1	24732.	5053.9	744.01	5174.0	770.21	775.12	24446.	4985.5	4921.3
#2	24674.	5050.9	744.05	5155.8	769.01	774.13	24407.	4993.0	4922.2
#3	24826.	5083.6	749.31	5160.3	768.40	777.67	24437.	5005.1	4937.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5040.9**	**25008.**	**768.04**	**24584.**	**4963.2**	**-1.954**	**4929.9**	**25431.**	**781.30**
Stddev	13.5	28.	1.75	35.	6.1	.178	15.3	91.	3.42
%RSD	.26736	.11114	.22780	.14278	.12218	9.118	.31123	.35852	.43768
#1	5055.8	25037.	768.02	24603.	4969.4	-1.804	4919.1	25519.	779.17
#2	5029.6	24982.	769.80	24544.	4957.3	-1.908	4923.2	25337.	779.49
#3	5037.1	25004.	766.30	24606.	4963.0	-2.151	4947.5	25439.	785.25
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**786.16**	**25188.**	**5.308**	**736.30**	**5146.2**	**4919.0**
Stddev	2.74	23.	.083	2.95	18.6	9.3
%RSD	.34883	.08938	1.561	.40022	.36231	.18978
#1	789.33	25213.	5.384	735.57	5165.5	4912.8
#2	784.47	25181.	5.320	733.78	5145.1	4914.4
#3	784.69	25169.	5.220	739.54	5128.2	4929.7
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV2 Acquired: 6/18/2008 11:20:37 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1892.4**	**67124.**	**369950.**
Stddev	4.0	93.	1473.
%RSD	.21118	.13926	.39814
#1	1895.8	67018.	368360.
#2	1893.5	67195.	370200.
#3	1888.0	67159.	371280.

Sample Name: CCB2 Acquired: 6/18/2008 11:25:20 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.05995**	**.64838**	**.38889**	**.39283**	**.06216**	**.02926**	**.30534**	**.80185**
Stddev	17.684	1.6003	1.2984	.04808	.02901	.02365	2.1222	.30318
%RSD	29499.	246.81	333.86	12.240	46.664	80.820	695.05	37.810
#1	-4.5464	-1.1668	-.69901	.36593	.06547	.05564	-1.7539	.69762
#2	-15.068	1.2567	.03947	.44835	.08937	.02214	.18441	.56452
#3	19.435	1.8553	1.8262	.36422	.03164	.00999	2.4855	1.1434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.87574**	**.45379**	**-4.9086**	**-.97893**	**17.357**	**.35469**	**.0428**	**.40308**
Stddev	.18024	.50235	1.2053	1.3561	7.041	.09912	.1859	.57591
%RSD	20.581	110.70	24.554	138.53	40.562	27.944	434.4	142.88
#1	.68071	-.12308	-5.3416	.17038	11.137	.44409	-.1705	-.23402
#2	1.0362	.79491	-3.5467	-.63257	25.001	.24811	.1698	.88670
#3	.91036	.68953	-5.8376	-2.4746	15.934	.37188	.1292	.55657
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-9.3275**	**-.43145**	**-1.4224**	**-.63141**	**.3352**	**1.1121**	**.43795**	**1.1918**
Stddev	25.795	1.3694	.1745	4.2018	.4278	.2901	.17513	.2878
%RSD	276.55	317.40	12.266	665.47	127.7	26.086	39.989	24.149
#1	-19.964	-1.9048	-1.5253	2.4229	.4714	1.4460	.26828	1.1991
#2	20.085	.80237	-1.5210	-5.4234	.6783	.92246	.61808	.90036
#3	-28.104	-.19189	-1.2210	1.1062	-.1442	.96770	.42750	1.4758
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB2 Acquired: 6/18/2008 11:25:20 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1950.1**	**67847.**	**379670.**
Stddev	6.7	158.	959.
%RSD	.34529	.23313	.25271
#1	1957.9	67794.	379670.
#2	1946.0	68025.	380630.
#3	1946.5	67723.	378710.

Sample Name: LCSW Acquired: 6/18/2008 11:30:18 Type: Unk
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: MW1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**2244.2**	**922.28**	**918.06**	**483.34**	**445.60**	**457.86**	**8777.1**	**473.88**	**464.28**
Stddev	18.0	2.53	1.27	.71	.83	1.18	29.3	.32	1.48
%RSD	.80336	.27407	.13799	.14607	.18707	.25739	.33334	.06648	.31881
#1	2253.4	925.10	918.61	483.83	446.49	459.22	8809.6	473.69	464.77
#2	2223.5	920.22	916.61	482.53	445.45	457.17	8768.8	473.70	462.61
#3	2255.8	921.51	918.95	483.66	444.84	457.19	8752.9	474.24	465.45

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**459.33**	**4667.2**	**922.93**	**5261.6**	**456.72**	**.0730**	**460.15**	**9239.1**	**925.00**
Stddev	1.86	7.7	4.84	13.2	.78	.2472	1.45	12.4	3.16
%RSD	.40543	.16483	.52419	.25161	.17112	338.4	.31505	.13372	.34138
#1	457.56	4674.8	923.16	5275.7	457.59	.3224	461.70	9224.9	927.89
#2	461.27	4667.4	917.97	5259.4	456.07	-.1720	459.94	9246.8	921.63
#3	459.16	4659.4	927.64	5249.5	456.52	.0687	458.82	9245.8	925.47

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**458.81**	**9314.5**	**2.506**	**973.75**	**454.17**	**918.81**
Stddev	2.81	18.8	.406	2.07	2.59	1.39
%RSD	.61203	.20189	16.22	.21288	.56926	.15088
#1	456.84	9317.8	2.038	975.98	455.92	920.40
#2	462.03	9294.3	2.772	973.38	455.40	917.84
#3	457.56	9331.5	2.708	971.89	451.20	918.19

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1862.3**	**67308.**	**372140.**
Stddev	1.3	258.	908.
%RSD	.06914	.38343	.24412
#1	1861.3	67053.	373010.
#2	1863.8	67301.	371200.
#3	1862.0	67569.	372210.

Sample Name: CRIF Acquired: 6/18/2008 11:35:02 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**164.75**	**60.411**	**10.478**	**210.50**	**5.0571**	**5.0338**	**4835.7**	**10.407**	**50.114**
Stddev	20.83	1.698	.207	.47	.0843	.0546	17.9	.223	.082
%RSD	12.646	2.8099	1.9772	.22432	1.6661	1.0839	.36938	2.1441	.16376
#1	141.09	61.367	10.695	210.67	4.9872	5.0018	4841.6	10.637	50.125
#2	180.33	58.451	10.283	209.96	5.0336	5.0027	4849.9	10.391	50.190
#3	172.85	61.414	10.456	210.85	5.1507	5.0968	4815.6	10.192	50.027
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**25.367**	**95.898**	**7.7162**	**4860.6**	**15.097**	**-.2888**	**39.863**	**5024.1**	**36.339**
Stddev	.251	2.944	1.7117	13.1	.125	.1091	.508	49.5	.674
%RSD	.98989	3.0704	22.183	.26911	.82664	37.76	1.2733	.98506	1.8556
#1	25.103	93.091	7.1998	4847.7	15.008	-.3996	39.473	5081.2	35.570
#2	25.603	98.963	9.6266	4860.3	15.240	-.2853	39.681	4995.2	36.828
#3	25.394	95.640	6.3222	4873.8	15.043	-.1816	40.437	4995.9	36.619
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.4428**	**4988.6**	**1.038**	**27.382**	**50.120**	**58.925**
Stddev	.1800	24.5	.004	.809	.479	.304
%RSD	1.9061	.49079	.3613	2.9541	.95591	.51661
#1	9.6488	5016.8	1.038	26.883	49.704	59.199
#2	9.3160	4972.9	1.035	28.315	50.013	58.597
#3	9.3636	4976.1	1.043	26.947	50.644	58.978
Check ?	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CRIF Acquired: 6/18/2008 11:35:02 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1948.5**	**68052.**	**378190.**
Stddev	2.4	126.	1090.
%RSD	.12314	.18549	.28829
#1	1950.9	67944.	378380.
#2	1946.1	68020.	377020.
#3	1948.5	68191.	379180.

Sample Name: ICSAF Acquired: 6/18/2008 11:39:59 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**254960.**	**-3.6502**	**-1.2507**	**2.6157**	**.40227**	**2.5504**	**243050.**
Stddev	331.	2.2457	1.8906	.0907	.03949	.2300	920.
%RSD	.12991	61.524	151.16	3.4672	9.8165	9.0179	.37848
#1	255150.	-2.5513	-1.0476	2.7132	.36224	2.6010	243920.
#2	254580.	-2.1656	-3.2346	2.6002	.40337	2.7509	243160.
#3	255150.	-6.2338	.53012	2.5338	.44120	2.2993	242090.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cr2055	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**48.401**	**2.9571**	**26.388**	**97611.**	**6.2612**	**266440.**	**19.631**
Stddev	.172	.1262	.340	119.	2.3587	125.	.345
%RSD	.35488	4.2686	1.2894	.12193	37.672	.04685	1.7587
#1	48.585	2.8267	26.206	97720.	3.9993	266550.	19.983
#2	48.244	2.9660	26.178	97484.	8.7061	266460.	19.293
#3	48.375	3.0787	26.781	97630.	6.0781	266310.	19.616
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895	Ti3349
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.073**	**25.330**	**-29.178**	**3.9838**	**10.342**	**845.18**	**10.33**
Stddev	.192	.210	15.984	3.3595	.080	2.45	.44
%RSD	17.92	.83026	54.780	84.329	.76894	.28999	4.266
#1	-1.094	25.415	-10.867	1.0749	10.250	843.96	10.84
#2	-.8713	25.091	-40.339	3.2155	10.386	843.58	10.00
#3	-1.254	25.484	-36.328	7.6609	10.390	848.00	10.16
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSAF Acquired: 6/18/2008 11:39:59 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L
Avg	**4.5744**	**-14.942**	**33.788**
Stddev	1.6256	.580	.821
%RSD	35.537	3.8821	2.4298
#1	3.3171	-15.600	32.924
#2	3.9960	-14.507	34.558
#3	6.4101	-14.717	33.882
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1690.7**	**64676.**	**348900.**
Stddev	.6	143.	1162.
%RSD	.03448	.22136	.33293
#1	1690.4	64512.	349270.
#2	1690.4	64779.	349830.
#3	1691.4	64736.	347600.

Sample Name: ICSABF Acquired: 6/18/2008 11:45:03 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**255210.**	**664.49**	**110.18**	**528.77**	**512.05**	**1043.4**	**242240.**
Stddev	487.	2.97	1.58	1.20	.73	2.7	834.
%RSD	.19065	.44647	1.4325	.22654	.14341	.26051	.34410
#1	255770.	665.83	108.52	529.79	511.32	1042.1	241790.
#2	254930.	661.09	111.67	527.45	512.05	1041.5	243200.
#3	254930.	666.55	110.36	529.08	512.79	1046.5	241730.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cr2055	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**578.08**	**523.25**	**565.82**	**97719.**	**63.235**	**267040.**	**525.29**
Stddev	.43	1.16	1.39	242.	1.754	503.	1.43
%RSD	.07391	.22137	.24601	.24792	2.7735	.18837	.27261
#1	577.65	522.51	567.07	97456.	64.815	266540.	524.12
#2	578.10	522.66	566.07	97771.	61.348	267020.	524.85
#3	578.50	524.59	564.32	97932.	63.543	267550.	526.89
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895	Ti3349
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.8869**	**1078.1**	**-19.187**	**59.494**	**226.51**	**854.59**	**11.01**
Stddev	.4185	2.1	19.787	2.241	.72	9.71	.26
%RSD	47.19	.19608	103.13	3.7664	.31682	1.1367	2.338
#1	-1.356	1076.3	3.6298	56.923	227.18	864.86	11.30
#2	-.7529	1077.5	-31.643	61.029	226.61	845.55	10.85
#3	-.5518	1080.4	-29.547	60.531	225.75	853.38	10.86
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSABF Acquired: 6/18/2008 11:45:03 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L
Avg	**114.05**	**482.48**	**1057.4**
Stddev	2.47	.74	3.3
%RSD	2.1693	.15285	.31141
#1	115.47	482.88	1054.3
#2	111.19	482.93	1057.2
#3	115.47	481.63	1060.8
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1685.7**	**64550.**	**348130.**
Stddev	3.2	21.	538.
%RSD	.19245	.03281	.15446
#1	1688.7	64555.	347560.
#2	1686.1	64568.	348220.
#3	1682.3	64526.	348620.

Sample Name: CCV3 Acquired: 6/18/2008 11:49:57 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**24664.**	**5018.7**	**741.10**	**5122.4**	**765.36**	**768.72**	**24210.**	**4988.7**	**4893.4**
Stddev	38.	12.8	3.00	4.6	1.08	1.13	64.	5.2	8.1
%RSD	.15373	.25462	.40463	.09030	.14160	.14700	.26412	.10375	.16485
#1	24622.	5004.1	737.71	5127.8	766.54	768.81	24276.	4985.0	4888.3
#2	24674.	5023.8	743.40	5120.1	765.14	767.55	24149.	4986.4	4889.3
#3	24696.	5028.1	742.19	5119.5	764.41	769.80	24204.	4994.6	4902.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**5014.7**	**24792.**	**766.70**	**24536.**	**4933.3**	**-1.990**	**4876.1**	**25348.**	**776.78**
Stddev	13.1	54.	1.84	86.	11.9	.121	7.7	38.	2.86
%RSD	.26104	.21917	.24048	.34899	.24198	6.103	.15882	.14940	.36755
#1	5029.3	24855.	767.38	24625.	4946.8	-2.111	4871.6	25341.	774.82
#2	5004.2	24759.	764.62	24454.	4924.3	-1.990	4871.6	25315.	775.47
#3	5010.5	24763.	768.11	24529.	4928.8	-1.868	4885.0	25389.	780.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**783.56**	**25189.**	**5.142**	**729.29**	**5054.2**	**4879.6**
Stddev	2.09	31.	.102	2.10	22.9	8.8
%RSD	.26665	.12244	1.977	.28838	.45290	.17992
#1	785.79	25155.	5.254	726.86	5080.5	4882.7
#2	781.65	25199.	5.118	730.41	5043.6	4869.7
#3	783.22	25214.	5.055	730.60	5038.6	4886.5
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV3 Acquired: 6/18/2008 11:49:57 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1897.6**	**67294.**	**370880.**
Stddev	1.8	72.	1053.
%RSD	.09564	.10700	.28390
#1	1899.1	67216.	369910.
#2	1898.0	67307.	370730.
#3	1895.5	67358.	372000.

Sample Name: CCB3 Acquired: 6/18/2008 11:54:41 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Elem	Al3082	Sb2068	As1890	Ba4554	Be3131	Cd2144	Ca3179	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-16.864**	**.58982**	**-.02816**	**.55671**	**.07122**	**.12167**	**7.5558**	**.56708**
Stddev	10.045	1.7023	.85879	.13948	.02345	.03312	1.8623	.10403
%RSD	59.565	288.62	3049.8	25.054	32.932	27.223	24.648	18.345
#1	-27.503	-1.3647	.80559	.52043	.08117	.11341	7.6061	.44728
#2	-15.544	1.3855	-.90997	.43895	.08806	.09346	5.6688	.61931
#3	-7.5439	1.7487	.01990	.71075	.04443	.15814	9.3924	.63463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**.62113**	**.42453**	**.01218**	**-.85549**	**14.422**	**.35032**	**-.1642**	**.19344**
Stddev	.23142	.30096	1.4852	.51797	20.504	.10869	.0536	.04389
%RSD	37.258	70.892	12198.	60.547	142.17	31.027	32.66	22.692
#1	.37195	.39967	-1.5058	-.99744	-2.7817	.47563	-.1483	.16780
#2	.66211	.13678	.08015	-1.2877	8.9364	.28164	-.1203	.24412
#3	.82932	.73715	1.4622	-.28134	37.111	.29368	-.2240	.16839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Elem	K_7664	Se1960	Ag3280	Na5895	Ti3349	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-2.5024**	**-1.1320**	**-1.4504**	**3.9397**	**.4224**	**1.3588**	**.10460**	**.89210**
Stddev	4.6994	.4694	.5470	2.0237	.4555	.6236	.37397	.32681
%RSD	187.80	41.466	37.714	51.366	107.8	45.890	357.51	36.634
#1	2.2542	-.72864	-.93485	2.5999	.0908	1.9631	.50994	1.2486
#2	-2.6189	-1.6472	-2.0242	6.2676	.9417	.71763	-.22702	.60663
#3	-7.1425	-1.0201	-1.3921	2.9517	.2347	1.3957	.03090	.82110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB3 Acquired: 6/18/2008 11:54:41 Type: QC
Method: ICP07 ILM05.4 2008(v2) Mode: CONC Corr. Factor: 1.000000
User: sanchezjc SDG: MH2608 CASE: 37402 Prep: NP1
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1956.6**	**67977.**	**378820.**
Stddev	3.9	167.	1017.
%RSD	.19773	.24579	.26844
#1	1953.7	67840.	377790.
#2	1961.0	68163.	379820.
#3	1955.1	67929.	378840.

DCL INORGANIC SAMPLE PREPARATION NOTE BOOK ISP 350 PAGE 064

SDG/PREP GROUP# MH2608 CONTINUED FROM PAGE#: 063

Explanations:

ILM05.4-MW1 Physical Description Log

CASE: 37402 **SDG:** MH2608 **DCL SET ID:** 8155033

Sample ID	Matrix	Method	Prep Date	Amount of Sample Used (mL)	Final Volume of Digested Samples (mL)	pH	Color/Clarity, Texture		Init.
							Before	After	
PBW	ASTM Type II H_2O	ILM05.4 MW1	6/16/2008	45 mL	50 mL	NA	N/CL	N/CL	KK
LCSW	↓	↓	↓	↓	↓	NA	N/CL	N/CL	↓
MH2608	Water	↓	↓	↓	↓	<2	N/CL	N/CL	↓
MH2609	↓	↓	↓	↓	↓	↓	↓	↓	↓
MH2610	↓	↓	↓	↓	↓	↓	↓	↓	↓
MH2610S	↓	↓	↓	↓	↓	↓	↓	↓	↓
MH2610D	↓	↓	↓	↓	↓	↓	↓	↓	↓
MH2611	↓	↓	↓	↓	↓	↓	↓	↓	↓

COLOR	N = Colorless	BR = Brown	TEXTURE	F = Fine	CLARITY
BL = Black	GR = Gray	GN = Green		M = Medium	CL = Clear
Y = Yellow	R = Red	O = Orange		C = Coarse	CO = Cloudy

KK 6/16/08

KK 6/16/08

CONTINUED ON PAGE# X

Preparer Signature/Date: 6/16/08

Reviewer Signature/Date: 6/16/08

TITLE % solids/ Moisture

Project No. NA

Book No. 1755

From Page No. X Insert of % solids/Moisture Data of set 8155033, 8154005

IJO 6/5/08

% Moistures & Solids

Analyst: IJO
Queue: EGRV
Batch: 1624
Instrument: GRAV03

Start Time 6/4/2008 12:50
Finish Time 6/5/2008 9:00

Oven Temperature
105 °C ± 2 °C

Workorder	Dish#	Lab Sample ID	Dish (g)	Dish + Soil (g)	Soil Weight (g)	Dish + DS (g)	Dry Soil (g)	% Solids	% Moistures
8155033	1	8155033001	1.2593	9.8906	8.6313	6.7263	5.4670	63.3392%	36.6608%
8155033	2	52874 DUP	1.2688	9.8759	8.6071	6.7098	5.4410	63.2153%	36.7847%
8155033	3	8155033002	1.2563	9.9144	8.6581	7.8477	6.5914	76.1299%	23.8701%
8155033	4	8155033003	1.2565	8.4756	7.2191	6.6806	5.4241	75.1354%	24.8646%
8155033	5	8155033004	1.2663	7.2165	5.9502	5.1589	3.8926	65.4196%	34.5804%

IJO 6/5/08

% Moistures & Solids

Analyst: IJO
Queue: EGRV
Batch: 1625
Instrument: GRAV03

Start Time 6/4//2008 13:44
Finish Time 6/4//2008 9:20

Oven Temperature
105 °C ± 2 °C

Workorder	Dish#	Lab Sample ID	Dish (g)	Dish + Soil (g)	Soil Weight (g)	Dish + DS (g)	Dry Soil (g)	% Solids	% Moistures
8154005	1	8154005001	1.2613	8.0381	6.7768	6.86	5.5961	82.5773%	17.4227%
8154005	2	52911 DUP	1.2568	8.0238	6.7670	6.85	5.5888	82.5890%	17.4110%
8154005	3	8154005002	1.2621	7.8322	6.5701	7.03	5.7641	87.7323%	12.2677%
8154005	4	8154005003	1.2561	8.9695	7.7134	7.58	6.3265	82.0196%	17.9804%
8154005	5	8154005004	1.2406	9.0257	7.7851	8.73	7.4929	96.2467%	3.7533%

IJO 6/5/08

To Page No. X

Witnessed & Understood by me, [signature] Date 6/5/08

Invented by: NA

Recorded by: [signature] Date 6/5/08

SAMPLE TAG INFORMATION SHEET

There are no Sample Tags included with this SDG

Notations concerning the location of the Sample Tags are included in Forms DC-1, DC-2 and in the SDG Administrative Narrative (if it is required).

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: MH2608

☒ ICPAES ☐ ICPMS ☐ HG ☐ CN

Laboratory Name: DataChem Laboratories, Inc.

Laboratory Code: DATAC

Contract No.: EP-W-06-054

Case No.: 37402

Analysis Price: N/A

SDG Turnaround: 21

Modified Analysis (if applicable):

Modification Reference No.: 1553.0

EPA Sample Numbers in SDG (Listed in Numerical Order)

1) MH2608	7)	13)	19)
2) MH2609	8)	14)	20)
3) MH2610	9)	15)	21)
4) MH2611	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

MH 6/11/08

MH2608	MH2611
First Sample in SDG	Last Sample in SDG
06/03/08	06/03/08
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20 field samples (excluding PE samples) in an SDG. Attach the TR/COC records to this form in alphanumeric order (the order listed above on this form).*

Signature: Meredith Edwards

Date: 6/11/2008

DataChem Laboratories, Inc.
CHAIN-OF-CUSTODY

Project / Job / Task: P056L001 | **Split:** | **Workorder ID:** 8155033

Client: U. S. EPA Region 8 | **Account:** 08201

Comments:

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Preservatives: COOL	Containers: Count	Requested Analysis: Solids/Moisture	LM05.4 ICP-AES, Soil	LM05.4 Prep/Extn/Dig
1	6/2/2008 13:15	MH2608	8155033001		Soil/Solids/Sediment		1	X	X	X
2	6/2/2008 14:30	MH2609	8155033002		Soil/Solids/Sediment		1	X	X	X
3	6/2/2008 15:15	MH2610	8155033003		Soil/Solids/Sediment		1	X	X	X
4	6/2/2008 16:00	MH2611	8155033004		Soil/Solids/Sediment		1	X	X	X
5										
6										
7										
8										
9										
10										

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Loretz, Nicole F.	06/03/2008 08:40	DCL Sample Receiving	Sample Login
[illegible] R-[illegible] mge	6/3/08 [illegible] 06/11/08 12:00	[illegible]	Storage
[illegible] R-403-1 kk	06/12/08 10:00 6/16/08 1030	[illegible] R-403 mge [illegible]	SPLP EXT STOR Metals

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: ICP Metals | Lab Notebook No.: 350

Prepared / Analyzed by: [illegible] | Date / Time: 6/16/08 1030

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
[illegible] R-403-1 kk	6/16/08 1230	R-403-1 kk	storage
R-403-1 [illegible]	6/17/08 17:20	ICP Lab [illegible]	analysis

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DataChem Laboratories, Inc.
CHAIN-OF-CUSTODY

Project / Job / Task: P056L001 | ***Split:*** | **Workorder ID:** 8155033

Client: U. S. EPA Region 8 | **Account:** 08201

Comments:

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Preservatives: COOL	Containers: Count	Requested Analysis: Solids/Moisture	LM05.4 ICP-AES, Soil	LM05.4 Prep/Extn/Dig
1	6/2/2008 13:15	MH2608	8155033001		Soil/Solids/Sediment		1	X	X	X
2	6/2/2008 14:30	MH2609	8155033002		Soil/Solids/Sediment		1	X	X	X
3	6/2/2008 15:15	MH2610	8155033003		Soil/Solids/Sediment		1	X	X	X
4	6/2/2008 16:00	MH2611	8155033004		Soil/Solids/Sediment		1	X	X	X
5										
6										
7										
8										
9										
10										

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Loretz, Nicole F.	06/03/2008 08:40	DCL Sample Receiving	Sample Login
Moraal Edward	6/3/08 1900	R-33_1 Cart	Storage
R-33_1 cart IJO	6/4/08 14:00	Jesse J Ovalle	solid
Jesse J Ovalle	6/4/08 14:30	R-403-1 down shelf #22	storage

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

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Batch Worklist

DATA CHEM LABORATORIES, INC.

Batch EICP/ 1389 **Created** 6/19/2008 14:39 **HBN** 16832

Rule ILM ICP-AES Analysis **Analyst** J. Sanchez **Status** WP

Workorder 8155033 **CASE** 37402 **SDG** MH2608 **MODN** 1553.0

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date
1	54357 *I08145	S0			3	STB		ILMAESW..3	5967	12/16/2008	6/19/2008
2	54358	S1500			3	STD		ILMAESW..3	5967	12/16/2008	6/19/2008
3	54359	S10000			3	STD		ILMAESW..3	5967	12/16/2008	6/19/2008
4	54360	S50000			3	STD		ILMAESW..3	5967	12/16/2008	6/19/2008
5	54361	ICV			3	ICV		ILMAESW..3	5967	12/16/2008	6/19/2008
6	54362	ICB			3	ICB		ILMAESW..3	5967	12/16/2008	6/19/2008
7	54363	CRII			3	CRI		ILMAESW..3	5967	12/16/2008	6/19/2008
8	54364	ICSAI			3	ICSA		ILMAESW..3	5967	12/16/2008	6/19/2008
9	54365	ICSABI			3	ICSAB		ILMAESW..3	5967	12/16/2008	6/19/2008
10	54366	CCV			3	CCV		ILMAESW..3	5967	12/16/2008	6/19/2008
11	54367	CCB			3	CCB		ILMAESW..3	5967	12/16/2008	6/19/2008
12	53982	PBW	45 mL	50 mL	3	PBW		ILMAESW..3	6120	12/13/2008	6/16/2008
13	8155033001	MH2608	1 grams	50 mL	4	SAMPLE	8155033001-A	I54AESW..3	5936	11/30/2008	6/22/2008
14	8155033002	MH2609	1 grams	50 mL	4	SAMPLE	8155033002-A	I54AESW..3	5936	11/30/2008	6/22/2008
15	8155033003	MH2610	1 grams	50 mL	4	SAMPLE	8155033003-A	I54AESW..3	5936	11/30/2008	6/22/2008
16	53985	MH2610(8155033003MS)	45 mL	50 mL	4	MS		ILMAESW..3	6120	11/30/2008	6/22/2008
17	53984	MH2610(8155033003MD)	45 mL	50 mL	4	MD		ILMAESW..3	6120	11/30/2008	6/22/2008
18	54368	MH2610L			4	SD		ILMAESW..3	5967	11/30/2008	6/22/2008
19	8155033004	MH2611	1 grams	50 mL	4	SAMPLE	8155033004-A	I54AESW..3	5936	11/30/2008	6/22/2008
20	54369	CCV2			3	CCV		ILMAESW..3	5967	12/16/2008	6/19/2008
21	54370	CCB2			3	CCB		ILMAESW..3	5967	12/16/2008	6/19/2008
22	53983	LCSW	45 mL	50 mL	3	LCSW		ILMAESW..3	6120	12/13/2008	6/16/2008
23	54371	CRIF			3	CRI		ILMAESW..3	5967	12/16/2008	6/19/2008
24	54372	ICSAF			3	ICSA		ILMAESW..3	5967	12/16/2008	6/19/2008
25	54373	ICSABF			3	ICSAB		ILMAESW..3	5967	12/16/2008	6/19/2008
26	54374	CCV3			3	CCV		ILMAESW..3	5967	12/16/2008	6/19/2008
27	54375	CCB3			3	CCB		ILMAESW..3	5967	12/16/2008	6/19/2008

Project No. _____

TITLE Splp write up mp 06/11/08 Book No. 4648

Account #: 8201	Initial Date/Time: 06/11/08/12:00	Client: U.S. E.P.A.	Book #:	Page #:
DCL Set ID's: 8155033	Filter Date/Time: 06/12/08/10:00	Region 8	Telp 23	49
—	Tumble Start Date/Time: 06/11/08/13:00	Tumbling Start Temp: 22.°C		
—	Tumble End Date/Time: 06/12/08/10:00	Tumbling End Temp: 22.°C		
—	SOP: 08-SOV-1312	Temp. Min: 22.°C		
—	Page: 1 of 1	Temp. Max: 22.°C		

DCL Sample ID:	Splp BL	OC	8155033 001	MP	MS	MSD	8155033 002	8155033 003	8155033 004
Field ID:	—	—	MH 2608			mp	MH 2609	MH 2610	MH 2611
Weight Tumbled:	—	—	100 g			mp	100 g	100 g	100 g
Fluid Tumbled:	2000 ml	mp	2000 ml			mp	2000 ml	2000 ml	2000 ml
ZHE Sample Weight:									
ZHE Fluid Amount:				NA	mp 06/11/08				
ZHE Number:									
Initial pH:	—	—	—	—	—	—	—	—	—
Adjusted pH:	—	—	—	—	—	—	—	—	—
Final pH:	Splp 5.58	Splp 5.58	8.39			mp	8.58	8.41	8.87
Fluid Number:	Splp #2								mp
Batch Number:	072								mp
% Liquid By Weight:	100%	100%	≈ 0			mp	≈ 0	≈ 0	≈ 0
% Solid By Weight:	0	0	≈ 100%			mp	≈ 100%	≈ 100%	≈ 100%
% Other By Weight:	0								mp
ICP/HG Acid Spike:	NA NS	A NS	A NS	A NS	A NS	A NS	A NS	A NS	A NS

Key For Above Spikes: A = Acidified N = Not Acidified NS = Not Spiked S = Spiked

Groups:	Blank ID's:	Spiking Solutions	Comments:
ICP	TB-	ICP ID #: NA	Balance #108750
HG	TB-	Amt Spiked:	
Pest	TB-	Spiked By:	mp 06/11/08
Herb	TB-	HG ID #:	
SV	TB-	Amt Spiked:	
VOA	TB-	Spiked By:	

mp 06/11/08

mp 06/11/08

To Page No. _____

Witnessed & Understood by me,	Date	Invented by: NA	Date
	6/11/08	Recorded by: Stacy Cline	06/11/08

Batch Worklist

DATA CHEM LABORATORIES, INC.

Batch EIPX/ 1412 **Created** 6/11/2008 13:40 **HBN** 16559

Rule ILM ICP-AES MW1 Prep **Analyst** K. Kuwitzky **Status** NA

Workorder 8155033 **CASE** 37402 **SDG** MH2608 **MODN** 1553.0

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date
1	53982	PBW	211.3	211.2	3	PBW		ILMAESW.3P	6120	12/13/2008	6/9/2008
2	53983	LCSW	210.3	210.2	3	LCSW		ILMAESW.3P	6120	12/13/2008	6/9/2008
3	8155033001	MH2608	210.8	210.8	4	SAMPLE	8155033001-A	I54AESW.3P	5936	11/30/2008	6/9/2008
4	8155033002	MH2609	211.3	211.3	4	SAMPLE	8155033002-A	I54AESW.3P	5936	11/30/2008	6/9/2008
5	8155033003	MH2610	211.9	211.9	4	SAMPLE	8155033003-A	I54AESW.3P	5936	11/30/2008	6/9/2008
6	53984	MH2610(8155033003MD)	211.9	211.8	4	MD		ILMAESW.3P	6120	11/30/2008	6/9/2008
7	53985	MH2610(8155033003MS)	211.0	210.9	4	MS		ILMAESW.3P	6120	11/30/2008	6/9/2008
8	8155033004	MH2611	212.6	212.6	4	SAMPLE	8155033004-A	I54AESW.3P	5936	11/30/2008	6/9/2008

TB 211.3 211.3

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DCL INORGANIC SAMPLE PREPARATION NOTE BOOK ISP 350 PAGE 063

GENERAL

Redigestion? (Y/N): N Original Bk/Pg: NA

DCL Set ID	Sample ID / TCLP Write-up Bk/Pg	Analytes	Account
8155033	MH2608- 2611	ICP Metals	8201

Prep Group # EIPX/1412

Hood: 21
Micro: MD7753
NA
SDG: MH2608
Case: 37402

Sample Description (Bk/Pg): SPLP

KK 6/16/08

QC INFORMATION (All QC's prepared using same method as samples)

DCL QC ID	Matrix source	Spike source ID (include Bk/Pg)	Pipet ID	Spike Vol
PBW 53982	Method Reagents	NA	NA	NA
LCSW 53983	ICV-1 (1201)	IP-PS-08-053 (2261/98)	Hg-10	4.5mL
MD 53984	MH2610	NA	NA	NA
MS 53985	↓KK	IP-PS-08-009 (2261/97) and IP-PS-08-008 (2261/96)	QC-2	45.0 mL

KK 6/16/08

QC's spiked by: KK Witness: [illegible]

METHOD INFORMATION

Method reagents/Lots ID's: conc. HNO_3 Baker G02058

Balance ID: KK 6/16/08 AH (02487)
Samples measured using: 50mL cent tube
Digestion glassware type: microwave vessel
Final volume container type: 50 mL cent tube
Amount of sample used: 45mL
Final sample volume: 50mL

Explanations below -- if redigesting, WHY, Modified method? (Y/N) N WHAT/WHY: NA

KK 6/16/08 1030 45 ml of sample transfered to microwave vessels. QCs prepared as above. 5ml of conc. HNO_3 added to all. Samples capped and weighed. Samples put in microwave and program "EPA CLP WATER" run to completion. Samples removed from microwave. Samples reweighed and transfered to 50mL cent tubes. KK 6/16/08 1230

KK 6/16/08

METHOD/DCL SOP USED (Include revision): ILM05.4-MW1 CONTINUED ON PAGE #: 064

Preparer Signature/Date: KK 6/16/08 Reviewer Signature/Date [illegible] 6/16/08

Project No. N/A

TITLE DATACHEM LABORATORIES- PRIMARY STANDARDS LOGBOOK

Book No. 2261

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DCL SOLUTION #	ANALYTES	CONCENTRATION	VENDOR	LOT #	DATE REC'D	DATE OPENED	DATE EXPIRES	INIT.
IP-PS-07-140	ICSA	SEE FACING PAGE	EPA / QATS	PART A (1206)	11/08/07	12/12/07	N/A	KE
IP-PS-07-141	SEE FACING PAGE					12/21/07		
IP-PS-07-142						12/21/07		
IP-PS-07-143						01/05/08		
IP-PS-07-144								
IP-PS-07-145								
IP-PS-07-146	ICSAB	SEE FACING PAGE	EPA / QATS	PART B (0203)	11/08/07		N/A	KE
IP-PS-07-147	SEE FACING PAGE					03/19/08		
IP-PS-07-148						05/09/08		
6020 std IP-PS-07-149	Ag, Al, As, Ba, Be, Co, Cd,	20 mg/mL	Inorganic Ventures	Z-MEB194104	12/17/07	12/17/07	01/01/09	KB
6020 Std IP-PS-07-150	Co, Cr3, Cu, Fe, K, Mg, Mn, Mo,							
12/17/07	Ni, Pb, Se, Sb, Tl, V, Zn							
KB 6020 SPK-5 IP-PS-07-151 KB 12/17/07	Ba/, Ba, Cr3, Cu, Zn	50 mg/mL	Inorganic Ventures	A2-CICP20089	12/17/07	12/17/07	01/01/09	KB
	Ni/Co, Pb, Sb/V	25 mg/mL / 20 mg/mL / 30 mg/mL						
	Ag, As, Cd/Be, Se, Tl	10 mg/mL / 5 mg/mL						
235 IP-PS-07-152	Br, Ho, In, Li, Rh, Sc,	10 mg/mL	Inorganic Ventures	A2-MEB194155	12/17/07	12/07/07	01/01/09	KB
235 IP-PS-07-153	Tl, Y							
IP-PS-08-001	Li, Rh, Y, Bi, Sc, Ho, Th	10 mg/mL	INORGANIC VENTURES	B2-MEB255072	02/05/08	02/05/08	03/01/09	KE
IP-PS-08-002	In	10 mg/mL	INORGANIC VENTURES	A2-QINO1098	02/05/08	02/05/08	03/01/09	KE
6020 WATER SPK IP-PS-08-003	Fe / Ba, Zn	100 mg/mL / 50 mg/mL	INORGANIC VENTURES	Z-MEB194099	02/05/08	02/05/08	03/01/09	KE
	Co, Cr3, Cu, Mn, Ni, Sb, V	20 mg/mL						
	As, Pb	10 mg/mL						
	Ag, Be, Cd, Se, Tl	5 mg/mL						
IP-PS-08-004	Li, Sr, Th, U	20 mg/mL	INORGANIC VENTURES	A2-MEB248045	02/05/08	02/05/08	03/01/09	KE
IP-PS-08-005	B, Mo, Sn, Ti	20 mg/mL	INORGANIC VENTURES	A2-MEB248044	02/05/08	02/05/08	03/01/09	KE
IP-PS-08-006	Ca, Mg, K, Na / Al, Ba	500 mg/mL / 20 mg/mL	INORGANIC VENTURES	KE 02/14/08 Z-MEB194095	02/13/08	02/14/08	03/01/09	KE
	Fe / Sb, Zn	10 mg/mL / 6 mg/mL						
	Co, V / Ni / Se	5 mg/mL / 4 mg/mL / 3.5						
	Cu, Tl / Mn	2.5 mg/mL / 1.5 mg/mL						
	Ag, As, Cr3, Pb / Be, Cd	1.0 mg/mL / 0.5 mg/mL						
IP-PS-08-007	Ag, Al, As, Ba, Be, Cd,	10 mg/mL	SPEX KB 2/29/08 ~~Inorganic Ventures~~	S-11265	02/28/08	02/29/08	02/28/09	KB
	Co, Cr, Cu, Mn, Ni, Pb,							
	Sb, Se, Tl, V, Zn							
CLP-SPK-6 IP-PS-08-008	Sb / Cd, Se, Tl	100 mg/mL / 50 mg/mL	INORGANIC VENTURES	Z-MEB194090	03/10/08	03/10/08	03/01/09	KE
1762	As / Pb	40 mg/mL / 20 mg/mL						

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Witnessed & Understood by me, Kristie Batmin

Date 03/28/08

Invented by

Date 03/10/08

Recorded by

Project No. N/A

TITLE DATACHEM LABORATORIES- PRIMARY STANDARDS LOGBOOK

Book No. 2261

From Page No. 96

DCL SOLUTION #	ANALYTES	CONCENTRATION	VENDOR	LOT #	DATE REC'D	DATE OPENED	DATE EXPIRES	INIT
CLPP-SPC-1 IP-PS-08-009	Al, Ba / Fe	2000 mg/mL / 1000 mg/mL	INORGANIC VENTURES	2-MEB174075	03/10/08	03/10/08	03/01/09	KE
	Co, Mn, Ni, V, Zn / Cu	500 mg/mL / 250 mg/mL						
176	Cr3 / Ag, Be	200 mg/mL / 50 mg/mL						
IP-PS-08-010	ICSA (SEE FACING PAG)	SEE FACING PAGE	EPA / QATS	ICSA (1206)	03/10/08	03/19/08	N/A	KE
IP-PS-08-011						03/19/08		
IP-PS-08-012								
IP-PS-08-013								
IP-PS-08-014								
IP-PS-08-015								
IP-PS-08-016						05/09/08		
IP-PS-08-017								
IP-PS-08-018	ICSAB	SEE FACING PAGE	EPA / QATS	ICSAB (0203)	03/10/08		N/A	KE
IP-PS-08-019	SEE FACING PAGE							
IP-PS-08-020								
6020 ISS IP-PS-08-021	Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr3, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn	20 µg/mL	Inorganic Ventures	2-MEB194104	03/27/08		04/01/09	KB
6020 ISS 03/28/08 IP-PS-08-022	Bi, Ho, In, Li6, Rh, Sc, Tb, Y	10 µg/mL	Inorganic Ventures	A2-MEB194155	03/27/08		04/01/09	KB
6020 ISS 03/28/08 IP-PS-08-023								
6020 ISS 03/28/08 IP-PS-08-024								
IM08023 (1879) IP-PS-08-025	Ag	1000 mg/mL	CPI	07H114	5/1/08	5/1/08	10/28/09	RKA
IM08024 (1883) IP-PS-08-026	Sb	10,000 mg/mL	CPI	07F023	5/1/08		10/28/09	RKA
IM08025 (1885) IP-PS-08-027	Ba	10,000 mg/mL	CPI	07C169	5/1/08		10/28/09	RKA
IP-PS-08-028 IM08026 (1886)	K	10,000 mg/mL	CPI	08C049	5/1/08		10/28/09	RKA
IP-PS-08-029 IM08027 (1887)	W	1000 mg/mL	CPI	07I208	5/1/08		10/28/09	RKA
IP-PS-08-030 IM08028 (1888)	Pt	10000 mg/mL	CPI	07D260	5/1/08		10/28/09	RKA
IP-PS-08-031 IM08029 (1889)	Na	10,000 mg/mL	CPI	08A030	5/1/08		10/28/09	RKA
IM08030 (1890) IP-PS-08-032	Ti	10,000 mg/mL	CPI	08A002	5/1/08		10/28/09	RKA
IM08031 (1891) IP-PS-08-033	Be	10,000 mg/mL	CPI	07F218	5/1/08		10/28/09	RKA
IM08032 (1892) IP-PS-08-034	Al	10,000 mg/mL	CPI	08C004	5/1/08		10/28/09	RKA
IP-PS-08-035 IM08033 (1893)	Fe	10,000 mg/mL	CPI	08B059	5/1/08		10/28/09	RKA
IP-PS-08-036 IM08034 (1894)	Zr	1,000 mg/mL	CPI	08A083	5/1/08		10/28/09	RKA
IP-PS-08-037 IM08035 (1895)	Ni	10,000 mg/mL	CPI	08A040	5/1/08		10/28/09	RKA
IP-PS-08-038 IM08036 (1896)	Mg	10,000 mg/mL	CPI	08C006	5/1/08		10/28/09	RKA

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Witnessed & Understood by me, Joanna C. Sanchez

Date 5/5/08

Invented by NA

Date 5/5/08

Recorded by

Project No. NA

TITLE DATACHEM LABORATORIES - PRIMARY STANDARDS LOGBOOK 5/8/08 RKA

Book No. 2261

From Page No. 97

DCL SOLUTION #	ANALYTES	CONCENTRATION	VENDOR	LOT#	DATE REC'D	DATE OPENED	DATE EXPIRES	INIT
IM080837(1897) IP-PS-08-039	As	10,000 µg/mL	CPI	07H102	5/1/08	5/1/08	10/28/09	RKA
IM080836(1898) IP-PS-08-040	Si	10,000 µg/mL	CPI	07D206	5/1/08	5/1/08	10/28/09	RKA
CRI-MS IP-PS-08-041	Ba/Se, V Cr3, Cu, Sb, Zn Ag, As, Be, Cd, Co, Mn, Ni, Pb, Tl	10 µg/mL / 5 µg/mL 2 µg/mL 1 µg/mL	Inorganic Ventures	A2-MEB194150	05/05/08	05/05/08	06/01/09	KB
CLP-MS-SPK IP-PS-08-042	Al, Ba Co, Mn, Ni, V, Zn Cu/Cr3 Sb/Ag, Be, Cd, Tl As/Pb Se	200 µg/mL 50 µg/mL 25 µg/mL / 20 µg/mL 10 µg/mL / 5 µg/mL 4 µg/mL / 2 µg/mL 1 µg/mL	Inorganic Ventures	A2-MEB194119	05/05/08	05/05/08	06/01/09	KB
IM080839(1899) IP-PS-08-043	Cr	10,000 µg/mL	CPI	07I020	5/6/08	5/6/08	11/2/09	RKA
IM080842(1902) IP-PS-08-044	Bi	10,000 µg/mL	Elements	CS7011437	4/16/08	5/8/08	10/09	RKA
IP-PS-08-045	ICSA (See facing page)	See facing page	EPA/QATS	ICSA (1206)	04/16/08		NA	GCS
IP-PS-08-046								
IP-PS-08-047								
IP-PS-08-048								
IP-PS-08-049					04/17/08 GCS 5/8/08			
IP-PS-08-050	ICSAB (See facing Pg)	See facing page	EPA/QATS	ICSAB (0203)	04/16/08		NA	GCS
IP-PS-08-051								
IP-PS-08-052					04/17/08 GCS 5/8/08			
IP-PS-08-053	ICV-1 (See facing Pg)	See facing page	EPA/QATS	ICV-1 (1201)	04/16/08		NA	GCS
IP-PS-08-054								
IP-PS-08-055								
IP-PS-08-056								
IP-PS-08-057					04/17/08			
IP-PS-08-058	Soil LCSS (See facing page)	See facing page	EPA/QATS	LCS-S (0405)	04/17/08		NA	GCS
IP-PS-08-059	Ba, Be, Bi, Ce, Co, In, Li, Ni, Pb, U	10 µg/mL	Inorganic Ventures	B2-MEB265024	05/08/08	05/13/08	06/01/09	KB
ICP-MS CLP ICSA IP-PS-08-060	See p.91 facing page	See p.91 facing page	EPA/QATS	Part A ICS-MS (0803)	04/17/08		NA	KB
IP-PS-08-061	See p.91 facing page	See p.91 facing page	EPA/QATS	Part B ICS-MS (0803)	04/17/08		NA	KB
IP-PS-08-062	Pb	1,000 µg/mL	CPI	08D051	05/20/08	06/04/08	11/16/09	GCS

To Page No.

Witnessed & Understood by me, | Date | Invented by | Date | 93

Recorded by

QATS INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET
PART A (1206) WITH PART B (0203) FOR ICP-AES

The "Certified Value" concentrations of the elements are listed in Table 1. The values are certified in that all results used in calculating the certified values were derived from statistically pooled results from the following sources: ILM05.4 Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis. Preparation and analysis must be performed according to the following instructions:

Part A (1206), Interferents: Pipet 10 mL of the Part A solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. A, by ICP-AES.

Part B (0203), Analytes, mixed with Part A (1206), Interferents: Pipet 10 mL of the Part A solution and 10 mL of the Part B solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. AB, by ICP-AES.

NOTE: THIS ICS SET IS FOR USE WITH ILM05.4 AND REVISIONS ONLY, NOT ILM04.x.

gcs 5/12/08

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book 2261 gcs 5/12/08

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES PART A (1206), AND PART A (1206) MIXED WITH PART B (0203)

Element	Concentration (µg/L) Part A	Concentration (µg/L) Part A + Part B
Al	244100	241100
Sb	(0)	589
As	(0)	101
Ba	(2)	495
Be	(0)	475
Cd	(0)	940
Ca	234900	231100
Cr	43	511
Co	(4)	461
Cu	(23)	548
Fe	95600	94800
Pb	10	61
Mg	247500	251100
Mn	19	502
Ni	(21)	984
Se	(0)	53
Ag	(0)	206
Tl	(0)	103
V	(0)	494
Zn	(28)	1028

( ) Indicates analyte values that are less than the CRQL, and the value is to be used as a set point for the +/- 2 times CRQL acceptance criteria calculations.

QATS INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICVs)

Element	ICV-1 (1201) Concentration (µg/L) (after 10 fold dilution)	ICV-1 (1201) Concentration (µg/L) (after 50 fold dilution)
Al	2482	496
Sb	992	198
As	996	199
Ba	502	100
Be	493	99
Cd	494	99
Ca	10180	2036
Cr	490	98
Co	496	99
Cu	490	98
Fe	5107	1021
Pb	996	199
Mg	6003	1201
Mn	495	99
Ni	492	98
K	10008	2002
Se	1005	201
Ag	495	99
Na	10039	2008
Tl	1027	205
V	501	100
Zn	1000	200

gcs 5/12/08

QATS INORGANIC REFERENCE MATERIAL
SOLID LABORATORY CONTROL SAMPLE
LCS-S (0405)

TABLE 1. "CERTIFIED VALUE" CONCENTRATIONS AND CONTROL LIMITS FOR THE ELEMENTS IN THE SOLID LABORATORY CONTROL SAMPLE, LCS-S (0405)

Element	"Certified Value" (mg/Kg)	Control Limits (mg/Kg) Low Limit	Control Limits (mg/Kg) High Limit
Al	115	54.7	175
Sb	66.0	27.6	104
As	253	154	352
Ba*	[1.6]	1.0	2.2
Be	4.9	3.0	6.8
Cd	10.9	7.7	14.0
Ca	44200	30300	58200
Cr	27.1	18.5	35.7
Co	37.4	24.2	50.6
Cu	1770	1320	2230
Fe	6470	4280	8660
Pb	56.9	41.4	72.4
Mg	29200	20500	37900
Mn	61.0	41.6	80.5
Hg	3.59	1.86	5.32
Ni	16.3	9.0	23.7
K*	[39.7]	0	85.3
Se	10.0	4.1	15.9
Ag	5.9	2.7	9.1
Na*	[72.5]	0	216
Tl	9.5	2.9	16.1
V	17.6	11.6	23.7
Zn	47.5	20.5	74.4

[ ] Denotes values which are greater than or equal to the method detection limit (MDL), but less than the Contract Required Quantitation Limit (CRQL).

* Barium, potassium, and sodium are present at concentrations below ILM05.x CRQLs. Acceptance limits are advisory only.

gcs 5/12/08

Batch Worklist

DATA CHEM LABORATORIES, INC.

Batch EGRV/ 1624 **Created** 6/4/2008 11:59 **HBN** 16339

Rule Solids/Moisture Determination **Analyst** I. Ovalle **Status** WP

Workorder 8155033 **CASE** 37402 **SDG** MH2608 **MODN** 1553.0

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date
1	8155033001	MH2608			4	SAMPLE		XX-EP-800	5936	6/8/2008	6/8/2008
2	52874	MH2608(8155033001MD)			4	MD		XX-EP-800	6092	6/8/2008	6/8/2008
3	8155033002	MH2609			4	SAMPLE		XX-EP-800	5936	6/8/2008	6/8/2008
4	8155033003	MH2610			4	SAMPLE		XX-EP-800	5936	6/8/2008	6/8/2008
5	8155033004	MH2611			4	SAMPLE		XX-EP-800	5936	6/8/2008	6/8/2008

TITLE DataChem Laboratories Analyst writeup Logbook

Project No. NA

Book No. 4728

From Page No. X

File #: i08145

WorkOrder#	Sample #'s	Analytes/Matrix	Prep Write-up(Bk./Pg.)	Prep Date/Time	HBN #	Account #
8155083	MH2608-11	#1/water (SPLP extract)	ISP 350/063	06/16/08 10:30	16559	8201

#1 - Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

MW1 Conversion Factor: (µg/L from instrument)(Dilution Factor)(0.05 L/0.045 L) = 1.11 µg/L

CALIBRATION AND QC STANDARDS UTILIZED:

	ID #	Book/Page
S0/ICB/CCB	ICP-08-084	4535/07
S1500	EI-SS-08-072	4676/72
S10000	EI-SS-08-075	4676/75
S50000	EI-SS-08-113	4721/13
ICV	EI-SS-08-123	4721/23
CRI	EI-SS-08-112	4721/12
ICSA	EI-SS-08-102	4721/2
ICSAB	EI-SS-08-125	4721/25
CCV	EI-SS-08-122	4721/22
Rinse	ICP-08-082, -086	4535/07
Internal Standard	ICP-08-081, -085	4535/07

MOD: 1553.0
SDG # MH2608
CASE # 37402
Prep Method: MW1
Analysis Method: ILM05.4
Analysis Date: 06/18/08
Instrument ID: ICP07

ANALYSIS PARAMETERS:
RF Power = 1200 W
Nebulizer Flow = 0.60 L/min
Auxiliary Gas = 0.5 L/min
Pump Rate = 50 rpm

JCS 6/19/08

Dilutions: None were required.

Comments: No Problems during analysis, except the first analysis of the LCSS had a high RSD so it was analyzed again.
A Serial Dilution was done by combining 2 mL of MH2610 with 8 mL of ICP-08-084 (4535/07) in a 14 mL Falcon tube.
The SPLP extraction was done on 06/11/08-06/12/08. The write-up is in 4648 page 49.
*ICP-08-081 and ICP-08-085 were mixed prior to the start of this run.

JCS 6/19/08

To Page No. X

Witnessed & Understood by me, John Kershner

Date 6/19/08

Invented by: NA

Recorded by Joanna C. Sanchez

Date 6/19/08

Project No. NA

TITLE DataChem Laboratories - ICP07 Analysis Run Logbook Book No. 4527

From Page No. 12

Date	Time on	Time off	total time	Method	Matrix	Workorder (IDs)	SDG	Low IS / High IS	# of samples	Run #	Initials
05/09/08	8:27	10:15	108 min	ILMO 5.4	soil	8129018	ME3L05	1955 / 437940	2	i08111	gcs
05/09/08	15:31	18:47	196 min	ILMO 5.4	water	8120034, 8124001, 8124004, 8124005	ME0092	1959 / 432640	13	i08112	gcs
05/12/08	13:18	17:32	254 min	ILMO 5.4	soil	8129024	ME00C2	2249 / 435650	20	i08113	gcs
05/13/08	13:14	16:30	~~260~~ 195 min (gcs 5/13/08)	ILMO 5.4	water	8120034, 8124001, 8124004, 8124005	ME0092	2388 / 396150	13	i08114	gcs
05/15/08	10:03	15:16	313 min	ILMO 5.4	soil	8129024 Ag failed	ME00C2	2487 / 421220	20	i08115	gcs
05/19/08	10:03	14:03	240 min	ILMO 5.4	soil	8129024 for Ag only	ME00C2	2414 / 417280	20	i08116	gcs
05/20/08	10:10	11:43	93 min	ILMO 5.4	soil	8129025 run stopped Less failed for Cd & Pb	ME00E2	2274 / 390290	12	i08117	gcs
05/21/08	11:09	17:33	336 min	ILMO 5.4	soil	8137034	MY41W3	1926 / 427700	20	i08118	gcs
05/22/08	9:13	14:01	288 min	ILMO 5.4	soil	8129031	ME00E9	2040 / 439750	9	i08119	gcs
05/22/08	15:46	21:16	330 min	ILMO 5.4	soil	8129031	ME00E9	2035 / 437010	9	i08120	gcs
05/23/08	12:01	15:28	207 min.	ILMO 5.4	soil	8129031	ME00E9	2014 / 444420	9	i08121	gcs
05/26/08	13:59	16:11	132 MIN	ILMO5.4	WATER	8144014	MC01X0	2231 / 427220	4	i08122	JE
05/27/08	10:30	13:51	201 min	ILMO 5.4	soil	8129025	ME00E2	2229 / 381520	12	i08123	gcs
05/27/08	15:20	17:28	128 min	ILMO 5.4	soil	8129031	ME00E9	2368 / 402560	~~4~~ 1 gcs 5/27/08	i08124	gcs
05/27/08	17:33	20:20	167 min	ILMO 5.4	soil	8129025 Ag only	ME00E2	2116 / 373440	12	i08125	gcs
05/28/08	17:03	19:40	157 min	ILMO 5.4	soil	8144033	MJ94H2	2217 / 422040	9	i08126	gcs
05/28/08	19:45	23:52	247 min	ILMO 5.4	soil	8145005	MJ94J1	2159 / 416690	20	i08127	gcs
05/29/08	15:36	17:49	133 min.	ILMO 5.4	soil	8145005	MJ94J1	2110 / 366900	6	i08128	gcs
05/29/08	17:54	22:00	246 min	ILMO 5.4	soil	8137033	MY41S3	2143 / 368860	20	i08129	gcs
05/30/08	12:32	16:03	211 min	ILMO 5.4	water	8143031	MC00Q7	2310 / 396080	16	i08130	gcs
05/30/08	16:09	18:18	129 min	ILMO 5.4	water	8141031 Ag failed	ME00H2	2229 / 387190	5	i08131	gcs
06/02/08	9:33	11:40	127 min.	ILMO 5.4	water	8141031	ME00H2	2469 / 438270	5	i08132	gcs
06/02/08	16:37	20:09	212 min.	ILMO 5.4	water	8143035	MC00R9	2377 / 442560	16	i08133	gcs
06/03/08	12:21	18:36	345 min	ILMO 5.4	soil	8137033	MY41S3	2315 / 465220	20	i08134	gcs
06/04/08	10:19	12:26	113 min	ILMO 5.4	soil	8137033	MY41S3	1948 / 461190	6	i08135	gcs
06/04/08	17:23	19:16	113 min	ILMO 5.4	soil	8137033	MY41S3	2010 / 475610	2	i08136	gcs
06/04/08	19:21	20:39	78 min.	ILMO 5.4	soil	8144033	MJ94H2	2021 / 477800	1	i08137	gcs
06/06/08	11:56	13:39	103 min.	ILMO 5.4	water	8150019	MX0895	2252 / 413140	1	i08138	gcs
06/06/08	13:44	15:13	89 min	ILMO 5.4	water	8151012	MC0087	2228 / 411450	1	i08139	gcs
06/09/08	11:10	15:15	235 min	ILMO 5.4	soil	8151011	MC0096	2401 / 444070	17	i08140	gcs
06/10/08	8:59	10:47	108 min	ILMO 5.4	soil	8154025	MJ94N7	2307 / 470990	3	i08141	gcs
06/10/08	12:32	15:20	228 min	ILMO 5.4	soil	8151013	MC0087	1956 / 458340	11	i08142	gcs
06/11/08	12:43	16:20	217 min.	ILMO 5.4	soil	8151013	MC0087	2272 / 426940	11	i08143	gcs
06/17/08	11:10	16:51	341 min.	ILMO 5.4	water	MWI MDLs		1908 / 375570	36	i08144	gcs
06/18/08	9:37	11:54	163 min.	ILMO 5.4	SPLP	8155033	MH2608	1941 / 379560	4	i08145	gcs

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Witnessed & Understood by me, Penny A. Foote

Date 19-Jun-2008

Invented by: NA

Recorded by: Joanna C. Sanchez

Date 6/19/08

Project No. NA
Book No. 4535

TITLE DataChem Laboratories - ICP Solutions/Reagents Logbook

From Page No. 6

Date	ICP Solution #	Solution Type	Primary Solution ID (Book/Page)	Recipe Page	Acid Lots	Expiration Date	Initials	Comments
04/30/08	ICP-08-058	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G07057 HCl-4107090	10/01/08	gcs	NA
04/30/08	ICP-08-059	Rinse 5%/5%	NA	1	HNO3-G07057 HCl-4107090	10/30/08	gcs	NA
05/07/08	ICP-08-060	Rinse 5%/5%	NA	1	HNO3-G07057 HCl-4108010	11/07/08	gcs	NA
05/12/08	ICP-08-061	Rinse 5%/5%	NA	1	HNO3-G07057 HCl-4108010	11/12/08	gcs	NA
05/12/08	ICP-08-062	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G07057 HCl-4108010	10/01/08	gcs	NA
05/14/08	ICP-08-063	Rinse 5%/5%	NA	1	HNO3-G07057 HCl-4108010	11/14/08	gcs	NA
05/14/08	ICP-08-064	5%/5%	NA	1	HNO3-G07057 HCl-4108010	11/14/08	gcs	1L for SO, ICB, CCB, Dilutent
05/21/08	ICP-08-065	Rinse 5%/5%	NA	1	HNO3-G07057 HCl-4108010	11/21/08	gcs	NA
05/21/08	ICP-08-066	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G07057 HCl-4108010	10/01/08	gcs	only 1L made
05/22/08	ICP-08-067	5%/5%	NA	1	HNO3-G04026 HCl-4107090	11/22/08	gcs	1L for SO, ICB, CCB Dilutent
05/22/08	ICP-08-068	Rinse 5%/5%	NA	1	HNO3-G04026 HCl-4107090	11/22/08	gcs	NA
05/23/08	ICP-08-069	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G04026 HCl-4107090	10/01/08	gcs	NA
05/27/08	ICP-08-070	Rinse 5%/5%	NA	1	HNO3-G04026 HCl-4108010	11/27/08	gcs	NA
05/28/08	ICP-08-071	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G04026 HCl-4108010	10/01/08	gcs	only 1L made
05/28/08	ICP-08-072	Rinse 5%/5%	NA	1	HNO3-G04026 HCl-4108010	11/28/08	gcs	NA
05/30/08	ICP-08-073	Rinse 5%/5%	NA	1	HNO3-G04026 HCl-4108010	11/30/08	gcs	NA
05/30/08	ICP-08-074	5%/5%	NA	1	HNO3-G04026 HCl-4108010	gcs 11/30/08 11/30/08	gcs	1L for SO, ICB, CCB, Dilutent
05/30/08	ICP-08-075	5% 5%	IP-PS-07-125 (2261/95)	1	HNO3-G04026 HCl-4108010	11/30/08	JK	2L for SO, ICB, CCB Dilutent
05/30/08	ICP-08-076	Sc IS.		1	↓	10/01 11/30/08 gcs 11/30/08	JK	NA
05/30/08	ICP-08-077	RINSE 5% 5%	NA	1	↓	11/30/08	JK	6L of RINSE MADE
06/02/08	ICP-08-078	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G11022 gcs 12/03/08 HCl-4108010	10/01/08	gcs	NA
06/03/08	ICP-08-079	Rinse 5%/5%	NA	1	HNO3-G11022 HCl-4108010	12/03/08	gcs	NA
06/05/08	ICP-08-080	Rinse 5%/5%	NA	1	HNO3-G11022 HCl-4108010	12/05/08	gcs	NA
06/05/08 gcs 06/06/08	ICP-08-081	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G11022 HCl-4108010	10/01/08	gcs	NA
06/10/08	ICP-08-082	Rinse 5%/5%	NA	1	HNO3-G11022 HCl-4108010	12/10/08	gcs	NA
06/11/08	ICP-08-083	Rinse 5%/5%	NA	1	HNO3-G11022 HCl-4108010	12/11/08	gcs	2L made
06/11/08	ICP-08-084	5%/5%	NA	1	HNO3-G11022 HCl-4108010	12/11/08	KK	1L for ICB, SO, CCB, Diluent
06/17/08	ICP-08-085	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G02058 HCl-4108010	10/01/08	gcs	1L made
06/18/08	ICP-08-086	Rinse 5%/5%	NA	1	HNO3-G11022 HCl-4108010	12/18/08	JC	2L made
06/18/08	ICP-08-087	ScIS	IP-PS-07-125 (2261/95)	1	HNO3-G11022 HCl-4108010	10/01/08	JK	2L made

To Page No.

Witnessed & Understood by me, Date

Invented by:

Recorded by:

Date

Project No. N/A

TITLE DATACHEM LABORATORIES - ICP SOLUTION/REAGENTS LOGBOOK

Book No. 4535

From Page No. X

RECIPES

7.5% HNO_3 = TRANSFERRED SOME ASTM TYPE II H_2O TO A 2L FLASK. ADD 150mL OF HNO_3 TO THE FLASK. BRING TO VOLUME WITH MORE ASTM TYPE II H_2O. STOPPER FLASK, SHAKE TO MIX. USE FOR SO, ICB, CLB AND DILUTANT.

Sc IS = ADDED SOME WATER TO A 2L FLASK. ADD 100 mL OF HNO_3 (sp wt 1.42) AND 100 mL OF HCl (sp wt 1.18). ADD 1.2mL OF A 10,000 µg/mL Sc STAND. BRING TO VOLUME WITH MORE ASTM TYPE II H_2O. STOPPER FLASK AND SHAKE WELL.

7.5%/1% RINSE = ADD SOME ASTM TYPE II H_2O TO A 2L FLASK. ADD 150mL OF HNO_3 + 20mL OF HCl. BRING TO VOLUME WITH MORE ASTM TYPE II H_2O. STOPPER FLASK AND SHAKE WELL.

2ppm Zn. = ADD SOME ASTM TYPE II H_2O TO A 200mL VOLUMETRIC FLASK. ADD 2mL OF HNO_3. SPIKE IN 40ml OF 10,000 µg/mL Zn. BRING TO VOLUME WITH MORE ASTM TYPE II H_2O. STOPPER AND SHAKE WELL. USE FOR TORCH ALIGNMENT.

5%/5% RINSE = ADD SOME ASTM TYPE II H_2O TO A 2L FLASK. ADD 100mL OF HNO_3 AND 100mL OF HCl TO THE FLASK. BRING TO VOLUME WITH MORE ASTM TYPE II H_2O. STOPPER FLASK AND SHAKE WELL.

Thermo Torch Alignment Solution = Add some ASTM Type II H_2O to a 250 mL flask. Add 2.5 mL of HNO_3, 7.5 µL of MeOH and 50 µL of 10,000 µg/mL Zn. Bring to volume with ASTM Type II H_2O, Stopper and shake to mix. 0.03 mL/L MeOH, 2 mg/L Zn in 1% HNO_3.

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date	99
		Recorded by:		

Project No. N/A

TITLE DATACHEM LABORATORIES - SECONDARY STANDARDS LOGBOOK

Book No. 4676

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-072	ILM05.4 Standard 1	S1500

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
As	IP-PS-07-077 (2261/93)	1,000 µg/mL	1.5 mL	1,500 µg/L
Be	IP-PS-07-036 (2261/91)	10,000 µg/mL	0.15 mL	1,500 µg/L
Cd	IP-PS-07-078 (2261/93)	1,000 µg/mL	1.5 mL	1,500 µg/L
Pb	IP-PS-07-079 (2261/93)	1,000 µg/mL	1.5 mL	1,500 µg/L
Se	IP-PS-07-080 (2261/93)	1,000 µg/mL	1.5 mL	1,500 µg/L
Ag	IP-PS-07-052 (2261/92)	1,000 µg/mL	1.5 mL	1,500 µg/L
Tl	IP-PS-07-081 (2261/93)	1,000 µg/mL	1.5 mL	1,500 µg/L
			FINAL VOL.:	1000 mL

MADE TO BE USED: As is

Date Made: 04/08/08

Expiration date: 09/30/08

Date verified: 04/08/08

Verified by: IE

Comments: N/A

Verification data found in Run#: i08097

Verification instrument: ICP07

Acid used - Lot#: 50 mL HNO_3 - E50032 JT Baker

50 mL HCl - 4107090 Fisher

Source: CPI

PIPETTE #4095124(0.15 mL), PIPETTE #Z55088C (1.5 mL) AND A 1 L VOLUMETRIC FLASK WERE USED TO MAKE THIS SOLUTION.

VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.

LEGEND: PS=Primary Solution, SS=Secondary Solution,

CALCULATION: {(FINAL VOL.) * (FINAL VOL. CONC.)} / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED

IE 04/08/08

IE 04/08/08

To Page No. X

Witnessed & Understood by me,	Date	Invented by:	Date
John Kirchhoff	04/08/08	Recorded by:	04/08/08

Project No. N/A

TITLE DATACHEM LABORATORIES - SECONDARY STANDARDS LOGBOOK

Book No. 4676

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-075	ILM05.4 Standard 2	S10000

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
Sb	IP-PS-07-040 (2261/92)	10,000 µg/mL	1.0 mL	10,000 µg/L
Ba	IP-PS-07-035 (2261/91)	10,000 µg/mL	1.0 mL	10,000 µg/L
Cr	IP-PS-07-037 (2261/92)	10,000 µg/mL	1.0 mL	10,000 µg/L
Co	IP-PS-07-058 (2261/92)	10,000 µg/mL	1.0 mL	10,000 µg/L
Cu	IP-PS-07-059 (2261/92)	10,000 µg/mL	1.0 mL	10,000 µg/L
Mn	IP-PS-07-064 (2261/93)	10,000 µg/mL	1.0 mL	10,000 µg/L
Mo	IP-PS-07-065 (2261/93)	10,000 µg/mL	1.0 mL	10,000 µg/L
Ni	IP-PS-07-038 (2261/92)	10,000 µg/mL	1.0 mL	10,000 µg/L
Ti	IP-PS-07-042 (2261/92)	10,000 µg/mL	1.0 mL	10,000 µg/L
V	IP-PS-07-074 (2261/93)	5,000 µg/mL	2.0 mL	10,000 µg/L
Zn	IP-PS-07-076 (2261/93)	10,000 µg/mL	1.0 mL	10,000 µg/L
				FINAL VOL.: 1000 mL

MADE TO BE USED: As is

Date Made: 04/10/08

Expiration date: 09/30/08

Date verified: N/A

Verified by: N/A

Comments: N/A

Verification data found in Run#: N/A

Verification instrument: ICP07

Acid used - Lot#: 50 mL HNO_3 - G07075 JT Baker
50 mL HCl - 4107090 Fisher

Source: CPI

PIPETTE #PL-214(1.0 mL), PIPETTE #Z55088C (2.0 mL) AND A 1 L VOLUMETRIC FLASK WERE USED TO MAKE THIS SOLUTION.

VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.

LEGEND: PS=Primary Solution, SS=Secondary Solution,

CALCULATION: {(FINAL VOL.) * (FINAL VOL. CONC.)} / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED

JS 04/21/08

JS 04/21/08

To Page No. X

Witnessed & Understood by me, Kristie Bethm

Date 04/23/08

Invented by:

Recorded by:

Date 04/21/08

Project No. NA

TITLE DataChem Laboratories Secondary Standard Logbook Book No. 4721

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-113	ILM05.4 STD 3	S50000

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
Al	IP-PS-07-053 (2261/92)	10,000 µg/mL	5.0 mL	50,000 µg/L
Ca	IP-PS-07-055 (2261/92)	10,000 µg/mL	5.0 mL	50,000 µg/L
Fe	IP-PS-07-060 (2261/92)	10,000 µg/mL	5.0 mL	50,000 µg/L
Mg	IP-PS-07-063 (2261/92)	10,000 µg/mL	5.0 mL	50,000 µg/L
K	IP-PS-07-061 (2261/92)	10,000 µg/mL	5.0 mL	50,000 µg/L
Na	IP-PS-07-066 (2261/93)	10,000 µg/mL	5.0 mL	50,000 µg/L
			FINAL VOL.:	1000 mL

MADE TO BE USED: As is

Date Made: 05/30/08
Expiration date: 11/30/08
Date verified: 05/30/08
Verified by: JCS
Comments:

Verification data found in Run #: i08130
Verification instrument: ICP07
Acid used - Lot#: 50 mL HNO_3 - G04026 JT Baker
50 mL HCl - 4108010 Fisher
Source: CPI

5 mLCLASS A PIPETTES AND A 1L VOLUMETRIC FLASK WERE USED TO MAKE THIS SOLUTION.
VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.
LEGEND: PS=Primary Solution, SS=Secondary Solution,
CALCULATION: {(FINAL VOL.) * (FINAL VOL. CONC.)} / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED

JCS 5/30/08

JCS 5/30/08

To Page No. X

Witnessed & Understood by me, Date 05/30/08

Invented by: NA

Recorded by: Joanna C. Sandoval Date 5/30/08

Project No. NA

TITLE DataChem Laboratories Secondary Standard Logbook Book No. 4721

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-123	ILM05.4 ICV	ICV

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
Al	IP-PS-07-022 (2261/91)	24820 µg/L	50 mL	2482 µg/L
Sb	IP-PS-07-022 (2261/91)	9920 µg/L	50 mL	992 µg/L
As	IP-PS-07-022 (2261/91)	9960 µg/L	50 mL	996 µg/L
Ba	IP-PS-07-022 (2261/91)	5020 µg/L	50 mL	502 µg/L
Be	IP-PS-07-022 (2261/91)	4930 µg/L	50 mL	493 µg/L
Cd	IP-PS-07-022 (2261/91)	494 µg/L	50 mL	494 µg/L
Ca	IP-PS-07-022 (2261/91)	101800 µg/L	50 mL	10180 µg/L
Cr	IP-PS-07-022 (2261/91)	4900 µg/L	50 mL	490 µg/L
Co	IP-PS-07-022 (2261/91)	4960 µg/L	50 mL	496 µg/L
Cu	IP-PS-07-022 (2261/91)	4900 µg/L	50 mL	490 µg/L
Fe	IP-PS-07-022 (2261/91)	51070 µg/L	50 mL	5107 µg/L
Pb	IP-PS-07-022 (2261/91)	9960 µg/L	50 mL	996 µg/L
Mg	IP-PS-07-022 (2261/91)	60030 µg/L	50 mL	6003 µg/L
Mn	IP-PS-07-022 (2261/91)	4950 µg/L	50 mL	495 µg/L
Ni	IP-PS-07-022 (2261/91)	4920 µg/L	50 mL	492 µg/L
K	IP-PS-07-022 (2261/91)	100080 µg/L	50 mL	10008 µg/L
Se	IP-PS-07-022 (2261/91)	10050 µg/L	50 mL	1005 µg/L
Ag	IP-PS-07-022 (2261/91)	4950 µg/L	50 mL	495 µg/L
Na	IP-PS-07-022 (2261/91)	100390 µg/L	50 mL	10039 µg/L
Tl	IP-PS-07-022 (2261/91)	10270 µg/L	50 mL	1027 µg/L
V	IP-PS-07-022 (2261/91)	5010 µg/L	50 mL	501 µg/L
Zn	IP-PS-07-022 (2261/91)	10000 µg/L	50 mL	1000 µg/L
			FINAL VOL.:	500 mL

JCS 6/4/08

MADE TO BE USED: As is

Date Made: 6/4/2008 by KK

Expiration date: 12/04/08

Date verified: 06/04/08

Verified by: JCS

Comments: none.

Solution Replaces: N/A

Verification data found in Run#: i08136

Verification instrument: ICP07

Acid used - Lot#: 25 mL HNO_3 - G11022 Baker

25 mL HCl - 4108010 Fisher

Source: ICV-1 (1201)

A 50 mL 'CLASS A PIPETTE AND A 500 mL VOLUMETRIC FLASKS WERE USED TO MAKE THIS SOLUTION.

VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.

LEGEND: PS=Primary Solution, SS=Secondary Solution,

*CALCULATION: {(FINAL VOL.) * (FINAL VOL. CONC.)} / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED*

JCS 6/4/08

To Page No. X

Witnessed & Understood by me, [signature] Date 06/05/08

Invented by: NA

Recorded by: Joanna C. Sanchez Date 6/4/08

Project No. NA

TITLE DataChem Laboratories Secondary Standards Logbook

Book No. 4721

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-112	ILM05.4 CRI	ILM05.4 CRI

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
Al	IP-PS-08-006 (2261/96)	20 µg/mL	10 mL	200 µg/L
Sb	IP-PS-08-006 (2261/96)	6 µg/mL	10 mL	60 µg/L
As	IP-PS-08-006 (2261/96)	1 µg/mL	10 mL	10 µg/L
Ba	IP-PS-08-006 (2261/96)	20 µg/mL	10 mL	200 µg/L
Be	IP-PS-08-006 (2261/96)	0.5 µg/mL	10 mL	5 µg/L
Cd	IP-PS-08-006 (2261/96)	0.5 µg/mL	10 mL	5 µg/L
Ca	IP-PS-08-006 (2261/96)	500 µg/mL	10 mL	5000 µg/L
Cr	IP-PS-08-006 (2261/96)	1 µg/mL	10 mL	10 µg/L
Co	IP-PS-08-006 (2261/96)	5 µg/mL	10 mL	50 µg/L
Cu	IP-PS-08-006 (2261/96)	2.5 µg/mL	10 mL	25 µg/L
Fe	IP-PS-08-006 (2261/96)	10 µg/mL	10 mL	100 µg/L
Pb	IP-PS-08-006 (2261/96)	1 µg/mL	10 mL	10 µg/L
Mg	IP-PS-08-006 (2261/96)	500 µg/mL	10 mL	5000 µg/L
Mn	IP-PS-08-006 (2261/96)	1.5 µg/mL	10 mL	15 µg/L
Ni	IP-PS-08-006 (2261/96)	4 µg/mL	10 mL	40 µg/L
K	IP-PS-08-006 (2261/96)	500 µg/mL	10 mL	5000 µg/L
Se	IP-PS-08-006 (2261/96)	3.5 µg/mL	10 mL	35 µg/L
Ag	IP-PS-08-006 (2261/96)	1 µg/mL	10 mL	10 µg/L
Na	IP-PS-08-006 (2261/96)	500 µg/mL	10 mL	5000 µg/L
Tl	IP-PS-08-006 (2261/96)	2.5 µg/mL	10 mL	25 µg/L
V	IP-PS-08-006 (2261/96)	5 µg/mL	10 mL	50 µg/L
Zn	IP-PS-08-006 (2261/96)	6 µg/mL	10 mL	60 µg/L
				FINAL VOL.: 1000 mL

MADE TO BE USED: As is

Date Made: 05/28/08

Expiration date: 11/28/08

Date verified: 05/29/08

Verified by: gcs

Comments: None.

Verification data found in Run#: i08128

Verification instrument: ICP07

Acid used - Lot#: 50 mL HNO_3 - G04026 Baker

50 mL HCl - 4108010 Fisher

Source: Inorganic Ventures

A 10 mL Glass Pipette and a CLASS A 1000 mL Volumeteric Flask were used to make this solution.

VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.

LEGEND: PS=Primary Solution, SS=Secondary Solution,

CALCULATION: {(FINAL VOL.) * (FINAL VOL. CONC.)} / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED

gcs 5/29/08

gcs 5/29/08

To Page No. X

Witnessed & Understood by me,

Date 05/29/08

Invented by: NA

Recorded by: Joanna C. Smoley

Date 5/29/08

Project No. N/A

TITLE DATACHEM LABORATORIES - SECONDARY STANDARD LOGBOOK Book No. 4721

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-102	ILM05.4 ICSA	ICSA

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
Al	IP-PS-08-012 (2261/97)	2441 µg/mL	100 mL	244100 µg/L
Ba		20 µg/L		(2 µg/L)
Ca		2349 µg/mL		234900 µg/L
Cr		430 µg/L		43 µg/L
Co		40 µg/L		(4 µg/L)
Cu		230 µg/L		(23 µg/L)
Fe		956 µg/mL		95600 µg/L
Pb		10 µg/L		10 µg/L
Mg		2475 µg/mL		247500 µg/L
Mn		190 µg/L		19 µg/L
Ni		210 µg/L		(21 µg/L)
Zn		280 µg/L		(28 µg/L)
			FINAL VOL.:	1000 mL

MADE TO BE USED: As is

Date Made: 05/21/08

Expiration date: 11/21/08

Date verified: 5/22/08

Verified by: gcs

Comments:

Verification data found in RUN#: i08119

Verification instrument: ICP07

Acid used - Lot#: 50 mL HNO_3 - G04026 Baker
50 mL HCl - 4108010 Fisher

Source: Part A (1206)

JTK 05/21/08

CLASS A 100 mL Pipette and a 1000 mL Volumeteric Flask were used to make this solution.

VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.

LEGEND: PS=Primary Solution, SS=Secondary Solution,

CALCULATION: ((FINAL VOL.) * (FINAL VOL. CONC.)) / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED

( ) indicates analytes values that are less than the CRQL and the value is to be used as a set point for the +/- times the CRQL acceptance criteria calculations.

JTK 05/21/08

To Page No. X

Witnessed & Understood by me,	Date	Invented by:	Date
Joanna C. Sanchez	5/22/08	Recorded by: John Kerchner	05/21/08

Project No. NA

TITLE DataChem Laboratories Secondary Standards Logbook Book No. 4721

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-125	ILM05.4 ICSAB	ICSAB

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
Al	IP-PS-08-046, -047 (2261/98)Part A	N/A	100 mL	241100 µg/L
Sb	IP-PS-08-020, -018 (2261/97)Part B		100 mL	589 µg/L
As	ICS Part A and ICS Part B			101 µg/L
Ba	solutions combined			495 µg/L
Be				475 µg/L
Cd				940 µg/L
Ca				231100 µg/L
Cr				511 µg/L
Co				461 µg/L
Cu				548 µg/L
Fe				94800 µg/L
Pb				61 µg/L
Mg				251100 µg/L
Mn				502 µg/L
Ni				984 µg/L
Se				53 µg/L
Ag				206 µg/L
Tl				103 µg/L
V				494 µg/L
Zn				1028 µg/L

FINAL VOL.: 1000 mL

MADE TO BE USED: As is

Date Made: 6/10/2008 by KK
Expiration date: 12/10/08
Date verified:
Verified by:
Comments: N/A

Verification data found in RUN#:
Verification instrument: ICP07
Acid used - Lot#: 50 mL HNO_3 - G11022 JT Baker
50 mL HCl - 4108010 Fisher
Source: Part A (1206) + Part B (0203)

CLASS A 50 mL Pipettes and a 1000 mL Volumeteric Flask were used to make this solution.
VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.
LEGEND: PS=Primary Solution, SS=Secondary Solution,
CALCULATION: {(FINAL VOL.) * (FINAL VOL. CONC.)} / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED

gcs 6/10/08

gcs 6/10/08

To Page No. X

Witnessed & Understood by me, Date 06/11/08

Invented by: NA

Recorded by Joanna C. Sanchez Date 6/10/08

Project No. NA

TITLE DataChem Laboratories Secondary Standard Logbook Book No. 4721

From Page No. X

ICP-AES Secondary Standard Solution Write-up

SOLUTION ID:	AKA:	USED FOR:
EI-SS-08-122	ILM05.4 CCV	CCV

This format is used to make a secondary solution from a raw chemical or purchased solution only.

ANALYTES	PRIMARY ID# (INCLUDING BOOK/PG.)	PRIMARY CONC.	VOLUME OF PRIMARY	FINAL CONC.
Al	IP-PS-07-053 (2261/92)	10,000 µg/mL	5 mL	25,000 µg/L
Sb	IP-PS-08-026 (2261/97)	10,000 µg/mL	1.0 mL	5,000 µg/L
As	IP-PS-07-077 (2261/93)	1,000 µg/mL	1.5 mL	750 µg/L
Ba	IP-PS-08-027 (2261/97)	10,000 µg/mL	1.0 mL	5,000 µg/L
Be	IP-PS-08-033 (2261/97)	10,000 µg/mL	0.15 mL	750 µg/L
Cd	IP-PS-07-078 (2261/93)	1,000 µg/mL	1.5 mL	750 µg/L
Ca	IP-PS-07-055 (2261/92)	10,000 µg/mL	5 mL	25,000 µg/L
Cr	IP-PS-08-043 (2261/98)	10,000 µg/mL	1.0 mL	5,000 µg/L
Co	IP-PS-07-058 (2261/92)	10,000 µg/mL	1.0 mL	5,000 µg/L
Cu	IP-PS-07-059 (2261/92)	10,000 µg/mL	1.0 mL	5,000 µg/L
Fe	IP-PS-07-060 (2261/92)	10,000 µg/mL	5 mL	25,000 µg/L
Pb	IP-PS-08-062 (2261/98)	1,000 µg/mL	1.5 mL	750 µg/L
Mg	IP-PS-07-063 (2261/92)	10,000 µg/mL	5 mL	25,000 µg/L
Mn	IP-PS-07-064 (2261/93)	10,000 µg/mL	1.0 mL	5,000 µg/L
Ni	IP-PS-08-037 (2261/97)	10,000 µg/mL	1.0 mL	5,000 µg/L
K	IP-PS-07-061 (2261/92)	10,000 µg/mL	5 mL	25,000 µg/L
Se	IP-PS-07-080 (2261/93)	1,000 µg/mL	1.5 mL	750 µg/L
Ag	IP-PS-08-025 (2261/97)	1,000 µg/mL	1.5 mL	750 µg/L
Na	IP-PS-07-066 (2261/93)	10,000 µg/mL	5 mL	25,000 µg/L
Tl	IP-PS-07-081 (2261/93)	1,000 µg/mL	1.5 mL	750 µg/L
V	IP-PS-07-074 (2261/93)	5,000 µg/mL	2 mL	5,000 µg/L
Zn	IP-PS-07-076 (2261/93)	10,000 µg/mL	1.0 mL	5,000 µg/L
			FINAL VOL.:	2000 mL

JCS 6/4/08

MADE TO BE USED: As is

Date Made: 6/4/2008 by KK

Expiration date: 12/04/08

Date verified: 06/04/08

Verified by: JCS

Comments: N/A

Verification data found in Run#: i08136

Verification instrument: ICP07

Acid used - Lot#: 100 mL HNO_3 - G04026 JT Baker

100 mL HCL - Fisher 410010 KK 6/5/08

Source: CPI

Pipettes 11061166 (5 mL, 2 mL, 1.5 mL), PL-214 (1 ml, 0.150 mL) and a 2 L Volumeteric Flask were used to make this solution. (Glass for all others)

VOLUMES OF PRIMARY SOLUTIONS WERE TAKEN TO THE FINAL VOLUME IN THE MATRIX ABOVE.

LEGEND: PS=Primary Solution, SS=Secondary Solution,

CALCULATION: {(FINAL VOL.) * (FINAL VOL. CONC.)} / CONC. OF PRIMARY = VOL. OF PRIMARY SOLUTION USED

JCS 6/4/08

To Page No. X

Witnessed & Understood by me,	Date	Invented by: NA	Date
[signature]	06/05/08	Recorded by: Joanna C Sanchez	6/4/08

Project No. N14

TITLE Data Chem Laboratories - Primary Standards Logbook

Book No. 2261

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DCL SOLUTION #	ANALYTES	CONCENTRATION	VENDOR	LOT #	DATE RECD.	DATE OPENED	DATE EXPIRES	INIT.
(APP-SPL-1) IP-PS-07-0034 726 03/07/07	Al, Ba / Fe	2,000 ug/mL / 1,000 ug/mL	Inorganic Ventures	Z-MEB194075	03/07/07	03/07/07	04/01/08	KE
	Co, Mn, Ni, V, Zn	500 ug/mL						
	Cu / Cr3	250 ug/mL / 200 ug/mL						
	Ag, Be	50 ug/mL						
(APP-SPL-5) IP-PS-07-015 726	Sb / Cd, Se, Tl	100 ug/mL / 50 ug/mL	Inorganic Ventures	Z-CLCP18071	03/07/07	03/07/07	04/01/08	KE
	As / Pb	40 ug/mL / 20 ug/mL						
CRI 9.4 IP-PS-07-016	Ba / Se, V	10 ug/mL / 5 ug/mL	Inorganic Ventures	A2-MEB194150	03/28/07	03/29/07	05/01/08	KB
	Cr3, Cu, Sb, Zn	2 ug/mL						
	Ag, As, Be, Cd, Co, Mn,	1 ug/mL						
	Ni, Pb, Tl							
ISS IP-PS-07-017	Bi, Ho, In, Li, Rh, Se, Tb, Y	10 ug/mL	Inorganic Ventures	Z-MEB194055	03/28/07	03/29/07	05/01/08	KB
ISS IP-PS-07-018	Bi, Ho, In, Li, Rh, Se, Tb, Y	10 ug/mL	Inorganic Ventures	Z-MEB194055	03/28/07	03/29/07	05/01/08	KB
IP-PS-07-019	Al, Ca / As, Fe, Pb, Mg, Ni, Se	1000 ug/mL / 500 ug/mL	CPI	07C089	04/01/07	04/18/07	09/08/08	KE
	Ba, Be, Cr, Co, Li, Mn, Mo, Sr,	200 ug/mL						
	Ti, V, Y, Zn, Zr, Cu	200 ug/mL						
6010 ICV IP-PS-07-020	K, Na / Fe, P	2000 ug/mL / 200 ug/mL	CPI	07C088	04/01/07	04/18/07	09/08/08	KE
	Ba, Ca, Pb, Se, Tl, Al, As, Mg, B	400 ug/mL						
	Ag, Be, Cd, Co, Cr, Cu, Mn, Ni	100 ug/mL						
	V, Zn, Sr, Li							
IP-PS-07-021	Sb, Mo, Sn, Ti, Si	400 ug/mL, 100 ug/mL	CPI	07C088	04/01/07	04/18/07	09/08/08	KE
IP-PS-07-022	ICV-1	See facing page	EPA/QATS	ICV-1 (1201)	04/18/07		NA	KB
IP-PS-07-023	See facing page							
IP-PS-07-024								
IP-PS-07-025	ICSA (ICP-MS)	See facing page	EPA/QATS	ICSA (0803)	04/18/07	09/23/07	NA	KB
IP-PS-07-026	See facing page					01/17/08		
IP-PS-07-027								
IP-PS-07-028								
IP-PS-07-029								
IP-PS-07-030								
IP-PS-07-031	ICSB (ICP-MS)					09/23/07		
IP-PS-07-032	See facing page	See facing page	EPA/QATS	ICSB (0803)	04/18/07		NA	KB
IP-PS-07-033								
IP-PS-07-034	As	10,000 ug/mL	CPI	07B146	04/01/07	04/20/07	09/30/08	KE
IP-PS-07-035	Ba	10,000 ug/mL	CPI	07C169	04/01/07	04/20/07	09/30/08	KE
IP-PS-07-036	Be	10,000 ug/mL	CPI	07A145	04/01/07	04/20/07	~~09/10~~ 04/30/08	KE

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Witnessed & Understood by me, Kristie Bettin — Date 04/20/07

Invented by — Date

Recorded by — Date 04/20/07

Facing Page 91

QATS INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICVs)

ICV-1 (1201):		
Element	Concentration (µg/L) (after 10-fold dilution)	Concentration (µg/L) (after 50-fold dilution)
Al	2482	496
Sb	992	198
As	996	199
Ba	502	100
Be	493	99
Cd	494	99
Ca	10180	2036
Cr	490	98
Co	496	99
Cu	490	98
Fe	5107	1021
Pb	996	199
Mg	6003	1201
Mn	495	99
Ni	492	98
K	10008	2002
Se	1005	201
Ag	495	99
Na	10039	2008
Tl	1027	205
V	501	100
Zn	1000	200

KB 4/19/07

QATS INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICVs)

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP and AA instruments. These solutions may also be used as aqueous Laboratory Control Solutions.

The values for each element in the ICVs are listed below in µg/L (ppb) for the solutions that result after the concentrates have been diluted according to the following instructions:

1. ICV-1 (1201) — For ICP-AES use, dilute the ICV-1 concentrate 10-fold with 2% (v/v) nitric acid; pipet 10 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. For ICP-MS use, dilute the ICV-1 concentrate 50-fold with 1% (v/v) nitric acid; pipet 2 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

2. ICV-2 (0601) -- For furnace AA use, dilute the ICV-2 concentrate 20-fold with 2% (v/v) nitric acid; pipet 5 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

3. ICV-3 (0500) -- For ICP use, dilute the ICV-3 concentrate 10-fold with 2% (v/v) nitric acid; pipet 10 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. For furnace AA use, dilute the ICV-3 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

KB 4/19/07

4. ICV-4 (0499) -- For the furnace AA determination of lead and thallium, dilute the ICV-4 concentrate 10-fold with 2% (v/v) nitric acid; pipet 10 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. For the furnace AA determination of silver and cadmium, dilute the ICV-4 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

5. ICV-5 (1104) -- For the cold vapor analysis of mercury by AA, dilute the ICV-5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV-5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

6. ICV-6 (0400) -- For the analysis of cyanide, dilute the ICV-6 concentrate 100-fold with Type II water; pipet 1 mL of the concentrate into a 100-mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

QATS INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE FOR ICP-MS
PART A (0803) WITH PART B (0803)

Part A (0803), Inferferents: Pipet 10 mL of the Part A solution into a 100-mL volumetric flask and dilute to volume with 1% v/v HNO3. Analyze this solution, Soln. A, by ICP-MS.

Part B (0803), Analytes, mixed with Part A (0803), Interferents: Pipet 10 mL of the Part A solution and 10 mL of the Part B solution into a 100-mL volumetric flask and dilute to volume with 1% v/v HNO3. Analyze this solution, Soln. AB, by ICP-MS.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS PART A (0803) AND PART A (0803) MIXED WITH PART B (0803)

Element	Concentration (µg/L) Part A	Concentration (µg/L) Part A + Part B
Al	[100000]	[100000]
Sb	(1.5)	22
As	(0.1)	19
Ba	(1.2)	22
Be	(0)	19
Cd	(0.7)	20
Ca	[100000]	[100000]
C	[200000]	[200000]
Cl	[1000000]	[1000000]
Cr	21	40
Co	1	20
Cu	8	25
Fe	[100000]	[100000]
Pb	4	25
Mg	[100000]	[100000]
Mn	7	27
Mo	[2000]	[2000]
Ni	6	24
P	[100000]	[100000]
K	[100000]	[100000]
Se	(0.3)	19
Ag	(0)	18
Na	[100000]	[100000]
S	[100000]	[100000]
Tl	(0)	21
Ti	[2000]	[2000]
V	(0.5)	19
Zn	11	29

KB 04/19/07

[ ] INDICATES ANALYTES THAT DO NOT REQUIRE ICP-MS DETERMINATION IN THE ICS.
( ) INDICATES ANALYTE VALUES THAT ARE LESS THAN THE CRQL AND THE VALUE IS TO BE USED AS A SET POINT FOR THE ± 3 TIMES CRQL ACCEPTANCE CRITERIA CALCULATIONS.

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DCL SOLUTION #	ANALYTES.	CONCENTRATION	VENDOR	LOT #	DATE RECD	DATE OPENED	DATE EXPIRES	INIT.
IP-PS-07-037	Cr	10,000 ug/mL	CPI	07A104	04/01/07	04/20/07	10/04/08	KE
IP-PS-07-038	Ni	10,000 ug/mL	CPI	07B236	04/01/07	04/20/07	09/30/08	KE
IP-PS-07-039	Pt	10,000 ug/mL	CPI	06D247	04/01/07	04/20/07	09/30/08	KE
IP-PS-07-040	Sb	10,000 ug/mL	CPI	06D239	04/01/07	04/20/07	09/30/08	KE
IP-PS-07-041	Si	10,000 ug/mL	CPI	06J226	04/01/07	04/20/07	10/04/08	KE
IP-PS-07-042	Ti	10,000 ug/mL	CPI	06I044	04/01/07	04/20/07	09/30/08	KE
IP-PS-07-043	W	1,000 ug/mL	CPI	06L114	04/01/07	04/20/07	09/30/08	KE
IP-PS-07-044	Zr	1,000 ug/mL	CPI	07C203	04/01/07	04/20/07	09/30/08	KE
6020 Std IP-PS-07-045	Ag, Al, As, Ba, Be, Ca/Cd, Co, Cr3, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn	20.00 ug/mL	Inorganic Ventures	Z-MEB194104	05/29/07	05/29/07	06/01/08	KB
ICP-MS CLP Spike IP-PS-07-046	As, Ba/Ca, Mn, Ni, V, Zn Cu / Cr3 Sb/Ag, Be, Cd, Tl As/Pb/Se	200 ug/mL / 50 ug/mL 25 ug/mL / 20 ug/mL 10 ug/mL / 5 ug/mL 4 ug/mL / 2 ug/mL / 1 ug/mL	Inorganic Ventures	A2-MEB194119	05/29/07	05/29/07	06/01/08	KB
6020 ISTD IP-PS-07-047	Bi, Ho, In/Li6, Rh, Sc, Tb, Y	10 ug/mL	Inorganic Ventures	Z-MEB194055	05/29/07	05/29/07	06/01/08	KB
6020 ISTD IP-PS-07-048	Bi, Ho, In, Li6, Rh, Sc, Tb, Y	10 ug/mL	Inorganic Ventures	Z-MEB194085	05/29/07	05/29/07	06/01/08	KB
IP-PS-07-049	Li, Sr, Th, U	20 ug/mL	Inorganic Ventures	A2-MEB238016	06/01/07	06/04/07	06/01/08	KB
IP-PS-07-050	B, Mo, Sn, Ti	20 ug/mL	Inorganic Ventures	A2-MEB238017	06/01/07	06/04/07	06/01/08	KB
X-STUNE IP-PS-07-051	Ba, Be, Bi, Cr, Co, In, Li, Ni, Pb, U	10 ug/mL	Inorganic Ventures	A2-MEB238018	06/01/07	06/04/07	06/01/08	KB
IP-PS-07-052	Ag	1,000 ug/mL	CPI	06J107	06/06/07	06/07/07	12/01/08	KE
IP-PS-07-053	AL	10,000		07E205	07/09/07	07/19/07	01/05/09	JK
IP-PS-07-054	B	5,000		06K019				
IP-PS-07-055	CA	10,000		07F345				
IP-PS-07-056	CA	10,000		07F345				
IP-PS-07-057	Cd	10,000		07E050				
IP-PS-07-058	Co	10,000		07F078				
IP-PS-07-059	Cu	10,000		07F075				
IP-PS-07-060	FE	10,000		07E183				
IP-PS-07-061	K	10,000		07F131				
IP-PS-07-062	Li	10,000		06I145				
IP-PS-07-063	Mg	10,000		07D085				
~~IP-PS-07-064~~	JK 07-19-07							

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Witnessed & Understood by me, Date 07/19/07 Invented by Date 10

Recorded by John Kerekink 07/19/07

Project No. N/A

TITLE DATACHEM LABORATORIES - PRIMARY STANDARDS LOGBOOK

Book No. 2261

From Page No. 92

DCL SOLUTION #	ANALYTES	CONCENTRATION	VENDOR	LOT #	DATE REC'D	DATE OPENED	DATE EXPIRES	INIT
IP-PS-07-064	MN	10,000 ug/mL	CPI	07C113	07/09/07	07/19/07	01/05/09	JK
IP-PS-07-065	MO	10,000		06H253				
IP-PS-07-066	NA	10,000		07F228				
IP-PS-07-067	P	10,000		07E211				
IP-PS-07-068	PB	10,000		07F278				
IP-PS-07-069	SE	10,000		07C158				
IP-PS-07-070	SN	10,000		06B011				
IP-PS-07-071	SR	10,000		06J208				
IP-PS-07-072	TE	10,000		4BK070				
IP-PS-07-073	TL	10,000		05K082				
IP-PS-07-074	V	5,000		07B083				
IP-PS-07-075	Y	10,000		07A200				
IP-PS-07-076	ZN	10,000		07D133				
IP-PS-07-077	AS	1,000		07F105				
IP-PS-07-078	CD	1,000		07C053				
IP-PS-07-079	PB	1,000		07F108				
IP-PS-07-080	SE	1,000		07C044				
IP-PS-07-081	TL	1,000		06C009				
IP-PS-07-082	SB	1,000		07A076				
IP-PS-07-083	ICSA	SEE FACING PAGE	EPA / QATS	ICSA (1206)	07/19/07	07/20/07	N/A	JK
IP-PS-07-084	SEE FACING PAGE					07/20/07		
IP-PS-07-085						08/27/07		
IP-PS-07-086						08/30/07		
IP-PS-07-087						10/15/07		
IP-PS-07-088						10/15/07		
IP-PS-07-089								
IP-PS-07-090								
IP-PS-07-091	ICSB	SEE FACING PAGE	EPA / QATS	ICSB (0203)	07/19/07	07/27/07	N/A	JK
IP-PS-07-092	SEE FACING PAGE					10/15/07		
IP-PS-07-093						12/21/07		
IP-PS-07-094						12/21/07		
IP-PS-07-095	ICV-1 SEE FACING PAGE	SEE FACING PAGE	EPA / QATS	ICV-1 (1201)	07/19/07	07/20/07	N/A	JK
IP-PS-07-096						08/30/07		
IP-PS-07-097						10/31/07		
IP-PS-07-098								

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Witnessed & Understood by me, John Kerschenski

Date 07/29/07

Invented by

Recorded by

Date 07/20/07

Project No. 11

TITLE DataChem Laboratories - Primary Standards Log book

Book No. 2261

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DCL Solution #	Analytes	Concentration	Vendor	Lot #	Date Rec'd	Date Opened	Date Expires	Initials
6020 ICSA IP-PS-07-118	Co, Cr3, Cu, Mn, Ni, V	20 µg/mL	Inorganic Ventures	Z-MEB194098	09/26/07	10/01/07	10/01/08	KB
	As, Cd, Sr, Zn / Ag	10 / 5 µg/mL						
std IP-PS-07-119	Ce	1000 µg/mL	Inorganic Ventures	A2-CE01055	09/26/07	10/01/07	10/01/08	KB
std IP-PS-07-120	Cs	1000 µg/mL	Inorganic Ventures	Z-CS01113	09/26/07	10/01/07	10/01/08	KB
std IP-PS-07-121	Ga	1000 µg/mL	Inorganic Ventures	Z-GA01072	09/26/07	10/01/07	10/01/08	KB
6020 std IP-PS-07-122	Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr3, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn	20 µg/mL	Inorganic Ventures	Z-MEB194104	09/26/07	10/01/07	10/01/08	KB
ICSS IP-PS-07-123	Bi, Ho, In, Li, Rh, Sc, Tb, Y	10 µg/mL	Inorganic Ventures	A2-MEB194155	09/26/07	10/01/07	10/01/08	KB
ICSS IP-PS-07-124	Bi, Ho, In, Li, Rh, Sc, Tb, Y	10 µg/mL	Inorganic Ventures	A2-MEB194155	09/26/07	10/01/07	10/01/08	KB
IP-PS-07-125	Se	10000 µg/mL	INORGANIC VENTURES	A2-SE02073	09/26/07	10/03/07	10/01/08	JMY
IP-PS-07-126	Li, Sr, Th, U	20 µg/mL	Inorganic Ventures	A2-MEB248043	10/26/07 ~~09/26/07~~	KB 10/29/07 10/29/07	11/01/08	KB
IP-PS-07-127	B, Mo, Sn, Ti	20 µg/mL	Inorganic Ventures	A2-MEB248044	10/26/07	10/29/07	11/01/08	KB
IP-PS-07-128	Au, Ir, Os, Pd, Pt, Re, Rh, Ru	10 µg/mL	Inorganic Ventures	Z-MEB208107	10/26/07	10/29/07	11/01/08	KB
IP-PS-07-129	Li	10 µg/mL	Inorganic Ventures	A2-QLI02142	10/26/07	10/29/07	11/01/08	KB
IP-PS-07-130	Ag, Be, Cd	10 µg/mL	Inorganic Ventures	A2-MEB250073	12/03/07	12/05/07	01/01/09	gcs
	Cr3	40 µg/mL						
	Cu	50 µg/mL						
	Co, Li, Mn, Ni, Pb, V, Zn	100 µg/mL						
	As, B, Fe, Se, Sr	200 µg/mL						
	Al, Ba, Tl	400 µg/mL						gcs
IP-PS-07-131	Sb, Ti	100 µg/mL	Inorganic Ventures	A2-MEB250074	12/03/07	12/05/07	01/01/09	gcs
	Si, Sn	200 µg/mL						
	Mo	400 µg/mL						gcs
IP-PS-07-132	SOIL LCSS	SEE FACING PAGE	EPA / DATS	LCS-S (0405)	11/08/07		N/A	KE
IP-PS-07-133	(SEE FACING PAGE)							
IP-PS-07-134								
IP-PS-07-135	ICV-1	SEE FACING PAGE	EPA / DATS	ICV-1 (1201)	11/08/07		N/A	KE
IP-PS-07-136	SEE FACING PAGE					01/08/08		
IP-PS-07-137						02/28/08		
IP-PS-07-138								
IP-PS-07-139						3/25/08		

KE 12/12/07

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Witnessed & Understood by me, Kristie Bates

Date 04/08/08

Invented by

Recorded by

Date 12/12/07

Project No. N/A

TITLE DataChem Laboratories - Primary Standards Logbook

Book No. 2261

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DCL Solution #	Analytes	Concentration	Vendor	Lot #	Date Rec'd	Date Opened	Date Expires	Init.
IP-PS-07-140	ICSA	See Facing Page	EPA / QATS	Part A (1206)	11/08/07	12/12/07	N/A	KE
IP-PS-07-141	See Facing Page					12/21/07		
IP-PS-07-142						12/21/07		
IP-PS-07-143						01/05/08		
IP-PS-07-144								
IP-PS-07-145								
IP-PS-07-146	ICSAB	See Facing Page	EPA / QATS	Part B (1208)	11/08/07		N/A	KE
IP-PS-07-147	See Facing Page					03/19/08		
IP-PS-07-148						05/09/08		
6020 Std IP-PS-07-149	Ag, Al, As, Ba, Be, Ca, Cd,	20 µg/mL	Inorganic Ventures	Z-MEB194104	12/17/07	12/17/07	01/01/09	KB
6020 Std IP-PS-07-150	Co, Cr3, Cu, Fe, K, Mg, Mn, Mo,							
12/17/07	Ni, Pb, Se, Sb, Tl, V, Zn							
6020 SPK-5 IP-PS-07-151	12/17/07 Bal, Ba, Cr3, Cu, Zn	50 µg/mL	Inorganic Ventures	A2-CICP20089	12/17/07	12/17/07	01/01/09	KB
	Ni / Co, Pb, Sb / V	25 µg/mL / 20 µg/mL / 10 µg/mL						
	Ag, As, Cd / Be, Se, Tl	10 µg/mL / 5 µg/mL						
IP-PS-07-152	Bi, Ho, In, Li, Rh, Sc,	10 µg/mL	Inorganic Ventures	A2-MEB194155	12/17/07	12/07/07	01/01/09	KB
IP-PS-07-153	Tlo, Y							
IP-PS-08-001	Li, Rh, Y, Bi, Sc, Ho, Th	10 µg/mL	Inorganic Ventures	B2-MEB255072	02/05/08	02/05/08	03/01/09	KE
IP-PS-08-002	In	10 µg/mL	Inorganic Ventures	A2-QIN01098	02/05/08	02/05/08	03/01/09	KE
6020 Water Std IP-PS-08-003	Fe / Ba, Zn	100 µg/mL / 50 µg/mL	Inorganic Ventures	Z-MEB194099	02/05/08	02/05/08	03/01/09	KE
	Co, Cr3, Cu, Mn, Ni, Sb, V	20 µg/mL						
	As, Pb	10 µg/mL						
	Ag, Be, Cd, Se, Tl	5 µg/mL						
IP-PS-08-004	Li, Sr, Th, U	20 µg/mL	Inorganic Ventures	A2-MEB248045	02/05/08	02/05/08	03/01/09	KE
IP-PS-08-005	B, Mo, Sn, Ti	20 µg/mL	Inorganic Ventures	A2-MEB248044	02/05/08	02/05/08	03/01/09	KE
IP-PS-08-006	Ca, Mg, K, Na / Al, Ba	500 mg/mL / 20 mg/mL	Inorganic Ventures	KE 02/14/08 Z-MEB194095	02/13/08	02/14/08	03/01/09	KE
	Fe / Sb, Zn	10 mg/mL / 6 mg/mL						
	Co, V / Ni / Se	5 mg/mL / 4 mg/mL / 3.5						
	Cu, Tl / Mn	2.5 mg/mL / 1.5 mg/mL						
	Ag, As, Cr3, Pb / Be, Cd	1.0 mg/mL / 0.5 mg/mL						
IP-PS-08-007	Ag, Al, As, Ba, Be, Cd,	10 µg/mL	SPEX KB 2/29/08 ~~Inorganic Ventures~~	S-11263	02/28/08	02/29/08	02/28/09	KB
	Co, Cr, Cu, Mn, Ni, Pb,							
	Sb, Se, Tl, V, Zn							
GLP-SPK-6 IP-PS-08-008	Sb / Cd, Se, Tl	100 µg/mL / 50 µg/mL	Inorganic Ventures	Z-MEB194090	03/10/08	03/10/08	03/01/09	KE
1762	As / Pb	40 µg/mL / 20 µg/mL						

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Witnessed & Understood by me, Kristie Britain

Date 03/28/08

Invented by

Recorded by

Date 03/10/08

FACING PAGE 96

QATS INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET
PART A (1206) WITH PART B (0203) FOR ICP-AES

The "Certified Value" concentrations of the elements are listed in Table 1. The values are certified in that all results used in calculating the certified values were derived from statistically pooled results from the following sources: ILM05.4 Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis. Preparation and analysis must be performed according to the following instructions:

Part A (1206), Interferents: Pipet 10 mL of the Part A solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. A, by ICP-AES.

Part B (0203), Analytes, mixed with Part A (1206), Interferents: Pipet 10 mL of the Part A solution and 10 mL of the Part B solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. AB, by ICP-AES.

NOTE: THIS ICS SET IS FOR USE WITH ILM05.4 AND REVISIONS ONLY, NOT ILM04.x.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES PART A (1206), AND PART A (1206) MIXED WITH PART B (0203)

Element	Concentration (µg/L) Part A	Concentration (µg/L) Part A + Part B
Al	244100	241100
Sb	(0)	589
As	(0)	101
Ba	2	495
Be	(0)	475
Cd	(0)	940
Ca	234900	231100
Cr	43	511
Co	(4)	461
Cu	(23)	548
Fe	95600	94800
Pb	10	61
Mg	247500	251100
Mn	19	502
Ni	(21)	984
Se	(0)	53
Ag	(0)	206
Tl	(0)	103
V	(0)	494
Zn	28	1028

( ) Indicates analyte values that are less than the CRQL, and the value is to be used as a set point for the +/- 2 times CRQL acceptance criteria calculations.

NE 12/12/07

Project No. N/A

TITLE DATACHEM LABORATORIES - PRIMARY STANDARDS LOGBOOK

Book No. 2261

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DL SOLUTION #	ANALYTES	CONCENTRATION	VENDOR	LOT #	DATE REC'D	DATE OPENED	DATE EXPIRES	INIT
CLPP-SPK-1 IP-PS-08-009	Al, Ba / Fe	2000 mg/mL / 1000 mg/mL	INORGANIC VENTURES	2-MEB174075	03/10/08	03/10/08	03/01/09	KE
	Co, Mn, Ni, V, Zn / Cu	500 mg/mL / 250 mg/mL						
1761	Cr3 / Ag, Be	200 mg/mL / 50 mg/mL						
IP-PS-08-010	ICSA (SEE FACING PAG)	SEE FACING PAGE	EPA / RATS	ICSA (1206)	03/10/08	03/19/08	N/A	KE
IP-PS-08-011						03/19/08		
IP-PS-08-012								
IP-PS-08-013								
IP-PS-08-014								
IP-PS-08-015						05/21/08		
IP-PS-08-016						05/09/08		
IP-PS-08-017						05/21/08		
IP-PS-08-018	ICSAB	SEE FACING PAGE	EPA / RATS	ICSAB (0203)	03/10/08		N/A	KE
IP-PS-08-019	SEE FACING PAGE							
IP-PS-08-020								
6020 std IP-PS-08-021	Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr3, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn	20 µg/mL	Inorganic Ventures	2-MEB194104	03/27/08		04/01/09	KB
6020 ISS 03/28/08 IP-PS-08-022	Bi, Hf, In, Li6, Rh, Sc, Tb, Y	10 µg/mL	Inorganic Ventures	A2-MEB194185	03/27/08		04/01/09	KB
6020 ISS 03/28/08 IP-PS-08-023								
6020 ISS 03/28/08 IP-PS-08-024								
IM08023 (1879) IP-PS-08-025	Ag	1000 mg/mL	CPI	07H114	5/1/08	5/1/08	10/28/09	RKA
IM08024 (1883) IP-PS-08-026	Sb	10,000 mg/mL	CPI	07F023	5/1/08		10/28/09	RKA
IM08025 (1885) IP-PS-08-027	Ba	10,000 mg/mL	CPI	07C169	5/1/08		10/28/09	RKA
IP-PS-08-028 IM08026 (1886)	K	10,000 mg/mL	CPI	08C049	5/1/08		10/28/09	RKA
IP-PS-08-029 IM08027 (1887)	W	1000 mg/mL	CPI	07I108	5/1/08		10/28/09	RKA
IP-PS-08-030 IM08028 (1888)	Pt	10000 mg/mL	CPI	07D260	5/1/08		10/28/09	RKA
IP-PS-08-031 IM08029 (1889)	Na	10,000 mg/mL	CPI	08A030	5/1/08		10/28/09	RKA
IM08030 (1890) IP-PS-08-032	Ti	10,000 mg/mL	CPI	08A002	5/1/08		10/28/09	RKA
IM08031 (1891) IP-PS-08-033	Be	10,000 mg/mL	CPI	07F218	5/1/08		10/28/09	RKA
IM08032 (1892) IP-PS-08-034	Al	10,000 mg/mL	CPI	08C004	5/1/08		10/28/09	RKA
IP-PS-08-035 IM08033 (1893)	Fe	10,000 mg/mL	CPI	08B059	5/1/08		10/28/09	RKA
IP-PS-08-036 IM08034 (1894)	Zr	1,000 mg/mL	CPI	08A083	5/1/08		10/28/09	RKA
IP-PS-08-037 IM08035 (1895)	Ni	10,000 mg/mL	CPI	08A040	5/1/08		10/28/09	RKA
IP-PS-08-038 IM08036 (1896)	Mg	10,000 mg/mL	CPI	08C006	5/1/08		10/28/09	RKA

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Witnessed & Understood by me, Joanna C. Sanchez

Date 5/5/08

Invented by NA

Recorded by [signature]

Date 5/5/08

QATS INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET
PART A (1206) WITH PART B (0203) FOR ICP-AES

The "Certified Value" concentrations of the elements are listed in Table 1. The values are certified in that all results used in calculating the certified values were derived from statistically pooled results from the following sources: ILM05.4 Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis. Preparation and analysis must be performed according to the following instructions:

Part A (1206), Interferents: Pipet 10 mL of the Part A solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. A, by ICP-AES.

Part B (0203), Analytes, mixed with Part A (1206), Interferents: Pipet 10 mL of the Part A solution and 10 mL of the Part B solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. AB, by ICP-AES.

NOTE: THIS ICS SET IS FOR USE WITH ILM05.4 AND REVISIONS ONLY, NOT ILM04.x.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES PART A (1206), AND PART A (1206) MIXED WITH PART B (0203)

Element	Concentration (µg/L) Part A	Concentration (µg/L) Part A + Part B
Al	244100	241100
Sb	(0)	589
As	(0)	101
Ba	(2)	495
Be	(0)	475
Cd	(0)	940
Ca	234900	231100
Cr	43	511
Co	(4)	461
Cu	(23)	548
Fe	95600	94800
Pb	10	61
Mg	247500	251100
Mn	19	502
Ni	(21)	984
Se	(0)	53
Ag	(0)	206
Tl	(0)	103
V	(0)	494
Zn	(28)	1028

( ) Indicates analyte values that are less than the CRQL, and the value is to be used as a set point for the +/- 2 times CRQL acceptance criteria calculations.

NE 03/10/08

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book 2261 gcs 5/9/08

Project No. NA

TITLE DATACHEM LABORATORIES - PRIMARY STANDARDS LOGBOOK 5/8/08 RKA

Book No. 2261

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DCL SOLUTION #	ANALYTES	CONCENTRATION	VENDOR	LOT#	DATE REC'D	DATE OPENED	DATE EXPIRES	INIT
IM080037 (1847) IP-PS-08-039	As	10,000 ug/mL	CPI	07H102	5/1/08	5/1/08	10/28/09	RKA
IM080036 (1848) IP-PS-08-040	Si	10,000 ug/mL	CPI	07D206	5/1/08	5/1/08	10/28/09	RKA
CRI-MS IP-PS-08-041	Ba / Se, V	10 ug/mL / 5 ug/mL	Inorganic Ventures	A2-MSB194150	05/05/08	05/05/08	06/01/09	KB
	Cr3, Cu, Sb, Zn	2 ug/mL						
	Ag, As, Be, Cd, Co, Mn, Ni, Pb, Tl	1 ug/mL						
CLP-MS-SPK IP-PS-08-042	Al, Ba	200 ug/mL	Inorganic Ventures	A2-MSB194119	05/05/08	05/05/08	06/01/09	KB
	Co, Mn, Ni, V, Zn	50 ug/mL						
	Cu / Cr3	25 ug/mL / 20 ug/mL						
	Sb / Ag, Be, Cd, Tl	10 ug/mL / 5 ug/mL						
	As / Pb	4 ug/mL / 2 ug/mL						
	Se	1 ug/mL						
IM080039 (1849) IP-PS-08-043	Cr	10,000 ug/mL	CPI	07I020	5/6/08	5/6/08	11/2/09	RKA
IM080042 (1902) IP-PS-08-044	Bi	10,000 ug/mL	Elements	CS7011437	4/16/08	5/8/08	10/09	RKA
IP-PS-08-045	ICSA (See facing page)	See facing page	EPA / QATS	ICSA (1206)	04/16/08		NA	GCS
IP-PS-08-046								
IP-PS-08-047								
IP-PS-08-048								
IP-PS-08-049					04/17/08 GCS 5/8/08			
IP-PS-08-050	ICSAB (See facing Pg)	See facing page	EPA / QATS	ICSAB (0203)	04/16/08		NA	GCS
IP-PS-08-051								
IP-PS-08-052					04/17/08 GCS 5/8/08			
IP-PS-08-053	ICV-1 (See facing Pg)	See facing page	EPA / QATS	ICV-1 (1201)	04/16/08		NA	GCS
IP-PS-08-054								
IP-PS-08-055								
IP-PS-08-056								
IP-PS-08-057					04/17/08			
IP-PS-08-058	Soil LCSS (See facing page)	See facing page	EPA / QATS	LCS-S (0405)	04/17/08		NA	GCS
IP-PS-08-059	Ba, Be, Bi, Ce, Co, In, Li, Ni, Pb, U	10 ug/mL	Inorganic Ventures	A2-MSB265024	05/08/08	05/13/08	06/01/09	KB
ICP-MS CLP ICSA IP-PS-08-060	See p.91 facing page	See p.91 facing page	EPA / QATS	Part A ICS-MS (0803)	04/17/08		NA	KB
IP-PS-08-061	See p.91 facing page	See p.91 facing page	EPA / QATS	Part B ICS-MS (0803)	04/17/08		NA	KB
IP-PS-08-062	Pb	1,000 ug/mL	CPI	08D051	05/20/08	06/04/08	11/16/09	GCS

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Witnessed & Understood by me, | Date | Invented by | Date

Recorded by

QATS INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET
PART A (1206) WITH PART B (0203) FOR ICP-AES

The "Certified Value" concentrations of the elements are listed in Table 1. The values are certified in that all results used in calculating the certified values were derived from statistically pooled results from the following sources: ILM05.4 Pre-award analysis, Quarterly Blind analysis, CLP laboratory referee analysis, and QATS Laboratory analysis. Preparation and analysis must be performed according to the following instructions:

Part A (1206), Interferents: Pipet 10 mL of the Part A solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. A, by ICP-AES.

Part B (0203), Analytes, mixed with Part A (1206), Interferents: Pipet 10 mL of the Part A solution and 10 mL of the Part B solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this solution, Soln. AB, by ICP-AES.

NOTE: THIS ICS SET IS FOR USE WITH ILM05.4 AND REVISIONS ONLY, NOT ILM04.x.

gcs 5/12/08

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Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES PART A (1206), AND PART A (1206) MIXED WITH PART B (0203)

Element	Concentration (µg/L) Part A	Concentration (µg/L) Part A + Part B
Al	244100	241100
Sb	(0)	589
As	(0)	101
Ba	(2)	495
Be	(0)	475
Cd	(0)	940
Ca	234900	231100
Cr	43	511
Co	(4)	461
Cu	(23)	548
Fe	95600	94800
Pb	10	61
Mg	247500	251100
Mn	19	502
Ni	(21)	984
Se	(0)	53
Ag	(0)	206
Tl	(0)	103
V	(0)	494
Zn	(28)	1028

( ) Indicates analyte values that are less than the CRQL, and the value is to be used as a set point for the +/- 2 times CRQL acceptance criteria calculations.

QATS INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICVs)

Element	ICV-1 (1201) Concentration (µg/L) (after 10 fold dilution)	ICV-1 (1201) Concentration (µg/L) (after 50 fold dilution)
Al	2482	496
Sb	992	198
As	996	199
Ba	502	100
Be	493	99
Cd	494	99
Ca	10180	2036
Cr	490	98
Co	496	99
Cu	490	98
Fe	5107	1021
Pb	996	199
Mg	6003	1201
Mn	495	99
Ni	492	98
K	10008	2002
Se	1005	201
Ag	495	99
Na	10039	2008
Tl	1027	205
V	501	100
Zn	1000	200

gcs 5/12/08

QATS INORGANIC REFERENCE MATERIAL
SOLID LABORATORY CONTROL SAMPLE
LCS-S (0405)

TABLE 1. "CERTIFIED VALUE" CONCENTRATIONS AND CONTROL LIMITS FOR THE ELEMENTS IN THE SOLID LABORATORY CONTROL SAMPLE, LCS-S (0405)

Element	"Certified Value" (mg/Kg)	Control Limits (mg/Kg) Low Limit	Control Limits (mg/Kg) High Limit
Al	115	54.7	175
Sb	66.0	27.6	104
As	253	154	352
Ba*	[1.6]	1.0	2.2
Be	4.9	3.0	6.8
Cd	10.9	7.7	14.0
Ca	44200	30300	58200
Cr	27.1	18.5	35.7
Co	37.4	24.2	50.6
Cu	1770	1320	2230
Fe	6470	4280	8660
Pb	56.9	41.4	72.4
Mg	29200	20500	37900
Mn	61.0	41.6	80.5
Hg	3.59	1.86	5.32
Ni	16.3	9.0	23.7
K*	[39.7]	0	85.3
Se	10.0	4.1	15.9
Ag	5.9	2.7	9.1
Na*	[72.5]	0	216
Tl	9.5	2.9	16.1
V	17.6	11.6	23.7
Zn	47.5	20.5	74.4

[ ] Denotes values which are greater than or equal to the method detection limit (MDL), but less than the Contract Required Quantitation Limit (CRQL).

* Barium, potassium, and sodium are present at concentrations below ILM05.x CRQLs. Acceptance limits are advisory only.

gcs 5/12/08

Olson, Roxanne

From: Kramer, Caroline [ckramer5@fedcsc.com]
Sent: Tuesday, June 03, 2008 12:28 PM
To: Olson, Roxanne
Cc: beard.carol@epa.gov
Subject: Region 08 | Case 37402 | Lab DATAC | Issue Discrepancies with tags, jars, and/or TR/COC | FINAL

Roxy,
Summary Start
Issue: DATAC received samples with the attached non-CLP TR/COC. The samples did not have CLP sample ID and were handwritten in with the commercial samples for this site, which DATAC is also analyzing.
Resolution: Per Region 8, the laboratory will use the CLP sample IDs provided in the table below (also as a spreadsheet attached). The water samples will require two CLP IDs for the dissolved and total metals analysis. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

CLP Sample ID	Field Sample number	Matrix	Collection date	Collection time	Analysis reques
MH2600	SC-SW-1	water	6/2/2008	13:15	TM by ICP-MS (15
MH2601	SC-SW-1	water (DM)	6/2/2008	13:15	DM by ICP-MS (1554.1)
MH2608	SC-SW-1	soil	6/2/2008	13:15	TM/SPLP (1553
MH2602	SC-SW-2	water	6/2/2008	14:30	TM by ICP-MS (15
MH2603	SC-SW-2	water (DM)	6/2/2008	14:30	DM by ICP-MS (1554.1)
MH2609	SC-SW-2	soil	6/2/2008	14:30	TM/SPLP (1553
MH2604	SC-SW-3	water	6/2/2008	15:15	TM by ICP-MS (15
MH2605	SC-SW-3	water (DM)	6/2/2008	15:15	DM by ICP-MS (1554.1)
MH2610	SC-SW-3	soil	6/2/2008	15:15	TM/SPLP (1553
MH2606	SC-SW-4	water	6/2/2008	16:00	TM by ICP-MS (15
MH2607	SC-SW-4	water (DM)	6/2/2008	16:00	DM by ICP-MS (1554.1)
MH2611	SC-SW-4	soil	6/2/2008	16:00	TM/SPLP (1553

Issue 2: There were no sample tags received with the samples.
Resolution 2: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.
Summary End

Please let me know if you have any questions or problems.
Thank you,

Caroline L. Kramer
ckramer5@fedcsc.com
Computer Sciences Corporation (CSC)
703.818.4248

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us by e-mail of the mistake in delivery. 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.

- 6/3/2008 Phone conversation between Caroline Kramer, SMO, and Carol Bears, Region 8. Carol indicated that SMO should provide new CLP sample IDs for the samples received on 6/3 under Case 37402. Region 8 has contacted the samplers and they will be using F2L to generate CLP TR's with CLP sample IDs in future shipments. Carol also indicated that there probably were no sample tags received with the samples and that the laboratory should note that issue in the SDG Narrative and proceed with the analysis.

- 6/3/2008 Phone conversation between Caroline Kramer, SMO, and Roxy Olson, DATAC. Roxy would like corresponding CLP sample IDs for the samples received on 6/3 with the attached TR/COC. Roxy also confirmed that no sample tags were received with the samples.

-----Original Message-----
From: Olson, Roxanne [mailto:olsonr@datachem.com]
Sent: Tuesday, June 03, 2008 1:14 PM
To: Kramer, Caroline
Subject: Case 37402

Attached is the DATAC CoC with the samples on it for the above referenced case. I just left you a message on your phone regarding this. Please call me and maybe we can sort it out.

Roxy