Complaint

PROJECT ID:04090008

SAMPLE ID: DK 28004

DESCRIPTOR: COMPLAINT RESPONSE

HERITAGE ENVIRONMENTAL SERVICES, LLC

HERITAGE

7901 West Morris Street
Indianapolis, IN 46231

Thank you. Done
Cass Co.

MITT DENNEY, IDEM
REPORT PACKAGE #2194
SAMPLE #: A675186
IDEM ID #: DK28004

HERITAGE ENVIRONMENTAL SERVICES, LLC

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
Fax: 317/486-5095
Internet:http://www.heritage-enviro.com

QUALITY ASSURANCE REPORT PACKAGE # **2194**
FOR
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

MITT DENNEY
INDIANA DEPT. OF ENV. MANAGEMENT
2525 NORTH SHADELAND AVENUE
BUILDING 30
INDIANAPOLIS, IN 46219

SAMPLE #'s: **A675186**

IDEM ID #: **DK28004**

HERITAGE ENVIRONMENTAL SERVICES, LLC
COMMERCIAL LABORATORY OPERATIONS
7901 WEST MORRIS STREET
INDIANAPOLIS, INDIANA 46231
PHONE: (317) 243-8304
FAX: (317) 486-5095

APPROVED BY: Gabrisch, QAO
PROJECT CHEMIST

Recycled Paper

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Heritage Environmental Services, LLC
7901 West Morris Street
Indianapolis, IN 46231
Phone: (317) 243-0811
Fax: (317) 486-5095

CASE NARRATIVE
SHIPPING AND RECEIVING

The following samples were received at Heritage Environmental Laboratory on September 28, 2004:

SAMPLE #: A675186

IDEM ID #: DK28004

The samples were received within EPA recommended holding times and in good condition. If required, a pH screen confirmed that all samples were preserved to acceptable pH levels. Samples were analyzed within holding times as prescribed by the analytical method. Exceptions to these statements, additional information, and any analytical anomalies are noted on the accompanying Certificates of Analysis Reports.

Nancy J. Carman
Document Control Officer

ACCREDITED IN ACCORDANCE WITH nelac

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

☐ OWM ☐ OSHWM ☐ OER ☐ OAM

CHAIN OF CUSTODY

I Certify that the sample(s) listed below was/were collected by me or in my presence. Date: ___/___/___ P.O. #: _____

Signature: James L. Harris Section: Ground Water

LAB NUMBER ASSIGNED	IDEM CONTROL NUMBER	CONSISTING OF THE INDICATED NUMBER OF BOTTLES											DATE AND TIME COLLECTED
		2000 ml P, N. M.	1000 ml P, N. M.	1000 ml G, N. M.	500 ml G,W. M.	250 ml G,W. M.	125 ml G,W. M.	40 ml VIAL	120 ml P,(B .O.)	500 ml P, N. M.	250 ml P, N. M.		
A675186	DK28004		1	2						1	1		9/16/04 12:30 AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM
													/ / : AM/PM

P-Plastic G-Glass N.M.-Narrow Mouth W.M.-Wide Mouth B. O.- Bacti. Only

CARRIERS

Should samples be iced? Y N

I certify that I received the above sample(s)

SIGNATURE	DATE AND TIME	SEALS INTACT		COMMENTS
RELINQUISHED BY: James Harris	9/17/04	Y	N	Lot SK 3-2
RECEIVED BY: S Kennamer	11:45 AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			
RELINQUISHED BY:	/ /	Y	N	
RECEIVED BY:	: AM/PM			

Lab Custodian

I certify that I received the above sample(s) and is/are recorded in the official record book. The same samples will be in custody of competent laboratory personnel at all times and stored in a secure area.

Signature: S Kennamer Date: 17 Sep 04 Time: 11:45 AM/PM

Lab: Heritage Address: Indianapolis

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER/GROUND WATER SECTION
BAA 1-86 SAMPLE TASK SHEET

Site ID: 04090008 IDEM Sample #s: DK 28004 To DK _____ Project Date: 6/16/04

Sampler: Harris Assigned Lab: UL [ ] HLI [x]

TASK 1 - METALS							
Antimony	X	Barium	X	Aluminum			
Arsenic	X	Calcium	X	Boron			
Beryllium	X	Iron	X	Cobalt			
Cadmium	X	Magnesium	X	Manganese			
Chromium	X	Potassium	X	Selenium			
Copper	X	Sodium	X	Silver			
Lead	X			Titanium			
Mercury	X			Thallium			
Nickle	X			Zinc			

TASK 2 – GENERAL INORGANICS, MICROBIOLOGIC, NUTRIENTS & ORGANICS					
Alkalinity	X	Total Coliforms,		Phosphorous (Applicable to All Forms)	
BOD5		Cyanide, Total		Solids, Filterable Residue (TDS)	
BOD, Ultimate		Cyanide, Amenable		Solids, Non-Filterable Residue (TSS)	
Bromide		Fluoride		Solids, % (Solid Waste Matrices)	
Chemical Oxygen Demand		Hardness as CaC03		Solids, Settleable Residue	
Chloride	X	Nitrogen, Kjeldahl (TKN)		Specific Conductanc	
Chlorine, Free & Total		Nitrogen, Nitrate		Sulfate	X
Chlorine, Free		Nitrogen, Nitrite		Total Organic carbon (TOC)	
Chromium, Hexavalent		Nitrogen, Nitrate-Nitrite	X	Turbidity	
Coliforms, E.coli		pH (Lab)			
Coliforms, Fecal		Phosphorous, ortho			

TASK 3 - ORGANICS					
524.2 – Volatile Organics		504.1 - EDB & DBCP		513 -TCDD (2,3,7,8-TCDD)	
524.2E – Volatile Organics Extended		505 - Organohalides & PCB's		515.1 - Chlorinated Acids - ECD	
525.2 – Semivolatile Organics		507 - Nitrogen/Phosphorous NPD		515.3 - Chlorinated Acids - ECD	
525.2E – Semivolatile Organics Extended	X	508.1 - Chlorinated Acids- ECD		531.1 - Carbamates	

SAS											
Worst Case Approximation	<10ppb	X	1-10ppm		10-100ppm		100-1000ppm		>1000ppm	
REPORTING TIME (Days)	30	X	14		2					

COMMENTS

Mailed Reports	Hand Delivered Reports	Contact Information
Mitt Denney IDEM Ground Water Section, 66-33 100 N Senate Ave Indianapolis, IN 46204	Mitt Denney IDEM Ground Water Section, 66-33 2525 N Shadeland Ave Indianapolis, IN 46219	(317) 308-3324 (317) 308-3339, fax mldenny@dem.state.in.us

M 163 M 163

September 27, 2004

U. S. EPA -CLP

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Lab Name : HES - Commercial Laboratory Contract : IDEM - OWM

Lab Code: Metals Case No. : _____ SAS No. : _____ SDG No.: _____

Instrument ID Number : _____ Method : _____

EPA Sample No.	Lab Sample No.	
	A675186	Water

Were ICP interelement corrections applied? Yes/No __ yes

Were ICP background corrections applied? Yes/No __ yes

If yes-were raw data generated before application of background corrections? Yes/No __ no

Comments:

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

Signature : _____ Name : _____

Date : _____ Title : _____

HERITAGE ENVIRONMENTAL SERVICES, LLC
COMMERCIAL LABORATORY OPERATIONS
METALS SECTION

CASE NARRATIVE

SAMPLE # A675186

There was possible matrix interference for K and Na, as indicated by the serial dilution results.

Steven J. Endersen, Senior Chemist

ACCREDITED IN ACCORDANCE WITH nelac

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U. S. EPA -CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found 111218	Continuing Calibration % R (1)	Continuing Calibration Found 120945	Continuing Calibration % R (1)		M
Antimony	1000	1020	102	1000	965	96.5	967	96.7		P
Arsenic	1000	1020	102	5000	4990	99.8	4930	98.6		P
Barium	1000	1040	104	5000	4890	97.8	4870	97.4		P
Beryllium	1000	1050	105	5000	5260	105.2	5180	103.6		P
Cadmium	1000	1030	103	5000	5010	100.2	4890	97.8		P
Calcium	20000	19700	98.5	50000	47600	95.2	47300	94.6		P
Chromium	1000	1010	101	5000	4820	96.4	4750	95.0		P
Copper	1000	1050	105	5000	5060	101.2	4960	99.2		P
Iron	1000	1050	105	5000	4980	99.6	4920	98.4		P
Lead	1000	1040	104	5000	4860	97.2	4800	96.0		P
Magnesium	20000	19200	96	50000	47900	95.8	47000	94.0		P
Mercury	2.00	2.08	104	3.00	3.09	103.0	2.94	98.0		CV
Nickel	1000	1030	103	5000	4810	96.2	4810	96.2		P
Potassium	20000	20500	102.5	50000	50800	101.6	50400	100.8		P
Sodium	20000	19600	98	50000	47600	95.2	46000	92.0		P

ICP Analytical Run Time (1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.

FORM II (Part 1) - IN

3

U. S. EPA -CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found 150214	Continuing Calibration % R (1)	Continuing Calibration Found 154404	Continuing Calibration % R (1)		M
Antimony				1000	979	97.9	974	97.4		P
Arsenic				5000	4990	99.8	4940	98.8		P
Barium				5000	4800	96.0	4880	97.6		P
Beryllium				5000	5320	106.4	5220	104.4		P
Cadmium				5000	4960	99.2	4950	99.0		P
Calcium				50000	47200	94.4	47700	95.4		P
Chromium				5000	4790	95.8	4780	95.6		P
Copper				5000	5100	102.0	4990	99.8		P
Iron				5000	4940	98.8	4930	98.6		P
Lead				5000	4800	96.0	4860	97.2		P
Magnesium				50000	48200	96.4	47600	95.2		P
Mercury				3.00	2.91	97.0				CV
Nickel				5000	4820	96.4	4810	96.2		P
Potassium				50000	51900	103.8	50300	100.6		P
Sodium				50000	47300	94.6	46000	92.0		P

ICP Analytical Run Time (1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.

FORM II (Part 1) - IN

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U. S. EPA -CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Initial Calibration Source : Perkin-Elmer

Continuing Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration % R (1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration % R (1)	Found	% R (1)		M
					174424					
Antimony				1000	983	98.3				P
Arsenic				5000	4950	99.0				P
Barium				5000	4810	96.2				P
Beryllium				5000	5210	104.2				P
Cadmium				5000	4900	98.0				P
Calcium				50000	46900	93.8				P
Chromium				5000	4710	94.2				P
Copper				5000	5070	101.4				P
Iron				5000	4930	98.6				P
Lead				5000	4790	95.8				P
Magnesium				50000	47500	95.0				P
Mercury										CV
Nickel				5000	4750	95.0				P
Potassium				50000	52000	104.0				P
Sodium				50000	46200	92.4				P

ICP Analytical Run Time (1) Control Limits: Mercury 80-120: Other Metals 90-110: Cyanide 85-115.

FORM II (Part 1) - IN

U. S. EPA -CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _

AA CRDL Calibration Source : Inorganic Ventures

ICP CRDL Calibration Source : Inorganic Ventures

Concentration Units: uG/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP						
					Initial		Final			
	True	Found	% R	True	Found	% R	Found	% R		M
					114852		*172841*			
Antimony				120	119	99.2	122	101.7		P
Arsenic				20	23.2	116.0	21.9	109.5		P
Barium				NA						
Beryllium				10	10.3	103.0	10.5	105.0		P
Cadmium				10	9.78	97.8	10.1	101.0		P
Calcium				NA						
Chromium				20	20.1	100.5	20.1	100.5		P
Copper				50	50.1	100.2	51.8	103.6		P
Iron				NA						
Lead				100	99.9	99.9	98.6	98.6		P
Magnesium				NA						
Mercury	0.20	0.21	105							CV
Nickel				80	81.6	102.0	81.8	102.3		P
Potassium				NA						
Sodium				NA						

FORM II (Part 2) - IN

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U. S. EPA -CLP

3

BLANKS

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : ___ SAS No. : ___ SDG No.: _____

Preparation Blank Matrix : Water

Preparation Blank Concentration Units (uG/L or mG/kG) : uG/L

Analyte	Initial Calibration Blank (uG/L)	C	Continuing Calibration Blank (uG/L) 1	C	2	C	3	C	Preparation Blank	C	M
	111732		*113826*		*121459*		*150728*		*151241*		
Antimony	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	P
Arsenic	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	P
Barium	0.125	B	0.12	U	0.169	B	0.176	B	0.12	U	P
Beryllium	0.0487	B	0.036	U	0.066	B	0.036	U	0.0641	B	P
Cadmium	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	P
Calcium	3.5	U	3.5	U	3.5	U	3.5	U	5.11	B	P
Chromium	0.25	U	0.25	U	0.25	U	0.25	U	-0.304	B	P
Copper	0.43	U	0.43	U	-0.48	B	-0.742	B	-1.06	B	P
Iron	2.4	U	2.4	U	2.4	U	2.4	U	2.4	U	P
Lead	-1.48	B	-1.09	B	1	U	-1.63	B	-1.02	B	P
Magnesium	3.4	U	3.4	U	3.4	U	3.4	U	-4.43	B	P
Mercury	0.042	U	0.042	U	0.042	U	0.042	U	0.042	U	CV
Nickel	0.67	U	0.67	U	0.67	U	0.67	U	0.67	U	P
Potassium	2.5	U	2.86	B	2.5	U	2.5	U	2.5	U	P
Sodium	1.9	U	4.36	B	-2	B	-1.93	B	1.9	U	P

ICP Analytical Run Time

FORM III -IN

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U. S. EPA -CLP

3

BLANKS

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : ___ SAS No. : ___ SDG No.: _____

Preparation Blank Matrix : _____

Preparation Blank Concentration Units (uG/L or mG/kG) : _____

Analyte	Initial Calibration Blank (uG/L)	C	Continuing Calibration Blank (uG/L) 4	C	5	C	6	C	Preparation Blank	C	M
			154917		*174937*						
Antimony			2.5	U	2.5	U					P
Arsenic			2.5	U	2.5	U					P
Barium			0.166	B	0.165	B					P
Beryllium			0.036	U	0.036	U					P
Cadmium			0.27	U	0.27	U					P
Calcium			3.5	U	11.8	B					P
Chromium			0.25	U	0.25	U					P
Copper			-0.991	B	-0.78	B					P
Iron			2.4	U	2.4	U					P
Lead			-1.17	B	1	U					P
Magnesium			3.4	U	3.4	U					P
Mercury											CV
Nickel			0.67	U	0.67	U					P
Potassium			2.5	U	2.5	U					P
Sodium			1.9	U	1.9	U					P

ICP Analytical Run Time

FORM III -IN

8

U. S. EPA -CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: ___

ICP ID Number : 370 ICS Source : Perkin-Elmer

Date of Analysis : 24-Sep-04

Concentration Units: uG/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found % R	Final Found Sol. A	Final Found Sol. AB	Final Found % R
Aluminum		500,000		510,000	102.0		518,000	103.6
Antimony		600		622	103.7		626	104.3
Arsenic		100		110	110.0		113	113.0
Barium		500		509	101.8		497	99.4
Beryllium		500		551	110.2		539	107.8
Cadmium		1,000		1,060	106.0		1,060	106.0
Calcium		500,000		475,000	95.0		469,000	93.8
Chromium		500		474	94.8		467	93.4
Cobalt		500		493	98.6		486	97.2
Copper		500		547	109.4		552	110.4
Iron		200,000		191,000	95.5		189,000	94.5
Lead		1,000		951	95.1		926	92.6
Magnesium		500,000		507,000	101.4		502,000	100.4
Manganese		500		482	96.4		480	96.0
Mercury								
Nickel		1,000		937	93.7		921	92.1
Potassium								
Selenium		50		26	52.6		34	68.8
Silver		200		215	107.5		215	107.5
Sodium								
Thallium		100						
Vanadium		500		489	97.8		485	97.0
Zinc		1,000		914	91.4		904	90.4

FORM IV - IN

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U. S. EPA -CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A675186

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : ____ SAS No. : ____ SDG No.: ____

Matrix (soil/water) : Water Level (low/med): ____

Initial Wt/Vol : 50 mL

% Solids for Sample : _____ Final Volume : 50 mL

Dilution : 1

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Control Limit %R	Q1653456 Spiked Sample (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	80 - 120	503		2.5	U	500	100.6		P
Arsenic	80 - 120	2030		7.02		2,000	101.1		P
Barium	80 - 120	2250		258		2,000	99.6		P
Beryllium	80 - 120	52.1		0.036	U	50	104.2		P
Cadmium	80 - 120	40.6		0.27	U	50	81.2		P
Calcium	80 - 120	207000		109000		100,000	98.0		P
Chromium	80 - 120	191		0.25	U	200	95.5		P
Copper	80 - 120	255		0.43	U	250	102.0		P
Iron	80 - 120	3170		2280		1,000	89.0		P
Lead	80 - 120	495		1.27	B	500	98.7		P
Magnesium	80 - 120	128000		31000		100,000	97.0		P
Mercury	80 - 120	1.00		0.042	U	1.00	100.0		CV
Nickel	80 - 120	476		0.67	U	500	95.2		P
Potassium	80 - 120	105000		1420		100,000	103.6		P
Sodium	80 - 120	119000		13800		100,000	105.2		P

FORM V (Part 1) - IN

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U. S. EPA -CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A675186

Lab Name: HES - Commercial Laboratories Contract : _____

Lab Code: _____ Case No. : ____ SAS No. : ____ SDG No.: ____

Matrix (soil/water) : Water Level (low/med): low

Initial Wt/Vol : 50 mL

% Solids for Sample : _____ Final Volume : 50 mL

Dilution : 1

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Control Limit %R	Spiked Dup Sample (SDS)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	80 - 120	533		2.5	U	500	106.6		P
Arsenic	80 - 120	2130		7.02		2,000	106.1		P
Barium	80 - 120	2310		258		2,000	102.6		P
Beryllium	80 - 120	55.1		0.036	U	50	110.2		P
Cadmium	80 - 120	42.4		0.27	U	50	84.8		P
Calcium	80 - 120	214000		109000		100,000	105.0		P
Chromium	80 - 120	198		0.25	U	200	99.0		P
Copper	80 - 120	272		0.43	U	250	108.8		P
Iron	80 - 120	3320		2280		1,000	104.0		P
Lead	80 - 120	513		1.27	B	500	102.3		P
Magnesium	80 - 120	133000		31000		100,000	102.0		P
Mercury	80 - 120	0.99		0.042	U	1.00	99.0		CV
Nickel	80 - 120	497		0.67	U	500	99.4		P
Potassium	80 - 120	110000		1420		100,000	108.6		P
Sodium	80 - 120	126000		13800		100,000	112.2		P

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U. S. EPA -CLP

5A

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

EPA SAMPLE NO.

A675186

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : ____ SAS No. : ____ SDG No.: ___

Matrix (soil/water) : Water Level (low/med): ___

Initial Wt/Vol : 50 mL

% Solids for Sample : _____ Final Volume : 50 mL

Dilution : 1

Concentration Units (uG/L or mG/kG dry weight) : uG/L

Analyte	Sample Result (SR)	Q1653456 Spiked Sample (SSR)	C	0 Spiked Duplicate Sample (SDS)	C	Spike Added (SA)	% RPD	Q	M
Antimony	2.5	100.6		106.6		500	5.8		P
Arsenic	7.02	101.1		106.1		2,000	4.8		P
Barium	258	99.6		102.6		2,000	3.0		P
Beryllium	0.036	104.2		110.2		50	5.6		P
Cadmium	0.27	81.2		84.8		50	4.3		P
Calcium	109000	98		105		100,000	6.9		P
Chromium	0.25	95.5		99		200	3.6		P
Copper	0.43	102		108.8		250	6.5		P
Iron	2280	89		104		1,000	15.5		P
Lead	1.27	98.7		102.3		500	3.6		P
Magnesium	31000	97		102		100,000	5.0		P
Mercury	0.042	100		99		1.00	1.0		CV
Nickel	0.67	95.2		99.4		500	4.3		P
Potassium	1420	103.6		108.6		100,000	4.7		P
Sodium	13800	105.2		112.2		100,000	6.4		P

FORM V (Part 1) - IN

U. S. EPA -CLP
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LABORATORY CONTROL SAMPLE

Q1653455

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No.: _____

Solid LCS Source : _____

Aqueous LCS Source : SPEX

Analyte	Aqueous (uG/L) True	Found	%R	True	Found	C	Limits		%R
Antimony	500	533	106.6						
Arsenic	2000	2,140	107.0						
Barium	2000	2,100	105.0						
Beryllium	50	56	112.0						
Cadmium	50	44	87.0						
Calcium	100000	103,000	103.0						
Chromium	200	202	101.0						
Copper	250	274	109.6						
Iron	1000	1,040	104.0						
Lead	500	523	104.6						
Magnesium	100000	105,000	105.0						
Mercury	2.00	1.91	95.5						
Nickel	500	522	104.4						
Potassium	100000	106,000	106.0						
Sodium	100000	105,000	105.0						

FORM VII - IN

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U. S. EPA -CLP

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ICP SERIAL DILUTION

EPA SAMPLE NO.

A675186

Lab Name: Heritage Contract : _____

Lab Code: _____ Case No. : ____ SAS No. : ____ SDG No.: ____

Matrix (soil/water) : Water Level (low/med): _____

Concentration Units (uG/L) : uG/L Dilution 1: 5

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q (1)	M
Antimony	2.5	U	2.5	U			P
Arsenic	7.02		2.5	U			P
Barium	258		254		1.6		P
Beryllium	0.036	U	0.036	U			P
Cadmium	0.27	U	0.27	U			P
Calcium	109000		108000		0.9		P
Chromium	0.25	U	0.25	U			P
Copper	0.43	U	0.43	U			P
Iron	2280		2300		0.9		P
Lead	1.27	B	1	U			P
Magnesium	31000		30100		2.9		P
Mercury							CV
Nickel	0.67	U	0.67	U			P
Potassium	1420		1220		14.1	E	P
Sodium	13800		12300		10.9	E	P

(1) - % Difference criteria 10%, if concentration > 50*IDL.

FORM IX - IN

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U. S. EPA - CLP

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STANDARD SOLUTIONS SOURCES

Lab Name: Heritage Environmental Services, LLC Contract_____

Analyte	CALIBRATION STANDARD	ICV	CCV	CRDL	MATRIX SPIKE	ICS	Method
Aluminum	INV	PE	INV		SPEX	PE	P
Antimony	INV	PE	INV	INV	INV	PE	P
Arsenic	INV	PE	INV	INV	SPEX	PE	P
Barium	INV	PE	INV		SPEX	PE	P
Beryllium	INV	PE	INV	INV	SPEX	PE	P
Cadmium	INV	PE	INV	INV	SPEX	PE	P
Calcium	INV	SPEX	INV		SPEX	PE	P
Chromium	INV	PE	INV	INV	SPEX	PE	P
Cobalt	INV	PE	INV	INV	SPEX	PE	P
Copper	INV	PE	INV	INV	SPEX	PE	P
Iron	INV	PE	INV		SPEX	PE	P
Lead	INV	PE	INV	INV	SPEX	PE	P
Magnesium	INV	SPEX	INV		SPEX	PE	P
Manganese	INV	PE	INV	INV	SPEX	PE	P
Mercury	INV	NIST	FISHER	FISHER	FISHER		CV
Nickel	INV	PE	INV	INV	SPEX	PE	P
Potassium	INV	SPEX	INV		SPEX		P
Selenium	INV	PE	INV	INV	SPEX	PE	P
Silver	INV	PE	INV	INV	SPEX	PE	P
Sodium	INV	SPEX	INV		SPEX		P
Thallium	INV	PE	INV	INV	SPEX	PE	P
Vanadium	INV	PE	INV	INV	SPEX	PE	P
Zinc	INV	PE	INV	INV	SPEX	PE	P
Titanium	INV	PE	INV		SPEX		P
Strontium	INV	PE	INV		SPEX		P
Molybdenum	INV	PE	INV		SPEX		P
Boron	INV	PE	INV		SPEX		P
Tin	INV	PE	INV		INV		P
Zirconium	INV	PE	INV		SPEX		P
Lithium	INV	PE	INV		SPEX		P
Silicon	INV	PE	INV		INV		P

PE = Perkin Elmer Pure

INV = Inorganic Ventures

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WATER METHOD DETECTION LIMITS, uG/L — Hotblock / Hotplate

Element	ICP-MS	Vista	Vista	Vista	Vista	Vista	Vista	Vista	GFAA	GFAA	CVAA	CVAA	
	#320	#334	#334	#334	#334	#334	#370	#370	PE5100	PE5100	FIMS	FIMS	
	AAS	JPK	JJL	DAD	JPK	JJL	JPK	JJL	A	B	DAD	SON	
	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	Hotblock	
Method					Trace	Trace	Trace	Trace					
Complete	1/27/04	9/3/04		9/27/02		9/10/02		11/4/03	10/8/02	12/10/02	7/12/04	7/13/04	
Al	2.8	8.0		6.0		5.3		7.0					
B	0.36	2.6		2.5		4.6		6.9					
Sb	0.071	4.3		5.5		2.5		2.4		2.1			
As	0.67	4.4		5.4		2.9		3.5	1.6	1.7			
Ba	0.26	0.12		0.14		0.14		0.33					
Be	0.017	0.060		0.093		0.054		0.062					
Cd	0.16	0.24		0.27		0.24		0.21		0.28			
Ca		5.7		9.6		5.9		5.6					
Cr	0.19	0.38		0.42		0.20		0.42		0.29			
Co	0.044	0.55		0.84		0.36		0.61					
Cu	0.17	0.28		2.8		0.56		0.85		0.90			
Fe		2.4		5.6		2.6		4.4					
Pb	0.031	1.3		3.1		1.5		1.6	0.92	1.6			
Mg		1.6		3.2		2.2		3.9					
Mn	0.14	0.39		0.69		0.26		0.43					
Hg											0.010	0.014	
Mo	0.098	0.63		1.5		0.50		0.71					
Ni	0.15	0.72		1.3		0.59		0.49					
K		12		5.4		3.0		5.6					
Li		0.90		2.4		0.72		0.98					
P											Method	1631-E	1631-E
Se	0.52	6.5		6.7		3.4		1.9	3.2	2.0	Instrument	373	373
Si		1.6		2.9		1.7		4.7			Analyst	DAD	SON
Sr	0.079	0.43		0.53		0.51		0.49			Units	ng/L	ng/L
Sn	0.044	1.5		1.5		0.73		1.2			Complete	8/11/2004	
Ag	0.073	0.15		0.81		0.16		0.20		0.20	Hg	0.26	
Na		3.9		2.7		3.4		9.3					
Th	0.047												
Ti	0.44	0.90		1.2		0.39		0.68					
Tl	0.039	2.7		4.8		2.0		2.0	1.6	1.3			
U	0.021												
V	0.72	0.88		1.6		0.54		0.46					
Zn	1.2	1.6		2.4		0.82		1.1					
Zr	2.6	1.5		2.3		0.47		0.99					
As prep													
Se prep									1.5				
Pb (DW)													

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U. S. EPA -CLP

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INSTRUMENT DETECTION LIMITS (ANNUAL)

Lab Name: Heritage Environmental Service, LLC Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No. _____

ICP ID Number : Vista ICP #334 Date: Sep 29, 2003
Flame AA ID Number : PE FIMS-CVAA
Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	USEPA CRDL (uG/L)	Laboratory Reporting Limits	High Calibration Standard	IDL (uG/L)	M
Aluminum	237.312		200	50	10,000	11	P
Antimony	217.582		60	10	2,000	4.1	P
Arsenic	188.980		10	10	10,000	5.7	P
Barium	233.527		200	10	10,000	0.13	P
Beryllium	234.861		5	4	10,000	0.063	P
Bismuth							P
Boron	249.772			50	10,000	7.4	P
Cadmium	228.802		5	5	10,000	0.34	P
Calcium	315.887		5000	100	100,000	2.2	P
Chromium	267.716		10	10	10,000	0.22	P
Cobalt	231.160		50	10	10,000	0.90	P
Copper	324.754		25	20	10,000	0.33	P
Iron	261.382		100	20	10,000	2.5	P
Lead	220.353		3	10	10,000	2.8	P
Lithium	610.365			10	10,000	1.6	P
Magnesium	279.078		5000	100	100,000	2.4	P
Manganese	293.305		15	10	10,000	0.80	P
Mercury **	253.7		0.20	0.20	5.0	0.042	CV
Molybdenum	202.032			10	2,000	0.87	P
Nickel	221.648		40	10	10,000	1.5	P
Palladium	340.458			1	10,000	0.84	P
Potassium	728.181		5000	100	100,000	20	P
Selenium	196.026		5	10	10,000	8.0	P
Silicon	251.611			100	10,000	3.4	P
Silver	328.068		10	10	2,000	0.57	P
Sodium	589.592		5000	100	100,000	1.1	P
Sodium	568.821		5000		100,000	97	P
Strontium	216.596			10	10,000	0.38	P
Thallium	190.794		10	10	10,000	4.8	P
Tin	189.927			10	10,000	2.2	P
Titanium	322.284			10	10,000	1.0	P
Uranium							P
Vanadium	289.164		50	10	10,000	0.74	P
Yttrium				10			P
Zinc	206.200		20	20	10,000	2.4	P
Zirconium	257.147			10	10,000	0.86	P

Comments: **Mercury on 7/24/03 (Hotblock)

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: Heritage Environmental Services, LLC Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____

ICP ID Number : ICP#334 Date Jul 20, 2004

Analyte	Integ. Time (Sec.)	Concentration (uG/L)	M
Aluminum	20	500,000	P
Antimony	20	200,000	P
Arsenic	20	100,000	P
Barium	20	40,000	P
Beryllium	20	20,000	P
Boron	20	100,000	P
Cadmium	20	20,000	P
Calcium	20	500,000	P
Chromium	20	100,000	P
Cobalt	20	100,000	P
Copper	20	100,000	P
Iron	20	500,000	P
Lead	20	100,000	P
Lithium	20	20,000	P
Magnesium	20	1,000,000	P
Manganese	20	200,000	P
Mercury			P
Molybdenum	20	50,000	P
Nickel	20	100,000	P
Phosphorus			P
Potassium	20	50,000	P
Selenium	20	100,000	P
Silicon	20	40,000	P
Silver	20	5,000	P
Sodium - L	20	80,000	P
Sodium - H	20	500,000	P
Strontium	20	100,000	P
Thallium	20	100,000	P
Tin	20	100,000	P
Titanium	20	100,000	P
Uranium			P
Vanadium	20	100,000	P
Zinc	20	100,000	P
Zirconium	20	100,000	P

Comments: _____

FORM XII - IN

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Heritage Environmental Services, LLC

ICP ID Number: ICP #334 Date: 19-Dec-03 Contract: _____

	Interelement Correction Factors for:												
IEC Factors	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn
Ag 328.068	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00006818
Al 237.312	1.00000000	0.00000000	0.00502301	-0.00074716	0.00000000	0.00004759	0.00181904	-0.00036123	0.00000000	-0.00275199	0.00000000	0.00000000	-0.00234741
As 188.980	0.00000000	1.00000000	0.00010528	0.00012816	0.00000000	0.00007718	-0.00004357	0.00034182	0.00000000	0.00000000	0.00000000	0.00000000	0.00007836
B 249.772	0.00003493	0.00012603	0.00006527	0.00012823	0.00000000	0.00000000	0.00000000	-0.00018407	0.00000000	-0.00049085	0.00000000	0.00000000	0.00000000
Ba 233.527	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Be 234.861	0.00001590	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00022858	0.00000000	0.00000000	0.00000000
Ca 315.887	0.00032143	0.00008776	0.00014899	0.00043207	1.00000000	0.00036023	0.00427417	-0.00224924	0.00006914	0.00000000	0.00000000	0.00000000	0.00007272
Cd 228.802	0.00000000	-0.00079900	0.00000000	0.00000000	0.00000000	1.00000000	0.00013671	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Co 231.160	0.00000000	0.00000000	0.00000000	-0.00299938	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00010340	0.00000000	0.00000000	0.00000000
Cr 267.716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Cu 324.754	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00058573	-0.00012383	1.00000000	-0.00012930	0.00000000	0.00000000	0.00000000
Fe 261.382	0.00000000	0.00000000	0.00000000	0.00009780	0.00000000	0.00000000	0.00039449	0.00048466	0.00000000	1.00000000	0.00000000	0.00000000	-0.00016465
K 728.181	0.00000000	0.00000000	0.00007036	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	-0.00021796
Li 610.365	0.00000000	0.00000000	0.00000000	0.00000000	-0.00032100	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mg 279.078	0.00017263	0.00000000	0.00006008	0.00007679	0.00000000	0.00016579	0.00000000	-0.00013705	0.00000000	0.00026250	0.00000000	1.00000000	-0.00069198
Mn 293.305	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00027100	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000
Mo 202.032	0.00000000	0.00000000	0.00000000	-0.00008012	0.00000000	-0.00009429	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Na 568.821	0.00053547	0.00307122	-0.01623267	0.01682278	0.01037238	0.01361904	0.00661999	0.00178910	0.00280758	0.00046164	0.00155038	0.00041160	0.00133144
Na 589.592	0.00000000	0.00000000	0.01053069	0.00007116	0.00000000	0.00013117	0.00000000	0.00000000	0.00000000	0.00000000	0.00005542	0.00000000	0.00000000
Ni 221.648	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00019690	-0.00051380	-0.00022352	0.00000000	0.00000000	0.00000000	0.00000000
Pb 220.353	0.00011145	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00008720	0.00000000	0.00000000	0.00019845	0.00000000	0.00000000	0.00009448
Sb 217.582	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00025600	0.00000000	0.00000000	0.00000000
Se 196.026	0.00003390	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000250	0.00000000	0.00000000	0.00000000
Si 251.611	0.00000000	0.00000000	0.00000000	0.00012157	0.00000000	0.00017962	0.00000000	-0.00007674	0.00000000	0.00000000	0.00008522	0.00000000	0.00043729
Sn 189.927	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00010946	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Sr 216.596	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00012121	0.00000000	0.00000000	0.00006954	0.00019323	0.00000000	0.00000000	0.00000000
Ti 322.284	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00018565
Tl 190.794	0.00000000	0.00000000	0.00000000	0.00007211	0.00000000	0.00000000	0.00356619	0.00033180	-0.00002839	-0.00012207	0.00000000	0.00000000	0.00061536
V 289.164	0.00000000	0.00000000	0.00000000	-0.00007028	0.00000000	0.00000000	0.00000000	-0.00262518	0.00011592	0.00005087	0.00000000	0.00000000	-0.00302714
Zn 206.200	0.00000000	0.00000000	0.00000000	0.00013335	0.00000000	0.00031441	0.00000000	0.00310878	0.00000000	0.00002609	0.00000000	0.00000000	0.00000000
Zr 257.147	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00013904	0.00000000	0.00000000	0.00000000

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Heritage Environmental Services, LLC

ICP ID Number: ICP #334 Date: 19-Dec-03 Contract: _____

	Interelement Correction Factors for:											
Analyte	Mo	Na	Ni	Pb	Sb	Si	Sn	Sr	Ti	V	Zn	Zr
Ag 328.068	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00081438	0.00000000	0.00000000	0.00000000	0.00350859
Al 237.312	0.00000000	0.00000000	0.00000000	0.00000000	0.00026082	0.00027102	0.00034705	0.00000000	-0.00011314	0.00000000	0.00000000	0.00578320
As 188.980	0.00048091	0.00000000	0.00000000	0.00000000	0.00012590	0.00000000	0.00000000	0.00000000	-0.00007452	0.00007636	0.00000000	0.00006852
B 249.772	-0.00009171	0.00000000	0.00000000	0.00000000	0.00009127	0.00005338	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ba 233.527	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00015747	0.00000000	0.00000000
Be 234.861	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ca 315.887	0.00035802	0.00000000	0.00015246	0.00006250	0.00007773	0.00023980	0.00012282	0.00015501	-0.00016163	0.00305317	0.00006649	-0.00889786
Cd 228.802	0.00002345	0.00000000	0.00006801	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Co 231.160	0.00000000	0.00000000	0.00032145	0.00000000	0.00703720	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Cr 267.716	0.00000000	0.00000000	0.00000000	0.00000000	0.00005779	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Cu 324.754	0.00028705	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00017763	0.00000000	0.00000000	0.00000000
Fe 261.382	-0.00020127	0.00000000	0.00000000	-0.00752128	0.00008188	0.00000000	0.00000000	0.00000000	-0.00239014	0.00122368	0.00000000	0.00000000
K 728.181	0.00013467	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00655865	0.00000000	0.00000000	0.00000000
Li 610.365	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mg 279.078	-0.00011685	0.00000000	0.00000000	0.00001558	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00024578	0.00000000	0.00000000
Mn 293.305	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mo 202.032	1.00000000	0.00000000	0.00000000	0.00000000	-0.00000775	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Na 568.821	-0.08511780	1.00000000	0.00301524	0.00258150	0.00159479	0.00667350	0.00288101	0.00359808	0.00604900	-0.00091858	0.00297581	0.01740532
Na 589.592	0.00045971	1.00000000	0.00000000	0.00000000	0.00000000	0.00021449	0.00000000	0.00000000	0.00012628	0.00000000	0.00000000	0.00000000
Ni 221.648	0.00009105	0.00000000	1.00000000	0.00000000	0.00000000	0.00199236	0.00000000	0.00000000	0.00000000	-0.00007765	0.00000000	0.00000000
Pb 220.353	-0.00296439	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Sb 217.582	0.00000000	0.00000000	-0.00128400	-0.00066813	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Se 196.026	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00014578
Si 251.611	0.01127976	0.00000000	0.00000000	0.00000000	0.00007296	1.00000000	0.00214352	0.00060260	0.02404301	0.00000000	-0.00026224	0.00279895
Sn 189.927	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00003652	1.00000000	0.00000000	0.00045712	0.00000000	0.00000000	0.00042277
Sr 216.596	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	-0.00009369	0.00000000	0.00000000
Ti 322.284	0.00143184	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00029157
Tl 190.794	-0.00217153	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00009029	0.00228236	0.00209547	0.00000000	0.00000000
V 289.164	-0.00095442	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00031362	1.00000000	0.00000000	0.00150195
Zn 206.200	0.00050734	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00006114	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000
Zr 257.147	0.00137160	0.00000000	0.00000000	0.00000000	0.00000000	0.00008560	0.00000000	0.00000000	-0.00126082	-0.00009684	0.00000000	1.00000000

U. S. EPA -CLP

10
INSTRUMENT DETECTION LIMITS (ANNUAL)

Lab Name: Heritage Environmental Service, LLC Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____ SDG No. _____

ICP ID Number : Vista ICP #370 Date: Jan 20, 2004
Flame AA ID Number : PE FIMS-CVAA
Furnace AA ID Number : _____ ***Trace Method***

Analyte	Wave-length (nm)	Back-ground	USEPA CRDL (uG/L)	Laboratory Reporting Limits	High Calibration Standard	IDL (uG/L)	M
Aluminum	237.312		200	50	10,000	6.6	P
Antimony	217.582		60	5	2,000	2.5	P
Arsenic	188.980		10	5	10,000	2.5	P
Barium	233.527		200	2	10,000	0.12	P
Beryllium	234.861		5	1	10,000	0.036	P
Bismuth							P
Boron	249.772			50	10,000	12	P
Cadmium	228.802		5	1	10,000	0.27	P
Calcium	315.887		5000	100	100,000	3.5	P
Chromium	267.716		10	2	10,000	0.25	P
Cobalt	231.160		50	2	10,000	0.51	P
Copper	324.754		25	10	10,000	0.43	P
Iron	261.382		100	20	10,000	2.4	P
Lead	220.353		3	5	10,000	1.0	P
Lithium	610.365			10	10,000	1.7	P
Magnesium	279.078		5000	100	100,000	3.4	P
Manganese	293.305		15	2	10,000	0.38	P
Mercury **	253.7		0.20	0.20	5.0	0.042	CV
Molybdenum	202.032			10	2,000	0.59	P
Nickel	221.648		40	5	10,000	0.67	P
Palladium	340.458			1	10,000		P
Potassium	728.181		5000	100	100,000	2.5	P
Selenium	196.026		5	5	10,000	3.7	P
Silicon	251.611			100	10,000	2.6	P
Silver	328.068		10	2	2,000	0.15	P
Sodium	589.592		5000	100	100,000	1.9	P
Sodium	568.821		5000		100,000	330	P
Strontium	216.596			10	10,000	0.32	P
Thallium	190.794		10	10	10,000	2.7	P
Tin	189.927			10	10,000	1.1	P
Titanium	322.284			10	10,000	0.85	P
Uranium							P
Vanadium	289.164		50	2	10,000	0.55	P
Yttrium				10			P
Zinc	206.200		20	20	10,000	3.7	P
Zirconium	257.147			10	10,000	0.59	P

Comments: **Mercury on 7/24/03 (Hotblock)

U. S. EPA -CLP

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: Heritage Environmental Services, LLC Contract : _____

Lab Code: _____ Case No. : _____ SAS No. : _____

ICP ID Number : ICP#370 Date Jun 30, 2004

Trace Method

Analyte	Integ. Time (Sec.)	Concentration (uG/L)	M
Aluminum	60	500,000	P
Antimony	60	200,000	P
Arsenic	60	100,000	P
Barium	60	40,000	P
Beryllium	60	20,000	P
Boron	60	100,000	P
Cadmium	60	20,000	P
Calcium	60	500,000	P
Chromium	60	100,000	P
Cobalt	60	100,000	P
Copper	60	100,000	P
Iron	60	500,000	P
Lead	60	100,000	P
Lithium	60	20,000	P
Magnesium	60	1,000,000	P
Manganese	60	200,000	P
Mercury			P
Molybdenum	60	50,000	P
Nickel	60	100,000	P
Phosphorus			P
Potassium	60	50,000	P
Selenium	60	100,000	P
Silicon	60	50,000	P
Silver	60	3,000	P
Sodium - L	60	100,000	P
Sodium - H	60	500,000	P
Strontium	60	100,000	P
Thallium	60	100,000	P
Tin	60	100,000	P
Titanium	60	100,000	P
Uranium			P
Vanadium	60	100,000	P
Zinc	60	100,000	P
Zirconium	60	100,000	P

Comments: _____

FORM XII - IN

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U. S. EPA-CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Heritage Environmental Services, LLC

ICP ID Number: ICP #370 Date: 2-Oct-02 ***Trace Method***

	Interelement Correction Factors for:												
Analyte	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn
Ag 328.068	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00000280	0.00000000	0.00000000	0.00006821
Al 237.312	1.00000000	0.00008167	0.00681983	0.00000000	0.00000000	0.00042242	0.00181380	-0.00015937	0.00000000	-0.00248065	0.00000000	0.00000000	-0.00119870
As 188.980	0.00000000	1.00000000	0.00008627	0.00000000	0.00000000	0.00000000	0.00000000	0.00045586	0.00000000	0.00000000	0.00000000	0.00000000	0.00004409
B 249.772	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00001294	0.00000000	0.00000000	-0.00004000	0.00000000	0.00000000	0.00000000
Ba 233.527	0.00001802	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Be 234.861	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	-0.00000919	0.00000000	0.00000000	-0.00011250	0.00000000	0.00000000	0.00000009
Ca 315.887	0.00071985	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00950991	-0.00244845	0.00000000	0.00000000	0.00000000	0.00006356	0.00000000
Cd 228.802	0.00000000	-0.00143579	0.00000000	0.00000000	0.00000000	1.00000000	0.00020169	0.00000000	0.00000000	0.00002024	0.00000000	0.00000000	0.00000951
Co 231.160	0.00000000	0.00000000	0.00000000	-0.01712920	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00023700	0.00000000	0.00000000	0.00000000
Cr 267.716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Cu 324.754	0.00000000	0.00000000	0.00000000	0.00000000	0.00002503	0.00000000	-0.00061831	0.00000000	1.00000000	-0.00012895	0.00000000	0.00000000	0.00000000
Fe 261.382	0.00007159	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00116423	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	-0.00038271
K 728.181	0.00000000	0.00000000	0.00000000	0.00000000	-0.00007049	0.00000000	0.00000000	0.00000000	0.00000000	-0.00023293	1.00000000	0.00000000	0.00000000
Li 610.365	0.00000000	0.00000000	0.00000000	0.00000000	-0.00052850	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mg 279.078	-0.00007305	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00021239	0.00000000	1.00000000	-0.00072009
Mn 293.305	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00001271	1.00000000
Mo 202.032	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Na 568.821	0.00007977	0.00424906	-0.01537974	-0.00179555	0.01106931	-0.00050255	0.00136897	0.00262530	0.00428322	-0.00003918	0.00031530	0.00068657	0.00002378
Na 589.592	0.00007723	0.00000000	0.00609301	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ni 221.648	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00020135	-0.00030189	-0.00029811	0.00000000	0.00000000	0.00000000	0.00000000
Pb 220.353	0.00015000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00001791	-0.00013245	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00008562
Sb 217.582	-0.00003700	0.00000000	0.00102482	0.00053766	0.00000000	0.00274520	0.00022610	0.00000000	0.00000000	-0.00006700	0.00000000	0.00000000	0.00000000
Se 196.026	0.00000000	0.00000000	0.00000000	0.00057026	0.00000000	0.00027258	0.00011398	0.00000000	0.00000000	0.00004500	0.00000000	0.00000000	0.00000000
Si 251.611	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Sn 189.927	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00011020	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Sr 216.596	0.00000000	0.00000000	0.00004196	0.00000000	0.00003575	0.00000000	0.00000000	0.00000000	0.00012837	0.00020000	0.00000000	0.00000000	0.00000000
Ti 322.284	0.00000000	0.00000000	0.00000000	0.00000000	-0.00002600	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00020383
Tl 190.794	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00008672	0.00526253	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00066678
V 289.164	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00151838	0.00010635	0.00005500	0.00000000	0.00000000	-0.00198375
Zn 206.200	0.00002359	0.00000000	0.00000000	0.00000000	0.00003679	0.00006550	0.00000000	0.00234552	0.00014401	-0.00006896	0.00000000	0.00000351	0.00000000
Zr 257.147	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00015000	0.00000000	0.00000000	0.00003480

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U. S. [illegible]-CLP

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Heritage Environmental Services, LLC

ICP ID Number: ICP #370 Date: 2-Oct-02 ***Trace Method***

	Interelement Correction Factors for:											
Analyte	Mo	Na	Ni	Pb	Sb	Si	Sn	Sr	Ti	V	Zn	Zr
Ag 328.068	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00040966	-0.00001991	0.00001241	0.00000000	0.00316250
Al 237.312	0.00000000	0.00000000	0.00000000	0.00000000	0.00022152	0.00000000	0.00000000	0.00000000	-0.00008600	0.00000000	0.00000000	0.00239655
As 188.980	0.00028287	0.00000000	0.00000000	0.00000000	0.00007884	0.00000000	0.00000000	0.00000000	0.00000000	0.00013901	0.00000000	0.00009427
B 249.772	0.00000000	0.00000000	0.00001567	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ba 233.527	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00007265	0.00000000	0.00012135	0.00000000	0.00000000
Be 234.861	0.00000000	0.00000000	0.00000043	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00000466	0.00000000	0.00000000	0.00000000
Ca 315.887	0.00077446	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00026173	0.00401608	0.00000000	-0.01521458
Cd 228.802	0.00000000	0.00000000	0.00006541	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00004824	0.00000000	0.00000000
Co 231.160	0.00000000	0.00000000	0.00056576	0.00000000	0.00446365	0.00000000	0.00000000	0.00000000	0.00000634	0.00003231	0.00000000	0.00000000
Cr 267.716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Cu 324.754	0.00031439	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00023542	0.00002425	0.00000000	0.00000000
Fe 261.382	0.00000000	0.00000000	0.00000000	-0.01290638	0.00000000	0.00000000	0.00000000	0.00000000	-0.00298308	0.00155631	0.00000000	0.00000000
K 728.181	0.00027610	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Li 610.365	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00008086	0.00000000	0.00000000	0.00000000
Mg 279.078	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Mn 293.305	0.00007939	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00002036	0.00000000	0.00000000
Mo 202.032	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Na 568.821	-0.01284436	1.00000000	0.00102137	-0.00046605	0.00312466	-0.00007129	-0.00030515	-0.00080901	-0.04373320	-0.00226815	0.00283461	0.01935898
Na 589.592	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Ni 221.648	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00173273	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Pb 220.353	-0.00327089	0.00000000	-0.00001741	1.00000000	0.00000000	0.00000000	0.00000000	0.00010323	0.00000000	0.00000000	0.00000000	0.00000000
Sb 217.582	0.00000000	0.00000000	-0.00120301	-0.00083451	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00196136	0.00000000	0.00029140
Se 196.026	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Si 251.611	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Sn 189.927	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00043974	0.00000000	0.00000000	0.00052035
Sr 216.596	0.00000000	0.00000000	-0.00079614	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	-0.00014583	0.00000000	0.00000000
Ti 322.284	0.00138674	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	1.00000000	0.00000000	0.00000000	0.00026442
Tl 190.794	-0.00228190	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	-0.00013234	0.00197280	0.00277564	0.00000000	0.00000000
V 289.164	-0.00055812	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000755	-0.00041515	1.00000000	0.00000000	0.00146318
Zn 206.200	0.00088308	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00004973	0.00000000	1.00000000	0.00000000
Zr 257.147	0.00148609	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00077206	0.00000000	-0.00066006	-0.00002567	0.00000000	1.00000000

MTO PREP SHEET Method: EPA 200.0

Prep Worksheet for Run: R476326 Instrument: 275 Page: 1

Analyst J / P / K # 3506 Reviewed ___/___/___ #_____ Recorded ___/___/___ #_____

Date 9 / 22 / 04 Start 22:00 Stop 5:00 Date ___/___/___ Date ___/___/___

SAMPLE	TEST	Initial Wt/Vol	Final Volume	DUE	SUBMITTER	CONTAINER ID	AN_REP	ELEMENT
Q1653454	BLA02	—	50ml		Milli-Q			
Q1653455	LCS	—			ICP	500µl spikes	#1 13930	
Q1653456	SPI02	50ml			A675186		#2 13977	
Q1653457	DPS02						#3 13966	
A675186	P129.2.0			06-OCT	IDEM - OFFICE	DK28004	ICP.0	Ba Ca Cd Cr Cu Fe K Mg Na Ni Sb
	P129.2.0			06-OCT	IDEM - OFFICE		TRACE.0	As Be Pb
Q1653458	BLA02	—			Milli-Q			
Q1653459	LCS	—			TRACE	500µl spikes	#1 13930	
Q1653460	SPI02	50ml			A675186		#2 13977	
Q1653461	DPS02						#3 13966	

COPY

Fisher 1104050 H2O2 Fisher _____ HCL Fisher 4104030 Balance# _____

1+1 HNO3_____ 1+1 HCl_____ HotBlock ✓ HotPlate_____ WaterBath_____ Digestion Temperature ~95°C

(runprep.sql)

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007354

MTO PREP SHEET Method: SW846-7470A

Prep Worksheet for Run: R476215 Instrument: 275 Page: 1

Test [illegible] #1016 Reviewed D/A/D #DR Recorded R/L/B #

Date 9/20/04 Start 10:00 Stop 17:00 Date 9/21/04 Date 9/22/04

SAMPLE	TEST	Initial Wt/Vol	Final Volume	DUE	SUBMITTER	CONTAINER ID	AN_REP	ELEMENT
Q1652736	LCS	40ml	40ml			80ml #13973		
Q1652737	BLA02							
A675186	P131.2.0			06-OCT	IDEM - OFFICE	DK28004	CVAA.0	Hg
Q1652738	SPI02					400ml #13975		
Q1652739	DPS02							
A675173	P131.6.0			[redacted]		W-5	CVAA.0	Hg
A675174	P131.6.0			[redacted]		EB #1	CVAA.0	Hg
A675175	P131.6.0			[redacted]		EB #1	CVAA.0	Hg
A675254	P134.6.0			[redacted]		EP 101	CVAA.1	Hg
A675255	P134.6.0			[redacted]		EP 21	CVAA.1	Hg

[redacted]3 Fisher 1104050 H_2SO_4 036423 H2O2 Fisher _____ HCL Fisher _____ Balance# _____

1+1 HNO3_____ 1+1 HCl_____ HotBlock 1 HotPlate_____ WaterBath_____ Digestion Temperature 95°

(runprep.sql)

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Blank (Blk) 9/24/2004, 10:46:07 AM Rack 1, Tube 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-1.7093	-2.9660	-3.1117
Al	237.312	1.5117	1.7047	0.30533
As	188.980	-0.38855	-0.84481	0.17985
B	249.772	44.782	44.000	43.669
Ba	233.527	26.556	27.590	27.584
Be	234.861	-4.0185	-4.8690	-3.4150
Ca	315.887	135.51	139.63	134.63
Cd	228.802	1.8060	1.3463	2.2228
Co	231.160	3.2408	2.6742	2.2309
Cr	267.716	1.5073	0.55286	0.43754
Cu	324.754	44.358	44.988	45.980
Fe	261.382	5.0884	4.2022	5.4146
K	728.181	-102.19	-107.21	-100.64
Li	610.365	342.92	344.79	340.15
Mg	279.078	1.9614	2.3863	1.6946
Mn	293.305	-2.3797	-2.7048	-4.3941
Mo	202.032	0.97940	0.76526	0.97232
Na	568.821	-78.816	-71.053	-74.263
Na	589.592	209.82	215.91	231.81
Ni	221.648	-0.14757	-0.083719	0.27537
Pb	220.353	-0.45351	-1.0217	-2.2773
Sb	217.582	-0.34080	-0.26562	-0.047552
Se	196.026	1.3990	2.3233	1.8773
Si	251.611	22.180	22.458	21.716
Sn	189.927	-0.009457	-0.70488	-0.73620
Sr	216.596	1.3480	0.097515	0.021227
Ti	322.284	30.887	28.210	27.798
Tl	190.794	-0.77313	0.23277	-0.89644
V	289.164	4.6815	3.8581	3.0479
Y	361.104	83486	80590	81133
Zn	206.200	2.7230	2.8288	2.9143
Zr	257.147	5.3594	5.1958	4.1854

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ag	328.068	0.000000	ppm	0.771	29.7	-2.5956
Al	237.312	0.000000	ppm	0.758	64.6	1.1739
As	188.980	0.000000	ppm	0.513	146.2	-0.35117
B	249.772	0.000000	ppm	0.571	1.3	44.154

9-24-04 ICP#370 JL407

CCV=S13895 STD2=S13899
DLS=S13903 MADE 8-3-04
CDL01=S13904
HMCS=STD2 STD3=S13900
ICS-A=S13907 MADE 8-3-04
ICS-AB=S13906
STD4=S13902
ICV01-19=S13905 MADE 8-3-04
ICV01-07=S13705
ICV01-31=S13704 STD3X=S13901

040924JJL370T

A675186

AsBePb| BaCaCd Cr Cu Fe K
Mg Na Ni Sb

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ba	233.527	0.000000	ppm	0.595	2.2	27.243
Be	234.861	0.000000	ppm	0.731	17.8	-4.1008
Ca	315.887	0.000000	ppm	2.668	2.0	136.59
Cd	228.802	0.000000	ppm	0.438	24.5	1.7917
Co	231.160	0.000000	ppm	0.506	18.6	2.7153
Cr	267.716	0.000000	ppm	0.587	70.5	0.83256
Cu	324.754	0.000000	ppm	0.818	1.8	45.109
Fe	261.382	0.000000	ppm	0.627	12.8	4.9017
K	728.181	0.000000	ppm	3.432	3.3	-103.35
Li	610.365	0.000000	ppm	2.335	0.7	342.62
Mg	279.078	0.000000	ppm	0.349	17.3	2.0141
Mn	293.305	0.000000	ppm	1.081	34.2	-3.1595
Mo	202.032	0.000000	ppm	0.122	13.4	0.90566
Na	568.821	0.000000	ppm	3.901	5.2	-74.711
Na	589.592	0.000000	ppm	11.356	5.2	219.18
Ni	221.648	0.000000	ppm	0.228	1551.5	0.014695
Pb	220.353	0.000000	ppm	0.933	74.6	-1.2508
Sb	217.582	0.000000	ppm	0.152	69.9	-0.21799
Se	196.026	0.000000	ppm	0.462	24.8	1.8665
Si	251.611	0.000000	ppm	0.375	1.7	22.118
Sn	189.927	0.000000	ppm	0.411	85.0	-0.48351
Sr	216.596	0.000000	ppm	0.745	152.4	0.48890
Ti	322.284	0.000000	ppm	1.677	5.8	28.965
Tl	190.794	0.000000	ppm	0.619	129.3	-0.47893
V	289.164	0.000000	ppm	0.817	21.1	3.8625
Zn	206.200	0.000000	ppm	0.096	3.4	2.8220
Zr	257.147	0.000000	ppm	0.636	12.9	4.9135

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.000000	81736	1539.491	1.9

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Cr(1)

Std 2 (Std) 9/24/2004, 10:51:22 AM Rack 1, Tube 2

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	36718	36517	36896
Al	237.312	2887.6	2862.0	2883.5
As	188.980	1620.9	1578.1	1617.0
B	249.772	49389	50931	52197
Ba	233.527	137251	136382	138779
Be	234.861	407224	408605	409819

El	Wavelen.	Replicates Intensity (c/s)		
Cd	228.802	43113	42961	43334
Co	231.160	20006	19882	20173
Cr	267.716	69492	69151	70069
Cu	324.754	136938	136661	136974
Fe	261.382	7386.2	7349.6	7440.3
Li	610.365	221364	220672	221614
Mn	293.305	52341	52146	52707
Ni	221.648	5948.5	5993.8	5951.0
Pb	220.353	5513.2	5465.0	5534.1
Se	196.026	1331.0	1329.7	1336.0
Sr	216.596	21070	19645	21010
Tl	190.794	2929.2	2944.1	2959.3
V	289.164	35100	35305	35360
Y	361.104	86331	85833	86748
Zn	206.200	5038.9	5032.9	5052.5
Zr	257.147	46250	46040	46687

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ag	328.068	2.0000	ppm	189.638	0.5	36710
Al	237.312	10.000	ppm	13.775	0.5	2877.7
As	188.980	10.000	ppm	23.661	1.5	1605.3
B	249.772	10.000	ppm	1406.520	2.8	50839
Ba	233.527	10.000	ppm	1213.511	0.9	137471
Be	234.861	10.000	ppm	1298.413	0.3	408550
Cd	228.802	10.000	ppm	187.363	0.4	43136
Co	231.160	10.000	ppm	146.375	0.7	20020
Cr	267.716	10.000	ppm	464.006	0.7	69571
Cu	324.754	10.000	ppm	170.869	0.1	136858
Fe	261.382	10.000	ppm	45.636	0.6	7392.0
Li	610.365	10.000	ppm	488.080	0.2	221217
Mn	293.305	10.000	ppm	284.863	0.5	52398
Ni	221.648	10.000	ppm	25.483	0.4	5964.4
Pb	220.353	10.000	ppm	35.484	0.6	5504.1
Se	196.026	10.000	ppm	3.324	0.2	1332.3
Sr	216.596	10.000	ppm	806.105	3.9	20575
Tl	190.794	10.000	ppm	15.040	0.5	2944.2
V	289.164	10.000	ppm	136.818	0.4	35255
Zn	206.200	10.000	ppm	10.020	0.2	5041.4
Zr	257.147	10.000	ppm	330.090	0.7	46325

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0000	86304	457.933	0.5

Std 4 (Std) **9/24/2004, 10:56:36 AM** **Rack 1, Tube 3**

El	Wavelen.	Replicates Intensity (c/s)		
Mo	202.032	3966.0	4021.6	4119.6
Sb	217.582	747.13	785.02	802.05
Si	251.611	8156.3	8416.0	8628.4
Sn	189.927	1644.0	1712.6	1756.8
Ti	322.284	39929	40245	41148
Y	361.104	86703	83294	81886

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Mo	202.032	2.0000	ppm	77.760	1.9	4035.7
Sb	217.582	2.0000	ppm	28.112	3.6	778.07
Si	251.611	10.000	ppm	236.402	2.8	8400.2
Sn	189.927	10.000	ppm	56.852	3.3	1704.5
Ti	322.284	10.000	ppm	632.672	1.6	40441

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.97285	83961	2476.594	2.9

Std 3 (Std) **9/24/2004, 11:01:50 AM** **Rack 1, Tube 4**

El	Wavelen.	Replicates Intensity (c/s)		
K	728.181	103799	103008	100885
Na	568.821	267.46	256.81	283.67
Na	589.592	359711	356092	345841
Y	361.104	83546	84246	88343

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
K	728.181	10.000	ppm	1506.920	1.5	102564
Na	568.821	10.000	ppm	13.525	5.0	269.31
Na	589.592	10.000	ppm	7194.599	2.0	353881

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.98927	85378	2590.900	3.0

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Std 3 10X (Std) 9/24/2004, 11:07:04 AM Rack 1, Tube 5

El	Wavelen.	Replicates Intensity (c/s)			
Ca	315.887	215157	207497	208291	
K	728.181	1096647	1050534	1074853	
Mg	279.078	34893	33222	33958	
Na	568.821	4542.8	4449.5	4392.7	
Na	589.592	3743377	3547187	3660107	
Y	361.104	78893	82462	80159	

El	Wavelen.	Sol'n Conc.	Units	SD(Int)	%RSD(Int)	Int. (c/s)
Ca	315.887	100.00	ppm	4212.225	2.0	210315
K	728.181	100.00	ppm	23067.828	2.1	1074011
Mg	279.078	100.00	ppm	837.567	2.5	34024
Na	568.821	100.00	ppm	75.798	1.7	4461.7
Na	589.592	100.00	ppm	98467.719	2.7	3650224

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.93280	80505	1809.654	2.2

Ag 328.068 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-2.5956	0.000000	0.000000	-	-
Std 2		36710	2.0000	2.0000	0.000000	0.0

Curve Type: Linear Equation: y = 18356.4 x − -2.59564

Al 237.312 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1.1739	0.000000	0.000000	-	-
Std 2		2877.7	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 287.652 x − 1.17388

As 188.980 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-0.35117	0.000000	0.000000	-	-
Std 2		1605.3	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 160.57 x + -0.351172

B 249.772 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		44.151	0.000000	0.000000	-	-
Std 2		50839	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 5079.46 x − 44.1506

Ba 233.527 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		27.243	0.000000	0.000000	-	-
Std 2		137471	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 13744.3 x − 27.2431

Be 234.861 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-4.1008	0.000000	0.000000	-	-
Std 2		408550	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 40855.4 x − -4.10084

Ca 315.887 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		136.59	0.000000	0.000000	-	-
Std 3 10X		210315	100.00	100.00	0.000000	0.0

Curve Type: Linear Equation: y = 2101.79 x − 136.592

Cd 228.802 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1.7917	0.000000	0.000000	-	-
Std 2		43136	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 4313.41 x − 1.7917

Co 231.160 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		2.7153	0.000000	0.000000	-	-
Std 2		20020	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 2001.74 x − 2.7153

Cr 267.716 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		0.83256	0.000000	0.000000	-	-
Std 2		69571	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 6956.98 x − 0.832562

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Co 324.754 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		45.109	0.000000	0.000000	-	-
Std 2		136858	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: $y = 13681.3\ x - 45.1089$

Fe 261.382 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		4.9017	0.000000	0.000000	-	-
Std 2		7392.0	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: $y = 738.714\ x - 4.90173$

K 728.181 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-103.35	0.000000	0.000000	-	-
Std 3		102564	10.000	10.000	0.000000	0.0
Std 3 10X		1074011	100.00	100.00	0.000000	0.0

Curve Type: Quadratic Equation: $y = 5.27144\ x^2 - 10214\ x - -103.348$

Li 610.365 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		342.62	0.000000	0.000000	-	-
Std 2		221217	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: $y = 22087.4\ x - 342.619$

Mg 279.078 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		2.0141	0.000000	0.000000	-	-
Std 3 10X		34024	100.00	100.00	0.000000	0.0

Curve Type: Linear Equation: $y = 340.223\ x - 2.0141$

Mn 293.305 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-3.1595	0.000000	0.000000	-	-
Std 2		52398	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: $y = 5240.13\ x - -3.15953$

Mo 202.032 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		0.905566	0.000000	0.000000	-	-
Std 4		4035.7	2.0000	2.0000	0.000000	0.0

Curve Type: Linear Equation: $y = 2017.41\ x - 0.905661$

Na 568.821 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 0.999741

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-74.711	0.000000	1.1823	-	-
Std 3		269.31	10.000	8.6863	-1.3137	-13.1
Std 3 10X		4461.7	100.00	100.13	0.13138	0.1

Curve Type: Linear Equation: $y = 45.8456\ x - -128.915$

Na 589.592 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		219.18	0.000000	0.000000	-	-
Std 3		353881	10.000	10.000	0.000000	0.0
Std 3 10X		3650224	100.00	100.00	0.000000	0.0

Curve Type: Quadratic Equation: $y = 12.598\ x^2 - 35240.2\ x - 219.179$

Ni 221.648 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		0.014695	0.000000	0.000000	-	-
Std 2		5964.4	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: $y = 596.443\ x - 0.0146954$

Pb 220.353 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-1.2508	0.000000	0.000000	-	-
Std 2		5504.1	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: $y = 550.536\ x - -1.25084$

Sb 217.582 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-0.21799	0.000000	0.000000	-	-
Std 4		778.07	2.0000	2.0000	-0.000000	0.0

Curve Type: Linear Equation: $y = 389.142\ x - -0.217991$

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Se 196.026 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		1.8665	0.000000	0.000000	-	-
Std 2		1332.3	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 133.039 x + 1.86653

Si 251.611 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		22.118	0.000000	0.000000	-	-
Std 4		8400.2	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 837.809 x + 22.1182

Sn 189.927 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-0.48351	0.000000	0.000000	-	-
Std 4		1704.5	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 170.494 x + -0.483512

Sr 216.596 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		0.48890	0.000000	0.000000	-	-
Std 2		20575	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 2057.45 x + 0.488899

Ti 322.284 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		28.965	0.000000	0.000000	-	-
Std 4		40441	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 4041.18 x + 28.9652

Tl 190.794 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		-0.47893	0.000000	0.000000	-	-
Std 2		2944.2	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 294.47 x + -0.478932

V 289.164 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		3.8625	0.000000	0.000000	-	-
Std 2		35255	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 3525.08 x + 3.86249

Zn 206.200 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		2.8220	0.000000	0.000000	-	-
Std 2		5041.4	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 503.86 x + 2.82204

Zr 257.147 Calibration (ppm) 9/24/2004, 11:07:04 AM Correlation Coefficient: 1.000000

Label	Flags	Int. (c/s)	Std Conc.	Calc Conc.	Error	%Error
Blank		4.9135	0.000000	0.000000	-	-
Std 2		46325	10.000	10.000	0.000000	0.0

Curve Type: Linear Equation: y = 4632.03 x + 4.91351

CCV (CCV) 9/24/2004, 11:12:18 AM Rack 1, Tube 6

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	18179	18243	17990
Al	237.312	1429.5	1428.3	1406.8
As	188.980	799.45	811.65	794.78
B	249.772	10393	10730	10628
Ba	233.527	67917	67360	66266
Be	234.861	214281	216836	213094
Ca	315.887	101085	100636	98885
Cd	228.802	21681	21736	21396
Co	231.160	9587.4	9567.7	9410.0
Cr	267.716	33661	33900	33009
Cu	324.754	69187	69660	68788
Fe	261.382	3653.7	3654.4	3595.9
K	728.181	529924	536837	529239
Li	610.365	112069	113489	111641
Mg	279.078	16306	16406	16138
Mn	293.305	25555	25604	25175
Mo	202.032	1930.4	1930.9	1901.6
Na	568.821	1914.4	1878.2	1872.1
Na	589.592	1701072	1722457	1701499
Ni	221.648	2909.0	2898.8	2824.2
Pb	220.353	2693.2	2672.9	2649.8
Sb	217.582	384.82	386.95	380.13
Se	196.026	668.77	679.23	666.77
Si	251.611	4199.1	4238.5	4190.0

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El	Wavelen.	Replicates Intensity (c/s)		
Sn	189.927	811.08	810.70	795.40
Sr	216.596	10447	9921.1	9810.7
Ti	322.284	19292	19203	18884
Tl	190.794	1423.3	1422.4	1404.8
V	289.164	17181	17108	16834
Y	361.104	81946	80570	81564
Zn	206.200	2454.5	2458.2	2414.3
Zr	257.147	22704	22674	22310

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.97172	ppm	0.007179	0.7	18137	0.97172 ppm	Y 361.104	97.17165
Al	237.312	4.8911	ppm	0.044364	0.9	1421.5	4.8911 ppm	Y 361.104	97.82119
As	188.980	4.9911	ppm	0.054224	1.1	801.96	4.9911 ppm	Y 361.104	99.82130
B	249.772	2.0749	ppm	0.034062	1.6	10583	2.0749 ppm	Y 361.104	103.74414
Ba	233.527	4.8850	ppm	0.061111	1.3	67181	4.8850 ppm	Y 361.104	97.70035
Be	234.861	5.2567	ppm	0.046810	0.9	214737	5.2567 ppm	Y 361.104	105.13393
Ca	315.887	47.622	ppm	0.55289	1.2	100202	47.622 ppm	Y 361.104	95.24493
Cd	228.802	5.0139	ppm	0.042298	0.8	21604	5.0139 ppm	Y 361.104	100.27720
Co	231.160	4.8415	ppm	0.048574	1.0	9521.7	4.8415 ppm	Y 361.104	96.82974
Cr	267.716	4.8185	ppm	0.066291	1.4	33523	4.8185 ppm	Y 361.104	96.37002
Cu	324.754	5.0571	ppm	0.031926	0.6	69212	5.0571 ppm	Y 361.104	101.14159
Fe	261.382	4.9786	ppm	0.045446	0.9	3634.7	4.9786 ppm	Y 361.104	99.57169
K	728.181	50.765b	ppm	0.39096	0.8	532000	50.765 ppm	Y 361.104	101.53078
Li	610.365	5.0870	ppm	0.043786	0.9	112400	5.0870 ppm	Y 361.104	101.73972
Mg	279.078	47.854	ppm	0.39914	0.8	16283	47.854 ppm	Y 361.104	95.70860
Mn	293.305	4.8556	ppm	0.044794	0.9	25445	4.8556 ppm	Y 361.104	97.11255
Mo	202.032	0.95174	ppm	0.008300	0.9	1921.0	0.95174 ppm	Y 361.104	95.17414
Na	568.821	43.419b	ppm	0.49855	1.1	1888.2	43.419 ppm	Y 361.104	86.83831Q
Na	589.592	47.624	ppm	0.33546	0.7	1708342	47.624 ppm	Y 361.104	95.24820
Ni	221.648	4.8150	ppm	0.077619	1.6	2877.4	4.8150 ppm	Y 361.104	96.29906
Pb	220.353	4.8583	ppm	0.039404	0.8	2672.0	4.8583 ppm	Y 361.104	97.16618
Sb	217.582	0.96494	ppm	0.008968	0.9	383.97	0.96494 ppm	Y 361.104	96.49413
Se	196.026	5.0277	ppm	0.050316	1.0	671.59	5.0277 ppm	Y 361.104	100.55315
Si	251.611	4.9977	ppm	0.030730	0.6	4209.2	4.9977 ppm	Y 361.104	99.95308
Sn	189.927	4.7249	ppm	0.052482	1.1	805.72	4.7249 ppm	Y 361.104	94.49785
Sr	216.596	4.8917	ppm	0.16538	3.4	10060	4.8917 ppm	Y 361.104	97.83321
Ti	322.284	4.7247	ppm	0.052998	1.1	19126	4.7247 ppm	Y 361.104	94.49356
Tl	190.794	4.7618	ppm	0.035413	0.7	1416.8	4.7618 ppm	Y 361.104	95.23538
V	289.164	4.8468	ppm	0.051823	1.1	17041	4.8468 ppm	Y 361.104	96.93680

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Zn	206.200	4.8204	ppm	0.048397	1.0	2442.3	4.8204 ppm	Y 361.104	96.40838
Zr	257.147	4.8687	ppm	0.047307	1.0	22563	4.8687 ppm	Y 361.104	97.37375

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.94271	81360	710.292	0.9

BLA01 (CCB) **9/24/2004, 11:17:32 AM** **Rack 1, Tube 7**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-1.0499	1.2708	-0.59541
Al	237.312	0.47989	1.5155	1.0319
As	188.980	-0.25501	-0.40114	-0.65748
B	249.772	401.69	328.09	294.14
Ba	233.527	30.047	29.101	27.742
Be	234.861	-2.3892	-2.6985	-1.3157
Ca	315.887	133.51	135.85	135.11
Cd	228.802	1.5910	1.2733	1.6025
Co	231.160	2.2845	2.7602	1.9133
Cr	267.716	2.3778	1.1066	1.5347
Cu	324.754	44.997	43.081	45.103
Fe	261.382	3.6213	3.6855	2.7642
K	728.181	-103.31	-110.38	-114.15
Li	610.365	335.56	362.65	356.93
Mg	279.078	1.7377	1.7577	2.0905
Mn	293.305	-1.1294	-3.3455	-2.9582
Mo	202.032	7.9399	3.5267	1.8963
Na	568.821	-72.467	-73.595	-78.054
Na	589.592	182.09	206.59	196.15
Ni	221.648	0.011815	-0.36333	0.53641
Pb	220.353	-1.8232	-1.7617	-2.6249
Sb	217.582	-0.11889	-0.28742	0.95322
Se	196.026	1.7136	1.7902	1.4236
Si	251.611	40.627	35.175	32.253
Sn	189.927	-0.32263	-0.73452	-0.51280
Sr	216.596	0.86157	-1.1556	-0.95391
Ti	322.284	31.317	30.924	34.108
Tl	190.794	1.7249	0.79651	0.95437
V	289.164	5.9933	5.5585	4.1171
Y	361.104	85823	83756	83036
Zn	206.200	1.6619	2.0633	1.7629

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El	Wavelen.	Replicates Intensity (c/s)		
Zr	257.147	8.7144	6.4306	7.7520

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000134	ppm	0.000067	50.0	-0.12486	0.000134 ppm	Y 361.104	0.00013
Al	237.312	-0.000564u	ppm	0.001801	319.1	1.0091	-0.000564 ppm	Y 361.104	-0.00056
As	188.980	-0.000540u	ppm	0.001269	234.8	-0.43788	-0.000540 ppm	Y 361.104	-0.00054
B	249.772	0.058501	ppm	0.010824	18.5	341.31	0.058501 ppm	Y 361.104	0.05850Z
Ba	233.527	0.000125	ppm	0.000084	67.6	28.963	0.000125 ppm	Y 361.104	0.00012
Be	234.861	0.000049	ppm	0.000018	36.5	-2.1345	0.000049 ppm	Y 361.104	0.00005
Ca	315.887	-0.000860u	ppm	0.000568	66.0	134.82	-0.000860 ppm	Y 361.104	-0.00086
Cd	228.802	-0.000069u	ppm	0.000043	62.4	1.4889	-0.000069 ppm	Y 361.104	-0.00007
Co	231.160	-0.000233u	ppm	0.000212	91.0	2.3194	-0.000233 ppm	Y 361.104	-0.00023
Cr	267.716	0.000121	ppm	0.000093	77.0	1.6730	0.000121 ppm	Y 361.104	0.00012
Cu	324.754	-0.000050u	ppm	0.000083	167.8	44.394	-0.000050 ppm	Y 361.104	-0.00005
Fe	261.382	-0.002139u	ppm	0.000696	32.6	3.3570	-0.002139 ppm	Y 361.104	-0.00214
K	728.181	-0.000580u	ppm	0.000539	93.0	-109.28	-0.000580 ppm	Y 361.104	-0.00058
Li	610.365	0.000424u	ppm	0.000647	152.6	351.71	0.000424 ppm	Y 361.104	0.00042
Mg	279.078	-0.000448u	ppm	0.000582	130.1	1.8620	-0.000448 ppm	Y 361.104	-0.00045
Mn	293.305	0.000130u	ppm	0.000226	173.9	-2.4777	0.000130 ppm	Y 361.104	0.00013
Mo	202.032	0.001759	ppm	0.001550	88.1	4.4543	0.001759 ppm	Y 361.104	0.00176
Na	568.821	1.1816	ppm	0.064441	5.5	-74.706	1.1816 ppm	Y 361.104	1.18157Z
Na	589.592	-0.000689u	ppm	0.000349	50.6	194.94	-0.000689 ppm	Y 361.104	-0.00069
Ni	221.648	0.000026u	ppm	0.000758	2910.4	0.061632	0.000026 ppm	Y 361.104	0.00003
Pb	220.353	-0.001485u	ppm	0.000875	58.9	-2.0699	-0.001485 ppm	Y 361.104	-0.00148
Sb	217.582	0.001028u	ppm	0.001729	168.2	0.18230	0.001028 ppm	Y 361.104	0.00103
Se	196.026	-0.001686u	ppm	0.001454	86.2	1.6425	-0.001686 ppm	Y 361.104	-0.00169
Si	251.611	0.016591	ppm	0.005073	30.6	36.018	0.016591 ppm	Y 361.104	0.01659
Sn	189.927	-0.000227u	ppm	0.001209	532.3	-0.52332	-0.000227 ppm	Y 361.104	-0.00023
Sr	216.596	-0.000439u	ppm	0.000540	123.1	-0.41597	-0.000439 ppm	Y 361.104	-0.00044
Ti	322.284	0.000778	ppm	0.000429	55.2	32.116	0.000778 ppm	Y 361.104	0.00078
Tl	190.794	0.005594	ppm	0.001687	30.2	1.1586	0.005594 ppm	Y 361.104	0.00559
V	289.164	0.000377	ppm	0.000279	73.8	5.2230	0.000377 ppm	Y 361.104	0.00038
Zn	206.200	-0.001965u	ppm	0.000414	21.1	1.8293	-0.001965 ppm	Y 361.104	-0.00196
Zr	257.147	0.000573	ppm	0.000248	43.2	7.6323	0.000573 ppm	Y 361.104	0.00057

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.97568	84205	1446.433	1.7

ICV01-19 (ICV) 9/24/2004, 11:22:45 AM Rack 1, Tube 8

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	46.109	43.977	47.372
Al	237.312	-0.002448	1.2234	0.11437
As	188.980	160.81	166.11	164.37
B	249.772	299.85	282.33	249.75
Ba	233.527	30.400	30.799	30.479
Be	234.861	42738	42872	43145
Ca	315.887	2243.9	2255.6	2246.4
Cd	228.802	4413.8	4466.5	4453.4
Co	231.160	2062.9	2075.7	2062.1
Cr	267.716	6953.6	7071.7	7063.4
Cu	324.754	14314	14563	14485
Fe	261.382	761.88	775.84	767.00
K	728.181	-93.899	-101.39	-98.188
Li	610.365	21317	21743	21664
Mg	279.078	328.97	335.14	333.07
Mn	293.305	5379.9	5455.1	5416.8
Mo	202.032	1984.1	2008.2	2006.5
Na	568.821	-82.929	-76.725	-71.600
Na	589.592	178.74	186.45	178.10
Ni	221.648	622.80	610.44	613.94
Pb	220.353	566.03	568.55	566.01
Sb	217.582	393.76	397.71	398.35
Se	196.026	135.62	137.06	136.67
Si	251.611	58.715	58.270	57.620
Sn	189.927	-0.30944	-0.38975	-0.21873
Sr	216.596	2204.5	2130.4	2112.0
Ti	322.284	4033.0	4066.3	4045.9
Tl	190.794	307.48	311.14	310.51
V	289.164	3531.1	3564.3	3541.9
Y	361.104	85240	83512	83720
Zn	206.200	509.70	509.94	509.92
Zr	257.147	4279.3	4327.0	4302.4

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000540	ppm	0.000093	17.3	45.820	-0.000540 ppm	Y 361.104	-
Al	237.312	-0.004362u	ppm	0.002352	53.9	0.44512	-0.004362 ppm	Y 361.104	-
As	188.980	1.0207	ppm	0.016829	1.6	163.77	1.0207 ppm	Y 361.104	102.07000
B	249.772	0.045903	ppm	0.005006	10.9	277.31	0.045903 ppm	Y 361.104	-

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	0.000071	ppm	0.000015	21.7	30.559	0.000071 ppm	Y 361.104	-
Be	234.861	1.0507	ppm	0.005078	0.5	42918	1.0507 ppm	Y 361.104	105.07086
Ca	315.887	1.0067	ppm	0.002943	0.3	2248.6	1.0067 ppm	Y 361.104	-
Cd	228.802	1.0311	ppm	0.006369	0.6	4444.6	1.0311 ppm	Y 361.104	103.11403
Co	231.160	1.0423	ppm	0.003823	0.4	2066.9	1.0423 ppm	Y 361.104	104.23118
Cr	267.716	1.0103	ppm	0.009474	0.9	7029.6	1.0103 ppm	Y 361.104	101.03141
Cu	324.754	1.0534	ppm	0.009299	0.9	14454	1.0534 ppm	Y 361.104	105.34431
Fe	261.382	1.0472	ppm	0.009561	0.9	768.24	1.0472 ppm	Y 361.104	104.71539
K	728.181	0.000342	ppm	0.000368	107.6	-97.827	0.000342 ppm	Y 361.104	-
Li	610.365	0.96150	ppm	0.010249	1.1	21575	0.96150 ppm	Y 361.104	96.14951
Mg	279.078	0.97145	ppm	0.009239	1.0	332.39	0.97145 ppm	Y 361.104	-
Mn	293.305	1.0343	ppm	0.007177	0.7	5417.3	1.0343 ppm	Y 361.104	103.42999
Mo	202.032	0.99073	ppm	0.006650	0.7	1999.6	0.99073 ppm	Y 361.104	99.07253
Na	568.821	1.1398	ppm	0.12374	10.9	-77.085	1.1398 ppm	Y 361.104	-
Na	589.592	-0.001083u	ppm	0.000132	12.2	181.10	-0.001083 ppm	Y 361.104	-
Ni	221.648	1.0332	ppm	0.010675	1.0	615.73	1.0332 ppm	Y 361.104	103.31989
Pb	220.353	1.0352	ppm	0.002658	0.3	566.87	1.0352 ppm	Y 361.104	103.52164
Sb	217.582	1.0164	ppm	0.006394	0.6	396.61	1.0164 ppm	Y 361.104	101.63964
Se	196.026	1.0103	ppm	0.005589	0.6	136.45	1.0103 ppm	Y 361.104	101.02908
Si	251.611	0.043069	ppm	0.000658	1.5	58.202	0.043069 ppm	Y 361.104	-
Sn	189.927	0.000301	ppm	0.000502	166.9	-0.30597	0.000301 ppm	Y 361.104	-
Sr	216.596	1.0450	ppm	0.023813	2.3	2149.0	1.0450 ppm	Y 361.104	104.49637
Ti	322.284	0.99319	ppm	0.004150	0.4	4048.4	0.99319 ppm	Y 361.104	99.31912
Tl	190.794	1.0442	ppm	0.006648	0.6	309.71	1.0442 ppm	Y 361.104	104.42358
V	289.164	1.0082	ppm	0.004804	0.5	3545.7	1.0082 ppm	Y 361.104	100.82363
Zn	206.200	1.0014	ppm	0.000270	0.0	509.85	1.0014 ppm	Y 361.104	100.14465
Zr	257.147	0.92696	ppm	0.005140	0.6	4302.9	0.92696 ppm	Y 361.104	92.69604

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.97512	84157	943.380	1.1

ICV01-07 (ICV) 9/24/2004, 11:27:59 AM Rack 1, Tube 9

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	9215.6	9375.5	8916.9
Al	237.312	296.09	299.45	288.72
As	188.980	-0.067259	-0.012324	-0.19055
B	249.772	5354.8	5516.1	5244.8
Ba	233.527	14352	14597	13887
Be	234.861	0.077272	2.6331	2.2072

El	Wavelen.	Replicates Intensity (c/s)		
Ca	315.887	127.61	132.71	130.48
Cd	228.802	1.5986	2.2509	1.9718
Co	231.160	3.4235	2.4260	3.4021
Cr	267.716	0.50091	1.3135	1.0710
Cu	324.754	51.808	56.890	52.066
Fe	261.382	5.7307	5.6309	4.3176
K	728.181	105389	106001	101252
Li	610.365	355.81	355.51	340.35
Mg	279.078	0.91948	0.82706	0.94942
Mn	293.305	-2.0173	-3.7588	-1.6397
Mo	202.032	7.1711	3.5521	3.0065
Na	568.821	-44.790	-45.956	-40.581
Na	589.592	10154	10348	9937.2
Ni	221.648	5.7037	5.9107	5.9057
Pb	220.353	-1.4454	-1.6071	-1.3003
Sb	217.582	0.40078	-0.29509	0.033379
Se	196.026	0.40644	0.26058	0.70046
Si	251.611	4310.5	4335.1	4178.8
Sn	189.927	343.76	346.50	336.49
Sr	216.596	1.2030	0.97330	1.6949
Ti	322.284	31.113	31.419	30.797
Tl	190.794	0.59680	0.64018	0.44933
V	289.164	2.5694	2.3642	4.7077
Y	361.104	83884	83254	87861
Zn	206.200	2.7339	4.0163	3.3327
Zr	257.147	14.330	10.434	9.7347

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.49966	ppm	0.012681	2.5	9169.3	0.49966 ppm	Y 361.104	99.93189
Al	237.312	1.0125	ppm	0.019081	1.9	294.75	1.0125 ppm	Y 361.104	101.24581
As	188.980	0.001523	ppm	0.000568	37.3	-0.090043	0.001523 ppm	Y 361.104	-
B	249.772	1.0489	ppm	0.026865	2.6	5371.9	1.0489 ppm	Y 361.104	104.88833
Ba	233.527	1.0369	ppm	0.026248	2.5	14278	1.0369 ppm	Y 361.104	103.68790
Be	234.861	0.000141	ppm	0.000034	23.7	1.6392	0.000141 ppm	Y 361.104	-
Ca	315.887	-0.003699u	ppm	0.001216	32.9	130.26	-0.003699 ppm	Y 361.104	-
Cd	228.802	0.000038u	ppm	0.000076	201.6	1.9404	0.000038 ppm	Y 361.104	-
Co	231.160	0.000146u	ppm	0.000285	194.9	3.0839	0.000146 ppm	Y 361.104	-
Cr	267.716	0.000019u	ppm	0.000060	322.8	0.96178	0.000019 ppm	Y 361.104	-
Cu	324.754	0.000623	ppm	0.000209	33.6	53.588	0.000623 ppm	Y 361.104	-

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Fe	261.382	0.000339u	ppm	0.001068	315.3	5.2264	0.000339 ppm	Y 361.104	-
K	728.181	10.160	ppm	0.25033	2.5	104214	10.160 ppm	Y 361.104	50.79923Q
Li	610.365	0.000371u	ppm	0.000400	107.9	350.56	0.000371 ppm	Y 361.104	-
Mg	279.078	-0.003211u	ppm	0.000187	5.8	0.89865	-0.003211 ppm	Y 361.104	-
Mn	293.305	0.000131u	ppm	0.000216	164.6	-2.4719	0.000131 ppm	Y 361.104	-
Mo	202.032	0.001820	ppm	0.001122	61.7	4.5766	0.001820 ppm	Y 361.104	-
Na	568.821	1.8133	ppm	0.061666	3.4	-43.776	1.8133 ppm	Y 361.104	181.33270Q
Na	589.592	0.27431	ppm	0.005826	2.1	10146	0.27431 ppm	Y 361.104	27.43096Q
Ni	221.648	-0.004494	ppm	0.000198	4.4	5.8401	-0.004494 ppm	Y 361.104	-
Pb	220.353	-0.000502u	ppm	0.000279	55.6	-1.4509	-0.000502 ppm	Y 361.104	-
Sb	217.582	-0.000497u	ppm	0.000895	180.2	0.046359	-0.000497 ppm	Y 361.104	-
Se	196.026	-0.010606u	ppm	0.001684	15.9	0.45582	-0.010606 ppm	Y 361.104	-
Si	251.611	5.0759	ppm	0.10027	2.0	4274.8	5.0759 ppm	Y 361.104	101.51874
Sn	189.927	2.0102	ppm	0.030337	1.5	342.25	2.0102 ppm	Y 361.104	100.51079
Sr	216.596	0.000349	ppm	0.000179	51.4	1.2904	0.000349 ppm	Y 361.104	-
Ti	322.284	0.000529	ppm	0.000077	14.5	31.110	0.000529 ppm	Y 361.104	-
Tl	190.794	0.003568	ppm	0.000340	9.5	0.56210	0.003568 ppm	Y 361.104	-
V	289.164	-0.000194u	ppm	0.000368	189.4	3.2138	-0.000194 ppm	Y 361.104	-
Zn	206.200	0.001053u	ppm	0.001273	120.9	3.3610	0.001053 ppm	Y 361.104	-
Zr	257.147	0.000322	ppm	0.000535	166.1	11.500	0.000322 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.98489	85000	2497.553	2.9

ICV01-31 (ICV) **9/24/2004, 11:33:12 AM** **Rack 1, Tube 10**

El	Wavelen.	Replicates Intensity (c/s)			
Ag	328.068	0.10860	-0.17748	-4.5550	
Al	237.312	-0.35045	0.55678	0.62034	
As	188.980	-0.53964	0.63208	0.35193	
B	249.772	337.81	306.76	284.66	
Ba	233.527	31.577	31.363	32.732	
Be	234.861	-2.7825	-2.0407	-2.6568	
Ca	315.887	41561	41518	41859	
Cd	228.802	1.2035	1.0010	1.0218	
Co	231.160	1.8259	2.1574	2.0995	
Cr	267.716	-1.4061	1.5426	-1.0007	
Cu	324.754	43.613	45.451	42.936	
Fe	261.382	3.3994	3.2750	2.9500	
K	728.181	210937	211503	211142	

El	Wavelen.	Replicates Intensity (c/s)			
Li	610.365	145.63	152.06	158.17	
Mg	279.078	6513.0	6503.3	6542.3	
Mn	293.305	0.058775	0.75966	0.83828	
Mo	202.032	1.2180	1.3656	0.94494	
Na	568.821	737.15	728.61	733.61	
Na	589.592	697711	695299	697138	
Ni	221.648	-0.41478	-0.10666	-0.65834	
Pb	220.353	-1.9669	-1.9745	-0.17544	
Sb	217.582	-1.0321	0.12766	-0.11420	
Se	196.026	1.5551	1.5440	1.4554	
Si	251.611	26.700	25.812	26.785	
Sn	189.927	-0.54623	-0.72358	-0.46894	
Sr	216.596	1.5906	0.70865	0.87704	
Ti	322.284	28.988	32.545	29.677	
Tl	190.794	0.65624	-0.28353	0.10606	
V	289.164	4.1859	3.8999	5.4354	
Y	361.104	86239	86250	86199	
Zn	206.200	3.1273	2.8186	2.2230	
Zr	257.147	4.8683	4.6861	3.8752	

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000059u	ppm	0.000142	242.6	-1.5413	0.000059 ppm	Y 361.104	-
Al	237.312	-0.003114u	ppm	0.001888	60.6	0.27555	-0.003114 ppm	Y 361.104	-
As	188.980	0.003110u	ppm	0.003811	122.5	0.14812	0.003110 ppm	Y 361.104	-
B	249.772	0.052287	ppm	0.005257	10.1	309.74	0.052287 ppm	Y 361.104	-
Ba	233.527	0.000338	ppm	0.000054	15.9	31.891	0.000338 ppm	Y 361.104	-
Be	234.861	0.000040	ppm	0.000010	24.4	-2.4933	0.000040 ppm	Y 361.104	-
Ca	315.887	19.750	ppm	0.088385	0.4	41646	19.750 ppm	Y 361.104	98.74802
Cd	228.802	-0.000160u	ppm	0.000026	16.2	1.0754	-0.000160 ppm	Y 361.104	-
Co	231.160	-0.000368u	ppm	0.000088	24.0	2.0276	-0.000368 ppm	Y 361.104	-
Cr	267.716	-0.000161u	ppm	0.000230	142.6	-0.28805	-0.000161 ppm	Y 361.104	-
Cu	324.754	-0.000412u	ppm	0.000095	23.1	44.000	-0.000412 ppm	Y 361.104	-
Fe	261.382	-0.002324u	ppm	0.000314	13.5	3.2081	-0.002324 ppm	Y 361.104	-
K	728.181	20.471b	ppm	0.027478	0.1	211194	20.471 ppm	Y 361.104	102.35385
Li	610.365	-0.002800u	ppm	0.000284	10.1	151.96	-0.002800 ppm	Y 361.104	-
Mg	279.078	19.157	ppm	0.059763	0.3	6519.5	19.157 ppm	Y 361.104	95.78319
Mn	293.305	0.000487	ppm	0.000082	16.8	0.55224	0.000487 ppm	Y 361.104	-
Mo	202.032	0.000134	ppm	0.000106	78.9	1.1762	0.000134 ppm	Y 361.104	-
Na	568.821	18.511b	ppm	0.093605	0.5	733.13	18.511 ppm	Y 361.104	92.55359

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Na	589.592	19.627	ppm	0.035270	0.2	696716	19.627 ppm	Y 361.104	98.13272
Ni	221.648	-0.000705u	ppm	0.000464	65.8	-0.39326	-0.000705 ppm	Y 361.104	-
Pb	220.353	-0.000223u	ppm	0.001883	846.1	-1.3723	-0.000223 ppm	Y 361.104	-
Sb	217.582	-0.000312u	ppm	0.001572	503.7	-0.33955	-0.000312 ppm	Y 361.104	-
Se	196.026	-0.002620u	ppm	0.000411	15.7	1.5182	-0.002620 ppm	Y 361.104	-
Si	251.611	0.005149	ppm	0.000643	12.5	26.432	0.005149 ppm	Y 361.104	-
Sn	189.927	-0.000557u	ppm	0.000766	137.6	-0.57958	-0.000557 ppm	Y 361.104	-
Sr	216.596	-0.000043	ppm	0.000228	528.4	1.0588	-0.000043 ppm	Y 361.104	-
Ti	322.284	0.000704	ppm	0.000467	66.3	30.403	0.000704 ppm	Y 361.104	-
Tl	190.794	0.002200	ppm	0.001603	72.9	0.15959	0.002200 ppm	Y 361.104	-
V	289.164	0.000174	ppm	0.000232	132.9	4.5071	0.000174 ppm	Y 361.104	-
Zn	206.200	-0.000771u	ppm	0.000912	118.4	2.7230	-0.000771 ppm	Y 361.104	-
Zr	257.147	-0.000106u	ppm	0.000114	108.2	4.4765	-0.000106 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.99914	86229	27.230	0.0

BLA01 (CCB) **9/24/2004, 11:38:26 AM** **Rack 1, Tube 11**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-0.96060	-1.3014	-1.7036
Al	237.312	1.2770	0.56389	1.5606
As	188.980	-0.52589	0.23462	-0.16455
B	249.772	209.83	187.34	167.46
Ba	233.527	28.823	28.659	27.943
Be	234.861	-3.1809	-4.3461	-4.9589
Ca	315.887	134.70	147.95	137.36
Cd	228.802	2.8248	1.0019	0.36464
Co	231.160	2.4167	2.7487	1.9513
Cr	267.716	1.8788	0.53467	1.2974
Cu	324.754	40.347	43.534	42.647
Fe	261.382	4.4679	3.9688	3.9842
K	728.181	-81.559	-60.459	-80.313
Li	610.365	352.22	352.32	356.95
Mg	279.078	1.2318	0.87796	1.5632
Mn	293.305	-3.4357	-2.1360	-3.1184
Mo	202.032	-0.16304	-0.33088	0.39619
Na	568.821	-72.639	-73.959	-81.398
Na	589.592	321.63	452.41	344.74
Ni	221.648	-0.42601	0.006260	-0.23972

El	Wavelen.	Replicates Intensity (c/s)		
Pb	220.353	-2.8606	-1.1645	-1.5178
Sb	217.582	-0.31756	-0.72855	-0.63061
Se	196.026	1.1947	1.0716	0.37593
Si	251.611	25.657	27.565	26.028
Sn	189.927	-0.22598	-0.88683	-0.53018
Sr	216.596	0.39856	0.14448	0.024155
Ti	322.284	28.338	31.195	30.619
Tl	190.794	0.77606	-0.085140	-0.25784
V	289.164	5.6338	4.2846	4.3138
Y	361.104	82379	81930	82324
Zn	206.200	1.4667	1.7871	1.4581
Zr	257.147	3.4692	4.2616	4.7461

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000071	ppm	0.000020	28.5	-1.3219	0.000071 ppm	Y 361.104	0.00007
Al	237.312	-0.000126u	ppm	0.001785	1412.9	1.1338	-0.000126 ppm	Y 361.104	-0.00013
As	188.980	0.001241u	ppm	0.002369	190.8	-0.15194	0.001241 ppm	Y 361.104	0.00124
B	249.772	0.028361	ppm	0.004173	14.7	188.21	0.028361 ppm	Y 361.104	0.02836Z
Ba	233.527	0.000089	ppm	0.000034	38.2	28.475	0.000089 ppm	Y 361.104	0.00009
Be	234.861	-0.000001u	ppm	0.000022	2598.9	-4.1620	-0.000001 ppm	Y 361.104	0.00000
Ca	315.887	0.001595u	ppm	0.003335	209.1	140.00	0.001595 ppm	Y 361.104	0.00159
Cd	228.802	-0.000088u	ppm	0.000296	336.2	1.3971	-0.000088 ppm	Y 361.104	-0.00009
Co	231.160	-0.000193u	ppm	0.000200	103.4	2.3723	-0.000193 ppm	Y 361.104	-0.00019
Cr	267.716	0.000058u	ppm	0.000097	166.7	1.2369	0.000058 ppm	Y 361.104	0.00006
Cu	324.754	-0.000211u	ppm	0.000120	57.0	42.176	-0.000211 ppm	Y 361.104	-0.00021
Fe	261.382	-0.001074u	ppm	0.000384	35.8	4.1403	-0.001074 ppm	Y 361.104	-0.00107
K	728.181	0.002865	ppm	0.001159	40.5	-74.110	0.002865 ppm	Y 361.104	0.00286
Li	610.365	0.000520	ppm	0.000122	23.5	353.83	0.000520 ppm	Y 361.104	0.00052
Mg	279.078	-0.002322u	ppm	0.001007	43.4	1.2243	-0.002322 ppm	Y 361.104	-0.00232
Mn	293.305	0.000050u	ppm	0.000129	257.8	-2.8967	0.000050 ppm	Y 361.104	0.00005
Mo	202.032	-0.000465u	ppm	0.000189	40.6	-0.032579	-0.000465 ppm	Y 361.104	-0.00047
Na	568.821	1.1533	ppm	0.10301	8.9	-75.999	1.1533 ppm	Y 361.104	1.15329Z
Na	589.592	0.004362	ppm	0.001981	45.4	372.93	0.004362 ppm	Y 361.104	0.00436
Ni	221.648	-0.000414u	ppm	0.000364	87.9	-0.21982	-0.000414 ppm	Y 361.104	-0.00041
Pb	220.353	-0.001088u	ppm	0.001625	149.4	-1.8476	-0.001088 ppm	Y 361.104	-0.00109
Sb	217.582	-0.000876u	ppm	0.000552	63.0	-0.55891	-0.000876 ppm	Y 361.104	-0.00088
Se	196.026	-0.007411u	ppm	0.003319	44.8	0.88076	-0.007411 ppm	Y 361.104	-0.00741Z
Si	251.611	0.005131	ppm	0.001207	23.5	26.417	0.005131 ppm	Y 361.104	0.00513
Sn	189.927	-0.000369u	ppm	0.001940	525.3	-0.54766	-0.000369 ppm	Y 361.104	-0.00037

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Sr	216.596	-0.000145u	ppm	0.000093	63.9	0.18906	-0.000145 ppm	Y 361.104	-0.00015
Ti	322.284	0.000270u	ppm	0.000374	138.4	30.050	0.000270 ppm	Y 361.104	0.00027
Tl	190.794	0.002146	ppm	0.001881	87.6	0.14436	0.002146 ppm	Y 361.104	0.00215
V	289.164	0.000241	ppm	0.000219	90.8	4.7441	0.000241 ppm	Y 361.104	0.00024
Zn	206.200	-0.002476u	ppm	0.000372	15.0	1.5706	-0.002476 ppm	Y 361.104	-0.00248
Zr	257.147	-0.000173u	ppm	0.000139	80.2	4.1590	-0.000173 ppm	Y 361.104	-0.00017

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.95258	82211	244.594	0.3

DLS (CRI) 9/24/2004, 11:43:39 AM Rack 1, Tube 12

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	182.63	181.06	182.32
Al	237.312	14.686	14.839	15.720
As	188.980	8.4518	8.1874	7.8806
B	249.772	423.15	434.25	463.92
Ba	233.527	170.96	169.48	171.11
Be	234.861	171.56	168.74	170.00
Ca	315.887	336.88	338.12	342.23
Cd	228.802	22.770	22.000	21.899
Co	231.160	23.406	22.067	23.333
Cr	267.716	69.917	69.222	70.735
Cu	324.754	323.54	325.04	328.67
Fe	261.382	21.305	23.355	23.326
K	728.181	930.02	941.54	942.34
Li	610.365	561.47	564.68	562.33
Mg	279.078	33.723	33.924	33.486
Mn	293.305	51.841	50.296	54.047
Mo	202.032	19.392	19.232	19.508
Na	568.821	-68.835	-70.980	-59.085
Na	589.592	3154.1	3149.5	3157.3
Ni	221.648	6.5158	6.2629	6.4158
Pb	220.353	4.7356	3.3264	3.3208
Sb	217.582	4.4761	2.7457	3.8984
Se	196.026	2.2672	1.7978	2.3679
Si	251.611	200.55	200.74	200.74
Sn	189.927	8.2408	7.6552	8.2918
Sr	216.596	21.571	22.499	20.432
Ti	322.284	72.581	70.040	71.172

El	Wavelen.	Replicates Intensity (c/s)		
Tl	190.794	2.6530	2.7753	2.8551
V	289.164	39.457	41.204	43.248
Y	361.104	83650	83308	83808
Zn	206.200	11.677	11.246	12.581
Zr	257.147	47.102	49.090	49.450

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.010025	ppm	0.000045	0.5	182.00	0.010025 ppm	Y 361.104	100.25365
Al	237.312	0.048291	ppm	0.001940	4.0	15.082	0.048291 ppm	Y 361.104	96.58106
As	188.980	0.053075	ppm	0.001780	3.4	8.1733	0.053075 ppm	Y 361.104	106.14944
B	249.772	0.078018	ppm	0.004150	5.3	440.44	0.078018 ppm	Y 361.104	156.03624R
Ba	233.527	0.010421	ppm	0.000065	0.6	170.52	0.010421 ppm	Y 361.104	104.21342
Be	234.861	0.004267	ppm	0.000035	0.8	170.10	0.004267 ppm	Y 361.104	-
Ca	315.887	0.096292	ppm	0.001332	1.4	339.08	0.096292 ppm	Y 361.104	96.29249
Cd	228.802	0.004814	ppm	0.000110	2.3	22.223	0.004814 ppm	Y 361.104	-
Co	231.160	0.010064	ppm	0.000376	3.7	22.935	0.010064 ppm	Y 361.104	100.63551
Cr	267.716	0.009936	ppm	0.000109	1.1	69.958	0.009936 ppm	Y 361.104	99.36156
Cu	324.754	0.020519	ppm	0.000193	0.9	325.75	0.020519 ppm	Y 361.104	102.59560
Fe	261.382	0.024133	ppm	0.001591	6.6	22.662	0.024133 ppm	Y 361.104	96.53268
K	728.181	0.10194	ppm	0.000675	0.7	937.97	0.10194 ppm	Y 361.104	101.94423
Li	610.365	0.010010	ppm	0.000075	0.8	562.83	0.010010 ppm	Y 361.104	100.09634
Mg	279.078	0.093165	ppm	0.000644	0.7	33.711	0.093165 ppm	Y 361.104	93.16465
Mn	293.305	0.010536	ppm	0.000360	3.4	52.062	0.010536 ppm	Y 361.104	105.36050
Mo	202.032	0.009156	ppm	0.000069	0.8	19.377	0.009156 ppm	Y 361.104	91.55928
Na	568.821	1.3635	ppm	0.13829	10.1	-66.300	1.3635 ppm	Y 361.104	1363.53638R
Na	589.592	0.083190	ppm	0.000111	0.1	3153.6	0.083190 ppm	Y 361.104	83.18958
Ni	221.648	0.010111	ppm	0.000214	2.1	6.3982	0.010111 ppm	Y 361.104	101.10841
Pb	220.353	0.009185	ppm	0.001481	16.1	3.7943	0.009185 ppm	Y 361.104	91.84875
Sb	217.582	0.010061	ppm	0.002264	22.5	3.7067	0.010061 ppm	Y 361.104	100.60955
Se	196.026	0.002075u	ppm	0.002287	110.2	2.1443	0.002075 ppm	Y 361.104	20.75078R
Si	251.611	0.21313	ppm	0.000128	0.1	200.68	0.21313 ppm	Y 361.104	106.56315
Sn	189.927	0.050125	ppm	0.002075	4.1	8.0626	0.050125 ppm	Y 361.104	100.25098
Sr	216.596	0.010214	ppm	0.000503	4.9	21.501	0.010214 ppm	Y 361.104	102.14411
Ti	322.284	0.010456	ppm	0.000315	3.0	71.265	0.010456 ppm	Y 361.104	104.56135
Tl	190.794	0.010939	ppm	0.000346	3.2	2.7611	0.010939 ppm	Y 361.104	109.39223
V	289.164	0.010644	ppm	0.000538	5.1	41.303	0.010644 ppm	Y 361.104	106.44127
Zn	206.200	0.017844	ppm	0.001352	7.6	11.835	0.017844 ppm	Y 361.104	89.21994
Zr	257.147	0.009372	ppm	0.000273	2.9	48.547	0.009372 ppm	Y 361.104	93.71876

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El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96854	83589	255.365	0.3

CDL01 (CRI) 9/24/2004, 11:48:52 AM Rack 1, Tube 13

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	357.84	354.97	358.42
Al	237.312	-0.051202	0.94692	0.44388
As	188.980	3.4029	3.0332	3.7061
B	249.772	199.78	197.82	179.69
Ba	233.527	29.215	28.305	28.672
Be	234.861	420.09	413.57	419.57
Ca	315.887	125.48	128.33	126.81
Cd	228.802	42.889	44.509	44.566
Co	231.160	209.33	209.59	208.89
Cr	267.716	141.09	140.13	140.00
Cu	324.754	731.05	727.32	730.95
Fe	261.382	22.244	21.761	22.847
K	728.181	-107.43	-106.38	-113.29
Li	610.365	338.90	335.23	346.48
Mg	279.078	0.38435	-0.11214	-0.32566
Mn	293.305	157.55	158.01	157.20
Mo	202.032	-0.66166	0.67730	-0.31363
Na	568.821	-69.449	-71.706	-70.988
Na	589.592	106.25	116.47	108.88
Ni	221.648	48.727	49.012	48.352
Pb	220.353	54.582	53.164	53.551
Sb	217.582	47.417	45.441	45.891
Se	196.026	2.7611	1.3785	2.1165
Si	251.611	34.275	35.970	35.097
Sn	189.927	-0.65089	-0.34337	-0.54224
Sr	216.596	0.81141	1.3290	0.059807
Ti	322.284	28.353	29.108	28.490
Tl	190.794	5.5089	6.2321	5.5818
V	289.164	367.97	366.93	367.83
Y	361.104	87049	87724	87248
Zn	206.200	22.059	21.586	21.101
Zr	257.147	3.0585	3.4921	3.2191

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.019594	ppm	0.000101	0.5	357.08	0.019594 ppm	Y 361.104	97.96931
Al	237.312	-0.002699u	ppm	0.001735	64.3	0.44653	-0.002699 ppm	Y 361.104	-
As	188.980	0.023198	ppm	0.002099	9.0	3.3807	0.023198 ppm	Y 361.104	115.98937
B	249.772	0.029191	ppm	0.002181	7.5	192.43	0.029191 ppm	Y 361.104	-
Ba	233.527	0.000096	ppm	0.000033	34.6	28.731	0.000096 ppm	Y 361.104	-
Be	234.861	0.010329	ppm	0.000089	0.9	417.74	0.010329 ppm	Y 361.104	103.29475
Ca	315.887	-0.006095u	ppm	0.000678	11.1	126.87	-0.006095 ppm	Y 361.104	-
Cd	228.802	0.009783	ppm	0.000221	2.3	43.988	0.009783 ppm	Y 361.104	97.82613
Co	231.160	0.10241	ppm	0.000178	0.2	209.27	0.10241 ppm	Y 361.104	102.41296
Cr	267.716	0.020062	ppm	0.000086	0.4	140.41	0.020062 ppm	Y 361.104	100.31101
Cu	324.754	0.050122	ppm	0.000155	0.3	729.77	0.050122 ppm	Y 361.104	100.24324
Fe	261.382	0.024507	ppm	0.000737	3.0	22.284	0.024507 ppm	Y 361.104	-
K	728.181	-0.000554u	ppm	0.000364	65.8	-109.03	-0.000554 ppm	Y 361.104	-
Li	610.365	-0.000099u	ppm	0.000260	263.6	340.20	-0.000099 ppm	Y 361.104	-
Mg	279.078	-0.005961u	ppm	0.001071	18.0	-0.017816	-0.005961 ppm	Y 361.104	-
Mn	293.305	0.030676	ppm	0.000078	0.3	157.59	0.030676 ppm	Y 361.104	102.25421
Mo	202.032	-0.000498u	ppm	0.000344	69.1	-0.099329	-0.000498 ppm	Y 361.104	-
Na	568.821	1.2674	ppm	0.025144	2.0	-70.714	1.2674 ppm	Y 361.104	-
Na	589.592	-0.003084u	ppm	0.000151	4.9	110.53	-0.003084 ppm	Y 361.104	-
Ni	221.648	0.081621	ppm	0.000555	0.7	48.697	0.081621 ppm	Y 361.104	102.02629
Pb	220.353	0.099944	ppm	0.001332	1.3	53.766	0.099944 ppm	Y 361.104	99.94429
Sb	217.582	0.11936	ppm	0.002662	2.2	46.250	0.11936 ppm	Y 361.104	99.46997
Se	196.026	0.001615u	ppm	0.005200	322.0	2.0854	0.001615 ppm	Y 361.104	16.14932R
Si	251.611	0.015512	ppm	0.001012	6.5	35.114	0.015512 ppm	Y 361.104	-
Sn	189.927	-0.000157u	ppm	0.000915	581.1	-0.51217	-0.000157 ppm	Y 361.104	-
Sr	216.596	0.000199u	ppm	0.000310	155.8	0.73339	0.000199 ppm	Y 361.104	-
Ti	322.284	-0.000072u	ppm	0.000100	139.0	28.651	-0.000072 ppm	Y 361.104	-
Tl	190.794	0.020355	ppm	0.001352	6.6	5.7743	0.020355 ppm	Y 361.104	101.77554
V	289.164	0.10326	ppm	0.000161	0.2	367.58	0.10326 ppm	Y 361.104	103.25755
Zn	206.200	0.037160	ppm	0.000951	2.6	21.582	0.037160 ppm	Y 361.104	-
Zr	257.147	-0.000370u	ppm	0.000047	12.8	3.2566	-0.000370 ppm	Y 361.104	-0.92471R

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0120	87340	347.269	0.4

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HMCS (ICV) 9/24/2004, 11:54:05 AM Rack 1, Tube 14

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	36620	37630	37456
Al	237.312	2840.5	2919.2	2883.1
As	188.980	1676.6	1685.3	1648.7
B	249.772	51986	53636	54119
Ba	233.527	136266	139522	139043
Be	234.861	420150	431720	433223
Ca	315.887	47.437	48.055	49.732
Cd	228.802	43061	44315	44026
Co	231.160	19989	20480	20437
Cr	267.716	69366	71163	70893
Cu	324.754	138046	142377	141250
Fe	261.382	7420.9	7631.1	7585.1
K	728.181	30.928	35.364	28.645
Li	610.365	223898	231192	230007
Mg	279.078	0.61617	0.17520	0.94328
Mn	293.305	52638	54151	53884
Mo	202.032	-0.39391	-0.27710	-0.14401
Na	568.821	-69.568	-75.648	-70.722
Na	589.592	-232278	-239268	-240961
Ni	221.648	6020.7	6223.7	6204.9
Pb	220.353	5476.7	5616.0	5596.6
Sb	217.582	3.0916	1.2810	0.50984
Se	196.026	1348.0	1388.5	1382.5
Si	251.611	160.27	178.91	186.20
Sn	189.927	-0.33184	0.28977	-0.013353
Sr	216.596	21813	20918	21017
Ti	322.284	39.491	38.585	36.547
Tl	190.794	2924.1	3033.2	2992.8
V	289.164	35007	36329	36151
Y	361.104	83002	80875	81253
Zn	206.200	5046.3	5204.7	5186.0
Zr	257.147	46732	47969	47798

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	1.9937	ppm	0.029428	1.5	37235	1.9937 ppm	Y 361.104	99.68443
Al	237.312	9.9143	ppm	0.13686	1.4	2880.9	9.9143 ppm	Y 361.104	99.14303
As	188.980	10.393	ppm	0.11921	1.1	1670.2	10.393 ppm	Y 361.104	103.92918
B	249.772	10.474	ppm	0.22019	2.1	53247	10.474 ppm	Y 361.104	104.74071

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	10.057	ppm	0.12791	1.3	138277	10.057 ppm	Y 361.104	100.56774
Be	234.861	10.486	ppm	0.17509	1.7	428364	10.486 ppm	Y 361.104	104.86129
Ca	315.887	-0.008644u	ppm	0.000565	6.5	48.408	-0.008644 ppm	Y 361.104	-
Cd	228.802	10.166	ppm	0.15232	1.5	43801	10.166 ppm	Y 361.104	101.65894
Co	231.160	10.327	ppm	0.13570	1.3	20302	10.327 ppm	Y 361.104	103.26583
Cr	267.716	10.130	ppm	0.13925	1.4	70474	10.130 ppm	Y 361.104	101.29853
Cu	324.754	10.278	ppm	0.16423	1.6	140558	10.278 ppm	Y 361.104	102.78484
Fe	261.382	10.312	ppm	0.14956	1.5	7545.7	10.312 ppm	Y 361.104	103.12015
K	728.181	0.013462	ppm	0.000334	2.5	31.646	0.013462 ppm	Y 361.104	-
Li	610.365	10.324	ppm	0.17722	1.7	228366	10.324 ppm	Y 361.104	103.23670
Mg	279.078	0.000229u	ppm	0.001133	495.5	0.57822	0.000229 ppm	Y 361.104	-
Mn	293.305	10.221	ppm	0.15410	1.5	53558	10.221 ppm	Y 361.104	102.21292
Mo	202.032	-0.000584u	ppm	0.000062	10.6	-0.27168	-0.000584 ppm	Y 361.104	-
Na	568.821	1.0548	ppm	0.070437	6.7	-71.979	1.0548 ppm	Y 361.104	-
Na	589.592	-6.8172u	ppm	0.13061	1.9	-237502	-6.8172 ppm	Y 361.104	-
Ni	221.648	10.320	ppm	0.18807	1.8	6149.7	10.320 ppm	Y 361.104	103.20225
Pb	220.353	10.107	ppm	0.13700	1.4	5563.1	10.107 ppm	Y 361.104	101.07178
Sb	217.582	-0.040512	ppm	0.003406	8.4	1.6275	-0.040512 ppm	Y 361.104	-
Se	196.026	10.293	ppm	0.16463	1.6	1373.0	10.293 ppm	Y 361.104	102.93403
Si	251.611	0.18263	ppm	0.015961	8.7	175.13	0.18263 ppm	Y 361.104	-
Sn	189.927	-0.000633	ppm	0.001823	287.9	-0.018473	-0.000633 ppm	Y 361.104	-
Sr	216.596	10.335	ppm	0.23861	2.3	21249	10.335 ppm	Y 361.104	103.34754
Ti	322.284	0.001240	ppm	0.000373	30.1	38.208	0.001240 ppm	Y 361.104	-
Tl	190.794	10.040	ppm	0.18736	1.9	2983.3	10.040 ppm	Y 361.104	100.39991
V	289.164	10.186	ppm	0.20356	2.0	35829	10.186 ppm	Y 361.104	101.86407
Zn	206.200	10.168	ppm	0.17171	1.7	5145.7	10.168 ppm	Y 361.104	101.67621
Zr	257.147	10.252	ppm	0.14468	1.4	47500	10.252 ppm	Y 361.104	102.52296

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.94677	81710	1134.669	1.4

ICS-A (ICSA) 9/24/2004, 11:59:17 AM Rack 1, Tube 15

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-19.737	-16.839	-16.203
Al	237.312	147686	147061	147814
As	188.980	1.6654	1.7614	1.6285
B	249.772	1491.4	999.57	722.05
Ba	233.527	257.13	259.80	261.18
Be	234.861	-708.59	-702.04	-715.92

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El	Wavelen.	Replicates Intensity (c/s)		
Ca	315.887	1005248	1004436	1000441
Cd	228.802	8.2698	9.4309	11.077
Co	231.160	146.04	150.86	160.92
Cr	267.716	1.2510	-0.29320	2.1870
Cu	324.754	-242.16	-235.35	-237.76
Fe	261.382	141141	140520	141693
K	728.181	-104.69	-95.495	-88.917
Li	610.365	-6191.8	-6156.9	-6291.0
Mg	279.078	170431	169402	172345
Mn	293.305	52.922	57.140	53.764
Mo	202.032	-3.5366	-1.0972	-2.1521
Na	568.821	1241.7	1228.7	1232.3
Na	589.592	602.57	629.71	631.04
Ni	221.648	1.7771	2.9267	2.4375
Pb	220.353	55.796	57.199	58.914
Sb	217.582	-12.563	-13.010	-11.624
Se	196.026	4.5046	5.7637	6.5782
Si	251.611	40.515	38.001	40.452
Sn	189.927	-2.0656	-1.8560	-1.9135
Sr	216.596	134.65	135.81	137.17
Ti	322.284	-10.454	-10.787	-10.505
Tl	190.794	-8.6642	-8.5689	-9.8418
V	289.164	28.401	24.629	25.905
Y	361.104	75236	75894	73495
Zn	206.200	10.020	9.1044	8.9931
Zr	257.147	105.38	105.34	106.59

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000474u	ppm	0.000103	21.7	-17.593	-0.000474 ppm	Y 361.104	-0.00047
Al	237.312	513.22	ppm	1.4003	0.3	147520	513.22 ppm	Y 361.104	-
As	188.980	0.012681	ppm	0.000427	3.4	1.6851	0.012681 ppm	Y 361.104	0.01268K
B	249.772	0.20829	ppm	0.076706	36.8	1071.0	0.20829 ppm	Y 361.104	0.20829K
Ba	233.527	0.008337	ppm	0.000150	1.8	259.37	0.008337 ppm	Y 361.104	0.00834K
Be	234.861	0.001975u	ppm	0.000170	8.6	-708.85	0.001975 ppm	Y 361.104	0.00197
Ca	315.887	476.94	ppm	1.2242	0.3	1003375	476.94 ppm	Y 361.104	-
Cd	228.802	0.000509	ppm	0.000327	64.3	9.5926	0.000509 ppm	Y 361.104	0.00051
Co	231.160	0.020380	ppm	0.003793	18.6	152.61	0.020380 ppm	Y 361.104	0.02038K
Cr	267.716	0.000031u	ppm	0.000180	580.6	1.0483	0.000031 ppm	Y 361.104	0.00003
Cu	324.754	-0.008987u	ppm	0.000252	2.8	-238.42	-0.008987 ppm	Y 361.104	-0.00899

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Fe	261.382	190.99	ppm	0.79463	0.4	141118	190.99 ppm	Y 361.104	-
K	728.181	0.028021u	ppm	0.000775	2.8	-96.366	0.028021 ppm	Y 361.104	0.02802
Li	610.365	-0.15615u	ppm	0.003149	2.0	-6213.2	-0.15615 ppm	Y 361.104	-0.15615K
Mg	279.078	501.80	ppm	4.3897	0.9	170726	501.80 ppm	Y 361.104	-
Mn	293.305	0.005217	ppm	0.000426	8.2	54.608	0.005217 ppm	Y 361.104	0.00522K
Mo	202.032	-0.001570u	ppm	0.000606	38.6	-2.2619	-0.001570 ppm	Y 361.104	-0.00157
Na	568.821	25.663	ppm	0.14672	0.6	1234.2	25.663 ppm	Y 361.104	25.66275K
Na	589.592	-0.025345	ppm	0.000456	1.8	621.11	-0.025345 ppm	Y 361.104	-0.02534
Ni	221.648	0.003913	ppm	0.000967	24.7	2.3805	0.003913 ppm	Y 361.104	0.00391
Pb	220.353	0.035209	ppm	0.002836	8.1	57.303	0.035209 ppm	Y 361.104	0.03521K
Sb	217.582	-0.003447u	ppm	0.001817	52.7	-12.399	-0.003447 ppm	Y 361.104	-0.00345
Se	196.026	-0.016242	ppm	0.007853	48.3	5.6155	-0.016242 ppm	Y 361.104	-0.01624K
Si	251.611	0.020933	ppm	0.001711	8.2	39.656	0.020933 ppm	Y 361.104	0.02093
Sn	189.927	-0.008572u	ppm	0.000635	7.4	-1.9450	-0.008572 ppm	Y 361.104	-0.00857
Sr	216.596	0.013648	ppm	0.000611	4.5	135.88	0.013648 ppm	Y 361.104	0.01365
Ti	322.284	-0.001399u	ppm	0.000044	3.2	-10.582	-0.001399 ppm	Y 361.104	-0.00140
Tl	190.794	-0.029444u	ppm	0.002408	8.2	-9.0250	-0.029444 ppm	Y 361.104	-0.02944K
V	289.164	-0.002849	ppm	0.000544	19.1	26.312	-0.002849 ppm	Y 361.104	-0.00285
Zn	206.200	-0.001866	ppm	0.001118	59.9	9.3724	-0.001866 ppm	Y 361.104	-0.00187
Zr	257.147	-0.001213	ppm	0.000153	12.6	105.77	-0.001213 ppm	Y 361.104	-0.00121

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.86758	74875	1239.367	1.7

ICS-AB (ICSAB) 9/24/2004, 12:04:31 PM Rack 1, Tube 16

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	3902.1	3992.4	3918.9
Al	237.312	144849	148476	146645
As	188.980	16.874	17.285	18.217
B	249.772	259.43	180.09	83.394
Ba	233.527	7071.2	7203.9	7138.4
Be	234.861	21479	22199	21425
Ca	315.887	990786	1010782	995406
Cd	228.802	4523.6	4631.7	4547.8
Co	231.160	1076.8	1103.4	1087.5
Cr	267.716	3272.4	3342.4	3281.2
Cu	324.754	7245.9	7484.5	7345.0
Fe	261.382	139998	143386	140892
K	728.181	-106.14	-109.54	-98.289

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El	Wavelen.	Replicates Intensity (c/s)		
Li	610.365	-6209.4	-6382.1	-6220.9
Mg	279.078	170836	175297	171772
Mn	293.305	2508.6	2599.5	2553.8
Mo	202.032	-1.8913	-2.7450	-2.4064
Na	568.821	1214.7	1251.2	1219.2
Na	589.592	-11758	-12157	-11762
Ni	221.648	553.89	566.28	555.86
Pb	220.353	561.45	572.61	549.21
Sb	217.582	229.51	236.09	230.70
Se	196.026	11.580	11.100	11.443
Si	251.611	61.309	61.042	60.974
Sn	189.927	-1.0062	-2.3167	-2.3502
Sr	216.596	136.84	137.91	135.09
Ti	322.284	-7.8501	-14.473	-10.193
Tl	190.794	18.069	19.338	18.923
V	289.164	1738.6	1774.7	1747.4
Y	361.104	73540	71905	73339
Zn	206.200	465.98	477.37	471.31
Zr	257.147	119.40	120.78	114.98

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.21497	ppm	0.002614	1.2	3937.8	0.21497 ppm	Y 361.104	107.48338
Al	237.312	510.21	ppm	6.3051	1.2	146657	510.21 ppm	Y 361.104	102.04257
As	188.980	0.11037	ppm	0.004286	3.9	17.459	0.11037 ppm	Y 361.104	110.36526
B	249.772	0.031739	ppm	0.017356	54.7	174.31	0.031739 ppm	Y 361.104	-
Ba	233.527	0.50879	ppm	0.004829	0.9	7137.8	0.50879 ppm	Y 361.104	101.75749
Be	234.861	0.55054	ppm	0.010580	1.9	21701	0.55054 ppm	Y 361.104	110.10857
Ca	315.887	474.85	ppm	4.9809	1.0	998991	474.85 ppm	Y 361.104	94.97042
Cd	228.802	1.0572	ppm	0.013148	1.2	4567.7	1.0572 ppm	Y 361.104	105.71740
Co	231.160	0.49318	ppm	0.006667	1.4	1089.2	0.49318 ppm	Y 361.104	98.63601
Cr	267.716	0.47403	ppm	0.005479	1.2	3298.7	0.47403 ppm	Y 361.104	94.80672
Cu	324.754	0.54669	ppm	0.008760	1.6	7358.4	0.54669 ppm	Y 361.104	109.33758
Fe	261.382	191.42	ppm	2.3768	1.2	141425	191.42 ppm	Y 361.104	95.70943
K	728.181	0.027120u	ppm	0.000565	2.1	-104.66	0.027120 ppm	Y 361.104	-
Li	610.365	-0.15937u	ppm	0.004370	2.7	-6270.8	-0.15937 ppm	Y 361.104	-
Mg	279.078	507.41	ppm	6.9136	1.4	172635	507.41 ppm	Y 361.104	101.48232
Mn	293.305	0.48211	ppm	0.008679	1.8	2554.0	0.48211 ppm	Y 361.104	96.42207
Mo	202.032	-0.001613u	ppm	0.000213	13.2	-2.3475	-0.001613 ppm	Y 361.104	-
Na	568.821	25.542	ppm	0.43461	1.7	1228.4	25.542 ppm	Y 361.104	-

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Na	589.592	-0.38375u	ppm	0.006497	1.7	-11893	-0.38375 ppm	Y 361.104	-
Ni	221.648	0.93702	ppm	0.011160	1.2	558.68	0.93702 ppm	Y 361.104	93.70206
Pb	220.353	0.95079	ppm	0.021260	2.2	561.09	0.95079 ppm	Y 361.104	95.07868
Sb	217.582	0.62212	ppm	0.009008	1.4	232.10	0.62212 ppm	Y 361.104	103.68653
Se	196.026	0.026266	ppm	0.001861	7.1	11.374	0.026266 ppm	Y 361.104	52.53280
Si	251.611	0.046539	ppm	0.000211	0.5	61.109	0.046539 ppm	Y 361.104	-
Sn	189.927	-0.008174u	ppm	0.004495	55.0	-1.8910	-0.008174 ppm	Y 361.104	-
Sr	216.596	0.014802	ppm	0.000691	4.7	136.61	0.014802 ppm	Y 361.104	-
Ti	322.284	-0.001427u	ppm	0.000831	58.2	-10.839	-0.001427 ppm	Y 361.104	-
Tl	190.794	0.060530	ppm	0.002198	3.6	18.776	0.060530 ppm	Y 361.104	60.53005
V	289.164	0.48892	ppm	0.005335	1.1	1753.6	0.48892 ppm	Y 361.104	97.78325
Zn	206.200	0.91363	ppm	0.011308	1.2	471.56	0.91363 ppm	Y 361.104	91.36311
Zr	257.147	0.001459	ppm	0.000654	44.8	118.39	0.001459 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.84501	72928	891.678	1.2

CCV (CCV) 9/24/2004, 12:09:45 PM Rack 1, Tube 17

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	18033	17943	17687
Al	237.312	1408.7	1413.7	1386.9
As	188.980	803.90	791.51	779.72
B	249.772	10453	10362	10184
Ba	233.527	66930	67524	66656
Be	234.861	216029	211023	208336
Ca	315.887	99659	99989	98711
Cd	228.802	21271	21101	20796
Co	231.160	9486.5	9487.3	9359.2
Cr	267.716	33108	33412	32615
Cu	324.754	69201	67808	66839
Fe	261.382	3622.4	3603.9	3549.4
K	728.181	537059	527220	521303
Li	610.365	112611	110204	108674
Mg	279.078	16233	16004	15770
Mn	293.305	25196	25042	24674
Mo	202.032	1908.7	1928.1	1907.3
Na	568.821	1808.9	1854.7	1816.2
Na	589.592	1678140	1647031	1618900
Ni	221.648	2922.5	2887.9	2810.2

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El	Wavelen.	Replicates Intensity (c/s)		
Pb	220.353	2642.0	2648.7	2628.5
Sb	217.582	386.46	386.10	381.33
Se	196.026	671.95	658.19	650.75
Si	251.611	4152.2	4122.5	4089.2
Sn	189.927	812.15	811.50	803.46
Sr	216.596	10248	9485.4	9785.6
Ti	322.284	19110	19166	18933
Tl	190.794	1410.1	1417.1	1399.1
V	289.164	16981	16981	16752
Y	361.104	80680	83138	84028
Zn	206.200	2405.0	2393.4	2358.9
Zr	257.147	22650	22611	22308

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.95819	ppm	0.009794	1.0	17888	0.95819 ppm	Y 361.104	95.81911
Al	237.312	4.8271	ppm	0.049524	1.0	1403.1	4.8271 ppm	Y 361.104	96.54227
As	188.980	4.9273	ppm	0.075292	1.5	791.71	4.9273 ppm	Y 361.104	98.54543
B	249.772	2.0256	ppm	0.026980	1.3	10333	2.0256 ppm	Y 361.104	101.27892
Ba	233.527	4.8746	ppm	0.032298	0.7	67037	4.8746 ppm	Y 361.104	97.49113
Be	234.861	5.1847	ppm	0.095568	1.8	211796	5.1847 ppm	Y 361.104	103.69400
Ca	315.887	47.267	ppm	0.31560	0.7	99453	47.267 ppm	Y 361.104	94.53309
Cd	228.802	4.8867	ppm	0.055764	1.1	21056	4.8867 ppm	Y 361.104	97.73388
Co	231.160	4.8015	ppm	0.036815	0.8	9444.3	4.8015 ppm	Y 361.104	96.03004
Cr	267.716	4.7498	ppm	0.057813	1.2	33045	4.7498 ppm	Y 361.104	94.99599
Cu	324.754	4.9648	ppm	0.086770	1.7	67949	4.9648 ppm	Y 361.104	99.29573
Fe	261.382	4.9200	ppm	0.051369	1.0	3591.9	4.9200 ppm	Y 361.104	98.39913
K	728.181	50.442b	ppm	0.74060	1.5	528527	50.442 ppm	Y 361.104	100.88425
Li	610.365	5.0007	ppm	0.089847	1.8	110496	5.0007 ppm	Y 361.104	100.01427
Mg	279.078	47.029	ppm	0.67967	1.4	16003	47.029 ppm	Y 361.104	94.05892
Mn	293.305	4.7652	ppm	0.051199	1.1	24971	4.7652 ppm	Y 361.104	95.30334
Mo	202.032	0.94864	ppm	0.005774	0.6	1914.7	0.94864 ppm	Y 361.104	94.86448
Na	568.821	42.081b	ppm	0.53648	1.3	1826.6	42.081 ppm	Y 361.104	84.16244Q
Na	589.592	45.968	ppm	0.81409	1.8	1648024	45.968 ppm	Y 361.104	91.93571
Ni	221.648	4.8088	ppm	0.096389	2.0	2873.6	4.8088 ppm	Y 361.104	96.17634
Pb	220.353	4.7998	ppm	0.018641	0.4	2639.7	4.7998 ppm	Y 361.104	95.99573
Sb	217.582	0.96706	ppm	0.007369	0.8	384.63	0.96706 ppm	Y 361.104	96.70580
Se	196.026	4.9429	ppm	0.080863	1.6	660.30	4.9429 ppm	Y 361.104	98.85764
Si	251.611	4.8927	ppm	0.037660	0.8	4121.3	4.8927 ppm	Y 361.104	97.85416
Sn	189.927	4.7443	ppm	0.028377	0.6	809.04	4.7443 ppm	Y 361.104	94.88621

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Sr	216.596	4.7847	ppm	0.18667	3.9	9839.6	4.7847 ppm	Y 361.104	95.69305
Ti	322.284	4.7108	ppm	0.030123	0.6	19070	4.7108 ppm	Y 361.104	94.21525
Tl	190.794	4.7347	ppm	0.030813	0.7	1408.8	4.7347 ppm	Y 361.104	94.69375
V	289.164	4.8079	ppm	0.037601	0.8	16905	4.8079 ppm	Y 361.104	96.15853
Zn	206.200	4.7084	ppm	0.047577	1.0	2385.8	4.7084 ppm	Y 361.104	94.16887
Zr	257.147	4.8601	ppm	0.040373	0.8	22523	4.8601 ppm	Y 361.104	97.20196

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.95726	82615	1734.143	2.1

BLA01 (CCB) 9/24/2004, 12:14:59 PM Rack 1, Tube 18

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	0.39352	-0.21736	-1.0563
Al	237.312	0.081768	1.1399	2.0161
As	188.980	-0.43868	-0.28776	-0.025515
B	249.772	661.37	610.97	530.32
Ba	233.527	29.728	30.048	28.936
Be	234.861	-2.5306	-1.3975	-0.36590
Ca	315.887	132.89	140.30	136.19
Cd	228.802	2.5615	2.4971	0.91059
Co	231.160	2.1335	2.6049	1.6518
Cr	267.716	-0.55603	0.26881	1.2399
Cu	324.754	38.112	39.609	37.779
Fe	261.382	3.4618	5.4525	3.9346
K	728.181	-101.64	-109.93	-105.73
Li	610.365	346.20	343.37	343.82
Mg	279.078	1.1309	2.4632	2.1905
Mn	293.305	-3.3673	-3.9227	-2.8155
Mo	202.032	7.2911	3.3801	1.6802
Na	568.821	-72.067	-65.290	-65.921
Na	589.592	143.50	154.61	147.84
Ni	221.648	-0.20979	0.026262	-0.14505
Pb	220.353	-1.7838	-1.2273	-1.8596
Sb	217.582	-0.10894	-0.53600	0.71828
Se	196.026	1.3803	2.0078	1.8308
Si	251.611	37.535	33.001	30.979
Sn	189.927	-0.64042	-0.57641	-0.17686
Sr	216.596	0.19536	0.45841	0.91572
Ti	322.284	30.021	28.036	30.740

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El	Wavelen.	Replicates Intensity (c/s)		
Tl	190.794	1.9283	0.59982	0.34254
V	289.164	3.2651	3.2469	6.2358
Y	361.104	85564	86071	85778
Zn	206.200	1.3272	1.1510	1.7415
Zr	257.147	9.3499	6.7516	6.2315

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000125	ppm	0.000040	31.8	-0.29339	0.000125 ppm	Y 361.104	0.00012
Al	237.312	-0.000318u	ppm	0.003367	1057.4	1.0792	-0.000318 ppm	Y 361.104	-0.00032
As	188.980	0.000626u	ppm	0.001302	208.0	-0.25065	0.000626 ppm	Y 361.104	0.00063
B	249.772	0.10961	ppm	0.013015	11.9	600.89	0.10961 ppm	Y 361.104	0.10961Z
Ba	233.527	0.000169	ppm	0.000042	24.7	29.570	0.000169 ppm	Y 361.104	0.00017
Be	234.861	0.000066	ppm	0.000027	40.2	-1.4313	0.000066 ppm	Y 361.104	0.00007
Ca	315.887	-0.000082u	ppm	0.001767	2165.6	136.46	-0.000082 ppm	Y 361.104	-0.00008
Cd	228.802	0.000048u	ppm	0.000217	447.5	1.9897	0.000048 ppm	Y 361.104	0.00005
Co	231.160	-0.000324u	ppm	0.000238	73.4	2.1301	-0.000324 ppm	Y 361.104	-0.00032
Cr	267.716	-0.000074u	ppm	0.000129	174.6	0.31756	-0.000074 ppm	Y 361.104	-0.00007
Cu	324.754	-0.000480u	ppm	0.000071	14.8	38.500	-0.000480 ppm	Y 361.104	-0.00048
Fe	261.382	-0.000876u	ppm	0.001408	160.7	4.2830	-0.000876 ppm	Y 361.104	-0.00088
K	728.181	-0.000235u	ppm	0.000406	172.6	-105.77	-0.000235 ppm	Y 361.104	-0.00024
Li	610.365	0.000096	ppm	0.000069	71.8	344.46	0.000096 ppm	Y 361.104	0.00010
Mg	279.078	-0.000253u	ppm	0.002069	816.7	1.9282	-0.000253 ppm	Y 361.104	-0.00025
Mn	293.305	-0.000040u	ppm	0.000106	263.7	-3.3685	-0.000040 ppm	Y 361.104	-0.00004
Mo	202.032	0.001592	ppm	0.001426	89.6	4.1171	0.001592 ppm	Y 361.104	0.00159
Na	568.821	1.3331	ppm	0.081661	6.1	-67.759	1.3331 ppm	Y 361.104	1.33305Z
Na	589.592	-0.002003u	ppm	0.000159	7.9	148.65	-0.002003 ppm	Y 361.104	-0.00200
Ni	221.648	-0.000254u	ppm	0.000204	80.6	-0.10952	-0.000254 ppm	Y 361.104	-0.00025
Pb	220.353	-0.000674u	ppm	0.000627	93.0	-1.6236	-0.000674 ppm	Y 361.104	-0.00067
Sb	217.582	0.000623u	ppm	0.001639	262.9	0.024448	0.000623 ppm	Y 361.104	0.00062
Se	196.026	-0.000956u	ppm	0.002432	254.5	1.7396	-0.000956 ppm	Y 361.104	-0.00096
Si	251.611	0.013989	ppm	0.004007	28.6	33.839	0.013989 ppm	Y 361.104	0.01399
Sn	189.927	0.000118u	ppm	0.001473	1251.5	-0.46456	0.000118 ppm	Y 361.104	0.00012
Sr	216.596	0.000017u	ppm	0.000177	1034.5	0.52316	0.000017 ppm	Y 361.104	0.00002
Ti	322.284	0.000155u	ppm	0.000347	223.2	29.599	0.000155 ppm	Y 361.104	0.00016
Tl	190.794	0.004911	ppm	0.002890	58.8	0.95688	0.004911 ppm	Y 361.104	0.00491
V	289.164	0.000100u	ppm	0.000488	487.9	4.2493	0.000100 ppm	Y 361.104	0.00010
Zn	206.200	-0.002803u	ppm	0.000602	21.5	1.4066	-0.002803 ppm	Y 361.104	-0.00280
Zr	257.147	0.000532	ppm	0.000361	67.7	7.4443	0.000532 ppm	Y 361.104	0.00053

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.99421	85804	254.622	0.3

Q1653580 BLA02 (Samp) **9/24/2004, 12:20:13 PM** **Rack 1, Tube 19**

Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-0.21018	-0.73094	-0.32610
Al	237.312	1.6607	2.3575	0.13930
As	188.980	0.061746	0.018178	-0.28996
B	249.772	430.75	397.86	344.10
Ba	233.527	29.427	29.864	29.590
Be	234.861	1.2164	-0.90245	-3.0879
Ca	315.887	151.82	149.66	147.57
Cd	228.802	0.79883	1.2995	0.65198
Co	231.160	2.3853	2.2650	2.6176
Cr	267.716	-0.21122	-1.4226	0.012178
Cu	324.754	36.641	37.186	37.500
Fe	261.382	5.1334	4.5797	4.4182
K	728.181	-83.170	-91.068	-89.195
Li	610.365	343.65	350.32	348.66
Mg	279.078	1.7036	1.0269	0.057176
Mn	293.305	-3.2556	-2.8208	-3.2915
Mo	202.032	0.57868	-0.025421	-0.34755
Na	568.821	-58.898	-65.400	-74.835
Na	589.592	222.20	225.92	217.19
Ni	221.648	0.56802	-0.007657	0.16344
Pb	220.353	-2.9282	-1.9879	-1.8752
Sb	217.582	0.078595	-0.60726	-0.16463
Se	196.026	0.56721	0.34390	0.29228
Si	251.611	21.247	19.218	20.876
Sn	189.927	-0.53165	-0.37140	-0.42816
Sr	216.596	0.86767	0.51683	0.091335
Ti	322.284	31.264	28.014	28.907
Tl	190.794	-0.065882	0.17108	0.19559
V	289.164	5.3405	4.6199	5.5258
Y	361.104	86892	86675	86541
Zn	206.200	2.4924	2.7812	2.9569
Zr	257.147	2.6278	2.2904	2.6296

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Sb	217.582	0.083313	ppm	0.001486	1.8	32.197	0.083313 ppm	Y 361.104	1.0000
Se	196.026	0.068635	ppm	0.001443	2.1	11.001	0.068635 ppm	Y 361.104	1.0000
Si	251.611	0.058989	ppm	0.000346	0.6	71.540	0.058989 ppm	Y 361.104	1.0000
Sn	189.927	0.042626	ppm	0.001055	2.5	6.7869	0.042626 ppm	Y 361.104	1.0000
Sr	216.596	0.004698	ppm	0.000364	7.7	10.166	0.004698 ppm	Y 361.104	1.0000
Ti	322.284	0.021785	ppm	0.000620	2.8	117.12	0.021785 ppm	Y 361.104	1.0000
Tl	190.794	0.080055	ppm	0.001172	1.5	23.117	0.080055 ppm	Y 361.104	1.0000
V	289.164	0.017374	ppm	0.000367	2.1	65.099	0.017374 ppm	Y 361.104	1.0000
Zn	206.200	0.040457	ppm	0.000398	1.0	23.238	0.040457 ppm	Y 361.104	1.0000
Zr	257.147	0.032317	ppm	0.000572	1.8	154.89	0.032317 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96980	83698	464.621	0.6

CCV (CCV) 9/24/2004, 3:02:14 PM Rack 1, Tube 50

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	18079	18068	18199
Al	237.312	1409.4	1409.9	1410.0
As	188.980	803.10	798.51	804.76
B	249.772	10425	10485	10789
Ba	233.527	65656	66231	66207
Be	234.861	217719	214883	218819
Ca	315.887	98828	99368	99626
Cd	228.802	21323	21313	21461
Co	231.160	9437.5	9469.6	9503.5
Cr	267.716	33185	33289	33417
Cu	324.754	69879	69396	69999
Fe	261.382	3601.2	3597.1	3619.3
K	728.181	545637	540304	547044
Li	610.365	113675	112576	113933
Mg	279.078	16387	16305	16469
Mn	293.305	25120	25118	25287
Mo	202.032	1903.0	1916.7	1924.0
Na	568.821	1934.4	1962.2	1910.1
Na	589.592	1700060	1686481	1702329
Ni	221.648	2867.9	2877.3	2887.0
Pb	220.353	2626.9	2644.9	2643.7
Sb	217.582	386.16	392.18	389.26
Se	196.026	674.21	671.56	679.83

El	Wavelen.	Replicates Intensity (c/s)		
Si	251.611	4177.0	4184.5	4220.1
Sn	189.927	803.19	803.07	807.81
Sr	216.596	9777.4	9689.8	9877.2
Ti	322.284	19060	19184	19193
Tl	190.794	1408.8	1413.4	1420.8
V	289.164	16860	16927	16970
Y	361.104	79935	81723	80530
Zn	206.200	2416.2	2419.2	2429.8
Zr	257.147	22341	22422	22500

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.97067	ppm	0.003955	0.4	18115	0.97067 ppm	Y 361.104	97.06743
Al	237.312	4.8509	ppm	0.001102	0.0	1409.8	4.8509 ppm	Y 361.104	97.01728
As	188.980	4.9921	ppm	0.020165	0.4	802.12	4.9921 ppm	Y 361.104	99.84246
B	249.772	2.0715	ppm	0.038428	1.9	10566	2.0715 ppm	Y 361.104	103.57641
Ba	233.527	4.8014	ppm	0.023685	0.5	66031	4.8014 ppm	Y 361.104	96.02776
Be	234.861	5.3155	ppm	0.049703	0.9	217140	5.3155 ppm	Y 361.104	106.31033
Ca	315.887	47.181	ppm	0.19388	0.4	99274	47.181 ppm	Y 361.104	94.36184
Cd	228.802	4.9586	ppm	0.019210	0.4	21366	4.9586 ppm	Y 361.104	99.17201
Co	231.160	4.8168	ppm	0.016492	0.3	9470.2	4.8168 ppm	Y 361.104	96.33552
Cr	267.716	4.7860	ppm	0.016691	0.3	33297	4.7860 ppm	Y 361.104	95.72009
Cu	324.754	5.0970	ppm	0.023336	0.5	69758	5.0970 ppm	Y 361.104	101.94044
Fe	261.382	4.9388	ppm	0.016005	0.3	3605.8	4.9388 ppm	Y 361.104	98.77699
K	728.181	51.912b	ppm	0.33043	0.6	544328	51.912 ppm	Y 361.104	103.82336
Li	610.365	5.1319	ppm	0.032633	0.6	113395	5.1319 ppm	Y 361.104	102.63799
Mg	279.078	48.158	ppm	0.24113	0.5	16387	48.158 ppm	Y 361.104	96.31686
Mn	293.305	4.8042	ppm	0.018535	0.4	25175	4.8042 ppm	Y 361.104	96.08356
Mo	202.032	0.94858	ppm	0.005272	0.6	1914.6	0.94858 ppm	Y 361.104	94.85783
Na	568.821	44.446b	ppm	0.56841	1.3	1935.5	44.446 ppm	Y 361.104	88.89184Q
Na	589.592	47.294	ppm	0.23524	0.5	1696290	47.294 ppm	Y 361.104	94.58788
Ni	221.648	4.8151	ppm	0.016011	0.3	2877.4	4.8151 ppm	Y 361.104	96.30174
Pb	220.353	4.7975	ppm	0.018274	0.4	2638.5	4.7975 ppm	Y 361.104	95.95017
Sb	217.582	0.97862	ppm	0.007735	0.8	389.20	0.97862 ppm	Y 361.104	97.86169
Se	196.026	5.0548	ppm	0.031726	0.6	675.20	5.0548 ppm	Y 361.104	101.09585
Si	251.611	4.9793	ppm	0.027479	0.6	4193.9	4.9793 ppm	Y 361.104	99.58665
Sn	189.927	4.7188	ppm	0.015842	0.3	804.69	4.7188 ppm	Y 361.104	94.37628
Sr	216.596	4.7564	ppm	0.045583	1.0	9781.5	4.7564 ppm	Y 361.104	95.12772
Ti	322.284	4.7295	ppm	0.018338	0.4	19146	4.7295 ppm	Y 361.104	94.59069
Tl	190.794	4.7535	ppm	0.020583	0.4	1414.4	4.7535 ppm	Y 361.104	95.07096

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
V	289.164	4.8122	ppm	0.015808	0.3	16919	4.8122 ppm	Y 361.104	96.24359
Zn	206.200	4.7797	ppm	0.014110	0.3	2421.7	4.7797 ppm	Y 361.104	95.59419
Zr	257.147	4.8381	ppm	0.017213	0.4	22421	4.8381 ppm	Y 361.104	96.76151

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.93541	80729	910.906	1.1

BLA01 (CCB) **9/24/2004, 3:07:28 PM** **Rack 1, Tube 51**

El	Wavelen.	Replicates Intensity (c/s)			
Ag	328.068	-0.012498	2.3759	-1.8513	
Al	237.312	0.002307	1.9186	-0.32069	
As	188.980	0.22329	0.22890	-0.61509	
B	249.772	307.78	238.07	205.89	
Ba	233.527	29.679	28.975	30.354	
Be	234.861	-3.9675	-2.2783	-2.6194	
Ca	315.887	134.92	139.65	135.54	
Cd	228.802	1.0453	2.1534	1.5706	
Co	231.160	3.2131	2.0901	1.9776	
Cr	267.716	0.13982	-0.33912	1.7388	
Cu	324.754	33.771	34.667	36.299	
Fe	261.382	3.4761	5.1026	4.6445	
K	728.181	-101.03	-110.39	-99.695	
Li	610.365	332.95	325.42	332.64	
Mg	279.078	1.5636	1.7890	1.4804	
Mn	293.305	-3.1471	-2.6964	-2.5392	
Mo	202.032	6.8636	2.7739	1.4507	
Na	568.821	-86.823	-67.658	-75.289	
Na	589.592	149.23	150.55	153.46	
Ni	221.648	-0.32675	-0.27145	-0.088502	
Pb	220.353	-2.0486	-2.3196	-2.0850	
Sb	217.582	-0.63112	-0.37907	-1.3027	
Se	196.026	1.1410	1.8156	0.66120	
Si	251.611	33.767	30.514	27.773	
Sn	189.927	-0.57394	-0.26376	-0.41578	
Sr	216.596	0.55190	1.4048	0.29389	
Ti	322.284	34.317	28.794	29.749	
Tl	190.794	2.3158	1.0240	0.66318	
V	289.164	3.7024	4.0820	5.3201	
Y	361.104	82411	86770	85345	

El	Wavelen.	Replicates Intensity (c/s)			
Zn	206.200	2.2170	1.6654	1.8673	
Zr	257.147	7.9416	8.1119	6.9692	

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000150	ppm	0.000115	77.0	0.17071	0.000150 ppm	Y 361.104	0.00015
Al	237.312	-0.002215u	ppm	0.004208	189.9	0.53339	-0.002215 ppm	Y 361.104	-0.00222
As	188.980	0.001849u	ppm	0.003025	163.6	-0.054300	0.001849 ppm	Y 361.104	0.00185
B	249.772	0.040640	ppm	0.010254	25.2	250.58	0.040640 ppm	Y 361.104	0.04064Z
Ba	233.527	0.000176	ppm	0.000050	28.5	29.669	0.000176 ppm	Y 361.104	0.00018
Be	234.861	0.000029	ppm	0.000022	76.1	-2.9551	0.000029 ppm	Y 361.104	0.00003
Ca	315.887	0.000036u	ppm	0.001223	3418.9	136.70	0.000036 ppm	Y 361.104	0.00004
Cd	228.802	-0.000042u	ppm	0.000129	302.5	1.5898	-0.000042 ppm	Y 361.104	-0.00004
Co	231.160	-0.000162u	ppm	0.000341	211.1	2.4269	-0.000162 ppm	Y 361.104	-0.00016
Cr	267.716	-0.000046u	ppm	0.000156	340.7	0.51318	-0.000046 ppm	Y 361.104	-0.00005
Cu	324.754	-0.000742u	ppm	0.000094	12.6	34.913	-0.000742 ppm	Y 361.104	-0.00074
Fe	261.382	-0.000719u	ppm	0.001135	158.0	4.4077	-0.000719 ppm	Y 361.104	-0.00072
K	728.181	-0.000033u	ppm	0.000571	1712.2	-103.70	-0.000033 ppm	Y 361.104	-0.00003
Li	610.365	-0.000544u	ppm	0.000193	35.5	330.34	-0.000544 ppm	Y 361.104	-0.00054
Mg	279.078	-0.001186u	ppm	0.000469	39.6	1.6110	-0.001186 ppm	Y 361.104	-0.00119
Mn	293.305	0.000070	ppm	0.000060	86.6	-2.7942	0.000070 ppm	Y 361.104	0.00007
Mo	202.032	0.001383	ppm	0.001399	101.1	3.6961	0.001383 ppm	Y 361.104	0.00138
Na	568.821	1.1404	ppm	0.21046	18.5	-76.590	1.1404 ppm	Y 361.104	1.14044Z
Na	589.592	-0.001934u	ppm	0.000061	3.2	151.08	-0.001934 ppm	Y 361.104	-0.00193
Ni	221.648	-0.000443u	ppm	0.000209	47.1	-0.22890	-0.000443 ppm	Y 361.104	-0.00044
Pb	220.353	-0.001633u	ppm	0.000267	16.4	-2.1511	-0.001633 ppm	Y 361.104	-0.00163
Sb	217.582	-0.001422u	ppm	0.001227	86.3	-0.77096	-0.001422 ppm	Y 361.104	-0.00142
Se	196.026	-0.004967u	ppm	0.004359	87.8	1.2059	-0.004967 ppm	Y 361.104	-0.00497
Si	251.611	0.010225	ppm	0.003582	35.0	30.685	0.010225 ppm	Y 361.104	0.01022
Sn	189.927	0.000392u	ppm	0.000910	232.2	-0.41783	0.000392 ppm	Y 361.104	0.00039
Sr	216.596	0.000127u	ppm	0.000283	222.0	0.75021	0.000127 ppm	Y 361.104	0.00013
Ti	322.284	0.000491u	ppm	0.000731	148.9	30.953	0.000491 ppm	Y 361.104	0.00049
Tl	190.794	0.006191	ppm	0.002951	47.7	1.3343	0.006191 ppm	Y 361.104	0.00619
V	289.164	0.000134u	ppm	0.000240	179.1	4.3682	0.000134 ppm	Y 361.104	0.00013
Zn	206.200	-0.001790u	ppm	0.000554	30.9	1.9165	-0.001790 ppm	Y 361.104	-0.00179
Zr	257.147	0.000582	ppm	0.000133	22.9	7.6742	0.000582 ppm	Y 361.104	0.00058

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.98306	84842	2222.237	2.6

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Q1653454 BLA02 (Samp) 9/24/2004, 3:12:41 PM Rack 1, Tube 52
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-0.91403	-1.0521	-1.9986
Al	237.312	1.4434	0.98059	1.4517
As	188.980	0.23589	-0.65151	0.55009
B	249.772	142.38	136.91	122.99
Ba	233.527	27.876	28.736	29.495
Be	234.861	-1.2752	-1.6292	-1.6178
Ca	315.887	146.14	148.69	147.35
Cd	228.802	0.048342	1.7349	0.99005
Co	231.160	2.1324	2.0439	1.0003
Cr	267.716	-0.99643	-1.4215	-1.4385
Cu	324.754	30.430	30.735	30.327
Fe	261.382	3.4007	4.0643	4.0939
K	728.181	-87.198	-89.965	-107.40
Li	610.365	326.33	340.07	339.60
Mg	279.078	0.51768	0.96180	0.039914
Mn	293.305	-1.8399	-2.4407	-4.7060
Mo	202.032	0.31575	0.11854	0.57916
Na	568.821	-72.903	-83.611	-71.640
Na	589.592	162.88	181.40	179.14
Ni	221.648	0.31416	-0.37431	0.14104
Pb	220.353	-2.1799	-1.6499	-1.5985
Sb	217.582	-0.30436	0.30662	-0.38035
Se	196.026	1.0482	0.82366	0.99552
Si	251.611	19.059	19.889	19.748
Sn	189.927	-0.40464	0.16872	-0.24030
Sr	216.596	0.79289	0.43089	0.23380
Ti	322.284	29.929	30.903	31.649
Tl	190.794	0.11406	-0.39099	0.34262
V	289.164	4.6045	3.8833	3.6743
Y	361.104	89457	84531	86365
Zn	206.200	1.6800	2.2858	2.3081
Zr	257.147	3.3374	4.2087	3.2822

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.000071	ppm	0.000032	45.1	-1.3216	0.000071 ppm	Y 361.104	1.0000
Al	237.312	0.000423u	ppm	0.000937	221.8	1.2919	0.000423 ppm	Y 361.104	1.0000
As	188.980	0.002467u	ppm	0.003881	157.3	0.044825	0.002467 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
B	249.772	0.017708	ppm	0.001968	11.1	134.10	0.017708 ppm	Y 361.104	1.0000
Ba	233.527	0.000106	ppm	0.000059	55.7	28.702	0.000106 ppm	Y 361.104	1.0000
Be	234.861	0.000064	ppm	0.000005	7.7	-1.5074	0.000064 ppm	Y 361.104	1.0000
Ca	315.887	0.005111	ppm	0.000607	11.9	147.39	0.005111 ppm	Y 361.104	1.0000
Cd	228.802	-0.000196u	ppm	0.000196	100.1	0.92443	-0.000196 ppm	Y 361.104	1.0000
Co	231.160	-0.000524u	ppm	0.000315	60.1	1.7256	-0.000524 ppm	Y 361.104	1.0000
Cr	267.716	-0.000304u	ppm	0.000036	11.8	-1.2855	-0.000304 ppm	Y 361.104	1.0000
Cu	324.754	-0.001065u	ppm	0.000016	1.5	30.497	-0.001065 ppm	Y 361.104	1.0000
Fe	261.382	-0.001461u	ppm	0.000531	36.3	3.8530	-0.001461 ppm	Y 361.104	1.0000
K	728.181	0.000834u	ppm	0.001072	128.6	-94.855	0.000834 ppm	Y 361.104	1.0000
Li	610.365	-0.000316u	ppm	0.000353	111.7	335.33	-0.000316 ppm	Y 361.104	1.0000
Mg	279.078	-0.004432u	ppm	0.001355	30.6	0.50647	-0.004432 ppm	Y 361.104	1.0000
Mn	293.305	0.000031u	ppm	0.000288	921.4	-2.9955	0.000031 ppm	Y 361.104	1.0000
Mo	202.032	-0.000281u	ppm	0.000115	40.7	0.33782	-0.000281 ppm	Y 361.104	1.0000
Na	568.821	1.1521	ppm	0.14346	12.5	-76.052	1.1521 ppm	Y 361.104	1.0000
Na	589.592	-0.001270u	ppm	0.000287	22.6	174.47	-0.001270 ppm	Y 361.104	1.0000
Ni	221.648	0.000022u	ppm	0.000600	2668.7	0.026962	0.000022 ppm	Y 361.104	1.0000
Pb	220.353	-0.001018u	ppm	0.000585	57.4	-1.8094	-0.001018 ppm	Y 361.104	1.0000
Sb	217.582	0.000238u	ppm	0.000968	407.1	-0.12603	0.000238 ppm	Y 361.104	1.0000
Se	196.026	-0.006847u	ppm	0.000882	12.9	0.95578	-0.006847 ppm	Y 361.104	1.0000
Si	251.611	-0.003047u	ppm	0.000530	17.4	19.565	-0.003047 ppm	Y 361.104	1.0000
Sn	189.927	0.001912	ppm	0.001732	90.6	-0.15874	0.001912 ppm	Y 361.104	1.0000
Sr	216.596	-0.000001u	ppm	0.000138	20533.0	0.48586	-0.000001 ppm	Y 361.104	1.0000
Ti	322.284	0.000462	ppm	0.000214	46.2	30.827	0.000462 ppm	Y 361.104	1.0000
Tl	190.794	0.001733	ppm	0.001275	73.6	0.021897	0.001733 ppm	Y 361.104	1.0000
V	289.164	0.000045u	ppm	0.000138	310.9	4.0540	0.000045 ppm	Y 361.104	1.0000
Zn	206.200	-0.001441u	ppm	0.000707	49.1	2.0913	-0.001441 ppm	Y 361.104	1.0000
Zr	257.147	-0.000293u	ppm	0.000112	38.2	3.6094	-0.000293 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0056	86784	2489.373	2.9

Q1653455 LCS (Samp) 9/24/2004, 3:17:55 PM Rack 1, Tube 53
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	993.07	978.53	983.31
Al	237.312	608.21	600.95	596.16
As	188.980	348.31	340.73	338.93
B	249.772	5484.0	5377.1	5523.0

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El	Wavelen.	Replicates Intensity (c/s)		
Ba	233.527	29050	28874	28928
Be	234.861	2316.9	2249.2	2267.3
Ca	315.887	216870	215330	214763
Cd	228.802	178.45	174.31	176.08
Co	231.160	1042.2	1006.7	1061.1
Cr	267.716	1416.3	1399.8	1400.9
Cu	324.754	3891.4	3759.0	3797.5
Fe	261.382	773.20	760.13	762.31
K	728.181	1157236	1129212	1133024
Li	610.365	24672	23954	24144
Mg	279.078	36298	35454	35594
Mn	293.305	2741.0	2698.2	2696.0
Mo	202.032	2238.7	2232.4	2224.1
Na	568.821	4755.9	4796.6	4652.4
Na	589.592	3546973	3596165	3748136
Ni	221.648	315.81	312.79	310.22
Pb	220.353	285.60	283.61	285.05
Sb	217.582	209.10	208.05	207.59
Se	196.026	296.24	289.10	288.89
Si	251.611	987.03	968.40	971.75
Sn	189.927	-0.42855	-0.58868	-0.61956
Sr	216.596	2183.5	2118.9	2252.7
Ti	322.284	4217.8	4192.2	4157.7
Tl	190.794	930.32	925.83	922.50
V	289.164	1843.3	1822.9	1816.3
Y	361.104	78254	80612	79693
Zn	206.200	265.74	262.54	265.24
Zr	257.147	14.992	12.989	10.128

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.053468	ppm	0.000404	0.8	984.97	0.053468 ppm	Y 361.104	1.0000
Al	237.312	2.0726	ppm	0.021085	1.0	601.77	2.0726 ppm	Y 361.104	1.0000
As	188.980	2.1354	ppm	0.031009	1.5	342.66	2.1354 ppm	Y 361.104	1.0000
B	249.772	1.0665	ppm	0.014866	1.4	5461.4	1.0665 ppm	Y 361.104	1.0000
Ba	233.527	2.1044	ppm	0.006592	0.3	28951	2.1044 ppm	Y 361.104	1.0000
Be	234.861	0.055968	ppm	0.000857	1.5	2277.8	0.055968 ppm	Y 361.104	1.0000
Ca	315.887	102.52	ppm	0.51876	0.5	215654	102.52 ppm	Y 361.104	1.0000
Cd	228.802	0.043450	ppm	0.000482	1.1	176.28	0.043450 ppm	Y 361.104	1.0000
Co	231.160	0.51295	ppm	0.013784	2.7	1036.7	0.51295 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Cr	267.716	0.20193	ppm	0.001332	0.7	1405.7	0.20193 ppm	Y 361.104	1.0000
Cu	324.754	0.27375	ppm	0.004979	1.8	3816.0	0.27375 ppm	Y 361.104	1.0000
Fe	261.382	1.0377	ppm	0.009476	0.9	765.21	1.0377 ppm	Y 361.104	1.0000
K	728.181	105.84b	ppm	1.3488	1.3	1139824	105.84 ppm	Y 361.104	1.0000
Li	610.365	1.1128	ppm	0.016843	1.5	24257	1.1128 ppm	Y 361.104	1.0000
Mg	279.078	105.17	ppm	1.3304	1.3	35782	105.17 ppm	Y 361.104	1.0000
Mn	293.305	0.51679	ppm	0.004842	0.9	2711.8	0.51679 ppm	Y 361.104	1.0000
Mo	202.032	1.1058	ppm	0.003642	0.3	2231.7	1.1058 ppm	Y 361.104	1.0000
Na	568.821	104.63b	ppm	1.6216	1.5	4735.0	104.63 ppm	Y 361.104	1.0000
Na	589.592	99.460	ppm	2.7783	2.8	3630425	99.460 ppm	Y 361.104	1.0000
Ni	221.648	0.52174	ppm	0.004689	0.9	312.94	0.52174 ppm	Y 361.104	1.0000
Pb	220.353	0.52280	ppm	0.001866	0.4	284.76	0.52280 ppm	Y 361.104	1.0000
Sb	217.582	0.53330	ppm	0.001985	0.4	208.25	0.53330 ppm	Y 361.104	1.0000
Se	196.026	2.1760	ppm	0.031428	1.4	291.41	2.1760 ppm	Y 361.104	1.0000
Si	251.611	1.1382	ppm	0.011854	1.0	975.73	1.1382 ppm	Y 361.104	1.0000
Sn	189.927	-0.000798u	ppm	0.000601	75.3	-0.54560	-0.000798 ppm	Y 361.104	1.0000
Sr	216.596	1.0603	ppm	0.032534	3.1	2185.0	1.0603 ppm	Y 361.104	1.0000
Ti	322.284	1.0298	ppm	0.007467	0.7	4189.2	1.0298 ppm	Y 361.104	1.0000
Tl	190.794	3.1428	ppm	0.013324	0.4	926.21	3.1428 ppm	Y 361.104	1.0000
V	289.164	0.51956	ppm	0.003984	0.8	1827.5	0.51956 ppm	Y 361.104	1.0000
Zn	206.200	0.51451	ppm	0.003425	0.7	264.51	0.51451 ppm	Y 361.104	1.0000
Zr	257.147	0.000618	ppm	0.000528	85.4	12.703	0.000618 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.92139	79520	1188.674	1.5

A675186 1:5 (Samp) 9/24/2004, 3:23:09 PM Rack 1, Tube 54
Weight: 1 Volume: 1 Dilution: 5

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-4.5655	-1.9118	-3.1679
Al	237.312	0.40863	1.1797	0.060073
As	188.980	-0.10681	0.17652	-0.099019
B	249.772	272.67	249.22	228.73
Ba	233.527	715.13	735.56	729.52
Be	234.861	-5.0547	-5.0288	-5.8852
Ca	315.887	45258	45849	45177
Cd	228.802	1.4044	2.6959	2.4972
Co	231.160	-0.006792	1.2968	3.1688
Cr	267.716	-0.51083	1.9423	-1.0225

S.D.

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El	Wavelen.	Replicates Intensity (c/s)		
Cu	324.754	41.862	44.789	42.817
Fe	261.382	341.56	349.42	344.63
K	728.181	2352.5	2410.2	2382.2
Li	610.365	152.78	163.72	157.38
Mg	279.078	2028.1	2081.9	2048.6
Mn	293.305	81.567	83.067	83.441
Mo	202.032	8.8919	5.0606	3.7352
Na	568.821	57.700	46.856	46.694
Na	589.592	85879	88372	87174
Ni	221.648	2.1747	1.6157	1.9653
Pb	220.353	-0.75207	-0.95718	-0.82020
Sb	217.582	-0.81569	-1.2271	-0.41111
Se	196.026	0.91206	0.96682	1.1241
Si	251.611	1311.0	1352.6	1344.9
Sn	189.927	-0.51104	-0.36425	-0.42863
Sr	216.596	67.392	68.018	66.898
Ti	322.284	31.110	28.580	30.860
Tl	190.794	2.2820	1.5302	0.66422
V	289.164	7.4991	6.3645	5.1929
Y	361.104	84479	82117	83011
Zn	206.200	4.9897	5.0253	4.8711
Zr	257.147	6.1354	3.9274	4.0522

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000042u	ppm	0.000072	171.8	-3.2150	-0.000211 ppm	Y 361.104	1.0000
Al	237.312	-0.001624u	ppm	0.001992	122.7	0.54948	-0.008119 ppm	Y 361.104	1.0000
As	188.980	0.002121	ppm	0.001005	47.4	-0.009769	0.010603 ppm	Y 361.104	1.0000
B	249.772	0.040581	ppm	0.004329	10.7	250.21	0.20291 ppm	Y 361.104	1.0000
Ba	233.527	0.050893	ppm	0.000763	1.5	726.73	0.25447 ppm	Y 361.104	1.0000
Be	234.861	0.000017u	ppm	0.000012	69.4	-5.3229	0.000086 ppm	Y 361.104	1.0000
Ca	315.887	21.549	ppm	0.17468	0.8	45428	107.74 ppm	Y 361.104	1.0000
Cd	228.802	0.000096u	ppm	0.000161	168.4	2.1992	0.000479 ppm	Y 361.104	1.0000
Co	231.160	-0.000766u	ppm	0.000797	104.2	1.4863	-0.003828 ppm	Y 361.104	1.0000
Cr	267.716	-0.000100u	ppm	0.000228	227.6	0.13632	-0.000500 ppm	Y 361.104	1.0000
Cu	324.754	-0.000457u	ppm	0.000109	23.9	43.156	-0.002286 ppm	Y 361.104	1.0000
Fe	261.382	0.46067	ppm	0.005359	1.2	345.20	2.3033 ppm	Y 361.104	1.0000
K	728.181	0.24430	ppm	0.002821	1.2	2381.6	1.2215 ppm	Y 361.104	1.0000
Li	610.365	-0.001998u	ppm	0.000249	12.4	157.96	-0.009992 ppm	Y 361.104	1.0000
Mg	279.078	6.0280	ppm	0.079894	1.3	2052.9	30.140 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Mn	293.305	0.016313	ppm	0.000189	1.2	82.692	0.081567 ppm	Y 361.104	1.0000
Mo	202.032	0.002474	ppm	0.001327	53.7	5.8959	0.012368 ppm	Y 361.104	1.0000
Na	568.821	3.7435	ppm	0.13759	3.7	50.417	18.718 ppm	Y 361.104	1.0000
Na	589.592	2.4640	ppm	0.035317	1.4	87141	12.320 ppm	Y 361.104	1.0000
Ni	221.648	-0.001219	ppm	0.000474	38.9	1.9186	-0.006094 ppm	Y 361.104	1.0000
Pb	220.353	0.000743	ppm	0.000190	25.5	-0.84315	0.003714 ppm	Y 361.104	1.0000
Sb	217.582	-0.001572u	ppm	0.001048	66.7	-0.81795	-0.007858 ppm	Y 361.104	1.0000
Se	196.026	-0.006615u	ppm	0.000827	12.5	1.0010	-0.033074 ppm	Y 361.104	1.0000
Si	251.611	1.5684	ppm	0.026375	1.7	1336.1	7.8420 ppm	Y 361.104	1.0000
Sn	189.927	0.000293u	ppm	0.000432	147.1	-0.43464	0.001467 ppm	Y 361.104	1.0000
Sr	216.596	0.032083	ppm	0.000273	0.9	67.436	0.16042 ppm	Y 361.104	1.0000
Ti	322.284	0.000680u	ppm	0.000345	50.7	30.183	0.003400 ppm	Y 361.104	1.0000
Tl	190.794	0.006726	ppm	0.002749	40.9	1.4921	0.033630 ppm	Y 361.104	1.0000
V	289.164	0.000700	ppm	0.000327	46.7	6.3522	0.003499 ppm	Y 361.104	1.0000
Zn	206.200	0.003714	ppm	0.000160	4.3	4.9620	0.018571 ppm	Y 361.104	1.0000
Zr	257.147	-0.000116u	ppm	0.000268	230.3	4.7050	-0.000581 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96406	83202	1192.366	1.4

A675186 (Samp) 9/24/2004, 3:28:23 PM Rack 1, Tube 55
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-2.3430	-3.8859	-3.0886
Al	237.312	0.38854	-0.15801	-0.91849
As	188.980	0.88999	1.5175	-0.066403
B	249.772	467.98	444.84	453.84
Ba	233.527	3563.2	3597.3	3573.4
Be	234.861	-13.539	-12.375	-12.800
Ca	315.887	231165	228932	230700
Cd	228.802	1.5044	-0.077537	-0.39133
Co	231.160	2.4882	3.4721	2.0396
Cr	267.716	-1.2245	-0.64680	1.2632
Cu	324.754	50.137	47.921	50.507
Fe	261.382	1707.7	1672.2	1697.0
K	728.181	14512	14114	14331
Li	610.365	-718.08	-686.26	-700.24
Mg	279.078	10681	10363	10566
Mn	293.305	418.28	412.42	418.97

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El	Wavelen.	Replicates Intensity (c/s)		
Mo	202.032	10.347	9.1672	8.8464
Na	568.821	666.74	659.06	655.22
Na	589.592	498790	478325	490998
Ni	221.648	8.6618	8.6111	8.3689
Pb	220.353	-0.017639	-1.0042	-0.62227
Sb	217.582	-1.2432	-0.24279	-1.1186
Se	196.026	1.0604	1.6514	2.3198
Si	251.611	6769.1	6631.0	6722.9
Sn	189.927	-0.039535	0.072912	0.84554
Sr	216.596	338.56	335.98	337.19
Ti	322.284	27.667	24.879	26.582
Tl	190.794	0.48502	1.3074	-0.42545
V	289.164	2.6337	1.1002	2.5396
Y	361.104	81965	85499	83220
Zn	206.200	16.727	15.866	15.545
Zr	257.147	5.2220	4.0643	4.4074

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000075u	ppm	0.000042	56.3	-3.1058	-0.000075 ppm	Y 361.104	1.0000
Al	237.312	-0.002281u	ppm	0.002282	100.1	-0.22932	-0.002281 ppm	Y 361.104	1.0000
As	188.980	0.007018	ppm	0.004967	70.8	0.78036	0.007018 ppm	Y 361.104	1.0000
B	249.772	0.081067	ppm	0.002296	2.8	455.55	0.081067 ppm	Y 361.104	1.0000
Ba	233.527	0.25834	ppm	0.001276	0.5	3578.0	0.25834 ppm	Y 361.104	1.0000
Be	234.861	0.000015u	ppm	0.000014	95.4	-12.905	0.000015 ppm	Y 361.104	1.0000
Ca	315.887	109.49	ppm	0.56061	0.5	230266	109.49 ppm	Y 361.104	1.0000
Cd	228.802	-0.000341u	ppm	0.000236	69.2	0.34519	-0.000341 ppm	Y 361.104	1.0000
Co	231.160	-0.000705u	ppm	0.000366	51.9	2.6666	-0.000705 ppm	Y 361.104	1.0000
Cr	267.716	-0.000149u	ppm	0.000187	125.8	-0.20269	-0.000149 ppm	Y 361.104	1.0000
Cu	324.754	-0.001291	ppm	0.000102	7.9	49.522	-0.001291 ppm	Y 361.104	1.0000
Fe	261.382	2.2842	ppm	0.024631	1.1	1692.3	2.2842 ppm	Y 361.104	1.0000
K	728.181	1.4163	ppm	0.019519	1.4	14319	1.4163 ppm	Y 361.104	1.0000
Li	610.365	-0.014997u	ppm	0.000722	4.8	-701.53	-0.014997 ppm	Y 361.104	1.0000
Mg	279.078	30.963	ppm	0.47332	1.5	10536	30.963 ppm	Y 361.104	1.0000
Mn	293.305	0.079738	ppm	0.000687	0.9	416.56	0.079738 ppm	Y 361.104	1.0000
Mo	202.032	0.004237	ppm	0.000392	9.2	9.4536	0.004237 ppm	Y 361.104	1.0000
Na	568.821	16.364	ppm	0.12784	0.8	660.34	16.364 ppm	Y 361.104	1.0000
Na	589.592	13.810	ppm	0.29025	2.1	489371	13.810 ppm	Y 361.104	1.0000
Ni	221.648	-0.008111	ppm	0.000262	3.2	8.5473	-0.008111 ppm	Y 361.104	1.0000
Pb	220.353	0.001271	ppm	0.000904	71.1	-0.54804	0.001271 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Sb	217.582	-0.001828u	ppm	0.001401	76.6	-0.86820	-0.001828 ppm	Y 361.104	1.0000
Se	196.026	-0.001956u	ppm	0.004736	242.1	1.6772	-0.001956 ppm	Y 361.104	1.0000
Si	251.611	7.9798	ppm	0.083905	1.1	6707.7	7.9798 ppm	Y 361.104	1.0000
Sn	189.927	0.004562	ppm	0.002826	62.0	0.29297	0.004562 ppm	Y 361.104	1.0000
Sr	216.596	0.16137	ppm	0.000627	0.4	337.24	0.16137 ppm	Y 361.104	1.0000
Ti	322.284	0.001290u	ppm	0.000348	27.0	26.376	0.001290 ppm	Y 361.104	1.0000
Tl	190.794	0.003193	ppm	0.002944	92.2	0.45567	0.003193 ppm	Y 361.104	1.0000
V	289.164	-0.000502u	ppm	0.000244	48.5	2.0912	-0.000502 ppm	Y 361.104	1.0000
Zn	206.200	0.023507	ppm	0.001213	5.2	16.046	0.023507 ppm	Y 361.104	1.0000
Zr	257.147	-0.000373u	ppm	0.000128	34.4	4.5645	-0.000373 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.96822	83561	1791.228	2.1

Q1653456 SP102 (Samp) **9/24/2004, 3:33:37 PM** **Rack 1, Tube 56**

Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	934.01	942.70	944.60
Al	237.312	562.30	572.08	569.36
As	188.980	323.45	326.66	327.63
B	249.772	5287.9	5428.0	5497.8
Ba	233.527	30854	31290	30825
Be	234.861	2085.6	2111.1	2134.1
Ca	315.887	433469	438923	435517
Cd	228.802	162.53	165.91	165.01
Co	231.160	966.34	980.58	960.81
Cr	267.716	1316.7	1335.2	1327.6
Cu	324.754	3535.3	3603.3	3604.6
Fe	261.382	2324.8	2351.9	2346.2
K	728.181	1114011	1127374	1139699
Li	610.365	21211	21468	21726
Mg	279.078	43052	43185	44582
Mn	293.305	2923.7	2967.3	2956.8
Mo	202.032	2098.4	2139.3	2120.3
Na	568.821	5375.8	5522.5	5362.9
Na	589.592	3777702	3854060	3861931
Ni	221.648	294.11	296.92	296.08
Pb	220.353	268.86	270.87	268.73
Sb	217.582	195.73	195.82	198.18

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El	Wavelen.	Replicates Intensity (c/s)		
Se	196.026	270.79	275.87	276.67
Si	251.611	6003.1	6078.6	6078.9
Sn	189.927	0.33290	-0.71532	-0.22203
Sr	216.596	2394.5	2408.2	2345.1
Ti	322.284	3940.3	3989.2	3957.4
Tl	190.794	861.17	873.95	868.46
V	289.164	1711.4	1737.7	1722.2
Y	361.104	81714	81255	79789
Zn	206.200	259.13	261.52	263.89
Zr	257.147	11.418	11.389	11.841

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.051015	ppm	0.000308	0.6	940.44	0.051015 ppm	Y 361.104	1.0000
Al	237.312	1.9581	ppm	0.017552	0.9	567.91	1.9581 ppm	Y 361.104	1.0000
As	188.980	2.0311	ppm	0.013645	0.7	325.91	2.0311 ppm	Y 361.104	1.0000
B	249.772	1.0553	ppm	0.021043	2.0	5404.6	1.0553 ppm	Y 361.104	1.0000
Ba	233.527	2.2527	ppm	0.018943	0.8	30990	2.2527 ppm	Y 361.104	1.0000
Be	234.861	0.052081	ppm	0.000594	1.1	2110.3	0.052081 ppm	Y 361.104	1.0000
Ca	315.887	207.36	ppm	1.3110	0.6	435970	207.36 ppm	Y 361.104	1.0000
Cd	228.802	0.040556	ppm	0.000407	1.0	164.48	0.040556 ppm	Y 361.104	1.0000
Co	231.160	0.47882	ppm	0.005097	1.1	969.24	0.47882 ppm	Y 361.104	1.0000
Cr	267.716	0.19055	ppm	0.001340	0.7	1326.5	0.19055 ppm	Y 361.104	1.0000
Cu	324.754	0.25504	ppm	0.002895	1.1	3581.0	0.25504 ppm	Y 361.104	1.0000
Fe	261.382	3.1704	ppm	0.019361	0.6	2341.0	3.1704 ppm	Y 361.104	1.0000
K	728.181	104.70b	ppm	1.1402	1.1	1127028	104.70 ppm	Y 361.104	1.0000
Li	610.365	1.0175	ppm	0.011658	1.1	21469	1.0175 ppm	Y 361.104	1.0000
Mg	279.078	128.16	ppm	2.4921	1.9	43606	128.16 ppm	Y 361.104	1.0000
Mn	293.305	0.56185	ppm	0.004344	0.8	2949.2	0.56185 ppm	Y 361.104	1.0000
Mo	202.032	1.0501	ppm	0.010146	1.0	2119.3	1.0501 ppm	Y 361.104	1.0000
Na	568.821	118.78b	ppm	1.9339	1.6	5420.4	118.78 ppm	Y 361.104	1.0000
Na	589.592	104.78	ppm	1.2321	1.2	3831231	104.78 ppm	Y 361.104	1.0000
Ni	221.648	0.47580	ppm	0.002412	0.5	295.70	0.47580 ppm	Y 361.104	1.0000
Pb	220.353	0.49489	ppm	0.002177	0.4	269.49	0.49489 ppm	Y 361.104	1.0000
Sb	217.582	0.50325	ppm	0.003571	0.7	196.58	0.50325 ppm	Y 361.104	1.0000
Se	196.026	2.0480	ppm	0.023965	1.2	274.44	2.0480 ppm	Y 361.104	1.0000
Si	251.611	7.1990	ppm	0.052147	0.7	6053.5	7.1990 ppm	Y 361.104	1.0000
Sn	189.927	0.001244u	ppm	0.003076	247.2	-0.20148	0.001244 ppm	Y 361.104	1.0000
Sr	216.596	1.1541	ppm	0.016125	1.4	2382.6	1.1541 ppm	Y 361.104	1.0000
Ti	322.284	0.97559	ppm	0.006138	0.6	3962.3	0.97559 ppm	Y 361.104	1.0000

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Tl	190.794	2.9449	ppm	0.021782	0.7	867.86	2.9449 ppm	Y 361.104	1.0000
V	289.164	0.49002	ppm	0.003752	0.8	1723.8	0.49002 ppm	Y 361.104	1.0000
Zn	206.200	0.50607	ppm	0.004714	0.9	261.51	0.50607 ppm	Y 361.104	1.0000
Zr	257.147	0.000153	ppm	0.000055	35.7	11.549	0.000153 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.93761	80919	1005.046	1.2

Q1653457 DPS02 (Samp) **9/24/2004, 3:38:50 PM** **Rack 1, Tube 57**
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	971.43	980.49	976.43
Al	237.312	593.49	601.46	594.00
As	188.980	338.24	347.32	341.63
B	249.772	5728.7	5932.6	5884.9
Ba	233.527	31504	31976	31789
Be	234.861	2191.8	2263.1	2240.4
Ca	315.887	446447	451875	450142
Cd	228.802	169.45	174.20	172.20
Co	231.160	1031.7	1015.3	1012.8
Cr	267.716	1368.5	1386.9	1376.9
Cu	324.754	3767.5	3859.2	3820.3
Fe	261.382	2427.4	2473.7	2450.7
K	728.181	1177329	1198574	1191873
Li	610.365	22433	23037	22768
Mg	279.078	44734	45703	45808
Mn	293.305	3043.5	3100.3	3078.8
Mo	202.032	2174.0	2204.4	2198.8
Na	568.821	5799.9	5739.5	5660.3
Na	589.592	3996188	4192507	4147366
Ni	221.648	314.34	311.55	311.22
Pb	220.353	277.86	281.40	279.48
Sb	217.582	208.97	208.55	207.03
Se	196.026	285.52	294.78	291.48
Si	251.611	7958.0	8100.4	8041.0
Sn	189.927	-0.077849	-0.39668	-0.85603
Sr	216.596	2510.9	2478.9	2454.0
Ti	322.284	4077.3	4106.5	4092.6
Tl	190.794	887.77	903.42	898.76

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El	Wavelen.	Replicates Intensity (c/s)		
V	289.164	1778.5	1799.8	1786.1
Y	361.104	78900	76825	77766
Zn	206.200	268.84	272.83	272.44
Zr	257.147	10.817	11.086	10.379

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.052944	ppm	0.000247	0.5	976.12	0.052944 ppm	Y 361.104	1.0000
Al	237.312	2.0566	ppm	0.015515	0.8	596.31	2.0566 ppm	Y 361.104	1.0000
As	188.980	2.1337	ppm	0.028559	1.3	342.40	2.1337 ppm	Y 361.104	1.0000
B	249.772	1.1428	ppm	0.021002	1.8	5848.7	1.1428 ppm	Y 361.104	1.0000
Ba	233.527	2.3085	ppm	0.017309	0.7	31756	2.3085 ppm	Y 361.104	1.0000
Be	234.861	0.055070	ppm	0.000892	1.6	2231.7	0.055070 ppm	Y 361.104	1.0000
Ca	315.887	213.80	ppm	1.3191	0.6	449488	213.80 ppm	Y 361.104	1.0000
Cd	228.802	0.042431	ppm	0.000553	1.3	171.95	0.042431 ppm	Y 361.104	1.0000
Co	231.160	0.50393	ppm	0.005129	1.0	1019.9	0.50393 ppm	Y 361.104	1.0000
Cr	267.716	0.19787	ppm	0.001327	0.7	1377.4	0.19787 ppm	Y 361.104	1.0000
Cu	324.754	0.27209	ppm	0.003363	1.2	3815.6	0.27209 ppm	Y 361.104	1.0000
Fe	261.382	3.3191	ppm	0.031346	0.9	2450.6	3.3191 ppm	Y 361.104	1.0000
K	728.181	110.23b	ppm	0.96387	0.9	1189259	110.23 ppm	Y 361.104	1.0000
Li	610.365	1.0772	ppm	0.013688	1.3	22746	1.0772 ppm	Y 361.104	1.0000
Mg	279.078	133.48	ppm	1.7410	1.3	45415	133.48 ppm	Y 361.104	1.0000
Mn	293.305	0.58563	ppm	0.005465	0.9	3074.2	0.58563 ppm	Y 361.104	1.0000
Mo	202.032	1.0863	ppm	0.008009	0.7	2192.4	1.0863 ppm	Y 361.104	1.0000
Na	568.821	125.52b	ppm	1.5264	1.2	5733.3	125.52 ppm	Y 361.104	1.0000
Na	589.592	112.21	ppm	2.7230	2.4	4112020	112.21 ppm	Y 361.104	1.0000
Ni	221.648	0.49713	ppm	0.002870	0.6	312.37	0.49713 ppm	Y 361.104	1.0000
Pb	220.353	0.51332	ppm	0.003218	0.6	279.58	0.51332 ppm	Y 361.104	1.0000
Sb	217.582	0.53303	ppm	0.002624	0.5	208.18	0.53303 ppm	Y 361.104	1.0000
Se	196.026	2.1694	ppm	0.035269	1.6	290.59	2.1694 ppm	Y 361.104	1.0000
Si	251.611	9.5619	ppm	0.085384	0.9	8033.1	9.5619 ppm	Y 361.104	1.0000
Sn	189.927	-0.000189u	ppm	0.002295	1214.5	-0.44352	-0.000189 ppm	Y 361.104	1.0000
Sr	216.596	1.2019	ppm	0.013881	1.2	2481.3	1.2019 ppm	Y 361.104	1.0000
Ti	322.284	1.0078	ppm	0.003607	0.4	4092.1	1.0078 ppm	Y 361.104	1.0000
Tl	190.794	3.0424	ppm	0.027284	0.9	896.65	3.0424 ppm	Y 361.104	1.0000
V	289.164	0.50835	ppm	0.003057	0.6	1788.1	0.50835 ppm	Y 361.104	1.0000
Zn	206.200	0.52539	ppm	0.004370	0.8	271.37	0.52539 ppm	Y 361.104	1.0000
Zr	257.147	-0.000066	ppm	0.000077	116.6	10.761	-0.000066 ppm	Y 361.104	1.0000

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.90182	77831	1039.316	1.3

CCV (CCV) 9/24/2004, 3:44:04 PM Rack 1, Tube 58

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	18020	17910	18060
Al	237.312	1402.3	1385.0	1394.8
As	188.980	795.61	789.82	796.21
B	249.772	10268	10335	10522
Ba	233.527	67615	66694	67183
Be	234.861	212912	211948	214730
Ca	315.887	100835	99575	100477
Cd	228.802	21328	21215	21431
Co	231.160	9548.5	9444.8	9534.4
Cr	267.716	33259	33250	33240
Cu	324.754	68008	68132	68647
Fe	261.382	3602.3	3587.1	3612.5
K	728.181	526209	525081	529541
Li	610.365	110007	109947	111085
Mg	279.078	16180	16097	16275
Mn	293.305	25271	25135	25366
Mo	202.032	1949.7	1927.7	1941.6
Na	568.821	1867.0	1846.5	1832.0
Na	589.592	1641001	1645990	1658849
Ni	221.648	2894.2	2854.0	2875.7
Pb	220.353	2689.6	2662.4	2671.9
Sb	217.582	387.26	385.13	389.98
Se	196.026	665.80	664.63	672.77
Si	251.611	4183.1	4171.1	4202.8
Sn	189.927	818.74	807.50	812.94
Sr	216.596	10134	9689.1	9862.4
Ti	322.284	19302	19062	19186
Tl	190.794	1424.4	1419.5	1426.3
V	289.164	17026	16855	16986
Y	361.104	82978	82470	81293
Zn	206.200	2435.6	2411.8	2435.5
Zr	257.147	22732	22481	22678

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.96405	ppm	0.004218	0.4	17997	0.96405 ppm	Y 361.104	96.40469
Al	237.312	4.7954	ppm	0.030205	0.6	1394.0	4.7954 ppm	Y 361.104	95.90887
As	188.980	4.9408	ppm	0.022003	0.4	793.88	4.9408 ppm	Y 361.104	98.81545
B	249.772	2.0338	ppm	0.025932	1.3	10375	2.0338 ppm	Y 361.104	101.69096
Ba	233.527	4.8838	ppm	0.033538	0.7	67164	4.8838 ppm	Y 361.104	97.67645
Be	234.861	5.2190	ppm	0.034586	0.7	213196	5.2190 ppm	Y 361.104	104.37970
Ca	315.887	47.667	ppm	0.30887	0.6	100296	47.667 ppm	Y 361.104	95.33487
Cd	228.802	4.9490	ppm	0.025096	0.5	21325	4.9490 ppm	Y 361.104	98.98082
Co	231.160	4.8345	ppm	0.028113	0.6	9509.2	4.8345 ppm	Y 361.104	96.69028
Cr	267.716	4.7792	ppm	0.001344	0.0	33250	4.7792 ppm	Y 361.104	95.58418
Cu	324.754	4.9877	ppm	0.024750	0.5	68262	4.9877 ppm	Y 361.104	99.75323
Fe	261.382	4.9327	ppm	0.017290	0.4	3600.6	4.9327 ppm	Y 361.104	98.65318
K	728.181	50.295b	ppm	0.21583	0.4	526944	50.295 ppm	Y 361.104	100.58984
Li	610.365	4.9940	ppm	0.028999	0.6	110346	4.9940 ppm	Y 361.104	99.88066
Mg	279.078	47.563	ppm	0.26064	0.5	16184	47.563 ppm	Y 361.104	95.12629
Mn	293.305	4.8199	ppm	0.022152	0.5	25258	4.8199 ppm	Y 361.104	96.39807
Mo	202.032	0.96102	ppm	0.005503	0.6	1939.7	0.96102 ppm	Y 361.104	96.10157
Na	568.821	42.556b	ppm	0.38344	0.9	1848.5	42.556 ppm	Y 361.104	85.11232Q
Na	589.592	45.984	ppm	0.25298	0.6	1648613	45.984 ppm	Y 361.104	91.96825
Ni	221.648	4.8104	ppm	0.033666	0.7	2874.6	4.8104 ppm	Y 361.104	96.20864
Pb	220.353	4.8632	ppm	0.025123	0.5	2674.6	4.8632 ppm	Y 361.104	97.26372
Sb	217.582	0.97414	ppm	0.006244	0.6	387.46	0.97414 ppm	Y 361.104	97.41444
Se	196.026	4.9988	ppm	0.033092	0.7	667.74	4.9988 ppm	Y 361.104	99.97514
Si	251.611	4.9696	ppm	0.019123	0.4	4185.7	4.9696 ppm	Y 361.104	99.39156
Sn	189.927	4.7679	ppm	0.032979	0.7	813.06	4.7679 ppm	Y 361.104	95.35785
Sr	216.596	4.8117	ppm	0.10912	2.3	9895.3	4.8117 ppm	Y 361.104	96.23460
Ti	322.284	4.7388	ppm	0.029797	0.6	19184	4.7388 ppm	Y 361.104	94.77676
Tl	190.794	4.7842	ppm	0.011974	0.3	1423.4	4.7842 ppm	Y 361.104	95.68388
V	289.164	4.8226	ppm	0.025418	0.5	16956	4.8226 ppm	Y 361.104	96.45160
Zn	206.200	4.7914	ppm	0.027159	0.6	2427.6	4.7914 ppm	Y 361.104	95.82855
Zr	257.147	4.8832	ppm	0.028476	0.6	22630	4.8832 ppm	Y 361.104	97.66452

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.95299	82247	864.650	1.1

BLA01 (CCB) 9/24/2004, 3:49:17 PM Rack 1, Tube 59

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-2.9622	-1.9651	-0.55697
Al	237.312	0.85786	1.2557	1.0747
As	188.980	-0.44975	-0.52106	-0.17766
B	249.772	435.03	337.81	291.47
Ba	233.527	28.378	30.483	29.728
Be	234.861	-1.9967	-1.2308	-4.8160
Ca	315.887	136.60	141.55	144.56
Cd	228.802	1.0646	1.1640	3.1270
Co	231.160	2.5859	3.3043	2.3925
Cr	267.716	-0.018071	1.3230	1.9289
Cu	324.754	32.439	31.338	30.745
Fe	261.382	3.8001	3.9276	3.8553
K	728.181	-123.95	-107.87	-108.82
Li	610.365	358.53	356.23	359.08
Mg	279.078	1.4953	1.1027	2.8911
Mn	293.305	-4.0411	-0.98305	-3.4652
Mo	202.032	8.6696	5.1473	3.5832
Na	568.821	-77.710	-80.744	-84.373
Na	589.592	146.00	173.16	194.89
Ni	221.648	-0.11806	-0.42502	-0.10571
Pb	220.353	-1.9478	-1.1982	-2.5537
Sb	217.582	-0.29874	-0.54245	-1.5419
Se	196.026	2.1322	1.1440	1.4305
Si	251.611	39.468	35.196	36.090
Sn	189.927	-0.60192	-0.24137	-0.62178
Sr	216.596	0.69691	-0.078564	1.2830
Ti	322.284	28.729	27.735	29.727
Tl	190.794	1.8717	1.5054	1.0941
V	289.164	3.4325	4.2730	6.0346
Y	361.104	84810	85902	84202
Zn	206.200	1.1719	1.4447	1.8340
Zr	257.147	6.7206	7.5556	5.3031

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000042u	ppm	0.000066	157.4	-1.8281	0.000042 ppm	Y 361.104	0.00004
Al	237.312	-0.000376u	ppm	0.000692	184.1	1.0627	-0.000376 ppm	Y 361.104	-0.00038
As	188.980	-0.000197u	ppm	0.001129	572.4	-0.38282	-0.000197 ppm	Y 361.104	-0.00020
B	249.772	0.061152	ppm	0.014424	23.6	354.77	0.061152 ppm	Y 361.104	0.06115Z

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El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	0.000166	ppm	0.000078	46.7	29.530	0.000166 ppm	Y 361.104	0.00017
Be	234.861	0.000035u	ppm	0.000046	130.7	-2.6812	0.000035 ppm	Y 361.104	0.00004
Ca	315.887	0.002027	ppm	0.001912	94.4	140.90	0.002027 ppm	Y 361.104	0.00203
Cd	228.802	-0.000000u	ppm	0.000270	101581.0	1.7852	-0.000000 ppm	Y 361.104	0.00000
Co	231.160	0.000006u	ppm	0.000240	4083.0	2.7609	0.000006 ppm	Y 361.104	0.00001
Cr	267.716	0.000035u	ppm	0.000143	406.0	1.0779	0.000035 ppm	Y 361.104	0.00004
Cu	324.754	-0.000991u	ppm	0.000063	6.3	31.507	-0.000991 ppm	Y 361.104	-0.00099
Fe	261.382	-0.001455u	ppm	0.000087	5.9	3.8610	-0.001455 ppm	Y 361.104	-0.00145
K	728.181	-0.000997u	ppm	0.000883	88.6	-113.55	-0.000997 ppm	Y 361.104	-0.00100
Li	610.365	0.000707	ppm	0.000068	9.7	357.95	0.000707 ppm	Y 361.104	0.00071
Mg	279.078	-0.000543u	ppm	0.002763	509.2	1.8297	-0.000543 ppm	Y 361.104	-0.00054
Mn	293.305	0.000063u	ppm	0.000310	494.8	-2.8298	0.000063 ppm	Y 361.104	0.00006
Mo	202.032	0.002426	ppm	0.001291	53.2	5.8000	0.002426 ppm	Y 361.104	0.00243
Na	568.821	1.0455	ppm	0.072759	7.0	-80.942	1.0455 ppm	Y 361.104	1.04551Z
Na	589.592	-0.001359u	ppm	0.000695	51.2	171.35	-0.001359 ppm	Y 361.104	-0.00136
Ni	221.648	-0.000443u	ppm	0.000303	68.4	-0.21626	-0.000443 ppm	Y 361.104	-0.00044
Pb	220.353	-0.001174u	ppm	0.001233	105.1	-1.8999	-0.001174 ppm	Y 361.104	-0.00117
Sb	217.582	-0.001482u	ppm	0.001693	114.3	-0.79438	-0.001482 ppm	Y 361.104	-0.00148
Se	196.026	-0.002239u	ppm	0.003822	170.7	1.5689	-0.002239 ppm	Y 361.104	-0.00224
Si	251.611	0.017665	ppm	0.002689	15.2	36.918	0.017665 ppm	Y 361.104	0.01767
Sn	189.927	-0.000022u	ppm	0.001256	5814.2	-0.48836	-0.000022 ppm	Y 361.104	-0.00002
Sr	216.596	0.000071u	ppm	0.000332	468.2	0.63378	0.000071 ppm	Y 361.104	0.00007
Ti	322.284	-0.000061u	ppm	0.000246	406.4	28.731	-0.000061 ppm	Y 361.104	-0.00006
Tl	190.794	0.006723	ppm	0.001321	19.6	1.4904	0.006723 ppm	Y 361.104	0.00672
V	289.164	0.000195u	ppm	0.000377	193.2	4.5800	0.000195 ppm	Y 361.104	0.00019
Zn	206.200	-0.002651u	ppm	0.000660	24.9	1.4836	-0.002651 ppm	Y 361.104	-0.00265
Zr	257.147	0.000333	ppm	0.000246	73.8	6.5264	0.000333 ppm	Y 361.104	0.00033

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.98456	84972	861.490	1.0

Q1653511 BLA02 (Samp) **9/24/2004, 3:54:30 PM** **Rack 1, Tube 60**
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-2.0130	0.76779	0.25368
Al	237.312	3.9984	2.7528	4.3957
As	188.980	-0.27001	-0.38848	-0.19291
B	249.772	203.70	184.36	170.99
Ba	233.527	30.062	30.465	29.980

El	Wavelen.	Replicates Intensity (c/s)		
Be	234.861	-4.0320	-5.9211	-4.5745
Ca	315.887	189.80	186.62	185.32
Cd	228.802	1.3474	1.3965	2.3709
Co	231.160	1.5843	1.0841	1.5162
Cr	267.716	0.51631	-0.86312	1.2214
Cu	324.754	32.758	31.995	33.724
Fe	261.382	4.9611	4.5706	4.0853
K	728.181	-61.386	-50.252	-44.277
Li	610.365	357.60	350.01	347.94
Mg	279.078	1.1601	0.77121	1.0998
Mn	293.305	-1.1706	-4.3593	-3.1660
Mo	202.032	1.4081	0.40136	0.26450
Na	568.821	-82.483	-86.804	-86.346
Na	589.592	169.08	167.93	173.69
Ni	221.648	-0.23121	-0.12440	0.056848
Pb	220.353	-1.4445	-1.8234	-1.0455
Sb	217.582	-0.082800	-0.58764	0.65140
Se	196.026	0.45629	0.48685	1.1387
Si	251.611	27.474	27.076	27.233
Sn	189.927	1.1732	0.97889	0.77371
Sr	216.596	0.41525	1.1111	0.93027
Ti	322.284	33.773	30.218	33.130
Tl	190.794	-0.51336	0.015586	0.66080
V	289.164	7.3635	7.0177	4.7037
Y	361.104	83512	84241	84665
Zn	206.200	2.1582	2.1224	1.7082
Zr	257.147	4.4442	4.3656	4.0449

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	0.000125	ppm	0.000081	64.6	-0.33052	0.000125 ppm	Y 361.104	1.0000
Al	237.312	0.008850	ppm	0.002980	33.7	3.7156	0.008850 ppm	Y 361.104	1.0000
As	188.980	0.000420u	ppm	0.000614	146.1	-0.28380	0.000420 ppm	Y 361.104	1.0000
B	249.772	0.027995	ppm	0.003237	11.6	186.35	0.027995 ppm	Y 361.104	1.0000
Ba	233.527	0.000212	ppm	0.000019	8.9	30.169	0.000212 ppm	Y 361.104	1.0000
Be	234.861	-0.000017u	ppm	0.000024	136.4	-4.8425	-0.000017 ppm	Y 361.104	1.0000
Ca	315.887	0.024069	ppm	0.001096	4.6	187.24	0.024069 ppm	Y 361.104	1.0000
Cd	228.802	-0.000018u	ppm	0.000134	750.3	1.7049	-0.000018 ppm	Y 361.104	1.0000
Co	231.160	-0.000693u	ppm	0.000136	19.6	1.3949	-0.000693 ppm	Y 361.104	1.0000
Cr	267.716	-0.000078u	ppm	0.000152	196.0	0.29154	-0.000078 ppm	Y 361.104	1.0000

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DLS (CRI) 9/24/2004, 5:23:27 PM Rack 1, Tube 77

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	181.23	182.20	178.40
Al	237.312	15.189	13.547	13.953
As	188.980	8.3456	7.7686	8.2644
B	249.772	467.79	441.22	439.27
Ba	233.527	169.27	168.85	163.69
Be	234.861	169.76	167.66	167.75
Ca	315.887	340.79	340.66	335.02
Cd	228.802	21.874	21.157	20.800
Co	231.160	23.357	22.499	22.248
Cr	267.716	67.941	70.256	68.427
Cu	324.754	326.13	321.99	322.78
Fe	261.382	22.728	22.414	23.133
K	728.181	934.86	932.74	924.66
Li	610.365	533.38	521.52	534.48
Mg	279.078	33.734	32.733	32.801
Mn	293.305	49.275	50.164	49.567
Mo	202.032	19.065	19.918	19.460
Na	568.821	-81.293	-75.775	-80.985
Na	589.592	3094.0	3034.4	3061.4
Ni	221.648	6.6186	6.8316	6.2084
Pb	220.353	3.4049	3.1260	3.5524
Sb	217.582	4.0096	4.2649	4.4401
Se	196.026	1.4488	2.2238	1.7443
Si	251.611	199.70	197.71	197.35
Sn	189.927	7.9099	7.7597	7.9434
Sr	216.596	21.668	21.411	20.236
Ti	322.284	70.847	68.110	68.921
Tl	190.794	3.3203	3.6333	3.7533
V	289.164	40.216	39.960	40.920
Y	361.104	86208	88829	87314
Zn	206.200	12.244	11.903	12.277
Zr	257.147	51.806	51.998	50.474

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.009948	ppm	0.000108	1.1	180.61	0.009948 ppm	Y 361.104	99.47751
Al	237.312	0.045327	ppm	0.002973	6.6	14.230	0.045327 ppm	Y 361.104	90.65453
As	188.980	0.052782	ppm	0.001945	3.7	8.1262	0.052782 ppm	Y 361.104	105.56313
B	249.772	0.079787	ppm	0.003137	3.9	449.43	0.079787 ppm	Y 361.104	159.57414R

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ba	233.527	0.010185	ppm	0.000226	2.2	167.27	0.010185 ppm	Y 361.104	101.85210
Be	234.861	0.004225	ppm	0.000029	0.7	168.39	0.004225 ppm	Y 361.104	-
Ca	315.887	0.096186	ppm	0.001566	1.6	338.82	0.096186 ppm	Y 361.104	96.18592
Cd	228.802	0.004594	ppm	0.000127	2.8	21.277	0.004594 ppm	Y 361.104	-
Co	231.160	0.009936	ppm	0.000290	2.9	22.701	0.009936 ppm	Y 361.104	99.35548
Cr	267.716	0.009780	ppm	0.000175	1.8	68.875	0.009780 ppm	Y 361.104	97.80433
Cu	324.754	0.020364	ppm	0.000161	0.8	323.63	0.020364 ppm	Y 361.104	101.82077
Fe	261.382	0.024253	ppm	0.000488	2.0	22.758	0.024253 ppm	Y 361.104	97.01118
K	728.181	0.10124	ppm	0.000527	0.5	930.75	0.10124 ppm	Y 361.104	101.23825
Li	610.365	0.008514	ppm	0.000325	3.8	529.79	0.008514 ppm	Y 361.104	85.14091
Mg	279.078	0.091337	ppm	0.001645	1.8	33.089	0.091337 ppm	Y 361.104	91.33745
Mn	293.305	0.010079	ppm	0.000086	0.9	49.669	0.010079 ppm	Y 361.104	100.79411
Mo	202.032	0.009207	ppm	0.000212	2.3	19.481	0.009207 ppm	Y 361.104	92.07328
Na	568.821	1.0788	ppm	0.067634	6.3	-79.351	1.0788 ppm	Y 361.104	1078.81653R
Na	589.592	0.080629	ppm	0.000848	1.1	3063.3	0.080629 ppm	Y 361.104	80.62865
Ni	221.648	0.010378	ppm	0.000531	5.1	6.5528	0.010378 ppm	Y 361.104	103.78173
Pb	220.353	0.008399	ppm	0.000393	4.7	3.3611	0.008399 ppm	Y 361.104	83.98740
Sb	217.582	0.011428	ppm	0.000556	4.9	4.2382	0.011428 ppm	Y 361.104	114.27619
Se	196.026	-0.000470u	ppm	0.002940	625.2	1.8056	-0.000470 ppm	Y 361.104	-4.70252R
Si	251.611	0.21023	ppm	0.001512	0.7	198.25	0.21023 ppm	Y 361.104	105.11497
Sn	189.927	0.049002	ppm	0.000574	1.2	7.8710	0.049002 ppm	Y 361.104	98.00381
Sr	216.596	0.010022	ppm	0.000371	3.7	21.105	0.010022 ppm	Y 361.104	100.22356
Ti	322.284	0.009968	ppm	0.000348	3.5	69.293	0.009968 ppm	Y 361.104	99.67857
Tl	190.794	0.013685	ppm	0.000759	5.5	3.5690	0.013685 ppm	Y 361.104	136.85422
V	289.164	0.010376	ppm	0.000141	1.4	40.365	0.010376 ppm	Y 361.104	103.76004
Zn	206.200	0.018453	ppm	0.000411	2.2	12.141	0.018453 ppm	Y 361.104	92.26609
Zr	257.147	0.009994	ppm	0.000179	1.8	51.426	0.009994 ppm	Y 361.104	99.93583

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	1.0133	87450	1315.636	1.5

CDL01 (CRI) 9/24/2004, 5:28:41 PM Rack 1, Tube 78

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	366.82	361.86	369.34
Al	237.312	0.98748	0.54225	0.81618
As	188.980	3.6835	2.8177	3.0384
B	249.772	176.67	163.05	157.03
Ba	233.527	27.487	28.237	27.960
Be	234.861	432.53	405.86	434.47

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El	Wavelen.	Replicates Intensity (c/s)		
Ca	315.887	127.04	126.93	129.83
Cd	228.802	45.972	44.378	45.349
Co	231.160	210.34	204.26	209.64
Cr	267.716	140.74	136.82	143.42
Cu	324.754	752.79	743.03	760.87
Fe	261.382	2.3671	2.0779	3.7301
K	728.181	-107.00	-101.94	-107.29
Li	610.365	322.67	315.04	329.60
Mg	279.078	0.62645	0.36607	0.64390
Mn	293.305	159.61	157.03	159.03
Mo	202.032	-0.53531	-0.47175	-0.51901
Na	568.821	-72.442	-88.551	-83.872
Na	589.592	112.96	109.16	118.37
Ni	221.648	49.064	47.945	49.349
Pb	220.353	54.334	53.162	51.602
Sb	217.582	47.620	46.059	48.401
Se	196.026	1.9503	2.2227	2.5263
Si	251.611	35.662	35.611	35.137
Sn	189.927	-0.40042	-0.39327	-0.55862
Sr	216.596	0.86635	1.2651	-0.033775
Ti	322.284	29.745	28.056	31.119
Tl	190.794	6.4395	6.2638	6.8053
V	289.164	374.42	364.60	373.15
Y	361.104	86286	86263	85109
Zn	206.200	21.443	21.081	22.301
Zr	257.147	5.0286	3.8161	3.5954

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.020080	ppm	0.000207	1.0	366.01	0.020080 ppm	Y 361.104	100.40245
Al	237.312	-0.001585u	ppm	0.000781	49.2	0.78197	-0.001585 ppm	Y 361.104	-
As	188.980	0.021947	ppm	0.002802	12.8	3.1799	0.021947 ppm	Y 361.104	109.73283
B	249.772	0.023903	ppm	0.001981	8.3	165.58	0.023903 ppm	Y 361.104	-
Ba	233.527	0.000035	ppm	0.000028	78.5	27.895	0.000035 ppm	Y 361.104	-
Be	234.861	0.010487	ppm	0.000391	3.7	424.28	0.010487 ppm	Y 361.104	104.86914
Ca	315.887	-0.005585u	ppm	0.000782	14.0	127.93	-0.005585 ppm	Y 361.104	-
Cd	228.802	0.010071	ppm	0.000186	1.9	45.233	0.010071 ppm	Y 361.104	100.71188
Co	231.160	0.10181	ppm	0.001663	1.6	208.08	0.10181 ppm	Y 361.104	101.80709
Cr	267.716	0.020050	ppm	0.000477	2.4	140.32	0.020050 ppm	Y 361.104	100.25227
Cu	324.754	0.051760	ppm	0.000653	1.3	752.23	0.051760 ppm	Y 361.104	103.51942

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Fe	261.382	-0.001987u	ppm	0.001194	60.1	2.7250	-0.001987 ppm	Y 361.104	-
K	728.181	-0.000200u	ppm	0.000295	147.3	-105.41	-0.000200 ppm	Y 361.104	-
Li	610.365	-0.000903u	ppm	0.000330	36.5	322.44	-0.000903 ppm	Y 361.104	-
Mg	279.078	-0.004301u	ppm	0.000457	10.6	0.54547	-0.004301 ppm	Y 361.104	-
Mn	293.305	0.030861	ppm	0.000259	0.8	158.56	0.030861 ppm	Y 361.104	102.87131
Mo	202.032	-0.000701u	ppm	0.000016	2.3	-0.50869	-0.000701 ppm	Y 361.104	-
Na	568.821	1.0294	ppm	0.18076	17.6	-81.622	1.0294 ppm	Y 361.104	-
Na	589.592	-0.003000u	ppm	0.000131	4.4	113.50	-0.003000 ppm	Y 361.104	-
Ni	221.648	0.081770	ppm	0.001244	1.5	48.786	0.081770 ppm	Y 361.104	102.21309
Pb	220.353	0.098612	ppm	0.002489	2.5	53.033	0.098612 ppm	Y 361.104	98.61215
Sb	217.582	0.12221	ppm	0.003065	2.5	47.360	0.12221 ppm	Y 361.104	101.84404
Se	196.026	0.002732	ppm	0.002166	79.3	2.2331	0.002732 ppm	Y 361.104	27.31573R
Si	251.611	0.015936	ppm	0.000346	2.2	35.470	0.015936 ppm	Y 361.104	-
Sn	189.927	0.000203u	ppm	0.000548	270.7	-0.45077	0.000203 ppm	Y 361.104	-
Sr	216.596	0.000189u	ppm	0.000323	171.3	0.69923	0.000189 ppm	Y 361.104	-
Ti	322.284	0.000173u	ppm	0.000380	218.8	29.640	0.000173 ppm	Y 361.104	-
Tl	190.794	0.022830	ppm	0.000938	4.1	6.5029	0.022830 ppm	Y 361.104	114.14754
V	289.164	0.10415	ppm	0.001515	1.5	370.72	0.10415 ppm	Y 361.104	104.15030
Zn	206.200	0.037211	ppm	0.001243	3.3	21.608	0.037211 ppm	Y 361.104	-
Zr	257.147	-0.000174u	ppm	0.000167	95.6	4.1467	-0.000174 ppm	Y 361.104	-0.43560R

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.99516	85886	673.225	0.8

ICS-A (ICSA) 9/24/2004, 5:33:55 PM Rack 1, Tube 79

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-20.300	-22.861	-22.581
Al	237.312	146494	148806	149364
As	188.980	1.5396	1.4254	0.75764
B	249.772	-358.26	-394.47	-390.40
Ba	233.527	244.07	251.93	251.72
Be	234.861	-686.69	-698.30	-732.25
Ca	315.887	995345	999478	1000377
Cd	228.802	6.3166	7.8154	7.8980
Co	231.160	146.92	153.17	153.30
Cr	267.716	-0.19547	-1.6840	-2.0345
Cu	324.754	-248.82	-249.24	-255.81
Fe	261.382	138387	141076	141542
K	728.181	-88.993	-92.263	-96.780

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El	Wavelen.	Replicates Intensity (c/s)		
Li	610.365	-6166.8	-6394.7	-6436.6
Mg	279.078	167465	172188	172820
Mn	293.305	51.839	52.239	51.244
Mo	202.032	-2.4402	0.91738	-1.8267
Na	568.821	1190.0	1217.5	1210.8
Na	589.592	599.94	680.98	656.80
Ni	221.648	2.2960	0.57020	2.5004
Pb	220.353	56.574	57.638	57.462
Sb	217.582	-10.119	-10.874	-13.551
Se	196.026	4.8324	3.7394	3.9757
Si	251.611	32.873	36.755	36.345
Sn	189.927	-2.8244	-2.4363	-2.2921
Sr	216.596	132.70	134.44	134.75
Ti	322.284	-11.487	-10.249	-12.589
Tl	190.794	-12.384	-12.995	-11.942
V	289.164	30.089	28.454	28.749
Y	361.104	79264	75847	75221
Zn	206.200	9.1210	10.704	9.7089
Zr	257.147	103.74	107.19	107.42

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	-0.000712u	ppm	0.000077	10.8	-21.914	-0.000712 ppm	Y 361.104	-0.00071
Al	237.312	515.65	ppm	5.2903	1.0	148221	515.65 ppm	Y 361.104	-
As	188.980	0.009915	ppm	0.002630	26.5	1.2409	0.009915 ppm	Y 361.104	0.00992
B	249.772	-0.077616u	ppm	0.003905	5.0	-381.04	-0.077616 ppm	Y 361.104	-0.07762K
Ba	233.527	0.007560	ppm	0.000326	4.3	249.24	0.007560 ppm	Y 361.104	0.00756K
Be	234.861	0.001944u	ppm	0.000579	29.8	-705.75	0.001944 ppm	Y 361.104	0.00194
Ca	315.887	474.57	ppm	1.2769	0.3	998400	474.57 ppm	Y 361.104	-
Cd	228.802	-0.000009	ppm	0.000206	2246.6	7.3433	-0.000009 ppm	Y 361.104	-0.00001
Co	231.160	0.019929	ppm	0.001824	9.2	151.13	0.019929 ppm	Y 361.104	0.01993K
Cr	267.716	-0.000307u	ppm	0.000140	45.7	-1.3047	-0.000307 ppm	Y 361.104	-0.00031
Cu	324.754	-0.009998u	ppm	0.000286	2.9	-251.29	-0.009998 ppm	Y 361.104	-0.01000
Fe	261.382	189.93	ppm	2.3052	1.2	140335	189.93 ppm	Y 361.104	-
K	728.181	0.028244	ppm	0.000383	1.4	-92.679	0.028244 ppm	Y 361.104	0.02824
Li	610.365	-0.16225u	ppm	0.006575	4.1	-6332.7	-0.16225 ppm	Y 361.104	-0.16225K
Mg	279.078	502.09	ppm	8.6007	1.7	170824	502.09 ppm	Y 361.104	-
Mn	293.305	0.004673	ppm	0.000096	2.0	51.774	0.004673 ppm	Y 361.104	0.00467K
Mo	202.032	-0.001002u	ppm	0.000886	88.4	-1.1165	-0.001002 ppm	Y 361.104	-0.00100
Na	568.821	25.066	ppm	0.31291	1.2	1206.1	25.066 ppm	Y 361.104	25.06650K

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Na	589.592	-0.024810	ppm	0.001181	4.8	645.91	-0.024810 ppm	Y 361.104	-0.02481
Ni	221.648	0.002935	ppm	0.001778	60.6	1.7889	0.002935 ppm	Y 361.104	0.00294
Pb	220.353	0.034731	ppm	0.001036	3.0	57.225	0.034731 ppm	Y 361.104	0.03473K
Sb	217.582	-0.001148u	ppm	0.004634	403.8	-11.515	-0.001148 ppm	Y 361.104	-0.00115
Se	196.026	-0.026766	ppm	0.004323	16.1	4.1825	-0.026766 ppm	Y 361.104	-0.02677K
Si	251.611	0.015762	ppm	0.002546	16.2	35.324	0.015762 ppm	Y 361.104	0.01576
Sn	189.927	-0.011931u	ppm	0.001615	13.5	-2.5176	-0.011931 ppm	Y 361.104	-0.01193
Sr	216.596	0.013003	ppm	0.000536	4.1	133.96	0.013003 ppm	Y 361.104	0.01300
Ti	322.284	-0.001654u	ppm	0.000290	17.5	-11.442	-0.001654 ppm	Y 361.104	-0.00165
Tl	190.794	-0.041038u	ppm	0.001795	4.4	-12.440	-0.041038 ppm	Y 361.104	-0.04104K
V	289.164	-0.002009	ppm	0.000247	12.3	29.097	-0.002009 ppm	Y 361.104	-0.00201
Zn	206.200	-0.000982	ppm	0.001588	161.7	9.8447	-0.000982 ppm	Y 361.104	-0.00098
Zr	257.147	-0.001011	ppm	0.000445	44.0	106.12	-0.001011 ppm	Y 361.104	-0.00101

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.88961	76777	2176.077	2.8

ICS-AB (ICSAB) **9/24/2004, 5:39:10 PM** **Rack 1, Tube 80**

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	3929.1	3936.9	3924.3
Al	237.312	148964	149343	148027
As	188.980	16.881	18.397	18.145
B	249.772	-393.30	-395.01	-395.30
Ba	233.527	6988.0	6938.5	7018.0
Be	234.861	21056	21335	21289
Ca	315.887	985724	985221	989296
Cd	228.802	4587.4	4581.2	4554.0
Co	231.160	1066.3	1077.4	1078.2
Cr	267.716	3245.8	3252.2	3255.7
Cu	324.754	7463.6	7458.2	7356.5
Fe	261.382	139650	140347	139980
K	728.181	-93.408	-102.30	-100.18
Li	610.365	-6301.1	-6331.6	-6324.6
Mg	279.078	170025	171394	171134
Mn	293.305	2536.8	2550.0	2540.9
Mo	202.032	-1.8979	-1.4567	-0.66890
Na	568.821	1210.4	1216.5	1207.9
Na	589.592	-11615	-11640	-11713
Ni	221.648	548.35	549.16	549.86

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El	Wavelen.	Replicates Intensity (c/s)		
Pb	220.353	549.48	550.79	544.01
Sb	217.582	235.43	232.37	233.34
Se	196.026	11.994	12.818	12.363
Si	251.611	64.781	59.541	59.348
Sn	189.927	-2.3613	-1.7438	-1.8125
Sr	216.596	129.99	130.31	133.13
Ti	322.284	-7.5208	-9.2261	-12.185
Tl	190.794	17.981	16.394	17.995
V	289.164	1738.8	1743.7	1741.3
Y	361.104	75074	74364	74514
Zn	206.200	465.82	466.54	467.96
Zr	257.147	112.75	116.21	117.52

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.21454	ppm	0.000348	0.2	3930.1	0.21454 ppm	Y 361.104	107.27236
Al	237.312	517.58	ppm	2.3550	0.5	148778	517.58 ppm	Y 361.104	103.51669
As	188.980	0.11254	ppm	0.005060	4.5	17.807	0.11254 ppm	Y 361.104	112.54128
B	249.772	-0.080311u	ppm	0.000212	0.3	-394.54	-0.080311 ppm	Y 361.104	-
Ba	233.527	0.49729	ppm	0.002922	0.6	6981.5	0.49729 ppm	Y 361.104	99.45875
Be	234.861	0.53873	ppm	0.003658	0.7	21227	0.53873 ppm	Y 361.104	107.74680
Ca	315.887	469.02	ppm	1.0571	0.2	986747	469.02 ppm	Y 361.104	93.80437
Cd	228.802	1.0587	ppm	0.004124	0.4	4574.2	1.0587 ppm	Y 361.104	105.86970
Co	231.160	0.48587	ppm	0.003332	0.7	1074.0	0.48587 ppm	Y 361.104	97.17322
Cr	267.716	0.46721	ppm	0.000723	0.2	3251.2	0.46721 ppm	Y 361.104	93.44282
Cu	324.754	0.55153	ppm	0.004409	0.8	7426.1	0.55153 ppm	Y 361.104	110.30544
Fe	261.382	189.48	ppm	0.47152	0.2	139992	189.48 ppm	Y 361.104	94.73921
K	728.181	0.027386	ppm	0.000455	1.7	-98.629	0.027386 ppm	Y 361.104	-
Li	610.365	-0.16327u	ppm	0.000722	0.4	-6319.1	-0.16327 ppm	Y 361.104	-
Mg	279.078	502.17	ppm	2.1356	0.4	170851	502.17 ppm	Y 361.104	100.43353
Mn	293.305	0.47999	ppm	0.001283	0.3	2542.6	0.47999 ppm	Y 361.104	95.99842
Mo	202.032	-0.001114u	ppm	0.000309	27.7	-1.3412	-0.001114 ppm	Y 361.104	-
Na	568.821	25.223	ppm	0.095906	0.4	1211.6	25.223 ppm	Y 361.104	-
Na	589.592	-0.37748u	ppm	0.001451	0.4	-11656	-0.37748 ppm	Y 361.104	-
Ni	221.648	0.92100	ppm	0.001270	0.1	549.12	0.92100 ppm	Y 361.104	92.10023
Pb	220.353	0.92617	ppm	0.006532	0.7	548.10	0.92617 ppm	Y 361.104	92.61652
Sb	217.582	0.62639	ppm	0.004017	0.6	233.71	0.62639 ppm	Y 361.104	104.39838
Se	196.026	0.034375	ppm	0.003103	9.0	12.392	0.034375 ppm	Y 361.104	68.74932
Si	251.611	0.046676	ppm	0.003679	7.9	61.224	0.046676 ppm	Y 361.104	-
Sn	189.927.	-0.008653u	ppm	0.001985	22.9	-1.9725	-0.008653 ppm	Y 361.104	-

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Sr	216.596	0.012673	ppm	0.000838	6.6	131.14	0.012673 ppm	Y 361.104	-
Ti	322.284	-0.001235u	ppm	0.000584	47.3	-9.6441	-0.001235 ppm	Y 361.104	-
Tl	190.794	0.056105	ppm	0.003125	5.6	17.457	0.056105 ppm	Y 361.104	56.10482
V	289.164	0.48548	ppm	0.000698	0.1	1741.2	0.48548 ppm	Y 361.104	97.09629
Zn	206.200	0.90406	ppm	0.002168	0.2	466.77	0.90406 ppm	Y 361.104	90.40633
Zr	257.147	0.001068	ppm	0.000532	49.8	115.49	0.001068 ppm	Y 361.104	-

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.86497	74651	374.217	0.5

CCV (CCV) 9/24/2004, 5:44:24 PM Rack 1, Tube 81

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	17763	18000	18112
Al	237.312	1403.6	1433.8	1438.7
As	188.980	778.97	802.22	804.21
B	249.772	9862.7	10323	10444
Ba	233.527	66323	65896	66257
Be	234.861	207589	215341	216081
Ca	315.887	98281	98566	98958
Cd	228.802	20790	21222	21312
Co	231.160	9338.9	9399.1	9444.1
Cr	267.716	32500	32801	32903
Cu	324.754	67958	69980	70417
Fe	261.382	3552.5	3619.7	3633.3
K	728.181	534285	548564	553687
Li	610.365	108579	112290	113017
Mg	279.078	15848	16269	16352
Mn	293.305	24765	25176	25284
Mo	202.032	1915.7	1918.5	1931.5
Na	568.821	1959.1	1885.4	1914.6
Na	589.592	1611696	1674024	1683334
Ni	221.648	2828.0	2828.0	2860.6
Pb	220.353	2631.2	2633.3	2633.4
Sb	217.582	386.62	390.68	395.80
Se	196.026	655.84	676.84	679.14
Si	251.611	4111.1	4194.2	4227.9
Sn	189.927	802.48	806.90	807.45
Sr	216.596	9907.8	9679.0	9874.5
Ti	322.284	19116	19093	19188

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El	Wavelen.	Replicates Intensity (c/s)		
Tl	190.794	1405.9	1411.3	1422.7
V	289.164	16759	16851	16923
Y	361.104	85151	81450	81074
Zn	206.200	2346.3	2380.8	2393.0
Zr	257.147	22436	22593	22680

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.96199	ppm	0.009716	1.0	17958	0.96199 ppm	Y 361.104	96.19940
Al	237.312	4.9051	ppm	0.066208	1.3	1425.4	4.9051 ppm	Y 361.104	98.10139
As	188.980	4.9486	ppm	0.087412	1.8	795.13	4.9486 ppm	Y 361.104	98.97266
B	249.772	2.0014	ppm	0.060401	3.0	10210	2.0014 ppm	Y 361.104	100.06898
Ba	233.527	4.8106	ppm	0.016720	0.3	66158	4.8106 ppm	Y 361.104	96.21280
Be	234.861	5.2143	ppm	0.11514	2.2	213004	5.2143 ppm	Y 361.104	104.28532
Ca	315.887	46.861	ppm	0.16171	0.3	98601	46.861 ppm	Y 361.104	93.72284
Cd	228.802	4.8988	ppm	0.064704	1.3	21108	4.8988 ppm	Y 361.104	97.97533
Co	231.160	4.7768	ppm	0.026369	0.6	9394.0	4.7768 ppm	Y 361.104	95.53654
Cr	267.716	4.7052	ppm	0.030131	0.6	32735	4.7052 ppm	Y 361.104	94.10308
Cu	324.754	5.0746	ppm	0.095877	1.9	69452	5.0746 ppm	Y 361.104	101.49184
Fe	261.382	4.9333	ppm	0.058569	1.2	3601.8	4.9333 ppm	Y 361.104	98.66665
K	728.181	52.021b	ppm	0.93438	1.8	545512	52.021 ppm	Y 361.104	104.04282
Li	610.365	5.0368	ppm	0.10778	2.1	111295	5.0368 ppm	Y 361.104	100.73526
Mg	279.078	47.482	ppm	0.79466	1.7	16157	47.482 ppm	Y 361.104	94.96427
Mn	293.305	4.7851	ppm	0.052235	1.1	25075	4.7851 ppm	Y 361.104	95.70103
Mo	202.032	0.95220	ppm	0.004175	0.4	1921.9	0.95220 ppm	Y 361.104	95.22033
Na	568.821	44.103b	ppm	0.80908	1.8	1919.7	44.103 ppm	Y 361.104	88.20638Q
Na	589.592	46.197	ppm	1.0702	2.3	1656351	46.197 ppm	Y 361.104	92.39393
Ni	221.648	4.7505	ppm	0.031615	0.7	2838.9	4.7505 ppm	Y 361.104	95.00935
Pb	220.353	4.7869	ppm	0.002260	0.0	2632.7	4.7869 ppm	Y 361.104	95.73830
Sb	217.582	0.98347	ppm	0.011821	1.2	391.03	0.98347 ppm	Y 361.104	98.34750
Se	196.026	5.0204	ppm	0.096492	1.9	670.61	5.0204 ppm	Y 361.104	100.40755
Si	251.611	4.9601	ppm	0.071759	1.4	4177.8	4.9601 ppm	Y 361.104	99.20256
Sn	189.927	4.7242	ppm	0.015976	0.3	805.61	4.7242 ppm	Y 361.104	94.48441
Sr	216.596	4.7753	ppm	0.060078	1.3	9820.4	4.7753 ppm	Y 361.104	95.50533
Ti	322.284	4.7261	ppm	0.012314	0.3	19132	4.7261 ppm	Y 361.104	94.52160
Tl	190.794	4.7504	ppm	0.029209	0.6	1413.3	4.7504 ppm	Y 361.104	95.00726
V	289.164	4.7907	ppm	0.023326	0.5	16844	4.7907 ppm	Y 361.104	95.81353
Zn	206.200	4.6841	ppm	0.048082	1.0	2373.4	4.6841 ppm	Y 361.104	93.68166
Zr	257.147	4.8702	ppm	0.026712	0.5	22570	4.8702 ppm	Y 361.104	97.40492

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.95660	82559	2253.296	2.7

BLA01 (CCB) 9/24/2004, 5:49:37 PM Rack 1, Tube 82

El	Wavelen.	Replicates Intensity (c/s)		
Ag	328.068	-0.64292	2.0670	-1.0049
Al	237.312	0.27660	1.1143	1.7223
As	188.980	0.062279	0.16543	-0.41937
B	249.772	313.50	268.63	230.82
Ba	233.527	29.012	29.686	29.850
Be	234.861	-3.7699	-3.4749	-2.7362
Ca	315.887	159.40	161.46	163.63
Cd	228.802	1.2472	1.9647	2.6568
Co	231.160	3.2205	1.7864	2.1782
Cr	267.716	2.2046	0.85866	1.2543
Cu	324.754	35.304	34.728	33.166
Fe	261.382	4.3653	4.5584	4.5693
K	728.181	-92.960	-90.442	-89.167
Li	610.365	324.45	322.20	321.38
Mg	279.078	2.0082	1.4930	2.3178
Mn	293.305	-3.6846	-3.9417	-1.8007
Mo	202.032	6.0087	2.3044	1.2302
Na	568.821	-88.168	-83.858	-87.572
Na	589.592	179.04	179.32	179.56
Ni	221.648	0.004231	0.41839	0.23046
Pb	220.353	-2.1016	-1.6857	-1.2085
Sb	217.582	0.26333	-0.17257	-0.67588
Se	196.026	1.1519	0.93591	0.90354
Si	251.611	34.483	30.733	30.311
Sn	189.927	-0.33222	-0.60150	-0.62379
Sr	216.596	0.91714	-0.34621	0.074555
Ti	322.284	29.176	29.317	31.218
Tl	190.794	2.1875	0.33154	0.45226
V	289.164	4.6784	6.6026	5.0392
Y	361.104	85528	84544	85535
Zn	206.200	3.2590	3.3931	3.6919
Zr	257.147	8.6410	5.3531	4.7021

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	QC Value
Ag	328.068	0.000149	ppm	0.000091	61.3	0.13973	0.000149 ppm	Y 361.104	0.00015
Al	237.312	-0.000462u	ppm	0.002523	546.6	1.0377	-0.000462 ppm	Y 361.104	-0.00046
As	188.980	0.001789u	ppm	0.001944	108.7	-0.063887	0.001789 ppm	Y 361.104	0.00179
B	249.772	0.044657	ppm	0.008148	18.2	270.98	0.044657 ppm	Y 361.104	0.04466Z
Ba	233.527	0.000165	ppm	0.000032	19.6	29.516	0.000165 ppm	Y 361.104	0.00016
Be	234.861	0.000020	ppm	0.000013	66.4	-3.3270	0.000020 ppm	Y 361.104	0.00002
Ca	315.887	0.011827	ppm	0.001006	8.5	161.50	0.011827 ppm	Y 361.104	0.01183
Cd	228.802	0.000042u	ppm	0.000163	386.1	1.9562	0.000042 ppm	Y 361.104	0.00004
Co	231.160	-0.000189u	ppm	0.000370	195.7	2.3950	-0.000189 ppm	Y 361.104	-0.00019
Cr	267.716	0.000087	ppm	0.000099	114.0	1.4392	0.000087 ppm	Y 361.104	0.00009
Cu	324.754	-0.000780u	ppm	0.000081	10.4	34.399	-0.000780 ppm	Y 361.104	-0.00078
Fe	261.382	-0.000587u	ppm	0.000155	26.5	4.4977	-0.000587 ppm	Y 361.104	-0.00059
K	728.181	0.001225	ppm	0.000189	15.4	-90.857	0.001225 ppm	Y 361.104	0.00123
Li	610.365	-0.000887u	ppm	0.000072	8.1	322.68	-0.000887 ppm	Y 361.104	-0.00089
Mg	279.078	-0.000220u	ppm	0.001225	557.6	1.9397	-0.000220 ppm	Y 361.104	-0.00022
Mn	293.305	0.000003u	ppm	0.000223	7136.2	-3.1423	0.000003 ppm	Y 361.104	0.00000
Mo	202.032	0.001128	ppm	0.001243	110.2	3.1811	0.001128 ppm	Y 361.104	0.00113
Na	568.821	0.92343	ppm	0.050943	5.5	-86.533	0.92343 ppm	Y 361.104	0.92343Z
Na	589.592	-0.001133u	ppm	0.000007	0.7	179.31	-0.001133 ppm	Y 361.104	-0.00113
Ni	221.648	0.000301u	ppm	0.000348	115.3	0.21769	0.000301 ppm	Y 361.104	0.00030
Pb	220.353	-0.000752u	ppm	0.000812	108.0	-1.6653	-0.000752 ppm	Y 361.104	-0.00075
Sb	217.582	0.000059u	ppm	0.001208	2032.6	-0.19504	0.000059 ppm	Y 361.104	0.00006
Se	196.026	-0.006537u	ppm	0.001015	15.5	0.99712	-0.006537 ppm	Y 361.104	-0.00654Z
Si	251.611	0.011606	ppm	0.002741	23.6	31.842	0.011606 ppm	Y 361.104	0.01161
Sn	189.927	-0.000202u	ppm	0.000952	470.2	-0.51917	-0.000202 ppm	Y 361.104	-0.00020
Sr	216.596	-0.000132u	ppm	0.000313	236.5	0.21516	-0.000132 ppm	Y 361.104	-0.00013
Ti	322.284	0.000232	ppm	0.000282	121.8	29.904	0.000232 ppm	Y 361.104	0.00023
Tl	190.794	0.005022	ppm	0.003526	70.2	0.99042	0.005022 ppm	Y 361.104	0.00502
V	289.164	0.000438	ppm	0.000290	66.2	5.4401	0.000438 ppm	Y 361.104	0.00044
Zn	206.200	0.001248	ppm	0.000440	35.2	3.4480	0.001248 ppm	Y 361.104	0.00125
Zr	257.147	0.000272u	ppm	0.000456	167.9	6.2321	0.000272 ppm	Y 361.104	0.00027

El	Wavelen.	Ratio	Int. (c/s)	SD(Int)	%RSD
Y	361.104	0.98723	85202	570.173	0.7

A675254 (Samp) **9/24/2004, 5:54:52 PM** **Rack 1, Tube 83**
Weight: 1 Volume: 1 Dilution: 1

El	Wavelen.	Replicates Intensity (c/s)			
Ag	328.068	12.905	14.662	10.303	
Al	237.312	6279.1	6223.1	6315.2	
As	188.980	1.8113	1.9525	1.5712	
B	249.772	1828.3	1831.7	1898.5	
Ba	233.527	3729.1	3687.3	3690.0	
Be	234.861	-46.249	-42.081	-40.438	
Ca	315.887	226189	224759	226502	
Cd	228.802	2.9467	2.4099	3.2414	
Co	231.160	45.069	46.176	46.223	
Cr	267.716	156.81	157.34	159.44	
Cu	324.754	347.65	342.19	356.35	
Fe	261.382	17781	17691	18023	
K	728.181	94480	94426	96759	
Li	610.365	114.74	128.99	136.15	
Mg	279.078	28100	28837	28786	
Mn	293.305	3046.2	3036.2	3093.5	
Mo	202.032	49.959	50.219	49.872	
Na	568.821	1453.8	1411.4	1359.1	
Na	589.592	1213176	1209043	1255259	
Ni	221.648	49.419	51.982	52.256	
Pb	220.353	16.498	15.059	15.979	
Sb	217.582	-2.5404	-2.4748	-2.8316	
Se	196.026	2.6172	3.0830	3.5498	
Si	251.611	25653	25778	26597	
Sn	189.927	-0.55894	0.24362	-0.13055	
Sr	216.596	7892.7	7494.9	7829.7	
Ti	322.284	1096.7	1090.6	1094.0	
Tl	190.794	-1.3329	-1.7653	-1.1284	
V	289.164	87.035	91.527	90.521	
Y	361.104	85331	84883	81597	
Zn	206.200	44.351	44.710	45.794	
Zr	257.147	53.354	48.928	52.700	

El	Wavelen.	Sol'n Conc.	Units	SD	%RSD	Int. (c/s)	Calc Conc.	IS	DF
Ag	328.068	-0.000302	ppm	0.000119	39.6	12.624	-0.000302 ppm	Y 361.104	1.0000
Al	237.312	21.848	ppm	0.16137	0.7	6272.4	21.848 ppm	Y 361.104	1.0000
As	188.980	0.013191	ppm	0.001200	9.1	1.7784	0.013191 ppm	Y 361.104	1.0000

59

==========

Method Name: MERCURY
Method Description: MERCURY
Element: Hg

Hg 9-21-04
ooh 1016
r= .9999

Date: 09/21/2004
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: HG9-21.SIF

A675186

Results Data Set Name: HG9-21

==========

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 09/21/2004
Sample ID: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0001	-0.0003	0.0001	11:55:55	No

Auto-zero performed.

==========

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 09/21/2004
Sample ID: 1

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0025	0.0138	0.0026	11:57:13	No

[Hg] Standard number 1 applied. [0.00020]
Correlation Coefficient: 1.00000 Slope: 12.53740
Intercept : 0.00000

0.00021 105

==========

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 09/21/2004
Sample ID: 2

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0060	0.0297	0.0061	11:58:30	No

[Hg] Standard number 2 applied. [0.00050]
Correlation Coefficient: 0.99980 Slope: 11.97823 100
Intercept : 0.00004

0.00050

==========

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 09/21/2004
Sample ID: 3

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0119	0.0551	0.0120	11:59:50	No

[Hg] Standard number 3 applied. [0.00100]
Correlation Coefficient: 0.99995 Slope: 11.89377 98
Intercept : 0.00006

0.00098

==========

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 09/21/2004
Sample ID: 4

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0245	0.1136	0.0246	12:01:10	No

[Hg] Standard number 4 applied. [0.00200]
Correlation Coefficient: 0.99989 Slope: 12.21159 99.5
Intercept : -0.00005

0.00199

60

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 09/21/2004
Sample ID: 5

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0372	0.1731	0.0373	12:02:31	No

[Hg] Standard number 5 applied. [0.00300]
Correlation Coefficient: 0.99991 Slope: 12.37392
Intercept : -0.00013 0.00301 100.3

Element: Hg Seq. No.: 7 AS Loc.: 7 Date: 09/21/2004
Sample ID: 6

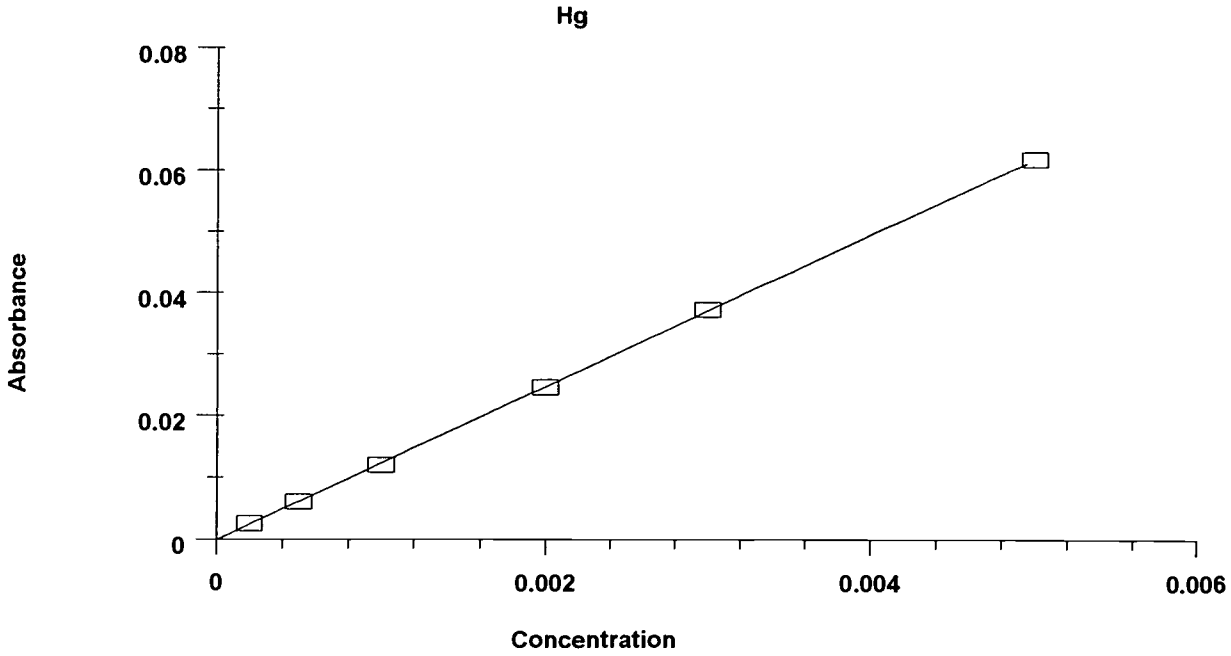
Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0618	0.2800	0.0619	12:03:53	No

[Hg] Standard number 6 applied. [0.00500]
Correlation Coefficient: 0.99997 Slope: 12.37705
Intercept : -0.00014 0.0050 100

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (mg/L)	Calculated Concentration (mg/L)	Standard Deviation	%RSD
BLA01	0.0001	-----	----	----	----
1	0.0025	0.00020	0.00021	----	----
2	0.0060	0.00050	0.00050	----	----
3	0.0119	0.00100	0.00098	----	----
4	0.0245	0.00200	0.00199	----	----
5	0.0372	0.00300	0.00301	----	----
6	0.0618	0.00500	0.00500	----	----

Correlation Coefficient: 0.99997 Slope: 12.37705 Intercept: -0.0001



Element: Hg Seq. No.: 8 AS Loc.: 1 Date: 09/21/2004

61

Sample ID: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00002	0.00002	0.0001	0.0016	0.0002	12:05:16	No

Reagent Blank Performed

<0.00020

Element: Hg Seq. No.: 9 AS Loc.: 9 Date: 09/21/2004
Sample ID: ICV01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00208	0.00208	0.0256	0.1173	0.0257	12:06:33	No

QC value within specified limits.

104

Element: Hg Seq. No.: 10 AS Loc.: 1 Date: 09/21/2004
Sample ID: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00002	0.00002	0.0001	0.0007	0.0002	12:07:50	No

QC value within specified limits.

<0.00020

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 09/21/2004
Sample ID: CCV

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00309	0.00309	0.0381	0.1726	0.0382	12:09:10	No

QC value within specified limits.

103

Element: Hg Seq. No.: 12 AS Loc.: 1 Date: 09/21/2004
Sample ID: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00002	0.00002	0.0001	0.0001	0.0002	12:10:29	No

QC value within specified limits.

<0.00020

Element: Hg Seq. No.: 13 AS Loc.: 2 Date: 09/21/2004
Sample ID: CDL

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00021	0.00021	0.0024	0.0100	0.0025	12:11:46	No

QC value within specified limits.

105

Element: Hg Seq. No.: 14 AS Loc.: 10 Date: 09/21/2004
Sample ID: LCS Q1652714

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00202	0.00202	0.0249	0.1151	0.0251	12:13:02	No

101

Element: Hg Seq. No.: 15 AS Loc.: 11 Date: 09/21/2004
Sample ID: BLA02 Q1651715

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

102

<0.00020

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0014	0.0002	02:03:07	No

BDL

Element: Hg Seq. No.: 96 AS Loc.: 73 Date: 09/21/2004
Sample ID: A674872 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0018	0.0003	02:04:26	No

BDL

Element: Hg Seq. No.: 97 AS Loc.: 74 Date: 09/21/2004
Sample ID: A674873 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0017	0.0002	02:05:45	No

BDL

Element: Hg Seq. No.: 98 AS Loc.: 75 Date: 09/21/2004
Sample ID: A675196 1G/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00085	0.00085	0.0103	0.0508	0.0106	02:07:02	No

0.034

Element: Hg Seq. No.: 99 AS Loc.: 76 Date: 09/21/2004
Sample ID: A675169 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00000	0.00000	-0.0001	0.0002	0.0001	02:08:22	No

BDL

Element: Hg Seq. No.: 100 AS Loc.: 77 Date: 09/21/2004
Sample ID: A675170 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0011	0.0002	02:09:42	No

BDL

Element: Hg Seq. No.: 101 AS Loc.: 78 Date: 09/21/2004
Sample ID: A675171 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0014	0.0002	02:11:00	No

BDL

Element: Hg Seq. No.: 102 AS Loc.: 79 Date: 09/21/2004
Sample ID: A675172 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0019	0.0002	02:12:15	No

BDL

Element: Hg Seq. No.: 103 AS Loc.: 8 Date: 09/21/2004
Sample ID: CCV

63

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00294	0.00294	0.0363	0.1666	0.0365	02:13:34	No

98

Element: Hg Seq. No.: 104 AS Loc.: 1 Date: 09/21/2004
Sample ID: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0016	0.0002	02:14:54	No

<0.00020

Element: Hg Seq. No.: 105 AS Loc.: 80 Date: 09/21/2004
Sample ID: LCS Q1652736

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00191	0.00191	0.0235	0.1050	0.0237	02:16:09	No

95.5

Element: Hg Seq. No.: 106 AS Loc.: 81 Date: 09/21/2004
Sample ID: BLA02 Q1652737

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00000	0.00000	-0.0001	-0.0007	0.0001	02:17:24	No

<0.00020

Element: Hg Seq. No.: 107 AS Loc.: 82 Date: 09/21/2004
Sample ID: A675186 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00000	0.00000	-0.0001	-0.0008	0.0001	02:18:40	No

BDL

Element: Hg Seq. No.: 108 AS Loc.: 83 Date: 09/21/2004
Sample ID: SPI02 Q1652738 186

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00100	0.00100	0.0122	0.0550	0.0124	02:19:57	No

100

Element: Hg Seq. No.: 109 AS Loc.: 84 Date: 09/21/2004
Sample ID: DPS02 Q1652739 186

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00099	0.00099	0.0121	0.0546	0.0123	02:21:13	No

99

Element: Hg Seq. No.: 110 AS Loc.: 85 Date: 09/21/2004
Sample ID: A675173 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00001	-0.00001	-0.0002	-0.0026	0.0000	02:22:29	No

BDL

Element: Hg Seq. No.: 111 AS Loc.: 86 Date: 09/21/2004
Sample ID: A675174 40/40

64

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

#	mg/L	mg/L	Signal	Area	Height		Stored
1	0.00001	0.00001	0.0000	0.0005	0.0002	02:23:46	No

BDL

Element: Hg Seq. No.: 112 AS Loc.: 87 Date: 09/21/2004
Sample ID: A675175 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0014	0.0003	02:25:04	No

BDL

Element: Hg Seq. No.: 113 AS Loc.: 88 Date: 09/21/2004
Sample ID: A675254 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0017	0.0002	02:26:23	No

BDL

Element: Hg Seq. No.: 114 AS Loc.: 89 Date: 09/21/2004
Sample ID: A675255 40/40

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0012	0.0002	02:27:42	No

BDL

Element: Hg Seq. No.: 115 AS Loc.: 2 Date: 09/21/2004
Sample ID: CDL

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00021	0.00021	0.0024	0.0124	0.0026	02:29:00	No

105

Element: Hg Seq. No.: 116 AS Loc.: 8 Date: 09/21/2004
Sample ID: CCV

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00291	0.00291	0.0359	0.1647	0.0361	02:30:20	No

97

Element: Hg Seq. No.: 117 AS Loc.: 1 Date: 09/21/2004
Sample ID: BLA01

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00001	0.00001	0.0000	0.0013	0.0002	02:31:40	No

<0.00020

65

HERITAGE ENVIRONMENTAL SERVICES, LLC

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Indianapolis, IN 46231
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Internet:http://www.heritage-enviro.com

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A675186

This sample was analyzed for the following analytes (see Table below) using normal procedures. The required hold times were met for the analyses. The method blanks were below the reporting limit. The Initial and Continuing Calibration Verifications standards were within the control limits. In addition, the matrix spike, matrix spike duplicate, and duplicate were within the control limits.

Total Alkalinity	EPA 310.1
Nitrate-Nitrite, Nitrogen	EPA 353.2

Barbara A. Shrake
BARBARA A. SHRAKE
LABORATORY SUPERVISOR
9/27/04

ACCREDITED IN ACCORDANCE WITH nelac

Recycled Paper

QC ACCEPTANCE LIMITS

ANALYSIS	ICV	CCV	LFB	LCS	MS/MSD %	MS/MSD RPD	DUP RPD
Alkalinity		80-120%	80-120%				≤ 20%
Nitrate-Nitrite	90-110%	90-110%			75 - 125%	≤ 20%	≤ 20%

Heritage Env Svc, LLC - GEN ALKALINITY Bench Sheet

3901 - 1

Analyst 257 E. SOTKIEWICZ

Instr 386 GEN PH METER

Start Date 9.24.04 Start Time 9:00

End Date 9.24.04 End Time 15:30

LIMS RunID

Reviewer

Recorder

DE Reviewer

SampleID	TestID Rep/ QCType		Parm		Raw Data	Result	Limit	Units	Smp/ TruVal	SpikeVal	% Rec	RPD	ClientID	Comments
G265-1	CCV		113	ALKALINITY, BICARBONATE		112		mg/L	125		89.6			Dil
			114	ALKALINITY, CARBONATE										Dil
			115	ALKALINITY										Dil
A675050	G605.2	0	115	ALKALINITY		340	2.0	mg/L						Dil
A675050	G610.2	0	113	ALKALINITY, BICARBONATE		340	1.0	mg/L						Dil
A675050	DUP01		113	ALKALINITY, BICARBONATE		330			340			3.0		Dil
		9.24.04	114	ALKALINITY, CARBONATE										Dil
			115	ALKALINITY		330			340			3.0		Dil
A675052	G605.2	0	115	ALKALINITY		340	2.0	mg/L						Dil
A675052	G610.2	0	113	ALKALINITY, BICARBONATE		340	1.0	mg/L						Dil
A675174	G605.2	0	115	ALKALINITY		BDL	3.0	mg/L						Dil
A675175	G605.2	0	115	ALKALINITY		BDL	3.0	mg/L						Dil
A675235	G605.2	0	115	ALKALINITY		BDL	3.0	mg/L						Dil
A675284	G605.2	0	115	ALKALINITY		BDL	1.0	mg/L						Dil
A675284	G610.2	0	113	ALKALINITY, BICARBONATE		BDL		mg/L						Dil
A675284	G611.2	0	114	ALKALINITY, CARBONATE		BDL		mg/L						Dil

Dilution Factor = Detection Limit Multiplier

Print Date 9/24/2004

Heritage Env Svc, LLC - GEN ALKALINITY Bench Sheet

3901 - 2

SampleID	TestID Rep/ QCType		Parm		Raw Data	Result	Limit	Units	Smp/ TruVal	SpikeVal	% Rec	RPD	ClientID	Comments
A675295	G605.2	0	115	ALKALINITY		BDL	3.0	mg/L						Dil___
A675062	G605.2	0	115	ALKALINITY		170	3.0	mg/L						Dil___
A675062	DUP01 DO		113	ALKALINITY, BICARBONATE										Dil___
	Not Record		114	ALKALINITY, CARBONATE										Dil___
			115	ALKALINITY		170		mg/L	170			0.0		Dil___
675285-1	CCV		113	ALKALINITY, BICARBONATE		112			125		89.6			Dil___
			114	ALKALINITY, CARBONATE										Dil___
			115	ALKALINITY										Dil___
A675082	G605.2	0	115	ALKALINITY		440	2.0	mg/L						Dil___
A675082	G610.2	0	113	ALKALINITY, BICARBONATE		440	1.0	mg/L						Dil___
A675082	DUP01		113	ALKALINITY, BICARBONATE		420			440			4.6		Dil___
	EB 9.24.04		~~114~~	~~ALKALINITY, CARBONATE~~										~~Dil___~~
			115	ALKALINITY		420			440			4.6		Dil___
A675083	G605.2	0	115	ALKALINITY		380	2.0	mg/L						Dil___
A675083	G610.2	0	113	ALKALINITY, BICARBONATE		380	1.0	mg/L						Dil___
A675084	G605.2	0	115	ALKALINITY		[illegible]	2.0	mg/L						Dil___
A675084	G610.2	0	113	ALKALINITY, BICARBONATE		460	1.0	mg/L						Dil___
A675085	G605.2	0	115	ALKALINITY		[illegible]	2.0	mg/L						Dil___
A675085	G610.2	0	113	ALKALINITY, BICARBONATE		420	1.0	mg/L						Dil___

Dilution Factor = Detection Limit Multiplier

Print Date 9/24/2004

Heritage Env Svc, LLC - GEN ALKALINITY Bench Sheet

3901 - 3

SampleID	TestID Rep/ QCType	Parm		Raw Data	Result	Limit	Units	Smp/ TruVal	SpikeVal	% Rec	RPD	ClientID	Comments
A675086	G605.2 0	115	ALKALINITY		340	2.0	mg/L						Dil____
A675086	G610.2 0	113	ALKALINITY, BICARBONATE		340	1.0	mg/L						Dil____
A675169	G605.2 0	115	ALKALINITY		280	3.0	mg/L						Dil____
A675170	G605.2 0	115	ALKALINITY		320	3.0	mg/L						Dil____
A675171	G605.2 0	115	ALKALINITY		240	3.0	mg/L						Dil____
A675171	DUP01 DO not Record	113	ALKALINITY, BICARBONATE										Dil____
		114	ALKALINITY, CARBONATE										Dil____
		115	ALKALINITY	9.8+01 ~~220~~ 220			mg/L	240			8.7		Dil____
A675172	G605.2 0	115	ALKALINITY		240	3.0	mg/L						Dil____
A675173	G605.2 0	115	ALKALINITY		460	3.0	mg/L						Dil____
A675186	G605.2 0	115	ALKALINITY		220	1.0	mg/L						Dil____
A675186	DUP01 DO not Record	113	ALKALINITY, BICARBONATE										Dil____
		114	ALKALINITY, CARBONATE										Dil____
		115	ALKALINITY		220		mg/L	220			0.0		Dil____
A675188	G605.2 0	115	ALKALINITY		130	3.0	mg/L						Dil____
A675229	G605.2 0	115	ALKALINITY		280	3.0	mg/L						Dil____
A675230	G605.2 0	115	ALKALINITY		400	3.0	mg/L						Dil____
A675231	G605.2 0	115	ALKALINITY		340	3.0	mg/L						Dil____
A675232	G605.2 0	115	ALKALINITY		300	3.0	mg/L						Dil____
G265-1	CCV	113	Bicarb		108		mg/L	125			86.4%		
		114	carb										
		115											

Dilution Factor = Detection Limit Multiplier

Print Date 9/24/2004

Heritage Env Svc, LLC - GEN ALKALINITY Bench Sheet

3901 - 4

SampleID	TestID	Rep/ QCType	Parm		Raw Data	Result	Limit	Units	Smp/ TruVal	SpikeVal	% Rec	RPD	ClientID	Comments
A675233	G605.2	0	115	ALKALINITY		300	3.0	mg/L						Dil____
6265-1	CCV		113	ALKALINITY, BICARBONATE		116			125		92.8			Dil____
			114	ALKALINITY, CARBONATE										Dil____
			115	ALKALINITY										Dil____
A675236	G605.2	0	115	ALKALINITY		280	3.0	mg/L						Dil____
A675237	G605.2	0	115	ALKALINITY		560	3.0	mg/L						Dil____
A675238	G605.2	0	115	ALKALINITY		460	3.0	mg/L						Dil____
A675239	G605.2	0	115	ALKALINITY		BDL	3.0	mg/L						Dil____
A675240	G605.2	0	115	ALKALINITY		460	3.0	mg/L						Dil____
A675241	G605.2	0	115	ALKALINITY		1100	3.0	mg/L						Dil____
A675244	G605.2	0	115	ALKALINITY		320	3.0	mg/L						Dil____
A675362	G605.2	0	115	ALKALINITY		420	2.0	mg/L						Dil____
A675362	G610.2	0	113	ALKALINITY, BICARBONATE		420 ES 9.24.04	1.0	mg/L						Dil____
A675277	G605.2	0	115	ALKALINITY		260	1.0	mg/L						Dil____
A675277	G610.2	0	113	ALKALINITY, BICARBONATE		260		mg/L						Dil____
A675277	G611.2	0	114	ALKALINITY, CARBONATE		BDL		mg/L						Dil____
A675278	G605.2	0	115	ALKALINITY		360	1.0	mg/L						Dil____
A675278	G610.2	0	113	ALKALINITY, BICARBONATE		360		mg/L						Dil____
A675278	G611.2	0	114	ALKALINITY, CARBONATE		BDL		mg/L						Dil____

Dilution Factor = Detection Limit Multiplier

Print Date 9/24/2004

Heritage Env Svc, LLC - GEN ALKALINITY Bench Sheet

3901 - 5

SampleID	TestID Rep/ QCType		Parm		Raw Data	Result	Limit	Units	Smp/ TrueVal	SpikeVal	% Rec	RPD	ClientID	Comments
[illegible]	CCV		113	ALKALINITY, BICARBONATE										Dil____
			114	ALKALINITY, CARBONATE										Dil____
			115	ALKALINITY										Dil____
A675279	G605.2	0	115	ALKALINITY		440	1.0	mg/L						Dil____
A675279	G610.2	0	113	ALKALINITY, BICARBONATE		440		mg/L						Dil____
A675279	G611.2	0	114	ALKALINITY, CARBONATE		BDL		mg/L						Dil____
A675280	G605.2	0	115	ALKALINITY		400	1.0	mg/L						Dil____
A675280	G610.2	0	113	ALKALINITY, BICARBONATE		400		mg/L						Dil____
A675280	G611.2	0	114	ALKALINITY, CARBONATE		BDL		mg/L						Dil____
A675280	DUP01		113	ALKALINITY, BICARBONATE		400			400		0.0			Dil____
			114	ALKALINITY, CARBONATE		BDL			BDL					Dil____
			115	ALKALINITY		400			400					Dil____
A675281	G605.2	0	115	ALKALINITY		360	1.0	mg/L						Dil____
A675281	G610.2	0	113	ALKALINITY, BICARBONATE		360		mg/L						Dil____
A675281	G611.2	0	114	ALKALINITY, CARBONATE		[illegible]		mg/L						Dil____
A675282	G605.2	0	115	ALKALINITY		280	1.0	mg/L						Dil____
A675282	G610.2	0	113	ALKALINITY, BICARBONATE		[illegible]		mg/L						Dil____
A675282	G611.2	0	114	ALKALINITY, CARBONATE		BDL		mg/L						Dil____
A675285	G605.2	0	115	ALKALINITY		[illegible]	1.0	mg/L						Dil____

Dilution Factor = Detection Limit Multiplier

Print Date 9/24/2004

Heritage Env Svc, LLC - GEN ALKALINITY Bench Sheet

3901 - 6

SampleID	TestID Rep/ QCType		Parm		Raw Data	Result	Limit	Units	Smp/ TruVal	SpikeVal	% Rec	RPD	ClientID	Comments
A675285	G610.2	0	113	ALKALINITY, BICARBONATE		360		mg/L						Dil____
A675285	G611.2	0	114	ALKALINITY, CARBONATE		[illegible]		mg/L						Dil____
A675306	G605.2	0	115	ALKALINITY	1400	~~1400~~ 9.24.04	3.0	mg/L						Dil____
A675308	G605.2	0	115	ALKALINITY		1400	3.0	mg/L						Dil____
G205-1	CCV		113	ALKALINITY, BICARBONATE		112			125		89.6			Dil____
			114	ALKALINITY, CARBONATE										Dil____
			115	ALKALINITY										Dil____

Dilution Factor = Detection Limit Multiplier

Print Date 9/24/2004

Start 9:00 end 15:30

ALKALINITY WORKSHEET

Page 1 of 2 | Analyst CB 257 | Date 9.24.04

TOTAL = G605.2, TOTAL (DW) = G605.4, BICARBONATE = G610.2, CARBONATE = G611.2, PHENOLPHTHALEIN = G612.2, HYDROXIDE = G613.2

Sample Number	G265-1	A675050	A675050	A675052	A675174	A675175	A675235	A675284	A675295
Test Code	ALL								
QAQC	CCV		Dup#1						
Client ID	TV=125	MW5		Dup	FB1	FB1	EB#3	Trip	FB2
Buret Final	5.2	13.6	21.9	30.4	30.4	30.5	30.5	30.6	30.4
Buret Initial	2.4	~~5.2~~ 5.2	13.6	21.9	30.4	30.5	30.5	30.6	30.6
Volume Titrant	2.8	8.4	8.3	8.5	0	0	0	0	0
pH Initial	10.10	6.90	6.81	6.99	5.89	5.59	5.47	5.58	5.60
pH Final	4.45	4.45	4.50	4.48	4.45	4.45	4.45	4.45	4.45
Volume Sample	25ml	→	→	→	→	→	→	→	→
Normality	0.02	→	→	→	→	→	→	→	→
Result	112 / 89.6%	340	330 / R=3.0	340	BDL	BDL	BDL	BDL	BDL

Sample Number	A675062	A675062	G265-1	A675082	A675082	A675083	A675084	A675085	A675086
Test Code			ALL						
QAQC		Dup#1	CCV		Dup#1				
Client ID	S1		TV=125mg/L	MW1		MW2	MW3	MW8	MW7
Buret Final	34.8	39.1	41.9	2.2	4.3	~~6.2~~	8.5	10.6	12.4
Buret Initial	30.6	34.8	39.1	0.0	2.2	4.3	6.2	8.5	10.7
Volume Titrant	4.2	4.3	2.8	2.2	2.1	1.9	2.3	2.1	1.7
pH Initial	7.75	7.70	10.18	7.08	7.19	8.05	7.31	8.01	7.35
pH Final	4.50	4.48	4.45	4.46	4.45	4.45	4.46	4.45	4.45
Volume Sample	25ml	→	→	→	→	→	→	→	→
Normality	0.02	→	→	0.10	→	→	→	→	→
Result	170	170 / R=0.0	112 / 89.6%	440	420 / R=4.6	380	460	420	340

Alkalinity mg/L = $\frac{(\text{mL } H_2SO_4) \times (\text{N } H_2SO_4) \times 50{,}000}{\text{Volume of Sample titrated, mL}}$

Heritage Environmental Services, LLC - Commercial Laboratory

ALKALINITY WORKSHEET

Page 2 of 3 | Analyst ES 257 | Date 9.24.04

TOTAL = G605.2, TOTAL (DW) = G605.4, BICARBONATE = G610.2, CARBONATE = G611.2, PHENOLPHTHALEIN = G612.2, HYDROXIDE = G613.2

Sample Number	A675169	A675170	A675171	A675171	G265-1	A675172	A675173	A675186	A675186
Test Code					ALL				
QAQC				Dup#1	CCV				Dup#1
Client ID	W2	W8	W3			Dup@W3	W5	DK 28004	
Buret Final	13.8	15.4	16.4	17.7	2.7	18.9	21.2	22.3	23.4
Buret Initial	12.4	13.8	15.4	16.6	0.0	17.7	18.9	21.2	22.3
Volume Titrant	1.4	1.6	1.2	1.1	2.7	1.2	2.3	1.1	1.1
pH Initial	6.95	7.97	6.45	6.38	10.25	6.41	6.19	7.55	7.59
pH Final	4.45	4.45	4.45	4.45	4.45	4.46	4.45	4.45	4.45
Volume Sample	25ml	→	→	→	→	→	→	→	→
Normality	0.10	→	→	→	0.02	0.10	→	→	→
Result	280	320	240	220/8.7%e	108/86.4%	240	460	220	220/e=0.0

Sample Number	A675188	A675229	A675230	A675231	A675232	A675233	G265-1	A675234	~~A675237~~ 9.24.04
Test Code							ALL		A675237
QAQC							CCV		
Client ID	Dup@S-D	W4	W15	W17	W6	W5	TV=125	F3	LW3
Buret Final	6.1	25.9	27.9	29.6	31.1	32.6	9.0	1.4	4.2
Buret Initial	ES 9.24.04 ~~23.5~~ 2.9	24.5	25.9	27.9	29.6	31.1	6.1	0.0	1.4
Volume Titrant	3.2	1.4	2.0	1.7	1.5	1.5	2.9	1.4	2.8
pH Initial	7.50	6.56	7.48	6.30	6.44	6.55	9.95	7.03	8.28
pH Final	4.45	4.45	4.45	4.50	4.48	4.45	4.45	4.45	4.45
Volume Sample	25ml	→	→	→	→	→	→	→	→
Normality	ES 9.24.04 ~~0.10~~ 0.02	0.10	→	→	→	→	0.02	0.10	0.10
Result	13.0	280	400	340	300	300	116/92.8%	280	560

Alkalinity mg/L = $\frac{(\text{mL } H_2SO_4) \times (\text{N } H_2SO_4) \times 50{,}000}{\text{Volume of Sample titrated, mL}}$

ALKALINITY WORKSHEET

Page 3 of 3 | Analyst ES 257 | Date 9.24.04

TOTAL = G605.2, TOTAL (DW) = G605.4, BICARBONATE = G610.2, CARBONATE = G611.2, PHENOLPHTHALEIN = G612.2, HYDROXIDE = G613.2

Sample Number	A675238	A675239	A675240	A675241	A675244	A675342	A675277	A675278	G265-1
Test Code									ALL
QAQC									CCV
Client ID	F16	EB#2	F6	LW6	UM15	MW6	OW-1	OW2	TV=125
Buret Final	6.5	9.0	9.8	15.5	17.1	19.2	20.5	22.3	11.8
Buret Initial	4.2	ES 9.24.04 ~~9.0~~	7.5	9.8	15.5	17.1	19.2	20.5	9.0
Volume Titrant	2.3	0.0	2.3	5.7	1.4	2.1	1.3	1.8	2.8
pH Initial	8.63	5.67	7.93	8.03	6.27	6.72	8.28	8.00	10.24
pH Final	4.48	4.45	4.48	4.46	4.45	4.45	4.48	4.46	4.45
Volume Sample	25ml	→							→
Normality	0.10	0.02	0.10	→				→	0.02
Result	460	BDL	460	1100	320	420	260	360	112/89.6%

Sample Number	A675279	A675280	A675280	A675281	ES 9.24.04 ~~A675282~~ A675282	A675285	A675306	A675308	G265-1
Test Code									ALL
QAQC			Dup@1						CCV
Client ID	OW4	OW10		OW11	OW12	OW13	Dup@LW16	LW16	TV=125
Buret Final	24.5	26.5	28.5	30.3	31.7	~~33.6~~	40.4	47.3	14.7
Buret Initial	22.3	24.5	26.5	28.5	30.3	31.8	33.6	40.4	11.9
Volume Titrant	2.2	2.0	2.0	1.8	1.4	1.8	6.8	6.9	2.8
pH Initial	7.82	7.71	7.68	7.79	7.80	7.83	7.64	7.68	9.96
pH Final	4.48	4.54	4.51	4.52	4.45	4.51	4.52	4.50	
Volume Sample	25ml	→							→
Normality	0.10	→						→	0.02
Result	440	400	400/e=0.0	360	280	380	1400	1400 ~~e=0.0~~ ES 9.24.04	112/89.6%

Alkalinity mg/L = $\frac{(\text{mL } H_2SO_4) \times (\text{N } H_2SO_4) \times 50{,}000}{\text{Volume of Sample titrated, mL}}$

pH CALIBRATION AND TITRANT STANDARDIZATION

Analyst ES257

Date 9.24.04

Analysis Alkalinity

pH Calibration

pH = 4.00	Lot# 4090-20	Resp 4.00
pH = 7.00	Lot# 4139-16	Resp 7.00
pH = 10.0	Lot# 4139-18	Resp 9.97

pH Verification

pH = 4.00	Lot# 033160-24	Resp 4.01
pH = 7.00	Lot# 033150-24	Resp 7.04

Standard _____ _____ g/L

	1.00 N			0.10 N			0.02 N		
Vol Std, ml									
$Buret_{FINAL}$									
$Buret_{INITIAL}$									
Vol Titrant, ml									
$pH_{INITIAL}$									
pH_{FINAL}									
Normality									
	Avg. N =			Avg. N =			Avg. N =		

$$Normality\ NaOH = \frac{(KHP\ g/L)\ x\ (mL\ KHP\ STD)}{204.2\ x\ (mL\ NaOH)}$$

$$Normlity\ H_2SO_4 = \frac{(Na_2CO_3\ g/L)\ x\ (mL\ Na_2CO_3\ STD)}{53.00\ x\ (mL\ H_2SO_4)}$$

File Number : 121-2

Nitrite Nitrate

Run Number :

Instrument # : 323

Analyst : MAA4317

Reviewed By :
Date :

Recorded By :
Date :

Start Date : 23-Sep-2004 Start Time 21:52 End Date 23-Sep-2004 End Time 22:41

QC Standard ID#	Nitrite	Nitrate	Total
ICV01	G228-2	G227-2	G227-2
CDL01	G230	G223	G223
SPI01	G230-1	G223-1	G223-1
DPS01	G230-1	G223-1	G223-1
CCV	G230	G223	G223

CAL01 See Attached Calibration Report

BLA OBS Value	Nitrite	0.002158 mg/L	Nitrate+Nitrite	0.003779 mg/L
BLA OBS Value	Nitrite	0.000466 mg/L	Nitrate+Nitrite	0.002257 mg/L
BLA OBS Value	Nitrite	0.001301 mg/L	Nitrate+Nitrite	0.002257 mg/L

		Observed Conc	Sample/True Value	Spike Conc	%Recovery	RPD
ICV01	Nitrite	0.373	0.4		93.3	
ICV01	Nitrite+Nitrate	0.390	0.4		97.5	
	Nitrate	0.385	0.4		96.3	
DL01	Nitrite+Nitrate	0.0491	0.05		98.2	
	Nitrite	0.0242	0.025		96.8	
	Nitrate	0.0249	0.025		99.6	
SPI01	Nitrate	0.941	0	1	94.1	
SPI01	Nitrite+Nitrate	0.0888	0	0.1	88.8	
DPS01	Nitrate	0.934	0	1	93.4	0.7
DPS01	Nitrite+Nitrate	0.0888	0	0.1	88.8	0
CCV	Nitrite+Nitrate	0.195	0.2		97.5	
	Nitrite	0.0970	0.1		97.0	
	Nitrate	0.0982	0.1		98.2	
CCV	Nitrite+Nitrate	0.200	0.2		100.0	
	Nitrite	0.0994	0.1		99.4	
	Nitrate	0.100	0.1		100.0	

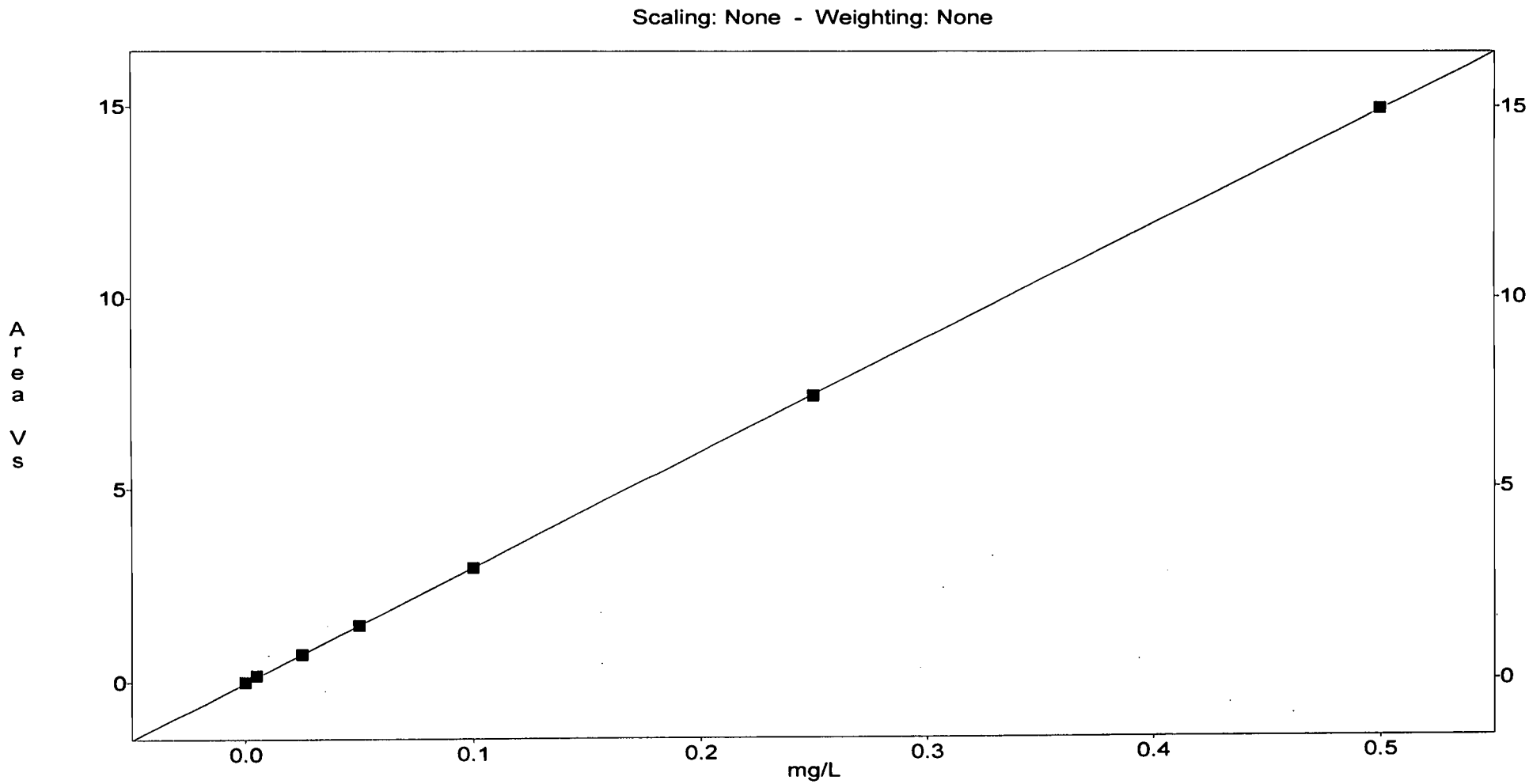
TestID	Sample	Parm	Man. Dil'n	Total Dil'n	Conc.	Result	RQL	DL	Units	Samp Conc	Std. TV	% Rec	RPD	#	Comments
BLA01		23-Sep-04 21:52													
	509	Nitrite+Nitrate	1	1	0.003779		BDL	0.01	mg/L						
	507	Nitrite	1	1	0.002158		BDL	0.01	mg/L						
	508	Nitrate	1	1	0.001621		BDL	0.01	mg/L						
CDL01		23-Sep-04 21:53													
	509	Nitrite+Nitrate	1	1	0.049088	0.0491		0.01	mg/L		0.05	98.2			
	507	Nitrite	1	1	0.024215	0.0242		0.01	mg/L		0.025	96.8			
	508	Nitrate	1	1	0.024873	0.0249		0.01	mg/L		0.025	99.6			
ICV01	NO2	23-Sep-04 21:54													
	509	Nitrite+Nitrate	1	1	0.401250	0.401		0.01	mg/L						
	507	Nitrite	1	1	0.373388	0.373		0.01	mg/L		0.4	93.3			
	508	Nitrate	1	1	0.027862	0.0279		0.01	mg/L						
ICV01	NO3	23-Sep-04 21:55													
	509	Nitrite+Nitrate	1	1	0.389665	0.390		0.01	mg/L		0.4	97.5			
	507	Nitrite	1	1	0.004678	0.00468		0.01	mg/L						
	508	Nitrate	1	1	0.384987	0.385		0.01	mg/L		0.4	96.3			
	A675485 EFF	23-Sep-04 21:57													
	509	Nitrite+Nitrate	10	10	0.064080			0.10	mg/L						
	507	Nitrite	10	10	0.059160			0.10	mg/L						
G106.3	508	Nitrate	10	10	0.004920		BDL	0.10	mg/L						
SPI01	A675485	23-Sep-04 21:58													
	509	Nitrite+Nitrate	10	10	0.976360			0.10	mg/L		1.00				
	507	Nitrite	10	10	0.035610			0.10	mg/L		1.00				
G	508	Nitrate	10	10	0.940750	0.941		0.10	mg/L	0.0	1.00	94.1			
DPS01	A6754845	23-Sep-04 21:59													
	509	Nitrite+Nitrate	10	10	0.973880			0.10	mg/L		1.00				
	507	Nitrite	10	10	0.039940			0.10	mg/L		1.00				
G	508	Nitrate	10	10	0.933940	0.934		0.10	mg/L	0.0	1.00	93.4	0.7		
CCV		23-Sep-04 22:02													
	509	Nitrite+Nitrate	1	1	0.195153	0.195		0.01	mg/L		0.200	97.5			
	507	Nitrite	1	1	0.096987	0.0970		0.01	mg/L		0.100	97.0			
	508	Nitrate	1	1	0.098166	0.0982		0.01	mg/L		0.100	98.2			
BLA01		23-Sep-04 22:03													
	509	Nitrite+Nitrate	1	1	0.002257		BDL	0.01	mg/L						
	507	Nitrite	1	1	0.000466		BDL	0.01	mg/L						
	508	Nitrate	1	1	0.001791		BDL	0.01	mg/L						

TestID	Sample	Parm	Man. Dil'n	Total Dil'n	Conc.	Result	RQL	DL	Units	Samp Conc	Std. TV	% Rec	RPD	#	Comments
	A675186 DK28004	23-Sep-04 22:32													
G113.3	509	Nitrite+Nitrate	1	1	0.012431		BDL	0.01	mg/L						
	507	Nitrite	1	1	0.004373			0.01	mg/L						
	508	Nitrate	1	1	0.008058			0.01	mg/L						
SPI01	A675186	23-Sep-04 22:33													
G	509	Nitrite+Nitrate	1	1	0.088752	0.0888		0.01	mg/L	0.0	0.10	88.8			
	507	Nitrite	1	1	0.003332			0.01	mg/L		0.10				
	508	Nitrate	1	1	0.085420			0.01	mg/L		0.10				
DPS01	A675186	23-Sep-04 22:34													
G	509	Nitrite+Nitrate	1	1	0.088803	0.0888		0.01	mg/L	0.0	0.10	88.8	0.0		
	507	Nitrite	1	1	0.007628			0.01	mg/L		0.10				
	508	Nitrate	1	1	0.081175			0.01	mg/L		0.10				
	A675445 OUT1	23-Sep-04 22:36													
G113.3	509	Nitrite+Nitrate	1	1	0.010588		BDL	0.01	mg/L						
	507	Nitrite	1	1	0.000466			0.01	mg/L						
	508	Nitrate	1	1	0.010122			0.01	mg/L						
	A675446 OUT2	23-Sep-04 22:37													
G113.3	509	Nitrite+Nitrate	1	1	0.015593	0.02		0.01	mg/L						
	507	Nitrite	1	1	0.002881			0.01	mg/L						
	508	Nitrate	1	1	0.012712			0.01	mg/L						
CCV		23-Sep-04 22:40													
	509	Nitrite+Nitrate	1	1	0.199920	0.200		0.01	mg/L		0.2	100.0			
	507	Nitrite	1	1	0.099423	0.0994		0.01	mg/L		0.1	99.4			
	508	Nitrate	1	1	0.100497	0.100		0.01	mg/L		0.1	100.0			
BLA01		23-Sep-04 22:41													
	509	Nitrite+Nitrate	1	1	0.002257		BDL	0.01	mg/L						
	507	Nitrite	1	1	0.001301		BDL	0.01	mg/L						
	508	Nitrate	1	1	0.000956		BDL	0.01	mg/L						

Nitrite

Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	14967491	0.500	14967491					0.0	0.0	-0.2
2	7420199	0.250	7420199					0.0	0.0	0.6
3	2963741	0.100	2963741					0.0	0.0	0.5
4	1473869	0.050	1473869					0.0	0.0	0.5
5	723238	0.025	723238					0.0	0.0	1.4
6	172323	0.005	172323					0.0	0.0	-24.5
7	0	0.000	0					0.0	0.0	

1st Order Poly
Conc = 3.343e-008 Area + 4.655e-004
r = 1.0000

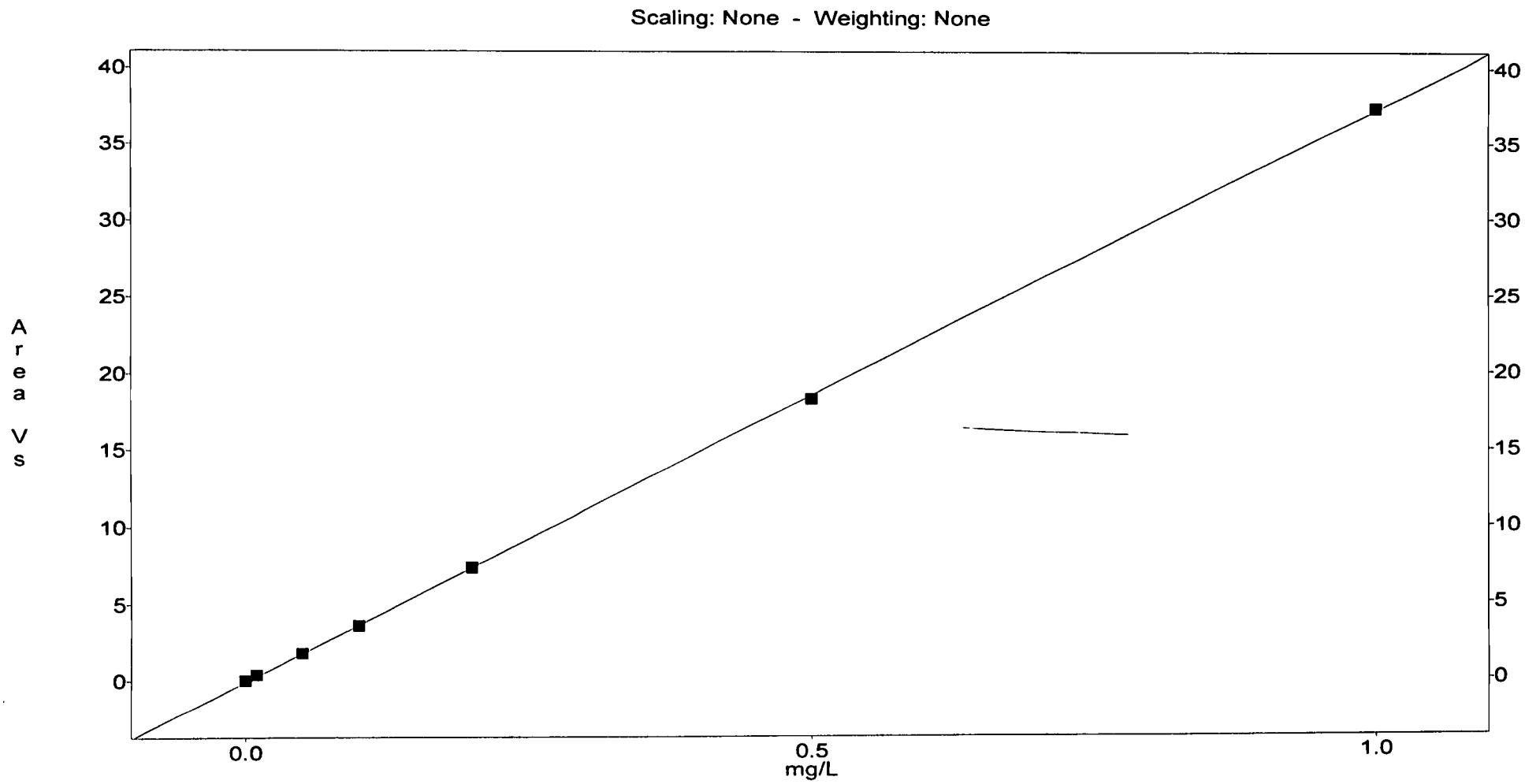


Printed: Thursday, September 23, 2004 - 09:54 PM

Nitrate Nitrite

Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	37391052	1.00	37391052					0.0	0.0	-0.4
2	18324996	0.50	18324996					0.0	0.0	1.4
3	7374402	0.20	7374402					0.0	0.0	0.1
4	3597497	0.10	3597497					0.0	0.0	1.4
5	1792402	0.05	1792402					0.0	0.0	-0.5
6	385106	0.01	385106					0.0	0.0	-25.7
7	0	0.00	0					0.0	0.0	

1st Order Poly
Conc = 2.678e-008 Area + 2.257e-003
r = 1.0000



Printed: Thursday, September 23, 2004 - 09:54 PM

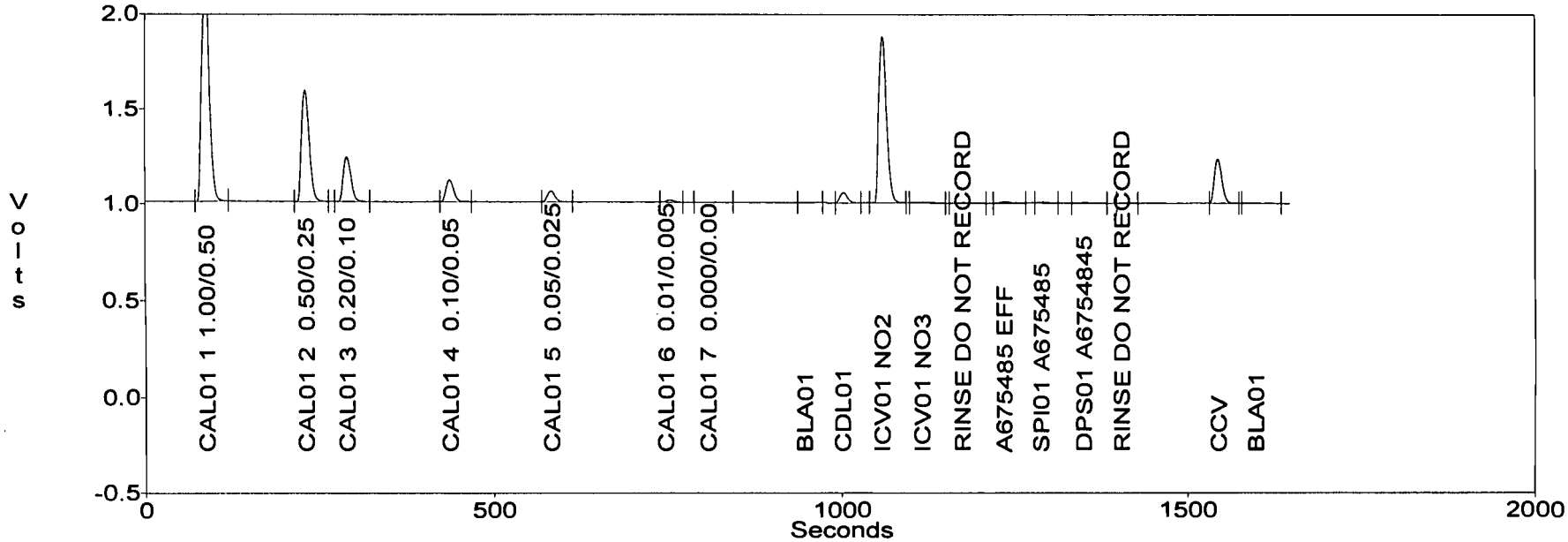
Heritage Environmental Services - Nitrite/Nitrate

Data File	Date	Time	Cup #	Sample ID	Sample Type	Man. Dil F	Auto Dil F	Weight	Unit	Analyte	Result/ Area	Unit	Analyte	Result/ Area	Unit
121-1.FDT	23-Sep-04	21:38:15	1	CAL01 1 1.00/0.50	CalStd	1	1	1	g	Nitrite	14967491	uv-s	Nitrate+Nitrite	37391052	uv-s
121-1.FDT	23-Sep-04	21:40:38	1	CAL01 2 0.50/0.25	CalStd	1	2	1	g	Nitrite	7420199	uv-s	Nitrate+Nitrite	18324996	uv-s
121-1.FDT	23-Sep-04	21:41:37	5	CAL01 3 0.20/0.10	CalStd	1	1	1	g	Nitrite	2963741	uv-s	Nitrate+Nitrite	7374402	uv-s
121-1.FDT	23-Sep-04	21:44:04	5	CAL01 4 0.10/0.05	CalStd	1	2	1	g	Nitrite	1473869	uv-s	Nitrate+Nitrite	3597497	uv-s
121-1.FDT	23-Sep-04	21:46:30	5	CAL01 5 0.05/0.025	CalStd	1	4	1	g	Nitrite	723238	uv-s	Nitrate+Nitrite	1792402	uv-s
121-1.FDT	23-Sep-04	21:49:20	5	CAL01 6 0.01/0.005	CalStd	1	20	1	g	Nitrite	172323	uv-s	Nitrate+Nitrite	385106	uv-s
121-1.FDT	23-Sep-04	21:50:17	2	CAL01 7 0.000/0.00	CalStd	1	1	1	g	Nitrite	0	uv-s	Nitrate+Nitrite	0	uv-s
121-1.FDT	23-Sep-04	21:52:31	2	BLA01	Blank	1	1	1	g	Nitrite	0.002158	mg/L	Nitrate+Nitrite	0.003779	mg/L
121-1.FDT	23-Sep-04	21:53:30	6	CDL01	RelChkStd	1	1	1	g	Nitrite	0.024215	mg/L	Nitrate+Nitrite	0.049088	mg/L
121-1.FDT	23-Sep-04	21:54:27	3	ICV01 NO2	RelChkStd	1	1	1	g	Nitrite	0.373388	mg/L	Nitrate+Nitrite	0.40125	mg/L
121-1.FDT	23-Sep-04	21:55:25	4	ICV01 NO3	RelChkStd	1	1	1	g	Nitrite	0.004678	mg/L	Nitrate+Nitrite	0.389665	mg/L
121-1.FDT	23-Sep-04	21:56:23	1	RINSE DO NOT RECOR	Unknown	1	1	1	g	Nitrite	0.004047	mg/L	Nitrate+Nitrite	0.005866	mg/L
121-1.FDT	23-Sep-04	21:57:22	2	A675485 EFF	Unknown	10	1	1	g	Nitrite	0.005916	mg/L	Nitrate+Nitrite	0.006408	mg/L
121-1.FDT	23-Sep-04	21:58:20	3	SPI01 A675485	Unknown	10	1	1	g	Nitrite	0.003561	mg/L	Nitrate+Nitrite	0.097636	mg/L
121-1.FDT	23-Sep-04	21:59:19	4	DPS01 A6754845	Unknown	10	1	1	g	Nitrite	0.003994	mg/L	Nitrate+Nitrite	0.097388	mg/L
121-1.FDT	23-Sep-04	22:00:17	5	RINSE DO NOT RECOR	Unknown	1	1	1	g	Nitrite	0.002765	mg/L	Nitrate+Nitrite	0.004345	mg/L
121-1.FDT	23-Sep-04	22:02:32	5	CCV	RelChkStd	1	1	1	g	Nitrite	0.096987	mg/L	Nitrate+Nitrite	0.195153	mg/L
121-1.FDT	23-Sep-04	22:03:29	2	BLA01	Blank	1	1	1	g	Nitrite	0.000466	mg/L	Nitrate+Nitrite	0.002257	mg/L
121-2.FDT	23-Sep-04	22:31:17	1	RINSE DO NOT RECOR	Unknown	1	1	1	g	Nitrite	0.003173	mg/L	Nitrate+Nitrite	0.004498	mg/L
121-2.FDT	23-Sep-04	22:32:15	2	A675186 DK28004	Unknown	1	1	1	g	Nitrite	0.004373	mg/L	Nitrate+Nitrite	0.012431	mg/L
121-2.FDT	23-Sep-04	22:33:14	3	SPI01 A675186	Unknown	1	1	1	g	Nitrite	0.003332	mg/L	Nitrate+Nitrite	0.088752	mg/L
121-2.FDT	23-Sep-04	22:34:12	4	DPS01 A675186	Unknown	1	1	1	g	Nitrite	0.007628	mg/L	Nitrate+Nitrite	0.088803	mg/L
121-2.FDT	23-Sep-04	22:35:11	5	RINSE DO NOT RECOR	Unknown	1	1	1	g	Nitrite	0.002166	mg/L	Nitrate+Nitrite	0.004256	mg/L
121-2.FDT	23-Sep-04	22:36:09	6	A675445 OUT1	Unknown	1	1	1	g	Nitrite	0.000466	mg/L	Nitrate+Nitrite	0.010588	mg/L
121-2.FDT	23-Sep-04	22:37:06	7	A675446 OUT2	Unknown	1	1	1	g	Nitrite	0.002881	mg/L	Nitrate+Nitrite	0.015593	mg/L
121-2.FDT	23-Sep-04	22:38:04	8	RINSE DO NOT RECOR	Unknown	1	1	1	g	Nitrite	0.002472	mg/L	Nitrate+Nitrite	0.003867	mg/L
121-2.FDT	23-Sep-04	22:40:19	5	CCV	RelChkStd	1	1	1	g	Nitrite	0.099423	mg/L	Nitrate+Nitrite	0.19992	mg/L
121-2.FDT	23-Sep-04	22:41:16	2	BLA01	Blank	1	1	1	g	Nitrite	0.001301	mg/L	Nitrate+Nitrite	0.002257	mg/L

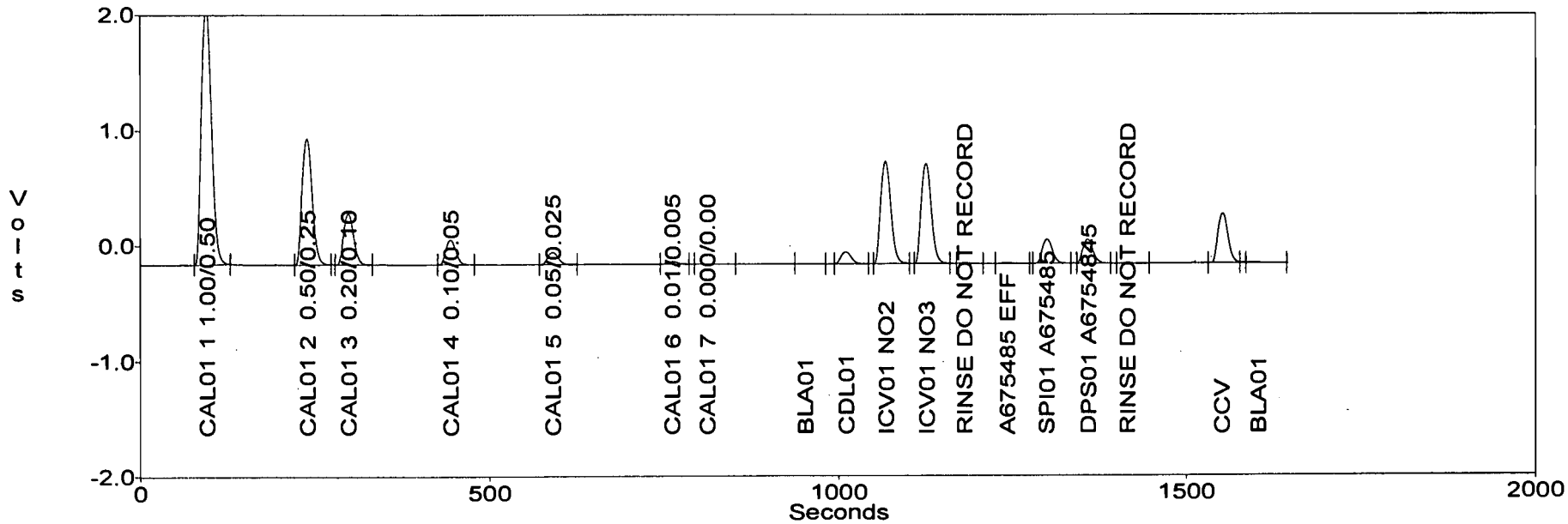
OPERATOR: maa1437
ACQ. TIME: Sep 23, 2004 21:38:14

DATA FILENAME: OMNION\DATA\NITRATE\121-1.FDT
METHOD FILENAME:
TRAY FILENAME: C:\OMNION\TRAYS\NITRATE\121-1.TRA

Channel 3 - Nitrite



Channel 4 - Nitrate+Nitrite



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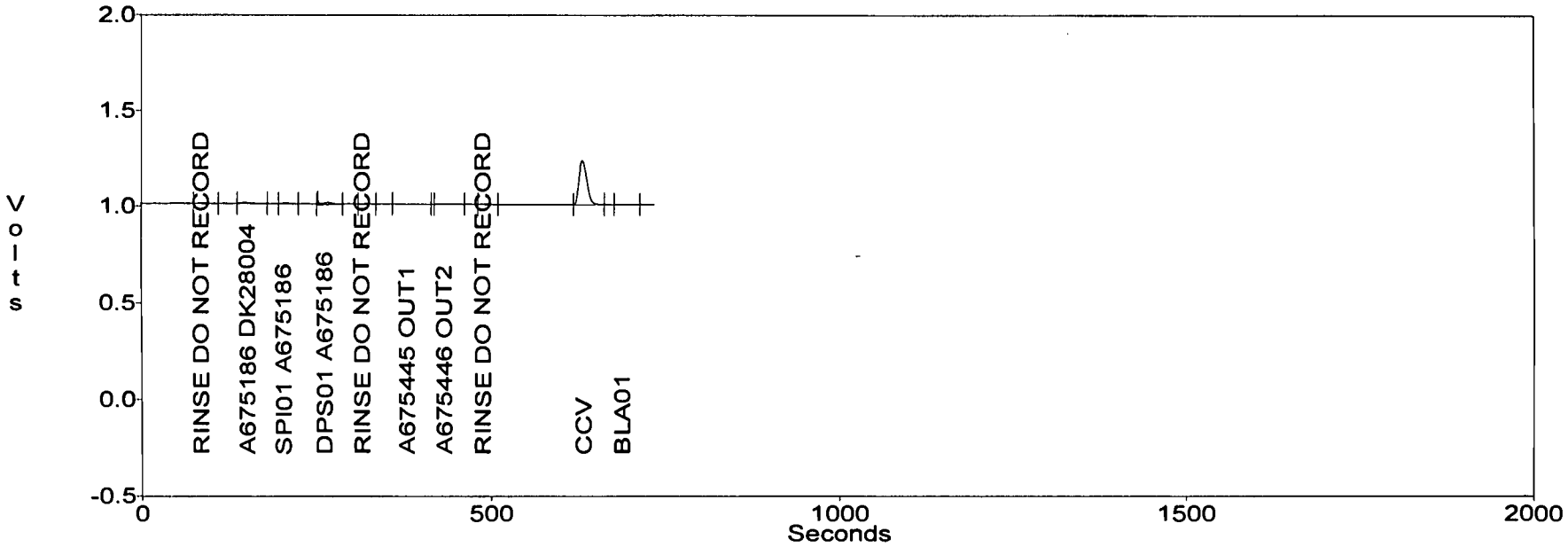
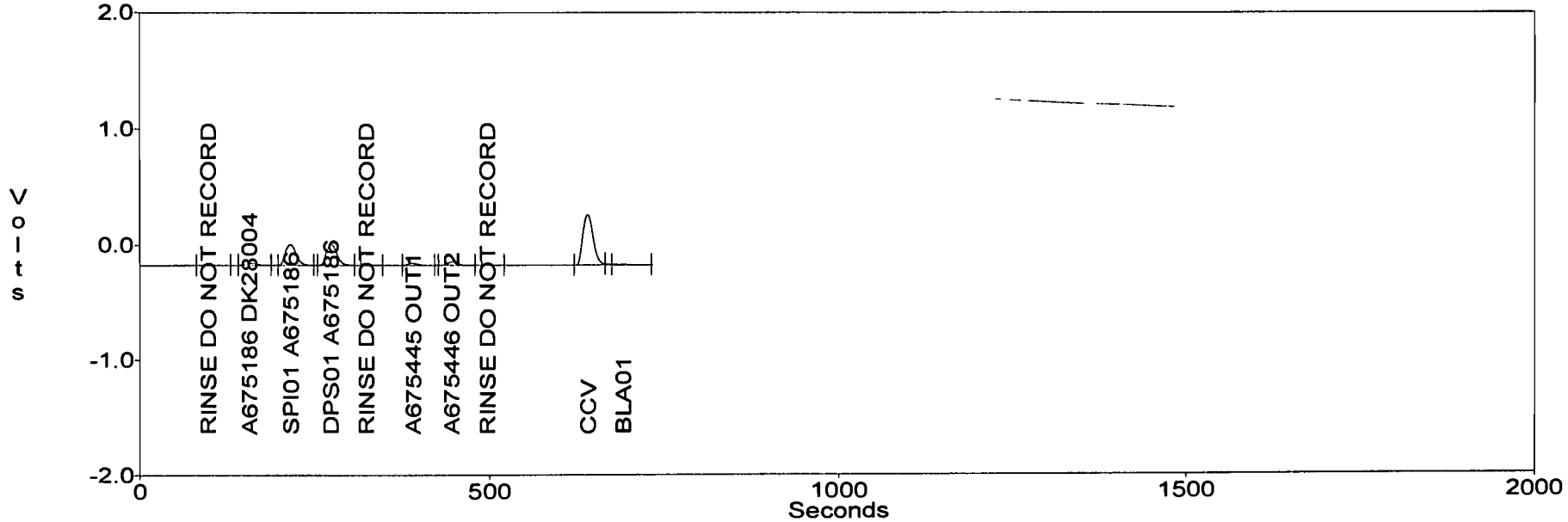
OPERATOR: maa1437
ACQ. TIME: Sep 23, 2004 22:31:14

DATA FILENAME: OMNION\DATA\NITRATE\121-2.FDT
METHOD FILENAME:
TRAY FILENAME: C:\OMNION\TRAYS\NITRATE\121-2.TRA

Channel 3 - Nitrite



Channel 4 - Nitrate+Nitrite



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HERITAGE ENVIRONMENTAL SERVICES, LLC

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
Fax: 317/486-5095
Internet:http://www.heritage-enviro.com

CASE NARRATIVE

IDEM – Office of Water Management
Organics Section Packet #2183

28 September 2004

SAMPLE	CLIENT ID
A675186	DK28004

This sample was analyzed for chloride and sulfate by Ion Chromatography (EPA 300.0) using normal procedures with no modifications. The required holding time was met for the analysis. The method blanks were below the reporting limit. The Initial Calibration Verification and Continuing Calibration Verification were within the control limits. In addition, the matrix spike and matrix spike duplicate were within the control limits.

Heritage Environmental Services
Limited Liability Company

Jay M. Montgomery
IC Analyst

ACCREDITED IN ACCORDANCE WITH nelac

Recycled Paper

Run Number CALIBRATION

File Number 04-0830

ION CHROMATOGRAPHY

Instrument # 268

Analyst JMM 1663

Start Date 30-Aug-04

Start Time 15:11

End Date 30-Aug-04

End Time 19:34

Reviewed By

Date

Recorded By

Date

Date Time Collected:	Dilution Factor:	Sample Name:	F Peak Ar	Cl Peak A	NO2 Pea	Br Peak A	NO3 Pea	HPO4 Pe	SO4 Peak
8/30/04 15:11	1	AUTOCAL 1	0	0	0	0	0	0	0
8/30/04 15:29	1	AUTOCAL 2	14456	56153	28335.4	4352.8	40054.8	0	60513.2
8/30/04 15:47	1	AUTOCAL 3	59188.2	157428.3	134725.8	25653.9	153219	24911.8	248379.4
8/30/04 16:05	1	AUTOCAL 4	193157	428032.2	335451.5	66060.4	396638.6	91139.8	603092.4
8/30/04 16:24	1	AUTOCAL 5	395250.2	884387.7	709055.6	142485.6	828555.1	219656.7	1240187
8/30/04 16:42	1	AUTOCAL 6	828464.2	1872172	1468414	298741.7	1741304	502345	2616892
8/30/04 17:00	1	AUTOCAL 7	2276773	5202469	3881936	767539.9	4830152	1436623	7242454
8/30/04 17:18	1	AUTOCAL 8	4948591	11313530	7997563	1625407	10669947	3235749	15855943
		low correl	**0.9989**	**0.9994**	**0.9996**	**0.9993**	**0.9997**	**0.9951**	**0.9999**
		std calc	0.021	0.009	0.010	0.017	0.008	0.054	0.011
			0.056	0.169	0.050	0.048	0.056	0.054	0.255
			0.168	0.456	0.200	0.196	0.193	0.164	1.014
			0.501	1.223	0.482	0.478	0.486	0.456	2.448
			0.939	2.308	0.957	0.965	0.931	0.897	4.629
			1.816	4.494	1.905	1.928	1.788	1.769	8.980
			4.746	11.863	4.920	4.816	4.690	4.650	23.599
			10.151	25.385	10.060	10.103	10.177	10.198	50.823
		std % rec	**112.00**	**135.20**	**100.00**	**96.00**	**112.00**	**108.00**	**102.00**
			84.00	**91.20**	**100.00**	**98.00**	**96.50**	**82.00**	**101.40**
			100.20	**97.84**	**96.40**	**95.60**	**97.20**	**91.20**	**97.92**
			93.90	**92.32**	**95.70**	**96.50**	**93.10**	**89.70**	**92.58**
			90.80	**89.88**	**95.25**	**96.40**	**89.40**	**88.45**	**89.80**
			94.92	**94.90**	**98.40**	**96.32**	**93.80**	**93.00**	**94.40**
			101.51	**101.54**	**100.60**	**101.03**	**101.77**	**101.98**	**101.65**
		high correl	**0.9993**	**0.9993**	**0.9999**	**0.9997**	**0.9990**	**0.9989**	**0.9992**
	4	**std calc**	**0.65**	**1.63**	**0.55**	**0.57**	**0.67**	**0.68**	**3.29**
	5		**1.05**	**2.62**	**1.02**	**1.03**	**1.06**	**1.06**	**5.27**
	6		**1.91**	**4.76**	**1.96**	**1.99**	**1.90**	**1.91**	**9.53**
	7		**4.79**	**11.99**	**4.94**	**4.84**	**4.75**	**4.72**	**23.86**
	8		**10.10**	**25.25**	**10.03**	**10.07**	**10.12**	**10.13**	**50.55**
	4	**std % rec**	**130.00**	**130.40**	**110.00**	**114.00**	**134.00**	**136.00**	**131.60**
	5		**105.00**	**104.80**	**102.00**	**103.00**	**106.00**	**106.00**	**105.40**
	6		**95.50**	**95.20**	**98.00**	**99.50**	**95.00**	**95.50**	**95.30**
	7		**95.80**	**95.92**	**98.80**	**96.80**	**95.00**	**94.40**	**95.44**
	8		**101.00**	**101.00**	**100.30**	**100.70**	**101.20**	**101.30**	**101.10**

Calibration Date/Time Aug 30, 2004 15:11 to Aug 30, 2004 17:18

	AUTOCAL 1	AUTOCAL 2	AUTOCAL 3	AUTOCAL 4	AUTOCAL 5	AUTOCAL 6	AUTOCAL 7	AUTOCAL 8
F Peak Area	0	14456	59188	193157	395250	828464	2276773	4948591
Cl Peak Are	0	56153	157428	428032	884388	1872172	5202469	11313530
NO2 Peak A	0	28335	134726	335451	709056	1468414	3881936	7997563
Br Peak Are	0	4353	25654	66060	142486	298742	767540	1625407
NO3 Peak A	0	40055	153219	396639	828555	1741304	4830152	10669947
HPO4 Peak	0	0	24912	91140	219657	502345	1436623	3235749
SO4 Peak A	0	60513	248379	603092	1240187	2616892	7242454	15855943
I Peak	0	32391	230912	465848	1165222	2631961	5448616	

	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Fl Conc	0	0.05	0.2	0.5	1	2	5	10
Cl Conc	0	0.125	0.5	1.25	2.5	5	12.5	25
NO2 Conc	0	0.05	0.2	0.5	1	2	5	10
Br Conc	0	0.05	0.2	0.5	1	2	5	10
NO3 Conc	0	0.05	0.2	0.5	1	2	5	10
HPO4 Conc	0	0.05	0.2	0.5	1	2	5	10
SO4 Conc	0	0.25	1	2.5	5	10	25	50
I CONC	0	1	5	10	25	50	100	

Low Calibration Curve Autocal 1 - 5

Parameter	Slope	Intercept	Cor. Coef	MDL	FLAG
F	2.4883e-06	0.02053	0.99888	0.01400	*
Cl	2.8367e-06	0.00925	0.99942	0.01700	
NO_2	1.4083e-06	0.00987	0.99965	0.00220	*
Br	6.9741e-06	0.01726	0.99932	0.00350	*
NO_3	1.2070e-06	0.00758	0.99971	0.00260	*
HPO_4	4.4090e-06	0.05397	0.99506	0.09300	
SO_4	4.0411e-06	0.01056	0.99989	0.03200	
I	2.1332e-05	0.11776	0.99993		

High Calibration Curve Autocal 5 - 8

Parameter	Slope	Intercept	Cor. Coef
F	1.9880e-06	0.26377	0.99930
Cl	2.1700e-06	0.69984	0.99930
NO_2	1.2371e-06	0.13897	0.99992
Br	6.0948e-06	0.16472	0.99971
NO_3	9.2014e-07	0.30162	0.99903
HPO_4	3.0059e-06	0.40225	0.99889
SO_4	3.0980e-06	1.42488	0.99919
I	1.7870e-05	2.86360	0.99966

Sample Areas less than L5 area are calculated using the low calibration.
Sample Areas between L5 area and the L8 are calculated using the high calibration.

Concentration = (Slope)*(area)+Intercept
y = (mx+b)

Modified 11/18/98 sab

TestID	Sample	Parm	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
AUTOCAL 1 30-Aug-04 15:11														
	367	F	0	1	0.021			0.10	mg/L					
	223	Cl	0	1	0.009			0.25	mg/L					
	507	NO_2	0	1	0.010			0.050	mg/L					
	192	Br	0	1	0.017			0.050	mg/L					
	508	NO_3	0	1	0.008			0.050	mg/L					
	539	HPO_4	0	1	0.054			0.050	mg/L					
	681	SO_4	0	1	0.011			0.25	mg/L					
AUTOCAL 2 30-Aug-04 15:29														
	367	F	14456	1	0.056			0.10	mg/L					
	223	Cl	56153	1	0.169			0.25	mg/L					
	507	NO_2	28335	1	0.050			0.050	mg/L					
	192	Br	4353	1	0.048			0.050	mg/L					
	508	NO_3	40055	1	0.056			0.050	mg/L					
	539	HPO_4	0	1	0.054			0.050	mg/L					
	681	SO_4	60513	1	0.255			0.25	mg/L					
AUTOCAL 3 30-Aug-04 15:47														
	367	F	59188	1	0.168			0.10	mg/L					
	223	Cl	157428	1	0.456			0.25	mg/L					
	507	NO_2	134726	1	0.200			0.050	mg/L					
	192	Br	25654	1	0.196			0.050	mg/L					
	508	NO_3	153219	1	0.193			0.050	mg/L					
	539	HPO_4	24912	1	0.164			0.050	mg/L					
	681	SO_4	248379	1	1.014			0.25	mg/L					
AUTOCAL 4 30-Aug-04 16:05														
	367	F	193157	1	0.501			0.10	mg/L					
	223	Cl	428032	1	1.223			0.25	mg/L					
	507	NO_2	335451	1	0.482			0.050	mg/L					
	192	Br	66060	1	0.478			0.050	mg/L					
	508	NO_3	396639	1	0.486			0.050	mg/L					
	539	HPO_4	91140	1	0.456			0.050	mg/L					
	681	SO_4	603092	1	2.448			0.25	mg/L					
AUTOCAL 5 30-Aug-04 16:24														
	367	F	395250	1	1.004			0.10	mg/L					
	223	Cl	884388	1	2.619			0.25	mg/L					
	507	NO_2	709056	1	1.016			0.050	mg/L					
	192	Br	142486	1	1.033			0.050	mg/L					
	508	NO_3	828555	1	1.008			0.050	mg/L					
	539	HPO_4	219657	1	1.063			0.050	mg/L					
	681	SO_4	1240187	1	5.267			0.25	mg/L					
AUTOCAL 6 30-Aug-04 16:42														
	367	F	828464	1	1.911			0.10	mg/L					
	223	Cl	1872172	1	4.763			0.25	mg/L					
	507	NO_2	1468414	1	1.956			0.050	mg/L					
	192	Br	298742	1	1.985			0.050	mg/L					
	508	NO_3	1741304	1	1.904			0.050	mg/L					
	539	HPO_4	502345	1	1.912			0.050	mg/L					
	681	SO_4	2616892	1	9.532			0.25	mg/L					
AUTOCAL 7 30-Aug-04 17:00														
	367	F	2276773	1	4.790			0.10	mg/L					
	223	Cl	5202469	1	11.989			0.25	mg/L					
	507	NO_2	3881936	1	4.941			0.050	mg/L					
	192	Br	767540	1	4.843			0.050	mg/L					
	508	NO_3	4830152	1	4.746			0.050	mg/L					
	539	HPO_4	1436623	1	4.721			0.050	mg/L					
	681	SO_4	7242454	1	23.862			0.25	mg/L					

TestID	Sample	Parm	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	AUTOCAL 8 30-Aug-04 17:18													
	367	F	4948591	1	10.102			0.10	mg/L					
	223	Cl	11313530	1	25.250			0.25	mg/L					
	507	NO_2	7997563	1	10.033	HIGH		0.050	mg/L					
	192	Br	1625407	1	10.071			0.050	mg/L					
	508	NO_3	10669947	1	10.119	HIGH		0.050	mg/L					
	539	HPO_4	3235749	1	10.128			0.050	mg/L					
	681	SO_4	15855943	1	50.546	HIGH		0.25	mg/L					
	ICV01 30-Aug-04 17:53													
	367	F	1821667	1	3.885	3.89		0.10	mg/L		4	97.3		
	223	Cl	5049513	1	11.657	11.7		0.25	mg/L		12	97.5		
	507	NO_2	3206963	1	4.106	4.11		0.050	mg/L		4	102.8		
	192	Br	611427	1	3.891	3.89		0.050	mg/L		4	97.3		
	508	NO_3	3725218	1	3.729	3.73		0.050	mg/L		4	93.3		
	539	HPO_4	1114871	1	3.753	3.75		0.050	mg/L		4	93.8		
	681	SO_4	5722642	1	19.153	19.2		0.25	mg/L		20	96.0		
	ICV01 1:5 30-Aug-04 19:34													
	367	F	283472	5	3.629	3.63		0.50	mg/L		4	90.8		
	223	Cl	847911	5	12.072	12.1		1.3	mg/L		12	100.8		
	507	NO_2	553382	5	3.946	3.95		0.25	mg/L		4	98.8		
	192	Br	109348	5	3.899	3.90		0.25	mg/L		4	97.5		
	508	NO_3	653779	5	3.983	3.98		0.25	mg/L		4	99.5		
	539	HPO_4	167926	5	3.972	3.97		0.25	mg/L		4	99.3		
	681	SO_4	1007480	5	20.410	20.4		1.3	mg/L		20	102.0		

Calibration Update Report

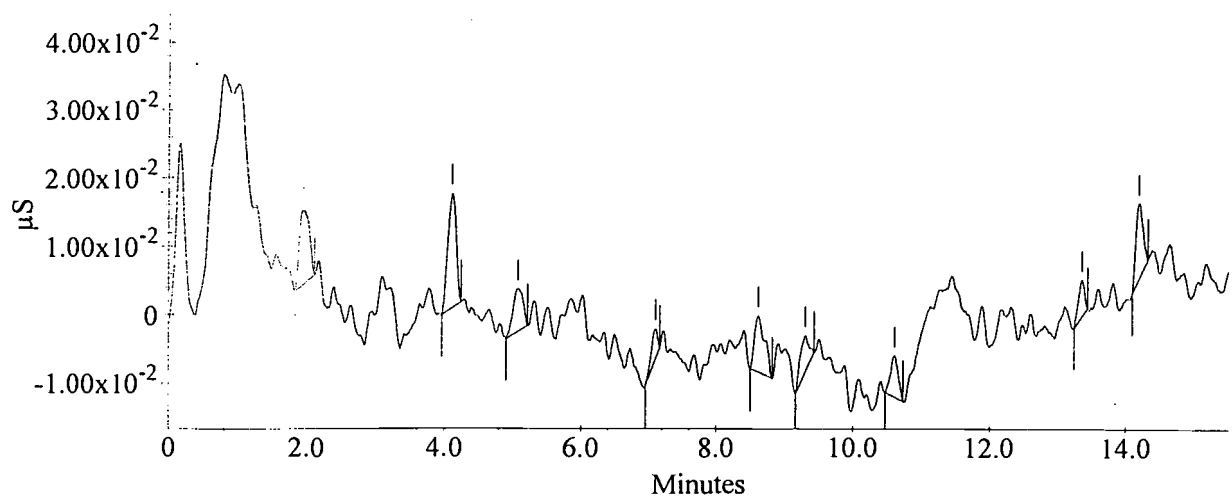
Sample Name : AUTOCAL 1
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_001.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 3:11:18 PM
Calibration Date : 8/30/04 3:29:26 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1		1.95			
	Cl				
	NO2				
	Br				
	NO3				
	HPO4				
	SO4				

AUTOCAL 1



Calibration Update Report

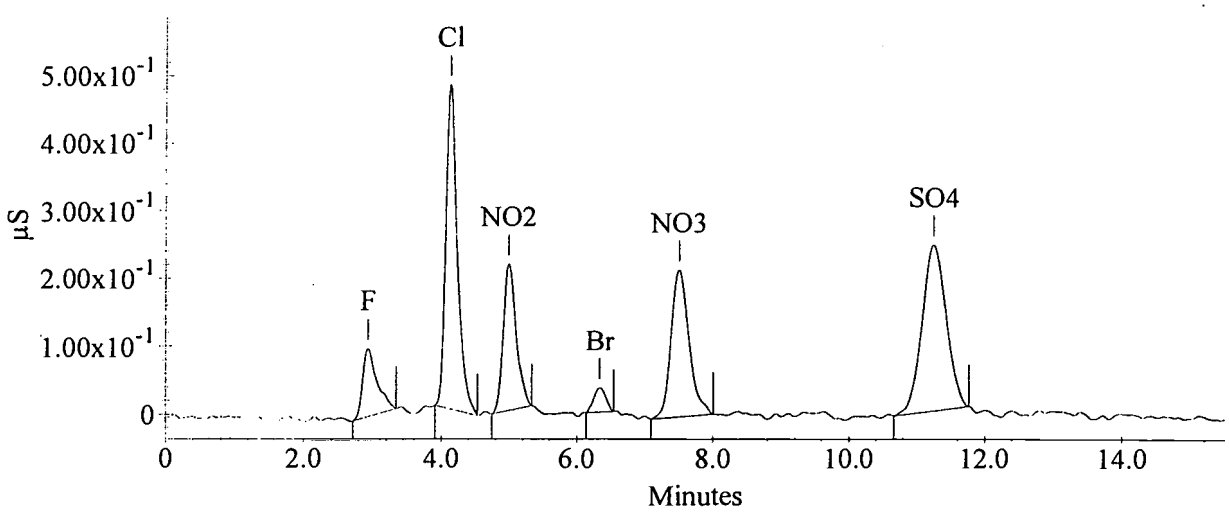
Sample Name : AUTOCAL 2
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_002.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 3:29:38 PM
Calibration Date : 8/30/04 3:47:39 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	F	2.93	12688	14456	14419
2	Cl	4.13	58395	56153	60215
3	NO2	4.99	47922	28335	32097
4	Br	6.33	28764	4353	5004
5	NO3	7.50	33440	40055	40020
	HPO4				
6	SO4	11.25	37228	60513	63974

AUTOCAL 2



Calibration Update Report

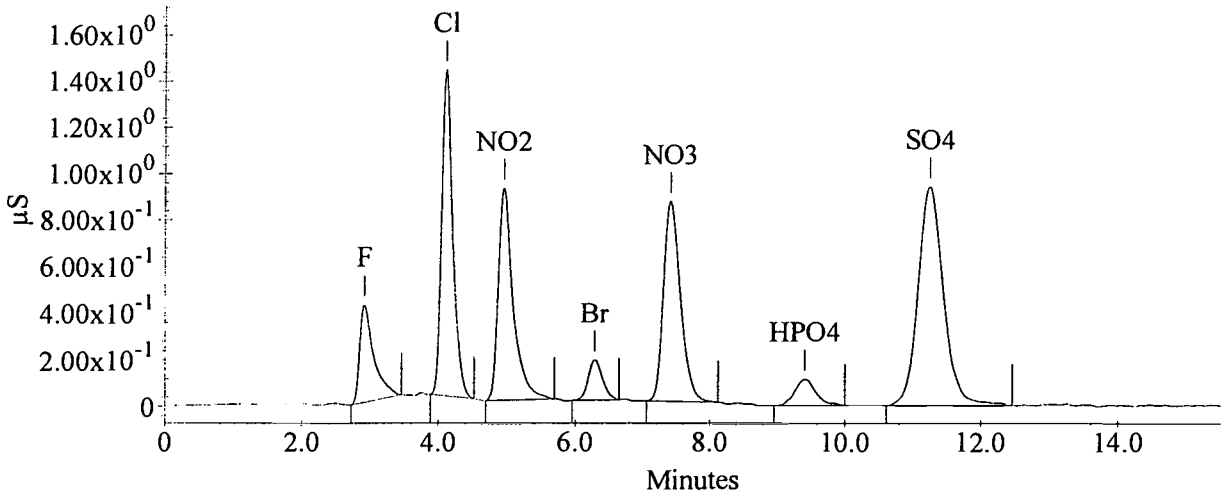
Sample Name : AUTOCAL 3
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_003.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 3:47:45 PM
Calibration Date : 8/30/04 4:05:46 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	F	2.92	56981	59188	58607
2	Cl	4.11	172108	157428	160815
3	NO2	4.96	167186	134726	134711
4	Br	6.28	124510	25654	25146
5	NO3	7.41	145021	153219	155619
6	HPO4	9.41	1635	24912	21647
7	SO4	11.25	144931	248379	239028

AUTOCAL 3



Calibration Update Report

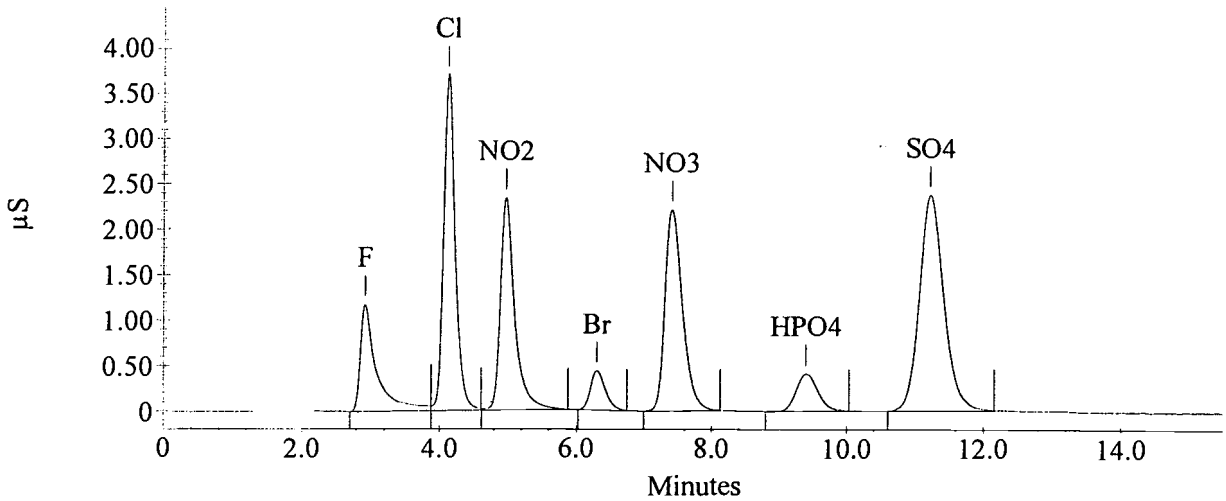
Sample Name : AUTOCAL 4
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_004.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 4:05:52 PM
Calibration Date : 8/30/04 4:23:57 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	F	2.92	195137	193157	191982
2	Cl	4.11	405259	428032	431742
3	NO2	4.97	432735	335451	345079
4	Br	6.30	334958	66060	69520
5	NO3	7.41	382620	396639	396595
6	HPO4	9.40	54182	91140	88903
7	SO4	11.22	579212	603092	602920

AUTOCAL 4



Calibration Update Report

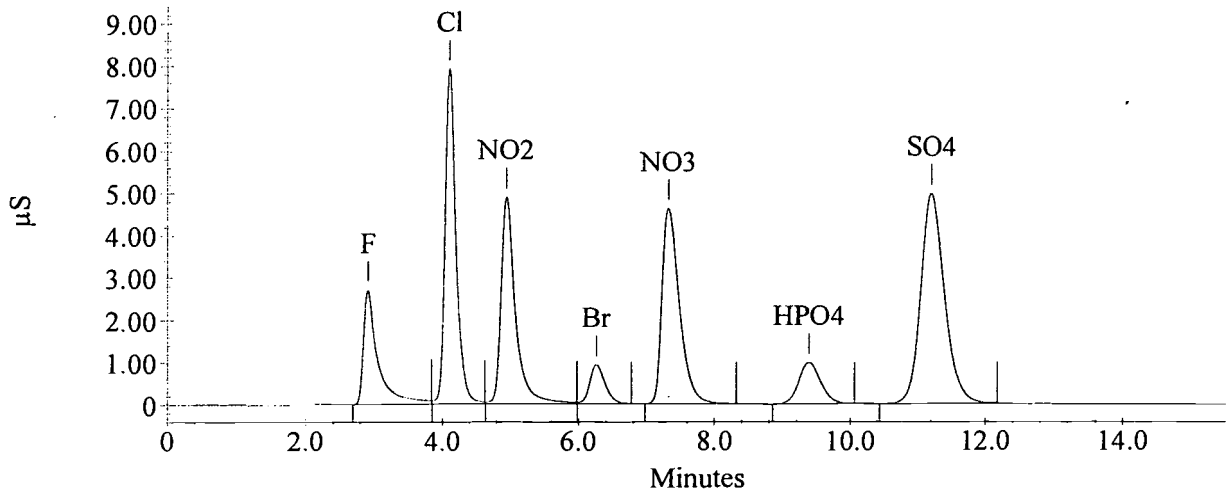
Sample Name : AUTOCAL 5
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_005.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 4:24:01 PM
Calibration Date : 8/30/04 4:42:06 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	F	2.91	403438	395250	395218
2	Cl	4.10	833613	884388	884329
3	NO2	4.94	850436	709056	708322
4	Br	6.26	674604	142486	142405
5	NO3	7.33	791141	828555	828555
6	HPO4	9.39	131910	219657	219657
7	SO4	11.21	1228255	1240187	1240187

AUTOCAL 5



Calibration Update Report

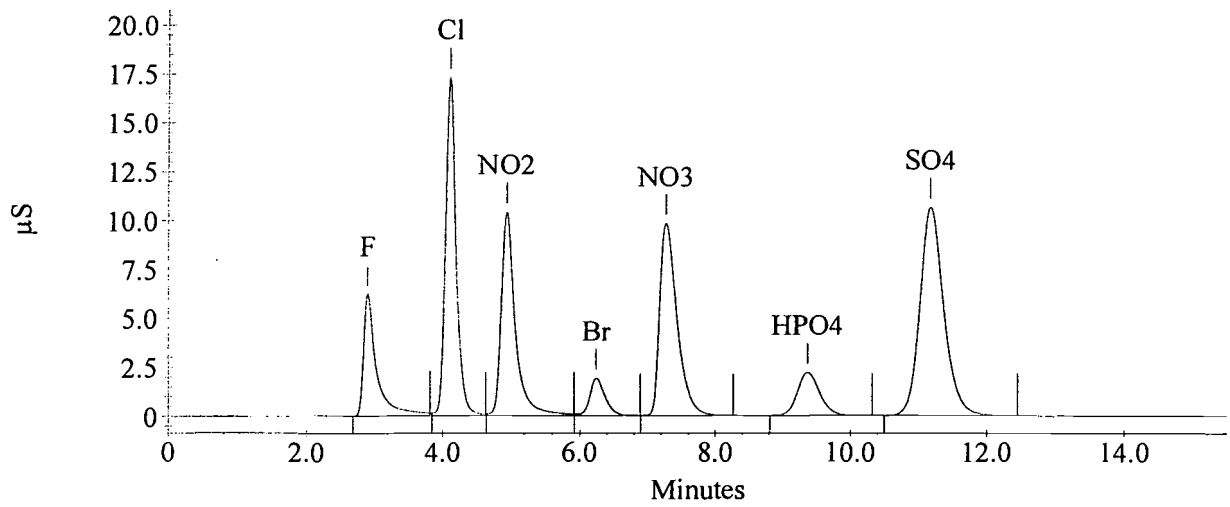
Sample Name : AUTOCAL 6
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_006.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 4:42:17 PM
Calibration Date : 8/30/04 5:00:22 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	F	2.90	853518	828464	828464
2	Cl	4.11	1751530	1872172	1872172
3	NO2	4.94	1860867	1468414	1468257
4	Br	6.24	1442973	298742	298742
5	NO3	7.27	1689963	1741304	1741304
6	HPO4	9.37	347417	502345	502194
7	SO4	11.18	2532308	2616892	2616636

AUTOCAL 6



Calibration Update Report

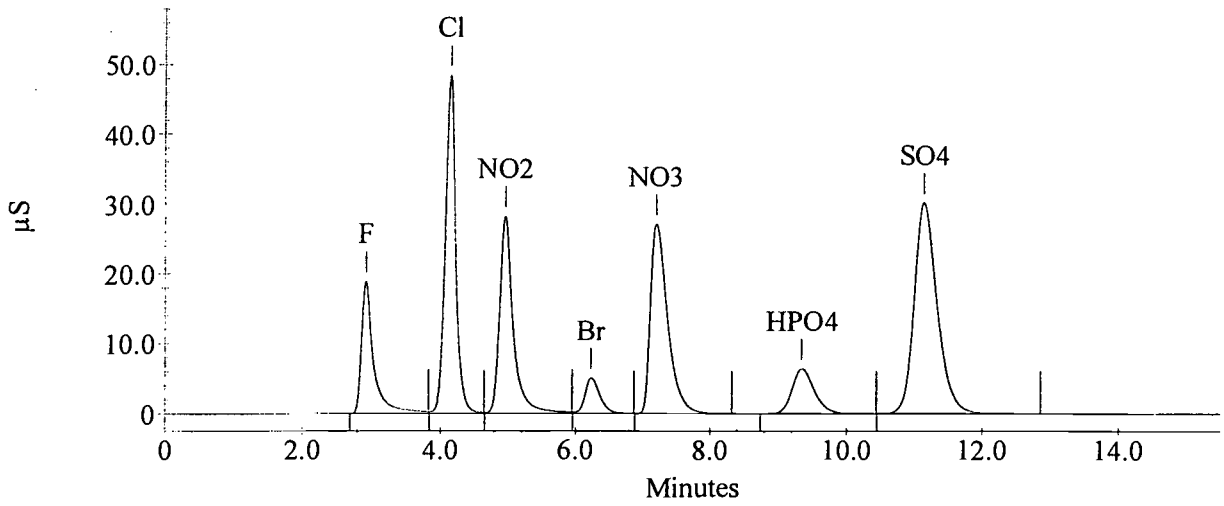
Sample Name : AUTOCAL 7
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_007.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 5:00:25 PM
Calibration Date : 8/30/04 5:18:23 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	F	2.92	2257599	2276773	2290970
2	Cl	4.14	4753800	5202469	5210603
3	NO2	4.96	5146620	3881936	3891494
4	Br	6.23	3859516	767540	771845
5	NO3	7.20	4662048	4830152	4832667
6	HPO4	9.35	4614069	1436623	1436623
7	SO4	11.15	6775840	7242454	7242454

AUTOCAL 7



Calibration Update Report

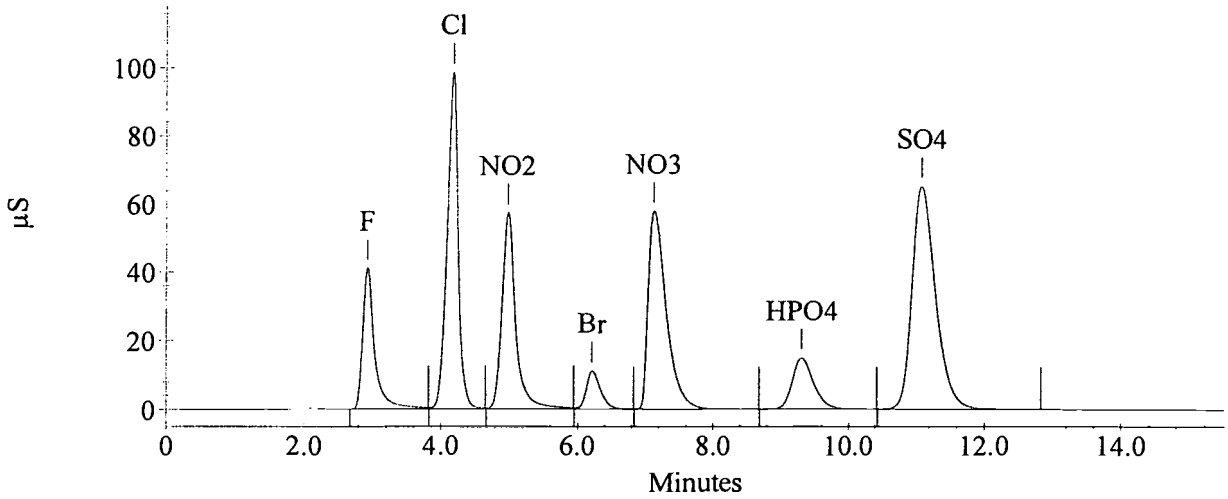
Sample Name : AUTOCAL 8
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_008.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Schedule File Name : c:\peaknet51\schedule\08300401.sch
Date Time Collected : 8/30/04 5:18:35 PM
Calibration Date : 8/30/04 5:36:34 PM
System Operator : JMM 1663

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1	F	2.92	4929316	4948591	4982610
2	Cl	4.18	10733365	11313530	11335521
3	NO2	4.98	11244528	7997563	8027034
4	Br	6.21	7988513	1625407	1642913
5	NO3	7.12	10595487	10669947	10698706
6	HPO4	9.31	10143506	3235749	3253215
7	SO4	11.08	14813513	15855943	15864817

AUTOCAL 8



Sample Analysis Report

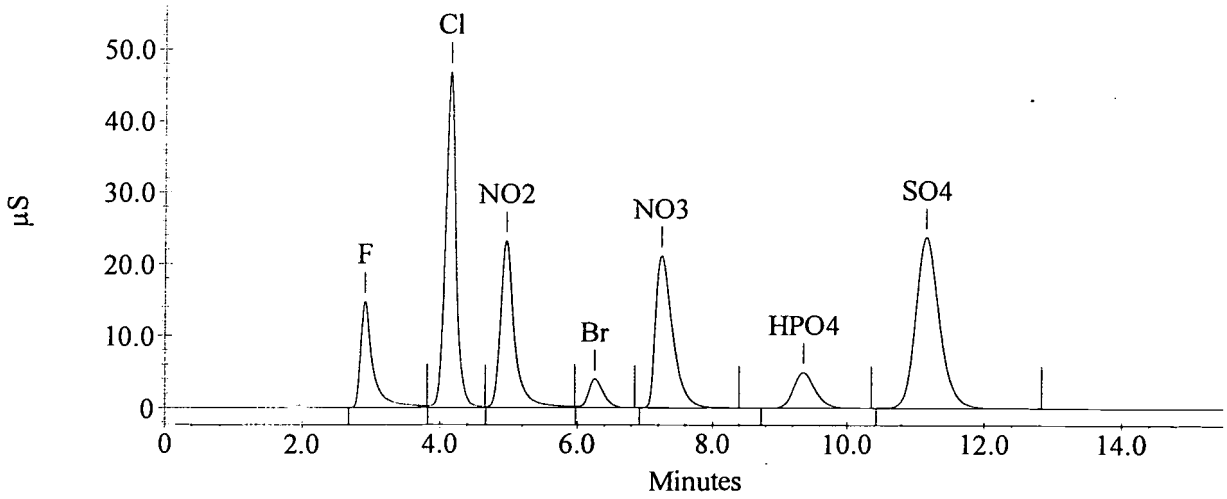
Sample Name : ICV01
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_009.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 8/30/04 5:53:19 PM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1	F	2.91	3.81	1821667	146714
2	Cl	4.15	11.51	5049513	467960
3	NO2	4.97	4.07	3206963	231506
4	Br	6.25	3.82	611427	40007
5	NO3	7.24	3.65	3725218	210805
6	HPO4	9.36	3.65	1114871	49495
7	SO4	11.16	18.81	5722642	237434

ICV01



Sample Analysis Report

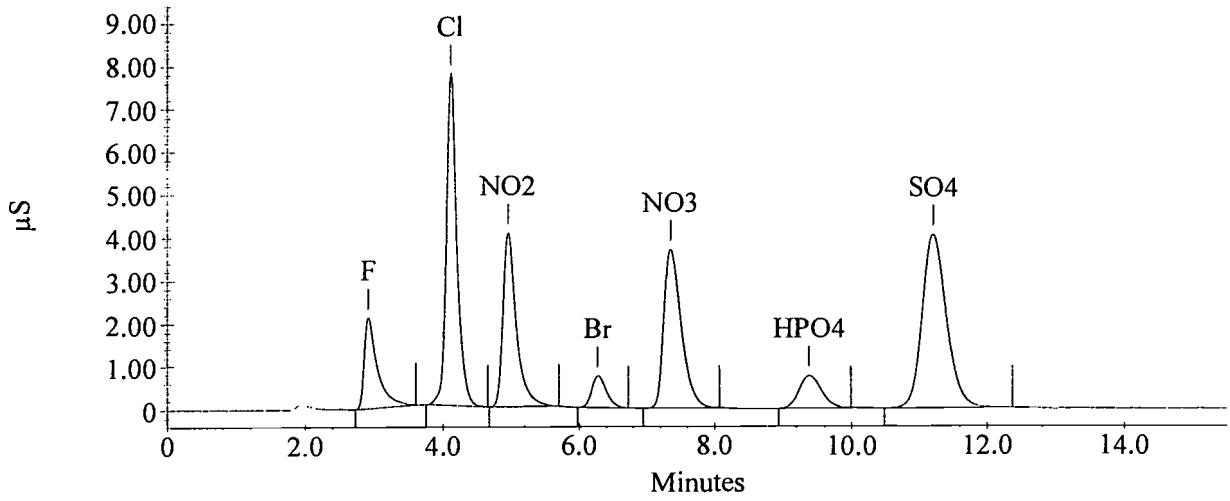
Sample Name : ICV01 1:5
Data File Name : C:\PEAKNET51\DATA\08300401\DATA_010.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 8/30/04 7:34:41 PM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1	F	2.91	3.60	283472	20964
2	Cl	4.11	11.21	847911	76809
3	NO2	4.95	3.83	553382	40104
4	Br	6.27	3.81	109348	7310
5	NO3	7.35	3.87	653779	36700
6	HPO4	9.38	3.73	167926	7518
7	SO4	11.21	19.69	1007480	40108

ICV01 1:5



Run Number R476532

File Number 04-0925

ION CHROMATOGRAPHY

Instrument # 268

Analyst JMM 1663

Start Date 25-Sep-04

Start Time 22:39

End Date 26-Sep-04

End Time 1:25

Reviewed By [illegible]

Date 9/26/04 RLB 9-27-04

Recorded By RLB

Date 9-27-04

RLB 9-27-04

Schedule File: C:\PeakNet51\schedule\09250402.sch

Line	Sample	Method	Data File	Dilution	Comment
1	BLA01	as14_an1.met	data_001.dxd	1	BLA01
2	CCV L	as14_an1.met	data_002.dxd	1	HA 2230
3	CCV H	as14_an1.met	data_003.dxd	1	HA 2230
4	LFB01 SPI	as14_an1.met	data_004.dxd	1	HA 2231
5	A675186 1:5	as14_an1.met	data_005.dxd	5	DK28004
6	SPI01 A675186 1:5	as14_an1.met	data_006.dxd	5	DK28004 MS
7	DPS01 A675186 1:5	as14_an1.met	data_007.dxd	5	DK28004 MSD
8	CCV L	as14_an1.met	data_008.dxd	1	HA 2230
9	CCV H	as14_an1.met	data_009.dxd	1	HA 2230
10	BLA01	as14_an1.met	data_010.dxd	1	BLA01

Default Method Path: C:\PEAKNET51\METHOD
Default Data Path: C:\PEAKNET51\DATA\09250401
Comment:
BatchDx created schedule.

TestID	Sample	Parm	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
1\375	BLA01 25-Sep-04 22:39													
	367	F	0	1	0.021		BDL	0.10	mg/L					
	223	Cl	0	1	0.009		BDL	0.25	mg/L					
	507	NO_2	0	1	0.010		BDL	0.050	mg/L					
	192	Br	0	1	0.017		BDL	0.050	mg/L					
	508	NO_3	0	1	0.008		BDL	0.050	mg/L					
	539	HPO_4	0	1	0.054		BDL	0.050	mg/L					
	681	SO_4	0	1	0.011		BDL	0.25	mg/L					
	CCV L 25-Sep-04 22:58													
	367	F	200647	1	0.520	0.520		0.10	mg/L		0.5	104.0		
	223	Cl	463124	1	1.323	1.32		0.25	mg/L		1.25	105.6		
	507	NO_2	342951	1	0.493	0.493		0.050	mg/L		0.5	98.6		
	192	Br	69421	1	0.501	0.501		0.050	mg/L		0.5	100.2		
	508	NO_3	389168	1	0.477	0.477		0.050	mg/L		0.5	95.4		
	539	HPO_4	44808	1	0.252	0.252		0.050	mg/L		0.5	50.4		*
	681	SO_4	578646	1	2.349	2.35		0.25	mg/L		2.5	94.0		
	CCV H 25-Sep-04 23:16													
	367	F	2329169	1	4.894	4.89		0.10	mg/L		5	97.8		
	223	Cl	5090377	1	11.746	11.7		0.25	mg/L		12.5	93.6		
	507	NO_2	3835451	1	4.884	4.88		0.050	mg/L		5	97.6		
	192	Br	763414	1	4.818	4.82		0.050	mg/L		5	96.4		
	508	NO_3	4759193	1	4.681	4.68		0.050	mg/L		5	93.6		
	539	HPO_4	1234190	1	4.112	4.11		0.050	mg/L		5	82.2		*
	681	SO_4	6927068	1	22.885	22.9		0.25	mg/L		25	91.6		
1\375	LFB01 SPI 25-Sep-04 23:34													
	367	F	407734	1	1.074			0.10	mg/L		1			
G	223	Cl	885977	1	2.622	2.62		0.25	mg/L		2.5	104.8		
	507	NO_2	714141	1	1.022			0.050	mg/L		1			
	192	Br	139776	1	0.992			0.050	mg/L		1			
	508	NO_3	794047	1	0.966			0.050	mg/L		1			
	539	HPO_4	134954	1	0.649			0.050	mg/L		1			
G	681	SO_4	1191593	1	4.826	4.83		0.25	mg/L		5	96.6		
	A675186 1:5 25-Sep-04 23:53													
	367	F	10721	5	0.236			0.50	mg/L					
G300.2	223	Cl	4846899	5	56.089	56.		1.3	mg/L					
	507	NO_2	0	5	0.049			0.25	mg/L					
	192	Br	0	5	0.086			0.25	mg/L					
	508	NO_3	0	5	0.038			0.25	mg/L					
	539	HPO_4	0	5	0.270			0.25	mg/L					
G300.7	681	SO_4	6700347	5	110.912	110		1.3	mg/L					
375	SPI01 A675186 1:5 26-Sep-04 00:11													
	367	F	423284	5	5.526			0.50	mg/L		5			
G	223	Cl	5445326	5	62.582	62.6		1.3	mg/L	50.5	12.5	96.8		
	507	NO_2	718014	5	5.136			0.25	mg/L		5			
	192	Br	150463	5	5.409			0.25	mg/L		5			
	508	NO_3	814516	5	4.953			0.25	mg/L		5			
	539	HPO_4	106617	5	2.620			0.25	mg/L		5			
G	681	SO_4	7451746	5	122.551	123.		1.3	mg/L	99.8	25	92.8		
375	DPS01 A675186 1:5 26-Sep-04 00:30													
	367	F	427083	5	5.564			0.50	mg/L		5			
G	223	Cl	5485791	5	63.021	63.0		1.3	mg/L	50.5	12.5	100.0	3.3	
	507	NO_2	718989	5	5.142			0.25	mg/L		5			
	192	Br	142033	5	5.039			0.25	mg/L		5			
	508	NO_3	812467	5	4.941			0.25	mg/L		5			
	539	HPO_4	109743	5	2.689			0.25	mg/L		5			
G	681	SO_4	7535741	5	123.852	124.		1.3	mg/L	99.8	25	96.8	4.2	

TestID	Sample	Parm	Area	Dil'n	Conc.	Result	RQL	DL	Units	Samp	Spike	Rec	RPD	#
	CCV L	26-Sep-04 00:48												
	367	F	200578	1	0.520	0.520		0.10	mg/L		0.5	104.0		
	223	Cl	422248	1	1.207	1.21		0.25	mg/L		1.25	96.8		
	507	NO_2	344408	1	0.495	0.495		0.050	mg/L		0.5	99.0		
	192	Br	72216	1	0.521	0.521		0.050	mg/L		0.5	104.2		
	508	NO_3	389553	1	0.478	0.478		0.050	mg/L		0.5	95.6		
	539	HPO_4	27822	1	0.177	0.177		0.050	mg/L		0.5	35.4		*
	681	SO_4	576034	1	2.338	2.34		0.25	mg/L		2.5	93.6		
	CCV H	26-Sep-04 01:06												
	367	F	2306233	1	4.849	4.85		0.10	mg/L		5	97.0		
	223	Cl	5009570	1	11.571	11.6		0.25	mg/L		12.5	92.8		
	507	NO_2	3785176	1	4.822	4.82		0.050	mg/L		5	96.4		
	192	Br	754400	1	4.763	4.76		0.050	mg/L		5	95.2		
	508	NO_3	4693748	1	4.621	4.62		0.050	mg/L		5	92.4		
	539	HPO_4	1183335	1	3.959	3.96		0.050	mg/L		5	79.2		*
	681	SO_4	6843365	1	22.625	22.6		0.25	mg/L		25	90.4		
1\375	BLA01	26-Sep-04 01:25												
	367	F	0	1	0.021		BDL	0.10	mg/L					
	223	Cl	0	1	0.009		BDL	0.25	mg/L					
	507	NO_2	0	1	0.010		BDL	0.050	mg/L					
	192	Br	0	1	0.017		BDL	0.050	mg/L					
	508	NO_3	0	1	0.008		BDL	0.050	mg/L					
	539	HPO_4	0	1	0.054		BDL	0.050	mg/L					
	681	SO_4	0	1	0.011		BDL	0.25	mg/L					

Sample Analysis Report

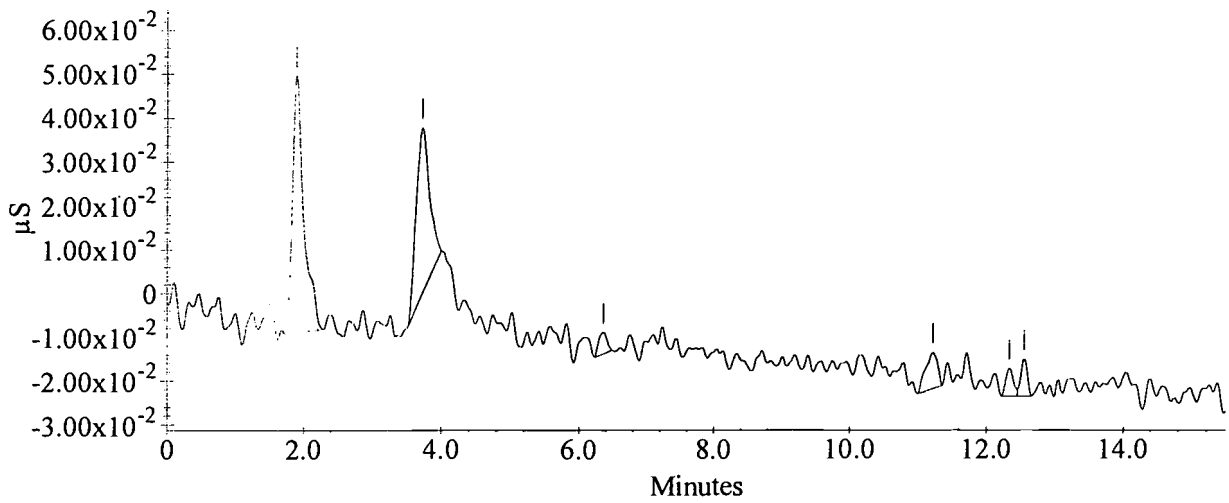
Sample Name : BLA01
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_001.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/25/04 10:39:52 PM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1		1.89	0.00	6865	582
2		3.73	0.00	5105	376
3		6.36	0.00	429	49
4		11.23	0.00	1011	83
5		12.34	0.00	491	63
6		12.56	0.00	559	85

BLA01



Sample Analysis Report

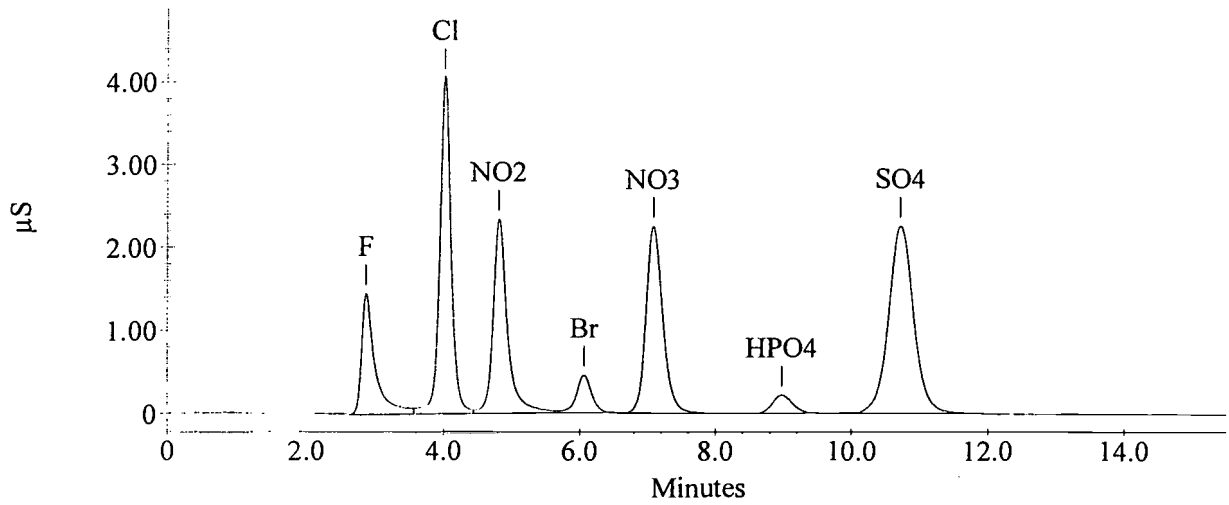
Sample Name : CCV L
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_002.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/25/04 10:58:23 PM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1	F	2.86	0.55	200647	14496
2	Cl	4.01	1.39	463124	40414
3	NO2	4.81	0.50	342951	23325
4	Br	6.06	0.52	69421	4512
5	NO3	7.08	0.53	389168	22448
6	HPO4	8.97	0.37	44808	2191
7	SO4	10.71	2.58	578646	22511

CCV L



Sample Analysis Report

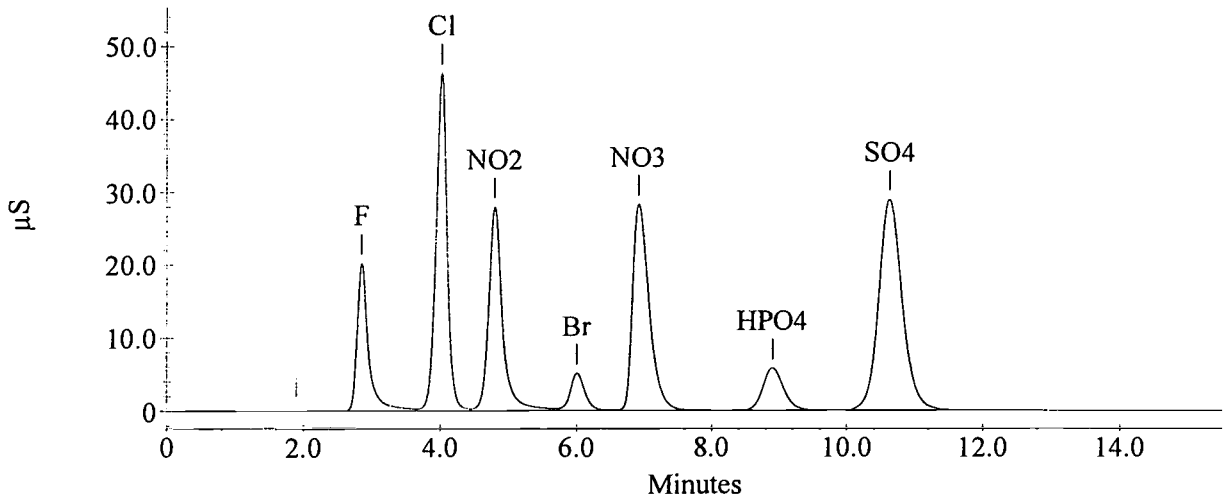
Sample Name : CCV H
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_003.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/25/04 11:16:43 PM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1		1.90	0.00	81559	5347
2	F	2.85	4.82	2329169	201092
3	Cl	4.02	11.60	5090377	461075
4	NO2	4.80	4.85	3835451	278093
5	Br	6.00	4.75	763414	50742
6	NO3	6.91	4.62	4759193	281893
7	HPO4	8.90	4.01	1234190	57749
8	SO4	10.63	22.61	6927068	288308

CCV H



Sample Analysis Report

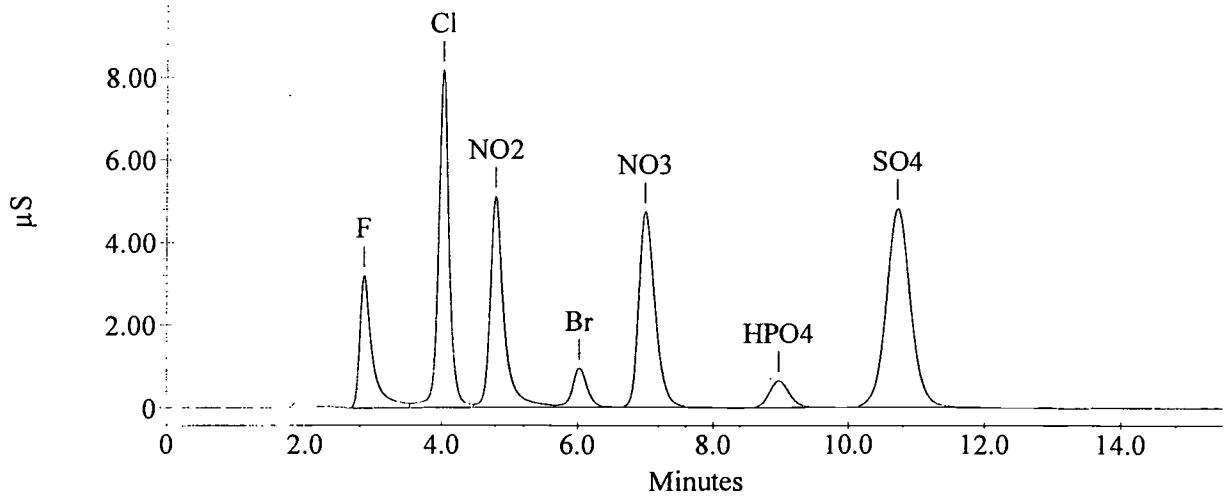
Sample Name : LFB01 SPI
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_004.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/25/04 11:34:56 PM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1		1.91	0.00	18031	1594
2	F	2.86	0.97	407734	31947
3	Cl	4.02	2.33	885977	81664
4	NO2	4.80	0.97	714141	50920
5	Br	6.02	0.95	139776	9355
6	NO3	7.00	0.90	794047	47157
7	HPO4	8.97	0.65	134954	6449
8	SO4	10.72	4.52	1191593	48028

LFB01 SPI



Sample Analysis Report

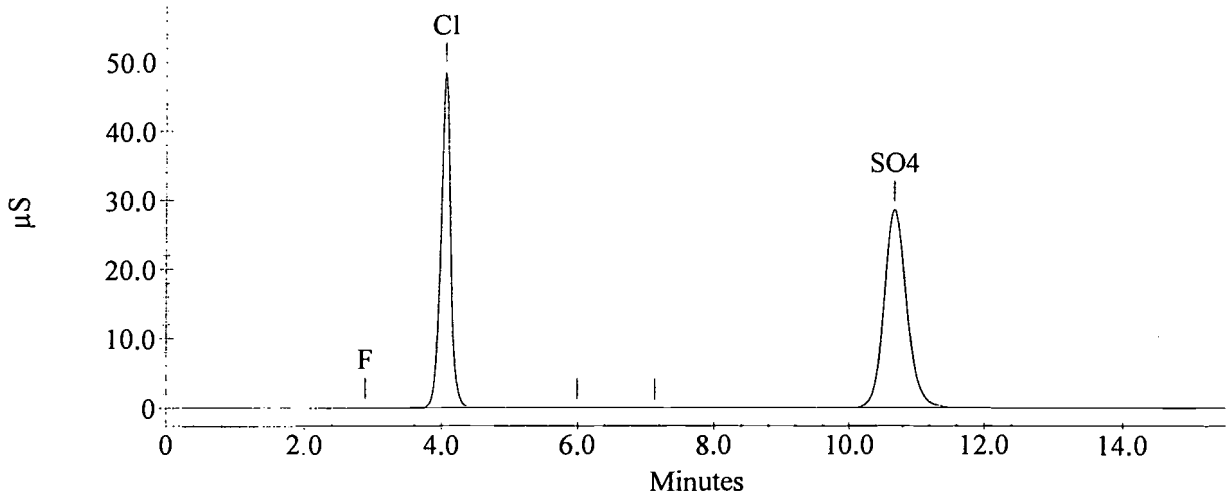
Sample Name : A675186 1:5
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_005.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/25/04 11:53:08 PM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1	F	2.88	0.87	10721	881
2	Cl	4.06	55.32	4846899	484833
3		5.99	0.00	431	57
4		7.13	0.00	1495	118
5	SO4	10.67	109.48	6700347	285056

A675186 1:5



Sample Analysis Report

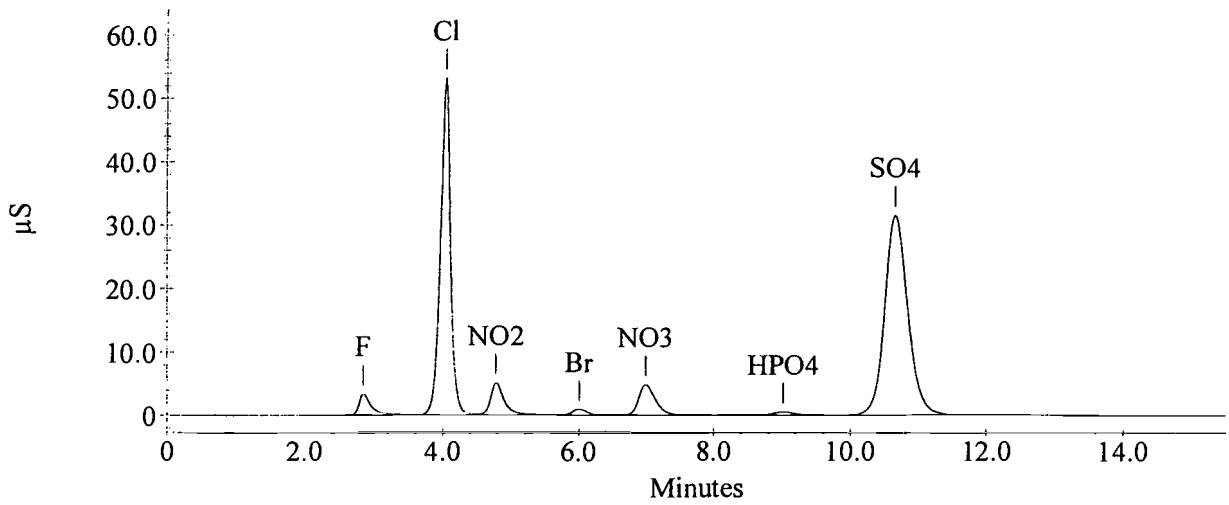
Sample Name : SPI01 A675186 1:5
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_006.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/26/04 12:11:57 AM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1	F	2.85	5.01	423284	33312
2	Cl	4.04	61.92	5445326	531120
3	NO2	4.78	4.85	718014	51003
4	Br	6.00	5.06	150463	9645
5	NO3	6.99	4.62	814516	48033
6	HPO4	9.02	2.79	106617	4882
7	SO4	10.65	121.34	7451746	315498

SPI01 A675186 1:5



Sample Analysis Report

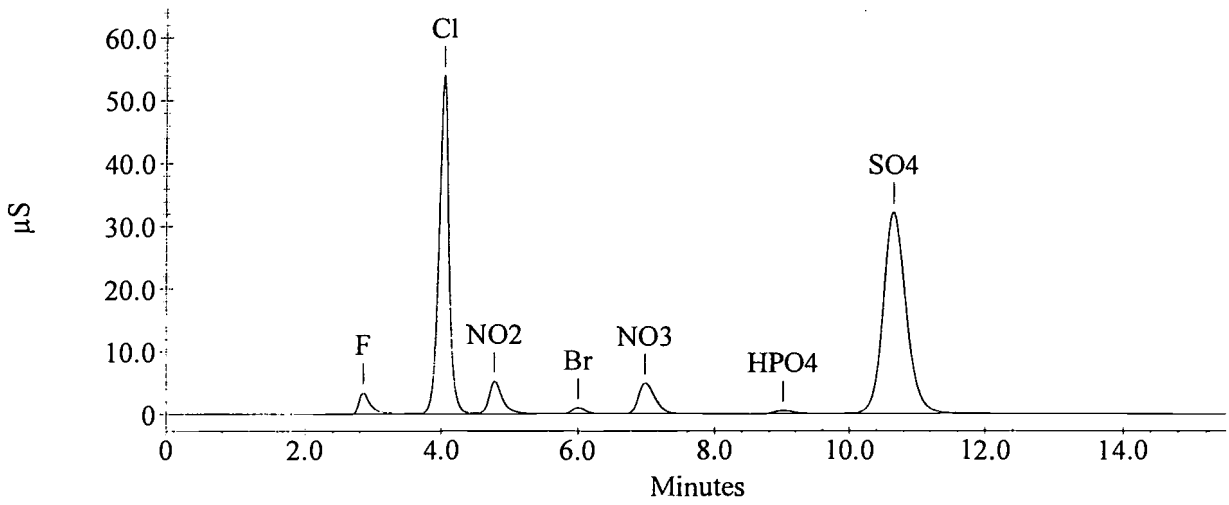
Sample Name : DPS01 A675186 1:5
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_007.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/26/04 12:30:09 AM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1	F	2.85	5.04	427083	33866
2	Cl	4.04	62.37	5485791	537987
3	NO2	4.78	4.86	718989	51742
4	Br	6.00	4.80	142033	9637
5	NO3	6.98	4.61	812466	48741
6	HPO4	9.01	2.84	109743	4998
7	SO4	10.65	122.66	7535741	321053

DPS01 A675186 1:5



Sample Analysis Report

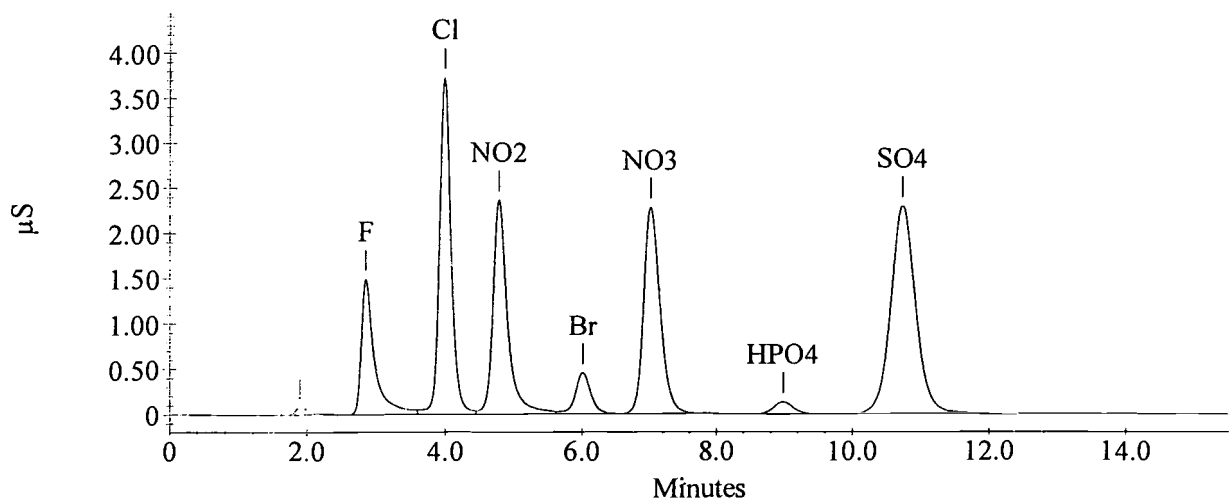
Sample Name : CCV L
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_008.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/26/04 12:48:17 AM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1		1.90	0.00	10459	836
2	F	2.85	0.55	200578	14910
3	Cl	3.99	1.30	422248	37266
4	NO2	4.78	0.51	344408	23640
5	Br	6.01	0.53	72216	4550
6	NO3	7.02	0.53	389553	22793
7	HPO4	8.98	0.32	27822	1347
8	SO4	10.73	2.58	576034	22879

CCV L



Sample Analysis Report

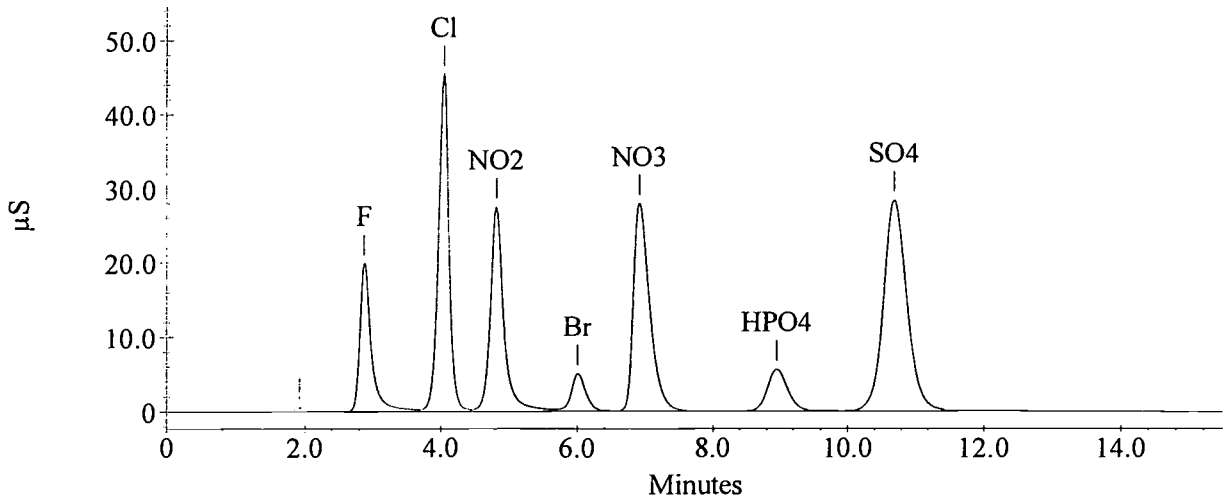
Sample Name : CCV H
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_009.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/26/04 1:06:47 AM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1		1.92	0.00	83362	5336
2	F	2.87	4.78	2306233	198160
3	Cl	4.04	11.42	5009570	452831
4	NO2	4.82	4.78	3785176	274594
5	Br	6.00	4.69	754400	50076
6	NO3	6.91	4.56	4693748	279762
7	HPO4	8.95	3.86	1183335	55778
8	SO4	10.69	22.35	6843365	283740

CCV H



Sample Analysis Report

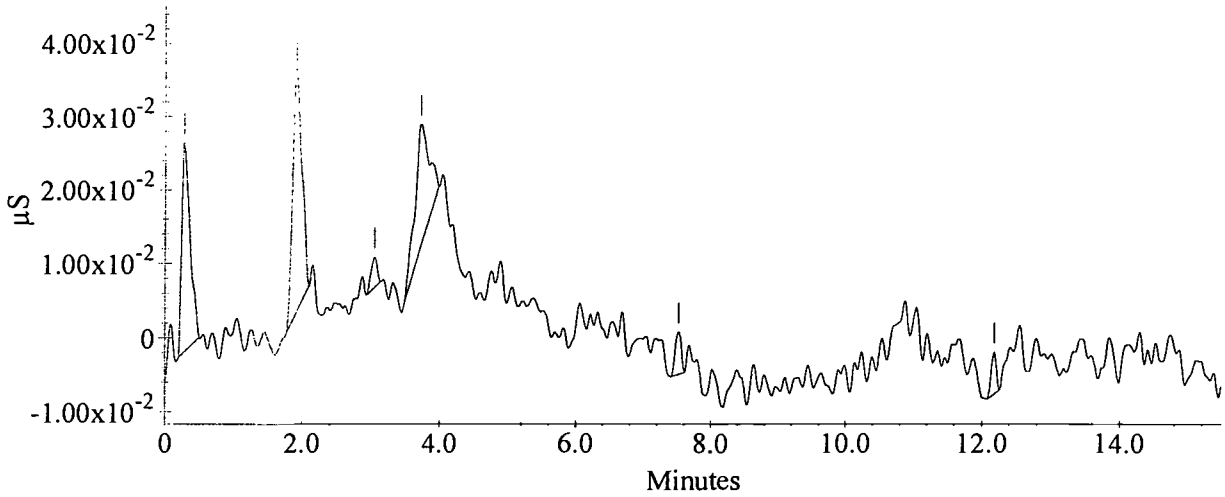
Sample Name : BLA01
Data File Name : C:\PEAKNET51\DATA\09250401\DATA_010.DXD

Method File Name : c:\peaknet51\method\as14_an1.met
Date Time Collected : 9/26/04 1:25:04 AM
System Operator : JMM 1663

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (mg/l)	Peak Area	Peak Height
1		0.28	0.00	2370	284
2		1.91	0.00	3091	330
3		3.05	0.00	250	41
4		3.73	0.00	2260	166
5		7.53	0.00	359	57
6		12.18	0.00	300	57

BLA01



Environmental Health Laboratories
The Nation's Drinking Water Laboratory

110 S. Hill Street
South Bend, IN 46617
574.233.4777
800.332.4345
Fax: 574.233.8207
www.ehl.cc

LABORATORY REPORT

Client: Heritage Laboratories, Inc.
Attn: Greg Busch
7901 West Morris Street
Indianapolis, IN 46231

Report: 1106515-21(19)

Priority: Standard Written

Status: Final

Sampling Point: A675186

Samples Submitted: One drinking water sample

Copies to: None

----------Collected----------
Date: 09/16/04 Time: 12:30 By: Client

----------Received----------
Date: 09/21/04 Time: 09:55

REPORT SUMMARY

Di(2-ethylhexyl)phthalate was detected in the sample submitted for analysis at a concentration of 1.4 ug/L, which is less than the current MCL of 6 ug/L. Method 525.2 section 13.2.4 states that phthalates can "appear in variable quantities in laboratory and field reagent blanks, and generally cannot be accurately measured at levels below about 2 ug/L." Di(2-ethylhexyl)phthalate was not detected in the associated laboratory method blank. None of the other analytes included in the detailed parameter list were detected in the sample submitted for analysis.

Note: In the Method 525.2 analysis, one of three SS recoveries in the sample submitted for analysis was high biased (131%) outside the acceptance limits of 70-130% recovery.

Note: The sample submitted for analysis was received improperly preserved as demonstrated by the pH (7). The sample was preserved by EHL personnel prior to analysis. Incorrect sample should not have been preserved 525E

Note: Sample containers were provided by the client.

Detailed quantitative results are presented on the following page.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call us at 574-233-4777.

Note: This report may not be reproduced, except in full, without written approval from Environmental Health Laboratories (EHL). EHL is accredited by the National Environmental Laboratory Accreditation Program (NELAP). This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

Reviewed By: [signature] Date: 10/14/04

Finalized By: [signature] Date: 10-15-04

Client: Heritage Laboratories, Inc. Report: 1106515-21(19)

Sampling Point: A675186

PARAMETER	SDWA Method	MRL * (ug/L)	Results (ug/L)	MCL (ug/L)	Extraction Date	Analysis Date	Lab Number
Alachlor (Lasso)	525.2	0.1	< 0.1	2	09/27/04	09/29/04	1106519
Aldicarb				postponed			
Aldicarb Sulfone				postponed			
Aldicarb Sulfoxide				postponed			
Aldrin				---			
Aroclor 1016				£			
Aroclor 1221				£			
Aroclor 1232				£			
Aroclor 1242				£			
Aroclor 1248				£			
Aroclor 1254				£			
Aroclor 1260				£			
Atrazine	525.2	0.1	< 0.1	3	09/27/04	09/29/04	1106519
Benzo(a)pyrene	525.2	0.02	< 0.02	0.2	09/27/04	09/29/04	1106519
Butachlor				---			
Carbaryl				---			
Carbofuran				40			
Chlordane				2			
2,4-D				70			
Dalapon				200			
1,2-Dibromo-3-chloropropane				0.2			
Dicamba				---			
Dieldrin				---			
Di(2-ethylhexyl)adipate	525.2	0.6	< 0.6	400	09/27/04	09/29/04	1106519
Di(2-ethylhexyl)phthalate	525.2	0.6	**1.4**	6	09/27/04	09/29/04	1106519
Dinoseb				7			
Diquat				20			
Endothall				100			
Endrin				2			
Ethylene dibromide (EDB)				0.05			
Glyphosate (Round-up)				700			
Heptachlor				0.4			
Heptachlor epoxide				0.2			
Hexachlorobenzene				1			
Hexachlorocyclopentadiene				50			
3-Hydroxycarbofuran				---			
Lindane (gamma-BHC)				0.2			
Methoxychlor				40			
Methomyl				---			
Metolachlor (Dual)				---			
Metribuzin (Sencor)				---			
Oxamyl (Vydate)				200			
Pentachlorophenol				1			
Picloram (Tordon)				500			
Propachlor				---			
2,4,5-TP (Silvex)				50			
Simazine	525.2	0.07	< 0.07	4	09/27/04	09/29/04	1106519
2,3,7,8-TCDD (Dioxin)				0.00003			
Toxaphene				3			

* EHL has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

£ Any positive Aroclor result would require analysis for total PCB as decachlorobiphenyl by method 508A (MCL = 0.5 ug/L).

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	17-SEP-04		A675186
	Completed	**PO Number**	
	19-OCT-04	03-506887-326C******	
	Printed	**Sampled**	
	20-OCT-04	16-SEP-04 12:30	

Report To	Bill To
MITT L. DENNEY INDIANA DEPT. OF ENVIRONMENTAL MANAGEMENT 2525 NORTH SHADELAND AVENUE BUILDING 30 INDIANAPOLIS, IN 46219	DEBBIE HILTON (SHADELAND) INDIANA DEPT. OF ENVIRONMENTAL MGMT 100 N. SENATE AVENUE PO BOX 6015 INDIANAPOLIS, IN 46206-6015

Sample Description

CLIENT ID: DK28004
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER CODE: 7195

FAA OR ICP ACID DIGESTION EPA 200.0

Analyst: J. KRAMER — Analysis Date: 22-SEP-04 22:0 — Instrument: PREP — Test: P129.2.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ANTIMONY ICP EPA 200.7 REV. 4.4 — NELAC:Y

Analyst: J. LEAK — Analysis Date: 24-SEP-04 15:2 — Instrument: ICP — Test: M402.3.0
Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.0050	mg/L

ARSENIC TRACE ICP EPA 200.7 REV. 4.4 — NELAC:Y

Analyst: J. LEAK — Analysis Date: 24-SEP-04 15:2 — Instrument: TRACE ICP — Test: M403.0.0
Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.0070	0.0050	mg/L

BERYLLIUM TRACE ICP EPA 200.7 REV. 4.4 — NELAC:Y

Analyst: J. LEAK — Analysis Date: 24-SEP-04 15:2 — Instrument: TRACE ICP — Test: M405.0.0
Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0010	mg/L

CADMIUM ICP EPA 200.7 REV. 4.4 — NELAC:Y

Analyst: J. LEAK — Analysis Date: 24-SEP-04 15:2 — Instrument: ICP — Test: M408.3.0
Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A675186 DK28004

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0010	mg/L

CHROMIUM ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M410.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.0020	mg/L

COPPER ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M412.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.010	mg/L

LEAD TRACE ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: TRACE ICP Test: M416.0.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0050	mg/L

NICKEL ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M422.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.0050	mg/L

BARIUM ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M404.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
BARIUM	0.26	0.0020	mg/L

CALCIUM ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M409.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
CALCIUM	110	0.10	mg/L

IRON ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M415.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
IRON	2.3	0.020	mg/L

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A675186 DK28004

MAGNESIUM ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M418.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	31.	0.10	mg/L

POTASSIUM ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M426.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
POTASSIUM	1.4	0.10	mg/L

SODIUM ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. LEAK Analysis Date: 24-SEP-04 15:2 Instrument: ICP Test: M431.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
SODIUM	14.	0.10	mg/L

MERCURY CVAA ACID DIGESTION EPA 245.1 REV. 3.0

Analyst: S. O'NEAL Analysis Date: 20-SEP-04 10:0 Instrument: PREP Test: P131.2.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA EPA 245.1 REV. 3.0 NELAC:Y

Analyst: S. O'NEAL Analysis Date: 21-SEP-04 12:0 Instrument: CVAA Test: M420.2.0

Prep: MERCURY CVAA ACID DIGESTION EPA 245.1 REV. 3.0 P131.2.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

ALKALINITY TOTAL EPA 310.1 NELAC:Y

Analyst: E. SOTKIEWICZ Analysis Date: 24-SEP-04 09:0 Test: G605.2.0

Parameter	Result	Det. Limit	Units
ALKALINITY	220	1.0	mg/L

NITROGEN, NITRATE-NITRITE EPA 353.2 REV. 2.0 NELAC:Y

Analyst: M. ADKINS Analysis Date: 23-SEP-04 22:3 Instrument: AUTO-ANALYZEF Test: G113.3.0

Parameter	Result	Det. Limit	Units
NITROGEN, NITRATE-NITRITE	BDL	0.01	mg/L

CHLORIDE BY ION CHROMATOGRAPHY EPA 300.0 REV. 2.1 NELAC:Y

Analyst: J. MONTGOMERY Analysis Date: 25-SEP-04 23:5 Instrument: IC Test: G300.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	56	1.3	mg/L

HERITAGE ENVIRONMENTAL SERVICES, LLC

Sample ID: A675186 DK28004

1:5 Dilution.

SULFATE BY ION CHROMATOGRAPHY EPA 300.0 REV. 2.1 NELAC:Y

Analyst: J. MONTGOMERY Analysis Date: 25-SEP-04 23:5 Instrument: IC Test: G300.7.0

Parameter	Result	Det. Limit	Units
SULFATE	110	1.3	mg/L

1:5 Dilution.

SVOA DRINKING WATER BY LSE AND CAPILLARY COLUMN GC/MS EPA 525.2 REV. 2.0 NELAC:Y

Vendor: ENVIRONMENTAL HEALTH LABORATORIES (EHL) Analysis Date: 27-SEP-04 Instrument: GC/MS SVOA Test: O512.3.0

Parameter	Result	Det. Limit	Units
ALACHLOR	BDL	0.1	ug/L
SIMAZINE (PRINCEP)	BDL	0.07	ug/L
ATRAZINE	BDL	0.1	ug/L
DI(2-ETHYLHEXYL)ADIPATE	BDL	0.6	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	1.4	0.6	ug/L
BENZO(A)PYRENE	BDL	0.02	ug/L
SURROGATE RECOVERY			

2-NITRO-M-XYLENE	BDL		% Rec
TRIPHENYL ESTER PHOSPHORIC ACID	BDL		% Rec
PERYLENE-D12	BDL		% Rec

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature 3.2 C.
Sample chain of custody number IDEM.

Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.

As indicated, some testing was performed at the following locations:
ENVIRONMENTAL HEALTH LABORATORIES (EHL)
110 SOUTH HILL STREET, SOUTH BEND, IN 46617

GABusch, QAO

Approved by: GREGORY BUSCH 20-OCT-04

QUALITY ASSURANCE REPORT

Service Location
Heritage Environmental Services, LLC
Commercial Laboratory Operations
7901 West Morris Street
Indianapolis, IN 46231
(317) 243-8304

Report Date : 20-Oct-04

Submitter
MITT L. DENNEY
INDIANA DEPT. OF ENVIRONMENTAL MANAGEMENT
2525 NORTH SHADELAND AVENUE
INDIANAPOLIS, IN 46219

Client ID	Lab Sample ID	Date/Time Sampled	Date Received	Date Complete
DK28004.....	A675186	16-Sep-04 12:30	17-Sep-04	19-Oct-04

HERITAGE ENVIRONMENTAL SERVICES, LLC

NITROGEN, NITRATE-NITRITE EPA 353.2 REV. 2.0 — G113.3

R476438 Analyst: M ADKINS Run Date: 23-Sep-04 Instrument: AUTO-ANALYZER
Analytical Reviewer: B SHRAKE Review Date: 24-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CDL01	Q1654403		NITROGEN, NITRATE-NITRITE	0.05			0.0491	mg/L	98.2	
ICV01	Q1654404		NITROGEN, NITRATE-NITRITE	0.4			0.39	mg/L	97.5	
CCV	Q1654407		NITROGEN, NITRATE-NITRITE	0.2			0.195	mg/L	97.5	
BLA01	Q1654408		NITROGEN, NITRATE-NITRITE			BDL	0.01	mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI01	Q1654409	A675186	NITROGEN, NITRATE-NITRITE	0	0.1		0.0888	mg/L	88.8	
DPS01	Q1654410	A675186	NITROGEN, NITRATE-NITRITE	0	0.1		0.0888	mg/L	88.8	0
CCV	Q1654411		NITROGEN, NITRATE-NITRITE	0.2			0.2	mg/L	100	
BLA01	Q1654412		NITROGEN, NITRATE-NITRITE			BDL	0.01	mg/L		

Qualifiers
BDL Below Detection Limit

CHLORIDE BY ION CHROMATOGRAPHY EPA 300.0 REV. 2.1 — G300.2

R476532 Analyst: J MONTGOMERY Run Date: 25-Sep-04 Instrument: IC
Analytical Reviewer: E WERNZ Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1654939		CHLORIDE			BDL	0.25	mg/L		
CCVL	Q1654940		CHLORIDE	1.25			1.32	mg/L	105.6	
CCVH	Q1654941		CHLORIDE	12.5			11.7	mg/L	93.6	
LFB01	Q1654942		CHLORIDE	2.5			2.62	mg/L	104.8	
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI01	Q1654943	A675186	CHLORIDE	50.5	12.5		62.6	mg/L	96.8	
DPS01	Q1654944	A675186	CHLORIDE	50.5	12.5		63	mg/L	100	3.3
CCVL	Q1654945		CHLORIDE	1.25			1.21	mg/L	96.8	
CCVH	Q1654946		CHLORIDE	12.5			11.6	mg/L	92.8	
BLA01	Q1654947		CHLORIDE			BDL	0.25	mg/L		

Q1654943 1:5 Dilution.

Q1654944 1:5 Dilution.

Qualifiers
BDL Below Detection Limit

SULFATE BY ION CHROMATOGRAPHY EPA 300.0 REV. 2.1 — G300.7

R476532 Analyst: J MONTGOMERY Run Date: 25-Sep-04 Instrument: IC
Analytical Reviewer: E WERNZ Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1654939		SULFATE			BDL	0.25	mg/L		
CCVL	Q1654940		SULFATE	2.5			2.35	mg/L	94	
CCVH	Q1654941		SULFATE	25			22.9	mg/L	91.6	
LFB01	Q1654942		SULFATE	5			4.83	mg/L	96.6	
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI01	Q1654943	A675186	SULFATE	99.8	25		123	mg/L	92.8	
DPS01	Q1654944	A675186	SULFATE	99.8	25		124	mg/L	96.8	4.2
CCVL	Q1654945		SULFATE	2.5			2.34	mg/L	93.6	
CCVH	Q1654946		SULFATE	25			22.6	mg/L	90.4	
BLA01	Q1654947		SULFATE			BDL	0.25	mg/L		

SULFATE BY ION CHROMATOGRAPHY EPA 300.0 REV. 2.1 — G300.7 (cont.)

R476532 Analyst: J MONTGOMERY Run Date: 25-Sep-04 Instrument: IC (cont.)
Analytical Reviewer: E WERNZ Review Date: 27-Sep-04

Q1654943	1:5 Dilution.
Q1654944	1:5 Dilution.

Qualifiers
BDL Below Detection Limit

ALKALINITY TOTAL EPA 310.1 — G605.2

R476575 Analyst: E SOTKIEWICZ Run Date: 24-Sep-04
Analytical Reviewer: B SHRAKE Review Date: 24-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
DUP02	Q1655281	A675062	ALKALINITY	170			170	mg/L		0
CCV	Q1655285		ALKALINITY	125			108	mg/L	86.4	
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
DUP01	Q1655286	A675186	ALKALINITY	220			220	mg/L		0
CCV	Q1655287		ALKALINITY	125			116	mg/L	92.8	

ANTIMONY ICP EPA 200.7 REV. 4.4 — M402.3
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326 Analyst: J KRAMER Run Date: 22-Sep-04 Instrument: PREP
Prep Reviewer: J LEAK Review Date: 22-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	ANTIMONY	1			1.02	mg/L	102	
CDL01	Q1654683	PERKIN ELM	ANTIMONY	0.120			0.119	mg/L	99.2	
ICS-A	Q1654686	PERKIN ELM	ANTIMONY	0.6			0.622	mg/L	103.7	
CCV	Q1654689	INORGANIC	ANTIMONY	1			0.979	mg/L	97.9	
BLA01	Q1654690	NA	ANTIMONY			<	0.00200	mg/L		
BLA02	Q1653454	NA	ANTIMONY			<	0.00200	mg/L		
LCS	Q1653455	SPEX	ANTIMONY	0.5			0.533	mg/L	106.6	
SER01	Q1654691	A675186	ANTIMONY	0		BDL		mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	ANTIMONY	0	0.500		0.503	mg/L	100.6	
DPS02	Q1653457	A675186	ANTIMONY	0	0.500		0.533	mg/L	106.6	5.8
CCV	Q1654692	INORGANIC	ANTIMONY	1			0.974	mg/L	97.4	
BLA01	Q1654693	NA	ANTIMONY			<	0.00200	mg/L		
SER01	Q1654694	A674402	ANTIMONY	13.5			13.3	mg/kg		1.5
CDL01	Q1654699	PERKIN ELM	ANTIMONY	0.120			0.122	mg/L	101.7	
ICS-A	Q1654701	PERKIN ELM	ANTIMONY	0.6			0.626	mg/L	104.3	

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

ANTIMONY ICP EPA 200.7 REV. 4.4 **M402.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP	(cont.)
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04		

Qualifiers
< Less Than Lower Detection Limit
BDL Below Detection Limit

ARSENIC TRACE ICP EPA 200.7 REV. 4.4 **M403.0**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP	
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04		

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: TRACE ICP	
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04		

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	ARSENIC	1			1.02	mg/L	102	
CDL01	Q1654684	INORGANIC	ARSENIC	10			10.4	mg/L	104	
ICS-A	Q1654686	PERKIN ELM	ARSENIC	0.1			0.110	mg/L	110	
CCV	Q1654689	INORGANIC	ARSENIC	5			4.99	mg/L	99.8	
BLA01	Q1654690	NA	ARSENIC			<	0.00200	mg/L		
BLA02	Q1653454	NA	ARSENIC				0.00247	mg/L		
LCS	Q1653455	SPEX	ARSENIC	2			2.14	mg/L	107	
SER01	Q1654691	A675186	ARSENIC	0.00702		BDL		mg/L		200
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	ARSENIC	0.00702	2		2.03	mg/L	101.1	
DPS02	Q1653457	A675186	ARSENIC	0.00702	2		2.13	mg/L	106.1	4.8
CCV	Q1654692	INORGANIC	ARSENIC	5			4.94	mg/L	98.8	
BLA01	Q1654693	NA	ARSENIC			<	0.00200	mg/L		
SER01	Q1654694	A674402	ARSENIC	5.38			5.91	mg/kg		9.4
CDL01	Q1654699	PERKIN ELM	ARSENIC	0.02			0.0219	mg/L	109.5	
ICS-A	Q1654701	PERKIN ELM	ARSENIC	0.1			0.112	mg/L	112	

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers
< Less Than Lower Detection Limit
BDL Below Detection Limit

BARIUM ICP EPA 200.7 REV. 4.4 **M404.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP	
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04		

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							

HERITAGE ENVIRONMENTAL SERVICES, LLC

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654679	PERKIN ELM	BARIUM	1			1.04	mg/L	104	
CDL01	Q1654684	INORGANIC	BARIUM	10			10.0	mg/L	100	
ICS-A	Q1654686	PERKIN ELM	BARIUM	0.500			0.509	mg/L	101.8	
CCV	Q1654689	INORGANIC	BARIUM	5.00			4.80	mg/L	96	
BLA01	Q1654690	NA	BARIUM			<	0.000800	mg/L		
BLA02	Q1653454	NA	BARIUM			<	0.000800	mg/L		
LCS	Q1653455	SPEX	BARIUM	2			2.10	mg/L	105	
SER01	Q1654691	A675186	BARIUM	0.258			0.254	mg/L		1.6
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	BARIUM	0.258	2.00		2.25	mg/L	99.6	
DPS02	Q1653457	A675186	BARIUM	0.258	2.00		2.31	mg/L	102.6	3
CCV	Q1654692	INORGANIC	BARIUM	5.00			4.88	mg/L	97.6	
BLA01	Q1654693	NA	BARIUM			<	0.000800	mg/L		
SER01	Q1654694	A674402	BARIUM	21.4			21.7	mg/kg		1.4
ICS-A	Q1654701	PERKIN ELM	BARIUM	0.500			0.497	mg/L	99.4	

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers

< Less Than Lower Detection Limit

BERYLLIUM TRACE ICP EPA 200.7 REV. 4.4 **M405.0**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326 Analyst: J KRAMER Run Date: 22-Sep-04 Instrument: PREP
Prep Reviewer: J LEAK Review Date: 22-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: TRACE ICP
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	BERYLLIUM	1			1.05	mg/L	105	
CDL01	Q1654684	INORGANIC	BERYLLIUM	10			10.5	mg/L	105	
ICS-A	Q1654686	PERKIN ELM	BERYLLIUM	0.500			0.550	mg/L	110	
CCV	Q1654689	INORGANIC	BERYLLIUM	5.00			5.32	mg/L	106.4	
BLA01	Q1654690	NA	BERYLLIUM			<	0.000400	mg/L		
BLA02	Q1653454	NA	BERYLLIUM			<	0.000400	mg/L		
LCS	Q1653455	SPEX	BERYLLIUM	0.05			0.0560	mg/L	112	
SER01	Q1654691	A675186	BERYLLIUM	0		BDL		mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	BERYLLIUM	0	0.050		0.0521	mg/L	104.2	
DPS02	Q1653457	A675186	BERYLLIUM	0	0.050		0.0551	mg/L	110.2	5.6
CCV	Q1654692	INORGANIC	BERYLLIUM	5.00			5.22	mg/L	104.4	
BLA01	Q1654693	NA	BERYLLIUM			<	0.000400	mg/L		

BERYLLIUM TRACE ICP EPA 200.7 REV. 4.4 **M405.0** (cont.)
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: TRACE ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SER01	Q1654694	A674402	BERYLLIUM	0.267		BDL		mg/kg		200
CDL01	Q1654699	PERKIN ELM	BERYLLIUM	0.010			0.0105	mg/L	105	
ICS-A	Q1654701	PERKIN ELM	BERYLLIUM	0.500			0.539	mg/L	107.8	

Q1654691 There was possible matrix interference for K and Na

Q1654691 as indicated by the serial dilution results.

Qualifiers
< Less Than Lower Detection Limit
BDL Below Detection Limit

CADMIUM ICP EPA 200.7 REV. 4.4 **M408.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326 Analyst: J KRAMER Run Date: 22-Sep-04 Instrument: PREP
Prep Reviewer: J LEAK Review Date: 22-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	CADMIUM	1			1.03	mg/L	103	
CDL01	Q1654684	INORGANIC	CADMIUM	10			10.2	mg/L	102	
ICS-A	Q1654686	PERKIN ELM	CADMIUM	1.00			1.06	mg/L	106	
CCV	Q1654689	INORGANIC	CADMIUM	5.00			4.96	mg/L	99.2	
BLA01	Q1654690	NA	CADMIUM			<	0.000400	mg/L		
BLA02	Q1653454	NA	CADMIUM			<	0.000400	mg/L		
LCS	Q1653455	SPEX	CADMIUM	0.05			0.0434	mg/L	86.8	
SER01	Q1654691	A675186	CADMIUM	0		BDL		mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	CADMIUM	0	0.050		0.0406	mg/L	81.2	
DPS02	Q1653457	A675186	CADMIUM	0	0.050		0.0424	mg/L	84.8	4.3
CCV	Q1654692	INORGANIC	CADMIUM	5.00			4.95	mg/L	99	
BLA01	Q1654693	NA	CADMIUM			<	0.000400	mg/L		
SER01	Q1654694	A674402	CADMIUM	0.206		BDL		mg/kg		200
CDL01	Q1654699	PERKIN ELM	CADMIUM	0.010			0.0101	mg/L	101	
ICS-A	Q1654701	PERKIN ELM	CADMIUM	1.00			1.06	mg/L	106	

Q1654691 There was possible matrix interference for K and Na

Q1654691 as indicated by the serial dilution results.

Qualifiers
< Less Than Lower Detection Limit
BDL Below Detection Limit

HERITAGE ENVIRONMENTAL SERVICES, LLC

CALCIUM ICP EPA 200.7 REV. 4.4 **M409.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654680	SPEX	CALCIUM	20			19.7	mg/L	98.5	
CDL01	Q1654682	INORGANIC	CALCIUM	0.1			0.0963	mg/L	96.3	
ICS-A	Q1654686	PERKIN ELM	CALCIUM	500			475.	mg/L	95	
CCV	Q1654689	INORGANIC	CALCIUM	50.0			47.2	mg/L	94.4	
BLA01	Q1654690	NA	CALCIUM			<	0.0400	mg/L		
BLA02	Q1653454	NA	CALCIUM			<	0.0400	mg/L		
LCS	Q1653455	SPEX	CALCIUM	100			102.	mg/L	102	
SER01	Q1654691	A675186	CALCIUM	109.			108.	mg/L		0.9
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	CALCIUM	109.	100		207.	mg/L	98	
DPS02	Q1653457	A675186	CALCIUM	109.	100		214.	mg/L	105	6.9
CCV	Q1654692	INORGANIC	CALCIUM	50.0			47.7	mg/L	95.4	
BLA01	Q1654693	NA	CALCIUM			<	0.0400	mg/L		
SER01	Q1654694	A674402	CALCIUM	12200			12300	mg/kg		0.8
ICS-A	Q1654700	PERKIN-ELM	CALCIUM	500			474.	mg/L	94.8	

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers

< Less Than Lower Detection Limit

CHROMIUM ICP EPA 200.7 REV. 4.4 **M410.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	CHROMIUM	1			1.01	mg/L	101	
CDL01	Q1654684	INORGANIC	CHROMIUM	10			10.1	mg/L	101	
ICS-A	Q1654686	PERKIN ELM	CHROMIUM	0.500			0.474	mg/L	94.8	
CCV	Q1654689	INORGANIC	CHROMIUM	5.00			4.79	mg/L	95.8	
BLA01	Q1654690	NA	CHROMIUM			<	0.000800	mg/L		

CHROMIUM ICP EPA 200.7 REV. 4.4 **M410.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	CHROMIUM			<	0.000800	mg/L		
LCS	Q1653455	SPEX	CHROMIUM	0.2			0.202	mg/L	101	
SER01	Q1654691	A675186	CHROMIUM	0		BDL		mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	CHROMIUM	0	0.200		0.190	mg/L	95	
DPS02	Q1653457	A675186	CHROMIUM	0	0.200		0.198	mg/L	99	4.1
CCV	Q1654692	INORGANIC	CHROMIUM	5.00			4.78	mg/L	95.6	
BLA01	Q1654693	NA	CHROMIUM			<	0.000800	mg/L		
SER01	Q1654694	A674402	CHROMIUM	12.9			13.3	mg/kg		3.1
CDL01	Q1654699	PERKIN ELM	CHROMIUM	0.020			0.0200	mg/L	100	
ICS-A	Q1654701	PERKIN ELM	CHROMIUM	0.500			0.467	mg/L	93.4	

Q1654691 There was possible matrix interference for K and Na

Q1654691 as indicated by the serial dilution results.

Qualifiers

< Less Than Lower Detection Limit
BDL Below Detection Limit

COPPER ICP EPA 200.7 REV. 4.4 **M412.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326 Analyst: J KRAMER Run Date: 22-Sep-04 Instrument: PREP
Prep Reviewer: J LEAK Review Date: 22-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	COPPER	1			1.05	mg/L	105	
CDL01	Q1654684	INORGANIC	COPPER	10			10.3	mg/L	103	
ICS-A	Q1654686	PERKIN ELM	COPPER	0.500			0.547	mg/L	109.4	
CCV	Q1654689	INORGANIC	COPPER	5.00			5.10	mg/L	102	
BLA01	Q1654690	NA	COPPER			<	0.00400	mg/L		
BLA02	Q1653454	NA	COPPER			<	0.00400	mg/L		
LCS	Q1653455	SPEX	COPPER	0.25			0.274	mg/L	109.6	
SER01	Q1654691	A675186	COPPER	0		BDL		mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	COPPER	0	0.250		0.255	mg/L	102	
DPS02	Q1653457	A675186	COPPER	0	0.250		0.272	mg/L	108.8	6.5
CCV	Q1654692	INORGANIC	COPPER	5.00			4.99	mg/L	99.8	
BLA01	Q1654693	NA	COPPER			<	0.00400	mg/L		
SER01	Q1654694	A674402	COPPER	1960			1920	mg/kg		2.1
CDL01	Q1654699	PERKIN ELM	COPPER	0.050			0.0518	mg/L	103.6	
ICS-A	Q1654701	PERKIN ELM	COPPER	0.500			0.552	mg/L	110.4	

Q1654691 There was possible matrix interference for K and Na

COPPER ICP EPA 200.7 REV. 4.4 **M412.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP	(cont.)
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04		

Q1654691 as indicated by the serial dilution results.

Qualifiers

< Less Than Lower Detection Limit
BDL Below Detection Limit

IRON ICP EPA 200.7 REV. 4.4 **M415.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP	
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04		

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP	
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04		

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	IRON	1			1.05	mg/L	105	
CDL01	Q1654684	INORGANIC	IRON	10			10.3	mg/L	103	
ICS-A	Q1654686	PERKIN ELM	IRON	200			191.	mg/L	95.5	
CCV	Q1654689	INORGANIC	IRON	5.00			4.94	mg/L	98.8	
BLA01	Q1654690	NA	IRON			<	0.00800	mg/L		
BLA02	Q1653454	NA	IRON			<	0.00800	mg/L		
LCS	Q1653455	SPEX	IRON	1			1.04	mg/L	104	
SER01	Q1654691	A675186	IRON	2.28			2.30	mg/L		0.9
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	IRON	2.28	1.00		3.17	mg/L	89	
DPS02	Q1653457	A675186	IRON	2.28	1.00		3.32	mg/L	104	15.5
CCV	Q1654692	INORGANIC	IRON	5.00			4.93	mg/L	98.6	
BLA01	Q1654693	NA	IRON			<	0.00800	mg/L		
SER01	Q1654694	A674402	IRON	8220			8390	mg/kg		2
ICS-A	Q1654700	PERKIN-ELM	IRON	200			190.	mg/L	95	

Q1654691 There was possible matrix interference for K and Na

Q1654691 as indicated by the serial dilution results.

Qualifiers

< Less Than Lower Detection Limit

LEAD TRACE ICP EPA 200.7 REV. 4.4 **M416.0**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP	
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04		

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							

HERITAGE ENVIRONMENTAL SERVICES, LLC

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: TRACE ICP
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	LEAD	1			1.04	mg/L	104	
CDL01	Q1654684	INORGANIC	LEAD	10			10.1	mg/L	101	
ICS-A	Q1654686	PERKIN ELM	LEAD	1.00			0.951	mg/L	95.1	
CCV	Q1654689	INORGANIC	LEAD	5.00			4.80	mg/L	96	
BLA01	Q1654690	NA	LEAD			<	0.00200	mg/L		
BLA02	Q1653454	NA	LEAD			<	0.00200	mg/L		
LCS	Q1653455	SPEX	LEAD	0.5			0.523	mg/L	104.6	
SER01	Q1654691	A675186	LEAD	0		BDL		mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	LEAD	0	0.500		0.495	mg/L	99	
DPS02	Q1653457	A675186	LEAD	0	0.500		0.513	mg/L	102.6	3.6
CCV	Q1654692	INORGANIC	LEAD	5.00			4.86	mg/L	97.2	
BLA01	Q1654693	NA	LEAD			<	0.00200	mg/L		
SER01	Q1654694	A674402	LEAD	755.			751.	mg/kg		0.5
CDL01	Q1654699	PERKIN ELM	LEAD	0.100			0.0986	mg/L	98.6	
ICS-A	Q1654701	PERKIN ELM	LEAD	1.00			0.926	mg/L	92.6	

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers

< Less Than Lower Detection Limit
BDL Below Detection Limit

MAGNESIUM ICP EPA 200.7 REV. 4.4 **M418.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326 Analyst: J KRAMER Run Date: 22-Sep-04 Instrument: PREP
Prep Reviewer: J LEAK Review Date: 22-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654680	SPEX	MAGNESIUM	20			19.2	mg/L	96	
CDL01	Q1654682	INORGANIC	MAGNESIUM	0.1			0.0932	mg/L	93.2	
ICS-A	Q1654686	PERKIN ELM	MAGNESIUM	500			507.	mg/L	101.4	
CCV	Q1654689	INORGANIC	MAGNESIUM	50.0			48.2	mg/L	96.4	
BLA01	Q1654690	NA	MAGNESIUM			<	0.0400	mg/L		
BLA02	Q1653454	NA	MAGNESIUM			<	0.0400	mg/L		
LCS	Q1653455	SPEX	MAGNESIUM	100			105.	mg/L	105	
SER01	Q1654691	A675186	MAGNESIUM	31.0			30.1	mg/L		2.9
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	MAGNESIUM	31.0	100		128.	mg/L	97	
DPS02	Q1653457	A675186	MAGNESIUM	31.0	100		133.	mg/L	102	5
CCV	Q1654692	INORGANIC	MAGNESIUM	50.0			47.6	mg/L	95.2	

MAGNESIUM ICP EPA 200.7 REV. 4.4 **M418.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476495 Analyst: J LEAK Run Date: 24-Sep-04 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 27-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1654693	NA	MAGNESIUM			<	0.0400	mg/L		
SER01	Q1654694	A674402	MAGNESIUM	3220			3160	mg/kg		1.9
ICS-A	Q1654700	PERKIN-ELM	MAGNESIUM	500			502.	mg/L	100.4	

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers
< Less Than Lower Detection Limit

MERCURY CVAA EPA 245.1 REV. 3.0 **M420.2**
Prep : MERCURY CVAA ACID DIGESTION EPA 245.1 REV. 3.0

R476215 Analyst: S O'NEAL Run Date: 20-Sep-04 Instrument: PREP
Prep Reviewer: D DRABENSTOTT Review Date: 21-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
LCS	Q1652736		Analytical Run: R476301							
BLA02	Q1652737		Analytical Run: R476301							
SAMPLE	A675186	Rep: 0	Analytical Run: R476301							
SPI02	Q1652738	A675186	Analytical Run: R476301							
DPS02	Q1652739	A675186	Analytical Run: R476301							

R476301 Analyst: S O'NEAL Run Date: 21-Sep-04 Instrument: CVAA
Analytical Reviewer: D DRABENSTOTT Review Date: 21-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1653247		MERCURY	0.002			0.00208	mg/L	104	
CDL01	Q1653266		MERCURY	0.0002			0.000222	mg/L	111	
CCV	Q1653271		MERCURY	0.003			0.00294	mg/L	98	
BLA01	Q1653272		MERCURY			<	0.0002	mg/L		
LCS	Q1652736		MERCURY	0.002			0.00191	mg/L	95.5	
BLA02	Q1652737		MERCURY			<	0.0002	mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1652738	A675186	MERCURY	0	0.001		0.000997	mg/L	99.7	
DPS02	Q1652739	A675186	MERCURY	0	0.001		0.000987	mg/L	98.7	1
CDL01	Q1653273		MERCURY	0.0002			0.000206	mg/L	103	
CCV	Q1653274		MERCURY	0.003			0.00291	mg/L	97	
BLA01	Q1653275		MERCURY			<	0.0002	mg/L		

Qualifiers
< Less Than Lower Detection Limit

NICKEL ICP EPA 200.7 REV. 4.4 **M422.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326 Analyst: J KRAMER Run Date: 22-Sep-04 Instrument: PREP
Prep Reviewer: J LEAK Review Date: 22-Sep-04

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654678	PERKIN ELM	NICKEL	1			1.03	mg/L	103	
CDL01	Q1654684	INORGANIC	NICKEL	10			10.3	mg/L	103	
ICS-A	Q1654686	PERKIN ELM	NICKEL	1.00			0.937	mg/L	93.7	
CCV	Q1654689	INORGANIC	NICKEL	5.00			4.82	mg/L	96.4	
BLA01	Q1654690	NA	NICKEL			<	0.00200	mg/L		
BLA02	Q1653454	NA	NICKEL			<	0.00200	mg/L		
LCS	Q1653455	SPEX	NICKEL	0.5			0.522	mg/L	104.4	
SER01	Q1654691	A675186	NICKEL	0		BDL		mg/L		
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	NICKEL	0	0.500		0.476	mg/L	95.2	
DPS02	Q1653457	A675186	NICKEL	0	0.500		0.497	mg/L	99.4	4.3
CCV	Q1654692	INORGANIC	NICKEL	5.00			4.81	mg/L	96.2	
BLA01	Q1654693	NA	NICKEL			<	0.00200	mg/L		
SER01	Q1654694	A674402	NICKEL	11.7			11.8	mg/kg		0.9
CDL01	Q1654699	PERKIN ELM	NICKEL	0.080			0.0818	mg/L	102.3	
ICS-A	Q1654701	PERKIN ELM	NICKEL	1.00			0.921	mg/L	92.1	

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers

< Less Than Lower Detection Limit

BDL Below Detection Limit

POTASSIUM ICP EPA 200.7 REV. 4.4 **M426.3**

Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654679	PERKIN ELM	POTASSIUM	10			10.2	mg/L	102	
ICV01	Q1654680	SPEX	POTASSIUM	20			20.5	mg/L	102.5	
CDL01	Q1654682	INORGANIC	POTASSIUM	0.1			0.102	mg/L	102	
CCV	Q1654689	INORGANIC	POTASSIUM	50			51.9	mg/L	103.8	
BLA01	Q1654690	NA	POTASSIUM			<	0.0400	mg/L		
BLA02	Q1653454	NA	POTASSIUM			<	0.0400	mg/L		
LCS	Q1653455	SPEX	POTASSIUM	100			106.	mg/L	106	
SER01	Q1654691	A675186	POTASSIUM	1.42			1.22	mg/L		15.2
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	POTASSIUM	1.42	100		105.	mg/L	103.6	
DPS02	Q1653457	A675186	POTASSIUM	1.42	100		110.	mg/L	108.6	4.7
CCV	Q1654692	INORGANIC	POTASSIUM	50			50.3	mg/L	100.6	
BLA01	Q1654693	NA	POTASSIUM			<	0.0400	mg/L		
SER01	Q1654706	A675241	POTASSIUM	4.04			2.64	mg/L		41.9

POTASSIUM ICP EPA 200.7 REV. 4.4 **M426.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP	(cont.)
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04		

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers
< Less Than Lower Detection Limit

SODIUM ICP EPA 200.7 REV. 4.4 **M431.3**
Prep : FAA OR ICP ACID DIGESTION EPA 200.0

R476326	Analyst: J KRAMER	Run Date: 22-Sep-04	Instrument: PREP
Prep	Reviewer: J LEAK	Review Date: 22-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1653454	NA	Analytical Run: R476495							
LCS	Q1653455	SPEX	Analytical Run: R476495							
SPI02	Q1653456	A675186	Analytical Run: R476495							
DPS02	Q1653457	A675186	Analytical Run: R476495							
SAMPLE	A675186	Rep: 0	Analytical Run: R476495							

R476495	Analyst: J LEAK	Run Date: 24-Sep-04	Instrument: ICP
Analytical	Reviewer: S ENDERSEN	Review Date: 27-Sep-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1654680	SPEX	SODIUM	20			19.6	mg/L	98	
CDL01	Q1654682	INORGANIC	SODIUM	0.1			0.0832	mg/L	83.2	
CCV	Q1654689	INORGANIC	SODIUM	50			47.3	mg/L	94.6	
BLA01	Q1654690	NA	SODIUM			<	0.0400	mg/L		
BLA02	Q1653454	NA	SODIUM			<	0.0400	mg/L		
LCS	Q1653455	SPEX	SODIUM	100			105.	mg/L	105	
SER01	Q1654691	A675186	SODIUM	13.8			12.3	mg/L		11.5
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							
SPI02	Q1653456	A675186	SODIUM	13.8	100		119.	mg/L	105.2	
DPS02	Q1653457	A675186	SODIUM	13.8	100		126.	mg/L	112.2	6.4
CCV	Q1654692	INORGANIC	SODIUM	50			46.0	mg/L	92	
BLA01	Q1654693	NA	SODIUM			<	0.0400	mg/L		
SER01	Q1654706	A675241	SODIUM	729			598	mg/L		19.7

Q1654691	There was possible matrix interference for K and Na
Q1654691	as indicated by the serial dilution results.

Qualifiers
< Less Than Lower Detection Limit

SVOA DRINKING WATER BY LSE AND CAPILLARY COLUMN GC/MS EPA 525.2 REV. 2.0 **O512.3**

R477502	Analyst: ENVIRONMENTAL HEA	Run Date: 23-Sep-04 (EHL)	Instrument: GC/MS SVOA
Analytical	Reviewer: G BUSCH	Review Date: 18-Oct-04	

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A675186		See Certificate of Analysis, Rep: 0							

Approved : GABusch, QAO