SELECTED REFERENCE
 # 10 VOL 1b

INORGANIC ANALYSIS DATA PACKAGE
ARDL REPORT NO. 9883
CORPS OF ENGINEERS - PORTLAND DISTRICT
ANNETTE ISLAND SITE

VOLUME 1-B

ARDL Inc.

applied research & development laboratory

CHEMISTRY • BIOLOGY • PHYSIOLOGY
ENGINEERING • ENVIRONMENTAL ANALYSIS

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"Test Everything - Keep The Good" 1 Thes. 5:21

INORGANIC ANALYSIS DATA PACKAGE
ARDL REPORT NO. 9883
CORPS OF ENGINEERS - PORTLAND DISTRICT
ANNETTE ISLAND SITE

VOLUME 1-B

10161

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

SOW No.: ILM02.0

EPA Sample No.	Lab Sample ID.
L00101	9883B-4
L00102	9883B-5
L00103	9883B-6
L00104	9883B-7
L00105	9883B-8
L00106	9883B-9
L00107	9883B-10
L00108	9883B-11
L00109	9883B-12
L00110	9883B-13
L00111	9883B-14
L00111MS	9883B-14MS
L00111MSD	9883B-14MSD
L00111D	9883B-14D
L00112	9883B-15

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

Signature: Daniel J. Gillespie Name: Daniel J. Gillespie

Date: 9/27/94 Title: Technical Services Manager

10162

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

SOW No.: ILMO2.0

Case Narrative

A total of fifteen samples were received 16 September 1994 for analysis. The requested analysis included the TCLP metals for three tar samples and TCLP and total lead for twelve soil samples. This package includes all total results. All TCLP results are reported in ARDL data package 9883A.

The requested analyses were to be performed following SW-846 methodology and reported in a USEPA CLP type data package. As such, MS/MSD matrix QC was employed for the lead analyses rather than duplicate/MS.

Due to their length, customer numbers were truncated beginning at the left. The resulting number consists of the last six digits of the original customer number.

INORGANIC DATA QUALIFIERS

FORM I-IN includes fields for three types of result qualifiers. These qualifiers are completed as follows:

C (Concentration) qualifier:

B - Reported value obtained from a reading between the CRDL and IDL.

U - Analyte was analyzed for but not detected.

Q qualifier -- Specified entries and their meanings are as follows:

E - The reported value is estimated because of the presence of interference. This determination is from: 1) ICP serial dilution results exceeding specified limits; or 2) very low (<40%) GFAA post-digestion spike recovery.

M - Duplicate injection precision not met.

N - Spiked sample recovery not within control limits.

S - The reported value was determined by the Method of Standard Additions (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.

NOTE: Entering 'S', 'W' or '+' is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

M (Method) qualifier -- Enter:

'P' for ICP
'A' for Flame AA
'F' for Furnace AA
'CV' for manual Cold Vapor AA
'C' for Manual Spectrophotometric

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00101

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-4

Level (low/med): LOW Date Received: 09/16/94

% Solids: 89.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1010		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10165

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00102

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-5

Level (low/med): LOW Date Received: 09/16/94

% Solids: 90.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	322		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10166

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00103

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-6

Level (low/med): LOW Date Received: 09/16/94

% Solids: 89.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	643		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10167

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00104

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-7

Level (low/med): LOW Date Received: 09/16/94

% Solids: 89.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	635		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10168

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00105

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-8

Level (low/med): LOW Date Received: 09/16/94

% Solids: 88.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1170		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10169

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00106

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-9

Level (low/med): LOW Date Received: 09/16/94

% Solids: 91.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	2950		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10170

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00107

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-10

Level (low/med): LOW Date Received: 09/16/94

% Solids: 93.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	248		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

Color After: YELLOW Clarity After: CLEAR

Comments: ROCKS

10171

FORM I - IN ILM02.0

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00108

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-11

Level (low/med): LOW Date Received: 09/16/94

% Solids: 87.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	706		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10172

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00109

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-12

Level (low/med): LOW Date Received: 09/16/94

% Solids: 91.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	619		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00110

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-13

Level (low/med): LOW Date Received: 09/16/94

% Solids: 88.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	634		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10174

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00111

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-14

Level (low/med): LOW Date Received: 09/16/94

% Solids: 95.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	27.6		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10175

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00112

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

Matrix (soil/water) SOIL Lab Sample ID: 9883B-15

Level (low/med): LOW Date Received: 09/16/94

% Solids: 91.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	63.4		N	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments: ROCKS

10176

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Initial Calibration Source: SPEX

Continuing Calibration Source: SPEX

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)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	5000.0	5070.00	101.4	5000.0	5051.00	101.0	5050.00	101.0	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

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

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Initial Calibration Source: SPEX

Continuing Calibration Source: SPEX

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)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead				5000.0	4941.00	98.8	5001.00	100.0	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(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: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Initial Calibration Source: SPEX

Continuing Calibration Source: SPEX

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)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead				5000.0	4998.00	100.0			P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

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

U.S. EPA - CLP

3

BLANKS

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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3

BLANKS

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead			20.0	U	20.0	U	20.0	U			P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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3

BLANKS

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead			20.0	U							P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: ARDL, INC. Contract 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

ICP ID Number: JA61E ICS Source: SPEX

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	501660	501660	486500	486200.0	96.9	478700	480700.0	95.8
Antimony								
Arsenic								
Barium	20	499						
Beryllium		498						
Cadmium		1002						
Calcium	502110	502110	461100	471500.0	93.9	462000	464800.0	92.6
Chromium		498						
Cobalt	3	501						
Copper	4	495						
Iron	199830	199830	175700	177100.0	88.6	172900	173800.0	87.0
Lead	8	1001	57	993.2	99.2	77	979.8	97.9
Magnesium	500900	500900	473300	476100.0	95.0	464600	468100.0	93.5
Manganese	18	496						
Mercury								
Nickel		995						
Potassium								
Selenium								
Silver		999						
Sodium	31							
Thallium								
Vanadium		500						
Zinc	43	999						

10184

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: ARDL, INC. Contract 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

ICP ID Number: JA61E ICS Source: SPEX

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	501660	501660				483800	483600.0	96.4
Antimony								
Arsenic								
Barium	20	499						
Beryllium		498						
Cadmium		1002						
Calcium	502110	502110				463400	469700.0	93.5
Chromium		498						
Cobalt	3	501						
Copper	4	495						
Iron	199830	199830				174800	175800.0	88.0
Lead	8	1001				66	975.1	97.4
Magnesium	500900	500900				469600	473600.0	94.5
Manganese	18	496						
Mercury								
Nickel		995						
Potassium								
Selenium								
Silver		999						
Sodium	31							
Thallium								
Vanadium		500						
Zinc	43	999						

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

L00111 MS

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Matrix: SOIL Level (low/med): LOW

% Solids: 95.3

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
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	75-125	64.5016		27.5971		52.47	70.3	N	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

10186

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5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

L00111 MSD

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Matrix: SOIL Level (low/med): LOW

% Solids: 95.3

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
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead	75-125	69.8426		27.5971		52.47	80.5		P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

10187

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6
DUPLICATES

EPA SAMPLE NO.

L00111 MS/MSD

Lab Name: ARDL, INC. Contract No.: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Matrix: SOIL Level (low/med): LOW

% Solids for Sample: 95.3 % Solids for Duplicate: 95.6

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead		64.5016		69.8426		8.0		P
Magnesium								NR
Manganese								NR
Mercury								NR
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Cyanide								NR

Comments:

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7

LABORATORY CONTROL SAMPLE

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

Solid LCS Source: _____

Aqueous LCS Source: LAB PREPARED

Analyte	Aqueous (ug/L) True	Found	%R	Solids (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	1000.0	961.30	96.1						
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

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10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

ICP ID Number: JA61E Date: 09/19/94

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200.0	50.0	P
Antimony	206.84		60.0	20.0	P
Arsenic	193.70		10.0	30.0	P
Barium	493.41		200.0	5.0	P
Beryllium	313.04		5.0	1.0	P
Cadmium	228.80		5.0	3.0	P
Calcium	317.93		5000.0	100.0	P
Chromium	267.72		10.0	5.0	P
Cobalt	228.62		50.0	5.0	P
Copper	324.75		25.0	5.0	P
Iron	259.94		100.0	50.0	P
Lead	220.35		3.0	20.0	P
Magnesium	279.01		5000.0	100.0	P
Manganese	257.61		15.0	5.0	P
Mercury			0.2		
Nickel	231.60		40.0	20.0	P
Potassium	766.49		5000.0	1000.0	P
Selenium	196.03		5.0	40.0	P
Silver	328.07		10.0	5.0	P
Sodium	588.99		5000.0	900.0	P
Thallium	190.87		10.0	50.0	P
Vanadium	292.40		50.0	5.0	P
Zinc	213.86		20.0	5.0	P

Comments: Arsenic, lead, selenium and thallium do not meet CRDL.

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11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

ICP ID Number: JA61E Date: 02/14/94

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Zn
Aluminum	308.22	--	0.000000	0.000000	0.000000	0.000000
Antimony	206.84	0.000000	--	0.000000	0.000000	0.000000
Arsenic	193.70	0.006495	0.000000	0.000295	0.000000	0.000000
Barium	493.41	0.000000	0.000000	0.000000	0.000000	0.000000
Beryllium	313.04	0.000000	0.000000	0.000000	0.000000	0.000000
Cadmium	228.80	0.000000	0.000000	0.000000	0.000000	0.000000
Calcium	317.93	0.000000	--	0.000000	0.000000	0.000000
Chromium	267.72	0.000000	0.000000	0.000000	0.000000	0.000000
Cobalt	228.62	0.000000	0.000000	0.000000	0.000000	0.000000
Copper	324.75	0.000000	0.000000	0.000000	0.000000	0.000000
Iron	259.94	0.000000	0.000000	--	0.000000	0.000000
Lead	220.35	0.001231	0.000000	0.000000	0.000000	0.000000
Magnesium	279.01	0.000000	0.000099	-0.000976	--	0.000000
Manganese	257.61	0.000000	0.000000	-0.000236	0.000000	0.000000
Mercury	--	--	--	--	--	--
Nickel	231.60	0.000000	0.000000	0.000000	0.000000	0.000000
Potassium	766.49	-0.001039	0.000000	-0.000324	-0.001184	0.001370
Selenium	196.03	0.000000	0.000000	0.000000	0.000000	0.000000
Silver	328.07	0.000000	0.000000	-0.000331	0.000000	0.000000
Sodium	588.99	0.000000	0.000098	0.000000	0.000000	0.000000
Thallium	190.87	0.001161	0.000084	0.002168	0.001318	0.000000
Vanadium	292.40	0.000000	0.000000	-0.000513	0.000000	0.000000
Zinc	213.86	0.000000	0.000000	0.000000	0.000000	0.000000

Comments: _____

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11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

ICP ID Number: JA61E Date: 02/14/94

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Cr	Ni	V	As
Aluminum	308.22	0.000000	0.000000	0.000000	0.000000	0.000000
Antimony	206.84	0.000000	0.012550	-0.009960	0.000000	0.000000
Arsenic	193.70	-0.001679	0.001175	0.000000	0.011714	--
Barium	493.41	0.000000	0.000000	0.000000	0.000000	0.000000
Beryllium	313.04	0.000000	0.000000	0.000000	0.002687	0.000000
Cadmium	228.80	0.000000	0.000000	0.000000	0.000000	0.010520
Calcium	317.93	0.000000	0.000000	0.000000	0.000000	0.000000
Chromium	267.72	0.000000	--	0.000000	0.000000	0.000000
Cobalt	228.62	0.000000	0.000000	0.000000	0.000000	0.000000
Copper	324.75	0.000000	0.000000	0.000000	0.000000	0.000000
Iron	259.94	0.000000	0.000000	0.000000	0.000000	0.000000
Lead	220.35	-0.001467	-0.000172	0.000000	-0.002666	0.000000
Magnesium	279.01	-0.017983	0.000000	0.000000	0.000000	0.000000
Manganese	257.61	--	0.000000	0.000000	0.000000	0.000000
Mercury	--	--	--	--	--	--
Nickel	231.60	0.000000	0.000000	--	0.000000	0.000000
Potassium	766.49	0.000000	0.000857	0.000721	0.000000	0.000000
Selenium	196.03	0.000000	0.000000	0.000000	-0.001662	0.000000
Silver	328.07	0.000000	0.000000	0.000000	-0.000820	0.000000
Sodium	588.99	0.000000	0.000000	0.000000	0.000000	0.000000
Thallium	190.87	0.002985	0.000000	0.000000	0.003452	0.000000
Vanadium	292.40	-0.000050	0.000000	0.000000	--	0.000000
Zinc	213.86	0.000000	-0.000260	0.003897	0.000000	0.000000

Comments: _____

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12

ICP LINEAR RANGES (QUARTERLY)

Lab Name: ARDL, INC. Contract: 9883B

Lab Code: ARDL Case No.: ____ SAS No.: ____ SDG No.: L00101

ICP ID Number: JA61E Date: 9/19/94

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	5.00	1000000	P
Antimony	5.00	100000	P
Arsenic	5.00	100000	P
Barium	5.00	200000	P
Beryllium	5.00	50000	P
Cadmium	5.00	150000	P
Calcium	5.00	1000000	P
Chromium	5.00	200000	P
Cobalt	5.00	50000	P
Copper	5.00	200000	P
Iron	5.00	500000	P
Lead	5.00	200000	P
Magnesium	5.00	1000000	P
Manganese	5.00	150000	P
Mercury	--	--	-
Nickel	5.00	200000	P
Potassium	5.00	1000000	P
Selenium	5.00	200000	P
Silver	5.00	200000	P
Sodium	5.00	1000000	P
Thallium	5.00	150000	P
Vanadium	5.00	150000	P
Zinc	5.00	100000	P

Comments: _____

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13

PREPARATION LOG

ab Name: ARDL, INC. Contract: 9883B

ab Code: ARDL Case No.: _____ SAS No.: _____ SDG No.: L00101

ethod: P

Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBW	09/21/94		100
LCSW	09/21/94		100
L00101	09/21/94	1.00	100
L00102	09/21/94	1.00	100
L00103	09/21/94	1.00	100
L00104	09/21/94	1.00	100
L00105	09/21/94	1.00	100
L00106	09/21/94	1.00	100
L00107	09/21/94	1.00	100
L00108	09/21/94	1.00	100
L00109	09/21/94	1.00	100
L00110	09/21/94	1.00	100
L00111	09/21/94	1.00	100
L00111MS	09/21/94	1.00	100
L00111MSD	09/21/94	1.00	100
L00112	09/21/94	1.00	100

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14

ANALYSIS RUN LOG

Lab Name: ARDL, Inc. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No. L00101

Instrument ID Number: JA61E Method: P

Start Date: 09/21/94 End Date: 09/21/94

EPA Sample No.	D/F	Time	%R	ANALYTES																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
30	1.00	1016																									
S	1.00	1019																									
3	1.00	1022																									
S	1.00	1026																									
S	1.00	1029																									
3	1.00	1033																									
S	1.00	1036																									
3	1.00	1040																									
3	1.00	1043																									
S	1.00	1046																									
CV	1.00	1050													X												
CB	1.00	1053													X												
CSA	1.00	1057		X						X				X	X	X											
CSAB	1.00	1100		X						X				X	X	X											
ZZZZZZ	1.00	1103																									
ZZZZZZ	1.00	1108																									
ZZZZZZ	1.00	1113																									
ZZZZZZ	1.00	1119																									
ZZZZZZ	1.00	1124																									
ZZZZZZ	1.00	1129																									
CCV	1.00	1134													X												
CCB	1.00	1139													X												
ZZZZZZ	1.00	1144																									
ZZZZZZ	1.00	1149																									
ZZZZZZ	1.00	1154																									
ZZZZZZ	1.00	1159																									
ZZZZZZ	1.00	1204																									
ZZZZZZ	1.00	1209																									
ZZZZZZ	1.00	1214																									
ZZZZZZ	1.00	1219																									
ZZZZZZ	1.00	1224																									
CCV	1.00	1229													X												
CCB	1.00	1234													X												

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14

ANALYSIS RUN LOG

Lab Name: ARDL, Inc. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No. L00101

Instrument ID Number: JA61E Method: P

Start Date: 09/21/94 End Date: 09/21/94

EPA Sample No.	D/F	Time	%R	ANALYTES																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1239																									
ZZZZZZ	1.00	1244																									
ICSA	1.00	1250		X						X				X	X	X											
ICSAB	1.00	1255		X						X				X	X	X											
CCV	1.00	1300													X												
CCB	1.00	1305													X												
PBW	1.00	1412													X												
LCSW	1.00	1417													X												
ZZZZZZ	1.00	1422																									
L00101	1.00	1427													X												
L00102	1.00	1432													X												
L00103	1.00	1437													X												
L00104	1.00	1442													X												
L00105	1.00	1447													X												
L00106	1.00	1452													X												
L00107	1.00	1457													X												
CCV	1.00	1502													X												
CCB	1.00	1507													X												
L00108	1.00	1513													X												
L00109	1.00	1518													X												
L00110	1.00	1523													X												
L00111	1.00	1528													X												
L00111MS	1.00	1533													X												
L00111MSD	1.00	1538													X												
L00112	1.00	1543													X												
ZZZZZZ	1.00	1548																									
ZZZZZZ	1.00	1553																									
ZZZZZZ	1.00	1558																									
CCV	1.00	1603													X												
CCB	1.00	1608													X												
ZZZZZZ	1.00	1619																									
ZZZZZZ	1.00	1624																									
ZZZZZZ	1.00	1629																									

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: ARDL, Inc. Contract: 9883B

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No. L00101

Instrument ID Number: JA61E Method: P

Start Date: 09/21/94 End Date: 09/21/94

EPA Sample No.	D/F	Time	%R	ANALYTES																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZ	1.00	1634																									
ZZZZZZ	1.00	1639																									
ZZZZZ	1.00	1644																									
ZZZZZ	1.00	1649																									
ZZZZZZ	1.00	1654																									
ZZZZZ	1.00	1659																									
CCV	1.00	1705													X												
CCB	1.00	1708													X												
CSA	1.00	1710		X						X				X	X	X											
ICSAB	1.00	1713		X						X				X	X	X											
CV	1.00	1715													X												
CCB	1.00	1718													X												

FORM XIV - IN ILM02.0

10197

RAW DATA

The Raw Data are included by Technique as Follows:

ICP DATA

OTHER INORGANIC DATA

CLP STANDARD NOTEBOOK PAGES

CALCULATIONS:

ICP

Soil matrix:

(A x B x E)/(C x D) = Reported value in mg/kg
Where:
A = instrument readout in ppm
B = digestate volume in liters
C = weight of sample digested in kg
D = (% total solids)/100
E = dilution factor as required to bring readout into calibration range of the instrument

Water matrix:

(A x B x E x 1000)/(C) = Reported value in ug/L
Where:
A = instrument readout in ppm
B = digestate volume in liters
C = amount of sample digested in liters
E = dilution factor as required to bring readout into calibration range of the instrument

AA

Soil matrix:

(A x B x E)/(C x D) = Reported value in mg/kg
Where:
A = instrument readout in ppb*
B = digestate volume in liters
C = weight of sample digested in grams
D = (% total solids)/100
E = dilution factor as required to bring readout into calibration range of the instrument

Water matrix:

(A x B x E)/(C) = Reported value in ug/L
Where:
A = instrument readout in ppb*
B = digestate volume in liters
C = amount of sample digested in liters
E = dilution factor as required to bring readout into calibration range of the instrument

* Sodium and potassium on AA - instrument readout is in ppm; therefore, an additional factor of 1000 should be included in the calculation.

ICP DATA

10200

940921

9883 (TOTAL SOILS) F-digest BATCH 1563 DO NOT REPORT

9883 (TOTAL SOILS) P-digest BATCH 1571 Pb

9887 (diss) Ba, Cd, Cr, Ag, Mn, TL

9888 (diss) Ba, Cd, Cr, Ag, Mn, TL

116487 (diss) Fe

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STDBLK	940921	MRD4PT	09/21/94	10:16		X	IR
2	2-3.1	940921	MRD4PT	09/21/94	10:19		X	IR
3	2-3.2	940921	MRD4PT	09/21/94	10:22		X	IR
4	2-3.3	940921	MRD4PT	09/21/94	10:26		X	IR
5	4.1	940921	MRD4PT	09/21/94	10:29		X	IR
6	4.2	940921	MRD4PT	09/21/94	10:33		X	IR
7	4.3	940921	MRD4PT	09/21/94	10:36		X	IR
8	1.1	940921	MRD4PT	09/21/94	10:40		X	IR
9	1.2	940921	MRD4PT	09/21/94	10:43		X	IR
10	1.3	940921	MRD4PT	09/21/94	10:46		X	IR
11	CCVAC	940921	MRD4PT	09/21/94	10:50	CME	Q	CONC
12	CCB	940921	MRD4PT	09/21/94	10:53	CME	B	CONC
13	ICSA	940921	MRD4PT	09/21/94	10:57	CME	Q	CONC
14	ICSAB	940921	MRD4PT	09/21/94	11:00	CME	Q	CONC
15	PB 1563	940921	MRD4PT	09/21/94	11:03	CME	S	CONC
16	LCS 1563	940921	MRD4PT	09/21/94	11:08	CME	S	CONC
17	SpBLK 1563	940921	MRD4PT	09/21/94	11:13	CME	S	CONC
18	9883-4	940921	MRD4PT	09/21/94	11:19	CME	S	CONC
19	9883-4MS1	940921	MRD4PT	09/21/94	11:24	CME	S	CONC
20	9883-4MSD1	940921	MRD4PT	09/21/94	11:29	CME	S	CONC
21	CCVAC	940921	MRD4PT	09/21/94	11:34	CME	Q	CONC
22	CCB	940921	MRD4PT	09/21/94	11:39	CME	B	CONC
23	9883-5	940921	MRD4PT	09/21/94	11:44	CME	S	CONC
24	9883-6	940921	MRD4PT	09/21/94	11:49	CME	S	CONC
25	9883-7	940921	MRD4PT	09/21/94	11:54	CME	S	CONC
26	9883-8	940921	MRD4PT	09/21/94	11:59	CME	S	CONC
27	9883-9	940921	MRD4PT	09/21/94	12:04	CME	S	CONC
28	9883-10	940921	MRD4PT	09/21/94	12:09	CME	S	CONC
29	9883-11	940921	MRD4PT	09/21/94	12:14	CME	S	CONC
30	9883-12	940921	MRD4PT	09/21/94	12:19	CME	S	CONC
31	9883-13	940921	MRD4PT	09/21/94	12:24	CME	S	CONC
32	CCVAC	940921	MRD4PT	09/21/94	12:29	CME	Q	CONC
33	CCB	940921	MRD4PT	09/21/94	12:34	CME	B	CONC
34	9883-14	940921	MRD4PT	09/21/94	12:39	CME	S	CONC
35	9883-15	940921	MRD4PT	09/21/94	12:44	CME	S	CONC
36	ICSA	940921	MRD4PT	09/21/94	12:50	CME	Q	CONC
37	ICSAB	940921	MRD4PT	09/21/94	12:55	CME	Q	CONC
38	CCVAC	940921	MRD4PT	09/21/94	13:00	CME	Q	CONC
39	CCB	940921	MRD4PT	09/21/94	13:05	CME	B	CONC
40	PB 1571	940921	MRD4PT	09/21/94	14:12	CME	S	CONC
41	LCS 1571	940921	MRD4PT	09/21/94	14:17	CME	S	CONC
42	SpBLK 1571	940921	MRD4PT	09/21/94	14:22	CME	S	CONC
43	9883-4	940921	MRD4PT	09/21/94	14:27	CME	S	CONC
44	9883-5	940921	MRD4PT	09/21/94	14:32	CME	S	CONC
45	9883-6	940921	MRD4PT	09/21/94	14:37	CME	S	CONC
46	9883-7	940921	MRD4PT	09/21/94	14:42	CME	S	CONC
47	9883-8	940921	MRD4PT	09/21/94	14:47	CME	S	CONC
48	9883-9	940921	MRD4PT	09/21/94	14:52	CME	S	CONC
49	9883-10	940921	MRD4PT	09/21/94	14:57	CME	S	CONC
50	CCVAC	940921	MRD4PT	09/21/94	15:02	CME	Q	CONC
51	CCB	940921	MRD4PT	09/21/94	15:07	CME	B	CONC
52	9883-11	940921	MRD4PT	09/21/94	15:13	CME	S	CONC
53	9883-12	940921	MRD4PT	09/21/94	15:18	CME	S	CONC

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
54	9883-13	940921	MRD4PT	09/21/94	15:23	CME	S	CONC
55	9883-14	940921	MRD4PT	09/21/94	15:28	CME	S	CONC
56	9883-14MS1	940921	MRD4PT	09/21/94	15:33	CME	S	CONC
57	9883-14MSD1	940921	MRD4PT	09/21/94	15:38	CME	S	CONC
58	9883-15	940921	MRD4PT	09/21/94	15:43	CME	S	CONC
59	PB DISS1	940921	MRD4PT	09/21/94	15:48	CME	S	CONC
60	LCS DISS1	940921	MRD4PT	09/21/94	15:53	CME	S	CONC
61	9887-1	940921	MRD4PT	09/21/94	15:58	CME	S	CONC
62	CCVAC	940921	MRD4PT	09/21/94	16:03	CME	Q	CONC
63	CCB	940921	MRD4PT	09/21/94	16:08	CME	B	CONC
64	9887-1MS1	940921	MRD4PT	09/21/94	16:19	CME	S	CONC
65	9887-1MSD1	940921	MRD4PT	09/21/94	16:24	CME	S	CONC
66	9887-2	940921	MRD4PT	09/21/94	16:29	CME	S	CONC
67	9888-1	940921	MRD4PT	09/21/94	16:34	CME	S	CONC
68	9888-1MS1	940921	MRD4PT	09/21/94	16:39	CME	S	CONC
69	9888-1MSD1	940921	MRD4PT	09/21/94	16:44	CME	S	CONC
70	9888-2	940921	MRD4PT	09/21/94	16:49	CME	S	CONC
71	116487-1	940921	MRD4PT	09/21/94	16:54	CME	S	CONC
72	116487-2	940921	MRD4PT	09/21/94	16:59	CME	S	CONC
73	CCVAC	940921	MRD4PT	09/21/94	17:05	CME	Q	CONC
74	CCB	940921	MRD4PT	09/21/94	17:08	CME	B	CONC
75	ICSA	940921	MRD4PT	09/21/94	17:10	CME	Q	CONC
76	ICSAB	940921	MRD4PT	09/21/94	17:13	CME	Q	CONC
77	CCVAC	940921	MRD4PT	09/21/94	17:15	CME	Q	CONC
78	CCB	940921	MRD4PT	09/21/94	17:18	CME	B	CONC
79	CCVAC	940921	MRD4PT	09/21/94	21:16	CME	Q	CONC
80	CCB	940921	MRD4PT	09/21/94	21:19	CME	B	CONC
81	ICSA	940921	MRD4PT	09/21/94	21:22	CME	Q	CONC
82	ICSAB	940921	MRD4PT	09/21/94	21:26	CME	Q	CONC

	Sample Name	AL	SB	AS	BA	BE	CD
1	STDBLK	.05206	.00153	-.00033	.00173	.00319	0
2	2-3.1	6.46439			8.26886	.46386	
3	2-3.2	31.5281			42.5196	2.28793	
4	2-3.3	61.6204			86.4447	4.46266	
5	4.1			.3316			.23986
6	4.2			.63746			.45413
7	4.3			1.32499			.95026
8	1.1						
9	1.2						
10	1.3						
11	CCVAC	10.26	-.0563	5.235	9.671	1.023	1.007
12	CCB	-.0087	.0029	-.0285	.0047	-.0001	.0019
13	ICSA	486.5	-.0056	.0767	.0187	.0002	.0027
14	ICSAB	486.2	.0083	.1440	.4658	.4552	.9365
15	PB 1563	.0465	-.0012	-.0340	.0001	-.0001	.0013
16	LCS 1563	L-.0137	L.0066	L-.0254	L.0001	L-.0001	L.0026
17	SpBLK 1563	-.0173	.0867	L.0219	L.0001	-.0001	L.0054
18	9883-4	65.44	.0013	.0333	.4432	.0024	.0163
19	9883-4MS1	70.78	.0014	.1035	.4644	.0031	.0156
20	9883-4MSD1	69.87	.0155	.0909	.5148	.0030	.0147
21	CCVAC	10.12	-.0612	5.250	9.602	1.029	1.002
22	CCB	-.0070	.0041	-.0270	.0052	-.0001	.0009
23	9883-5	63.63	.0030	.0376	.3407	.0023	.0031
24	9883-6	33.87	-.0296	.0387	.1742	.0009	.0042
25	9883-7	36.86	-.0325	.0140	.0689	.0010	-.0016
26	9883-8	22.03	-.0324	.0132	.0625	.0008	.0005
27	9883-9	38.49	-.0169	.0517	.2099	.0015	.0033
28	9883-10	37.74	-.0357	.0218	.0612	.0010	-.0049
29	9883-11	19.56	-.0202	.0264	.0466	.0006	.0114
30	9883-12	32.42	-.0357	-.0009	.0537	.0011	-.0026
31	9883-13	29.87	-.0281	.0254	.0746	.0009	-.0007
32	CCVAC	10.02	-.0434	5.190	9.422	1.016	1.002
33	CCB	-.0106	.0076	-.0143	.0055	-.0001	.0004
34	9883-14	34.04	.0077	.0256	.1676	.0009	.0022
35	9883-15	40.48	.0130	.0344	.4658	.0015	.0077
36	ICSA	478.7	-.0142	.1280	.0184	-.0000	-.0002
37	ICSAB	480.7	.0023	.1682	.4598	.4513	.9253
38	CCVAC	10.09	-.0502	5.197	9.520	1.022	.9986
39	CCB	-.0101	.0085	-.0193	.0058	-.0001	.0011
40	PB 1571	-.0129	.0064	-.0285	.0001	-.0001	.0026
41	LCS 1571	17.64	1.613	1.818	17.81	.5260	.9453
42	SpBLK 1571	1.938	.4650	1.980	1.825	.0517	.0505
43	9883-4	65.34	-.0066	.0738	.4161	.0029	.0124
44	9883-5	55.47	.0040	-.0024	.2970	.0020	.0017
45	9883-6	29.11	-.0288	.0271	.0694	.0006	.0039
46	9883-7	27.12	-.0499	.0226	.0625	.0005	.0015
47	9883-8	19.31	-.0278	.0010	.0387	.0004	-.0015
48	9883-9	38.91	.0141	.0965	.1973	.0013	.0072
49	9883-10	27.22	-.0254	.0064	.0474	.0006	.0009
50	CCVAC	10.04	-.0570	5.159	9.420	1.010	.9894
51	CCB	.0024	-.0027	-.0291	.0054	-.0001	.0030
52	9883-11	25.96	-.0343	.0172	.0527	.0007	.0061
53	9883-12	25.76	-.0262	-.0019	.0499	.0006	-.0015

#	Sample Name	AL	SB	AS	BA	BE	CD
54	9883-13	19.26	-.0431	-.0154	.0450	.0006	-.0021
55	9883-14	30.50	.0004	.0208	.1210	.0009	.0015
56	9883-14MS1	32.17	.3263	1.861	1.894	.0500	.0460
57	9883-14MSD1	31.51	.3144	1.912	1.930	.0505	.0476
58	9883-15	36.78	.0080	.0156	.3745	.0013	.0072
59	PB DISS1	.0310	.0047	-.0288	.0046	-.0001	.0009
60	LCS DISS1	17.66	1.668	1.824	17.84	.5351	.9718
61	9887-1	-.0201	.0023	-.0233	.0044	-.0001	.0030
62	CCVAC	9.965	-.0535	5.100	9.348	1.005	.9807
63	CCB	.0036	.0073	-.0301	.0054	-.0001	.0041
64	9887-1MS1	2.032	.4671	2.141	1.891	.0522	.0533
65	9887-1MSD1	2.034	.4663	2.119	1.898	.0526	.0574
66	9887-2	-.0152	.0017	.0098	.1534	-.0001	.0027
67	9888-1	-.0140	.0000	-.0234	.0001	-.0002	.0026
68	9888-1MS1	2.068	.4874	2.153	1.915	.0532	.0539
69	9888-1MSD1	2.072	.4936	2.159	1.922	.0534	.0535
70	9888-2	-.0161	.0061	.0035	.1308	-.0002	.0027
71	116487-1	-.0150	.0097	-.0066	.1286	-.0001	.0010
72	116487-2	-.0114	.0070	.0172	.0833	-.0001	.0022
73	CCVAC	9.843	-.0546	5.126	9.155	1.001	.9819
74	CCB	.0085	-.0024	-.0149	.0061	-.0001	.0018
75	ICSA	483.8	.0182	.1186	.0183	.0001	.0034
76	ICSAB	483.6	-.0153	.1739	.4583	.4552	.9370
77	CCVAC	9.953	-.0582	5.189	9.335	1.010	.9877
78	CCB	.0119	-.0015	-.0210	.0077	.0002	.0012
79	CCVAC	Q-.0453	.0008	Q.0033	Q.0000	Q-.0007	Q.0034
80	CCB	-.0572	-.0056	-.0276	-.0003	-.0006	.0030
81	ICSA	461.6	.0199	.1793	.0187	-.0000	.0011
82	ICSAB	478.2	-.0026	.1881	.4528	.4547	.9226

#	Sample Name	CA	CR	CO	CU	fe	FEHIGH
1	STDBLK	.00619	.00293	.00153	.00253	.00693	.00166
2	2-3.1		.68666	1.48006	.63346	3.8068	.3722
3	2-3.2		3.31406	7.10879	3.12953	18.318	1.78893
4	2-3.3		6.4312	13.8013	6.12759	35.2244	3.47893
5	4.1						
6	4.2						
7	4.3						
8	1.1	10.1119					
9	1.2	47.9756					
10	1.3	90.4761					
11	CCVAC	20.75	2.076	5.243	2.023	10.46	10.14
12	CCB	-.0720	-.0021	-.0035	-.0030	-.0087	.0046
13	ICSA	461.1	.0088	.0059	.0064	175.7	164.9
14	ICSAB	471.5	.4621	.4583	.4917	177.1	167.5
15	PB 1563	-.0099	-.0032	-.0030	-.0043	.0110	.0103
16	LCS 1563	L-.0828	L.0200	L-.0035	L-.0051	L-.0154	-.0438
17	SpBLK 1563	-.0795	L-.0014	-.0030	-.0046	-.0207	-.0345
18	9883-4	22.96	.2737	.2281	1.024	166.8	157.4
19	9883-4MS1	35.73	.2681	.2192	1.280	183.9	174.6
20	9883-4MSD1	22.59	.3026	.2258	1.545	181.5	172.4
21	CCVAC	20.74	2.074	5.239	2.011	10.35	10.10

#	Sample Name	CA	CR	CO	CU	fe	FEHIGH
22	CCB	-.0686	-.0021	-.0025	-.0040	-.0081	.0084
23	9883-5	22.74	.3152	.3230	.2199	207.7	197.7
24	9883-6	7.461	.7405	.6980	.2475	344.6	335.1
25	9883-7	5.556	.8065	.7053	.1091	329.6	321.0
26	9883-8	5.107	.6912	.6013	.2207	296.6	286.3
27	9883-9	11.84	.4647	.4064	.1942	230.4	220.1
28	9883-10	3.774	.6288	.7578	.1252	338.2	329.0
29	9883-11	4.609	.5192	.7062	.4273	430.8	423.9
30	9883-12	9.285	.6027	.7913	.0960	371.6	363.3
31	9883-13	6.847	.6925	.7896	.1426	361.0	353.0
32	CCVAC	20.79	2.064	5.218	1.980	10.22	10.09
33	CCB	-.0678	-.0009	-.0035	-.0032	-.0019	.0102
34	9883-14	8.120	.0479	.0248	.1977	142.0	134.1
35	9883-15	12.19	.4185	.0512	.0735	90.95	85.46
36	ICSA	462.0	.0085	.0049	.0059	172.9	163.3
37	ICSAB	464.8	.4554	.4513	.4859	173.8	164.5
38	CCVAC	20.65	2.069	5.236	1.999	10.29	10.11
39	CCB	-.0642	-.0012	-.0030	-.0038	.0046	-.0102
40	PB 1571	-.0697	-.0016	-.0021	-.0048	-.0112	-.0121
41	LCS 1571	24.37	.9536	4.860	2.390	9.600	9.374
42	SpBLK 1571	-.0625	.1963	.5029	.2397	.9913	.9714
43	9883-4	23.71	.3782	.2103	1.818	182.4	173.1
44	9883-5	18.59	.3047	.2489	.1945	169.6	160.6
45	9883-6	6.243	.6377	.6824	.1873	336.7	327.9
46	9883-7	4.193	.4938	.6550	.0864	303.4	294.0
47	9883-8	4.804	.4724	.6188	.1586	292.6	282.7
48	9883-9	21.98	.5296	.3526	.1707	204.0	194.9
49	9883-10	3.604	.4599	.7387	.0942	329.5	321.0
50	CCVAC	20.49	2.041	5.166	1.986	10.15	9.960
51	CCB	-.0355	-.0003	-.0023	-.0022	.0041	.0009
52	9883-11	5.832	.6219	.6861	.4580	382.2	374.4
53	9883-12	4.607	.4022	.7286	.0998	324.5	315.8
54	9883-13	8.001	.5169	.7141	.0883	302.5	293.0
55	9883-14	7.601	.0271	.0169	.0762	64.68	60.52
56	9883-14MS1	7.432	.2246	.4814	.2951	60.46	56.37
57	9883-14MSD1	7.339	.2114	.4872	.3018	67.10	62.80
58	9883-15	10.96	.0482	.0365	.1137	77.48	72.71
59	PB DISS1	.0210	-.0016	-.0028	-.0016	.0119	.0289
60	LCS DISS1	26.22	.9892	4.927	2.400	9.638	9.522
61	9887-1	-.0060	-.0015	-.0028	-.0046	-.0187	-.0289
62	CCVAC	20.39	2.032	5.144	1.976	10.15	9.929
63	CCB	-.0341	.0000	-.0014	-.0016	.0024	.0120
64	9887-1MS1	-.0054	.2093	.5419	.2512	1.036	1.036
65	9887-1MSD1	-.0074	.2104	.5424	.2525	1.040	1.021
66	9887-2	56.51	-.0018	-.0030	-.0059	.8809	.8190
67	9888-1	-.0088	-.0023	-.0025	-.0046	-.0191	-.0418
68	9888-1MS1	-.0141	.2141	.5503	.2555	1.058	1.052
69	9888-1MSD1	-.0107	.2140	.5494	.2566	1.059	1.080
70	9888-2	54.78	-.0005	-.0007	-.0056	5.294	4.906
71	116487-1	269.7	-.0038	-.0011	-.0059	-.0016	-.0324
72	116487-2	414.4	-.0013	-.0007	-.0046	-.0185	-.0455
73	CCVAC	20.44	2.036	5.164	1.936	10.17	9.984
74	CCB	-.0394	-.0003	-.0023	-.0022	.0108	.0158
75	ICSA	463.4	.0106	.0052	.0067	174.8	165.3

#	Sample Name	CA	CR	CO	CU	fe	FEHIGH
76	ICSAB	469.7	.4598	.4599	.4891	175.8	166.8
77	CCVAC	20.47	2.047	5.191	1.967	10.21	10.08
78	CCB	-.0280	-.0015	-.0021	-.0022	.0143	-.0010
79	CCVAC	Q-.0695	Q-.0014	Q-.0016	Q-.0070	Q-.0169	Q-.0456
80	CCB	-.0742	-.0040	-.0035	-.0083	-.0185	-.0640
1	ICSA	448.6	.0083	.0026	.0053	168.6	159.4
82	ICSAB	468.7	.4575	.4545	.4810	174.7	166.2

	Sample Name	PB	MG	MN	NI	K	AG
1	STDBLK	.00079	.01106	.00006	-.00059	.01313	-.00273
2	2-3.1			.42379	1.09146		.5026
3	2-3.2			2.04806	5.25333		2.45219
4	2-3.3			3.96866	10.1713		4.81473
5	4.1	.25213					
6	4.2	.47786					
7	4.3	.99813					
8	1.1		6.89866			.23126	
9	1.2		33.6424			1.10093	
10	1.3		64.4417			2.11006	
11	CCVAC	5.070	20.12	1.031	5.248	19.82	1.005
12	CCB	-.0160	-.0685	-.0004	.0086	-.2658	.0026
13	ICSA	.0573	473.3	.0096	.0311	-.4779	-.0020
14	ICSAB	.9932	476.1	.4652	.9203	-.2402	.9711
15	PB 1563	-.0072	-.0047	.0003	-.0046	-.3402	-.0020
16	LCS 1563	L.0172	L-.0685	L.0003	L.0012	L-.4022	L.0187
17	SpBLK 1563	L.0121	-.0693	.0003	.0038	-.0426	L-.0021
18	9883-4	5.003	332.7	2.987	1.584	4.030	.0012
19	9883-4MS1	5.920	312.0	3.498	1.421	4.428	.0008
20	9883-4MSD1	8.925	313.6	3.112	1.469	5.310	.0004
21	CCVAC	5.051	19.93	1.028	5.253	19.36	1.003
22	CCB	-.0045	-.0653	-.0002	.0073	-.3278	.0029
23	9883-5	3.948	514.4	3.820	2.436	3.297	-.0003
24	9883-6	7.536	H1249.	6.949	5.976	-.9855	-.0005
25	9883-7	9.721	H1187.	7.041	5.745	-.6824	-.0010
26	9883-8	16.74	H1070.	5.764	5.222	-.8767	-.0003
27	9883-9	23.13	700.9	4.243	3.314	4.343	-.0016
28	9883-10	5.469	H1337.	7.530	6.425	-1.196	-.0001
29	9883-11	5.128	H1224.	6.980	5.944	-1.379	-.0015
30	9883-12	7.620	H1310.	7.685	6.362	-1.312	-.0017
31	9883-13	15.10	H1287.	7.720	6.167	-.8414	-.0009
32	CCVAC	5.050	19.52	1.014	5.207	19.60	.9976
33	CCB	-.0109	-.0469	-.0004	.0040	-.1543	.0021
34	9883-14	.3884	24.85	1.034	.0691	3.360	-.0006
35	9883-15	16.16	69.11	1.125	.2466	6.712	-.0011
36	ICSA	.0772	464.6	.0097	.0096	-.1732	-.0011
37	ICSAB	.9798	468.1	.4571	.8813	-.1182	.9611
38	CCVAC	5.059	19.83	1.022	5.192	19.51	.9989
39	CCB	-.0069	-.0286	-.0004	-.0008	-.3651	.0018
40	PB 1571	-.0021	-.0637	-.0002	-.0150	.1805	-.0005
41	LCS 1571	.9613	22.37	1.446	3.874	23.13	.9542
42	SpBLK 1571	.4859	-.0747	.4979	.5107	-.0880	.0477
43	9883-4	9.051	323.3	2.923	1.454	4.125	-.0001

#	Sample Name	PB	MG	MN	NI	K	AG
44	9883-5	2.909	387.0	3.034	1.876	2.928	-.0012
45	9883-6	5.742	H1199.	6.804	5.608	-1.022	.0004
46	9883-7	5.694	H1100.	6.205	5.379	-.4785	-.0022
47	9883-8	10.34	H1079.	5.796	5.168	-.9543	.0004
48	9883-9	26.95	627.3	3.630	2.811	3.676	-.0009
49	9883-10	2.317	H1188.	7.221	5.444	-1.358	-.0012
50	CCVAC	5.001	19.55	1.006	5.112	19.83	1.032
51	CCB	-.0014	-.0103	.0000	-.0011	.0193	.0013
52	9883-11	6.146	H1235.	6.563	5.779	-1.478	-.0015
53	9883-12	5.662	H1178.	6.961	6.023	-.9028	-.0005
54	9883-13	5.628	H1224.	6.214	5.645	-1.790	-.0022
55	9883-14	.2630	21.45	.7529	.0243	2.116	-.0010
56	9883-14MS1	.6147	20.68	1.211	.4924	3.562	.0411
57	9883-14MSD1	.6656	19.95	1.142	.5091	3.309	.0438
58	9883-15	.5791	45.95	.9870	.1448	7.119	-.0028
59	PB DISS1	-.0120	.0049	.0000	.0111	-.5758	-.0014
60	LCS DISS1	.9760	23.97	1.487	4.001	23.80	.9930
61	9887-1	-.0008	-.0550	.0013	.0005	.0566	-.0013
62	CCVAC	4.941	19.62	1.003	5.095	19.39	1.007
63	CCB	.0060	-.0166	.0003	.0025	.1185	.0023
64	9887-1MS1	.5236	-.0763	.5301	.5519	-.0381	.0489
65	9887-1MSD1	.5293	-.0723	.5327	.5562	-.2117	.0484
66	9887-2	-.0073	11.96	1.540	-.0021	4.392	-.0004
67	9888-1	-.0031	-.0670	.0010	.0131	-.2286	-.0004
68	9888-1MS1	.5490	-.0611	.5396	.5476	.1975	.0497
69	9888-1MSD1	.5253	-.0746	.5396	.5664	-.1373	.0511
70	9888-2	-.0087	12.45	2.918	.0068	4.687	-.0005
71	116487-1	-.0129	166.2	.2754	.0205	4.546	-.0012
72	116487-2	-.0230	264.8	.2744	.0144	5.062	-.0013
73	CCVAC	5.001	19.40	1.005	5.129	19.09	.9808
74	CCB	-.0014	-.0063	.0008	.0086	.0194	.0029
75	ICSA	.0663	469.6	.0100	.0202	-.1702	-.0008
76	ICSAB	.9751	473.6	.4621	.9001	-.2917	.9726
77	CCVAC	4.998	19.65	1.013	5.138	19.14	.9859
78	CCB	.0033	.0065	.0008	.0073	-.4394	.0023
79	CCVAC	Q-.0017	Q-.0590	Q.0008	Q.0033	Q1.594	Q-.0052
80	CCB	-.0193	-.0813	.0003	.0058	.7013	-.0067
81	ICSA	.0706	450.5	.0101	.0131	-.3102	-.0028
82	ICSAB	.9963	468.7	.4619	.9160	-.4571	.9557

#	Sample Name	NA	V	ZN	Se	B	Mo
1	STDBLK	.14059	.0006	.0006	-.00159	.00293	0
2	2-3.1		1.29946	.40299			
3	2-3.2		6.36106	1.9456			
4	2-3.3		12.4455	3.83279			
5	4.1				.12213		
6	4.2				.23193		
7	4.3				.47939		
8	1.1	8.7586					
9	1.2	42.4718					
10	1.3	80.2686					
11	CCVAC	20.50	5.135	1.044	5.060	-.0075	-.0019

#	Sample Name	NA	V	ZN	Se	B	Mo
12	CCB	.0145	-.0020	-.0019	.0171	-.0040	-.0001
13	ICSA	-.2450	.0061	.0607	.0151	-.0145	.0113
14	ICSAB	-.2839	.4634	1.005	-.0217	-.0321	.0134
15	PB 1563	-.4758	-.0033	.0023	-.0244	-.0127	.0010
16	LCS 1563	L-.4621	L-.0020	L-.0008	L.0109	-.0031	.0006
17	SpBLK 1563	-.4586	-.0012	-.0008	L-.0175	-.0172	.0013
18	9883-4	1.284	.2362	2.708	.0064	-.0163	.0127
19	9883-4MS1	1.358	.3343	2.860	.0238	-.0127	.0092
20	9883-4MSD1	1.427	.3180	3.453	-.0254	-.0145	.0102
21	CCVAC	20.04	5.131	1.043	5.107	-.0066	-.0022
22	CCB	-.0116	-.0023	-.0015	-.0196	-.0057	.0049
23	9883-5	1.085	.2342	1.369	.0244	-.0119	.0095
24	9883-6	-.0339	.0782	2.474	.0470	-.0172	.0166
25	9883-7	.0486	.0852	2.196	.0380	-.0189	.0188
26	9883-8	-.0492	.0717	2.285	.0165	-.0048	.0152
27	9883-9	.2057	.1274	5.966	.0111	-.0233	.0102
28	9883-10	-.0647	.0639	.4462	.0553	-.0163	.0170
29	9883-11	-.1397	.0615	2.059	.0768	-.0172	.0213
30	9883-12	.0488	.0826	1.785	.0678	-.0136	.0127
31	9883-13	.0313	.0815	2.069	.0131	-.0189	.0191
32	CCVAC	19.70	5.089	1.042	5.049	-.0075	-.0001
33	CCB	-.0059	-.0023	-.0012	-.0161	-.0022	.0049
34	9883-14	-.0537	.0983	.3579	.0297	-.0242	.0170
35	9883-15	-.2519	.1390	.5503	-.0125	-.0251	.1697
36	ICSA	-.2391	.0078	.0615	-.0272	-.0189	.0120
37	ICSAB	-.2872	.4585	.9943	.0524	-.0303	.0142
38	CCVAC	20.12	5.107	1.045	5.081	-.0084	-.0022
39	CCB	.0079	-.0028	-.0018	-.0231	-.0031	.0021
40	PB 1571	-.4484	-.0025	.0016	-.0224	-.0207	-.0001
41	LCS 1571	23.89	4.738	1.998	.9818	-.0075	-.0001
42	SpBLK 1571	-.4235	.4815	.5067	1.948	-.0092	-.0008
43	9883-4	1.119	.2996	3.858	.0071	-.0189	.0145
44	9883-5	1.131	.2058	.9591	.0049	.0022	.0081
45	9883-6	.0042	.0782	2.198	.0138	-.0259	.0149
46	9883-7	-.0835	.0705	1.650	.0533	-.0145	.0120
47	9883-8	-.0999	.0574	2.572	.0498	-.0198	.0149
48	9883-9	.4041	.1264	6.172	-.0305	-.0172	.0142
49	9883-10	-.1683	.0565	.5154	.0872	-.0216	.0159
50	CCVAC	20.23	5.049	1.033	5.019	-.0110	.0006
51	CCB	-.0043	-.0015	-.0001	-.0217	-.0004	-.0004
52	9883-11	-.0534	.0673	1.944	.0616	-.0101	.0181
53	9883-12	-.0941	.0636	1.506	-.0070	-.0163	.0181
54	9883-13	-.0671	.0595	1.155	.0041	-.0207	.0152
55	9883-14	.0232	.0890	.2651	-.0292	-.0242	.0049
56	9883-14MS1	-.0163	.5350	.6804	1.816	-.0180	.0085
57	9883-14MSD1	-.0692	.5422	.7035	1.866	-.0268	.0099
58	9883-15	.4577	.1388	.4376	-.0028	-.0207	.0092
59	PB DISS1	-.0087	-.0033	.0008	-.0016	.0022	.0010
60	LCS DISS1	22.50	4.781	2.068	.9542	-.0127	-.0011
61	9887-1	-.4899	-.0018	-.0001	-.0134	-.0321	.0006
62	CCVAC	20.08	5.015	1.030	5.003	-.0084	.0003
63	CCB	.0012	-.0015	.0002	-.0321	-.0048	.0035
64	9887-1MS1	-.4768	.5109	.5488	2.119	-.0330	.0017
65	9887-1MSD1	-.4768	.5141	.5491	2.115	-.0312	-.0008

#	Sample Name	NA	V	ZN	Se	B	Mo
66	9887-2	8.068	-.0016	-.0015	.0005	.0119	.0017
7	9888-1	-.4857	-.0026	.0012	.0054	-.0365	.0013
68	9888-1MS1	-.4822	.5222	.5563	2.108	-.0312	-.0008
69	9888-1MSD1	-.4822	.5199	.5545	2.118	-.0303	-.0001
0	9888-2	9.917	-.0014	-.0009	-.0168	.0242	.0035
1	116487-1	113.4	-.0046	.1922	L-.0619	.0180	-.0001
72	116487-2	174.2	-.0033	.1084	-.0300	.0356	.0010
73	CCVAC	19.34	4.989	1.031	4.978	-.0092	.0021
4	CCB	-.0078	-.0023	.0015	.0047	-.0057	.0017
75	ICSA	-.2380	.0084	.0607	.0636	-.0189	.0142
76	ICSAB	-.2805	.4632	1.008	-.0412	-.0347	.0120
77	CCVAC	19.73	5.043	1.038	5.163	-.0101	-.0011
78	CCB	.0126	-.0012	.0019	.0047	-.0040	-.0001
79	CCVAC	Q-.3923	Q-.0018	Q-.0032	Q-.0196	-.0391	.0028
0	CCB	-.4019	-.0041	-.0036	-.0383	-.0400	-.0001
1	ICSA	-.2547	.0089	.0584	.0088	-.0163	.0142
82	ICSAB	-.2899	.4624	.9993	-.0114	-.0330	.0063

#	Sample Name	Sr	Ti	Sn	Tl
1	STDBLK	.00026	.00106	.0004	-.00133
2	2-3.1				
3	2-3.2				
4	2-3.3				
5	4.1				.29266
6	4.2				.55113
7	4.3				1.13873
8	1.1				
9	1.2				
10	1.3				
1	CCVAC	-.0000	.0004	-.0055	5.128
2	CCB	-.0002	.0005	-.0101	.0060
13	ICSA	.0108	-.0084	.0025	-.0043
14	ICSAB	.0108	-.0074	.0094	-.0478
5	PB 1563	-.0004	-.0002	.0048	-.0097
16	LCS 1563	-.0004	.0002	-.0135	L.0400
17	SpBLK 1563	-.0004	-.0003	.0025	.0534
8	9883-4	.1551	3.165	.1799	L-.0527
19	9883-4MS1	.1649	3.642	-.0490	L-.0576
20	9883-4MSD1	.1461	3.514	-.0250	-.0378
1	CCVAC	-.0001	.0011	-.0032	5.063
2	CCB	-.0002	.0007	.0059	.0025
23	9883-5	.1602	2.710	-.0467	L-.0721
24	9883-6	.1483	.6653	.0036	-.0305
5	9883-7	.0938	.5763	.0025	L-.0805
26	9883-8	.0725	.6067	-.0009	L-.0696
27	9883-9	.1888	1.707	-.0181	-.0414
8	9883-10	.0833	.4092	.0162	.0051
29	9883-11	.0631	.4277	.0197	L-.0673
30	9883-12	.1736	.6918	-.0090	L-.0724
1	9883-13	.0910	.6995	-.0055	L-.1087
2	CCVAC	-.0001	.0006	.0036	5.039
33	CCB	-.0001	.0007	-.0055	.0312

10210

#	Sample Name	Sr	Ti	Sn	Tl
34	9883-14	.0339	1.189	.0929	.0089
35	9883-15	.0482	1.957	-.0204	-.0374
36	ICSA	.0106	-.0066	.0002	.0719
37	ICSAB	.0104	-.0068	.0048	.0084
38	CCVAC	-.0001	.0006	.0048	5.035
39	CCB	-.0002	.0007	.0082	-.0296
40	PB 1571	-.0003	.0002	-.0009	-.0284
41	LCS 1571	.0001	.0002	.0025	1.770
42	SpBLK 1571	-.0002	.0008	-.0032	1.965
43	9883-4	.1426	3.637	.0734	-.0168
44	9883-5	.1563	2.578	-.0456	L-.0705
45	9883-6	.1088	.7945	-.0067	L-.0802
46	9883-7	.0640	.6793	.0094	L-.0584
47	9883-8	.0556	.6799	.0059	-.0315
48	9883-9	.1321	1.851	-.0009	L-.0911
49	9883-10	.1138	.5122	.0013	L-.1376
50	CCVAC	-.0001	.0008	.0036	5.019
51	CCB	-.0002	.0008	.0048	-.0092
52	9883-11	.0842	.5951	.0460	L-.1168
53	9883-12	.0733	.8420	.0071	L-.1149
54	9883-13	.0650	.6620	.0025	L-.1203
55	9883-14	.0302	1.039	-.0044	-.0008
56	9883-14MS1	.0299	1.047	-.0158	1.804
57	9883-14MSD1	.0420	.9990	-.0055	1.804
58	9883-15	.0438	1.955	-.0044	.0005
59	PB DISS1	-.0002	.0000	-.0009	.0528
60	LCS DISS1	-.0001	.0010	.0185	1.863
61	9887-1	-.0003	.0003	-.0032	-.0325
62	CCVAC	-.0002	.0006	.0048	4.970
63	CCB	-.0002	.0007	-.0009	-.0191
64	9887-1MS1	-.0003	.0005	-.0021	2.098
65	9887-1MSD1	-.0003	.0003	-.0078	2.130
66	9887-2	.2286	.0000	.0208	-.0172
67	9888-1	-.0002	.0005	-.0021	-.0015
68	9888-1MS1	-.0003	.0008	-.0032	2.116
69	9888-1MSD1	-.0003	.0007	-.0090	2.101
70	9888-2	.2323	-.0005	.0162	-.0330
71	116487-1	.7069	-.0030	.0219	-.0233
72	116487-2	.9740	-.0048	.0242	-.0327
73	CCVAC	-.0002	.0012	.0036	4.967
74	CCB	-.0001	.0005	-.0021	-.0016
75	ICSA	.0106	-.0073	-.0044	-.0114
76	ICSAB	.0106	-.0073	.0002	.0100
77	CCVAC	-.0001	.0007	.0025	5.095
78	CCB	-.0002	.0003	-.0021	.0066
79	CCVAC	-.0003	.0012	-.0055	Q-.0115
80	CCB	-.0005	.0007	-.0032	.0090
81	ICSA	.0100	-.0056	-.0067	.0062
82	ICSAB	.0105	-.0054	.0002	-.0149

Method: MRD4PT Standard: STDBLK

Elem	AL	SB	AS	BA	BE	CD	CA
Avge	.0521	.0015	-.0003	.0017	.0032	-.0000	.0062
SDev	.0004	.0009	.0023	.0001	.0000	.0005	.0003
%RSD	.7996	61.64	682.3	6.662	.0000	3636e6	5.587
#1	.0524	.0026	.0022	.0018	.0032	-.0006	.0064
#2	.0522	.0008	-.0022	.0016	.0032	.0004	.0058
#3	.0516	.0012	-.0010	.0018	.0032	.0002	.0064

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Avge	.0029	.0015	.0025	.0069	.0017	.0008	.0111
SDev	.0004	.0003	.0001	.0003	.0001	.0018	.0013
%RSD	14.19	19.92	4.558	4.406	6.928	222.2	11.62
#1	.0034	.0018	.0026	.0066	.0016	.0014	.0120
#2	.0028	.0016	.0026	.0072	.0016	.0022	.0096
#3	.0026	.0012	.0024	.0070	.0018	-.0012	.0116

Elem	MN	NI	K	AG	NA	V	ZN
Avge	.0001	-.0006	.0131	-.0027	.1406	.0006	.0006
SDev	.0001	.0003	.0011	.0001	.0029	.0000	.0002
%RSD	173.2	57.74	8.387	4.225	2.095	.0000	33.33
#1	.0000	-.0008	.0144	-.0028	.1380	.0006	.0004
#2	.0002	-.0008	.0126	-.0026	.1438	.0006	.0006
#3	.0000	-.0002	.0124	-.0028	.1400	.0006	.0008

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Avge	-.0016	.0029	.0000	.0003	.0011	.0004	-.0013
SDev	.0024	.0003	.0000	.0001	.0002	.0005	.0030
%RSD	147.4	10.41	.0000	43.30	21.65	132.3	227.2
#1	-.0042	.0030	.0000	.0002	.0008	.0002	-.0048
#2	.0004	.0026	.0000	.0004	.0012	.0010	.0000
#3	-.0010	.0032	.0000	.0002	.0012	.0000	.0008

Standardization Rpt. Wed 09-21-94 10:22:51 AM page 1

S

Method: MRD4PT Standard: 2-3.1

Elem	AL	BA	BE	CR	CO	CU	fe
Avge	6.464	8.269	.4639	.6867	1.480	.6335	3.807
SDev	.033	.053	.0019	.0019	.003	.0043	.011
%RSD	.5168	.6425	.4006	.2753	.2069	.6818	.2830
#1	6.497	8.324	.4654	.6852	1.478	.6380	3.815
#2	6.431	8.218	.4618	.6860	1.478	.6294	3.795
#3	6.465	8.265	.4644	.6888	1.484	.6330	3.811

Elem	FEHIGH	MN	NI	AG	V	ZN
Avge	.3722	.4238	1.091	.5026	1.299	.4030
SDev	.0013	.0005	.01	.0014	.003	.0003
%RSD	.3356	.1249	.8712	.2785	.2351	.0860
#1	.3712	.4244	1.082	.5016	1.303	.4032
#2	.3718	.4234	1.101	.5020	1.297	.4026
#3	.3736	.4236	1.091	.5042	1.299	.4032

10213

Standardization Rpt. Wed 09-21-94 10:26:18 AM page 1

S

Method: MRD4PT Standard: 2-3.2

Elem	AL	BA	BE	CR	CO	CU	fe
Avge	31.53	42.52	2.288	3.314	7.109	3.130	18.32
SDev	.32	.63	.018	.013	.041	.042	.13
%RSD	1.017	1.481	.7937	.4050	.5737	1.351	.7011
#1	31.59	42.62	2.284	3.304	7.088	3.136	18.27
#2	31.18	41.85	2.272	3.309	7.083	3.084	18.22
#3	31.82	43.09	2.308	3.329	7.156	3.168	18.46

Elem	FEHIGH	MN	NI	AG	V	ZN
Avge	1.789	2.048	5.253	2.452	6.361	1.946
SDev	.011	.012	.049	.014	.047	.011
%RSD	.6214	.6061	.9264	.5544	.7377	.5495
#1	1.784	2.041	5.210	2.448	6.354	1.936
#2	1.781	2.041	5.243	2.441	6.318	1.944
#3	1.802	2.062	5.306	2.467	6.411	1.957

CGK

Standardization Rpt. Wed 09-21-94 10:29:44 AM page 1

Method: MRD4PT Standard: 2-3.3 S

Elem	AL	BA	BE	CR	CO	CU	fe
Avge	61.62	86.44	4.463	6.431	13.80	6.128	35.22
SDev	.62	1.21	.033	.016	.04	.085	.17
%RSD	1.003	1.400	.7301	.2540	.2679	1.389	.4759
#1	61.07	85.37	4.435	6.413	13.76	6.055	35.05
#2	62.29	87.75	4.498	6.445	13.82	6.221	35.39
#3	61.50	86.21	4.455	6.436	13.82	6.106	35.23

Elem	FEHIGH	MN	NI	AG	V	ZN
Avge	3.479	3.969	10.17	4.815	12.45	3.833
SDev	.010	.015	.03	.024	.07	.009
%RSD	.3001	.3819	.3278	.5055	.5852	.2412
#1	3.468	3.953	10.13	4.791	12.38	3.822
#2	3.489	3.983	10.20	4.840	12.52	3.839
#3	3.480	3.970	10.18	4.813	12.44	3.837

Cal

Standardization Rpt. S Wed 09-21-94 10:33:09 AM page 1

Method: MRD4PT Standard: 4.1

Elem	AS	CD	PB	Se	Tl
Avge	.3316	.2399	.2521	.1221	.2927
SDev	.0042	.0006	.0031	.0008	.0042
%RSD	1.264	.2680	1.214	.6818	1.449
#1	.3280	.2396	.2486	.1224	.2920
#2	.3362	.2394	.2538	.1212	.2972
#3	.3306	.2406	.2540	.1228	.2888

Cal

10216

Standardization Rpt. Wed 09-21-94 10:36:33 AM page 1

Method: MRD4PT Standard: 4.2 S

Elem	AS	CD	PB	Se	Tl
Avge	.6375	.4541	.4779	.2319	.5511
SDev	.0026	.0001	.0046	.0082	.0123
%RSD	.4083	.0254	.9675	3.524	2.226
#1	.6376	.4542	.4832	.2232	.5644
#2	.6348	.4542	.4750	.2332	.5488
#3	.6400	.4540	.4754	.2394	.5402

10217

Standardization Rpt. Wed 09-21-94 10:39:57 AM page 1

Method: MRD4PT Standard: S 4.3

Elem	AS	CD	PB	Se	Tl
Avge	1.325	.9503	.9981	.4794	1.139
SDev	.005	.0060	.0113	.0043	.010
%RSD	.3559	.6322	1.137	.9035	.9008
#1	1.321	.9466	.9852	.4800	1.128
#2	1.324	.9470	1.003	.4834	1.148
#3	1.330	.9572	1.006	.4748	1.141

10218

Standardization Rpt. Wed 09-21-94 10:43:21 AM page 1

Method: MRD4PT Standard: 1.1 S

Elem	CA	MG	K	NA
Avge	10.11	6.899	.2313	8.759
SDev	.01	.039	.0026	.114
%RSD	.1474	.5625	1.112	1.303
#1	10.11	6.931	.2294	8.783
#2	10.13	6.856	.2302	8.634
#3	10.10	6.909	.2342	8.859

Cal

10219

Standardization Rpt. Wed 09-21-94 10:46:44 AM page 1

S

Method: MRD4PT Standard: 1.2

Elem	CA	MG	K	NA
Avge	47.98	33.64	1.101	42.47
SDev	.16	.11	.002	.20
%RSD	.3430	.3305	.1993	.4623
#1	47.82	33.51	1.098	42.25
#2	47.95	33.70	1.102	42.63
#3	48.15	33.72	1.102	42.53

Ca

10220

Standardization Rpt. Wed 09-21-94 10:50:08 AM page 1

Method: MRD4PT Standard: 1.3 S

Elem	CA	MG	K	NA
Avge	90.48	64.44	2.110	80.27
SDev	.29	.25	.013	.58
%RSD	.3183	.3926	.6309	.7216
#1	90.15	64.32	2.113	80.49
#2	90.59	64.28	2.096	79.61
#3	90.69	64.73	2.122	80.71

Cal

10221

Standardization Report Wed 09-21-94 10:50:11 AM page 1

Method: MRD4PT Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AL	308.215	Multiple	Standards	3.18084	-.169177	09/21/94 10:26:24
SB	206.838	Multiple	Standards	4.41137	-.006829	09/21/94 10:26:24
AS	193.696	Multiple	Standards	7.63635	.002448	09/21/94 10:36:39
BA	493.409	Multiple	Standards	2.36059	.000158	09/21/94 10:26:24
BE	313.042	Multiple	Standards	1.06355	-.003464	09/21/94 10:26:24
CD	228.802	Multiple	Standards	5.42111	-.000099	09/21/94 10:36:39
CA	317.933	Multiple	Standards	4.17529	-.045513	09/21/94 10:46:50
CR	267.716	Multiple	Standards	1.50864	-.004705	09/21/94 10:26:24
CO	228.616	Multiple	Standards	3.50519	-.006985	09/21/94 10:26:24
CU	324.754	Multiple	Standards	4.01339	-.010464	09/21/94 10:26:24
fe	259.940	Multiple	Standards	2.73169	-.022333	09/21/94 10:26:24
FEHIGH	271.441	Multiple	Standards	28.7946	-.051044	09/21/94 10:26:24
PB	220.353	Multiple	Standards	5.07326	-.004146	09/21/94 10:36:39
MG	279.010	Multiple	Standards	5.98591	-.077313	09/21/94 10:46:50
MN	257.610	Multiple	Standards	3.65168	-.000689	09/21/94 10:26:24
NI	231.604	Multiple	Standards	3.79795	.000971	09/21/94 10:26:24
K	766.491	Multiple	Standards	186.002	-2.44828	09/21/94 10:46:50
AG	328.068	Multiple	Standards	2.02434	.005307	09/21/94 10:26:24
NA	588.995	Multiple	Standards	4.78259	-.683719	09/21/94 10:46:50
V	292.402	Multiple	Standards	3.92612	-.003308	09/21/94 10:26:24
ZN	213.856	Multiple	Standards	5.14839	-.003577	09/21/94 10:26:24
Se	196.026	Multiple	Standards	10.3959	.016453	09/21/94 10:36:39
B	249.678	Multiple	Standards	13.1932	-.039142	09/21/94 10:26:24
Mo	202.030	Multiple	Standards	5.33781	-.000077	09/21/94 10:26:24
Sr	421.553	Multiple	Standards	.682474	-.000392	09/21/94 10:26:24
Ti	334.941	Multiple	Standards	2.51299	-.002843	09/21/94 10:26:24
Sn	189.989	Multiple	Standards	17.1675	-.006669	09/21/94 10:26:24
Tl	190.864	Multiple	Standards	8.77017	.011302	09/21/94 10:36:39

Analysis Report QC Standard ICV Wed 09-21-94 10:53:37 AM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 10:50:16
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.26	-.0563	5.235	9.671	1.023	1.007	20.75
SDev	.02	.0172	.019	.014	.001	.005	.03
%RSD	.1916	30.54	.3614	.1440	.0816	.4877	.1644
#1	10.24	-.0677	5.224	9.665	1.024	1.002	20.72
#2	10.27	-.0365	5.257	9.661	1.023	1.011	20.79
#3	10.27	-.0646	5.225	9.687	1.023	1.009	20.74
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.076	5.243	2.023	10.46	10.14	5.070	20.12
SDev	.000	.004	.004	.01	.05	.030	.03
%RSD	.0145	.0673	.1832	.0691	.4984	.6010	.1310
#1	2.076	5.243	2.021	10.45	10.13	5.059	20.10
#2	2.076	5.246	2.021	10.46	10.19	5.105	20.12
#3	2.075	5.239	2.028	10.46	10.09	5.047	20.15
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.031	5.248	19.82	1.005	20.50	5.135	1.044
SDev	.001	.073	.59	.001	.18	.004	.001
%RSD	.0717	1.393	2.993	.1178	.8981	.0684	.0572
#1	1.030	5.168	19.14	1.004	20.33	5.135	1.044
#2	1.032	5.266	20.22	1.006	20.48	5.132	1.045
#3	1.031	5.311	20.11	1.004	20.69	5.139	1.043
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.060	-.0075	-.0019	-.0000	.0004	-.0055	5.128
SDev	.054	.0000	.0031	.0002	.0000	.0040	.041
%RSD	1.073	.0000	166.0	562.1	.8435	71.76	.8021
#1	5.003	-.0075	-.0001	-.0001	.0004	-.0032	5.144
#2	5.111	-.0075	-.0001	-.0001	.0004	-.0101	5.081
#3	5.065	-.0075	-.0054	.0002	.0004	-.0032	5.158
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

Cal

10223

Analysis Report Blank Sample Wed 09-21-94 10:57:02 AM page 1

ICB

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 10:53:42
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0087	.0029	-.0285	.0047	-.0001	.0019	-.0720
SDev	.0042	.0018	.0134	.0003	.0000	.0035	.0029
%RSD	48.97	61.07	46.91	5.773	2.204	179.0	4.076
#1	-.0050	.0047	-.0433	.0049	-.0001	.0046	-.0689
#2	-.0133	.0029	-.0173	.0049	-.0001	.0033	-.0747
#3	-.0076	.0011	-.0250	.0044	-.0001	-.0020	-.0722
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0021	-.0035	-.0030	-.0087	.0046	-.0160	-.0685
SDev	.0005	.0007	.0005	.0005	.0307	.0154	.0099
%RSD	22.05	20.14	15.59	6.298	665.2	96.32	14.51
#1	-.0026	-.0028	-.0032	-.0081	.0399	-.0326	-.0796
#2	-.0020	-.0035	-.0024	-.0092	-.0159	-.0133	-.0605
#3	-.0017	-.0042	-.0032	-.0087	-.0102	-.0021	-.0653
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0004	.0086	-.2659	.0026	.0145	-.0020	-.0019
SDev	.0004	.0047	.0936	.0010	.0066	.0005	.0006
%RSD	96.85	55.37	35.22	39.35	45.55	23.17	30.43
#1	.0001	.0124	-.3651	.0037	.0222	-.0017	-.0016
#2	-.0007	.0101	-.2534	.0017	.0107	-.0018	-.0015
#3	-.0007	.0033	-.1790	.0025	.0107	-.0025	-.0025
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0171	-.0040	-.0001	-.0002	.0005	-.0101	.0060
SDev	.0248	.0040	.0000	.0001	.0003	.0034	.0190
%RSD	144.7	101.8	.0000	37.52	58.06	33.99	314.1
#1	-.0106	-.0048	-.0001	-.0001	.0007	-.0135	.0113
#2	.0372	-.0075	-.0001	-.0003	.0007	-.0067	.0218
#3	.0248	.0004	-.0001	-.0003	.0002	-.0101	-.0150
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	.0750	.0500	.0500	.0200	.0200	.0500	

CGL

10224

Analysis Report QC Standard Wed 09-21-94 11:00:26 AM page 1

Method: MRD4PT Sample Name: ICSA Operator: CME
Run Time: 09/21/94 10:57:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	486.5	-.0056	.0767	.0187	.0002	.0027	461.1
SDev	3.9	.0184	.0101	.0003	.0000	.0007	2.3
%RSD	.8083	326.7	13.11	1.455	.6984	25.67	.5017
#1	483.1	-.0094	.0655	.0190	.0002	.0036	458.7
#2	485.7	-.0218	.0799	.0186	.0002	.0024	461.2
#3	490.8	.0143	.0848	.0186	.0002	.0023	463.3
Errors	OC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	501.7						502.1
Range	102.5						102.6

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0088	.0059	.0064	175.7	164.9	.0573	473.3
SDev	.0005	.0015	.0000	1.1	.9	.0131	3.3
%RSD	5.254	24.87	.0000	.6375	.5634	22.77	.6904
#1	.0092	.0063	.0064	174.6	164.0	.0520	470.5
#2	.0089	.0042	.0064	175.5	164.9	.0722	472.6
#3	.0083	.0070	.0064	176.9	165.8	.0477	476.9
Errors	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass
Value				199.8			500.9
Range				40.85			102.4

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0096	.0311	-.4779	-.0020	-.2450	.0061	.0607
SDev	.0007	.0122	.2099	.0016	.0083	.0004	.0010
%RSD	6.826	39.18	43.93	77.27	3.387	6.110	1.719
#1	.0089	.0427	-.2449	-.0015	-.2505	.0059	.0596
#2	.0099	.0321	-.6522	-.0008	-.2355	.0058	.0617
#3	.0101	.0184	-.5367	-.0038	-.2491	.0065	.0607
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0151	-.0145	.0113	.0108	-.0084	.0025	-.0043
SDev	.0234	.0110	.0033	.0002	.0008	.0105	.0186
%RSD	155.0	75.68	28.84	1.922	8.928	421.8	430.2
#1	-.0106	-.0180	.0149	.0107	-.0077	.0002	.0156
#2	.0352	-.0233	.0106	.0108	-.0084	-.0067	-.0074
#3	.0206	-.0022	.0085	.0111	-.0092	.0139	-.0212
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							

10225

Analysis Report QC Standard Wed 09-21-94 11:03:49 AM page 1

Method: MRD4PT Sample Name: ICSAB Operator: CME
Run Time: 09/21/94 11:00:30
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	486.2	.0083	.1440	.4658	.4552	.9365	471.5
SDev	4.0	.0167	.0346	.0054	.0022	.0039	1.6
%RSD	.8150	201.9	24.04	1.170	.4913	.4135	.3422
#1	487.5	-.0100	.1182	.4690	.4556	.9336	469.7
#2	481.7	.0121	.1304	.4595	.4527	.9409	471.7
#3	489.3	.0227	.1833	.4690	.4571	.9351	472.9
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	501.7			.4991	.4978	1.002	502.1
Range	102.5			.1020	.1018	.2049	102.6

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4621	.4583	.4917	177.1	167.5	.9932	476.1
SDev	.0029	.0018	.0053	.7	.5	.0203	2.3
%RSD	.6297	.3850	1.087	.3746	.2729	2.042	.4838
#1	.4609	.4564	.4944	177.0	167.3	.9715	476.8
#2	.4600	.4599	.4856	176.5	167.2	.9965	473.6
#3	.4654	.4585	.4952	177.8	168.0	1.012	478.0
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass
Value	.4977	.5009	.4952	199.8		1.001	500.9
Range	.1017	.1024	.1012	40.85		.2047	102.4

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4652	.9203	-.2402	.9711	-.2839	.4634	1.005
SDev	.0018	.0148	.0979	.0041	.0065	.0016	.003
%RSD	.3904	1.603	40.74	.4188	2.301	.3518	.2505
#1	.4642	.9041	-.3504	.9738	-.2901	.4651	1.002
#2	.4641	.9239	-.2072	.9664	-.2846	.4619	1.004
#3	.4673	.9330	-.1631	.9732	-.2770	.4633	1.007
Errors	QC Pass	QC Pass	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass
Value	.4962	.9948		.9991		.4997	.9993
Range	.1014	.2033		.2042		.1021	.2043

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0218	-.0321	.0134	.0108	-.0074	.0094	-.0478
SDev	.0514	.0110	.0044	.0001	.0005	.0040	.0685
%RSD	236.1	34.22	33.06	1.264	6.174	42.39	143.1
#1	-.0765	-.0286	.0170	.0108	-.0080	.0071	-.1119
#2	-.0141	-.0233	.0149	.0107	-.0072	.0139	.0243
#3	.0254	-.0444	.0085	.0109	-.0071	.0071	-.0560
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							

10226

Analysis Report Wed 09-21-94 11:08:51 AM page 1

Method: MRD4PT Sample Name: PB 1563 Operator: CME
Run Time: 09/21/94 11:03:53
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0465	-.0012	-.0340	.0002	-.0001	.0013	-.0099
SDev	.0223	.0071	.0103	.0000	.0000	.0028	.0209
%RSD	48.02	579.0	30.21	.0000	3.548	217.3	211.3
#1	.0280	-.0095	-.0222	.0002	-.0001	.0022	-.0305
#2	.0713	.0029	-.0393	.0002	-.0001	.0035	.0113
#3	.0401	.0029	-.0405	.0002	-.0001	-.0019	-.0104
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0032	-.0030	-.0043	.0110	.0103	-.0072	-.0047
SDev	.0011	.0011	.0005	.0088	.0225	.0136	.0159
%RSD	34.03	35.55	10.75	79.98	219.0	188.4	341.4
#1	-.0041	-.0021	-.0040	.0028	.0065	-.0032	-.0222
#2	-.0020	-.0042	-.0048	.0203	.0345	.0039	.0089
#3	-.0035	-.0028	-.0040	.0099	-.0101	-.0225	-.0007
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0003	-.0046	-.3402	-.0020	-.4758	-.0033	.0023
SDev	.0004	.0061	.1549	.0011	.0109	.0008	.0006
%RSD	146.2	133.5	45.52	54.47	2.286	23.97	27.18
#1	.0008	-.0081	-.2906	-.0024	-.4848	-.0025	.0026
#2	.0001	.0025	-.5138	-.0008	-.4637	-.0033	.0015
#3	.0000	-.0081	-.2162	-.0028	-.4790	-.0041	.0026
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0244	-.0128	.0010	-.0004	-.0002	.0048	-.0097
SDev	.0479	.0026	.0011	.0000	.0003	.0072	.0076
%RSD	195.9	20.69	107.8	.0000	176.3	149.7	78.35
#1	L-.0771	-.0128	.0010	-.0004	.0002	-.0032	-.0062
#2	-.0127	-.0154	.0021	-.0004	-.0003	.0071	-.0045
#3	.0164	-.0101	-.0001	-.0004	-.0003	.0105	-.0185
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10227

Analysis Report Wed 09-21-94 11:13:54 AM page 1

Method: MRD4PT Sample Name: LCS 1563 Operator: CME
Run Time: 09/21/94 11:08:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0137	L.0066	L-.0254	L.0002	L-.0001	L.0026	L-.0828
SDev	.0051	.0037	.0181	.0000	.0000	.0018	.0054
%RSD	37.14	55.80	70.99	.0000	2.109	67.99	6.561
#1	L-.0190	L.0036	L-.0463	L.0002	L-.0001	L.0046	L-.0881
#2	L-.0133	L.0107	L-.0158	L.0002	L-.0001	L.0011	L-.0831
#3	L-.0089	L.0054	L-.0143	L.0002	L-.0001	L.0022	L-.0772
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	24.09	2.409	2.409	24.09	.6383	1.204	30.19
Low	15.91	1.591	1.591	15.91	.4214	.7956	20.58

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0200	L-.0035	L-.0051	L-.0154	-.0438	L.0172	L-.0685
SDev	.0005	.0007	.0005	.0013	.0168	.0159	.0077
%RSD	2.608	20.14	9.064	8.186	38.25	92.85	11.23
#1	L.0197	L-.0035	L-.0056	L-.0169	-.0606	L-.0001	L-.0630
#2	L.0197	L-.0042	L-.0048	L-.0147	-.0271	L.0314	L-.0653
#3	L.0206	L-.0028	L-.0048	L-.0147	-.0438	L.0202	L-.0773
Errors	LC Low	LC Low	LC Low	LC Low	NOCHECK	LC Low	LC Low
High	1.204	6.022	3.011	12.04		1.204	30.11
Low	.7956	3.978	1.988	7.956		.7956	19.88

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0003	L.0012	L-.4022	L.0187	L-.4621	L-.0020	L-.0008
SDev	.0004	.0051	.2439	.0028	.0130	.0004	.0016
%RSD	156.0	413.0	60.66	15.19	2.818	21.85	187.9
#1	L.0000	L.0025	L-.6626	L.0167	L-.4723	L-.0018	L-.0025
#2	L.0008	L-.0043	L-.3650	L.0175	L-.4666	L-.0025	L-.0005
#3	L.0000	L.0055	L-.1790	L.0220	L-.4475	L-.0018	L.0005
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	1.807	4.818	30.11	1.204	30.11	6.022	2.409
Low	1.193	3.182	19.88	.7956	19.88	3.978	1.591

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0109	-.0031	.0006	-.0004	.0002	-.0135	L.0400
SDev	.0138	.0015	.0012	.0001	.0010	.0034	.0439
%RSD	126.9	49.45	194.3	18.01	615.0	25.37	109.8
#1	L.0144	-.0022	.0021	-.0005	-.0008	-.0101	L.0903
#2	L-.0043	-.0048	-.0001	-.0004	.0002	-.0170	L.0096
#3	L.0227	-.0022	-.0001	-.0004	.0012	-.0135	L.0201
Errors	LC Low	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Low

10228

Analysis Report Wed 09-21-94 11:18:57 AM page 1

Method: MRD4PT Sample Name: SpBLK 1563 Operator: CME
Run Time: 09/21/94 11:13:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0173	.0867	L.0219	L.0002	-.0001	L.0054	-.0795
SDev	.0062	.0150	.0088	.0000	.0000	.0026	.0041
%RSD	35.62	17.32	39.86	.0000	6.047	48.62	5.183
#1	-.0241	.0867	L.0118	L.0002	-.0001	L.0030	-.0823
#2	-.0159	.1017	L.0270	L.0002	-.0001	L.0082	-.0814
#3	-.0120	.0717	L.0270	L.0002	-.0001	L.0050	-.0747
Errors	NOCHECK	NOCHECK	LC Low	LC Low	NOCHECK	LC Low	NOCHECK
High			6.022	30.12		1.204	
Low			3.978	19.87		.7956	

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0014	-.0030	-.0046	-.0207	-.0345	L.0121	-.0693
SDev	.0021	.0015	.0017	.0009	.0681	.0103	.0218
%RSD	152.3	48.44	36.50	4.573	197.6	85.13	31.43
#1	L-.0038	-.0042	-.0065	-.0212	-.0939	L.0009	-.0893
#2	L.0001	-.0035	-.0040	-.0212	-.0494	L.0141	-.0725
#3	L-.0005	-.0014	-.0032	-.0196	.0399	L.0212	-.0461
Errors	LC Low	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Low	NOCHECK
High	6.022					6.022	
Low	3.978					3.978	

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0003	.0038	-.0426	L-.0021	-.4586	-.0012	-.0008
SDev	.0004	.0078	.3456	.0019	.0053	.0012	.0006
%RSD	159.6	206.5	810.7	88.84	1.149	98.84	71.69
#1	.0000	.0093	-.4394	L-.0032	-.4551	-.0026	-.0005
#2	.0000	.0070	.1930	L-.0032	-.4561	-.0002	-.0015
#3	.0008	-.0051	.1185	L.0001	-.4647	-.0009	-.0005
Errors	NOCHECK	NOCHECK	NOCHECK	LC Low	NOCHECK	NOCHECK	NOCHECK
High				6.022			
Low				3.978			

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0175	-.0172	.0013	-.0004	-.0003	.0025	.0534
SDev	.0373	.0015	.0012	.0001	.0005	.0086	.0123
%RSD	212.9	8.881	91.57	18.01	148.5	347.5	22.99
#1	L-.0605	-.0180	-.0001	-.0004	-.0008	.0036	.0447
#2	L.0019	-.0180	.0021	-.0005	-.0003	.0105	.0675
#3	L.0061	-.0154	.0021	-.0004	.0002	-.0067	.0481
Errors	LC Low	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10229

Analysis Report Wed 09-21-94 11:23:59 AM page 1

Method: MRD4PT Sample Name: 9883-4 Operator: CME
Run Time: 09/21/94 11:19:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	65.44	.0013	.0333	.4432	.0024	.0163	22.96
SDev	.28	.0093	.0240	.0026	.0001	.0008	.13
%RSD	.4353	706.4	72.05	.5867	5.013	4.944	.5777
#1	65.36	-.0056	.0559	.4444	.0025	.0154	22.81
#2	65.20	-.0023	.0081	.4402	.0025	.0169	23.03
#3	65.76	.0119	.0360	.4449	.0023	.0166	23.06
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2737	.2281	1.024	166.8	157.4	5.003	332.7
SDev	.0028	.0028	.007	.5	.4	.005	1.3
%RSD	1.024	1.242	.7023	.2723	.2820	.1064	.3781
#1	.2705	.2251	1.028	166.5	157.0	4.999	332.7
#2	.2750	.2286	1.016	166.6	157.2	5.009	331.5
#3	.2756	.2307	1.029	167.3	157.9	5.002	334.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.987	1.584	4.030	.0012	1.284	.2362	2.708
SDev	.01	.028	.218	.0010	.01	.0019	.009
%RSD	.3237	1.774	5.402	85.48	.7549	.8123	.3278
#1	2.978	1.612	3.943	.0007	1.273	.2354	2.699
#2	2.986	1.556	3.869	.0024	1.286	.2348	2.710
#3	2.998	1.584	4.278	.0005	1.293	.2384	2.716
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0064	-.0163	.0127	.1551	3.165	.1799	L-.0527
SDev	.0234	.0076	.0037	.0006	.013	.0139	.0481
%RSD	368.1	46.81	29.04	.4034	.4109	7.714	91.16
#1	-.0082	-.0207	.0149	.1552	3.163	.1959	-.0303
#2	.0334	-.0075	.0149	.1544	3.153	.1719	-.0200
#3	-.0061	-.0207	.0085	.1556	3.179	.1719	L-.1079
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10230

Analysis Report Wed 09-21-94 11:29:02 AM page 1

Method: MRD4PT Sample Name: 9883-4MS1 Operator: CME
Run Time: 09/21/94 11:24:04
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	70.78	.0015	.1035	.4644	.0031	.0156	35.73
SDev	.48	.0089	.0250	.0046	.0001	.0019	.12
%RSD	.6792	609.8	24.17	.9978	4.146	11.81	.3418
#1	71.10	-.0053	.0890	.4671	.0030	.0161	35.68
#2	71.02	-.0018	.1324	.4671	.0030	.0136	35.65
#3	70.23	.0115	.0891	.4591	.0032	.0172	35.87
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2681	.2192	1.280	183.9	174.6	5.920	312.0
SDev	.0010	.0033	.01	.4	.1	.030	1.5
%RSD	.3899	1.511	.7627	.1920	.0563	.5050	.4740
#1	.2693	.2180	1.287	184.0	174.7	5.934	312.8
#2	.2675	.2166	1.285	184.2	174.5	5.885	312.9
#3	.2675	.2230	1.269	183.5	174.6	5.940	310.3
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.498	1.421	4.428	.0008	1.358	.3343	2.860
SDev	.003	.008	.486	.0016	.023	.001	.008
%RSD	.0960	.5951	10.98	208.2	1.703	.2896	.2723
#1	3.501	1.420	4.205	.0019	1.383	.3349	2.852
#2	3.499	1.414	4.093	-.0010	1.355	.3332	2.862
#3	3.495	1.431	4.986	.0014	1.337	.3348	2.867
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0238	-.0128	.0092	.1649	3.642	-.0490	L-.0576
SDev	.0205	.0053	.0012	.0015	.019	.0155	.0257
%RSD	86.12	41.37	13.44	.9120	.5337	31.59	44.52
#1	.0377	-.0180	.0106	.1659	3.653	-.0341	-.0336
#2	.0335	-.0128	.0085	.1656	3.652	-.0650	L-.0546
#3	.0003	-.0075	.0085	.1631	3.619	-.0479	L-.0847
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10231

Analysis Report Wed 09-21-94 11:34:05 AM page 1

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Method: MRD4PT Sample Name: 9883-4MSD1 Operator: CME
Run Time: 09/21/94 11:29:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	69.87	.0155	.0909	.5148	.0030	.0147	22.59
SDev	.09	.0018	.0157	.0000	.0000	.0032	.05
%RSD	.1309	11.45	17.31	.0000	.2351	21.92	.2357
#1	69.96	.0149	.0897	.5148	.0030	.0182	22.54
#2	69.78	.0175	.0758	.5148	.0030	.0120	22.58
#3	69.86	.0141	.1072	.5148	.0030	.0138	22.65
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.3027	.2258	1.545	181.5	172.4	8.925	313.6
SDev	.0008	.0014	.003	.2	.2	.026	.4
%RSD	.2509	.6210	.1873	.1070	.1229	.2904	.1391
#1	.3019	.2258	1.548	181.5	172.4	8.916	314.0
#2	.3028	.2272	1.542	181.3	172.1	8.904	313.1
#3	.3034	.2244	1.546	181.7	172.5	8.954	313.7
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.112	1.469	5.310	.0004	1.427	.3180	3.453
SDev	.003	.027	.289	.0004	.011	.0021	.007
%RSD	.1077	1.837	5.443	88.81	.7710	.6614	.2065
#1	3.112	1.459	4.988	.0000	1.416	.3199	3.445
#2	3.109	1.449	5.546	.0007	1.438	.3158	3.459
#3	3.116	1.500	5.397	.0005	1.427	.3184	3.456
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0254	-.0145	.0102	.1461	3.514	-.0250	-.0378
SDev	.0105	.0030	.0016	.0001	.005	.0110	.0348
%RSD	41.18	20.99	15.92	.0934	.1380	44.18	91.95
#1	-.0268	-.0180	.0117	.1462	3.516	-.0170	-.0443
#2	-.0143	-.0128	.0106	.1459	3.509	-.0204	-.0003
#3	-.0351	-.0128	.0085	.1461	3.518	-.0376	L-.0689
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10232

Analysis Report QC Standard Wed 09-21-94 11:39:10 AM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 11:34:11
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.12	-.0612	5.250	9.602	1.029	1.002	20.74
SDev	.05	.0065	.014	.065	.005	.012	.08
%RSD	.4719	10.67	.2581	.6758	.4829	1.233	.3680
#1	10.13	-.0673	5.264	9.629	1.031	.9895	20.67
#2	10.06	-.0543	5.238	9.528	1.023	1.004	20.72
#3	10.15	-.0621	5.247	9.650	1.032	1.014	20.82
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.074	5.239	2.011	10.35	10.10	5.051	19.93
SDev	.007	.016	.010	.04	.04	.019	.09
%RSD	.3288	.2981	.5209	.3716	.3892	.3762	.4407
#1	2.068	5.231	2.015	10.34	10.13	5.041	19.96
#2	2.072	5.229	1.999	10.32	10.06	5.073	19.83
#3	2.082	5.257	2.020	10.39	10.11	5.040	20.00
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.028	5.253	19.36	1.003	20.04	5.131	1.043
SDev	.004	.040	.27	.003	.05	.019	.002
%RSD	.3514	.7561	1.385	.2924	.2359	.3699	.2354
#1	1.026	5.287	19.29	1.002	20.03	5.133	1.044
#2	1.026	5.209	19.66	1.001	20.00	5.111	1.041
#3	1.032	5.263	19.14	1.006	20.09	5.149	1.046
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.107	-.0066	-.0022	-.0001	.0011	-.0032	5.063
SDev	.088	.0015	.0037	.0002	.0006	.0059	.01
%RSD	1.728	23.09	167.2	214.3	51.39	183.8	.1913
#1	5.159	-.0075	-.0001	.0000	.0014	-.0067	5.072
#2	5.005	-.0048	-.0065	.0000	.0014	-.0067	5.062
#3	5.157	-.0075	-.0001	-.0003	.0005	.0036	5.053
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10233

Analysis Report Blank Sample Wed 09-21-94 11:44:14 AM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 11:39:15
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0070	.0041	-.0270	.0052	-.0001	.0009	-.0686
SDev	.0094	.0158	.0155	.0003	.0000	.0025	.0047
%RSD	134.8	386.6	57.42	5.248	9.332	295.2	6.920
#1	-.0178	-.0059	-.0447	.0049	-.0001	-.0018	-.0739
#2	-.0012	.0223	-.0205	.0054	-.0001	.0012	-.0647
#3	-.0019	-.0041	-.0159	.0054	-.0001	.0032	-.0672
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0021	-.0025	-.0040	-.0081	.0084	-.0045	-.0653
SDev	.0027	.0023	.0008	.0020	.0395	.0121	.0168
%RSD	131.0	88.54	19.85	24.23	473.4	269.7	25.68
#1	-.0050	-.0042	-.0048	-.0098	-.0268	-.0143	-.0821
#2	.0004	.0000	-.0032	-.0059	.0008	.0090	-.0486
#3	-.0017	-.0035	-.0040	-.0087	.0511	-.0082	-.0653
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0002	.0073	-.3279	.0029	-.0116	-.0023	-.0015
SDev	.0004	.0051	.7185	.0022	.0123	.0020	.0010
%RSD	215.5	69.27	219.1	74.61	106.4	87.92	66.22
#1	-.0007	.0017	-1.109	.0004	-.0151	-.0041	-.0015
#2	.0000	.0116	.3046	.0045	-.0218	-.0002	-.0005
#3	.0001	.0086	-.1791	.0037	.0021	-.0025	-.0026
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0196	-.0057	.0049	-.0002	.0007	.0059	.0025
SDev	.0198	.0030	.0044	.0002	.0005	.0040	.0237
%RSD	100.9	53.27	90.62	75.04	75.35	66.97	937.4
#1	-.0397	-.0022	-.0001	-.0004	.0002	.0036	-.0220
#2	-.0189	-.0075	.0063	-.0001	.0012	.0105	.0043
#3	-.0002	-.0075	.0085	-.0001	.0007	.0036	.0253
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10234

Analysis Report Wed 09-21-94 11:49:16 AM page 1

Method: MRD4PT Sample Name: 9883-5 Operator: CME
Run Time: 09/21/94 11:44:18
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	63.63	.0030	.0376	.3407	.0023	.0031	22.74
SDev	.25	.0143	.0225	.0014	.0001	.0022	.03
%RSD	.3924	475.4	59.79	.4000	5.542	70.50	.1166
#1	63.60	.0000	.0393	.3415	.0025	.0006	22.72
#2	63.89	.0186	.0143	.3415	.0023	.0040	22.73
#3	63.39	-.0096	.0591	.3391	.0023	.0047	22.77
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.3152	.3230	.2199	207.7	197.7	3.948	514.4
SDev	.0002	.0033	.0021	.5	.2	.021	1.8
%RSD	.0553	1.026	.9657	.2471	.0783	.5243	.3420
#1	.3154	.3267	.2215	207.4	197.5	3.927	513.8
#2	.3151	.3218	.2207	208.3	197.8	3.968	516.3
#3	.3151	.3204	.2175	207.4	197.6	3.949	513.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.820	2.436	3.297	-.0003	1.085	.2342	1.369
SDev	.008	.022	.548	.0011	.015	.0008	.003
%RSD	.2121	.8888	16.62	416.6	1.419	.3262	.2270
#1	3.814	2.414	3.930	-.0012	1.099	.2349	1.369
#2	3.829	2.435	2.999	.0009	1.087	.2343	1.372
#3	3.816	2.457	2.963	-.0004	1.069	.2333	1.366
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0244	-.0119	.0095	.1602	2.710	-.0467	L-.0721
SDev	.0373	.0085	.0039	.0009	.011	.0210	.0344
%RSD	153.1	71.42	40.39	.5672	.3931	44.90	47.64
#1	-.0040	-.0180	.0138	.1600	2.708	-.0650	-.0434
#2	.0105	-.0022	.0085	.1612	2.721	-.0238	L-.0628
#3	.0667	-.0154	.0063	.1594	2.700	-.0513	L-.1102
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10235

Analysis Report Wed 09-21-94 11:54:19 AM page 1

Method: MRD4PT Sample Name: 9883-6 Operator: CME
Run Time: 09/21/94 11:49:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	33.87	-.0296	.0387	.1742	.0009	.0042	7.461
SDev	.23	.0049	.0226	.0003	.0000	.0026	.012
%RSD	.6899	16.60	58.38	.1565	.8395	63.55	.1619
#1	33.79	-.0320	.0395	.1744	.0008	.0027	7.447
#2	33.68	-.0328	.0157	.1739	.0009	.0072	7.468
#3	34.13	-.0239	.0609	.1744	.0009	.0025	7.469
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.7405	.6980	.2475	344.6	335.1	7.536	H1249.
SDev	.0017	.0035	.0019	1.3	1.2	.014	5.
%RSD	.2244	.5055	.7491	.3872	.3674	.1875	.4242
#1	.7388	.6948	.2464	343.8	334.2	7.546	H1246.
#2	.7406	.6976	.2464	343.9	334.6	7.541	H1246.
#3	.7421	.7018	.2496	346.2	336.5	7.520	H1255.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.949	5.976	-.9855	-.0005	-.0339	.0782	2.474
SDev	.029	.020	.1989	.0012	.0043	.0022	.007
%RSD	.4127	.3344	20.18	238.7	12.74	2.767	.2682
#1	6.931	5.964	-.9097	.0008	-.0380	.0758	2.467
#2	6.934	5.966	-.8356	-.0016	-.0342	.0799	2.475
#3	6.982	5.999	-1.211	-.0007	-.0294	.0789	2.480
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0470	-.0172	.0166	.1483	.6653	.0036	-.0305
SDev	.0218	.0107	.0022	.0011	.0047	.0060	.0531
%RSD	46.42	62.17	13.35	.7440	.7020	163.8	174.0
#1	.0477	-.0075	.0191	.1481	.6639	.0002	-.0080
#2	.0685	-.0286	.0159	.1473	.6614	.0105	.0076
#3	.0249	-.0154	.0149	.1495	.6705	.0002	L-.0912
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10236

Analysis Report Wed 09-21-94 11:59:22 AM page 1

Method: MRD4PT Sample Name: 9883-7 Operator: CME
Run Time: 09/21/94 11:54:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	36.86	-.0325	.0140	.0689	.0010	-.0016	5.556
SDev	.24	.0296	.0128	.0006	.0001	.0031	.022
%RSD	.6431	91.14	91.47	.7909	12.99	186.7	.3976
#1	36.59	.0014	.0266	.0686	.0011	-.0035	5.581
#2	36.95	-.0456	.0010	.0686	.0009	-.0033	5.548
#3	37.03	-.0534	.0144	.0696	.0009	.0019	5.539
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.8065	.7053	.1091	329.6	321.0	9.721	H1187.
SDev	.0017	.0014	.0021	.5	.3	.041	4.
%RSD	.2060	.1988	1.946	.1551	.0924	.4187	.3034
#1	.8085	.7067	.1075	329.0	320.9	9.765	H1183.
#2	.8057	.7039	.1083	330.0	321.4	9.685	H1190.
#3	.8054	.7053	.1115	329.7	320.8	9.714	H1189.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.041	5.745	-.6824	-.0010	.0486	.0852	2.196
SDev	.009	.035	.3987	.0012	.0070	.001	.001
%RSD	.1235	.6149	58.43	121.0	14.50	1.159	.0540
#1	7.033	5.781	-.2473	.0004	.0407	.0840	2.196
#2	7.050	5.710	-1.030	-.0015	.0541	.0859	2.196
#3	7.038	5.744	-.7694	-.0017	.0512	.0855	2.194
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0380	-.0189	.0188	.0938	.5763	.0025	L-.0805
SDev	.0162	.0145	.0040	.0007	.0033	.0086	.0341
%RSD	42.45	76.84	21.52	.7701	.5715	347.5	42.30
#1	.0332	-.0339	.0159	.0930	.5727	.0105	-.0427
#2	.0561	-.0180	.0170	.0941	.5768	-.0067	L-.0899
#3	.0249	-.0048	.0234	.0943	.5793	.0036	L-.1088
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10237

Analysis Report Wed 09-21-94 12:04:25 PM page 1

ZZZZZZ

Method: MRD4PT Sample Name: 9883-8 Operator: CME
Run Time: 09/21/94 11:59:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	22.03	-.0324	.0132	.0625	.0008	.0005	5.107
SDev	.09	.0170	.0052	.0000	.0001	.0012	.034
%RSD	.4106	52.56	39.36	.0000	17.21	244.8	.6703
#1	21.95	-.0515	.0156	.0625	.0008	-.0002	5.087
#2	22.02	-.0189	.0073	.0625	.0006	-.0002	5.087
#3	22.13	-.0267	.0168	.0625	.0008	.0019	5.146
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6912	.6013	.2207	296.6	286.3	16.74	H1070.
SDev	.001	.0022	.0008	.9	1.1	.11	3.
%RSD	.1403	.3748	.3637	.3184	.3718	.6288	.2689
#1	.6908	.5987	.2199	295.6	285.4	16.66	H1066.
#2	.6905	.6029	.2207	296.5	286.2	16.71	H1070.
#3	.6923	.6022	.2215	297.5	287.5	16.86	H1072.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.764	5.222	-.8767	-.0003	-.0492	.0717	2.285
SDev	.020	.028	.1715	.0003	.0147	.0013	.006
%RSD	.3432	.5451	19.56	121.1	29.92	1.785	.2450
#1	5.747	5.213	-.6892	.0000	-.0530	.0721	2.280
#2	5.759	5.199	-1.026	-.0002	-.0616	.0703	2.284
#3	5.786	5.254	-.9152	-.0006	-.0329	.0727	2.291
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0165	-.0048	.0152	.0725	.6067	-.0009	L-.0696
SDev	.0620	.0115	.0016	.0002	.0018	.0139	.0549
%RSD	374.7	237.6	10.71	.2878	.2914	1466.	78.92
#1	.0685	.0031	.0138	.0722	.6049	.0139	L-.0645
#2	.0332	-.0180	.0149	.0725	.6069	-.0135	-.0174
#3	L-.0521	.0004	.0170	.0726	.6084	-.0032	L-.1268
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10238

Analysis Report Wed 09-21-94 12:09:28 PM page 1

Method: MRD4PT Sample Name: 9883-9 Operator: CME
Run Time: 09/21/94 12:04:29
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	38.49	-.0169	.0517	.2099	.0015	.0033	11.84
SDev	.25	.0146	.0160	.0034	.0000	.0043	.06
%RSD	.6616	86.44	30.87	1.627	.3294	130.1	.4852
#1	38.53	-.0000	.0656	.2117	.0015	.0057	11.85
#2	38.72	-.0258	.0552	.2121	.0015	-.0017	11.78
#3	38.22	-.0247	.0343	.2060	.0015	.0060	11.90
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4647	.4064	.1942	230.4	220.1	23.13	700.9
SDev	.0028	.0008	.0016	.2	.1	.06	2.6
%RSD	.6033	.1992	.8266	.0989	.0600	.2605	.3747
#1	.4660	.4073	.1942	230.6	220.2	23.19	701.8
#2	.4615	.4059	.1958	230.5	220.0	23.07	703.0
#3	.4666	.4059	.1926	230.2	220.2	23.14	698.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.243	3.314	4.343	-.0016	.2057	.1274	5.966
SDev	.002	.036	.239	.0011	.0048	.0014	.009
%RSD	.0560	1.092	5.514	70.79	2.344	1.136	.1545
#1	4.246	3.334	4.070	-.0007	.2063	.1283	5.959
#2	4.242	3.273	4.442	-.0028	.2102	.1257	5.963
#3	4.241	3.336	4.517	-.0012	.2006	.1282	5.977
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0111	-.0233	.0102	.1888	1.707	-.0181	-.0414
SDev	.0048	.0053	.0016	.0015	.007	.0071	.0455
%RSD	43.37	22.64	15.92	.7796	.3995	39.46	110.0
#1	.0083	-.0180	.0117	.1895	1.710	-.0101	L-.0718
#2	.0083	-.0286	.0106	.1899	1.711	-.0238	.0109
#3	.0166	-.0233	.0085	.1872	1.699	-.0204	L-.0632
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	200.0	50.00	50.00	50.00	50.00		150.0

10239

Analysis Report Wed 09-21-94 12:14:30 PM page 1

Method: MRD4PT Sample Name: 9883-10 Operator: CME
Run Time: 09/21/94 12:09:32
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	37.74	-.0357	.0218	.0612	.0010	-.0049	3.774
SDev	.26	.0059	.0065	.001	.0001	.0006	.011
%RSD	.6900	16.59	29.84	1.605	13.36	11.30	.3021
#1	38.01	-.0378	.0259	.0620	.0010	-.0046	3.762
#2	37.49	-.0290	.0253	.0601	.0010	-.0046	3.776
#3	37.72	-.0402	.0143	.0615	.0008	L-.0056	3.784
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6288	.7578	.1252	338.2	329.0	5.469	H1337.
SDev	.0018	.0031	.0008	.7	.7	.003	4.
%RSD	.2892	.4032	.6412	.2145	.1977	.0542	.2830
#1	.6307	.7593	.1260	338.9	329.6	5.469	H1341.
#2	.6286	.7543	.1244	337.5	328.3	5.466	H1333.
#3	.6271	.7600	.1252	338.2	329.0	5.472	H1336.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.530	6.425	-1.196	-.0001	-.0647	.0639	.4462
SDev	.016	.038	.063	.0010	.0006	.0008	.0015
%RSD	.2136	.5940	5.304	723.6	.8557	1.184	.3414
#1	7.545	6.407	-1.161	.0007	-.0643	.0632	.4476
#2	7.513	6.399	-1.270	-.0013	-.0643	.0647	.4446
#3	7.533	6.469	-1.159	.0001	-.0653	.0637	.4463
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0553	-.0163	.0170	.0833	.4092	.0162	.0051
SDev	.0147	.0085	.0000	.0007	.0018	.0139	.0649
%RSD	26.65	52.12	.0000	.8673	.4426	85.55	1262.
#1	.0394	-.0101	.0170	.0841	.4112	.0139	.0372
#2	.0581	-.0259	.0170	.0827	.4077	.0036	L-.0695
#3	.0685	-.0128	.0170	.0830	.4087	.0311	.0477
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	200.0	50.00	50.00	50.00	50.00		150.0

10240

Analysis Report Wed 09-21-94 12:19:33 PM page 1

Method: MRD4PT Sample Name: 9883-11 Operator: CME
Run Time: 09/21/94 12:14:35
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.56	-.0202	.0264	.0466	.0006	.0114	4.609
SDev	.13	.0204	.0083	.0006	.0000	.0036	.007
%RSD	.6514	100.9	31.26	1.170	1.154	31.79	.1464
#1	19.45	.0005	.0331	.0460	.0006	.0134	4.615
#2	19.53	-.0402	.0172	.0469	.0006	.0072	4.610
#3	19.70	-.0207	.0290	.0469	.0006	.0135	4.602
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5192	.7062	.4273	430.8	423.9	5.128	H1224.
SDev	.0032	.0029	.0044	1.6	1.6	.015	6.
%RSD	.6268	.4133	1.035	.3639	.3839	.2928	.4848
#1	.5155	.7039	.4230	429.6	422.7	5.112	H1219.
#2	.5206	.7095	.4270	430.3	423.3	5.141	H1222.
#3	.5215	.7053	.4318	432.6	425.8	5.132	H1231.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.980	5.944	-1.379	-.0015	-.1397	.0615	2.059
SDev	.026	.016	.377	.0019	.0055	.0020	.005
%RSD	.3744	.2694	27.37	121.8	3.954	3.279	.2485
#1	6.963	5.949	-1.575	.0006	-.1429	.0638	2.055
#2	6.968	5.927	-.9437	-.0021	-.1429	.0603	2.059
#3	7.010	5.958	-1.617	-.0031	-.1333	.0604	2.065
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0768	-.0172	.0213	.0631	.4277	.0197	L-.0674
SDev	.0614	.010	.0037	.0004	.0018	.0121	.0111
%RSD	79.87	58.24	17.38	.5725	.4125	61.35	16.51
#1	.1080	-.0101	.0191	.0628	.4259	.0311	L-.0769
#2	.1163	-.0286	.0191	.0629	.4279	.0208	L-.0700
#3	.0061	-.0128	.0255	.0635	.4294	.0071	L-.0552
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low
High	200.0	50.00	50.00	50.00	50.00		150.0

10241

Analysis Report Wed 09-21-94 12:24:36 PM page 1

Method: MRD4PT Sample Name: 9883-12 Operator: CME
Run Time: 09/21/94 12:19:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.42	-.0357	-.0009	.0537	.0011	-.0026	9.285
SDev	.22	.0021	.0087	.0003	.0000	.0054	.045
%RSD	.6930	6.014	983.2	.5079	.0892	210.1	.4849
#1	32.26	-.0360	-.0055	.0540	.0011	L-.0086	9.237
#2	32.32	-.0334	-.0062	.0535	.0011	-.0011	9.291
#3	32.68	-.0376	.0091	.0535	.0011	.0019	9.326
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6027	.7913	.0960	371.6	363.3	7.620	H1310.
SDev	.0008	.0051	.0005	1.3	1.4	.026	4.
%RSD	.1325	.6409	.4826	.3541	.3757	.3400	.3324
#1	.6021	.7887	.0963	370.5	362.1	7.623	H1307.
#2	.6024	.7880	.0955	371.1	362.9	7.592	H1308.
#3	.6036	.7971	.0963	373.0	364.8	7.644	H1315.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.685	6.362	-1.312	-.0017	.0488	.0826	1.785
SDev	.031	.035	.291	.0019	.0091	.0003	.005
%RSD	.4047	.5457	22.15	110.6	18.68	.3547	.2879
#1	7.665	6.340	-.9882	-.0030	.0393	.0823	1.779
#2	7.670	6.344	-1.398	.0005	.0498	.0829	1.786
#3	7.721	6.402	-1.550	-.0027	.0574	.0825	1.789
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0678	-.0136	.0127	.1736	.6918	-.0090	L-.0724
SDev	.0159	.0176	.0019	.0011	.0040	.0020	.0474
%RSD	23.41	128.8	14.52	.6356	.5773	22.13	65.52
#1	.0540	-.0180	.0106	.1730	.6887	-.0101	L-.0649
#2	.0644	-.0286	.0138	.1730	.6903	-.0101	L-.1231
#3	.0852	.0057	.0138	.1749	.6963	-.0067	-.0292
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low
High	200.0	50.00	50.00	50.00	50.00		150.0

10242

Analysis Report Wed 09-21-94 12:29:39 PM page 1

Method: MRD4PT Sample Name: 9883-13 Operator: CME
Run Time: 09/21/94 12:24:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.87	-.0281	.0254	.0746	.0009	-.0007	6.847
SDev	.37	.0057	.0259	.001	.0001	.0008	.017
%RSD	1.245	20.29	102.1	1.318	13.21	112.0	.2471
#1	30.28	-.0343	-.0045	.0757	.0009	-.0001	6.828
#2	29.56	-.0267	.0412	.0738	.0009	-.0015	6.852
#3	29.76	-.0232	.0394	.0743	.0011	-.0005	6.860
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6925	.7896	.1426	361.0	353.0	15.10	H1287.
SDev	.0017	.0051	.0024	2.1	1.6	.04	11.
%RSD	.2400	.6423	1.720	.5806	.4662	.2320	.8709
#1	.6917	.7929	.1453	363.2	354.7	15.12	H1300.
#2	.6914	.7838	.1404	359.1	351.4	15.06	H1278.
#3	.6944	.7922	.1420	360.5	352.7	15.13	H1284.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.720	6.167	-.8414	-.0009	.0313	.0815	2.069
SDev	.038	.060	.5114	.0013	.0031	.0011	.008
%RSD	.4869	.9716	60.78	143.9	9.842	1.340	.4098
#1	7.761	6.236	-1.429	-.0018	.0348	.0827	2.078
#2	7.686	6.130	-.6024	.0006	.0300	.0813	2.061
#3	7.712	6.135	-.4933	-.0015	.0290	.0806	2.069
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0131	-.0189	.0191	.0910	.6995	-.0055	L-.1087
SDev	.1061	.0055	.0056	.0013	.0073	.0052	.0894
%RSD	810.7	29.04	29.52	1.457	1.036	94.93	82.29
#1	.1351	-.0233	.0255	.0924	.7076	-.0067	L-.1568
#2	-.0375	-.0128	.0170	.0898	.6935	-.0101	-.0055
#3	L-.0583	-.0207	.0149	.0906	.6975	.0002	L-.1637
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low
High	200.0	50.00	50.00	50.00	50.00		150.0

10243

Analysis Report QC Standard Wed 09-21-94 12:34:44 PM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 12:29:45
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.02	-.0434	5.190	9.422	1.016	1.002	20.79
SDev	.04	.0070	.038	.063	.003	.008	.05
%RSD	.4398	16.05	.7283	.6659	.2864	.7718	.2506
#1	10.05	-.0506	5.227	9.460	1.018	.9983	20.77
#2	10.03	-.0367	5.191	9.456	1.017	.9966	20.76
#3	9.969	-.0428	5.151	9.350	1.013	1.011	20.85
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.064	5.218	1.980	10.22	10.09	5.050	19.52
SDev	.002	.009	.011	.01	.05	.043	.06
%RSD	.0973	.1789	.5504	.0857	.4856	.8562	.3295
#1	2.063	5.228	1.986	10.22	10.04	5.046	19.53
#2	2.062	5.210	1.987	10.23	10.13	5.008	19.57
#3	2.066	5.216	1.967	10.21	10.10	5.095	19.45
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.014	5.207	19.60	.9976	19.70	5.089	1.042
SDev	.000	.040	.27	.0010	.17	.01	.002
%RSD	.0404	.7684	1.399	.1011	.8793	.1954	.1717
#1	1.015	5.249	19.81	.9986	19.83	5.097	1.041
#2	1.014	5.169	19.29	.9966	19.77	5.093	1.041
#3	1.014	5.203	19.70	.9974	19.50	5.078	1.044
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.049	-.0075	-.0001	-.0001	.0006	.0036	5.039
SDev	.051	.0053	.0000	.0000	.0006	.0034	.113
%RSD	1.009	70.57	.0000	.0000	94.46	94.55	2.235
#1	5.048	-.0128	-.0001	-.0001	-.0001	.0036	5.141
#2	4.999	-.0022	-.0001	-.0001	.0009	.0002	4.918
#3	5.100	-.0075	-.0001	-.0001	.0010	.0071	5.059
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	5.000						5.000

Cak

10244

Analysis Report Blank Sample Wed 09-21-94 12:39:48 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 12:34:49
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0106	.0076	-.0143	.0055	-.0001	.0004	-.0678
SDev	.0134	.0066	.0145	.0003	.0000	.0005	.0054
%RSD	126.6	87.38	101.6	4.948	9.388	123.9	7.921
#1	-.0241	.0038	-.0233	.0054	-.0001	.0001	-.0739
#2	.0026	.0153	.0024	.0058	-.0001	.0009	-.0639
#3	-.0101	.0038	-.0219	.0054	-.0001	.0001	-.0656
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0009	-.0035	-.0032	-.0019	.0102	-.0109	-.0469
SDev	.0023	.0028	.0016	.0021	.0432	.0155	.0210
%RSD	256.3	80.58	49.55	106.8	423.7	142.3	44.64
#1	-.0032	-.0063	-.0048	-.0043	-.0380	-.0285	-.0701
#2	-.0008	-.0035	-.0016	-.0005	.0456	-.0052	-.0294
#3	.0013	-.0007	-.0032	-.0010	.0231	.0009	-.0414
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0004	.0040	-.1543	.0021	-.0059	-.0023	-.0012
SDev	.0004	.0076	.7101	.0031	.0102	.0020	.0006
%RSD	97.21	189.4	460.3	148.1	174.6	88.49	47.80
#1	-.0007	-.0036	-.9603	-.0012	-.0036	-.0041	-.0015
#2	.0001	.0116	.1185	.0049	-.0170	-.0025	-.0005
#3	-.0007	.0040	.3789	.0025	.0031	-.0002	-.0015
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0161	-.0022	.0049	-.0001	.0007	-.0055	.0312
SDev	.0188	.0053	.0044	.0001	.0009	.0052	.0123
%RSD	116.3	239.7	90.62	114.7	130.4	94.93	39.57
#1	-.0355	-.0075	-.0001	-.0003	-.0003	-.0067	.0429
#2	.0019	.0031	.0085	.0000	.0012	.0002	.0323
#3	-.0147	-.0022	.0063	-.0001	.0012	-.0101	.0183
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

CGK

10245

Analysis Report Wed 09-21-94 12:44:52 PM page 1

Method: MRD4PT Sample Name: 9883-14 Operator: CME
Run Time: 09/21/94 12:39:53
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	34.04	.0077	.0256	.1676	.0009	.0022	8.120
SDev	.14	.0221	.0124	.0022	.0000	.0005	.020
%RSD	.3990	286.0	48.51	1.301	.1403	23.77	.2419
#1	33.88	.0054	.0239	.1663	.0009	.0018	8.100
#2	34.11	-.0131	.0388	.1663	.0009	.0027	8.119
#3	34.13	.0310	.0142	.1701	.0009	.0019	8.140
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0479	.0248	.1977	142.0	134.1	.3884	24.85
SDev	.0015	.0004	.0009	.5	.6	.0197	.10
%RSD	3.108	1.632	.4688	.3599	.4232	5.077	.4192
#1	.0496	.0253	.1966	141.5	133.5	.3983	24.73
#2	.0469	.0246	.1982	142.3	134.4	.3657	24.87
#3	.0472	.0246	.1982	142.4	134.5	.4012	24.94
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.034	.0691	3.360	-.0006	-.0537	.0983	.3579
SDev	.004	.0016	.279	.0004	.0036	.0004	.0018
%RSD	.3708	2.289	8.316	78.17	6.739	.3967	.4962
#1	1.030	.0709	3.633	-.0005	-.0563	.0978	.3558
#2	1.035	.0678	3.075	-.0010	-.0553	.0984	.3589
#3	1.038	.0686	3.372	-.0002	-.0496	.0985	.3589
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0297	-.0242	.0170	.0339	1.189	.0929	.0089
SDev	.0307	.0055	.0000	.0001	.005	.0150	.0368
%RSD	103.0	22.71	.0000	.4030	.3999	16.11	414.4
#1	.0644	-.0259	.0170	.0339	1.183	.1032	.0385
#2	.0187	-.0180	.0170	.0337	1.190	.0757	.0204
#3	.0062	-.0286	.0170	.0340	1.192	.0998	-.0323
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	200.0	50.00	50.00	50.00	50.00		150.0

10246

Analysis Report Wed 09-21-94 12:49:55 PM page 1

Method: MRD4PT Sample Name: 9883-15 Operator: CME
Run Time: 09/21/94 12:44:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	40.48	.0130	.0344	.4658	.0015	.0077	12.19
SDev	.23	.0134	.0112	.0044	.0000	.0015	.04
%RSD	.5772	102.7	32.47	.9362	.1896	19.72	.2950
#1	40.73	-.0020	.0238	.4709	.0015	.0061	12.19
#2	40.28	.0236	.0332	.4633	.0015	.0081	12.23
#3	40.42	.0174	.0461	.4633	.0015	.0091	12.15
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4185	.0512	.0735	90.95	85.46	16.16	69.11
SDev	.0017	.0025	.0005	.28	.21	.05	.27
%RSD	.4099	4.937	.6301	.3125	.2426	.2982	.3956
#1	.4171	.0484	.0738	91.28	85.67	16.21	69.41
#2	.4204	.0533	.0738	90.81	85.43	16.17	68.88
#3	.4180	.0519	.0730	90.77	85.26	16.11	69.03
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.125	.2466	6.712	-.0011	.2519	.1390	.5503
SDev	.004	.0118	.488	.0008	.0120	.0008	.0017
%RSD	.3323	4.776	7.267	73.92	4.748	.6153	.3145
#1	1.129	.2463	6.265	-.0017	.2656	.1391	.5513
#2	1.125	.2585	7.232	-.0002	.2465	.1397	.5513
#3	1.122	.2349	6.637	-.0014	.2436	.1380	.5483
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0125	-.0251	.1697	.0482	1.957	-.0204	-.0374
SDev	.0378	.0015	.0019	.0006	.01	.0069	.0053
%RSD	303.2	6.077	1.090	1.146	.5008	33.66	14.25
#1	.0312	-.0259	.1707	.0487	1.968	-.0273	-.0375
#2	-.0333	-.0259	.1707	.0477	1.950	-.0135	-.0427
#3	-.0353	-.0233	.1675	.0481	1.953	-.0204	-.0320
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10247

Analysis Report QC Standard Wed 09-21-94 12:54:59 PM page 1

Method: MRD4PT Sample Name: ICSA Operator: CME
Run Time: 09/21/94 12:50:00
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	478.7	-.0142	.1280	.0184	-.0000	-.0002	462.0
SDev	3.6	.0147	.0418	.0006	.0000	.0042	1
%RSD	.7527	103.4	32.63	2.961	1.474	2009.	.2098
#1	481.7	-.0307	.1591	.0181	-.0000	-.0037	461.0
#2	479.7	-.0024	.1444	.0190	-.0000	-.0014	462.3
#3	474.7	-.0095	.0805	.0181	-.0000	.0045	462.8
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	501.7						502.1
Range	102.5						102.6

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0085	.0049	.0059	172.9	163.3	.0772	464.6
SDev	.0014	.0014	.0005	.5	.2	.0128	2.0
%RSD	16.45	28.43	7.912	.2646	.1345	16.57	.4358
#1	.0101	.0063	.0056	173.2	163.2	.0663	466.2
#2	.0077	.0049	.0064	173.1	163.6	.0741	465.2
#3	.0077	.0035	.0056	172.4	163.2	.0913	462.3
Errors	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass
Value				199.8			500.9
Range				40.85			102.4

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0097	.0096	-.1733	-.0011	-.2391	.0078	.0615
SDev	.0004	.0023	.1590	.0009	.0034	.0002	.0006
%RSD	4.044	24.22	91.77	80.05	1.415	2.107	.9709
#1	.0094	.0116	-.2446	-.0021	-.2393	.0078	.0608
#2	.0095	.0101	-.2841	-.0004	-.2356	.0080	.0618
#3	.0101	.0070	.0089	-.0009	-.2424	.0077	.0618
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0272	-.0189	.0120	.0106	-.0066	.0002	.0719
SDev	.0782	.0055	.0044	.0001	.0004	.0119	.0422
%RSD	287.3	29.04	36.97	.7453	5.636	6013.	58.68
#1	-.0210	-.0128	.0170	.0107	-.0069	.0071	.1015
#2	.0477	-.0233	.0106	.0105	-.0068	.0071	.0906
#3	-.1083	-.0207	.0085	.0105	-.0062	-.0135	.0236
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10248

Analysis Report QC Standard Wed 09-21-94 01:00:02 PM page 1

Method: MRD4PT Sample Name: ICSAB Operator: CME
Run Time: 09/21/94 12:55:03
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	480.7	.0023	.1682	.4598	.4513	.9253	464.8
SDev	5.2	.0054	.0554	.0066	.0034	.0027	2.0
%RSD	1.083	233.6	32.95	1.439	.7448	.2968	.4302
#1	480.3	-.0013	.1629	.4595	.4505	.9246	465.6
#2	486.1	.0085	.1156	.4666	.4549	.9229	462.6
#3	475.7	-.0003	.2261	.4534	.4483	.9283	466.4
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	501.7			.4991	.4978	1.002	502.1
Range	102.5			.1020	.1018	.2049	102.6

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4554	.4513	.4859	173.8	164.5	.9798	468.1
SDev	.0017	.0018	.0086	.5	.2	.0268	3.7
%RSD	.3689	.3910	1.767	.2985	.1017	2.739	.7826
#1	.4557	.4515	.4840	173.7	164.7	.9754	467.3
#2	.4536	.4494	.4952	174.4	164.5	.9554	472.1
#3	.4569	.4529	.4784	173.4	164.3	1.009	464.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass
Value	.4977	.5009	.4952	199.8		1.001	500.9
Range	.1017	.1024	.1012	40.85		.2047	102.4

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4571	.8813	-.1182	.9611	-.2872	.4585	.9943
SDev	.0009	.0145	.3203	.0030	.0045	.0022	.0044
%RSD	.1935	1.644	270.9	.3102	1.582	.4794	.4448
#1	.4576	.8646	-.2054	.9589	-.2876	.4609	.9913
#2	.4576	.8889	-.3860	.9645	-.2825	.4577	.9994
#3	.4560	.8905	.2367	.9600	-.2916	.4567	.9922
Errors	QC Pass	QC Pass	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass
Value	.4962	.9948		.9991		.4997	.9993
Range	.1014	.2033		.2042		.1021	.2043

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0524	-.0303	.0142	.0104	-.0068	.0048	.0084
SDev	.0362	.0061	.0033	.0000	.0005	.0210	.0283
%RSD	69.19	20.08	23.04	.0000	6.829	439.3	338.0
#1	.0690	-.0233	.0170	.0104	-.0069	.0002	-.0222
#2	.0773	-.0339	.0106	.0104	-.0072	.0277	.0137
#3	.0108	-.0339	.0149	.0104	-.0063	-.0135	.0336
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10249

Analysis Report QC Standard Wed 09-21-94 01:05:07 PM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 13:00:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.09	-.0502	5.197	9.520	1.022	.9986	20.65
SDev	.05	.0113	.028	.052	.002	.0110	.08
%RSD	.4773	22.43	.5376	.5440	.2311	1.104	.3923
#1	10.13	-.0444	5.179	9.549	1.024	1.006	20.74
#2	10.04	-.0431	5.229	9.460	1.019	1.004	20.62
#3	10.11	-.0632	5.182	9.550	1.023	.9860	20.58
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.069	5.236	1.999	10.29	10.11	5.059	19.83
SDev	.003	.019	.010	.03	.05	.021	.08
%RSD	.1355	.3623	.5021	.3053	.5145	.4175	.3999
#1	2.072	5.257	2.006	10.33	10.17	5.066	19.90
#2	2.067	5.230	1.987	10.26	10.09	5.076	19.75
#3	2.067	5.221	2.003	10.29	10.08	5.036	19.85
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.022	5.192	19.51	.9989	20.12	5.107	1.045
SDev	.004	.083	.16	.0025	.22	.022	.001
%RSD	.4207	1.608	.8315	.2493	1.101	.4241	.1407
#1	1.027	5.282	19.62	1.001	20.24	5.128	1.047
#2	1.019	5.117	19.33	.9962	19.86	5.085	1.044
#3	1.021	5.176	19.59	.9995	20.25	5.106	1.044
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.081	-.0084	-.0022	-.0001	.0006	.0048	5.035
SDev	.059	.0040	.0037	.0000	.0003	.0072	.099
%RSD	1.158	48.22	167.2	.0000	49.75	149.7	1.965
#1	5.146	-.0075	-.0001	-.0001	.0009	.0105	5.148
#2	5.032	-.0128	-.0065	-.0001	.0004	.0071	4.990
#3	5.065	-.0048	-.0001	-.0001	.0004	-.0032	4.966
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10250

Analysis Report Blank Sample Wed 09-21-94 01:10:12 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 13:05:12
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0101	.0085	-.0193	.0058	-.0001	.0011	-.0642
SDev	.0058	.0049	.0031	.0000	.0000	.0011	.0035
%RSD	57.53	57.78	16.19	.0000	2.127	92.39	5.418
#1	-.0152	.0037	-.0218	.0058	-.0001	.0001	-.0681
#2	-.0114	.0135	-.0203	.0058	-.0001	.0022	-.0630
#3	-.0038	.0082	-.0158	.0058	-.0001	.0011	-.0614
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0012	-.0030	-.0038	.0046	-.0102	-.0069	-.0286
SDev	.0009	.0004	.0005	.0006	.0243	.0148	.0084
%RSD	73.49	13.43	12.28	13.66	238.0	215.7	29.33
#1	-.0002	-.0028	-.0032	.0050	-.0214	.0050	-.0198
#2	-.0017	-.0028	-.0040	.0050	-.0269	-.0234	-.0294
#3	-.0017	-.0035	-.0040	.0039	.0177	-.0021	-.0366
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0004	-.0008	-.3651	.0018	.0079	-.0028	-.0018
SDev	.0004	.0105	.4290	.0005	.0078	.0005	.0006
%RSD	93.49	1308.	117.5	26.18	99.72	16.60	29.83
#1	.0000	-.0127	-.0303	.0013	-.0008	-.0025	-.0025
#2	-.0007	.0070	-.2162	.0021	.0098	-.0033	-.0015
#3	-.0007	.0033	-.8487	.0021	.0145	-.0025	-.0015
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0231	-.0031	.0021	-.0002	.0007	.0082	-.0296
SDev	.0275	.0040	.0065	.0001	.0005	.0020	.0170
%RSD	119.3	130.8	315.5	47.90	75.26	24.15	57.57
#1	-.0023	.0004	.0063	-.0003	.0002	.0071	-.0255
#2	-.0542	-.0022	-.0054	-.0001	.0012	.0071	-.0150
#3	-.0127	-.0075	.0053	-.0001	.0007	.0105	-.0483
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

CCB

10251

Analysis Report Wed 09-21-94 02:17:25 PM page 1

PBS

Method: KRD4PT Sample Name: PB 1571 Operator: CME
Run Time: 09/21/94 14:12:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0129	.0064	-.0285	.0002	-.0001	.0026	-.0697
SDev	.001	.0087	.0044	.0000	.0000	.0027	.0022
%RSD	7.538	136.4	15.45	.0000	6.309	101.3	3.168
#1	-.0140	-.0007	-.0234	.0002	-.0001	.0022	-.0722
#2	-.0127	.0161	-.0310	.0002	-.0001	H.0055	-.0689
#3	-.0120	.0037	-.0310	.0002	-.0001	.0002	-.0681
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0016	-.0021	-.0048	-.0112	-.0121	-.0021	-.0637
SDev	.0017	.0012	.0014	.0003	.0226	.0106	.010
%RSD	104.7	58.43	28.69	2.810	186.7	498.1	15.61
#1	-.0005	-.0014	-.0032	-.0114	-.0159	.0101	-.0558
#2	-.0035	-.0014	-.0056	-.0109	.0121	-.0082	-.0749
#3	-.0008	-.0035	-.0056	-.0114	-.0325	-.0082	-.0606
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0002	-.0150	.1805	-.0005	-.4484	-.0025	.0016
SDev	.0004	.0033	.4622	.0009	.0019	.0014	.0010
%RSD	205.9	22.10	256.0	170.1	.4267	53.65	63.89
#1	-.0007	-.0135	.7138	-.0008	-.4465	-.0010	.0016
#2	.0000	-.0188	-.0675	.0005	-.4484	-.0033	.0027
#3	.0000	-.0127	-.1046	-.0012	-.4503	-.0033	.0006
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0224	-.0207	-.0001	-.0003	.0002	-.0009	-.0284
SDev	.0452	.0070	.0021	.0000	.0005	.0079	.0142
%RSD	202.1	33.77	2767.	.0000	304.5	837.6	49.81
#1	-.0147	-.0128	.0021	-.0003	.0007	.0036	-.0413
#2	-.0709	-.0233	-.0001	-.0003	.0002	.0036	-.0133
#3	.0185	-.0259	-.0022	-.0003	-.0003	-.0101	-.0308
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10252

Analysis Report Wed 09-21-94 02:22:28 PM page 1

LCSS

Method: MRD4PT Sample Name: LCS 1571 Operator: CME
Run Time: 09/21/94 14:17:30
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.64	1.613	1.818	17.81	.5260	.9453	24.37
SDev	.04	.019	.013	.05	.0005	.0049	.02
%RSD	.2339	1.179	.7352	.2913	.0950	.5223	.0755
#1	17.66	1.592	1.805	17.83	.5262	.9436	24.38
#2	17.67	1.627	1.817	17.85	.5264	.9414	24.35
#3	17.59	1.622	1.832	17.75	.5254	.9508	24.36
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	24.09	2.409	2.409	24.09	.6383	1.204	30.19
Low	15.91	1.591	1.591	15.91	.4214	.7956	20.58

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9536	4.860	2.390	9.600	9.374	.9613	22.37
SDev	.0035	.007	.007	.024	.037	.0129	.04
%RSD	.3649	.1340	.2934	.2498	.3930	1.344	.1720
#1	.9548	4.865	2.392	9.613	9.417	.9687	22.40
#2	.9563	4.862	2.396	9.615	9.350	.9687	22.38
#3	.9497	4.853	2.382	9.572	9.357	.9463	22.33
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass
High	1.204	6.022	3.011	12.04		1.204	30.11
Low	.7956	3.978	1.988	7.956		.7956	19.88

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.446	3.874	23.13	.9542	23.89	4.738	1.998
SDev	.003	.025	.48	.0014	.19	.013	.001
%RSD	.2396	.6472	2.091	.1478	.8129	.2690	.0633
#1	1.448	3.874	23.43	.9550	24.03	4.745	1.998
#2	1.447	3.848	23.39	.9550	23.96	4.747	1.998
#3	1.442	3.898	22.57	.9526	23.67	4.724	1.996
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.807	4.818	30.11	1.204	30.11	6.022	2.409
Low	1.193	3.182	19.88	.7956	19.88	3.978	1.591

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9818	-.0075	-.0001	.0001	.0002	.0025	1.770
SDev	.0405	.0000	.0021	.0001	.0003	.0052	.008
%RSD	4.129	.0000	2767.	125.2	168.5	210.9	.4602
#1	.9354	-.0075	-.0022	.0000	.0003	-.0032	1.761
#2	1.010	-.0075	-.0001	.0002	.0003	.0071	1.775
#3	.9998	-.0075	.0021	.0000	-.0002	.0036	1.775
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass

10253

Analysis Report Wed 09-21-94 02:27:33 PM page 1

Method: MRD4PT Sample Name: SpBLK 1571 Operator: CME
Run Time: 09/21/94 14:22:32
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.938	.4650	1.980	1.825	.0517	.0505	-.0625
SDev	.018	.0100	.027	.024	.0004	.0009	.0013
%RSD	.9065	2.158	1.386	1.337	.8637	1.716	2.041
#1	1.923	.4539	2.012	1.802	.0513	.0495	-.0614
#2	1.933	.4680	1.965	1.823	.0517	.0510	-.0639
#3	1.957	.4733	1.964	1.850	.0521	.0510	-.0622
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	2.409	.6022	2.409	2.409	.0602	.0602	
Low	1.591	.3978	1.591	1.591	.0398	.0398	

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1963	.5029	.2397	.9913	.9714	.4859	-.0747
SDev	.0011	.0015	.0032	.0041	.0086	.0092	.0014
%RSD	.5818	.2902	1.353	.4137	.8824	1.894	1.841
#1	.1972	.5034	.2368	.9873	.9790	.4791	-.0763
#2	.1950	.5013	.2392	.9911	.9621	.4822	-.0740
#3	.1968	.5041	.2432	.9955	.9732	.4964	-.0739
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	.2409	.6022	.3011	1.204	1.204	.6022	
Low	.1591	.3978	.1989	.0796	.0796	.3978	

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4979	.5107	-.0880	.0477	-.4235	.4815	.5067
SDev	.0019	.0080	.1872	.0010	.0077	.0020	.0012
%RSD	.3888	1.574	212.7	2.148	1.807	.4105	.2369
#1	.4964	.5137	.0856	.0486	-.4235	.4794	.5073
#2	.4971	.5015	-.0632	.0466	-.4159	.4818	.5074
#3	.5001	.5167	-.2864	.0478	-.4312	.4834	.5053
Errors	LC Pass	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	LC Pass
High	.6022	.6022		.0602		.6022	.6022
Low	.3978	.3978		.0398		.3978	.3978

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.948	-.0092	-.0008	-.0002	.0008	-.0032	1.965
SDev	.034	.0030	.0012	.0001	.0003	.0034	.047
%RSD	1.725	32.98	156.3	47.90	34.73	106.1	2.397
#1	1.967	-.0128	-.0001	-.0001	.0012	-.0032	1.945
#2	1.967	-.0075	-.0001	-.0001	.0007	-.0067	1.931
#3	1.909	-.0075	-.0022	-.0003	.0007	.0002	2.019
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

Clak

10254

Analysis Report Wed 09-21-94 02:32:38 PM page 1

L00101

Method: MRD4PT Sample Name: 9883-4 Operator: CME
Run Time: 09/21/94 14:27:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	65.34	-.0066	.0738	.4161	.0029	.0124	23.71
SDev	.67	.0127	.0054	.0059	.0000	.0026	.08
%RSD	1.023	192.5	7.362	1.422	.4210	21.34	.3356
#1	64.64	.0080	.0800	.4100	.0029	.0151	23.62
#2	65.40	-.0140	.0712	.4166	.0029	.0099	23.75
#3	65.98	-.0138	.0701	.4218	.0029	.0120	23.75
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.3782	.2103	1.818	182.4	173.1	9.051	323.3
SDev	.0019	.0000	.022	1.1	.8	.064	2.8
%RSD	.4982	.0000	1.238	.6273	.4476	.7071	.8667
#1	.3788	.2103	1.796	181.2	172.2	8.977	320.6
#2	.3797	.2103	1.816	182.6	173.2	9.089	323.2
#3	.3761	.2103	1.841	183.5	173.7	9.087	326.2
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.923	1.454	4.125	-.0001	1.119	.2996	3.858
SDev	.017	.036	.244	.0019	.018	.0037	.018
%RSD	.5838	2.478	5.925	2627.	1.588	1.231	.4599
#1	2.905	1.431	4.386	.0020	1.098	.2954	3.839
#2	2.924	1.436	4.088	-.0006	1.127	.3016	3.863
#3	2.939	1.496	3.902	-.0016	1.131	.3019	3.873
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0071	-.0189	.0145	.1426	3.637	.0734	-.0168
SDev	.0312	.0040	.0022	.0015	.034	.0040	.0302
%RSD	437.0	21.31	15.31	1.055	.9426	5.398	179.9
#1	.0252	-.0180	.0127	.1410	3.601	.0757	-.0498
#2	.0252	-.0154	.0170	.1427	3.640	.0757	-.0099
#3	-.0289	-.0233	.0138	.1440	3.670	.0689	.0093
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10255

Analysis Report Wed 09-21-94 02:37:40 PM page 1

L00102

Method: MRD4PT Sample Name: 9883-5 Operator: CME
Run Time: 09/21/94 14:32:42
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	55.47	.0040	-.0024	.2970	.0020	.0017	18.59
SDev	.15	.0132	.0481	.0003	.0001	.0005	.07
%RSD	.2721	327.6	2009.	.0918	6.239	28.40	.3978
#1	55.43	-.0069	.0525	.2971	.0022	.0015	18.50
#2	55.35	.0002	-.0372	.2966	.0019	.0013	18.64
#3	55.64	.0188	-.0225	.2971	.0019	.0022	18.62
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.3047	.2489	.1945	169.6	160.6	2.909	387.0
SDev	.0015	.0012	.0012	.5	.3	.008	1.3
%RSD	.4885	.4878	.6304	.2861	.1755	.2782	.3332
#1	.3040	.2482	.1958	169.2	160.3	2.918	386.3
#2	.3037	.2482	.1934	169.3	160.7	2.906	386.2
#3	.3064	.2503	.1942	170.1	160.8	2.902	388.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.034	1.876	2.928	-.0012	1.131	.2058	.9591
SDev	.010	.010	.254	.0001	.004	.0005	.0041
%RSD	.3368	.5498	8.662	6.551	.3869	.2560	.4273
#1	3.025	1.870	3.126	-.0013	1.128	.2053	.9547
#2	3.031	1.870	3.014	-.0012	1.130	.2064	.9598
#3	3.045	1.888	2.642	-.0011	1.136	.2057	.9628
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0049	.0022	.0081	.1563	2.578	-.0456	L-.0705
SDev	.0303	.0055	.0027	.0007	.008	.0040	.0236
%RSD	613.4	250.1	33.14	.4394	.3158	8.698	33.47
#1	.0084	.0084	.0053	.1564	2.574	-.0479	L-.0604
#2	.0334	-.0022	.0085	.1556	2.573	-.0479	L-.0975
#3	-.0269	.0004	.0106	.1570	2.588	-.0410	L-.0537
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low
High	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

10256

Analysis Report Wed 09-21-94 02:42:42 PM page 1

L00103

Method: MRD4PT Sample Name: 9883-6 Operator: CME
Run Time: 09/21/94 14:37:44
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.11	-.0288	.0271	.0694	.0006	.0039	6.243
SDev	.16	.0009	.0119	.0003	.0000	.0010	.032
%RSD	.5384	3.072	43.80	.3927	.3570	25.98	.5120
#1	29.16	-.0297	.0391	.0696	.0006	.0038	6.213
#2	28.94	-.0287	.0269	.0691	.0006	.0050	6.277
#3	29.24	-.0279	.0154	.0696	.0006	.0030	6.238
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6377	.6824	.1873	336.7	327.9	5.742	H1199.
SDev	.0045	.0008	.0017	1.1	.6	.020	5.
%RSD	.7002	.1186	.8923	.3228	.1714	.3438	.4271
#1	.6347	.6814	.1878	336.2	327.5	5.761	H1199.
#2	.6428	.6828	.1854	336.0	327.7	5.722	H1194.
#3	.6356	.6828	.1886	338.0	328.5	5.744	H1204.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.804	5.608	-1.022	.0004	.0042	.0782	2.198
SDev	.016	.022	.302	.0016	.0038	.0007	.006
%RSD	.2413	.3842	29.58	424.2	90.34	.8744	.2734
#1	6.794	5.594	-.9723	-.0003	.0004	.0782	2.194
#2	6.795	5.633	-.7480	.0022	.0081	.0776	2.196
#3	6.823	5.597	-1.347	-.0008	.0042	.0789	2.205
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0138	-.0259	.0149	.1088	.7945	-.0067	L-.0802
SDev	.0291	.0070	.0011	.0008	.0035	.0091	.0209
%RSD	211.4	26.90	7.180	.7631	.4425	136.2	26.09
#1	.0436	-.0286	.0159	.1092	.7960	-.0135	L-.1004
#2	.0124	-.0312	.0149	.1078	.7904	.0036	L-.0816
#3	-.0146	-.0180	.0138	.1093	.7970	-.0101	L-.0586
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10257

Analysis Report Wed 09-21-94 02:47:44 PM page 1

L00104

Method: MRD4PT Sample Name: 9883-7 Operator: CME
Run Time: 09/21/94 14:42:46
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.12	-.0499	.0226	.0625	.0005	.0015	4.193
SDev	.30	.0011	.0049	.0005	.0001	.0051	.015
%RSD	1.091	2.118	21.68	.7557	24.11	345.3	.3590
#1	26.78	-.0506	.0274	.0620	.0006	-.0025	4.206
#2	27.34	-.0487	.0227	.0629	.0006	-.0003	4.197
#3	27.24	-.0504	.0176	.0625	.0004	.0072	4.177
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4938	.6550	.0864	303.4	294.0	5.694	H1100.
SDev	.0033	.0032	.0009	1.8	1.5	.013	9.
%RSD	.6730	.4826	1.073	.6018	.5036	.2326	.8316
#1	.4922	.6520	.0859	301.5	292.5	5.709	H1090.
#2	.4977	.6583	.0875	305.1	295.4	5.684	H1107.
#3	.4916	.6548	.0859	303.8	294.2	5.689	H1103.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.205	5.379	-.4785	-.0022	-.0835	.0705	1.650
SDev	.034	.035	.5058	.0014	.0038	.001	.005
%RSD	.5506	.6455	105.7	64.28	4.582	1.370	.3195
#1	6.169	5.339	.0460	-.0009	-.0835	.0715	1.644
#2	6.238	5.401	-.5184	-.0038	-.0874	.0704	1.654
#3	6.208	5.396	-.9631	-.0020	-.0797	.0696	1.652
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0533	-.0145	.0120	.0640	.6793	.0094	L-.0584
SDev	.0284	.0030	.0016	.0008	.0054	.0020	.0650
%RSD	53.27	20.99	13.56	1.250	.7979	21.19	111.2
#1	.0789	-.0180	.0117	.0631	.6731	.0105	L-.1125
#2	.0228	-.0128	.0106	.0646	.6832	.0105	L-.0763
#3	.0581	-.0128	.0138	.0643	.6817	.0071	.0137
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10258

Analysis Report Wed 09-21-94 02:52:46 PM page 1

L00105

Method: MRD4PT Sample Name: 9883-8 Operator: CME
Run Time: 09/21/94 14:47:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.31	-.0278	.0010	.0387	.0004	-.0015	4.804
SDev	.17	.0073	.0145	.0006	.0001	.0012	.016
%RSD	.8773	26.19	1470.	1.408	31.37	79.28	.3309
#1	19.22	-.0361	.0043	.0384	.0003	-.0001	4.788
#2	19.20	-.0228	.0135	.0384	.0003	-.0024	4.820
#3	19.50	-.0244	-.0149	.0393	.0006	-.0021	4.805
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4724	.6188	.1586	292.6	282.7	10.34	H1079.
SDev	.0011	.0004	.0017	1.3	.9	.03	7.
%RSD	.2418	.0654	1.053	.4360	.3183	.2575	.6424
#1	.4711	.6190	.1573	291.7	281.9	10.31	H1076.
#2	.4729	.6190	.1581	292.0	282.5	10.35	H1075.
#3	.4732	.6183	.1605	294.0	283.7	10.36	H1087.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.796	5.168	-.9543	.0004	-.0999	.0574	2.572
SDev	.029	.038	.2665	.0014	.0025	.0016	.009
%RSD	.4939	.7423	27.93	393.8	2.533	2.822	.3509
#1	5.775	5.130	-1.250	.0011	-.1027	.0571	2.567
#2	5.783	5.169	-.8785	.0012	-.0989	.0559	2.567
#3	5.828	5.206	-.7339	-.0013	-.0979	.0591	2.583
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0498	-.0198	.0149	.0556	.6799	.0059	-.0315
SDev	.0198	.0040	.0021	.0006	.0051	.0099	.0752
%RSD	39.83	20.36	14.36	1.071	.7478	167.4	238.5
#1	.0602	-.0207	.0170	.0553	.6767	.0002	L-.0675
#2	.0623	-.0233	.0149	.0552	.6772	.0174	.0549
#3	.0269	-.0154	.0127	.0563	.6857	.0002	L-.0819
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10259

Analysis Report Wed 09-21-94 02:57:49 PM page 1

L00106

Method: MRD4PT Sample Name: 9883-9 Operator: CME
Run Time: 09/21/94 14:52:50
Comment:
Mode: CONC. Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	38.91	.0141	.0965	.1973	.0013	.0072	21.98
SDev	.55	.0123	.0253	.0012	.0003	.0020	.10
%RSD	1.424	87.63	26.26	.6021	19.30	28.40	.4571
#1	38.37	.0102	.0936	.1961	.0015	.0054	21.86
#2	39.47	.0042	.1231	.1984	.0010	.0094	22.03
#3	38.88	.0279	.0727	.1975	.0015	.0067	22.04
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5296	.3526	.1707	204.0	194.9	26.95	627.3
SDev	.0028	.0031	.0020	1.6	1.4	.16	6.3
%RSD	.5294	.8665	1.184	.7673	.7171	.5878	1.007
#1	.5263	.3491	.1685	202.4	193.5	26.77	621.3
#2	.5315	.3548	.1725	205.5	196.3	27.05	633.9
#3	.5309	.3540	.1709	203.9	194.9	27.04	626.6
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.630	2.811	3.676	-.0009	.4041	.1264	6.172
SDev	.028	.040	.290	.0010	.0166	.0005	.033
%RSD	.7780	1.436	7.879	118.9	4.105	.3734	.5293
#1	3.601	2.767	3.591	.0001	.3898	.1264	6.135
#2	3.657	2.846	3.439	-.0020	.4223	.1268	6.197
#3	3.632	2.821	3.999	-.0007	.4003	.1259	6.184
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0305	-.0172	.0142	.1321	1.851	-.0009	L-.0911
SDev	.0193	.0030	.0033	.0020	.021	.0155	.0549
%RSD	63.32	17.76	23.04	1.513	1.143	1635.	60.29
#1	-.0250	-.0154	.0149	.1302	1.831	-.0170	-.0280
#2	L-.0520	-.0154	.0170	.1342	1.873	.0002	L-.1166
#3	-.0146	-.0207	.0106	.1317	1.850	.0139	L-.1286
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10260

Analysis Report Wed 09-21-94 03:02:51 PM page 1

L00107

Method: MRD4PT Sample Name: 9883-10 Operator: CME
Run Time: 09/21/94 14:57:53
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.22	-.0254	.0064	.0474	.0006	.0009	3.604
SDev	.28	.0130	.0212	.0000	.0000	.0030	.012
%RSD	1.026	51.31	329.2	.0000	1.207	331.5	.3269
#1	27.29	-.0316	-.0071	.0474	.0006	.0032	3.591
#2	27.47	-.0104	.0309	.0474	.0006	-.0025	3.605
#3	26.92	-.0341	-.0044	.0474	.0006	.0021	3.615
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4599	.7387	.0942	329.5	321.0	2.317	H1188.
SDev	.0006	.0028	.0012	1.4	1.0	.007	7.
%RSD	.1366	.3836	1.302	.4279	.3132	.3221	.6009
#1	.4606	.7354	.0939	329.3	320.5	2.325	H1188.
#2	.4597	.7403	.0955	331.1	322.1	2.311	H1196.
#3	.4594	.7403	.0931	328.3	320.3	2.314	H1181.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.221	5.444	-1.358	-.0012	-.1683	.0565	.5154
SDev	.029	.021	.737	.0003	.0054	.0021	.0022
%RSD	.3978	.3950	54.30	22.15	3.233	3.630	.4237
#1	7.216	5.431	-1.494	-.0014	-.1638	.0554	.5148
#2	7.252	5.432	-2.018	-.0009	-.1667	.0588	.5178
#3	7.195	5.469	-.5621	-.0014	-.1743	.0552	.5136
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0872	-.0216	.0159	.1138	.5122	.0013	L-.1376
SDev	.0382	.0081	.0019	.0013	.0043	.0105	.0238
%RSD	43.76	37.40	11.60	1.165	.8382	781.5	17.31
#1	.0436	-.0233	.0170	.1141	.5127	.0105	L-.1104
#2	.1039	-.0286	.0138	.1149	.5162	.0036	L-.1548
#3	.1142	-.0128	.0170	.1124	.5077	-.0101	L-.1475
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10261

Analysis Report QC Standard Wed 09-21-94 03:07:54 PM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 15:02:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.04	-.0570	5.159	9.420	1.010	.9894	20.49
SDev	.06	.0072	.026	.048	.004	.0022	.03
%RSD	.5538	12.63	.5045	.5131	.3631	.2217	.1550
#1	10.06	-.0641	5.188	9.432	1.009	.9891	20.48
#2	10.08	-.0497	5.149	9.461	1.014	.9874	20.52
#3	9.972	-.0572	5.138	9.367	1.007	.9917	20.45
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.041	5.166	1.986	10.15	9.960	5.001	19.55
SDev	.006	.021	.011	.03	.072	.040	.1
%RSD	.2698	.4035	.5487	.3206	.7232	.7936	.4933
#1	2.043	5.163	1.987	10.15	9.967	5.012	19.53
#2	2.044	5.188	1.996	10.18	10.03	5.035	19.66
#3	2.034	5.147	1.975	10.12	9.885	4.957	19.47
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.006	5.112	19.83	1.032	20.23	5.049	1.033
SDev	.003	.089	.47	.003	.31	.012	.002
%RSD	.2929	1.739	2.390	.3364	1.546	.2348	.1826
#1	1.006	5.109	20.07	1.032	20.22	5.050	1.031
#2	1.009	5.202	20.14	1.036	20.54	5.061	1.035
#3	1.003	5.024	19.29	1.029	19.92	5.037	1.033
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.019	-.0110	.0006	-.0001	.0008	.0036	5.019
SDev	.032	.0040	.0012	.0000	.0006	.0034	.034
%RSD	.6451	36.65	194.3	.0000	77.29	94.55	.6702
#1	4.988	-.0101	.0021	-.0001	.0014	.0071	5.013
#2	5.053	-.0075	-.0001	-.0001	.0004	.0002	5.055
#3	5.015	-.0154	-.0001	-.0001	.0004	.0036	4.989
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10262

Analysis Report Blank Sample Wed 09-21-94 03:12:58 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 15:07:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0024	-.0027	-.0291	.0054	-.0001	.0030	-.0355
SDev	.0060	.0013	.0077	.0000	.0000	.0013	.0025
%RSD	253.0	49.69	26.47	.0000	2.120	43.02	7.058
#1	-.0044	-.0015	-.0280	.0054	-.0001	.0023	-.0380
#2	.0045	-.0024	-.0220	.0054	-.0001	.0022	-.0355
#3	.0070	-.0042	-.0373	.0054	-.0001	.0045	-.0330
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0003	-.0023	-.0022	.0041	.0009	-.0014	-.0103
SDev	.0008	.0004	.0005	.0006	.0366	.0021	.0048
%RSD	271.1	17.51	21.36	15.49	4270.	145.7	46.89
#1	-.0011	-.0028	-.0016	.0033	-.0047	-.0031	-.0151
#2	-.0002	-.0021	-.0024	.0044	-.0326	.0009	-.0103
#3	.0004	-.0021	-.0024	.0044	.0399	-.0021	-.0054
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	-.0011	.0193	.0013	-.0043	-.0015	-.0001
SDev	.0000	.0049	.1306	.0016	.0139	.0004	.0006
%RSD	24.23	463.3	675.2	129.1	326.6	29.41	418.7
#1	.0000	.0010	-.1047	-.0004	-.0103	-.0017	.0005
#2	.0000	-.0066	.0070	.0013	-.0142	-.0010	-.0005
#3	.0001	.0025	.1557	.0029	.0117	-.0017	-.0005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0217	-.0004	-.0004	-.0002	.0008	.0048	-.0092
SDev	.0251	.0030	.0006	.0001	.0003	.0052	.0219
%RSD	115.7	689.1	142.3	47.90	34.62	109.8	239.3
#1	-.0480	.0031	-.0001	-.0001	.0007	.0002	.0008
#2	.0019	-.0022	-.0001	-.0003	.0007	.0036	-.0343
#3	-.0189	-.0022	-.0011	-.0001	.0012	.0105	.0060
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

ok

10263

Analysis Report Wed 09-21-94 03:18:00 PM page 1

L00108

Method: MRD4PT Sample Name: 9883-11 Operator: CME
Run Time: 09/21/94 15:13:02
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.96	-.0343	.0172	.0527	.0007	.0061	5.832
SDev	.23	.0098	.0602	.0007	.0001	.0014	.043
%RSD	.8689	28.68	349.9	1.368	19.36	23.27	.7349
#1	26.22	-.0362	.0109	.0535	.0006	.0073	5.784
#2	25.80	-.0431	-.0396	.0521	.0008	.0045	5.845
#3	25.86	-.0237	.0803	.0526	.0006	.0066	5.867
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6219	.6861	.4580	382.2	374.4	6.146	H1235.
SDev	.0035	.0008	.0058	.5	.6	.011	5.
%RSD	.5623	.1180	1.268	.1349	.1558	.1864	.3950
#1	.6214	.6856	.4647	382.7	374.0	6.133	H1241.
#2	.6187	.6856	.4551	381.7	374.2	6.148	H1233.
#3	.6256	.6870	.4543	382.2	375.1	6.156	H1233.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.563	5.779	-1.478	-.0015	-.0534	.0673	1.944
SDev	.006	.027	.299	.0018	.0039	.0013	.002
%RSD	.0941	.4606	20.23	116.3	7.229	1.922	.0909
#1	6.565	5.752	-1.764	-.0034	-.0569	.0675	1.943
#2	6.556	5.781	-1.502	-.0013	-.0493	.0684	1.946
#3	6.568	5.805	-1.168	.0001	-.0541	.0659	1.943
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0616	-.0101	.0181	.0842	.5951	.0460	L-.1168
SDev	.0821	.0132	.0028	.0008	.0028	.0052	.0429
%RSD	133.4	130.4	15.63	.8929	.4646	11.41	36.69
#1	.1247	-.0101	.0159	.0851	.5979	.0517	L-.0723
#2	.0914	-.0233	.0213	.0837	.5924	.0448	L-.1204
#3	-.0313	.0031	.0170	.0838	.5949	.0414	L-.1578
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10264

Analysis Report Wed 09-21-94 03:23:02 PM page 1

L00109

Method: MRD4PT Sample Name: 9883-12 Operator: CME
Run Time: 09/21/94 15:18:04
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.76	-.0262	-.0019	.0499	.0006	-.0015	4.607
SDev	.20	.0155	.0104	.0022	.0000	.0017	.013
%RSD	.7673	59.21	554.5	4.371	.1190	113.9	.2737
#1	25.53	-.0392	-.0101	.0474	.0006	-.0011	4.593
#2	25.88	-.0090	.0098	.0511	.0006	-.0034	4.608
#3	25.86	-.0302	-.0053	.0511	.0006	-.0000	4.618
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4022	.7286	.0998	324.5	315.8	5.662	H1178.
SDev	.0017	.0011	.0012	1.3	1.0	.005	5.
%RSD	.4131	.1470	1.229	.4110	.3285	.0807	.4240
#1	.4041	.7284	.0987	323.0	314.6	5.656	H1173.
#2	.4011	.7277	.1011	325.4	316.5	5.664	H1182.
#3	.4014	.7298	.0995	325.1	316.3	5.664	H1180.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.961	6.023	-.9028	-.0005	-.0941	.0636	1.506
SDev	.032	.027	.3388	.0010	.0085	.0002	.006
%RSD	.4647	.4478	37.53	207.8	9.034	.3310	.3667
#1	6.924	5.992	-.5906	.0003	-.1037	.0638	1.500
#2	6.983	6.039	-.8547	-.0017	-.0912	.0636	1.510
#3	6.976	6.038	-1.263	-.0001	-.0874	.0634	1.509
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0070	-.0163	.0181	.0733	.8420	.0071	L-.1149
SDev	.0386	.0030	.0028	.0006	.0048	.0124	.1009
%RSD	549.8	18.72	15.63	.8115	.5696	175.2	87.84
#1	.0041	-.0180	.0159	.0726	.8365	.0036	L-.1454
#2	-.0500	-.0128	.0213	.0736	.8445	.0208	-.0022
#3	.0249	-.0180	.0170	.0737	.8450	-.0032	L-.1969
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10265

Analysis Report Wed 09-21-94 03:28:04 PM page 1

LD0110

Method: MRD4PT Sample Name: 9883-13 Operator: CME
Run Time: 09/21/94 15:23:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.26	-.0431	-.0154	.0450	.0006	-.0021	8.001
SDev	.07	.0164	.0037	.0000	.0000	.0043	.039
%RSD	.3581	38.02	24.08	.0000	.1145	204.9	.4851
#1	19.22	-.0296	-.0149	.0450	.0006	.0022	7.979
#2	19.23	-.0384	-.0120	.0450	.0006	L-.0064	7.979
#3	19.34	L-.0613	-.0194	.0450	.0006	-.0020	8.046
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5169	.7142	.0883	302.5	293.0	5.628	H1224.
SDev	.0061	.0032	.0008	.9	1.1	.022	3.
%RSD	1.180	.4426	.9094	.3128	.3882	.3951	.2548
#1	.5134	.7109	.0875	301.8	292.2	5.603	H1221.
#2	.5134	.7144	.0883	302.1	292.6	5.637	H1223.
#3	.5239	.7172	.0891	303.6	294.3	5.644	H1227.
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.214	5.645	-1.790	-.0022	-.0671	.0595	1.155
SDev	.024	.018	.353	.0012	.0074	.0002	.004
%RSD	.3823	.3247	19.73	53.10	11.08	.3327	.3630
#1	6.201	5.640	-2.124	-.0030	-.0610	.0594	1.151
#2	6.200	5.630	-1.827	-.0009	-.0648	.0597	1.154
#3	6.242	5.665	-1.420	-.0028	-.0754	.0593	1.160
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0041	-.0207	.0152	.0650	.6620	.0025	L-.1203
SDev	.0558	.0106	.0054	.0002	.0022	.0169	.0446
%RSD	1377.	51.06	35.29	.3206	.3316	681.1	37.07
#1	-.0063	-.0101	.0202	.0649	.6605	-.0170	L-.1048
#2	-.0458	-.0207	.0159	.0650	.6610	.0139	L-.0856
#3	.0644	-.0312	.0095	.0653	.6645	.0105	L-.1706
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

Cal

10266

Analysis Report Wed 09-21-94 03:33:07 PM page 1

L00111

Method: MRD4PT Sample Name: 9883-14 Operator: CME
Run Time: 09/21/94 15:28:09
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.50	.0004	.0208	.1210	.0009	.0015	7.601
SDev	.20	.0132	.0155	.0000	.0000	.0016	.035
%RSD	.6550	3269.	74.80	.0000	.1599	107.9	.4647
#1	30.63	.0151	.0116	.1210	.0009	-.0002	7.591
#2	30.59	-.0105	.0119	.1210	.0009	.0030	7.572
#3	30.27	-.0034	.0387	.1210	.0009	.0017	7.640
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0271	.0169	.0762	64.68	60.52	.2630	21.45
SDev	.0008	.0012	.0008	.14	.07	.0043	.11
%RSD	2.804	7.206	1.053	.2142	.1092	1.621	.5036
#1	.0270	.0176	.0770	64.76	60.60	.2605	21.50
#2	.0279	.0154	.0762	64.75	60.48	.2605	21.52
#3	.0264	.0176	.0754	64.52	60.48	.2679	21.32
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.7529	.0243	2.116	-.0010	.0232	.0890	.2651
SDev	.0013	.0091	.232	.0010	.0101	.0004	.0000
%RSD	.1672	37.61	10.98	99.85	43.64	.4824	.0134
#1	.7522	.0336	2.377	-.0009	.0347	.0888	.2650
#2	.7543	.0238	1.931	-.0001	.0194	.0887	.2651
#3	.7521	.0154	2.042	-.0021	.0155	.0895	.2651
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0292	-.0242	.0049	.0302	1.039	-.0044	-.0008
SDev	.0091	.0066	.0027	.0002	.005	.0052	.0203
%RSD	31.07	27.45	54.78	.7833	.4609	119.7	2645.
#1	-.0396	-.0233	.0074	.0303	1.042	-.0032	.0127
#2	-.0250	-.0312	.0021	.0303	1.042	-.0101	.0092
#3	-.0229	-.0180	.0053	.0299	1.034	.0002	-.0242
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

Cab

10267

Analysis Report Wed 09-21-94 03:38:10 PM page 1

L0011MS

Method: MRD4PT Sample Name: 9883-14MS1 Operator: CME
Run Time: 09/21/94 15:33:11
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.17	.3263	1.861	1.894	.0500	.0460	7.432
SDev	.09	.0063	.031	.010	.0001	.0021	.020
%RSD	.2872	1.927	1.684	.5289	.2676	4.608	.2628
#1	32.20	.3319	1.847	1.902	.0501	.0479	7.410
#2	32.07	.3195	1.897	1.883	.0499	.0463	7.443
#3	32.25	.3275	1.839	1.897	.0501	.0437	7.444
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2246	.4814	.2951	60.46	56.37	.6147	20.68
SDev	.0008	.0018	.0019	.12	.17	.0071	.08
%RSD	.3554	.3665	.6282	.1969	.2992	1.155	.3972
#1	.2237	.4795	.2962	60.43	56.22	.6079	20.68
#2	.2249	.4830	.2929	60.36	56.32	.6141	20.60
#3	.2252	.4816	.2962	60.59	56.55	.6221	20.76
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.211	.4924	3.562	.0411	-.0163	.5350	.6804
SDev	.002	.0097	.094	.0011	.0015	.0021	.0021
%RSD	.1976	1.969	2.629	2.742	8.965	.3903	.3150
#1	1.210	.4947	3.575	.0418	-.0150	.5364	.6780
#2	1.210	.4818	3.463	.0418	-.0179	.5326	.6822
#3	1.214	.5008	3.649	.0398	-.0160	.5359	.6811
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.816	-.0180	.0085	.0299	1.047	-.0158	1.804
SDev	.027	.0000	.0000	.0001	.004	.0139	.063
%RSD	1.462	.0000	.0000	.4564	.3460	87.68	3.501
#1	1.787	-.0180	.0085	.0300	1.048	-.0032	1.807
#2	1.839	-.0180	.0085	.0298	1.043	-.0307	1.739
#3	1.822	-.0180	.0085	.0299	1.050	-.0135	1.865
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10268

Analysis Report Wed 09-21-94 03:43:12 PM page 1

L00111MSD

Method: MRD4PT Sample Name: 9883-14MSD1 Operator: CME
Run Time: 09/21/94 15:38:14
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.51	.3144	1.912	1.930	.0505	.0476	7.339
SDev	.07	.0098	.041	.004	.0001	.0011	.008
%RSD	.2198	3.120	2.135	.2242	.2553	2.397	.1075
#1	31.46	.3055	1.894	1.926	.0504	.0464	7.348
#2	31.49	.3126	1.883	1.929	.0506	.0486	7.333
#3	31.59	.3249	1.959	1.935	.0506	.0479	7.336
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2114	.4872	.3018	67.10	62.80	.6656	19.95
SDev	.0017	.0007	.0021	.1	.18	.0083	.07
%RSD	.7860	.1439	.7037	.1438	.2886	1.240	.3262
#1	.2113	.4879	.2994	66.99	62.62	.6714	19.89
#2	.2098	.4872	.3026	67.12	62.80	.6561	19.94
#3	.2131	.4865	.3034	67.18	62.98	.6692	20.02
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.142	.5091	3.309	.0438	-.0692	.5422	.7035
SDev	.004	.0035	.318	.001	.0054	.0010	.0027
%RSD	.3570	.6837	9.605	2.236	7.856	.1878	.3854
#1	1.137	.5129	3.347	.0427	-.0676	.5416	.7025
#2	1.144	.5084	2.974	.0444	-.0753	.5417	.7015
#3	1.144	.5061	3.607	.0444	-.0648	.5434	.7066
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.866	-.0268	.0099	.0420	.9990	-.0055	1.804
SDev	.021	.0040	.0012	.0002	.0038	.0071	.042
%RSD	1.143	15.02	12.47	.4968	.3809	129.4	2.331
#1	1.872	-.0312	.0106	.0419	.9946	-.0135	1.762
#2	1.884	-.0259	.0085	.0418	1.001	-.0032	1.846
#3	1.843	-.0233	.0106	.0422	1.002	.0002	1.802
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10269

Analysis Report Wed 09-21-94 03:48:14 PM page 1

L00112

Method: MRD4PT Sample Name: 9883-15 Operator: CME
Run Time: 09/21/94 15:43:16
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	36.78	.0080	.0156	.3745	.0013	.0072	10.96
SDev	.37	.0122	.0022	.0053	.0000	.0000	.02
%RSD	1.004	153.5	13.90	1.404	.3496	.2773	.2177
#1	37.15	.0048	.0166	.3802	.0013	.0072	10.96
#2	36.77	-.0023	.0132	.3736	.0013	.0072	10.94
#3	36.41	.0215	.0172	.3698	.0013	.0072	10.99
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0482	.0365	.1137	77.48	72.71	.5791	45.95
SDev	.0015	.0000	.0005	.32	.04	.0125	.35
%RSD	3.088	.0000	.4076	.4179	.0512	2.157	.7624
#1	.0475	.0365	.1131	77.82	72.75	.5662	46.30
#2	.0472	.0365	.1140	77.44	72.69	.5797	45.97
#3	.0499	.0365	.1140	77.18	72.68	.5912	45.60
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9870	.1448	7.119	-.0028	.4577	.1388	.4376
SDev	.0031	.0075	.408	.0000	.0249	.0013	.0006
%RSD	.3097	5.176	5.729	.3573	5.439	.9684	.1322
#1	.9904	.1499	6.796	-.0028	.4819	.1381	.4372
#2	.9860	.1362	6.982	-.0028	.4590	.1380	.4373
#3	.9845	.1483	7.577	-.0028	.4322	.1404	.4383
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0028	-.0207	.0092	.0438	1.955	-.0044	.0005
SDev	.0594	.0070	.0022	.0006	.016	.0071	.0361
%RSD	2145.	33.77	24.22	1.246	.8393	163.2	7760.
#1	.0624	-.0259	.0074	.0444	1.971	.0036	-.0229
#2	L-.0541	-.0128	.0085	.0438	1.957	-.0067	.0420
#3	-.0166	-.0233	.0117	.0433	1.938	-.0101	-.0177
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10270

Analysis Report Wed 09-21-94 03:53:17 PM page 1

Method: MRD4PT Sample Name: PB DISS1 Operator: GME
Run Time: 09/21/94 15:48:19
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0310	.0047	-.0288	.0046	-.0001	.0009	.0210
SDev	.0074	.0062	.0078	.0003	.0000	.0017	.0013
%RSD	23.96	132.4	27.02	5.972	3.602	189.3	6.070
#1	.0376	.0002	-.0268	.0049	-.0001	.0023	.0221
#2	.0229	.0118	-.0374	.0044	-.0001	.0013	.0196
#3	.0325	.0020	-.0222	.0044	-.0001	-.0010	.0213
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0016	-.0028	-.0016	.0119	.0289	-.0120	.0049
SDev	.0008	.0014	.0008	.0022	.0289	.0113	.0084
%RSD	47.83	50.45	49.10	18.55	100.3	94.53	171.2
#1	-.0017	-.0014	-.0016	.0115	.0456	-.0164	.0137
#2	-.0008	-.0042	-.0008	.0099	-.0046	-.0204	.0041
#3	-.0023	-.0028	-.0024	.0143	.0456	.0009	-.0031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	.0111	-.5758	-.0014	-.0087	-.0033	.0008
SDev	.0007	.0112	.1137	.0005	.0047	.0008	.0006
%RSD	1475.	100.9	19.74	33.18	53.99	24.41	65.53
#1	.0008	.0025	-.5511	-.0012	-.0056	-.0025	.0005
#2	.0000	.0238	-.4766	-.0020	-.0142	-.0041	.0015
#3	-.0007	.0070	-.6999	-.0012	-.0065	-.0033	.0005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0016	.0022	.0010	-.0002	.0000	-.0009	.0528
SDev	.0372	.0040	.0028	.0002	.0003	.0040	.0395
%RSD	2369.	183.5	285.2	95.79	3910.	418.8	74.88
#1	-.0106	.0057	.0042	.0000	.0002	-.0032	.0937
#2	-.0335	-.0022	-.0011	-.0003	-.0003	-.0032	.0499
#3	.0393	.0031	-.0001	-.0003	.0002	.0036	.0148
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10271

Analysis Report Wed 09-21-94 03:58:19 PM page 1

Method: MRD4PT Sample Name: LCS DISS1 Operator: CME
Run Time: 09/21/94 15:53:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.66	1.668	1.824	17.84	.5351	.9718	26.22
SDev	.09	.012	.035	.09	.0013	.0123	.09
%RSD	.5172	.7459	1.904	.4964	.2364	1.267	.3533
#1	17.70	1.656	1.836	17.90	.5353	.9625	26.17
#2	17.56	1.667	1.784	17.73	.5337	.9672	26.16
#3	17.73	1.681	1.850	17.88	.5362	.9858	26.32
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	24.09	2.409	2.409	24.09	.6383	1.204	30.19
Low	15.91	1.591	1.591	15.91	.4214	.7956	20.58

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9892	4.927	2.400	9.638	9.522	.9760	23.97
SDev	.0048	.020	.013	.030	.022	.0120	.1
%RSD	.4842	.3961	.5312	.3129	.2355	1.226	.4028
#1	.9874	4.923	2.408	9.647	9.498	.9659	23.99
#2	.9856	4.909	2.386	9.605	9.527	.9730	23.87
#3	.9946	4.948	2.407	9.663	9.542	.9892	24.06
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass
High	1.204	6.022	3.011	12.04		1.204	30.11
Low	.7956	3.978	1.988	7.956		.7956	19.88

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.487	4.001	23.80	.9930	22.50	4.781	2.068
SDev	.004	.038	.48	.0050	.24	.012	.005
%RSD	.2955	.9524	2.033	.4997	1.069	.2532	.2377
#1	1.487	3.997	23.80	.9940	22.65	4.784	2.064
#2	1.482	3.965	23.31	.9875	22.22	4.768	2.065
#3	1.491	4.040	24.28	.9973	22.62	4.792	2.073
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.807	4.818	30.11	1.204	30.11	6.022	2.409
Low	1.193	3.182	19.88	.7956	19.88	3.978	1.591

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9542	-.0128	-.0011	-.0001	.0010	.0185	1.863
SDev	.0240	.0091	.0018	.0000	.0005	.0040	.045
%RSD	2.514	71.66	161.5	.0000	48.09	21.42	2.417
#1	.9770	-.0233	.0010	-.0001	.0015	.0139	1.825
#2	.9292	-.0075	-.0022	-.0001	.0005	.0208	1.913
#3	.9563	-.0075	-.0022	-.0001	.0011	.0208	1.851
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass

10272

Analysis Report Wed 09-21-94 04:03:22 PM page 1

Method: MRD4PT Sample Name: 9887-1 Operator: CME
Run Time: 09/21/94 15:58:23
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0201	.0023	-.0233	.0044	-.0001	.0030	-.0060
SDev	.0016	.0013	.0067	.0039	.0000	.0016	.0019
%RSD	7.965	57.65	28.53	87.69	3.793	53.31	32.21
#1	-.0203	.0011	-.0264	.0002	-.0001	.0033	-.0071
#2	-.0216	.0037	-.0157	.0054	-.0001	.0043	-.0071
#3	-.0184	.0021	-.0279	.0077	-.0001	.0012	-.0038
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0015	-.0028	-.0046	-.0187	-.0289	-.0008	-.0550
SDev	.0014	.0007	.0005	.0025	.0032	.0086	.0111
%RSD	95.89	25.23	10.12	13.50	11.00	1145.	20.12
#1	-.0020	-.0035	-.0048	-.0201	-.0325	-.0011	-.0678
#2	.0001	-.0028	-.0040	-.0201	-.0271	.0080	-.0486
#3	-.0026	-.0021	-.0048	-.0158	-.0270	-.0092	-.0486
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0013	.0005	.0566	-.0013	-.4899	-.0018	-.0001
SDev	.0004	.0125	.1909	.0008	.0058	.0008	.0005
%RSD	33.68	2686.	337.5	64.19	1.193	44.79	373.3
#1	.0015	-.0043	.0070	-.0016	-.4962	-.0025	-.0005
#2	.0015	-.0089	.2673	-.0004	-.4848	-.0010	-.0004
#3	.0008	.0146	-.1046	-.0020	-.4886	-.0018	.0005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0134	-.0321	.0006	-.0003	.0003	-.0032	-.0325
SDev	.0739	.0015	.0016	.0001	.0003	.0103	.0076
%RSD	553.3	4.745	257.0	53.42	85.44	318.3	23.48
#1	.0622	-.0312	.0010	-.0004	.0002	.0071	-.0378
#2	-.0168	-.0312	.0021	-.0001	.0007	-.0032	-.0238
#3	L-.0854	-.0339	-.0011	-.0003	.0002	-.0135	-.0360
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10273

Analysis Report QC Standard Wed 09-21-94 04:08:26 PM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 16:03:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.965	-.0535	5.100	9.348	1.005	.9807	20.39
SDev	.083	.0147	.051	.107	.008	.0040	.04
%RSD	.8379	27.43	.9959	1.140	.7500	.4072	.1968
#1	10.01	-.0429	5.141	9.423	1.009	.9853	20.43
#2	10.02	-.0702	5.117	9.396	1.009	.9781	20.38
#3	9.869	-.0473	5.043	9.226	.9963	.9787	20.35
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.032	5.144	1.976	10.15	9.929	4.941	19.62
SDev	.01	.022	.022	.06	.077	.024	.12
%RSD	.4734	.4368	1.105	.5822	.7742	.4908	.5896
#1	2.040	5.156	1.990	10.19	9.962	4.969	19.70
#2	2.033	5.157	1.987	10.18	9.841	4.932	19.67
#3	2.021	5.118	1.950	10.08	9.983	4.923	19.48
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.003	5.095	19.39	1.007	20.08	5.015	1.030
SDev	.004	.038	.26	.002	.27	.033	.003
%RSD	.4139	.7499	1.348	.2124	1.323	.6586	.3126
#1	1.007	5.124	19.66	1.009	20.17	5.043	1.029
#2	1.004	5.108	19.36	1.008	20.29	5.024	1.034
#3	.9986	5.051	19.14	1.005	19.79	4.979	1.028
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.003	-.0084	.0003	-.0002	.0006	.0048	4.970
SDev	.012	.0040	.0016	.0002	.0003	.0072	.058
%RSD	.2485	48.22	585.1	95.79	50.10	149.7	1.159
#1	4.990	-.0128	-.0011	-.0003	.0004	-.0032	5.013
#2	5.003	-.0048	.0021	-.0003	.0004	.0105	4.992
#3	5.015	-.0075	-.0001	.0000	.0009	.0071	4.905
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10274

Analysis Report Blank Sample Wed 09-21-94 04:13:30 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 16:08:31
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0036	.0073	-.0301	.0054	-.0001	.0041	-.0341
SDev	.0020	.0132	.0142	.0000	.0000	.0016	.0019
%RSD	56.04	180.8	47.08	.0000	2.232	40.22	5.655
#1	.0045	.0170	-.0464	.0054	-.0001	.0046	-.0330
#2	.0013	-.0077	-.0235	.0054	-.0001	.0022	-.0363
#3	.0051	.0126	-.0205	.0054	-.0001	H.0054	-.0330
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	-.0014	-.0016	.0024	.0120	.0060	-.0166
SDev	.0015	.0012	.0000	.0003	.0147	.0018	.0097
%RSD	7144.	88.19	.0000	12.96	122.8	29.36	58.21
#1	-.0017	-.0007	-.0016	.0023	.0232	.0050	-.0222
#2	.0013	-.0007	-.0016	.0028	-.0047	.0050	-.0222
#3	.0004	-.0028	-.0016	.0023	.0176	.0080	-.0055
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0003	.0025	.1185	.0023	.0012	-.0015	.0002
SDev	.0004	.0008	.2808	.0014	.0169	.0005	.0006
%RSD	146.7	30.50	236.9	60.86	1469.	31.12	314.7
#1	.0000	.0025	.4161	.0025	.0193	-.0017	-.0005
#2	.0000	.0017	-.1418	.0009	-.0017	-.0017	.0005
#3	.0008	.0033	.0813	.0037	-.0142	-.0009	.0005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0321	-.0048	.0035	-.0002	.0007	-.0009	-.0191
SDev	.0115	.0026	.0006	.0001	.0005	.0105	.0199
%RSD	35.71	54.52	17.70	47.90	74.88	1108.	104.4
#1	-.0210	-.0022	.0031	-.0001	.0007	-.0032	-.0133
#2	-.0314	-.0075	.0042	-.0003	.0002	.0105	-.0413
#3	-.0438	-.0048	.0031	-.0001	.0012	-.0101	-.0027
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10275

Analysis Report Wed 09-21-94 04:24:11 PM page 1

Method: MRD4PT Sample Name: 9887-1MS1 Operator: CME
Run Time: 09/21/94 16:19:13
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.032	.4671	2.141	1.891	.0522	.0533	-.0054
SDev	.010	.010	.021	.023	.0003	.0018	.0029
%RSD	.5070	2.138	.9954	1.213	.6622	3.410	53.27
#1	2.038	.4557	2.142	1.903	.0525	.0537	-.0088
#2	2.039	.4716	2.162	1.906	.0522	.0513	-.0038
#3	2.021	.4742	2.119	1.865	.0518	.0549	-.0038
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2093	.5419	.2512	1.036	1.036	.5236	-.0763
SDev	.0009	.0024	.0016	.003	.032	.0066	.0104
%RSD	.4404	.4481	.6391	.2707	3.120	1.259	13.69
#1	.2095	.5447	.2528	1.036	.9991	.5168	-.0811
#2	.2083	.5405	.2512	1.038	1.055	.5239	-.0835
#3	.2101	.5405	.2496	1.033	1.055	.5300	-.0643
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5301	.5519	-.0381	.0489	-.4768	.5109	.5488
SDev	.0019	.0111	.4098	.0018	.0011	.0028	.0015
%RSD	.3641	2.015	1075.	3.759	.2316	.5518	.2769
#1	.5315	.5638	.1603	.0470	-.4781	.5133	.5501
#2	.5308	.5502	-.5093	.0490	-.4762	.5117	.5491
#3	.5279	.5418	.2346	.0507	-.4762	.5078	.5471
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.119	-.0330	.0017	-.0003	.0005	-.0021	2.098
SDev	.027	.0055	.0022	.0002	.0006	.0020	.058
%RSD	1.276	16.65	130.6	52.36	114.5	94.79	2.749
#1	2.103	-.0391	-.0001	-.0004	.0002	.0002	2.032
#2	2.150	-.0312	.0010	-.0004	.0002	-.0032	2.120
#3	2.105	-.0286	.0042	-.0001	.0012	-.0032	2.141
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10276

Analysis Report Wed 09-21-94 04:29:14 PM page 1

Method: MRD4PT Sample Name: 9887-1MSD1 Operator: CME
Run Time: 09/21/94 16:24:16
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.034	.4663	2.119	1.898	.0526	.0574	-.0074
SDev	.017	.0177	.022	.014	.0005	.0024	.0051
%RSD	.8538	3.797	1.057	.7303	.8789	4.108	69.15
#1	2.031	.4583	2.133	1.883	.0522	.0580	-.0029
#2	2.053	.4865	2.131	1.911	.0531	.0548	-.0063
#3	2.019	.4539	2.093	1.901	.0525	.0594	-.0129
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2104	.5424	.2525	1.040	1.021	.5293	-.0723
SDev	.0009	.0015	.0012	.009	.024	.0187	.0055
%RSD	.4302	.2690	.4855	.8452	2.376	3.542	7.635
#1	.2104	.5419	.2512	1.033	1.033	.5401	-.0787
#2	.2095	.5440	.2536	1.050	1.038	.5077	-.0691
#3	.2113	.5412	.2528	1.038	.9935	.5402	-.0692
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5327	.5562	-.2117	.0484	-.4768	.5141	.5491
SDev	.0022	.0082	.2232	.0021	.0069	.0014	.0010
%RSD	.4206	1.477	105.4	4.317	1.451	.2669	.1821
#1	.5323	.5653	.0115	.0507	-.4733	.5133	.5501
#2	.5352	.5494	-.4349	.0478	-.4723	.5156	.5491
#3	.5308	.5540	-.2117	.0466	-.4848	.5133	.5481
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.115	-.0312	-.0008	-.0003	.0003	-.0078	2.130
SDev	.020	.0026	.0012	.0002	.0008	.0052	.032
%RSD	.9379	8.450	156.3	60.17	226.4	67.12	1.518
#1	2.105	-.0312	-.0001	-.0001	.0012	-.0067	2.103
#2	2.138	-.0286	-.0022	-.0004	.0002	-.0135	2.166
#3	2.103	-.0339	-.0001	-.0005	-.0003	-.0032	2.122
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10277

Analysis Report Wed 09-21-94 04:34:17 PM page 1

Method: MRD4PT Sample Name: 9887-2 Operator: CME
Run Time: 09/21/94 16:29:18
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0152	.0017	.0098	.1534	-.0001	.0027	56.51
SDev	.0006	.0005	.0284	.0003	.0001	.0008	.20
%RSD	4.179	28.67	290.8	.1776	90.08	28.60	.3451
#1	-.0146	.0011	.0291	.1531	-.0003	.0028	56.72
#2	-.0152	.0020	.0230	.1536	-.0001	.0018	56.45
#3	-.0159	.0020	-.0228	.1536	-.0001	.0033	56.34
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0018	-.0030	-.0059	.8809	.8191	-.0073	11.96
SDev	.0018	.0011	.0012	.0030	.0225	.0128	.07
%RSD	103.1	35.55	20.73	.3416	2.748	176.1	.5799
#1	-.0014	-.0021	-.0056	.8775	.7986	-.0120	11.88
#2	-.0002	-.0028	-.0048	.8824	.8432	-.0171	12.00
#3	-.0038	-.0042	-.0073	.8829	.8154	.0072	12.01
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.540	-.0021	4.392	-.0004	8.068	-.0016	-.0015
SDev	.002	.0110	.074	.0005	.091	.0012	.001
%RSD	.1098	530.0	1.694	115.9	1.125	74.54	66.28
#1	1.541	.0070	4.392	-.0010	7.985	-.0019	-.0015
#2	1.541	-.0142	4.467	-.0001	8.054	-.0003	-.0025
#3	1.538	.0010	4.318	-.0001	8.165	-.0027	-.0005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0005	.0119	.0017	.2286	.0000	.0208	-.0172
SDev	.0177	.0055	.0034	.0015	.0003	.0069	.0266
%RSD	3467.	46.27	201.6	.6790	1238.	33.02	154.9
#1	-.0064	.0057	.0042	.2269	-.0001	.0208	-.0458
#2	.0206	.0136	.0031	.2291	-.0002	.0139	.0068
#3	-.0127	.0163	-.0022	.2299	.0003	.0277	-.0125
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10278

Analysis Report Wed 09-21-94 04:39:19 PM page 1

Method: MRD4PT Sample Name: 9888-1 Operator: CME
Run Time: 09/21/94 16:34:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0140	-.0000	-.0234	.0002	-.0002	.0026	-.0088
SDev	.0055	.0035	.0026	.0000	.0001	.0016	.0014
%RSD	39.75	40890.	11.18	.0000	58.16	62.32	16.49
#1	-.0076	.0038	-.0219	.0002	-.0003	.0012	-.0071
#2	-.0178	-.0006	-.0264	.0002	-.0003	.0023	-.0096
#3	-.0165	-.0032	-.0218	.0002	-.0001	.0044	-.0096
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0023	-.0025	-.0046	-.0191	-.0418	-.0031	-.0670
SDev	.0008	.0018	.0005	.0005	.0307	.0137	.0084
%RSD	34.84	69.31	10.12	2.867	73.43	438.3	12.53
#1	-.0014	-.0042	-.0048	-.0191	-.0102	.0111	-.0677
#2	-.0029	-.0028	-.0048	-.0185	-.0716	-.0163	-.0582
#3	-.0026	-.0007	-.0040	-.0196	-.0437	-.0041	-.0750
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0010	.0131	-.2286	-.0004	-.4857	-.0026	.0012
SDev	.0004	.0088	.0936	.0008	.0017	.0000	.0006
%RSD	42.76	66.74	40.96	218.8	.3411	.8252	52.96
#1	.0015	.0040	-.3278	.0004	-.4876	-.0025	.0015
#2	.0008	.0139	-.2162	-.0004	-.4848	-.0026	.0015
#3	.0008	.0215	-.1418	-.0012	-.4848	-.0026	.0005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0054	-.0365	.0013	-.0002	.0005	-.0021	-.0015
SDev	.0530	.0046	.0012	.0001	.0003	.0052	.0490
%RSD	989.1	12.52	91.57	47.90	57.28	250.8	3174.
#1	.0061	-.0418	.0021	-.0001	.0007	.0036	.0516
#2	.0580	-.0339	.0021	-.0001	.0007	-.0032	-.0448
#3	-.0480	-.0339	-.0001	-.0003	.0002	-.0067	-.0115
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	200.0	50.00	50.00	50.00	50.00		150.0

10279

Analysis Report Wed 09-21-94 04:44:22 PM page 1

Method: MRD4PT Sample Name: 9888-1MS1 Operator: CME
Run Time: 09/21/94 16:39:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.068	.4874	2.153	1.915	.0532	.0539	-.0141
SDev	.005	.0055	.036	.014	.0001	.0021	.0019
%RSD	.2309	1.137	1.662	.7081	.2330	3.951	13.72
#1	2.063	.4830	2.130	1.900	.0532	.0527	-.0129
#2	2.071	.4936	2.194	1.921	.0532	.0564	-.0129
#3	2.071	.4856	2.134	1.925	.0534	.0527	-.0163
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2141	.5503	.2555	1.058	1.052	.5490	-.0611
SDev	.0017	.0051	.0012	.005	.012	.0100	.0113
%RSD	.7760	.9186	.4799	.4656	1.097	1.825	18.52
#1	.2153	.5545	.2544	1.058	1.065	.5605	-.0571
#2	.2122	.5517	.2552	1.063	1.043	.5422	-.0739
#3	.2150	.5447	.2568	1.053	1.049	.5442	-.0523
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5396	.5476	.1975	.0497	-.4822	.5222	.5563
SDev	.0015	.0114	.5403	.0006	.0058	.0012	.0036
%RSD	.2711	2.078	273.5	1.247	1.212	.2313	.6543
#1	.5396	.5509	.7183	.0499	-.4809	.5235	.5573
#2	.5410	.5570	-.3604	.0503	-.4771	.5219	.5593
#3	.5381	.5350	.2347	.0490	-.4886	.5212	.5522
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.108	-.0312	-.0008	-.0003	.0008	-.0032	2.116
SDev	.025	.0046	.0033	.0001	.0003	.0103	.039
%RSD	1.185	14.64	413.4	53.42	34.51	318.3	1.826
#1	2.107	-.0365	.0021	-.0004	.0007	-.0032	2.118
#2	2.084	-.0286	-.0043	-.0001	.0012	.0071	2.153
#3	2.134	-.0286	-.0001	-.0003	.0007	-.0135	2.076
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10280

Analysis Report Wed 09-21-94 04:49:26 PM page 1

Method: MRD4PT Sample Name: 9888-1MSD1 Operator: CME
Run Time: 09/21/94 16:44:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.072	.4936	2.159	1.922	.0534	.0535	-.0107
SDev	.016	.0097	.039	.021	.0004	.0042	.0024
%RSD	.7611	1.969	1.818	1.112	.7154	7.845	22.49
#1	2.055	.4839	2.128	1.899	.0529	.0495	-.0121
#2	2.075	.4937	2.203	1.926	.0536	.0531	-.0079
#3	2.086	.5033	2.145	1.941	.0536	.0579	-.0121
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2140	.5494	.2566	1.059	1.080	.5253	-.0747
SDev	.0019	.0008	.0036	.004	.029	.0077	.0118
%RSD	.8803	.1473	1.411	.3382	2.649	1.465	15.81
#1	.2147	.5489	.2528	1.056	1.105	.5341	-.0690
#2	.2156	.5489	.2568	1.060	1.049	.5219	-.0667
#3	.2119	.5503	.2600	1.063	1.088	.5198	-.0882
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5396	.5664	-.1373	.0511	-.4822	.5199	.5545
SDev	.0007	.0176	.4143	.0000	.0036	.0005	.0006
%RSD	.1342	3.109	301.8	.0153	.7510	.0883	.1122
#1	.5389	.5547	-.2117	.0511	-.4781	.5196	.5542
#2	.5403	.5866	.3092	.0511	-.4838	.5196	.5541
#3	.5396	.5578	-.5093	.0511	-.4848	.5204	.5552
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.118	-.0303	-.0001	-.0003	.0007	-.0090	2.101
SDev	.057	.0081	.0000	.0002	.0005	.0020	.098
%RSD	2.693	26.56	.0000	52.36	74.53	22.13	4.648
#1	2.086	-.0233	-.0001	-.0001	.0012	-.0101	2.203
#2	2.184	-.0286	-.0001	-.0004	.0002	-.0067	2.092
#3	2.084	-.0391	-.0001	-.0004	.0007	-.0101	2.008
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10281

Analysis Report Wed 09-21-94 04:54:29 PM page 1

Method: MRD4PT Sample Name: 9888-2 Operator: CME
Run Time: 09/21/94 16:49:30
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0161	.0061	.0035	.1308	-.0002	.0027	54.78
SDev	.0112	.0092	.0124	.0006	.0001	.0017	.16
%RSD	69.50	149.6	352.6	.4169	59.21	62.42	.2876
#1	-.0267	-.0041	.0148	.1314	-.0003	.0008	54.94
#2	-.0171	.0090	-.0097	.1305	-.0001	.0032	54.77
#3	-.0044	.0135	.0054	.1305	-.0003	.0041	54.63
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0005	-.0007	-.0056	5.294	4.906	-.0087	12.45
SDev	.0005	.0007	.0008	.018	.042	.0133	.09
%RSD	108.6	103.7	14.21	.3392	.8618	153.3	.7156
#1	-.0002	-.0014	-.0065	5.314	4.888	.0052	12.55
#2	-.0002	-.0007	-.0048	5.289	4.877	-.0212	12.40
#3	-.0011	.0000	-.0056	5.279	4.955	-.0100	12.40
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.918	.0068	4.687	-.0005	9.917	-.0014	-.0009
SDev	.012	.0083	.223	.0014	.148	.0008	.0006
%RSD	.4051	122.6	4.761	281.0	1.494	55.22	71.30
#1	2.930	.0116	4.910	-.0019	10.09	-.0006	-.0016
#2	2.916	-.0028	4.464	-.0007	9.821	-.0014	-.0005
#3	2.907	.0116	4.687	.0010	9.843	-.0021	-.0005
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0168	.0242	.0035	.2323	-.0005	.0162	-.0330
SDev	.0344	.0046	.0012	.0021	.0006	.0072	.0106
%RSD	204.3	18.90	35.41	.8840	112.5	44.06	32.16
#1	L-.0522	.0295	.0021	.2347	-.0008	.0139	-.0208
#2	-.0147	.0215	.0042	.2312	-.0008	.0242	-.0383
#3	.0165	.0215	.0042	.2310	.0002	.0105	-.0400
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10282

Analysis Report Wed 09-21-94 04:59:31 PM page 1

Method: MRD4PT Sample Name: 116487-1 Operator: CME
Run Time: 09/21/94 16:54:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0150	.0097	-.0066	.1286	-.0001	.0010	269.7
SDev	.0079	.0132	.0168	.0000	.0000	.0012	1.2
%RSD	52.65	135.9	252.8	.0000	3.798	116.8	.4447
#1	-.0108	-.0050	.0030	.1286	-.0001	.0009	270.7
#2	-.0241	.0135	.0031	.1286	-.0001	-.0001	269.9
#3	-.0101	.0206	-.0260	.1286	-.0001	.0023	268.4
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0038	-.0011	-.0059	-.0016	-.0324	-.0129	166.2
SDev	.0011	.0011	.0005	.0009	.0290	.0053	.5
%RSD	28.63	93.67	7.834	60.19	89.54	40.99	.2948
#1	-.0035	-.0021	-.0056	-.0021	-.0157	-.0159	166.0
#2	-.0050	.0000	-.0056	-.0021	-.0659	-.0068	166.8
#3	-.0029	-.0014	-.0065	-.0005	-.0156	-.0159	165.9
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2754	.0205	4.546	-.0012	113.4	-.0046	.1922
SDev	.0008	.0063	.119	.0012	.8	.0009	.0006
%RSD	.3053	30.90	2.627	103.6	.7074	19.39	.2982
#1	.2759	.0184	4.496	-.0012	113.0	-.0041	.1925
#2	.2759	.0154	4.682	-.0024	114.3	-.0041	.1915
#3	.2744	.0276	4.459	.0000	112.8	-.0057	.1925
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0619	.0180	-.0001	.7069	-.0030	.0219	-.0233
SDev	.0098	.0015	.0000	.0028	.0003	.0121	.0081
%RSD	15.88	8.450	.0000	.3978	9.850	54.95	34.57
#1	L-.0542	.0189	-.0001	.7047	-.0027	.0208	-.0186
#2	L-.0730	.0189	-.0001	.7101	-.0033	.0345	-.0326
#3	L-.0584	.0163	-.0001	.7058	-.0030	.0105	-.0186
Errors	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

10283

Analysis Report Wed 09-21-94 05:04:34 PM page 1

Method: MRD4PT Sample Name: 116487-2 Operator: CME
Run Time: 09/21/94 16:59:35
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0114	.0070	.0172	.0833	-.0001	.0022	414.4
SDev	.0072	.0056	.0368	.0000	.0001	.0015	1.3
%RSD	63.34	79.29	213.2	.0000	84.52	68.08	.3169
#1	-.0063	.0038	.0518	.0833	-.0001	.0016	415.6
#2	-.0197	.0038	-.0214	.0833	-.0003	.0012	414.6
#3	-.0082	.0135	.0213	.0833	-.0001	.0040	413.0
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.	200.0	100.0	200.0	50.00	150.0	1000.
Low	-.1000	-.0600	-.0500	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0013	-.0007	-.0046	-.0185	-.0455	-.0230	264.8
SDev	.0011	.0007	.0012	.0009	.0064	.0150	.3
%RSD	82.41	103.7	26.78	5.113	14.16	64.94	.1056
#1	-.0023	-.0007	-.0056	-.0180	-.0381	-.0261	265.0
#2	-.0002	.0000	-.0032	-.0196	-.0493	-.0068	265.0
#3	-.0014	-.0014	-.0048	-.0180	-.0492	-.0362	264.5
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	50.00	200.0	500.0	5000.	200.0	1000.
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2744	.0144	5.062	-.0013	174.2	-.0033	.1084
SDev	.0007	.0089	.170	.0013	.4	.0008	.0006
%RSD	.2672	61.86	3.366	98.84	.2225	23.61	.5241
#1	.2751	.0245	5.099	-.0004	174.6	-.0033	.1087
#2	.2737	.0108	5.210	-.0028	174.3	-.0025	.1088
#3	.2744	.0078	4.876	-.0008	173.8	-.0041	.1078
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	150.0	200.0	1000.	200.0	1000.	150.0	100.0
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0300	.0356	.0010	.9740	-.0048	.0242	-.0327
SDev	.0098	.0085	.0011	.0006	.0002	.0103	.0249
%RSD	32.77	23.81	107.8	.0642	3.412	42.51	75.95
#1	-.0189	.0453	-.0001	.9746	-.0049	.0345	L-.0596
#2	-.0335	.0321	.0010	.9742	-.0050	.0139	-.0281
#3	-.0376	.0295	.0021	.9734	-.0047	.0242	-.0106
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10284

Analysis Report QC Standard Wed 09-21-94 05:08:03 PM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 17:05:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.843	-.0546	5.126	9.155	1.001	.9819	20.44
SDev	.014	.0055	.026	.031	.001	.0057	.03
%RSD	.1391	10.15	.5104	.3341	.1338	.5763	.1545
#1	9.843	-.0482	5.157	9.127	.9998	.9873	20.43
#2	9.829	-.0578	5.112	9.152	1.002	.9824	20.43
#3	9.856	-.0578	5.110	9.188	1.001	.9760	20.48
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.036	5.164	1.936	10.17	9.984	5.001	19.40
SDev	.005	.006	.005	.02	.032	.015	.07
%RSD	.2589	.1222	.2698	.1536	.3173	.3050	.3443
#1	2.035	5.158	1.930	10.16	9.961	5.015	19.34
#2	2.032	5.164	1.936	10.17	9.972	5.003	19.38
#3	2.042	5.170	1.941	10.19	10.02	4.985	19.47
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.005	5.129	19.09	.9808	19.34	4.989	1.031
SDev	.002	.026	.34	.0021	.03	.016	.001
%RSD	.1935	.5094	1.800	.2186	.1365	.3135	.0894
#1	1.004	5.101	19.29	.9832	19.37	4.975	1.030
#2	1.004	5.134	18.69	.9791	19.32	4.985	1.031
#3	1.007	5.153	19.29	.9800	19.33	5.006	1.032
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.978	-.0092	.0021	-.0002	.0012	.0036	4.967
SDev	.037	.0061	.0019	.0001	.0003	.0103	.034
%RSD	.7361	65.97	89.85	37.52	22.96	283.7	.6937
#1	4.936	-.0128	.0031	-.0003	.0014	.0139	4.985
#2	4.998	-.0128	.0031	-.0001	.0014	.0036	4.927
#3	5.001	-.0022	-.0001	-.0003	.0009	-.0067	4.989
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

Cal

10285

Analysis Report Blank Sample Wed 09-21-94 05:10:40 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 17:08:08
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0085	-.0024	-.0149	.0061	-.0001	.0018	-.0394
SDev	.0036	.0138	.0076	.0003	.0002	.0022	.0038
%RSD	42.43	577.9	51.32	4.441	322.3	118.3	9.560
#1	.0045	-.0095	-.0159	.0063	-.0001	.0011	-.0430
#2	.0115	-.0112	-.0068	.0058	.0002	.0042	-.0355
#3	.0096	.0135	-.0220	.0063	-.0003	.0001	-.0397
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0003	-.0023	-.0022	.0108	.0158	-.0015	-.0063
SDev	.0024	.0025	.0012	.0006	.0084	.0228	.0180
%RSD	870.8	106.5	56.51	5.835	53.32	1568.	287.5
#1	.0001	-.0049	-.0024	.0104	.0066	-.0194	-.0055
#2	.0019	.0000	-.0008	.0104	.0230	.0243	.0113
#3	-.0029	-.0021	-.0032	.0115	.0178	-.0092	-.0246
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0008	.0086	.0194	.0029	-.0078	-.0023	.0015
SDev	.0000	.0050	.2532	.0011	.0058	.0025	.0010
%RSD	.2998	58.14	1308.	37.23	75.17	112.3	66.18
#1	.0008	.0033	-.0674	.0021	-.0142	-.0033	.0005
#2	.0008	.0093	.3046	.0041	-.0027	.0006	.0025
#3	.0008	.0131	-.1790	.0025	-.0065	-.0041	.0015
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0047	-.0057	.0017	-.0001	.0005	-.0021	-.0016
SDev	.0271	.0030	.0022	.0002	.0003	.0099	.0097
%RSD	581.3	53.27	130.6	283.5	57.71	474.0	615.6
#1	.0331	-.0075	.0042	-.0003	.0002	.0036	-.0080
#2	-.0210	-.0022	.0010	.0002	.0007	-.0135	.0095
#3	.0019	-.0075	-.0001	-.0001	.0007	.0036	-.0062
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10286

Analysis Report QC Standard Wed 09-21-94 05:13:17 PM page 1

Method: MRD4PT Sample Name: ICSA Operator: CME
Run Time: 09/21/94 17:10:45
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	483.8	.0182	.1186	.0183	.0001	.0034	463.4
SDev	2.4	.0208	.0299	.0003	.0001	.0014	.9
%RSD	.4957	114.5	25.22	1.493	112.9	41.45	.1973
#1	481.2	.0399	.1120	.0186	-.0000	.0021	463.1
#2	484.1	-.0015	.0925	.0181	.0002	.0033	462.6
#3	486.0	.0161	.1513	.0181	.0002	.0049	464.4
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	501.7						502.1
Range	102.5						102.6

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0106	.0052	.0067	174.8	165.3	.0663	469.6
SDev	.0017	.0018	.0012	.4	.5	.0146	1.9
%RSD	15.70	34.15	18.41	.2176	.2910	22.01	.4119
#1	-.0125	.0049	.0064	174.4	164.8	.0769	467.4
#2	.0095	.0035	.0056	174.9	165.2	.0725	470.5
#3	.0098	.0070	.0080	175.2	165.8	.0497	471.0
Errors	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass
Value				199.8			500.9
Range				40.85			102.4

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0100	.0202	-.1702	-.0008	-.2380	.0084	.0607
SDev	.0001	.0085	.5204	.0015	.0062	.0007	.0010
%RSD	1.336	41.90	305.7	176.4	2.584	8.334	1.733
#1	.0098	.0169	.1998	-.0025	-.2414	.0089	.0608
#2	.0100	.0298	-.7653	.0005	-.2309	.0076	.0597
#3	.0101	.0139	.0547	-.0006	-.2416	.0088	.0618
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0636	-.0189	.0142	.0106	-.0073	-.0044	-.0114
SDev	.0213	.0030	.0033	.0002	.0007	.0040	.0771
%RSD	33.56	16.11	23.04	1.964	9.348	90.51	674.8
#1	.0456	-.0207	.0170	.0104	-.0067	-.0067	-.0115
#2	.0580	-.0207	.0106	.0108	-.0072	-.0067	-.0885
#3	.0872	-.0154	.0149	.0107	-.0081	.0002	.0657
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10287

Analysis Report QC Standard Wed 09-21-94 05:15:52 PM page 1

Method: MRD4PT Sample Name: ICSAB Operator: CME
Run Time: 09/21/94 17:13:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	483.6	-.0153	.1739	.4583	.4552	.9370	469.7
SDev	2.8	.0168	.0560	.0039	.0024	.0057	1.1
%RSD	.5806	109.8	32.19	.8578	.5389	.6115	.2437
#1	480.6	-.0056	.1125	.4539	.4530	.9304	469.1
#2	483.9	-.0056	.1871	.4595	.4547	.9393	469.1
#3	486.2	-.0347	.2222	.4614	.4578	.9411	471.1
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	501.7			.4991	.4978	1.002	502.1
Range	102.5			.1020	.1018	.2049	102.6

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4598	.4599	.4891	175.8	166.8	.9751	473.6
SDev	.0020	.0028	.0020	.7	.6	.0059	2.2
%RSD	.4270	.6097	.4130	.4211	.3418	.6056	.4697
#1	.4578	.4571	.4872	175.2	166.3	.9731	471.5
#2	.4597	.4599	.4888	175.6	166.7	.9704	473.4
#3	.4618	.4627	.4912	176.6	167.5	.9817	475.9
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass	QC Pass
Value	.4977	.5009	.4952	199.8		1.001	500.9
Range	.1017	.1024	.1012	40.85		.2047	102.4

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4621	.9001	-.2917	.9726	-.2805	.4632	1.008
SDev	.0018	.0130	.2035	.0043	.0037	.0011	.004
%RSD	.3981	1.443	69.79	.4421	1.322	.2375	.4405
#1	.4610	.9087	-.0957	.9695	-.2804	.4629	1.004
#2	.4611	.8851	-.5020	.9708	-.2842	.4624	1.006
#3	.4642	.9064	-.2773	.9775	-.2768	.4645	1.013
Errors	QC Pass	QC Pass	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass
Value	.4962	.9948		.9991		.4997	.9993
Range	.1014	.2033		.2042		.1021	.2043

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0412	-.0347	.0120	.0106	-.0073	.0002	.0100
SDev	.0756	.0093	.0040	.0001	.0008	.0060	.0193
%RSD	183.6	26.67	33.62	.7421	10.34	3007.	191.9
#1	-.1056	-.0444	.0074	.0107	-.0065	.0036	.0298
#2	-.0599	-.0259	.0149	.0105	-.0080	-.0067	.0089
#3	.0420	-.0339	.0138	.0107	-.0073	.0036	-.0087
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10288

Analysis Report QC Standard Wed 09-21-94 05:18:27 PM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/21/94 17:15:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.953	-.0582	5.189	9.335	1.010	.9877	20.47
SDev	.036	.0086	.042	.042	.003	.0030	.01
%RSD	.3617	14.74	.8016	.4528	.3132	.3070	.0577
#1	9.918	-.0658	5.164	9.293	1.007	.9883	20.48
#2	9.950	-.0597	5.166	9.333	1.009	.9904	20.46
#3	9.990	-.0489	5.237	9.377	1.013	.9844	20.46
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.00		5.000	10.00	1.000	1.000	20.00
Range	1.044		.5220	1.044	.1044	.1044	2.088

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.047	5.191	1.967	10.21	10.08	4.998	19.65
SDev	.005	.005	.008	.03	.03	.006	.04
%RSD	.2372	.1014	.4318	.2519	.3152	.1286	.2172
#1	2.043	5.191	1.958	10.19	10.11	4.994	19.61
#2	2.052	5.186	1.971	10.20	10.05	5.005	19.66
#3	2.046	5.196	1.974	10.24	10.07	4.994	19.69
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	5.000	2.000	10.00	10.00	5.000	20.00
Range	.2088	.5220	.2088	1.044	1.044	.5220	2.088

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.013	5.138	19.14	.9859	19.73	5.043	1.038
SDev	.001	.032	.22	.0052	.09	.006	.001
%RSD	.0716	.6294	1.166	.5223	.4756	.1238	.0689
#1	1.013	5.115	18.92	.9918	19.69	5.040	1.038
#2	1.013	5.124	19.36	.9820	19.83	5.038	1.038
#3	1.014	5.175	19.14	.9840	19.65	5.050	1.037
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.000	5.000	20.00	1.000	20.00	5.000	1.000
Range	.1044	.5220	2.088	.1044	2.088	.5220	.1044

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.163	-.0101	-.0011	-.0001	.0007	.0025	5.095
SDev	.033	.0026	.0018	.0000	.0003	.0040	.080
%RSD	.6397	26.08	161.5	.0000	38.57	159.4	1.577
#1	5.184	-.0128	-.0033	-.0001	.0004	.0002	5.106
#2	5.125	-.0075	-.0001	-.0001	.0009	.0002	5.010
#3	5.181	-.0101	-.0001	-.0001	.0009	.0071	5.169
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10289

Analysis Report Blank Sample Wed 09-21-94 05:21:02 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 17:18:31
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0119	-.0015	-.0210	.0077	.0002	.0012	-.0280
SDev	.0086	.0078	.0268	.0000	.0001	.0033	.0029
%RSD	72.47	521.5	127.2	.0000	55.51	284.8	10.34
#1	.0020	-.0103	-.0464	.0077	.0004	.0046	-.0296
#2	.0166	.0011	-.0236	.0077	.0002	-.0020	-.0296
#3	.0172	.0047	.0069	.0077	.0002	.0009	-.0246
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.2000	.0600	.0750	.2000	.0050	.0050	5.000
Low	-.2000	-.0600	-.0750	-.2000	-.0050	-.0050	-5.000

Elem	CR	CO	CU	fe	FEHIGH	PB	MG
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0015	-.0021	-.0022	.0143	-.0010	.0033	.0065
SDev	.0009	.0007	.0005	.0006	.0211	.0051	.0024
%RSD	61.99	33.74	21.36	3.828	2081.	155.6	37.12
#1	-.0017	-.0014	-.0016	.0143	-.0103	-.0021	.0065
#2	-.0023	-.0028	-.0024	.0137	-.0159	.0080	.0041
#3	-.0005	-.0021	-.0024	.0148	.0231	.0040	.0089
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0100	.0500	.0250	.1000	1.000	.0450	5.000
Low	-.0100	-.0500	-.0250	-.1000	-1.000	-.0450	-5.000

Elem	MN	NI	K	AG	NA	V	ZN
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0008	.0073	-.4394	.0023	.0126	-.0012	.0019
SDev	.0000	.0055	.3664	.0018	.0101	.0005	.0006
%RSD	.7563	75.26	83.37	78.27	80.15	37.80	31.03
#1	.0008	.0101	-.0302	.0004	.0012	-.0017	.0025
#2	.0008	.0010	-.7370	.0025	.0165	-.0010	.0016
#3	.0008	.0108	-.5510	.0041	.0203	-.0009	.0015
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.0150	.0400	5.000	.0100	5.000	.0500	.0200
Low	-.0150	-.0400	-5.000	-.0100	-5.000	-.0500	-.0200

Elem	Se	B	Mo	Sr	Ti	Sn	Tl
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0047	-.0040	-.0001	-.0002	.0003	-.0021	.0066
SDev	.0162	.0015	.0021	.0001	.0003	.0020	.0266
%RSD	345.9	38.47	2767.	37.52	86.03	94.79	400.8
#1	-.0085	-.0022	.0021	-.0003	.0002	-.0032	-.0238
#2	-.0002	-.0048	-.0022	-.0001	.0007	-.0032	.0183
#3	.0227	-.0048	-.0001	-.0003	.0002	.0002	.0253
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK
High	.0750	.0500	.0500	.0200	.0200	.0500	

Cat

10290

OTHER INORGANIC DATA

ARDL, INC.

METALS PREPARATION LOG

Contract: POCE | Batch: 1571P | Method: SW846/3050
Date: 9/21/94 | Matrix: SOIL | Analyst: J Collier

ARDL Sample No.	Initial Weight (gram/vol)	Final Volume (mL)
Prep Blank 1	100ml	100ml
Prep Blank 2	100ml	100ml
LCS 1	100ml	100ml
LCS 2	100ml	100ml
Spike Blank	100ml	100ml
9883-4	1.0g	100ml
9883-5	1.0g	100ml
9883-6	1.0g	100ml
9883-7	1.0g	100ml
9883-8	1.0g	100ml
9883-9	1.0g	100ml
9883-10	1.0g	100ml
9883-11	1.0g	100ml
9883-12	1.0g	100ml
9883-13	1.0g	100ml
9883-14	1.0g	100ml
9883-14 ms	1.0g	100ml
9883-14 msd	1.0g	100ml
9883-15	1.0g	100ml

QC Solution	Mls Added	Solution Used	Reference # (Book #-Pg #)	Spk\Witness
Spike F (GFAA)		GFAA Solutions Plus		\
Spike P (ICP/FLAA)	1	ICP SPEX Spike One	NB 1484 P.43	JKC \ CA
TCLP (ICP/FLAA)		TCLP Spike		\
LCS F (GFAA)		GFAA M		\
Spike Blank (GFAA)		Solutions Plus		\
LCS P (ICP/FLAA)	5.5	Leeman's LCS	NB 1484 P.71	CA \ JKC
Spike Blank (ICP/FLAA)	1	SPEX Spike One	NB 1484 P.71	CA \ JKC
Spike BlankTCLP (ICP/FLAA)		TCLP Spike		\
Solid LCS		ERA Lot		\

Signed	Date	Signed	Date
[illegible]	9/21/94	DC Upchurch	10292 9-21-94

Sample #	Tare #	Tare wt g	Sample + Tare wt (g)	105° wt. g)	conc %
BLK	1	.98	8.26	0.99	<1.0
009881-01	2	.97	6.26	6.03	95.7
009881-01 Dup	3	.98	6.33	6.04	94.6
009883-04	4	.98	7.01	6.37	89.4
009883-04 Dup	5	.98	6.94	6.37	90.4
009883-05	6	.99	6.38	5.86	90.4
009883-06	7	.98	7.06	6.41	89.3
009883-07	8	.98	6.86	6.25	89.6
009883-08	9	.98	8.62	7.71	88.1
009883-09	10	.98	7.18	6.65	91.5
009883-10	11	.98	6.81	6.42	93.3
009883-11	12	.98	7.19	6.38	87.0
009883-12	13	.98	6.25	5.80	91.5
009883-13	14	.98	6.67	6.03	88.8
009883-14	15	.99	6.96	6.68	95.3
009883-14 Dup	16	.99	7.09	6.82	95.6
009883-15	17	.99	6.52	6.04	91.3
009886-04	~~18~~ 72	~~.99~~ 69.5582	71.6089	71.5472	97.0
	GAG 9-19-94	GM 9-19-94			

Calculations: $\frac{105° wt - Tare wt}{Sample + Tare wt - Tare wt} \times 100\%$

009881-01 = $\frac{6.03 - .97}{6.26 - .97} \times 100\% = 95.7$

% RPD = $\frac{\text{Diff. in conc.}}{\text{Avg. of conc}} \times 100\%$

009883-14 = $\frac{95.6 - 95.3}{95.45} \times 100\% = .31\%$ RPD

* Not enough sample to do Dup. Sample was a tal, it was analyzed in a crucible.

Continued on Page

Read and Understood By

Signed 9-16-94 Date Signed 9-19-94 Date

10293

COLOR/CLARITY

	BEFORE				AFTER	
SAMPLE #	COLOR	TEXTURE	ARTIFACTS (SOIL)	CLARITY (WATER)	COLOR	CLARITY
9883-4	brown	Fine	Rocks		yellow	clear
9883-5	brown	Fine	Rocks		yellow	clear
9883-6	brown	Fine	Rocks		yellow	clear
9883-7	brown	Fine	Rocks		yellow	clear
9883-8	brown	Fine	Rocks		yellow	clear
9883-9	brown	Fine	Rocks		yellow	clear
9883-10	brown	Fine	Rocks		yellow	clear
9883-11	brown	Fine	Rocks		yellow	clear
9883-12	brown	Fine	Rocks		yellow	clear
9883-13	brown	Fine	Rocks		yellow	clear
9883-14	brown	Fine	Rocks		yellow	clear
9883-15	brown	Fine	Rocks		yellow	clear

CLP STANDARD NOTEBOOK PAGES

10295

Package 9883

Run date 940921

ICP STANDARD PAGES

STANDARD PREPARATION			
	NB #	PAGE	CERT. #
ICAL 1	1484	68	6-86 As
ICAL 2-3	1484	26/68	6-58 As / 6-96 As
ICAL 3			
ICAL 4	1484	26/49	5-134 As
ICAL 5	1484	2	5-45 As
ICVAC			
ICVB			
CCVAC	1484	65	6-55As / 6-57As
CCVB	1484	40	6-56 As
ICSA	1484	20	6-108 As
ICSAB	1484	49	6-108 As 5-224 As
CRI1			
CRI2			
SERIAL DILUTION			
A SPIKE			

CERTICATION REFERENCE		
	NB #	PAGE
ICAL1	1487	14
ICAL2	1427	26
ICAL3	1487	13
ICAL4	1427	92
ICAL5	1427	30
~~ICVI~~CCV A	1487/1427	16/13
~~ICVI~~CCV B	1427	15
INT-A	1427	80
INT-B	1487	17
CRDL		
CRI2 - AS		
CRI2 - PB		
CRI2 - SE		
CRI2 - TL		

Sample dilutions

NB # Page

10296

ICAL 1

2ml of spex # 6-86AS → 12.5ml HNO_3 → 250 ml

ICAL 2-3

2ml of spex # 6-96AS
2ml of spex # 6-58AS } 10ml HNO_3 → 200 ml

9-16-94
0800

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
	9-16-94		9/20/94

ROJECT _____ NOTEBOOK NO. _____

Continued From Page _____

Shawl Kent 8-15-94

SPEX

CERTIFICATE OF ANALYSIS

Rec'd 8/12/94

Catalog Number: ICAL-1

Description: Instrument Calibration Standard 1

Lot Number: 6-86AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Ca	5,000	4,987.5			
Mg	5,000	4,989.0			
K	5,000	5,005.5			
Na	5,000	4,986.1			

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

Ca: NIST 3109, Mg: NIST 3131, K: NIST 3141, Na: NIST 3152.

Spex Reference Multi: Lot #1-113BDREF, 4-70AS, and 5-80AS.

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: AUG 94

SPEX

Printed on Recycled Paper

SPEX INDUSTRIES, INC. 3880 PARK AVE. EDISON, N.J. 08820 908-549-7144 FAX: 908-603-9647

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
Shawl Kent	8-15-94	DC Upcraft	8/15/94

10298

PROJECT _____ Notebook No. _____

Continued From Page _____

SPEX

CERTIFICATE OF ANALYSIS

Catalog Number: ICAL-2

Description: Instrument Calibration Standard 2

Lot Number: 6-58AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Ag	100	100.14			
Cr	100	99.68			
Mn	150	149.89			
Ni	400	398.39			
Zn	200	200.31			

Rec'd 4-22-94

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

Ag: NIST 3151 Cr: NIST 3112 Mn: NIST 3132 Ni: NIST 3136
Zn: NIST 3168

Spex Reference Multi: Lot #1-97BDREF, 5-8AS, & 4-119AS

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: APR 94

SPEX

Printed on Recycled Paper

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4-25-94 JC

Continued on Page

Read and Understood By

10299

Signed	Date	Signed	Date
J Collier	4-25-94	D C Upcraft	4-25-94

SPEX

CERTIFICATE OF ANALYSIS

Rec'd 8/10/94

Catalog Number: ICAL-3

Description: Instrument Calibration Standard 3

Lot Number: 6-96AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Al	2,000	1,999.8			
Ba	2,000	2,000.7			
Be	50	50.0			
Co	500	496.5			
Cu	250	250.1			
Fe	1,000	1,011.1			
V	500	499.0			

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

Al: NIST 3101 Ba: NIST 3104 Be: NIST 3105 Co: NIST 3113,
Cu: NIST 3114 Fe: NIST 3126 V : NIST 3165

Spex Reference Multi: Lot #1-61BDREF, 3-38AS, 5-9AS

Balances are calibrated with NIST weight sets N.J. #92589 and #92550, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: AUG 94

8/10/94

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Signed	Date	Signed	Date
[illegible]	8/10/94	[illegible]	8/10/94

10300

ICAL 2-3.3

20ml of spx #6-96 AS } 10ml HNO_3 → 200ml
20ml of spx #6-58 AS }

ICAL 2-3.2

10ml of spx #6-96 AS } 10ml HNO_3 → 200ml
10ml of spx #6-58 AS }

ICAL 4.1

5ml of spx # 5-134 AS → 10ml HNO_3 → 200ml

ICAL 4.3

20 ml of spx #5-134 AS → 10ml HNO_3 → 200ml

CEat
8-11-94
0915

Continued on Page

Read and Understood By

10301

Signed	Date	Signed	Date
		[illegible]	9/27/94

CCVAC

2ml of Spk # 6-55AS } 10ml HNO_3 → 200ml
2ml of Spk # 6-57AS }

ICSAB

20ml of spk 6-108AS } 10ml HNO_3 → 200ml
2ml of Spk 5-224AS }

ICAL 4

10ml of spk 5-134AS → 10ml HNO_3 → 200ml

8-31-94
0830

Continued on Page

Read and Understood By

10302

Signed | Date | Signed | Date 9/26/94

PROJECT _____ Notebook No. 1427

Continued From Page _____

Omitted from prior notebooks DCW 7/22/94

SPEX

CERTIFICATE OF ANALYSIS

Catalog Number: ICAL-4

Description: Instrument Calibration Standard 4

Lot Number: 5-134AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
As	100	99.75			
Cd	50	49.97			
Pb	50	50.39			
Se	50	50.34			
Tl	100	99.98			

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

As: NIST 3103 Cd: NIST 3108 Pb: NIST 3128 Se: NIST 3149
Tl: NIST 3158.

Spex Reference Multi: Lot #1-94BDREF, 4-60AS, 4-261AS

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of purchase. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager, Date: AUG 93

SPEX

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DC Lipcraft
7-22-94

Continued on Page

Read and Understood By

DC Lipcraft	7/22/94	CEat	10303 7-22-94
Signed	Date	Signed	Date

SPEX

CERTIFICATE OF ANALYSIS

Catalog Number: INT-B1

Rec'd 2-21-94

Description: Analytes B

Lot Number: 5-224AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Ag	100	99.91	Cu	50	49.52
Ba	50	49.91	Mn	50	49.62
Be	50	49.78	Ni	100	99.48
Cd	100	100.24	Pb	100	100.13
Co	50	50.09	V	50	49.97
Cr	50	49.77	Zn	100	99.93

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

Ag: NIST 3151, Ba: NIST 3104, Be: NIST 3105, Cd: NIST 3108,
Co: NIST 3113, Cr: NIST 3112, Cu: NIST 3114, Mn: NIST 3132,
Ni: NIST 3136, Pb: NIST 3128, V: NIST 3165, Zn: NIST 3168,

Spex Reference Multi: Lot #1-75BDREF, 3-113AS, 4-254AS, 5-81AS.

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: 2 96

SPEX

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DC Upcraft 8-29-94

Continued On Page

Read and Understood By

10304

Signed	Date	Signed	Date
Calvin Black	8/24/94	DC Upcraft	8/29/94

CRI 1

0.5ml 6-87AS → 25ml HNO_3 → 500ml

[signature]
8-2-94
0730

CCVAC

2ml of spex 6-55AS
2ml of spex 6-57AS } 10ml HNO_3 → 200ml

ICSAB

20ml of spex 6-108AS
2ml of spex 5-224AS } 10ml HNO_3 → 200ml

ICAL 5

1ml of spex 5-45AS → 4ml HNO_3 → 200ml

ICAL 1.2

10ml of spex 5-80AS → 12.5ml HNO_3 → 250ml

ICAL 1.3

20ml of spex 5-80AS → 12.5ml HNO_3 → 250ml

[signature]
8-2-94
0900

Continued on Page

Read and Understood By

10305

[signature] Signed 8-2-94 Date [signature] Signed 8/2/94 Date

SPEX

ISO 9001

CERTIFICATE OF ANALYSIS

Catalog Number: ICAL-5

Description: Instrument Calibration Standard 5

Lot Number: 5-45AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Sb	600	597.0			

Rec'd 4-22-94

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM was used in establishing the above results:

Sb: NIST 3102

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager, Date: APR 94

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4-25-94

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
J Collier	4-25-94	DC Upcraft	4-25-94

10306

CCVAC

2 ml of Spex 6-55AS
2 ml of Spex 6-57 As } 10 ml HNO_3 → 200 ml

CEat
9-13-94
0830

ICAL 1.3

20 ml of Sp ~~4 6 88~~ CE 9-13-94 6-86 → 12.5 ml HNO_3 → 250 ml

CEat
9-13-94
1400

Continued on Page

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CEat — Signed
9-13-94 — Date
[illegible] — Signed
9/26/94 — Date

16
PROJECT

Notebook No. 1401

Continued From Page

SPEX

CERTIFICATE OF ANALYSIS

Rec'd 2-21-94

Catalog Number: ICV-2A

Description: Initial Calibration Verification Standard II

Lot Number: 6-55AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Al	1,000	1,004.4	Mg	2,000	1,999.2
Ba	1,000	998.8	Mn	100	100.1
Be	100	100.2	Ni	500	499.9
Ca	2,000	2,003.9	K	2,000	2,000.6
Cr	200	200.5	Ag	100	100.6
Co	500	498.4	Na	2,000	1,996.5
Cu	200	200.0	V	500	502.0
Fe	1,000	996.3	Zn	100	100.4

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

Al: NIST 3101, Ba: NIST 3104, Be: NIST 3105, Ca : NIST 3109, Cr : NIST 3112, Co: NIST 3113, Cu: NIST 3114, Fe: NIST 3126, Mg: NIST 3131, Mn: NIST 3132, Ni: NIST 3136, K : NIST 3141, Ag: NIST 3151, Na: NIST 3152, V : NIST 3165, Zn: NIST 3168.

Spex Reference Multi: Lot #1-102BDREF, 4-107AS

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: FEB 94

SPEX

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DCUpchurch 8-29-94

Page 10308

Read and Understood By

Signed	Date	Signed	Date
Zulmi Black	8/29/94	DC Upchurch	8/29/94

SPEX

CERTIFICATE OF ANALYSIS

Rec'd 2-21-94

Catalog Number: ICV-2C

Description: Initial Calibration Verification Standard II

Lot Number: 6-57AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
As	500	498.7			
Cd	100	99.3			
Pb	500	501.5			
Se	500	499.4			
Tl	500	503.0			

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

As: NIST 3103 Cd: NIST 3108 Pb: NIST 3128 Se: NIST 3149
Tl: NIST 3158

Spex Reference Multi: Lot #1-101BDREF, 1-100BDSRM, 4-109AS

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: FEB 94

SPEX

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DCLlocaph 4-7-94

Continued on Page 10309

Read and Understood By

Signed	Date	Signed	Date
DCLlocaph	4-7-94	J Collier	4-7-94

PROJECT

Notebook No. 1181

Continued From Page

CCUAC

2ml of spk 6-55AS
2ml of spk 6-57AS } → 10 ml HNO_3 → 200 ml

CCUB

1ml of spk 6-56AS → 25ml HNO_3 → 500 ml

CEat
8-20-94

Continued on Page

Read and Understood By

10310

Signed	Date	Signed	Date
			9/26/94

SPEX

CERTIFICATE OF ANALYSIS

Rec'd 2-21-94

Catalog Number: ICV-2B

Description: Initial Calibration Verification Standard II

Lot Number: 6-56AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Sb	1,000	1,001.8			

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM was used in establishing the above results:

Sb: NIST 3102, 4-108AS, 2-207SB, 3-91SB, 4-130SB

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kochelakota, Chemical Production Manager Date: FEB 94

SPEX

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Continued on Page

Read and Understood By

Signed	Date	Signed	Date
DC Upcraft	2-21-94	CEa	2-22-94
DC Upcraft	4-7-94	J Collier	4-7-94

DC Upcraft 4-7-94

10311

PROJECT

Notebook No. 1484

Continued From Page

ICSA

20ml of spk 6-108 As → 10ml HNO_3 → 200ml

Steve Red
8-5-94
1030

Continued on Page

Read and Understood By

10312

Steve Red 8/9/94 Signed Date

DC Upchurch 8/9/94 Signed Date

SPEX

CERTIFICATE OF ANALYSIS

Catalog Number: INT-Al

Description: Interferents A

Lot Number: 6-108AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Al	5,000	5,016.6			
Ca	5,000	5,021.1			
Fe	2,000	1,998.3			
Mg	5,000	5,009.0			

Rec'd 6-21-94

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

Al: NIST 3101, Ca: NIST 3109, Fe: NIST 3126, Mg: NIST 3131.

Spex Reference Multi: Lot #1-99BDREF, 5-226AS, 5-83AS, 6-22AS

Balances are calibrated with NIST weight sets N.J. #76552, #76543, #82395, according to NIST circular 547 3.4.3.

NOTE: The following elements are present as trace impurities in this particular lot:

Zn = 430 ppb, Na = 310 ppb, Si = 250 ppb, Ba = 200 ppb, Mn = 185 ppb,
Sr = 125 ppb, Pb = 75 ppb, Cu = 45 ppb, Co = 30 ppb.

SPEX plasma solution standards are guaranteed stable and accurate to ±0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: JUN 94

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Signed	Date	Signed	Date
J Collier	6-21-94	DC Upchurch	6-29-94

SPEX

CERTIFICATE OF ANALYSIS

Rec'd 8/19/94

Catalog Number: SPIKE-1

Description: Spike Sample Standard

Lot Number: 6-88AS

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Al	200	200.92	Fe	100	100.42
Sb	50	50.50	Pb	50	50.10
As	200	201.22	Mn	50	49.91
Ba	200	200.91	Ni	50	50.00
Be	5	4.96	Se	200	200.96
Cd	5	5.04	Ag	5	4.96
Cr	20	20.07	Tl	200	201.78
Co	50	50.08	V	50	50.13
Cu	25	25.36	Zn	50	49.92

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

The following SRM's were used in establishing the above results:

Al: NIST 3101, Sb: NIST 3102, As: NIST 3103, Ba: NIST 3104,
Be: NIST 3105, Cd: NIST 3108, Cr: NIST 3112, Co: NIST 3113,
Cu: NIST 3114, Fe: NIST 3126, Pb: NIST 3128, Mn: NIST 3132,
Ni: NIST 3136, Se: NIST 3149, Ag: NIST 3151, Tl: NIST 3158,
V : NIST 3165, Zn: NIST 3168.

Spex Reference Multi: Lot #1-79BDREF, 5-154AS, 4-257AS

Balances are calibrated with NIST weight sets N.J. #76552, #76543 #82395, according to NIST circular 547 3.4.3.

SPEX plasma solution standards are guaranteed stable and accurate to ± 0.5% of labeled concentration for one year from date of shipment. This value is the sum of cumulative errors associated with analytical determinations, pipetting and diluting to final volume. For these solutions we use high purity acids, 18 megohm double deionzed water and triple rinsed bottles. All glassware used is class A.

Signed by: N. Kocherlakota, Chemical Production Manager Date: AUG 94

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Continued on Page

Read and Understood By

10314

Signed	Date	Signed	Date
OCUpcraft	8/23/94		9/20/94

CCSP

1	Leeman CLP STD	499001	0.5 ml	100 ml
2		462801	1.0	
3		462802	1.0	
4		499004	2.0	
5	NB. 1484 p.67	414705	1.0	

Spike Blank P

1 ml Spex Spike One lot # 6-88 As → 100 ml

Continued on Page

10315

Read and Understood By

Signed	Date	Signed	Date
[illegible]	9-21-94	[illegible]	9/26/94

PLASMA-PURE™
Standard Certificate

Catalog Number: 502-00016 **Lot Number:** 499001

Starting Material: 5-6 9's purity materials **Diluent/Matrix:** 5x HNO_3

Preparation Date: 8/94 **Expiration Date:** 8/95

Rec'd 8/4/94

Element	Concentration
CLP Standard 1	
Ca	5000 ug/ml
Mg	5002 ug/ml
K	5002 ug/ml
Na	5000 ug/ml

Residual Impurities*	Concentration
Ba	0.210 ug/ml
Mn	0.100 ug/ml
Fe	0.0150 ug/ml
In	0.0250 ug/ml
Li	0.0150 ug/ml

* Impurities were determined via ICP Emission Spectroscopy. Only elements detected are reported.

Traceability

1. This standard is certified using wet chemistry assay procedures and/or plasma emission spectroscopy, traceable to primary or well-characterized secondary standards. Traceable to: NIST Standard Reference Materials
2. Analytical balances are routinely calibrated using NIST weight sets.

Certification

Leeman Labs, Inc. certifies that PLASMA-PURE Standards have been formulated to the concentrations listed above (± 0.5% of reported value). This certification does not apply and will be considered null and void if PLASMA-PURE Standards are used in a manner or in an environment not consistent with their intended purpose or are modified by the Customer in any manner.

Limitations

THE ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Limitation of Liability

In no event shall Leeman Labs, Inc. be liable for any indirect, incidental, special, or consequential damages, including loss of profits, revenue, or used incurred by Customer or any third party, whether in an action in contract or tort. Leeman Labs Inc's liability for damages hereunder shall in no event exceed the amounts paid for the PLASMA-PURE Standards.

LEEMAN LABS, INC
55 Technology Drive
Lowell, MA 01851
Phone (508) 454-4442
FAX (508) 452-7429

QC Analyst: Ruth Tales

Date: August 3, 1994

C Hawk 8/4/94

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Continued on Page

Read and Understood By

Signed	Date	Signed	Date
C Hawk	8/4/94	[illegible]	8/10/94

10316

PLASMA-PURE™

Standard Certificate

Catalog Number: 208-08919 **Lot Number:** 462301

Starting Material: 2-4 grs purity materials **Diluent/Matrix:** 5% HNO_3

Preparation Date: 4/94 **Expiration Date:** 4/95

Element	Concentration
CLP Standard 2	
Ag	100.0 ug/ml
Cr	100.1 ug/ml
Mn	100.0 ug/ml
Ni	400.2 ug/ml
Zn	201.9 ug/ml

Rec'd 4-26-94

Residual Impurities*	Concentration
None Detected	

* Impurities were determined via ICP Emission Spectroscopy. Only elements detected are reported.

Traceability

1. This standard is certified using wet chemistry assay procedures and/or plasma emission spectroscopy, traceable to primary or well-characterized secondary standards. Traceable to: NIST Standard Reference Materials
2. Analytical balances are routinely calibrated using NIST weight sets.

Certification

Leeman Labs, Inc. certifies that PLASMA-PURE Standards have been formulated to the concentrations listed above (± 0.5% of reported value). This certification does not apply and will be considered null and void if PLASMA-PURE Standards are used in a manner or in an environment not consistent with their intended purpose or are modified by the Customer in any manner.

Limitations

THE ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Limitation of Liability

In no event shall Leeman Labs, Inc. be liable for any indirect, incidental, special, or consequential damages, including loss of profits, revenue, or used incurred by Customer or any third party, whether in an action in contract or tort. Leeman Labs Inc's liability for damages hereunder shall in no event exceed the amounts paid for the PLASMA-PURE Standards.

LEEMAN LABS, INC
55 Technology Drive
Lowell, MA 01851
Phone (508) 454-4442
FAX (508) 452-7429

QC Analyst: Rick Iaes

Date: April 21, 1994

4-26-94 JRC

Read and Understood By

Signed	Date	Signed	Date
J. Collier	4-26-94	QC Uporsky	4-26-94

PLASMA-PURE™
Standard Certificate

Catalog Number: 502-00022
Lot Number: 462802
Starting Material: 5-6 9's purity materials
Diluent/Matrix: 5% HNO_3
Preparation Date: 4/94
Expiration Date: 4/95

Element	Concentration
CLP Standard 3	
Al	2011 ug/ml
Ba	2000 ug/ml
Be	50.55 ug/ml
Co	500.5 ug/ml
Cu	253.9 ug/ml
Fe	1000 ug/ml
V	500.0 ug/ml

Rec'd 4-26-94

Residual Impurities*	Concentration
Ca	.0048 ug/ml
Mg	.0042 ug/ml
Ag	.0200 ug/ml
Si	.0400 ug/ml

* Impurities were determined via ICP Emission Spectroscopy. Only elements detected are reported.

Traceability

1. This standard is certified using wet chemistry assay procedures and/or plasma emission spectroscopy, traceable to primary or well-characterized secondary standards. Traceable to:
   NIST Standard Reference Materials
2. Analytical balances are routinely calibrated using NIST weight sets.

Certification

Leeman Labs, Inc. certifies that PLASMA-PURE Standards have been formulated to the concentrations listed above (± 0.5% of reported value). This certification does not apply and will be considered null and void if PLASMA-PURE Standards are used in a manner or in an environment not consistent with their intended purpose or are modified by the Customer in any manner.

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QC Analyst: Tammy Martz

Date: April 21, 1994

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Signed	Date	Signed	Date
J Collier	4-28-94	DC Upchurch	4-28-94

PROJECT

Notebook No. 1487

Continued From Page

PLASMA-PURE™

Standard Certificate

Catalog Number: 602-00025 **Lot Number:** 499004

Starting Material: 5-6 9's purity materials **Diluent/Matrix:** 5% HNO_3

Preparation Date: 8/94 **Expiration Date:** 8/95

Rec'd 8/4/94

Element	Concentration
CLP Standard 4	
As	100.3 ug/ml
Cd	50.10 ug/ml
Pb	50.00 ug/ml
Se	52.00 ug/ml
Tl	100.0 ug/ml

Residual Impurities*	Concentration
None Detected	

* Impurities were determined via ICP Emission Spectroscopy. Only elements detected are reported.

Traceability

1. This standard is certified using wet chemistry assay procedures and/or plasma emission spectroscopy, traceable to primary or well-characterized secondary standards. Traceable to: NIST Standard Reference Materials
2. Analytical balances are routinely calibrated using NIST weight sets.

Certification

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QC Analyst: Ruth Tolles

Date: August 3, 1994

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	8/4/94		8/10/94

PROJECT

Notebook No. 1221

Continued From Page

PLASMA-PURE™

Standard Certificate

Catalog Number: 602-00028

Lot Number: 414705

Starting Material: 5-6 9's purity materials

Diluent/Matrix: 5% HNO_3

Preparation Date: 11/93

Expiration Date: 12/94

Element	Concentration
Custom Mutlielement Standard	
Sb	600.0 ug/ml

Residual Impurities*	Concentration
None Detected	

* Impurities were determined via ICP Emission Spectroscopy. Only elements detected are reported.

Traceability

1. This standard is certified using wet chemistry assay procedures and/or plasma emission spectroscopy, traceable to primary or well-characterized secondary standards. Traceable to: NIST Standard Reference Materials
2. Analytical balances are routinely calibrated using NIST weight sets.

Certification

Leeman Labs, Inc. certifies that PLASMA-PURE Standards have been formulated to the concentrations listed above (± 0.5% of reported value). This certification does not apply and will be considered null and void if PLASMA-PURE Standards are used in a manner or in an environment not consistent with their intended purpose or are modified by the Customer in any manner.

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QC Analyst: Tammy Mark

Date: November 30, 1993

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