

1/20/98



TOTAL ANALYTICAL SERVICES FOR A SAFE ENVIRONMENT

nytest environmental inc.

box 1518 □ 60 seaview blvd., port washington, ny 11050 □ (516) 625-5500 □ fax (516) 625-1274



TOTAL ANALYTICAL SERVICES FOR A SAFE ENVIRONMENT

nyttest environmental inc.

January 20, 1998

C.A. Rich Consultants
404 Glen Cove Avenue
Sea Cliff, NY 11579

Attn : Eric Weinstock
Ref : Tishcon
P.O. #: Pending

Nyttest Environmental, Inc., is pleased to submit our Project Number 9723158 for Login Number 33225, on your samples received 10/29/97. Addwork to NEI Login 32757.

We certify that this report is a true report of results obtained from our tests of this material.

Test sample(s) associated with this project will be retained for a period of thirty (30) days, unless otherwise instructed.

My staff is available to answer any questions concerning our report and we look forward to serving your future analytical needs.

Respectfully submitted,

Lori Beyer
Laboratory Director
Nyttest Environmental, Inc.

cc: Janet Josher
219 N. Motze Drive
Milltown, NJ 08850

Encl: Analytical Package 1 bound 1 unbound
Shipped Via:

NYS Lab ID#10195
NJ Cert.#73469

Report on sample(s) furnished by client applies to sample(s). Report on sample(s) obtained by us applies to lot sampled. Information contained herein is not to be used for reproduction except by special permission. In the event that there are portions or parts of sample(s) remaining after Nyttest has completed the required tests, Nyttest shall have the option of returning such sample(s) to the client at the client's expense.

box 1518 60 seaview blvd., port washington, ny 11050 (516) 625-5500
fax (516) 625-1274

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NYTEST ENVIRONMENTAL Inc.

SDG:

LABORATORY
NUMBER

SAMPLE
IDENTIFICATION

TYPE OF
SAMPLE

3322501

SS-SD6

Soil

000001

SDG NARRATIVES

000002

Login No: 33225

HOLDING TIMES

Samples associated with this LOGIN were NOT prepared and analyzed within the specified holding time due to request by client as a result of an initial laboratory oversight at sample CALIBRATIONS LOGIN

All ICV and CCV standards meet QC criteria.

to R 11/21/98

The percent recovery of all components in the CRDL standard recovered within NEI control limits of $\pm 50\%$. Note that CLP SOW ILM04.0 does not specify control limits for the CRDL standard.

BLANKS

All preparation blanks and calibration blanks associated with these analyses meet QC criteria.

MATRIX SPIKES

Sample SS-SD6 was utilized as the matrix spike sample for these analyses.

All matrix spike recoveries met the 75-125% recovery criteria.

DUPLICATES

Sample SS-SD6 was utilized as the duplicate sample for these analyses.

All Relative Percent Differences (RPDs) met QC criteria.

Note that all RPDs of 200% are due to one analyte being reported above the Instrument Detection Limit (IDL) and one result below the IDL.

LABORATORY CONTROL SAMPLE (LCS)

The percent recovery of all components in the LCS met QC criteria.

SERIAL DILUTION

A serial dilution was performed on sample SS-SD6. All percent differences (%D) were within the $\pm 10\%$ acceptance limits.

000003

SAMPLES

All samples were analyzed in accordance with the requirements of the methods described in NYSDEC ASP.

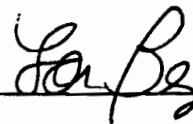
No further analytical problems were encountered.

SPECIAL PROJECT NOTES

None.

000004

I certify 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 has been authorized by the Laboratory Director or her designee, as verified by the following signature.

A handwritten signature in cursive script, appearing to read "Lori Beyer", is written over a horizontal line.

Lori Beyer,
Laboratory Director

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ASP FORMS

000006

SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		VOA GC/MS Method	BNA GC/MS Method	VOA GC Method	PEST PCB Method	METALS	OTHER
55-SD6	322501					X	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

SAMPLE PREPARATION ANALYSIS AND SUMMARY

INORGANIC ANALYSES

SAMPLE ID	MATRIX	METALS REQUESTED	DATE RECEIVED	DATE DIGESTED	DATE ANALYZED
3322501	Soil	Ag, As, Ba, Cd, Cr, Pb, Se, Hg	10/29/97	01/20/98	01/20/98

TRAFFIC REPORTS

000009

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample

NAME: P. HAMID TITLE: SC

Client: CALIFORNIA Date Broken: 10/29/97 Military Time Seal Broken: 12:05

Login #: 32757 Analytical Parameter/Fraction: ASPROA 95-1, RCRAMEI

SAMPLE NO.	ALIQUOT/EXTRACT NO.	SAMPLE NO.	ALIQUOT/EXTRACT NO.
SS-SD2	32757-01	NYAD1	32757-11
SS-SD6	02	NTSD20	12
SS-BF1	03	FIELD	13
SS-CL1	04	TRIP	14
SS-SD4	05		
SS-SD4M	06		
SS-SD4MD	07		
SS-DB5	08		
NYAD1	09		
NYAD3	10		

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUST
10/20/97	2000	PRINTED NAME P. HAMID SIGNATURE P. Hamid	PRINTED NAME P. Hamid SIGNATURE P. Hamid	11/19
10/22/97	2200	PRINTED NAME P. Hamid SIGNATURE P. Hamid	PRINTED NAME P. Hamid SIGNATURE P. Hamid	Storage
10/23/97	1930	PRINTED NAME P. Hamid SIGNATURE P. Hamid	PRINTED NAME P. Hamid SIGNATURE P. Hamid	11/19
10/23/97	2100	PRINTED NAME P. Hamid SIGNATURE P. Hamid	PRINTED NAME P. Hamid SIGNATURE P. Hamid	Storage
11/7/97	1500	PRINTED NAME P. Hamid SIGNATURE P. Hamid	PRINTED NAME N. S. [unclear] SIGNATURE N. S. [unclear]	ASPROA 95-1
11/8/97	1530	PRINTED NAME P. Hamid SIGNATURE P. Hamid	PRINTED NAME P. Hamid SIGNATURE P. Hamid	000011

QUALIFIERS

000012

Method Qualifiers for Inorganics

* **C (concentration) Qualifier** - Enter "B" if the reported value was obtained from a reading that was less than the Contract Required detection limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL). If the analyte was analyzed for, but not detected, a "U" must be entered.

* **Q Qualifier** - Specified entries and their meanings as follows:

E - The reported value is estimated because of the presence of interference.

M - Duplicate precision not met (CV > 20%)

N - Spike sample recovery not within control limits.

S - The reported value was determined by Method of Standard Addition (MSA).

W - Post-digestion spike for Furnace AA analysis is out of control limits (85 - 115), while sample absorbance is less than 50% of spike absorbance.

***** - Duplicate analysis not within control limits.

+ - Correlation Coefficient for the MSA is less than 0.995.

Entering "S", "W", or "+" is mutually exclusive.

* **M (Method) Qualifier - enter:**

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "CV" for Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- "NR" if the analyte is not required to be analyzed.

INORGANIC DATA

000014

INORGANIC DATA - METALS

000015

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Name: NYTEST_ENV_INC Contract: 9723158
Lab Code: NYTEST Case No.: 33225 SAS No.: SDG No.:33225
SOW No.: ILM04.0

Table with 2 columns: EPA Sample No. and Lab Sample ID. Rows include SS-SD6, SS-SD6D, SS-SD6S and their corresponding Lab Sample IDs: 322501, 322501D, 322501S.

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 floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [Handwritten Signature] Name: Lori Beyer
Date: 1/21/98 Title: Laboratory Director

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SS-SD6

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_

Matrix (soil/water): SOIL_ Lab Sample ID: 322501

Level (low/med): LOW_ Date Received: 10/29/97

% Solids: _93.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.1	-	-	P
7440-39-3	Barium	5.0	B	-	P
7440-43-9	Cadmium	0.03	U	-	P
7440-47-3	Chromium	3.5	-	-	P
7439-92-1	Lead	1.5	-	-	P
7439-97-6	Mercury	0.02	U	-	CV
7782-49-2	Selenium	0.51	B	-	P
7440-22-4	Silver	0.08	U	-	P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____
 Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_
 Initial Calibration Source: SPEX _____
 Continuing Calibration Source: SPEX _____

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	1000.0	1051.22	105.1	500.0	534.17	106.8	533.27	106.7	P
Barium	1000.0	1017.35	101.7	3000.0	3160.26	105.3	3156.37	105.2	P
Cadmium	1000.0	1036.76	103.7	3000.0	3185.12	106.2	3172.83	105.8	P
Chromium	1000.0	1017.49	101.7	3000.0	3206.31	106.9	3192.10	106.4	P
Lead	1000.0	1034.00	103.4	500.0	530.50	106.1	528.92	105.8	P
Mercury	7.5	7.30	97.3	5.0	4.85	97.0	4.83	96.6	CV
Selenium	1000.0	1030.79	103.1	500.0	539.67	107.9	542.80	108.6	P
Silver	1000.0	1019.67	102.0	500.0	530.73	106.1	528.38	105.7	P

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

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: NYTEST_ENV_INC _____

Contract: 9723158 _____

Lab Code: NYTEST

Case No.: 33225_

SAS No.: _____

SDG No.: 33225_

Initial Calibration Source: SPEX _____

Continuing Calibration Source: SPEX _____

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				M	
	True	Found	%R(1)	True	Found	%R(1)	Found		%R(1)
Arsenic				500.0	524.17	104.8			P
Barium				3000.0	3135.56	104.5			P
Cadmium				3000.0	3135.61	104.5			P
Chromium				3000.0	3155.43	105.2			P
Lead				500.0	525.11	105.0			P
Mercury									NR
Selenium				500.0	539.15	107.8			P
Silver				500.0	520.32	104.1			P

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

CRDL STANDARD FOR AA AND ICP

Lab Name: NYTEST_ENV_INC _____

Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_

SAS No.: _____ SDG No.: 33225_

AA CRDL Standard Source: SPEX _____

ICP CRDL Standard Source: SPEX _____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Arsenic				20.0	22.04	110.2	21.96	109.8
Barium								
Cadmium				10.0	11.59	115.9	11.30	113.0
Chromium				20.0	21.86	109.3	21.83	109.2
Lead				6.0	6.30	105.0	7.85	130.8
Mercury	0.2	0.19	95.0					
Selenium				10.0	10.63	106.3	13.75	137.5
Silver				20.0	16.87	84.4	16.27	81.4

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BLANKS

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_

Preparation Blank Matrix (soil/water): SOIL_

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

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Arsenic	2.4	U	2.4	U	2.4	U	2.4	U	-0.305	B	P
Barium	4.6	U	4.6	U	4.6	U	4.6	U	0.460	U	P
Cadmium	0.3	U	0.3	U	0.3	U	0.3	U	0.030	U	P
Chromium	1.0	U	1.0	U	1.0	U	1.0	U	0.100	U	P
Lead	1.9	U	1.9	U	1.9	U	1.9	U	0.190	U	P
Mercury	0.04	U	0.04	U	0.04	U	0.04	U	0.020	U	CV
Selenium	4.5	B	2.5	B	2.3	U	2.3	U	0.294	B	P
Silver	0.8	U	0.8	U	0.8	U	0.8	U	0.080	U	P

11/16/96

Lab Name: NYTEST_ENV_INC

Contract: 9723158

Lab Code: NYTEST

Case No.: 33225

SAS No:

SDG No.: 33225

P ID Number: TRACE

ICS Source: EPA

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Arsenic	0	100	14	117.9	117.9	11	115.9	115.9
Barium	0	500	4	565.9	113.2	4	564.7	112.9
Cadmium	0	1000	5	1022.2	102.2	5	1017.7	101.8
Chromium	0	500	-6	516.2	103.2	-7	514.5	102.9
Lead	0	50	2	51.6	103.2	3	51.6	103.2
Mercury								
Selenium	0	50	1	55.4	110.8	2	56.7	113.4
Silver	0	200	0	218.1	109.0	1	216.9	108.4

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

SS-SD6S

Lab Name: NYTEST_ENV_INC _____

Contract: 9723158 _____

Lab Code: NYTEST

Case No.: 33225_

SAS No.: _____

SDG No.: 33225_

Matrix (soil/water): SOIL_

Level (low/med): LOW_

% Solids for Sample: 93.2

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

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Arsenic	75-125	175.0414	1.1356	212.47	81.8	-	P
Barium	75-125	233.4392	4.9696	212.47	107.5	-	P
Cadmium	75-125	5.2395	0.0319	5.31	98.7	-	P
Chromium	75-125	25.7883	3.5227	21.25	104.8	-	P
Lead	75-125	56.8478	1.4851	53.12	104.2	-	P
Mercury	75-125	0.5290	0.0215	0.54	98.0	-	CV
Selenium	75-125	208.6156	0.5131	212.47	97.9	-	P
Silver	75-125	5.6060	0.0850	5.31	105.6	-	P

Comments:

000023

U.S. EPA - CLP

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DUPLICATES

EPA SAMPLE NO.

SS-SD6D

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____
 Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_
 Matrix (soil/water): SOIL_ Level (low/med): LOW_
 % Solids for Sample: 93.2 % Solids for Duplicate: 93.2

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)		C	RPD	Q	M
Arsenic	1.1	1.1356	U	0.9331	B		19.6		P
Barium		4.9696	B	4.9262	B		0.9		P
Cadmium		0.0319	U	0.0316	U				P
Chromium	1.1	3.5227	-	3.5650	-		1.2		P
Lead	0.3	1.4851	-	1.4285	-		3.9		P
Mercury		0.0215	U	0.0215	U				CV
Selenium		0.5131	B	0.3019	B		51.8		P
Silver		0.0850	U	0.0842	U				P

000024

U.S. EPA - CLP

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LABORATORY CONTROL SAMPLE

Lab Name: NYTEST_ENV_INC _____

Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_

SAS No.: _____

SDG No.: 33225_

Solid LCS Source: ERA235 _____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic				151.0	152.6		112.0 - 192.0	101.1
Barium				178.0	180.2		137.0 - 219.0	101.2
Cadmium				136.0	135.0		105.0 - 167.0	99.3
Chromium				57.6	56.7		44.4 - 70.8	98.4
Lead				84.9	80.4		62.3 - 108.0	94.7
Mercury				1.2	1.1		0.8 - 1.5	91.7
Selenium				132.0	127.3		97.9 - 166.0	96.4
Silver				57.0	52.4		42.5 - 71.6	91.9

000025

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ICP SERIAL DILUTION

EPA SAMPLE NO.

SS-SD6L

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_

Matrix (soil/water): SOIL_ Level (low/med): LOW_

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	10.69		31.75	B	197.0		P
Barium	46.78	B	72.50	B	55.0		P
Cadmium	0.30	U	1.50	U			P
Chromium	33.16		37.40	B	12.8		P
Lead	13.98		16.60		18.7		P
Mercury							NR
Selenium	4.83	B	43.65		803.7		P
Silver	0.80	U	4.00	U			P

000027

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Instrument Detection Limits (Quarterly)

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____
 Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_
 ICP ID Number: _____ Date: 10/16/97
 Flame AA ID Number : 100 _____
 Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Arsenic			10		NR
Barium			200		NR
Cadmium			5		NR
Chromium			10		NR
Lead			3		NR
Mercury	253.70		0.2	0.04 0.0	CV
Selenium			5		NR
Silver			10		NR

Comments:

000028

Lab Name: NYTEST_ENV_INC _____

Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_

SAS No.: _____

SDG No.: 33225_

ICP ID Number: TRACE _____

Date: 10/21/97

Name AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Arsenic	189.04		10	2.4	P
Barium	493.41		200	4.6	P
Cadmium	226.50		5	0.3	P
Chromium	267.72		10	1.0	P
Lead	220.35		3	1.9	P
Mercury			0.2		NR
Selenium	196.02		5	2.3	P
Silver	328.07		10	0.8	P

Comments:

000029

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11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_

ICP ID Number: TRACE _____ Date: 08/07/97

Analyte	Wave-length (nm)	Interelement Correction Factors for :				
		Al	Ca	Fe	Mg	AS_
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0010000	0.0179270	0.0002860
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury						
Selenium	196.02	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

000030

Lab Name: NYTEST_ENV_INC Contract: 9723158

Lab Code: NYTEST Case No.: 33225 SAS No.: SDG No.: 33225

CP ID Number: TRACE Date: 08/07/97

Analyte	Wave-length (nm)	Interelement Correction Factors for :				
		BE_	CD_	CR_	CU_	PB_
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0002370	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury						
Selenium	196.02	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

000031

U.S. EPA - CLP

11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158____
 Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_
 ICP ID Number: TRACE _____ Date: 08/07/97

Analyte	Wave-length (nm)	Interelement Correction Factors for :				
		SE_	TL_	ZN_	_____	_____
Arsenic	189.04	0.0000000	0.0000000	0.0000000		
Barium	493.41	0.0000000	0.0000000	0.0000000		
Cadmium	226.50	0.0000000	0.0000000	0.0000000		
Chromium	267.72	-0.0001100	0.0001950	0.0000000		
Lead	220.35	0.0000000	0.0000000	0.0000000		
Mercury						
Selenium	196.02	0.0000000	0.0000000	0.0000000		
Silver	328.07	0.0000000	0.0000000	0.0000000		

Comments:

U.S. EPA - CLP

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: NYTEST_ENV_INC _____ Contract: 9723158 _____
 Lab Code: NYTEST Case No.: 33225_ SAS No.: _____ SDG No.: 33225_
 ICP ID Number: TRACE _____ Date: 10/21/97

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Arsenic	5.00	50000.0	P
Barium	5.00	50000.0	P
Cadmium	5.00	50000.0	P
Chromium	5.00	100000.0	P
Lead	5.00	100000.0	P
Mercury			NR
Selenium	5.00	50000.0	P
Silver	5.00	10000.0	P

Comments:

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U.S. EPA - CLP

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PREPARATION LOG

Lab Name: NYTEST_ENV_INC _____

Contract: 9723158 _____

Lab Code: NYTEST Case No.: _33225_

SAS No.: _____ SDG No.:33225_

ethod: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS _____	01/20/98 _____	0.20 _____	100 _____
PBS _____	01/20/98 _____	0.20 _____	100 _____
SS-SD6 _____	01/20/98 _____	0.20 _____	100 _____
SS-SD6D _____	01/20/98 _____	0.20 _____	100 _____
SS-SD6S _____	01/20/98 _____	0.20 _____	100 _____

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: NYTEST_ENV_INC _____

Contract: 9723158 _____

Lab Code: NYTEST Case No.: 33225_

SAS No.: _____ SDG No.: 33225_

Instrument ID Number: 100 _____

Method: CV

Start Date: 01/20/98

End Date: 01/20/98

EPA Sample No.	D/F	Time	% R	Analytes															
				A S	B A	C D	C R	P B	H G	S E	A G								
STD1REP1	1.00	1217		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
STD2REP1	1.00	1219		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
STD3REP1	1.00	1222		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
STD4REP1	1.00	1225		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
STD5REP1	1.00	1228		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
STD6REP1	1.00	1232		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
ICV	1.00	1244		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
ICB	1.00	1247		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
CRA	1.00	1250		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
CV	1.00	1252		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
CCB	1.00	1256		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
PBS	1.00	1258		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
LCSS	1.00	1300		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
SS-SD6	1.00	1303		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
SS-SD6D	1.00	1306		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
SS-SD6S	1.00	1308		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
ZZZZZZ	1.00	1311		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCV	1.00	1314		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
CCB	1.00	1317		-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

ANALYSIS RUN LOG

Lab Name: NYTEST_ENV_INC_____

Contract: 9723158_____

Lab Code: NYTEST Case No.: 33225__

SAS No.: _____ SDG No.: 33225_

Instrument ID Number: TRACE_____

Method: P_

Start Date: 01/20/98

End Date: 01/20/98

EPA Sample No.	D/F	Time	% R	Analytes																	
				A S	B A	C D	C R	P B	H G	S E	A G										
S0	1.00	1128		X	X	X	X	X			X	X									
S1	1.00	1133		X	X	X	X	X			X	X									
S2	1.00	1138		X	X	X	X	X			X	X									
S3	1.00	1143		X	X	X	X	X			X	X									
S4	1.00	1148		X	X	X	X	X			X	X									
ZZZZZZ	1.00	1153																			
ICV	1.00	1200		X	X	X	X	X			X	X									
ICB	1.00	1218		X	X	X	X	X			X	X									
CRI	1.00	1231		X		X	X	X			X	X									
ICSA	1.00	1238		X	X	X	X	X			X	X									
CSAB	1.00	1243		X	X	X	X	X			X	X									
ICV	1.00	1256		X	X	X	X	X			X	X									
CCB	1.00	1305		X	X	X	X	X			X	X									
PBS	1.00	1310		X	X	X	X	X			X	X									
LCSS	1.00	1321		X	X	X	X	X			X	X									
SS-SD6	1.00	1327		X	X	X	X	X			X	X									
SS-SD6D	1.00	1332		X	X	X	X	X			X	X									
SS-SD6S	1.00	1338		X	X	X	X	X			X	X									
ZZZZZZ	1.00	1344																			
SS-SD6L	5.00	1349		X	X	X	X	X			X	X									
ZZZZZZ	1.00	1355																			
CCV	1.00	1400		X	X	X	X	X			X	X									
CCB	1.00	1406		X	X	X	X	X			X	X									
CRI	1.00	1412		X		X	X	X			X	X									
ICSA	1.00	1418		X	X	X	X	X			X	X									
ICSAB	1.00	1423		X	X	X	X	X			X	X									
CCV	1.00	1434		X	X	X	X	X			X	X									
CCB	1.00	1439		X	X	X	X	X			X	X									

Method: CLP-97 Standard: SC

Elem	AL	SB	AS	BA	BE	CD	CA
Avg	.08852	.04053	.10932	.01898	-.05632	.00660	.13258
SDev	.00915	.01795	.08211	.00018	.00064	.00607	.00011
%RSD	10.336	44.277	74.697	.96044	1.0893	1.0893	.08437
#1	.08205	.05322	.16798	.01885	-.05877	.00665	.13250
#2	.09499	.02784	.05186	.01911	-.05787	.00655	.13266

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Avg	.01293	.00937	.12300	.01760	.02179	.31511	.02230
SDev	.00025	.00399	.00795	.00059	.06170	.23178	.00452
%RSD	1.9200	42.587	6.4658	3.3310	283.14	73.554	20.273
#1	.01275	.01220	.12862	.01719	.06542	.17900	.02550
#2	.01310	.00675	.11737	.01802	-.02184	.15122	.01911

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Avg	.01523	.00961	-.39117	.07566	-.00002	-.01361	-.00384
SDev	.00559	.00127	.04592	.04819	.00311	.02630	.00229
%RSD	42.242	13.202	11.739	63.697	16361.	193.27	59.717
#1	.01719	.01053	-.35370	.04158	-.00222	.00499	-.00222
#2	.00928	.00873	-.42364	.10973	.00218	-.03221	-.00546

Elem	W	NA	K
Avg	.87416	.02551	.56456
SDev	.05115	.06430	.17624
%RSD	5.8507	253.08	31.571
#1	.81032	-.01996	.43353
#2	.83799	.07097	.69659

000039

Method: CLP-97 Standard: S1

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	1.9221	8.6376	4.3535	11.284	5.9240	11.595	38.165
SDev	.0171	.1742	.0184	.154	.0923	.161	.557
%RSD	.86343	2.0169	.42374	1.3679	1.3887	1.3871	1.4585

#1	1.9100	8.5144	4.3355	11.174	5.8658	11.482	37.772
#2	1.9342	8.7608	4.3904	11.393	5.9822	11.709	38.559

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Avge	4.7569	8.1510	9.4369	3.8065	5.3574	3.0715	4.0409
SDev	.0693	.1220	.1315	.0650	.1038	.1550	.0874
%RSD	1.4562	1.4963	1.3844	1.7089	1.9382	5.0474	2.1638

#1	4.7073	8.0648	9.4040	3.7605	5.4308	2.9619	3.9791
#2	4.8059	8.2373	9.5899	3.8525	5.2840	3.1811	4.1028

Elem	MN	NI	SF196A	SF196B	AG	TL	V
Avge	7.8132	5.9767	3.3029	1.8018	.59773	.78079	4.3718
SDev	.1164	.0542	.0909	.1392	.01354	.05282	.0625
%RSD	1.4898	.90734	2.7515	7.7280	2.2660	6.7649	1.4305

#1	7.7309	5.9383	3.3571	1.7933	.58815	.74344	4.3275
#2	7.8956	6.0150	3.2366	1.9002	.60731	.81814	4.4160

Elem	ZN
Avge	14.718
SDev	.185
%RSD	1.2547

#1	14.597
#2	14.848

000040

Method: CLP-97

Standard: S2

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	3.7905	17.416	8.8218	22.841	12.088	23.389	77.149
SDev	.0628	.267	.2064	.353	.170	.339	1.199
%RSD	1.6554	1.5324	2.3400	1.5457	1.4049	1.4497	1.5539

#1	3.8349	17.605	8.9677	23.090	12.208	23.629	77.997
#2	3.7461	17.227	8.6758	22.591	11.968	23.149	76.301

Elem	CR	CO	CU	FE	PB220A	PB220B	MC
Avge	9.6619	16.558	19.048	7.7432	11.029	6.1925	8.1002
SDev	.1388	.252	.269	.1291	.065	.0366	.1272
%RSD	1.4336	1.5195	1.4102	1.6678	.58777	.59167	1.5700

#1	9.7800	16.736	19.237	7.8345	11.075	6.2184	8.1901
#2	9.5837	16.330	18.858	7.6519	10.984	6.1666	8.0102

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Avge	15.852	12.102	7.3825	3.5487	1.2062	1.5479	8.8899
SDev	.232	.195	.1467	.0497	.0174	.0016	.1341
%RSD	1.4623	1.5965	1.9875	1.3994	1.4407	.10238	1.5088

#1	16.016	12.239	7.4863	3.5838	1.2185	1.5491	8.9848
#2	15.688	11.955	7.2788	3.5136	1.1939	1.5468	8.7951

Elem	ZN
Avge	28.227
SDev	.456
%RSD	1.6147

#1	28.549
#2	27.905

000041

Method: CLP-97 Standard: S3

Elem	AL	SE	AS	BA	BE	CD	CA
Avg	7.2815	34.094	17.572	44.456	23.739	45.316	151.46
SDev	.0379	.304	.038	.279	.174	.267	.92
%RSD	.50875	.89021	.21464	.62828	.73277	.58861	.61397

#1	7.2553	33.679	17.599	44.258	23.616	45.127	149.75
#2	7.3077	34.508	17.546	44.653	23.862	45.505	151.05

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Avg	18.963	32.152	37.122	15.074	21.383	11.970	15.794
SDev	.147	.13	.266	.094	.065	.254	.115
%RSD	.77859	.6230	.71619	.62242	.30238	2.1251	.73033

#1	18.799	32.108	36.934	15.008	21.387	11.791	15.712
#2	19.007	32.195	37.310	15.141	21.380	12.150	15.875

Elem	MN	NI	SF196A	SE196B	AG	TL	V
Avg	30.902	23.576	14.345	6.9716	2.3649	3.0800	17.398
SDev	.213	.119	.098	.1964	.0157	.0964	.112
%RSD	.68807	.50400	.68087	2.8175	.66559	3.1289	.64327

#1	30.751	23.432	14.414	6.8527	2.5537	3.0119	17.319
#2	31.052	23.660	14.276	7.1105	2.576	3.1482	17.477

Elem	ZN
Avg	53.679
SDev	.339
%RSD	.63216

#1	53.439
#2	53.919

Method: CLP-97 Standard: S4

Elem	AL	SB	AS	PA	BE	CD	CA
Avge	14.290	67.647	34.623	67.452	46.824	88.721	296.16
SDev	.015	.165	.127	.144	.128	.160	.62
%RSD	.10641	.24375	.36537	.16507	.27300	.20318	.20959

#1	14.280	67.530	34.534	67.366	46.733	88.594	295.72
#2	14.301	67.765	34.713	67.570	46.914	88.849	296.60

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Avge	37.358	63.514	73.562	29.756	42.213	23.555	31.100
SDev	.080	.147	.276	.047	.262	.411	.050
%RSD	.21453	.23157	.37556	.15844	.47847	1.7431	.15971

#1	37.301	63.410	73.367	29.723	42.070	23.265	31.065
#2	37.414	63.618	73.757	29.789	42.355	23.845	31.135

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Avge	60.876	46.360	28.676	13.665	4.7233	6.0814	34.487
SDev	.153	.124	.176	.345	.0210	.0983	.081
%RSD	.25090	.26842	.62236	2.5230	.44387	1.6170	.23439

#1	60.768	46.272	28.544	13.422	4.7085	6.0118	34.429
#2	60.984	46.448	28.796	13.909	4.7381	6.1509	34.544

Elem	ZN	SA	K
Avge	104.61	11.153	1357.2
SDev	.21	.014	2.6
%RSD	.20175	.12297	.19301

#1	104.46	11.169	1359.1
#2	104.75	11.140	1355.4

000043

Method: DLP-97 Slope = Conc(SIR)/IR

Element	WaveLen	High std	Low std	Slope	Y-intercept	Date Standardized
AL	308.215	Multiple	Standards	.837666	-.074387	01/20/98 11:48:23
SB	206.838	Multiple	Standards	.147198	-.006067	01/20/98 11:48:23
AS	189.042	Multiple	Standards	.028702	-.003141	01/20/98 11:48:23
BA	295.409	Multiple	Standards	.067095	-.001376	01/20/98 11:48:23
BE	315.042	Multiple	Standards	.042000	.002428	01/20/98 11:48:23
CD	226.502	Multiple	Standards	.065696	-.000586	01/20/98 11:48:23
CA	317.933	Multiple	Standards	.330902	-.045421	01/20/98 11:48:23
CR	267.716	Multiple	Standards	.158191	-.002096	01/20/98 11:48:23
CO	228.616	Multiple	Standards	.092556	-.000952	01/20/98 11:48:23
CU	324.754	Multiple	Standards	.080458	-.009975	01/20/98 11:48:23
FE	271.444	Multiple	Standards	1.66965	-.029925	01/20/98 11:48:23
PB220A	210.351	Multiple	Standards	.023454	-.000517	01/20/98 11:48:23
PB220B	210.351	Multiple	Standards	.043572	-.013695	01/20/98 11:48:23
MG	273.07	Multiple	Standards	.472175	-.010829	01/20/98 11:48:23
MN	277.61	Multiple	Standards	.064417	-.000908	01/20/98 11:48:23
NI	214.604	Multiple	Standards	.126599	-.001319	01/20/98 11:48:23
SE196A	196.021	Multiple	Standards	.033780	.013204	01/20/98 11:48:23
SE196B	196.022	Multiple	Standards	.071283	-.005400	01/20/98 11:48:23
AG	328.068	Multiple	Standards	.209872	-.000005	01/20/98 11:48:23
TI	190.864	Multiple	Standards	.169904	.002286	01/20/98 11:48:23
V	292.402	Multiple	Standards	.171589	.000608	01/20/98 11:48:23
ZN	206.200	Multiple	Standards	.055930	-.049135	01/20/98 11:48:23
PB	220.353	Multiple	Standards	.000000	.000000	*01/20/98 11:48:23
SE	196.026	Multiple	Standards	.000000	.000000	*01/20/98 11:48:23
NA	330.232	S4	S0	1.29642	-.071508	01/20/98 11:48:23
K	766.491	S4	S0	1.27727	310246	01/20/98 11:48:23

Method: CLP-97 Sample Name: H STD Operator: JRP
 Run Time: 01/20/98 11:53:41
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.977	10.132	1.0209	5.9633	2.0031	5.9453	100.36
SDev	.601	.105	.0006	.0342	.0034	.0228	.57
%RSD	.00495	1.0391	.05657	.57229	.16745	.38304	.55708
#1	11.977	10.057	1.0204	5.9591	2.0007	5.9292	99.959
#2	11.976	10.206	1.0215	6.0075	2.0055	5.9614	100.76

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.000	10.000	1.0000	6.0000	2.0000	6.0000	100.00
Range	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000

Elem	CR	CO	CU	FF	PR220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.0240	6.0010	6.0466	60.251	.97713	1.0339	15.227
SDev	.0057	.0181	.0303	.235	.03392	.0058	.369
%RSD	.09432	.30240	.50089	.46864	3.4719	.55800	2.4207
#1	6.0100	5.9881	6.0252	60.055	1.0011	1.0380	14.966
#2	6.0380	6.0138	6.0680	60.417	.95314	1.0298	15.487

Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	6.0000	6.0000	6.0000	60.000			15.000
Range	5.0000	5.0000	5.0000	5.0000			5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.0048	5.9835	.98545	1.017	1.0119	1.0293	6.0508
SDev	.0139	.0115	.03792	.0179	.0021	.0274	.0308
%RSD	.34716	.19176	3.8478	.2578	.20696	2.6577	.50836
#1	3.9949	5.9754	1.0123	1.018	1.0105	1.0099	6.0290
#2	4.0146	5.9916	.95864	1.0177	1.0134	1.0486	6.0725

Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	4.0000	6.0000			1.0000	1.0000	6.0000
Range	5.0000	5.0000			5.0000	5.0000	5.0000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	5.9141	1.0150	1.0083	50.775	202.75
SDev	.0151	.0151	.0143	.394	.65
%RSD	.25562	1.4921	1.4413	.77616	.32511
#1	5.9034	1.0257	1.0186	51.054	203.21
#2	5.9248	1.0043	.99603	50.496	202.28

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	6.0000	1.0000	1.0000	50.000	200.00
Range	5.0000	5.0000	5.0000	5.0000	5.0000

Method: CLP-37 Sample Name: ICV Operator: JRP
 Run Time: 01/20/98 12: 0:09
 Comment:
 Mode: CONC Corr. Factor:

Elem	AL	SB	AS	BA	BE	CD	TA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0813	1.0160	1.0512	1.0174	2.0281	1.0368	26.771
SDev	.0156	.0094	.0054	.0069	.0113	.0048	.191
%RSD	1.4399	.92374	.51174	.67480	.55825	.46434	71181
#1	1.0702	1.0094	1.0474	1.0126	2.0201	1.0334	26.636
#2	1.0923	1.0227	1.0550	1.0222	2.0361	1.0402	26.906

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	26.000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0175	1.0303	1.0293	5.1520	1.0028	1.0496	2.6126
SDev	.0082	.0054	.0065	.0231	.0082	.0167	.0231
%RSD	.80841	.52336	.63796	.45246	.82253	1.5867	.88357
#1	1.0117	1.0265	1.0247	5.1355	.99697	1.0376	2.5963
#2	1.0233	1.0341	1.0339	5.1665	1.0086	1.0614	2.6289

Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	1.0000	1.0000	1.0000	5.0000			2.5000
Range	10.000	10.000	10.000	10.000			10.000

Elem	MN	NI	SE196A	SE196B	4G	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0268	1.0350	1.0207	1.0353	1.0197	1.0651	1.0246
SDev	.0063	.0051	.0115	.0177	.0081	.0069	.0075
%RSD	.61560	.49344	1.1305	1.7130	.79323	.64927	.73662
#1	1.0223	1.0314	1.0126	1.0233	1.0140	1.0502	1.0193
#2	1.0313	1.0386	1.0289	1.0484	1.0254	1.0700	1.0299

Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000			1.0000	1.0000	1.0000
Range	10.000	10.000			10.000	10.000	10.000

Elem	ZK	PB	SF	MA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0074	1.0340	1.0308	10.675	30.003
SDev	.0053	.0139	.0157	.537	.222
%RSD	.52366	1.3399	1.5209	5.1540	.73827
#1	1.0036	1.0242	1.0197	10.437	29.851
#2	1.0111	1.0438	1.0419	10.913	30.165

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	10.000	30.000
Range	10.000	10.000	10.000	10.000	10.000

Method: CLP-97 Sample Name: ICB Operator: JRP
 Run Time: 01/20/98 12:18:52
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SP	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.00414	.00241	-0.00191	-0.00007	.00016	.00018	.00146
SDev	.00340	.00476	.00222	.00012	.00013	.00020	.00271
%RSD	82.101	197.95	116.37	185.52	82.019	111.41	186.17

#1	-0.00174	.00577	-0.00348	.00002	.00026	.00031	.00337
#2	-0.00654	-0.00096	-0.00334	-0.00015	.00007	.00004	-0.00046

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01000	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01000	-.20000	-.00500	-.00500	-5.0000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	-0.00001	.00022	-0.00051	-0.00017	.00020	-0.00009
SDev	.00037	.00022	.00041	.00762	.00408	.00157	.00134
%RSD	456.65	2946.7	186.38	1486.1	2359.9	776.06	1498.6

#1	.00034	.00015	.00051	.00488	.00271	.00132	-0.00104
#2	-0.00018	-0.00016	-0.00007	-0.00590	-0.00306	-0.00091	.00086

Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.01000	.05000	.01500	.10000			5.0000
Low	-.01000	-.05000	-.01500	-.10000			-5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.00013	-0.00349	.00158	.00600	.00007	.00527	.00005
SDev	.00018	.00628	.00332	.00443	.00118	.00481	.00003
%RSD	140.83	58.296	210.23	73.865	1669.8	91.373	53.594

#1	-0.00000	-0.00029	-0.00077	.00014	.00090	.00867	.00006
#2	-0.00025	-0.00069	.00393	.00287	-0.00076	.00186	.00003

Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	.01500	.04000			.01000	.01000	.05000
Low	-.01500	-.04000			-.01000	-.01000	-.05000

Elem	TH	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00105	.00008	.00453	-0.03372	.07880
SDev	.00104	.00241	.00185	10580	.00869
%RSD	99.118	3097.9	40.861	313.79	11.027

#1	.00179	.00178	.00594	.00110	.08494
#2	.00031	-0.00162	.00322	-0.10853	.07265

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.02000	.00300	.00500	5.0000	5.0000
Low	-.02000	-.00300	-.00500	-5.0000	-5.0000

000047

Method: CLP-87 Sample Name: CR11 Operator: JRP
 Run Time: 01/20/98 12:31:31
 Comment:
 Mode: CON Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	04347	12314	02204	-00007	01673	01160	04902
SDev	00431	00442	00112	00004	00314	00370	00018
%RSD	11.290	3.5859	5.0961	50.726	1.2693	6.0460	3.6363

#1	04000	12002	02234	-00010	01053	01110	04889
#2	04695	12626	02125	-00005	01083	01209	04914

Errors	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value		12000	02000		01000	01000	
Range		50.000	50.000		50.000	50.000	

Elem	CR	CO	U	FF	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	02136	11189	05592	01895	00582	00654	04839
SDev	00102	00111	00109	00289	00258	00030	00083
%RSD	4.6797	99018	1.9532	15.246	44.217	4.6060	1.7202

#1	02114	11111	05514	01691	00400	00675	04898
#2	02259	11267	05669	02100	00765	00633	04780

Errors	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	02000	10000	05000				
Range	50.000	50.000	50.000				

Elem	MN	VI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	03263	08960	01222	00984	01687	02492	10969
SDev	00056	00122	00031	00404	00002	00383	00151
%RSD	1.7761	1.3545	6.8436	41.059	0.08938	15.376	1.3778

#1	03222	08894	01165	01269	01589	02221	10862
#2	03304	09067	01281	00698	01686	02763	11076

Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	03000	08000			02000	02000	10000
Range	50.000	50.000			50.000	50.000	50.000

Elem	IN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	04407	00630	01063	-017240	08058
SDev	00022	00066	00242	015727	01812
%RSD	49709	10.421	22.725	31.227	22.463

#1	04312	00584	01234	-021360	06787
#2	04493	00677	00892	-06119	09350

Errors	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK
Value	04000	00600	01000		
Range	50.000	50.000	50.000		

000048

Method: CLP-97 Sample Name: ICS47 Operator: JRP
 Run Time: 01/20/98 12:35:41
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AI	SB	AS	BA	BE	CO	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	519.50	.20417	.01383	.00393	-.00021	.00015	493.99
SDev	1.87	.27459	.00763	.00201	.00004	.00011	4.67
%RSD	.35920	136.94	55.198	51.202	19.349	106.14	.94562

#1	518.18	.00647	.01923	.00535	-.00018	.00125	490.69
#2	520.82	.40187	.00843	.00251	-.00024	.00905	497.30

Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	500.00						500.00
Range	20.000						20.000

Elem	CR	CO	CU	FE	P6220A	P6220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00635	.00127	.02053	202.32	.31459	-.16379	558.09
SDev	.00046	.00121	.00119	1.67	.00037	.01438	7.36
%RSD	7.219	95.204	5.7781	.82523	2.7799	8.7818	1.3189

#1	-.00667	.00041	.02137	201.14	.34121	-.17336	552.89
#2	-.00602	.00212	.01969	203.50	.32766	-.15362	563.30

Errors	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass
Value				500.00			500.00
Range				20.000			20.000

Elem	MN	NI	SE196A	SE196B	AG	V
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01523	-.00002	-.00538	.00476	-.00038	13753
SDev	.00459	.00004	.01481	.00008	.00198	18218
%RSD	30.150	194.26	275.51	419.85	525.41	132.47

#1	.01198	-.00005	.00510	-.00942	-.00178	.00871
#2	.01848	.00001	-.01585	.01899	.00103	.26635

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value						
Range						

Elem	ZN	PR	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.65507	.00217	.00140	.14391	.12571
SDev	.02164	.00647	.00846	.07659	.02453
%RSD	3.3023	298.27	604.44	54.810	19.517

#1	.01765	-.00241	-.00458	.08534	.10336
#2	.04861	.00575	.00738	.19949	.14305

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value					
Range					

Method: CLP-97 Sample Name: ICSABI Operator: JRP
 Run Time: 01/20/98 12:47:52
 Comment:
 Mode: COHC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	517.05	.6692	.11790	.56587	.53951	1.0222	492.64
SDev	2.39	.01114	.00518	.00162	.00088	.0036	3.01
%RSD	.46134	1.7613	4.3956	.28686	.16323	.35515	.61040
#1	518.74	.66116	.12156	.56702	.54014	1.0247	494.76
#2	515.36	.67789	.11424	.56472	.53889	1.0196	490.51
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.00	.60000	.10000	.50000	.50000	1.0000	500.00
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Elem	CR	CO	CU	FE	PB204	PP220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51622	.50247	.55268	202.14	.38107	-.11294	557.30
SDev	.00249	.00209	.00127	.78	.01183	.00755	1.80
%RSD	.48253	.41620	.23058	.38615	3.1053	6.6847	.32365
#1	.51799	.50395	.55356	202.70	.38944	-.11826	558.58
#2	.51446	.50100	.55178	201.59	.37270	-.10760	556.02
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	200.00			500.00
Range	20.000	20.000	20.000	20.000			20.000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54615	1.0208	.04692	.05962	.21315	.11538	.53868
SDev	.00141	.0027	.02067	.01400	.00026	.00400	.00140
%RSD	.25757	.26593	44.659	23.477	.12141	3.4650	.25990
#1	.54714	1.0227	.04154	.04972	.21534	.11255	.53967
#2	.54515	1.0189	.04230	.06952	.21796	.11821	.53769
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000			.20000	.10000	.50000
Range	20.000	20.000			20.000	20.000	20.000

Elem	ZN	PR	SE	NI	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.97991	.05157	.05539	.15688	.07674
SDev	.00330	.00110	.00245	.03781	.00378
%RSD	.33682	2.1235	4.4267	24.103	4.6058
#1	.98224	.05079	.05366	.18362	.08141
#2	.97757	.05234	.05713	.13014	.07606
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK
Value	1.0000	.05000	.05000		
Range	20.000	20.000	20.000		

Method: CLP-97 Sample Name: CCV Operator: JRP

Run Time: 01/20/98 12:56:12

Comment:

Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.3707	5.3560	.53417	3.1603	1.0663	3.1851	53.500
SDev	.1414	.1250	.01085	.0710	.0232	.0676	1.143
%RSD	2.2202	2.3337	2.0307	2.2464	2.1766	2.1232	2.1371

#1	6.4708	5.4443	.54184	3.2105	1.0833	3.2329	54.309
#2	6.2707	5.2676	.52650	3.1101	1.0505	3.1373	52.692

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	3.0000	5.0000	.50000	3.0000	1.0000	3.0000	50.000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.2063	3.1848	3.1866	26.545	.52991	.53081	8.0299
SDev	.0707	.0713	.0677	.575	.01426	.01145	.1751
%RSD	2.2066	2.2391	2.1253	2.1668	2.6913	2.1561	2.1810

#1	3.2563	3.2352	3.2344	26.952	.54000	.53390	8.1538
#2	3.1563	3.1343	3.1387	26.138	.51993	.52272	7.9061

Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	3.0000	5.0000	3.0000	25.000			7.5000
Range	10.000	10.000	10.000	10.000			10.000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1338	3.2138	.55157	.53174	.53073	.52747	3.1854
SDev	.0477	.0675	.00685	.00422	.01094	.00207	.0719
%RSD	2.2370	2.1005	1.2420	.79058	2.0610	.39199	2.2579

#1	2.1675	3.2616	.55642	.53672	.53847	.52893	3.2363
#2	2.1000	3.1661	.54673	.53076	.52300	.52601	3.1346

Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	2.0000	3.0000			.50000	.50000	3.0000
Range	10.000	10.000			10.000	10.000	10.000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	3.1363	.53051	.53968	26.143	104.63
SDev	.0654	.01238	.00510	.907	2.31
%RSD	2.0842	2.3341	.94420	3.4695	2.2105

#1	3.1825	.53927	.54328	26.785	106.27
#2	3.0901	.52175	.53608	25.502	103.00

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	3.0000	.50000	.50000	25.000	100.00
Range	10.000	10.000	10.000	10.000	10.000

000051

Method: CLP-97 Sample Name: CCB Operator: JRP
 Run Time: 01/20/98 13:05:43
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01117	-.00063	-.00085	.00013	-.00021	.00017	.00780
SDev	.00387	.00299	.00204	.00031	.00008	.00028	.00491
%RSD	33.703	471.82	239.26	244.07	36.481	163.92	63.022

#1	.00874	.00148	.00059	.00034	-.00016	.00037	.01127
#2	.01420	-.00274	-.00229	-.00009	-.00027	-.00003	.00432

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01000	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01000	-.02000	-.00500	-.00500	-5.0000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00017	.00062	-.00019	.01118	-.00258	.00071	.00355
SDev	.00046	.00045	.00059	.02011	.00015	.00154	.00214
%RSD	269.05	72.413	302.23	179.78	5.8395	218.03	50.301

#1	.00049	.00093	.00022	.02540	-.00247	.00180	.00506
#2	-.00015	.00030	-.00061	-.00303	-.00268	-.00038	.00203

Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.01000	.05000	.02500	.10000			5.0000
Low	-.01000	-.05000	-.02500	-.10000			-5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00009	-.00052	-.00378	.00571	.00011	.00745	.00034
SDev	.00011	.00031	.00061	.00442	.00076	.00853	.00075
%RSD	119.06	59.221	32356	77.404	666.40	114.57	221.34

#1	-.00001	-.00031	-.00379	.00883	.00065	H.01348	.00086
#2	-.00017	-.00074	-.00377	.00258	-.00042	.00141	-.00019

Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	.01500	.04000			.01000	.01000	.05000
Low	-.01500	-.04000			-.01000	-.01000	-.05000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00208	-.00039	.00255	-.28544	.07112
SDev	.00065	.00108	.00294	.03660	.01030
%RSD	31.078	279.89	115.50	12.822	14.485

#1	-.00163	.00038	.00465	-.01132	.06381
#2	-.00254	-.00115	.00047	-.25956	.07840

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.02000	.00300	.00500	5.0000	5.0000
Low	-.02000	-.00300	-.00500	-5.0000	-5.0000

000052

Method: CLP-97 Sample Name: 65012FNA Operator: JRP

Run Time: 01/20/98 13:10:46

Comment:

Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01266	-.00345	-.00306	.00007	-.00029	.00001	.00170
SDev	.00299	.00151	.00189	.00015	.00003	.00011	.00173
%RSD	23.663	43.883	61.860	210.54	11.709	1170.1	101.65

#1	.01054	-.00238	-.00172	.00018	-.00026	-.00007	.00293
#2	.01478	-.00452	-.00440	-.00004	-.00031	.00009	.00048

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.60000	.01000	.20000	.00500	.00500	5.0000
Low	-.20000	-.60000	-.01000	-.20000	-.00500	-.00500	-5.0000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00036	.00049	.00057	.01499	-.00074	-.00068	.00544
SDev	.00018	.00004	.00098	.00149	.00015	.00143	.00202
%RSD	50.498	8.6197	172.02	9.9171	21.626	211.82	37.169

#1	-.00023	.00046	.00126	.01794	-.00063	.00034	.00687
#2	-.00049	.00051	-.00012	.01604	-.00086	-.00169	.00401

Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.01000	.05000	.02500	.10000			5.0000
Low	-.01000	-.05000	-.02500	-.10000			-5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00035	-.00081	.00384	.00250	.00017	.00403	.00038
SDev	.00012	.00041	.00412	.00167	.00000	.00472	.00056
%RSD	54.335	50.697	107.31	66.664	.78706	117.24	147.59

#1	-.00020	-.00110	.00675	.00366	.00017	.00736	.00077
#2	-.00045	-.00052	.00093	.00132	.00017	.00069	-.00002

Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	.01500	.04000			.01000	.01000	.05000
Low	-.01500	-.04000			-.01000	-.01000	-.05000

Elem	Zn	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00345	-.00070	.00294	-.11392	.08151
SDev	.00063	.00101	.00248	.12964	.00937
%RSD	18.255	144.32	84.302	113.60	11.165

#1	-.00301	.00001	.00470	-.20559	.07500
#2	-.00390	-.00141	.00119	-.02225	.0679

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.02000	.00300	.00500	5.0000	5.0000
Low	-.02000	-.00300	-.00500	-5.0000	-5.0000

Method: CLP-97 Sample Name: LS1

Operator: JRP

Run Time: 01/20/98 13:21:47

Comment:

Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.655	.18027	1.5258	1.8022	.51682	1.3498	20.591
SDev	.053	.00164	.0211	.0054	.00149	.0010	.046
%RSD	12.556	.90733	1.3810	.30160	.28773	.07575	.22535
#1	43.628	.18142	1.5407	1.7984	.51577	1.3491	20.558
#2	43.703	.17911	1.5109	1.8051	.51787	1.3505	20.623

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	50.000	50.000	20.000	50.000	1000.0
Low	-.20000	-.06000	-.02000	-.20000	-.00500	-.00500	-5.0000

Elem	CR	CO	C	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56732	.53917	.59994	72.680	.92715	.79100	17.095
SDev	.00127	.00081	.00193	.237	.00186	.01504	.034
%RSD	.22452	.14974	.32211	.32566	.22430	1.8971	.19825
#1	.56642	.53860	.59857	72.513	.92876	.78236	17.071
#2	.56822	.53974	.60131	72.848	.92514	.80363	17.119

Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00	100.00	100.00	250.00			700.00
Low	-.01000	-.05000	-.02500	-.10000			-5.0000

Elem	NI	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.7972	1.3924	1.2877	1.2652	.52441	.51679	1.4179
SDev	.0070	.0006	.0019	.0252	.00061	.00993	.0049
%RSD	.25027	.04056	.14454	1.9904	.12148	1.9213	.34220
#1	2.7923	1.3927	1.2890	1.2474	.52396	.50977	1.4145
#2	2.8022	1.3920	1.2864	1.2830	.52486	.52381	1.4214

Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	50.000	100.00			10.000	50.000	100.00
Low	-.01500	-.04000			-.01000	-.01000	-.05000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	9.5644	.80447	1.2727	7.6094	28.365
SDev	.0089	.00942	.0162	.9619	.331
%RSD	.09310	1.1705	1.2711	12.641	1.1677
#1	9.5581	.80781	1.2612	8.2895	28.600
#2	9.5707	.80113	1.2841	6.9292	28.131

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	100.00	300.00
Low	-.02000	-.00300	-.00500	-5.0000	-5.0000

Method: CLP-97 Sample Name: 322501 Operator: JRP
 Run Time: 01/20/98 13:27:22
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.606	.00102	.01070	.04679	.00089	.00018	1.0046
SDev	.024	.00115	.00329	.00003	.00001	.00012	.0010
%RSD	.15599	112.69	30.774	.07204	1.2633	68.111	.09520
#1	15.589	.00021	.01302	.04681	.00090	.00026	1.0052
#2	15.624	.00183	.00837	.04676	.00088	.00009	1.0039

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	50.000	50.000	20.000	50.000	1000.0
Low	-.20000	-.06000	-.02000	-.20000	-.00500	-.00500	-5.0000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03316	.00664	.04264	22.363	.02495	.00851	2.0212
SDev	.00015	.00087	.00031	.017	.00032	.00163	.0029
%RSD	.45171	13.060	.73169	.07824	1.2696	19.188	.14429
#1	.03306	.00725	.04286	22.375	.02472	.00966	2.0232
#2	.03327	.00603	.04242	22.350	.02517	.00736	2.0131

Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00	100.00	100.00	250.00			700.00
Low	-.01000	-.05000	-.02500	-.10000			-5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09400	.04673	.00320	.00886	.00041	.00804	.03679
SDev	.00001	.00047	.00967	.00239	.00033	.01132	.00003
%RSD	.00537	.99475	299.20	26.978	82.215	140.73	.09582
#1	.09399	.04640	.00361	.00717	.00017	.01605	.03682
#2	.09400	.04706	-.01007	.01055	.00064	.00004	.03677

Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	50.000	100.00			10.000	50.000	100.00
Low	-.01500	-.04000			-.01000	-.01000	-.05000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.13559	.01398	.00483	.36217	1.3436
SDev	.00135	.00098	.00163	.09152	.0025
%RSD	.99337	7.0350	33.636	25.271	.18634
#1	.13654	.01468	.00598	.42688	1.3453
#2	.13464	.01329	.00368	.29745	1.3418

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	100.00	300.00
Low	-.00000	-.00300	-.00500	-5.0000	-5.0000

Method: CLP-97 Sample Name: 2250101 Operator: JRP
 Run Time: 01/20/98 13:32:56
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.558	.00007	.00888	.04664	.00090	-.00007	1.0016
SDev	.115	.00024	.00380	.00032	.00002	.00001	.0077
%RSD	.73717	339.17	42.819	.67526	1.7189	7.6579	.77189
#1	15.477	.00024	.00619	.04662	.00089	-.00006	.99618
#2	15.639	-.00010	.01156	.04706	.00091	-.00007	1.0071

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	50.000	50.000	20.000	50.000	1000.0
Low	-.20000	-.06000	-.02000	-.20000	-.00500	-.00500	-5.0000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03389	.00664	.02250	22.286	.02530	.00773	2.0173
SDev	.00046	.00044	.00004	.140	.00272	.00075	.0133
%RSD	1.3414	6.6862	.02207	.62731	10.769	9.6567	.66085
#1	.03357	.00633	.02252	22.188	.02723	.00826	2.0078
#2	.03422	.00696	.02247	22.385	.02338	.00720	2.0267

Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00	100.00	100.00	250.00			700.00
Low	-.01000	-.05000	-.02500	-.10000			-5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09364	.04814	-.00263	.00562	-.00007	.01004	.03702
SDev	.00076	.00053	.00224	.00358	.00117	.00066	.00029
%RSD	.81367	1.0943	85.346	63.722	1724.6	6.5375	.78250
#1	.09310	.04777	-.00422	.00309	.00076	.01051	.03681
#2	.09418	.04852	-.00104	.00816	-.00089	.00958	.03722

Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	50.000	100.00			10.000	50.000	100.00
Low	-.01500	-.04000			-.01000	-.01000	-.0000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.13373	.01356	.00288	.44258	1.3434
SDev	.00116	.00140	.00314	.02727	.0070
%RSD	.86417	10.317	109.10	6.1620	.52129
#1	.13291	.01458	.00066	.42330	1.3384
#2	.13455	.01259	.00509	.46186	1.3483

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	100.00	300.00
Low	-.02000	-.00300	-.00500	-5.0000	-5.0000

Method: CLP-87 Sample Name: 322501S1 Operator: JRP
 Run Time: 01/20/98 13:38:31
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	A	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.547	1.45541	1.6477	2.1974	.05191	.04932	.97479
SDev	.314	.00972	.0323	.0397	.00096	.00128	.01649
%RSD	1.8969	2.1535	1.9592	1.8073	1.8436	2.5918	1.6916
#1	16.325	1.44854	1.6249	2.1693	.05124	.04842	.96313
#2	16.769	1.46228	1.6705	2.2255	.05259	.05022	.98645
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	50.000	50.000	50.000	50.000	1000.0
Low	-20000	-0.0000	-0.000	-20000	-0.00500	-0.00500	-5.0000

Elem	CR	CO	CI	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.24275	.53774	.30259	21.729	.53654	.53441	1.8772
SDev	.00480	.00944	.00556	.406	.00360	.00950	.0315
%RSD	1.9764	1.7551	1.8370	1.8665	.67172	1.7770	1.6792
#1	.23936	.53107	.29866	21.443	.53399	.52770	1.8549
#2	.24614	.54441	.30552	22.016	.53909	.54113	1.8995
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00	100.00	100.00	250.00			700.00
Low	-0.10000	-0.05000	-0.05000	-1.00000			-5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.62382	.58457	1.9905	1.9554	.05278	2.0849	.54956
SDev	.01158	.01178	.0234	.0355	.00057	.0398	.01023
%RSD	1.8556	2.0143	1.1661	1.7130	1.0724	1.9101	1.8607
#1	.61563	.57625	1.9639	1.9317	.05238	2.0567	.54233
#2	.63200	.59290	1.9970	1.9791	.05318	2.1120	.55679
Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	50.000	100.00			10.000	50.000	100.00
Low	-0.1500	-0.04000			-0.10000	-0.10000	-0.05000

Elem	BN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.65498	.53512	1.9637	.19202	1.2668
SDev	.01103	.00753	.0301	.20464	.0422
%RSD	1.6846	1.4079	1.5344	106.57	3.3304
#1	.64718	.52979	1.9424	.04732	1.2570
#2	.66279	.54045	1.9850	.33672	1.2966
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	100.00	300.00
Low	-0.20000	-0.03000	-0.05000	-5.00000	-5.00000

Method: CLP-97 Sample Name: 233501L1 Operator: JRP
 Run Time: 01/20/98 13:49:39
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	A	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avgc	3.192	.00466	.00636	.01450	.00004	.00001	.21785
SDev	.037	.00061	.00082	.00023	.00002	.00005	.00295
%RSD	1.1806	13.005	12.892	1.5839	65.773	553.13	1.3528
#1	3.1715	.00509	.00578	.01434	.00005	.00005	.21577
#2	3.2249	.00424	.00694	.01466	.00002	-.00003	.21994
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	50.000	20.000	50.000	1000.0
Low	-.20000	-.06000	-.02000	-.20000	-.00500	-.00500	-5.0000
Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avgc	.00748	.00264	.00977	4.4509	.00713	.00143	.43843
SDev	.00029	.00052	.00076	.0525	.00006	.00076	.03825
%RSD	3.8860	19.740	7.7285	1.1793	.75179	53.122	2.0188
#1	.00769	.00227	.00924	4.4136	.00709	.00089	.40260
#2	.00728	.00301	.01031	4.4880	.00717	.00196	.41426
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	100.00	100.00	100.00	250.00			700.00
Low	-.01000	-.35000	-.02500	-10000			-5.0000
Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avgc	.01998	.01225	.01064	.00778	.00076	.00909	.00844
SDev	.00036	.00099	.00600	.00097	.00033	.00088	.00009
%RSD	1.8215	8.1100	56.430	12.399	43.727	9.6846	1.0354
#1	.01973	.01155	.00639	.00846	.00039	.00846	.00838
#2	.02024	.01296	.01488	.00710	.00052	.00971	.00850
Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	50.000	100.00			10.000	50.000	100.00
Low	-.01500	-.04000			-.01000	-.01000	-.05000
Elem	ZN	PB	SE	NA	K		
Units	ppm	ppm	ppm	ppm	ppm		
Avgc	.02974	.00333	.00873	.22496	.36472		
SDev	.00028	.00052	.00136	.02919	.00273		
%RSD	.93723	15.761	15.519	12.977	.74820		
#1	.02994	.00296	.00777	.20430	.35279		
#2	.02954	.00370	.00969	.24560	.36665		
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass		
High	100.00	100.00	50.000	100.00	300.00		
Low	-.02000	-.00500	-.00500	-5.0000	-5.0000		

Method: CLP-97 Sample Name: CCV Operator: JRP
 Run Time: 01/20/98 14:00:49
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AI	SP	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.3339	5.3285	.53327	3.1564	1.0653	3.1728	53.296
SDev	.0052	.0249	.00183	.0192	.0056	.0098	.258
%RSD	.4152	.46703	.34366	.66673	.62125	.30916	.48461
#1	6.3404	5.3109	.53198	3.1428	1.0606	3.1659	53.113
#2	6.3275	5.3461	.53457	3.1699	1.0699	3.1798	53.479

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	6.0000	5.0000	.50000	3.0000	1.0000	3.0000	50.000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.1921	3.1652	3.1821	26.415	.52541	.53068	7.9921
SDev	.0149	.0133	.0224	.080	.00051	.00342	.0299
%RSD	.46737	.42033	.70524	.30435	.09611	.64362	.37433
#1	3.1815	3.1558	3.1663	26.356	.52577	.52827	7.9709
#2	3.2027	3.1746	3.1980	26.472	.52506	.53310	8.0132

Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	3.0000	3.0000	3.0000	25.000			7.5000
Range	10.000	10.000	10.000	10.000			10.000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1253	3.2046	.55369	.53737	.52839	.52778	3.1702
SDev	.0113	.0121	.00188	.00417	.00278	.02607	.0177
%RSD	.52999	.37698	.33896	.77562	.52602	4.9357	.55791
#1	2.1203	3.1990	.55501	.53442	.52642	.50936	3.1577
#2	2.1363	3.2102	.55236	.54032	.53036	.54620	3.1827

Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	2.0000	3.0000			.50000	.50000	3.0000
Range	10.000	10.000			10.000	10.000	10.000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	3.1322	.52893	.54280	25.575	102.94
SDev	.0105	.00211	.00215	.001	.02
%RSD	.33557	.39893	.39701	.00553	.0153
#1	3.1248	.52744	.54126	25.576	102.93
#2	3.1396	.53042	.54433	25.574	102.96

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	3.0000	.50000	.50000	25.000	100.00
Range	10.000	10.000	10.000	10.000	10.000

Method: CLP-97 Sample Name: CCB Operator: JRP
 Run Time: 01/29/98 14:06:25
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02526	.00116	.00178	.00011	-.00043	.00001
SDev	.00144	.00130	.00027	.00004	.00001	.00011
%RSD	5.7077	111.78	15.262	37.982	2.6141	731.09
#1	.02628	.00024	-.00158	.00013	-.00044	.00009
#2	.02424	.00208	-.00197	.00008	-.00042	-.00006
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01000	.20000	.00500	.00500
Low	-.20000	-.06000	-.01000	-.20000	-.00500	-.00500

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	.00089	.00020	.01572	.00109	-.00331	.00378
SDev	.00033	.00016	.00024	.01035	.00102	.00024	.00068
%RSD	330.41	17.637	112.81	65.840	93.540	7.3870	18.097
#1	.00034	.00100	.00003	.02304	.00181	-.00349	.00330
#2	-.00014	.00078	.00037	.00840	.00057	-.00314	.00427
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.01000	.05000	.02500	.10000			5.0000
Low	-.01000	-.05000	-.02500	-.10000			-5.0000

Elem	VN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00028	-.00147	.00095	.00212	.00060	.00316	.00047
SDev	.00014	.00057	.00080	.00051	.00077	.00093	.00013
%RSD	47.928	120.34	396.68	24.120	129.11	29.423	27.971
#1	-.00019	-.00007	.00064	.00246	.00114	.00382	.00056
#2	-.00038	-.00088	-.00173	.00175	.00005	.00250	.00038
Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	.01000	.04000			.01000	.01000	.05000
Low	-.01000	-.04000			-.01000	-.01000	-.05000

Elem	ZN	PB	SF	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00513	-.00165	.00173	-.02349	.10512
SDev	.00013	.00018	.00161	.03718	.01162
%RSD	2.5173	9.5553	92.819	158.25	11.053
#1	-.00504	-.00172	.00066	.00280	.11334
#2	-.00522	-.00197	.00059	-.04978	.09690
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.02000	.00300	.00500	5.0000	5.0000
Low	-.02000	-.00300	-.00500	-5.0000	-5.0000

000060

Method: CLP-97 Sample Name: CRIF Operator: JRP
 Run Time: 01/20/98 14:12:55
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	RA	BE	OD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06201	.12658	.02196	-.00015	.01090	.01131	.05346
SDev	.00526	.00152	.00077	.00009	.00002	.00001	.00142
%RSD	8.4900	1.1979	3.5222	64.313	.16852	.11671	2.6599
#1	.06574	.12551	.02251	-.00006	.01089	.01130	.05446
#2	.05829	.12765	.02141	-.00021	.01092	.01132	.05245
Errors	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK
Value		.12000	.02000		.01000	.01000	
Range		50.000	50.000		50.000	50.000	

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02183	.11587	.05799	.01124	.00478	.00939	.04921
SDev	.00029	.00021	.00009	.00570	.00143	.00066	.00214
%RSD	1.3254	.18118	.15894	50.677	29.986	6.3831	4.3464
#1	.02163	.11572	.05615	.01527	.00580	.00893	.05073
#2	.02204	.11602	.05792	.00721	.00377	.00986	.04770
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value	.02000	.10000	.05000				
Range	50.000	50.000	50.000				

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03402	.09317	.00728	.01691	.01627	.02660	.11320
SDev	.00007	.00069	.00088	.00029	.00006	.00367	.00024
%RSD	.21422	.74122	12.110	17.129	.34889	13.808	.21461
#1	.03397	.09268	.00790	.01904	.01623	.02400	.11303
#2	.03407	.09366	.00666	.01499	.01631	.02919	.11337
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	.02000	.08000			.02000	.02000	.10000
Range	50.000	50.000			50.000	50.000	50.000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.04114	.00786	.01375	-.53772	.06493
SDev	.00026	.00004	.00223	.01037	.00651
%RSD	.63157	.50889	16.241	1.9293	10.021
#1	.04096	.00789	.01533	-.53038	.06954
#2	.04133	.00783	.01217	-.54505	.06033
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK
Value	.04000	.00600	.01000		
Range	50.000	50.000	50.000		

000061

Method: CLP-97 Sample Name: ICSAF Operator: JRP
 Run Time: 01/20/98 14:18:00
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	539.70	.19691	.01059	.00451	-.00045	.00509	515.12
SDev	1.22	.26508	.00625	.00246	.00001	.00526	1.28
%RSD	.22565	134.62	77.915	54.561	3.3126	103.34	.24902

#1	540.56	.00947	.01643	.00625	-.00046	.00137	514.22
#2	538.84	.38435	.00476	.00277	-.00044	.00881	516.03

Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	500.00						500.00
Range	20.000						20.000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00692	.00170	.02117	210.6	.34527	-.16763	585.10
SDev	.00012	.00004	.00253	.7	.01017	.00723	1.44
%RSD	1.6758	2.3241	11.945	.0823	2.9455	4.3131	.24645

#1	-.00694	.00172	.02296	210.4	.35246	-.17275	584.08
#2	-.00691	.00167	.01938	210.3	.33808	-.16252	586.12

Errors	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass
Value				200.00			500.00
Range				20.000			20.000

Elem	WN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01571	.00026	-.00534	.00604	.00111	.14283	.00433
SDev	.00422	.00035	.00979	.00139	.00044	.19218	.00150
%RSD	23.895	368.17	163.23	22.957	39.426	134.55	34.663

#1	.01272	.00093	.00158	.00506	.00080	.00694	.00539
#2	.01869	-.00041	-.01227	.00702	.00141	.27873	.00327

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	.02573	.00316	.00225	.01754	.14076
SDev	.02090	.00144	.00234	.13537	.01645
%RSD	81.261	45.392	104.03	774.79	11.695

#1	.01045	.00215	.00390	-.07854	.12913
#2	.04061	.00418	.00059	.11361	.15239

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value					
Range					

000062

Method: CLP-97 Sample Name: TCSABF Operator: JRP

Run Time: 01/20/98 14:23:27

Comment:

Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	514.72	.66358	.11587	.56467	.53802	1.0177	492.82
SDev	38.06	.04894	.00707	.04274	.04001	.0727	34.36
%RSD	7.3947	7.3753	6.1040	7.5697	7.4359	7.1440	6.9759
#1	541.64	.69819	0.12088	.59489	.56631	1.0691	517.13
#2	487.81	.62897	.11087	.53444	.50973	.96631	468.51
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.00	.60000	.10000	.50000	.50000	1.0000	500.00
Range	20.000	20.000	20.000	20.000	20.000	20.000	20.000
Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51451	.49961	.55126	201.11	.38144	-.11311	556.22
SDev	.03758	.03631	.04287	14.92	.02978	.00866	42.31
%RSD	7.3047	7.2640	7.7764	7.4166	7.8064	7.6540	7.6064
#1	.54108	.52548	.58157	211.65	.40250	-.11924	586.14
#2	.48793	.47414	.52094	190.56	.36039	-.10699	526.30
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	200.00			500.00
Range	20.000	20.000	20.000	20.000			20.000
Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54455	1.0207	.05182	.05916	.21686	.10866	.53574
SDev	.04055	.0737	.00877	.00953	.01565	.01928	.04002
%RSD	7.4465	7.2224	16.926	.89791	7.2149	9.4630	7.4696
#1	.57322	1.0728	.05802	.05879	.22793	.11583	.56404
#2	.51588	.96858	.04562	.05954	.20580	.10158	.50744
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000			.20000	.10000	.50000
Range	20.000	20.000			20.000	20.000	20.000
Elem	ZN	PB	SE	NA	K		
Units	ppm	ppm	ppm	ppm	ppm		
Avg	.97610	.05157	.05672	.09006	.03597		
SDev	.06876	.00414	.00257	.20046	.01382		
%RSD	7.0442	8.0295	4.5243	222.78	15.081		
#1	1.0247	.05450	.05853	-.05168	.07619		
#2	.92748	.04665	.05490	.23161	.09574		
Errors	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK		
Value	1.0000	.05000	.05000				
Range	20.000	20.000	20.000				

000063

Method: CLP-97 Sample Name: CCV3 Operator: JRP
 Run Time: 01/20/98 14:34:12
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.2976	5.2904	.52418	3.1356	1.0531	3.1356	52.923
SDev	.1062	.1390	.00553	.0722	.0210	.0649	1.242
%RSD	1.6861	2.6267	1.0544	2.3016	1.9922	2.0705	2.3473
#1	6.2225	5.1922	.52027	3.0845	1.0383	3.0897	52.045
#2	6.3727	5.3887	.52609	3.1866	1.0680	3.1815	53.802
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	6.0000	5.0000	.50000	3.0000	1.0000	3.0000	50.000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.1554	3.1267	3.1547	26.165	.51613	.52960	8.0590
SDev	.0541	.0601	.0725	.614	.00880	.01010	.3495
%RSD	1.7155	1.9220	2.2967	2.3469	1.7054	1.9080	4.3371
#1	3.1172	3.0842	3.1035	25.731	.50991	.52245	7.8118
#2	3.1937	3.1632	3.2060	26.599	.52236	.53674	8.3062
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	3.0000	3.0000	3.0000	25.000			7.5000
Range	10.000	10.000	10.000	10.000			10.000

Elem	MK	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1074	3.1591	.54174	.53787	.52032	.52877	3.1414
SDev	.0423	.0538	.01386	.01225	.01039	.02481	.0695
%RSD	2.0181	1.7631	2.5590	2.2773	1.9968	4.6927	2.2124
#1	2.0773	3.1210	.53193	.52921	.51297	.51123	3.0922
#2	2.1375	3.1971	.55154	.54653	.52767	.54632	3.1905
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass
Value	2.0000	3.0000			.50000	.50000	3.0000
Range	10.000	10.000			10.000	10.000	10.000

Elem	ZN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	3.0980	.52511	.53916	25.563	102.19
SDev	.0577	.00967	.01279	.396	1.26
%RSD	1.8632	1.8417	2.3715	1.5482	1.2350
#1	3.0572	.51828	.53012	25.284	101.30
#2	3.1388	.53195	.54820	25.843	103.08
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	3.0000	.50000	.50000	25.000	100.00
Range	10.000	10.000	10.000	10.000	10.000

Method: CLP-97 Sample Name: CCB3 Operator: JRP
 Run Time: 01/20/98 14:39:44
 Comment:
 Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03749	-.00198	-.00237	.00014	-.00043	.00005	.01063
SDev	.00476	.00046	.00145	.00030	.00002	.00000	.00228
%RSD	2.769	23.345	61.404	208.33	3.8484	.36034	21.430

#1	.03412	-.00231	-.00340	-.00007	-.00044	.00005	.00952
#2	.04086	-.00166	-.00134	.00035	-.00042	.00005	.01274

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01000	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01000	-.02000	-.00500	-.00500	-5.0000

Elem	CR	CO	CU	FE	PB220A	PB220B	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00044	.00036	-.00017	.00377	-.00236	-.00021	.01552
SDev	.00096	.00060	.00111	.01883	.00146	.00212	.00744
%RSD	216.05	167.65	647.64	498.87	61.894	994.74	47.948

#1	-.00112	-.00007	-.00095	-.00954	-.00133	-.00171	.01026
#2	.00023	.00078	.00061	.01709	-.00310	.00128	.02078

Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.01000	.05000	.02500	.10000			5.0000
Low	-.01000	-.05000	-.02500	-.10000			-5.0000

Elem	MN	NI	SE196A	SE196B	AG	TL	V
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00047	-.00044	-.00052	.00349	-.00007	.00576	.00027
SDev	.00013	.00092	.00126	.00108	.00170	.00055	.00069
%RSD	27.797	208.77	19.348	31.064	2520.0	9.5220	255.64

#1	-.00056	-.00109	-.00742	.00272	-.00127	.00614	-.00022
#2	-.00038	.00121	-.00563	.00425	.00113	.00537	.00076

Errors	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass
High	.01500	.04000			.01000	.01000	.05000
Low	-.01500	-.04000			-.01000	-.01000	-.05000

Elem	TN	PB	SE	NA	K
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00563	-.00093	.00015	-.07188	.08485
SDev	.00031	.00092	.00114	.12079	.01507
%RSD	5.4557	99.467	741.09	168.03	17.763

#1	-.00546	-.00158	-.00065	-.15729	.07420
#2	-.00590	-.00026	.00096	.01353	.09551

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.02000	.00300	.00300	5.0000	5.0000
Low	-.02000	-.00300	-.00300	-.5.0000	-5.0000

000065

**NYTEST METALS DIGESTION LOGBOOK
NON-CLP SOIL**

000023

Date: 1/20/98
Analyst: *[Signature]*
LCSS ID: 522

Method: NCP
Analysis (AA/ICP): ICP
Reviewed by: _____

Date Rec'd	Client Sample ID	NEI Sample Number	PHYSICAL DESCRIPTION		INITIAL WEIGHT (gm)	FINAL VOLUME (ml)
			BEFORE	AFTER		
---	PBS	PS 0120NA	NA	NA	-	100 ml
---	LCSS	LS 0120NA	NA	NA	1.00	100 ml
		32757-2	NA	NA	1.01	100 ml
			D NA	NA	1.02	100 ml
			S NA	NA	1.01	100 ml
			ISA NA	NA	1.01	100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml
			NA	NA		100 ml

HNO₃ Lot No: _____ HCl Lot No: _____ H₂O₂: Lot No: _____
 MS(A) ID: _____ MS(B) ID: _____ MS(C) ID: _____ Witness: _____
 Transfer to Instrument By: _____ Accepted By: _____

000066

12:17:15 20 Jan 1998

Folder: HG0120J
Protocol: PS

Page 1

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

*** Standard: 1 Rep: 1

Seq: 0

12:17:15 20 Jan 1998 HG

```
*** Standard: 2 Rep: 1                Seq: 1            12:19:40 20 Jan 1998 HG
Hg   .2000  ppb                15077
      Ave. Int. =    15077 S. D. =      0

*** Standard: 3 Rep: 1                Seq: 2            12:22:31 20 Jan 1998 HG
Hg   .5000  ppb                39366
      Ave. Int. =    39366 S. D. =      0

*** Standard: 4 Rep: 1                Seq: 3            12:25:20 20 Jan 1998 HG
Hg   1.000  ppb                86333
      Ave. Int. =    86333 S. D. =      0

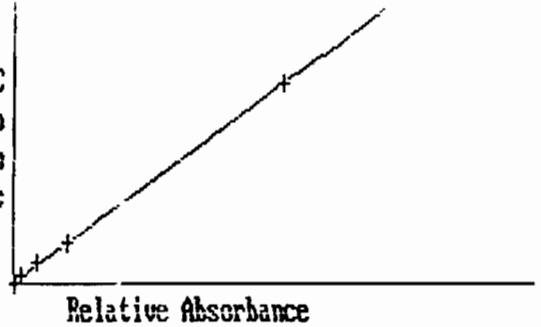
*** Standard: 5 Rep: 1                Seq: 4            12:28:25 20 Jan 1998 HG
Hg   5.000  ppb                429753
      Ave. Int. =    429753 S. D. =      0

*** Standard: 6 Rep: 1                Seq: 5            12:32:00 20 Jan 1998 HG
Hg  10.00  ppb                828587
      Ave. Int. =    828587 S. D. =      0
```

Protocol: PS		Rev: 2.005	Time: 12:32:00	20 Jan 1998
Folder: HG0120J	Seq: 6	Print: On		
User:	Batch:	Id: Std6Rep1	Cup:	Gas: 0.30 LPM
State: Idle	Macro HGCLP	79	: F3 Print	Ymit: Off Autosampler: On
CALIBRATION: Line Calibration				
Accepted				

000068

S1	.0000	.0642	.0642	Quadratic
S2	.2000	.1830	-.0170	WtdLinear
S3	.5000	.4560	-.0440	
S4	1.000	.9073	-.0127	Accept
S5	5.000	5.013	.0126	
S6	10.00	9.997	-.0031	StdAdd
A	1.0450e-12	r	.999958	
B	1.11813e-5	C	1.42199e-2	



	Mean	%RSD	
S1	4470	0	4470
S2	15077	0	15077
S3	39366	0	39366
S4	86333	0	86333
S5	429753	0	429753
S6	828587	0	828587

New cal coefficients stored

12:44:24 20 Jan 1998

Folder: HG0120J
Protocol: PS

Page 2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICV					Seq: 6		12:44:24 20 Jan 1998	HG
Hg	7.305	ppb	.0000	7.305				
*** Sample ID: ICB					Seq: 7		12:47:58 20 Jan 1998	HG
Hg	.0005	ppb	.0000	.0006				
*** Sample ID: CRA					Seq: 8		12:50:19 20 Jan 1998	HG
Hg	.1874	ppb	.0000	.1874				
*** Sample ID: CCV1					Seq: 9		12:52:50 20 Jan 1998	HG
Hg	4.851	ppb	.0000	4.851				
*** Sample ID: CCB1					Seq: 10		12:56:13 20 Jan 1998	HG
Hg	.0126	ppb	.0000	.0126				
*** Sample ID: PS					Seq: 11		12:58:34 20 Jan 1998	HG
Hg	.0181	ppb	.0000	.0181				
*** Sample ID: LCSS					Seq: 12		13:00:53 20 Jan 1998	HG
Hg	2.163	ppb	.0000	2.163				
*** Sample ID: 3322501					Seq: 13		13:03:49 20 Jan 1998	HG
Hg	.0048	ppb	.0000	.0048				
*** Sample ID: 32230 ^{cid}					Seq: 14		13:06:08 20 Jan 1998	HG
Hg	.0231	ppb	.0000	.0231				
*** Sample ID: 32230 ⁰¹⁵					Seq: 15		13:08:27 20 Jan 1998	HG
Hg	.9859	ppb	.0000	.9859				
*** Sample ID: 32230 ^{015D}					Seq: 16		13:11:27 20 Jan 1998	HG
Hg	.9902	ppb	.0000	.9902				
*** Sample ID: CCV2					Seq: 17		13:14:27 20 Jan 1998	HG
Hg	4.826	ppb	.0000	4.826				

000070

