SELECTED REFERENCE
10 VOL 1a

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

VOLUME 1-A

ARDL inc.

applied research & development laboratory

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

VOLUME 1-A

10000

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ARDL, INC. Contract: 9883A

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

SOW No.: ILM02.0

	EPA Sample No.	Lab Sample ID.
ANN94 T	R00101	9883A-1
"	R00101MS	9883A-1MS
"	R00101MSD	9883A-1MSD
"	R00201	9883A-2
"	R00301	9883A-3
ANN94 S	L00101	9883A-4
"	L00101MS	9883A-4MS
"	L00101MSD	9883A-4MSD
"	L00102	9883A-5
"	L00103	9883A-6
"	L00104	9883A-7
"	L00105	9883A-8
"	L00106	9883A-9
"	L00107	9883A-10
"	L00108	9883A-11
"	L00109	9883A-12
"	L00110	9883A-13
"	L00111	9883A-14
"	L00112	9883A-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 Gillespie Name: Daniel J. Gillespie

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

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ARDL, INC. Contract: 9883A

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 TCLP results. All total lead results are reported in ARDL data package 9883B.

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 these analyses rather than duplicate/MS.

When a CCV or CCB was found to be outside of control limits during an analytical run on the ICP, data acquisition continued for remaining elements for analytical samples and for all elements of interest for QC samples (i.e., CCV's, CCB's, CRI's, ICSA's and ICSAB's). If the final ICSAB evaluation for the "out of control" element was within control limits, sample data acquired prior to the last valid CCV/CCB before the errant CCV/CCB was reported. All CCV and CCB evaluations have been recorded on Forms 2A and 3. This interpretation of the SOW was discussed with and approved by the EPA on 3 December 1991. This occurred in the run for selenium on 20 September 1994.

All spiking levels are at TCLP regulatory limits except for barium which is spiked at 25000 ug/L and mercury which is spiked at 10 ug/L.

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.

R00101

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-1

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	35.0	U		P
7440-39-3	Barium	339			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.0	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	20.0	U		P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	40.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00201
R00201 ?

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-2

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	35.0	U		P
7440-39-3	Barium	301			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.0	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	20.0	U		P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	40.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

R00301

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-3

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	35.0	U		P
7440-39-3	Barium	203			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.0	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	38.9			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	40.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00101

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-4

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	13200		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00102

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-5

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	1860		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00103

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-6

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	4970		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00104

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-7

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	4110		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00105

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-8

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	12000		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00106

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-9

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	44200		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00107

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-10

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	1600		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00108

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-11

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	10500		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00109

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-12

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	11000		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00110

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-13

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	18300		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00111

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-14

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	103		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

L00112

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

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

Matrix (soil/water) WATER Lab Sample ID: 9883A-15

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				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	360		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: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ARDL, INC. Contract: 9883A

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	5000.0	5144.00	102.9	5000.0	5088.00	101.8	5214.00	104.3	P
Barium	10000.0	9902.00	99.0	10000.0	9860.00	98.6	9911.00	99.1	P
Beryllium									NR
Cadmium	1000.0	988.60	98.9	1000.0	983.50	98.4	989.70	99.0	P
Calcium									NR
Chromium	2000.0	2100.00	105.0	2000.0	2083.00	104.2	2105.00	105.3	P
Cobalt									NR
Copper									NR
Iron									NR
Lead	5000.0	4978.00	99.6	5000.0	4949.00	99.0	4966.00	99.3	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium	5000.0	5062.00	101.2	5000.0	4985.00	99.7	5232.00	104.6	P
Silver	1000.0	1051.00	105.1	1000.0	1043.00	104.3	1047.00	104.7	P
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: 9883A

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				5000.0	5044.00	100.9	5043.00	100.9	P
Barium				10000.0	9588.00	95.9	9711.00	97.1	P
Beryllium									NR
Cadmium				1000.0	970.30	97.0	980.10	98.0	P
Calcium									NR
Chromium				2000.0	2068.00	103.4	2071.00	103.6	P
Cobalt									NR
Copper									NR
Iron									NR
Lead				5000.0	4871.00	97.4	4883.00	97.7	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium				5000.0	5101.00	102.0	5071.00	101.4	P
Silver				1000.0	1023.00	102.3	1023.00	102.3	P
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: 9883A

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				5000.0	5105.00	102.1			P
Barium				10000.0	9864.00	98.6			P
Beryllium									NR
Cadmium				1000.0	986.90	98.7			P
Calcium									NR
Chromium				2000.0	2091.00	104.6			P
Cobalt									NR
Copper									NR
Iron									NR
Lead				5000.0	4959.00	99.2			P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium				5000.0	4997.00	99.9			P
Silver				1000.0	1029.00	102.9			P
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: 9883A

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

Initial Calibration Source: LAB PREPARED

Continuing Calibration Source: LAB PREPARED

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									NR
Magnesium									NR
Manganese									NR
Mercury	6.0	6.08	101.3	4.0	4.14	103.5	4.02	100.5	CV
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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2B

CRDL STANDARD FOR AA AND ICP

Lab Name: ARDL, INC. Contract: 9883A

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

AA CRDL Standard Source: LAB PREPARED

ICP CRDL Standard Source: SPEX

Concentration Units: UG/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury	0.2	0.21	105.0					
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

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3

BLANKS

Lab Name: ARDL, INC. Contract: 9883A

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	35.0	U	35.0	U	35.0	U	35.0	U	35.000	U	P
Barium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Beryllium											NR
Cadmium	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Calcium											NR
Chromium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
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	0.2	U	0.2	U	0.2	U			0.200	U	CV
Nickel											NR
Potassium											NR
Selenium	40.0	U	40.0	U	40.0	U	41.6		40.000	P	F
Silver	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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3

BLANKS

Lab Name: ARDL, INC. Contract: 9883A

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			35.0	U	35.0	U					P
Barium			6.8	B	5.1	B					P
Beryllium											NR
Cadmium			3.0	U	3.0	U					P
Calcium											NR
Chromium			5.0	U	5.0	U					P
Cobalt											NR
Copper											NR
Iron											NR
Lead			20.0	U	20.0	U					P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium			40.0	U	40.0	U					P
Silver			7.1	B	5.5	B					P
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: ARDL, INC. Contract 9883A

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	%R	Final Found Sol. A	Final Found Sol. AB	%R
Aluminum	501660	501660	499100	499400.0	99.5	493400	492400.0	98.2
Antimony								
Arsenic			-66	-35.9		-11	10.6	
Barium	20	499	18	480.3	96.3	18	469.3	94.0
Beryllium		498						
Cadmium		1002	0	915.3	91.3	1	914.9	91.3
Calcium	502110	502110	470700	476500.0	94.9	468900	474300.0	94.5
Chromium		498	9	466.3	93.6	10	458.7	92.1
Cobalt	3	501						
Copper	4	495						
Iron	199830	199830	178500	179200.0	89.7	176800	177500.0	88.8
Lead	8	1001	52	966.7	96.6	54	933.3	93.2
Magnesium	500900	500900	485300	488200.0	97.5	483600	485200.0	96.9
Manganese	18	496						
Mercury								
Nickel		995						
Potassium								
Selenium			53	52.5		58	30.6	
Silver		999	0	976.8	97.8	-2	969.1	97.0
Sodium	31							
Thallium								
Vanadium		500						
Zinc	43	999						

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

R00101 MS

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

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

Matrix: WATER Level (low/med): LOW

% Solids: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic	75-125	5004.0000		35.0000	U	5000.00	100.1		P
Barium	75-125	22050.0000		338.8000		25000.00	86.8		P
Beryllium									NR
Cadmium	75-125	902.9000		3.0000	U	1000.00	90.3		P
Calcium									NR
Chromium	75-125	4561.0000		5.0000	U	5000.00	91.2		P
Cobalt									NR
Copper									NR
Iron									NR
Lead	75-125	4378.0000		20.0000	U	5000.00	87.6		P
Magnesium									NR
Manganese									NR
Mercury	75-125	9.5600		0.2000	U	10.00	95.6		CV
Nickel									NR
Potassium									NR
Selenium	75-125	1074.0000		40.0000	U	1000.00	107.4		P
Silver	75-125	4578.0000		5.0000	U	5000.00	91.6		P
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

L00101 MS

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

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

Matrix: WATER Level (low/med): LOW

% Solids: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead		16260.0000		13170.0000		5000.00	61.8	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:

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.
R00101 MSD

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

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

Matrix: WATER Level (low/med): LOW

% Solids: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic	75-125	5050.0000		35.0000	U	5000.00	101.0		P
Barium	75-125	22400.0000		338.8000		25000.00	88.2		P
Beryllium									NR
Cadmium	75-125	890.8000		3.0000	U	1000.00	89.1		P
Calcium									NR
Chromium	75-125	4577.0000		5.0000	U	5000.00	91.5		P
Cobalt									NR
Copper									NR
Iron									NR
Lead	75-125	4395.0000		20.0000	U	5000.00	87.9		P
Magnesium									NR
Manganese									NR
Mercury	75-125	9.4400		0.2000	U	10.00	94.4		CV
Nickel									NR
Potassium									NR
Selenium	75-125	1068.0000		40.0000	U	1000.00	106.8		P
Silver	75-125	4570.0000		5.0000	U	5000.00	91.4		P
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

L00101 MSD

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

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

Matrix: WATER Level (low/med): LOW

% Solids: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead		16420.0000		13170.0000		5000.00	65.0	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:

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6
DUPLICATES

EPA SAMPLE NO.

R00101 MS/MSD

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

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

Matrix: WATER Level (low/med): LOW

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

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic		5004.0000		5050.0000		0.9		P
Barium		22050.0000		22400.0000		1.6		P
Beryllium								NR
Cadmium		902.9000		890.8000		1.3		P
Calcium								NR
Chromium		4561.0000		4577.0000		0.4		P
Cobalt								NR
Copper								NR
Iron								NR
Lead		4378.0000		4395.0000		0.4		P
Magnesium								NR
Manganese								NR
Mercury		9.5600		9.4400		1.3		CV
Nickel								NR
Potassium								NR
Selenium		1074.0000		1068.0000		0.6		P
Silver		4578.0000		4570.0000		0.2		P
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Cyanide								NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

L00101 MS/MSD

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

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

Matrix: WATER Level (low/med): LOW

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

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead		16260.0000		16420.0000		1.0		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: 9883A

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	2000.0	1845.00	92.3						
Barium	20000.0	19310.00	96.6						
Beryllium									
Cadmium	1000.0	956.70	95.7						
Calcium									
Chromium	1000.0	1000.00	100.0						
Cobalt									
Copper									
Iron									
Lead	1000.0	967.20	96.7						
Magnesium									
Manganese									
Mercury	5.0	4.93	98.6						
Nickel									
Potassium									
Selenium	1000.0	1014.00	101.4						
Silver	1000.0	1001.00	100.1						
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

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10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: ARDL, INC. Contract: 9883A

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	35.0	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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10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: ARDL, INC. Contract: 9883A

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

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

Flame AA ID Number: _____

Furnace AA ID Number AA20

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony	217.60	BD	60.0	1.0	F
Arsenic	193.70	BD	10.0	1.0	F
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium	357.90	BD	10.0	1.0	F
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead	283.30	BD	3.0	1.0	F
Magnesium			5000.0		
Manganese			15.0		
Mercury	253.70	BD	0.2	0.2	CV
Nickel			40.0		
Potassium			5000.0		
Selenium	196.03	BD	5.0	1.0	F
Silver			10.0		
Sodium			5000.0		
Thallium	276.80	BD	10.0	1.0	F
Vanadium			50.0		
Zinc			20.0		

Comments: _____

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11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: ARDL, INC. Contract: 9883A

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: 9883A

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: 9883A

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

Lab Name: ARDL, INC. Contract: 9883A

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

Method: P

Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBW	09/20/94		100
LCSW	09/20/94		100
R00101	09/20/94		100
R00101MS	09/20/94		100
R00101MSD	09/20/94		100
R00201	09/20/94		100
R00301	09/20/94		100
L00101	09/20/94		100
L00101MS	09/20/94		100
L00101MSD	09/20/94		100
L00102	09/20/94		100
L00103	09/20/94		100
L00104	09/20/94		100
L00105	09/20/94		100
L00106	09/20/94		100
L00107	09/20/94		100
L00108	09/20/94		100
L00109	09/20/94		100
L00110	09/20/94		100
L00111	09/20/94		100
L00112	09/20/94		100

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13

PREPARATION LOG

Lab Name: ARDL, INC. Contract: 9883A

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

Method: CV

Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBW	09/20/94		100
LCSW	09/20/94		100
R00101	09/20/94		100
R00101MS	09/20/94		100
R00101MSD	09/20/94		100
R00201	09/20/94		100
R00301	09/20/94		100

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14

ANALYSIS RUN LOG

Lab Name: ARDL, Inc. Contract: 9883A

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

Instrument ID Number: JA61E Method: P

Start Date: 09/20/94 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	2026																									
5	1.00	2029																									
5	1.00	2033																									
5	1.00	2036																									
5	1.00	2040																									
5	1.00	2043																									
5	1.00	2046																									
5	1.00	2050																									
5	1.00	2053																									
5	1.00	2057																									
ICV	1.00	2100				X	X		X		X				X						X	X					
ICB	1.00	2103				X	X		X		X				X						X	X					
ICSA	1.00	2107		X		X	X		X	X	X			X	X	X					X	X					
ICSAB	1.00	2110		X		X	X		X	X	X			X	X	X					X	X					
ZZZZZZ	1.00	2114																									
ZZZZZZ	1.00	2117																									
ZZZZZZ	1.00	2122																									
ZZZZZZ	1.00	2127																									
ZZZZZZ	1.00	2132																									
ZZZZZZ	1.00	2137																									
ZZZZZZ	1.00	2142																									
ZZZZZZ	1.00	2147																									
CCV	1.00	2152				X	X		X		X				X						X	X					
CCB	1.00	2157				X	X		X		X				X						X	X					
PBW	1.00	2202				X	X		X		X				X						X	X					
LCSW	1.00	2207				X	X		X		X				X						X	X					
ZZZZZZ	1.00	2212																									
R00101	1.00	2217				X	X		X		X				X						X	X					
R00101MS	1.00	2222				X	X		X		X				X						X	X					
R00101MS	1.00	2228				X	X		X		X				X						X	X					
R00201	1.00	2233				X	X		X		X				X						X	X					
R00301	1.00	2238				X	X		X		X				X						X	X					
L00101	1.00	2243													X												

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14

ANALYSIS RUN LOG

ab Name: ARDL, Inc. Contract: 9883A

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

nstrument ID Number: JA61E Method: P

tart Date: 09/20/94 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
00101MS	1.00	2248													X												
CV	1.00	2253				X	X		X		X				X						X	X					
CB	1.00	2258				X	X		X		X				X						X	X					
00101MS	1.00	2303													X												
00102	1.00	2308													X												
00103	1.00	2313													X												
00104	1.00	2318													X												
00105	1.00	2323													X												
00106	1.00	2328													X												
00107	1.00	2333													X												
00108	1.00	2338													X												
00109	1.00	2343													X												
00110	1.00	2348													X												
CV	1.00	2353				X	X		X		X				X						X	X					
CB	1.00	2358				X	X		X		X				X						X	X					
00111	1.00	0003													X												
00112	1.00	0009													X												
ZZZZZ	1.00	0014																									
ZZZZZ	1.00	0019																									
ZZZZZ	1.00	0024																									
CV	1.00	0029				X	X		X		X				X						X	X					
CB	1.00	0034				X	X		X		X				X						X	X					
ZZZZZ	1.00	0039																									
ZZZZZ	1.00	0047																									
ZZZZZ	1.00	0056																									
ZZZZZ	1.00	0104																									
ZZZZZ	1.00	0109																									
ZZZZZ	1.00	0114																									
CSA	1.00	0119		X		X	X		X	X	X			X	X	X					X	X					
CSAB	1.00	0124		X		X	X		X	X	X			X	X	X					X	X					
CV	1.00	0129				X	X		X		X				X						X	X					
CB	1.00	0134				X	X		X		X				X						X	X					

FORM XIV - IN

ILM01.0

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14

ANALYSIS RUN LOG

Lab Name: ARDL, Inc. Contract: 9883A

Lab Code: ARDL Case No.: _____ SAS No.: _____ SDG No. L01101

Instrument ID Number: AA20 Method: CV

Start Date: 09/20/94 End Date: 09/20/94

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
50.00	1.00	1307																									
50.50	1.00	1308																									
51.00	1.00	1309																									
53.00	1.00	1310																									
55.00	1.00	1311																									
510.00	1.00	1312																									
ICV	1.00	1313																X									
ICB	1.00	1314																X									
CRA	1.00	1315																X									
ZZZZZZ	1.00	1316																									
ZZZZZZ	1.00	1317																									
ZZZZZZ	1.00	1318																									
ZZZZZZ	2.00	1319																									
ZZZZZZ	2.00	1320																									
ZZZZZZ	2.00	1321																									
ZZZZZZ	10.00	1322																									
ZZZZZZ	10.00	1323																									
ZZZZZZ	10.00	1324																									
CCV	1.00	1325																X									
CCB	1.00	1326																X									
LCSW	1.00	1327																X									
PBW	1.00	1328																X									
R00101	1.00	1329																X									
R00101MS	1.00	1330																									
R00101MS	1.00	1331																									
R00101MS	2.00	1332																X									
R00101MS	2.00	1333																X									
R00201	1.00	1334																X									
R00301	1.00	1335																X									
CCV	1.00	1336																X									
CCB	1.00	1337																X									

RAW DATA

The Raw Data are included by Technique as Follows:

ICP DATA

COLD VAPOR 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

10046

940920B

9887 (TOTAL) Ba, Cd, Cr, ~~As~~, Mn, TL, Ag

116507 Ca, Fe, Mg

9883 (TAR) As, Ba, Cd, Cr, Pb, Ag, Se (TCLP) 1-3

9883 (SOIL) ~~TCLP~~ TCLP Pb (4-15)

* SPIKE RECOVERY FOR Pb IS OUT OF CONTROL, BUT ACCORDING TO THE TCLP SCHEME, NO FURTHER ACTION IS REQUIRED.

8306 Ba, Cd, Cr, Ag, Pb #9 (10-11 ANALYZE BY GFAA)

Analysis Report Summary Wed 09-21-94 07:12:27 AM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	STDBLK	940920B	MRD4PT	09/20/94	20:26		X	IR
2	2-3.1	940920B	MRD4PT	09/20/94	20:29		X	IR
3	2-3.2	940920B	MRD4PT	09/20/94	20:33		X	IR
4	2-3.3	940920B	MRD4PT	09/20/94	20:36		X	IR
5	4.1	940920B	MRD4PT	09/20/94	20:40		X	IR
6	4.2	940920B	MRD4PT	09/20/94	20:43		X	IR
7	4.3	940920B	MRD4PT	09/20/94	20:46		X	IR
8	1.1	940920B	MRD4PT	09/20/94	20:50		X	IR
9	1.2	940920B	MRD4PT	09/20/94	20:53		X	IR
10	1.3	940920B	MRD4PT	09/20/94	20:57		X	IR
11	CCVAC	940920B	MRD4PT	09/20/94	21:00	CME	Q	CONC
12	CCB	940920B	MRD4PT	09/20/94	21:03	CME	B	CONC
13	ICSA	940920B	MRD4PT	09/20/94	21:07	CME	Q	CONC
14	ICSAB	940920B	MRD4PT	09/20/94	21:10	CME	Q	CONC
15	PB 1566	940920B	MRD4PT	09/20/94	21:14	CME	S	CONC
16	LCS 1566	940920B	MRD4PT	09/20/94	21:17	CME	S	CONC
17	SpBLK 1566	940920B	MRD4PT	09/20/94	21:22	CME	S	CONC
18	9887-1	940920B	MRD4PT	09/20/94	21:27	CME	S	CONC
19	9887-1MS1	940920B	MRD4PT	09/20/94	21:32	CME	S	CONC
20	9887-1MSD1	940920B	MRD4PT	09/20/94	21:37	CME	S	CONC
21	9887-2	940920B	MRD4PT	09/20/94	21:42	CME	S	CONC
22	116507-1	940920B	MRD4PT	09/20/94	21:47	CME	S	CONC
23	CCVAC	940920B	MRD4PT	09/20/94	21:52	CME	Q	CONC
24	CCB	940920B	MRD4PT	09/20/94	21:57	CME	B	CONC
25	PB 1567	940920B	MRD4PT	09/20/94	22:02	CME	S	CONC
26	LCS 1567	940920B	MRD4PT	09/20/94	22:07	CME	S	CONC
27	SpBLK 1567	940920B	MRD4PT	09/20/94	22:12	CME	S	CONC
28	9883-1	940920B	MRD4PT	09/20/94	22:17	CME	S	CONC
29	9883-1MS1	940920B	MRD4PT	09/20/94	22:22	CME	S	CONC
30	9883-1MSD1	940920B	MRD4PT	09/20/94	22:28	CME	S	CONC
31	9883-2	940920B	MRD4PT	09/20/94	22:33	CME	S	CONC
32	9883-3	940920B	MRD4PT	09/20/94	22:38	CME	S	CONC
33	9883-4	940920B	MRD4PT	09/20/94	22:43	CME	S	CONC
34	9883-4MS1	940920B	MRD4PT	09/20/94	22:48	CME	S	CONC
35	CCVAC	940920B	MRD4PT	09/20/94	22:53	CME	Q	CONC
36	CCB	940920B	MRD4PT	09/20/94	22:58	CME	B	CONC
37	9883-4MSD1	940920B	MRD4PT	09/20/94	23:03	CME	S	CONC
38	9883-5	940920B	MRD4PT	09/20/94	23:08	CME	S	CONC
39	9883-6	940920B	MRD4PT	09/20/94	23:13	CME	S	CONC
40	9883-7	940920B	MRD4PT	09/20/94	23:18	CME	S	CONC
41	9883-8	940920B	MRD4PT	09/20/94	23:23	CME	S	CONC
42	9883-9	940920B	MRD4PT	09/20/94	23:28	CME	S	CONC
43	9883-10	940920B	MRD4PT	09/20/94	23:33	CME	S	CONC
44	9883-11	940920B	MRD4PT	09/20/94	23:38	CME	S	CONC
45	9883-12	940920B	MRD4PT	09/20/94	23:43	CME	S	CONC
46	9883-13	940920B	MRD4PT	09/20/94	23:48	CME	S	CONC
47	CCVAC	940920B	MRD4PT	09/20/94	23:53	CME	Q	CONC
48	CCB	940920B	MRD4PT	09/20/94	23:58	CME	B	CONC
49	9883-14	940920B	MRD4PT	09/21/94	00:03	CME	S	CONC
50	9883-15	940920B	MRD4PT	09/21/94	00:09	CME	S	CONC
51	PB 1561	940920B	MRD4PT	09/21/94	00:14	CME	S	CONC
52	LCS 1561	940920B	MRD4PT	09/21/94	00:19	CME	S	CONC
53	SpBLK 1561	940920B	MRD4PT	09/21/94	00:24	CME	S	CONC

10048

Analysis Report Summary Wed 09-21-94 07:12:27 AM page 2

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
54	CCVAC	940920B	MRD4PT	09/21/94	00:29	CME	Q	CONC
55	CCB	940920B	MRD4PT	09/21/94	00:34	CME	B	CONC
56	830~~5~~-9	940920B	MRD4PT	09/21/94	00:39	CME	S	CONC
57	830~~5~~-9MS1	940920B	MRD4PT	09/21/94	00:47	CME	S	CONC
58	830~~5~~-9MSD1	940920B	MRD4PT	09/21/94	00:56	CME	S	CONC
59	830~~5~~-10 CE 92094	940920B	MRD4PT	09/21/94	01:04	CME	S	CONC
60	830~~5~~-11	940920B	MRD4PT	09/21/94	01:09	CME	S	CONC
61	830~~5~~-12	940920B	MRD4PT	09/21/94	01:14	CME	S	CONC
62	ICSA	940920B	MRD4PT	09/21/94	01:19	CME	Q	CONC
63	ICSAB	940920B	MRD4PT	09/21/94	01:24	CME	Q	CONC
64	CCVAC	940920B	MRD4PT	09/21/94	01:29	CME	Q	CONC
65	CCB	940920B	MRD4PT	09/21/94	01:34	CME	B	CONC

CEL

Analysis Report Averages Wed 09-21-94 07:12:27 AM page 3

#	Sample Name	AL	SB	AS	BA	BE	CD
1	STDBLK	.0494	.00173	-.00446	.00179	.00319	.00026
2	2-3.1	6.16773			7.89779	.45593	
3	2-3.2	29.9729			40.2482	2.222	
4	2-3.3	59.2023			82.3138	4.37826	
5	4.1			.33646			.2422
6	4.2			.64513			.46346
7	4.3			1.33879			.96726
8	1.1						
9	1.2						
10	1.3						
11	CCVAC	10.46	-.0570	5.144	9.902	1.037	.9886
12	CCB	.0018	.0038	.0097	.0040	-.0001	.0002
13	ICSA	499.1	.0026	-.0662	.0179	-.0001	-.0001
14	ICSAB	499.4	-.0098	-.0359	.4803	.4614	.9153
15	PB 1566	.0367	.0023	.0060	-.0008	-.0001	.0002
16	LCS 1566	18.42	1.700	1.839	18.97	.5471	.9652
17	SpBLK 1566	2.018	.4799	2.003	1.940	.0538	.0490
18	9887-1	-.0048	.0076	.0073	-.0008	-.0001	-.0001
19	9887-1MS1	2.033	.4820	2.003	1.939	.0540	.0500
20	9887-1MSD1	2.021	.4916	1.984	1.910	.0536	.0499
21	9887-2	.0100	.0070	.0077	.1548	-.0001	.0013
22	116507-1	-.0015	.0020	.0053	.0526	-.0001	-.0018
23	CCVAC	10.44	-.0582	5.088	9.860	1.032	.9835
24	CCB	-.0033	-.0030	.0173	.0036	-.0001	.0012
25	PB 1567	.0176	.0129	.0321	-.0008	-.0001	-.0003
26	LCS 1567	18.82	1.682	1.845	19.31	.5552	.9567
27	SpBLK 1567	-.0011	-.0002	5.000	21.90	-.0001	.8718
28	9883-1	.1166	-.0056	.0331	.3388	-.0001	.0007
29	9883-1MS1	.1028	.0041	5.004	22.05	-.0001	.9029
30	9883-1MSD1	.1202	.0084	5.058	22.40	-.0001	.8908
31	9883-2	.1188	.0060	.0167	.3009	-.0001	.0005
32	9883-3	.0049	-.0071	.0164	.2033	-.0001	-.0019
33	9883-4	1.247	-.0030	.0365	.8972	-.0001	.0216
34	9883-4MS1	1.198	.0049	5.000	22.50	-.0001	.8784
35	CCVAC	10.51	-.0498	5.214	9.911	1.058	.9897
36	CCB	-.0035	.0023	.0023	.0036	-.0001	-.0004
37	9883-4MSD1	1.240	.0089	5.131	23.30	.0001	.8909
38	9883-5	.1386	.0103	.0269	.6096	-.0001	.0032
39	9883-6	.0147	-.0109	.0112	.3969	-.0001	.0030
40	9883-7	.0143	.0111	.0375	.3403	-.0001	-.0004
41	9883-8	.0143	.0003	.0256	.3426	-.0001	.0025
42	9883-9	.0675	.0004	.0313	.4134	-.0001	.0032
43	9883-10	.0069	-.0087	.0424	.3300	-.0001	-.0008
44	9883-11	.0271	-.0064	.0056	.3719	-.0001	.0111
45	9883-12	.2509	-.0058	.0259	.3481	-.0001	.0011
46	9883-13	.2434	-.0160	.0171	.3299	-.0001	.0001
47	CCVAC	10.25	-.0525	5.044	9.588	1.034	.9703
48	CCB	-.0075	.0058	.0153	.0043	-.0001	-.0005
49	9883-14	.3995	.0073	.0384	.3951	-.0001	.0006
50	9883-15	.1910	.0035	.0380	.7188	-.0001	.0062
51	PB 1561	-.0079	-.0115	-.0017	-.0008	-.0001	-.0007
52	LCS 1561	18.25	1.663	1.821	18.50	.5440	.9454
53	SpBLK 1561	2.022	.4761	2.020	1.904	.0536	.0481

10050

Analysis Report Averages Wed 09-21-94 07:12:27 AM page 4

#	Sample Name	AL	SB	AS	BA	BE	CD
54	CCVAC	10.30	-.0501	5.043	9.711	1.036	.9801
55	CCB	.0056	.0050	.0042	.0068	.0002	.0010
56	830~~5~~6-9	.2114	-.0033	.0318	.0857	.0002	.0458
57	830~~5~~6-9MS1	2.234	.3222	1.952	1.969	.0515	.0921
58	830~~5~~6-9MSD1 CE	2.247	.3187	1.995	1.922	.0513	.0938
59	830~~5~~6-10 9-20-94	.0422	.0117	.0144	.0038	-.0001	-.0002
60	830~~5~~6-11	.0795	.0052	.0177	-.0008	-.0001	-.0002
61	830~~5~~6-12	.0753	.0149	.0177	-.0008	-.0001	.0019
62	ICSA	493.4	.0122	-.0114	.0180	.0000	.0008
63	ICSAB	492.4	-.0091	.0106	.4693	.4568	.9149
64	CCVAC	10.43	-.0573	5.105	9.864	1.036	.9869
65	CCB	-.0090	-.0054	.0178	.0051	-.0001	-.0006

#	Sample Name	CA	CR	CO	CU	fe	FEHIGH
1	STDBLK	.00533	.00319	.0014	.00233	.00633	.00153
2	2-3.1		.68	1.47399	.61093	3.74833	.36886
3	2-3.2		3.25926	7.01146	2.09106	17.8368	1.75706
4	2-3.3		6.38453	13.7313	5.83226	34.6345	3.44939
5	4.1						
6	4.2						
7	4.3						
8	1.1	9.93713					
9	1.2	47.0291					
10	1.3	89.9337					
11	CCVAC	21.16	2.100	5.291	2.057	10.59	10.22
12	CCB	-.0712	-.0001	-.0020	-.0018	-.0103	.0420
13	ICSA	470.7	.0092	.0032	.0063	178.5	166.8
14	ICSAB	476.5	.4663	.4586	.5018	179.2	168.3
15	PB 1566	-.0130	-.0013	-.0025	-.0029	.0087	.0383
16	LCS 1566	25.33	.9974	5.027	2.510	9.989	9.663
17	SpBLK 1566	-.0678	.2020	.5177	.2521	1.035	.9704
18	9887-1	.0181	-.0024	-.0020	-.0029	-.0066	-.0294
19	9887-1MS1	.0212	.2043	.5198	.2524	1.043	1.010
20	9887-1MSD1	.0237	.2041	.5174	.2501	1.031	1.018
21	9887-2	54.28	-.0023	-.0022	-.0043	1.059	.9940
22	116507-1	23.60	-.0025	-.0036	-.0043	.8742	.8041
23	CCVAC	21.03	2.083	5.246	2.045	10.51	10.20
24	CCB	-.0760	-.0013	-.0022	-.0029	-.0095	-.0162
25	PB 1567	-.0624	-.0006	-.0017	-.0035	-.0029	.0420
26	LCS 1567	25.10	1.0000	5.051	2.546	10.10	9.784
27	SpBLK 1567	-.0653	4.459	.0107	-.0032	.0025	-.0105
28	9883-1	1.086	-.0017	.0063	-.0001	.1178	.1399
29	9883-1MS1	1.005	4.561	.0204	.0041	.0914	.0737
30	9883-1MSD1	1.015	4.577	.0216	.0018	.0957	.1169
31	9883-2	3.462	-.0018	.0136	.0010	.3124	.3167
32	9883-3	.5759	-.0003	.0018	.0006	.0914	.1230
33	9883-4	5.898	.0192	.1873	1.485	1.462	1.348
34	9883-4MS1	5.529	4.477	.1873	1.433	1.380	1.299
35	CCVAC	21.41	2.105	5.299	2.052	10.63	10.33
36	CCB	-.0754	-.0024	-.0025	-.0026	-.0107	.0044
37	9883-4MSD1	5.435	4.543	.1876	1.472	1.581	1.442
38	9883-5	89.24	.0005	.1442	.0091	.2079	.2189

CEK

10051

#	Sample Name	CA	CR	CO	CU	fe	FEHIGH
39	9883-6	6.630	.0006	.1807	.0046	.0367	.0458
40	9883-7	2.567	.0014	.1485	-.0001	-.0034	.0082
41	9883-8	1.237	.0026	.1981	.0077	.1207	.1173
42	9883-9	67.38	.0118	.1885	.0191	.2650	.2415
43	9883-10	1.144	.0006	.1913	.0007	.0349	.0458
44	9883-11	9.699	.0009	.1664	.0317	.2876	.2773
45	9883-12	4.201	.0352	.4018	.0110	.6192	.5761
46	9883-13	23.01	.0598	.3891	.0147	.7465	.7134
47	CCVAC	21.10	2.068	5.209	1.997	10.44	10.16
48	CCB	-.0726	-.0021	-.0022	-.0035	-.0105	.0138
49	9883-14	2.950	.0003	.0044	.0166	.3038	.2866
50	9883-15	13.13	.0054	.0072	.0082	.1198	.0854
51	PB 1561	-.0709	-.0020	-.0032	-.0043	-.0112	-.0012
52	LCS 1561	25.42	.9753	5.004	2.454	9.997	9.730
53	SpBLK 1561	-.0754	.2012	.5142	.2462	1.028	.9894
54	CCVAC	21.11	2.071	5.219	2.019	10.49	10.15
55	CCB	-.0656	-.0011	-.0006	-.0023	-.0071	.0325
56	830~~3~~6-~~4~~9	.1508	.0271	.0008	.0707	.4385	.4031
57	830~~3~~6-~~4~~9MS1 CE	.1878	.2232	.4894	.3287	1.538	1.425
58	830~~3~~6-9MSD1 9-20-94	.1658	.2261	.4948	.3270	1.508	1.432
59	830~~3~~6-10	-.0209	.0055	-.0027	.0188	.0460	.0740
60	830~~3~~6-11	.0164	.0092	-.0029	.0325	.1001	.1079
61	830~~3~~6-12	.0152	.0064	-.0027	.0213	.0852	.0890
62	ICSA	468.9	.0101	.0056	.0066	176.8	164.9
63	ICSAB	474.3	.4587	.4539	.4943	177.5	166.7
64	CCVAC	21.09	2.091	5.266	2.053	10.49	10.20
65	CCB	-.0698	-.0004	-.0008	-.0021	-.0099	-.0013

#	Sample Name	PB	MG	MN	NI	K	AG
1	STDBLK	-.00046	.00906	.00013	.00126	.01313	-.0032
2	2-3.1			.41913	1.09473		.49446
3	2-3.2			2.00766	5.17939		2.39306
4	2-3.3			3.92686	10.1507		4.73226
5	4.1	.25419					
6	4.2	.4932					
7	4.3	1.01639					
8	1.1		6.60573			.221	
9	1.2		32.2663			1.029	
10	1.3		62.4411			1.99679	
11	CCVAC	4.978	20.51	1.045	5.264	20.58	1.051
12	CCB	.0056	-.0500	.0000	-.0025	.1886	.0022
13	ICSA	.0517	485.3	.0096	.0102	-.6355	-.0004
14	ICSAB	.9667	488.2	.4686	.8953	-.1461	.9768
15	PB 1566	.0075	.0014	-.0005	-.0046	-.2185	.0013
16	LCS 1566	.9858	23.39	1.511	4.035	24.49	.9929
17	SpBLK 1566	.4870	-.0682	.5155	.5250	-.2535	.0503
18	9887-1	.0019	-.0700	.0000	-.0063	-.5074	.0001
19	9887-1MS1	.4999	-.0648	.5184	.5296	-.2272	.0517
20	9887-1MSD1	.5035	-.0574	.5125	.5123	.0748	.0524
21	9887-2	-.0024	11.84	1.522	.0000	4.282	.0015
22	116507-1	.0014	9.601	.5035	-.0020	.8550	.0001
23	CCVAC	4.949	20.17	1.037	5.206	20.52	1.043

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10052

#	Sample Name	PB	MG	MN	NI	K	AG
24	CCB	-.0050	-.0600	-.0007	-.0058	-.3498	.0008
25	PB 1567	.0099	-.0525	.0003	.0008	.0179	.0032
26	LCS 1567	.9672	23.40	1.519	4.034	24.52	1.001
27	SpBLK 1567	4.272	-.0633	-.0002	-.0041	-.5102	4.505
28	9883-1	.0153	3.989	.1237	.0191	2.644	.0012
29	9883-1MS1	4.378	3.780	.1170	.0321	2.602	4.578
30	9883-1MSD1	4.395	3.767	.1155	.0295	2.523	4.579
31	9883-2	-.0001	5.927	.2660	.0504	1.264	.0002
32	9883-3	.0389	3.556	.1371	.0120	.3850	.0003
33	9883-4	13.17	19.76	2.026	.5304	4.574	.0009
34	9883-4MS1	16.26	18.55	1.880	.4848	4.202	4.431
35	CCVAC	4.966	20.63	1.047	5.312	19.70	1.047
36	CCB	-.0047	-.0600	-.0010	-.0038	-.4023	.0017
37	9883-4MSD1	16.42	18.96	1.906	.4993	3.703	4.527
38	9883-5	1.860	37.11	2.096	.5098	2.687	.0015
39	9883-6	4.967	48.29	1.655	.7877	.5450	-.0007
40	9883-7	4.111	40.32	1.555	.5754	.8088	.0015
41	9883-8	12.02	44.02	1.660	.7146	.9814	.0010
42	9883-9	44.20	23.73	1.082	.3749	3.560	.0008
43	9883-10	1.600	53.31	2.122	.6620	14.79	.0035
44	9883-11	10.51	60.06	1.698	.8276	.5817	-.0002
45	9883-12	10.98	64.25	3.409	1.215	.7391	-.0001
46	9883-13	18.25	63.71	3.199	1.368	.6482	.0006
47	CCVAC	1.871	20.11	1.024	5.210	19.12	1.023
48	CCB	-.0080	-.0616	.0003	-.0056	-.1003	.0049
49	9883-14	.1026	1.509	.0798	.0064	2.212	.0016
50	9883-15	.3599	3.970	.1133	.0267	4.812	-.0006
51	PB 1561	.0043	-.0625	.0000	-.0091	-.1659	-.0009
52	LCS 1561	.9619	23.01	1.479	3.996	23.06	.9754
53	SpBLK 1561	.4850	-.0764	.5105	.5179	-.4374	.0516
54	CCVAC	4.883	20.40	1.029	5.227	19.28	1.023
55	CCB	-.0033	-.0475	.0005	.0013	-.1134	.0071
56	8306-9	100.2	.1561	.0095	.0603	.1820	.0008
57	8306-9MS1	102.6	.3761	.4993	.5510	-.1439	.0473
58	8306-9MSD1 CE	103.9	.2093	.5010	.5640	-.0648	.0481
59	8306-10 9-20-94	.0046	-.0500	.0018	.0082	-.3103	.0021
60	8306-11	.0055	-.0375	.0028	.0051	-.1921	.0005
61	8306-12	.0019	-.0292	.0028	.0061	-.1921	.0014
62	ICSA	.0540	483.6	.0089	-.0051	-.3120	-.0018
63	ICSAB	.9333	485.2	.4634	.8986	-.6512	.9691
64	CCVAC	4.959	20.47	1.041	5.243	20.37	1.029
65	CCB	.0073	-.0500	.0005	.0008	.0967	.0055

#	Sample Name	NA	V	ZN	Se	B	Mo
1	STDBLK	.13333	.00026	.00073	-.00406	.00346	.00079
2	2-3.1		1.27333	.40406			
3	2-3.2		6.18546	1.93239			
4	2-3.3		12.2075	3.80493			
5	4.1				.11946		
6	4.2				.23446		
7	4.3				.48866		
8	1.1	8.253					

Cal

10053

#	Sample Name	NA	V	ZN	Se	B	Mo
9	1.2	39.6727					
10	1.3	75.4995					
11	CCVAC	20.62	5.209	1.047	5.062	-.0092	-.0086
12	CCB	-.0086	.0003	-.0012	.0457	-.0031	-.0043
13	ICSA	-.2314	.0054	.0008	-.0062	-.0181	.0106
14	ICSAB	-.2796	.4663	.9972	.0982	-.0233	.0092
15	PB 1566	-.4253	-.0007	.0005	.0006	-.0057	-.0043
16	LCS 1566	24.62	4.943	2.054	.9668	-.0057	-.0043
17	SpBLK 1566	-.4654	.5031	.5110	1.949	-.0066	-.0043
18	9887-1	-.4273	-.0013	.0012	.0027	-.0048	-.0018
19	9887-1MS1	-.3927	.5058	.5195	2.041	.0084	-.0043
20	9887-1MSD1	-.4256	.5004	.5114	1.983	-.0075	-.0043
21	9887-2	8.047	-.0005	-.0002	.0198	.0605	-.0043
22	116507-1	10.33	-.0021	.0189	.0054	.0066	-.0050
23	CCVAC	20.65	5.178	1.039	4.984	-.0128	-.0043
24	CCB	.0077	-.0016	-.0026	.0095	-.0075	-.0040
25	PB 1567	H1294.	.0003	.0001	-.0000	.0137	-.0015
26	LCS 1567	24.63	4.994	2.056	1.014	-.0039	-.0043
27	SpBLK 1567	1259.	-.0013	-.0019	1.001	-.0057	-.0004
28	9883-1	H1245.	-.0012	.1416	.0034	.0508	-.0043
29	9883-1MS1	H1199.	-.0004	.1320	1.074	.0561	-.0043
30	9883-1MSD1	H1200.	-.0004	.1320	1.068	.0561	-.0043
31	9883-2	H1281.	-.0011	.1360	.0218	.0508	-.0043
32	9883-3	H1175.	-.0017	.1317	-.0035	.0561	-.0036
33	9883-4	H1259.	-.0011	4.712	-.0192	.0737	-.0036
34	9883-4MS1	H1221.	.0002	4.348	1.074	.0728	-.0036
35	CCVAC	20.26	5.235	1.050	5.232	-.0092	-.0026
36	CCB	.0012	-.0010	-.0022	-.0035	-.0013	-.0047
37	9883-4MSD1	H1261.	-.0018	4.396	1.071	.0781	-.0040
38	9883-5	H1235.	-.0013	.3075	-.0219	.0728	-.0033
39	9883-6	H1252.	-.0017	.7224	-.0076	.0578	-.0029
40	9883-7	H1213.	-.0012	.4000	.0143	.0940	-.0036
41	9883-8	H1241.	-.0006	1.234	-.0076	.0834	-.0036
42	9883-9	H1165.	-.0016	8.373	-.0308	.0499	-.0043
43	9883-10	H1184.	-.0009	.1619	-.0185	.4716	-.0043
44	9883-11	H1180.	-.0018	.9712	-.0212	.0516	-.0043
45	9883-12	H1265.	.0003	1.162	-.0294	.0993	-.0043
46	9883-13	H1300.	-.0007	1.391	-.0178	.0869	-.0001
47	CCVAC	19.55	5.125	1.032	5.101	-.0066	-.0075
48	CCB	-.0239	-.0013	-.0015	.0232	-.0039	-.0043
49	9883-14	H1217.	-.0011	.3295	-.0226	.0552	-.0043
50	9883-15	H1315.	-.0023	.4376	.0218	.0781	-.0043
51	PB 1561	-.4324	-.0010	-.0026	.0129	.0005	-.0026
52	LCS 1561	23.48	4.901	2.016	.9859	-.0039	-.0043
53	SpBLK 1561	-.4195	.4991	.5103	2.030	.0111	-.0065
54	CCVAC	20.10	5.139	1.037	5.071	-.0101	-.0029
55	CCB	.0739	.0009	-.0012	.0280	-.0048	-.0047
56	830~~5~~-9	1.333	.0293	9.171	-.0321	-.0101	-.0043
57	830~~5~~-9MS1	1.461	.5112	9.178	2.103	-.0242	-.0050
58	830~~5~~-9MSD1 CE	1.353	.5144	9.248	2.099	-.0172	.0007
59	830~~5~~-10 9-20-94	-.4626	-.0010	.0199	.0273	-.0260	-.0036
60	830~~5~~-11	-.4616	-.0018	.0195	.0362	-.0269	-.0036
61	830~~5~~-12	-.4623	-.0010	.0114	.0266	-.0251	-.0040
62	ICSA	-.2325	.0052	.0598	.0580	-.0136	.0096

10054

#	Sample Name	NA	V	ZN	Se	B	Mo
63	ICSAB	-.2732	.4635	.9911	.0306	-.0331	.0121
64	CCVAC	21.03	5.191	1.040	4.997	-.0066	-.0083
65	CCB	.0539	.0008	-.0022	.0382	-.0128	-.0036

#	Sample Name	Sr	Ti	Sn	Tl
1	STDBLK	.00019	.0012	-.00006	.00026
2	2-3.1				
3	2-3.2				
4	2-3.3				
5	4.1				.29039
6	4.2				.55699
7	4.3				1.1524
8	1.1				
9	1.2				
10	1.3				
11	CCVAC	-.0002	.0003	.0150	5.031
12	CCB	-.0001	.0005	.0059	.0010
13	ICSA	.0106	-.0085	-.0010	.0013
14	ICSAB	.0105	-.0086	.0059	-.0380
15	PB 1566	-.0004	.0005	.0059	-.0165
16	LCS 1566	-.0000	.0006	.0093	1.869
17	SpBLK 1566	-.0003	.0000	.0024	1.908
18	9887-1	-.0001	.0002	-.0010	-.0258
19	9887-1MS1	-.0001	.0008	.0093	2.003
20	9887-1MSD1	-.0001	.0008	.0081	1.896
21	9887-2	.2186	.0006	-.0055	-.0123
22	116507-1	.0012	-.0001	.0013	.0041
23	CCVAC	-.0001	.0005	.0070	4.969
24	CCB	-.0001	.0002	.0081	-.0112
25	PB 1567	.0020	.0003	.0446	.0325
26	LCS 1567	-.0000	-.0001	.0138	1.843
27	SpBLK 1567	.0021	.0008	.0446	-.0159
28	9883-1	.0113	.0011	.0652	-.0327
29	9883-1MS1	.0108	.0018	.0560	-.0309
30	9883-1MSD1	.0110	.0023	.0503	-.0198
31	9883-2	.0247	.0009	.0595	-.0340
32	9883-3	.0053	.0001	.0526	.0150
33	9883-4	.0400	.0008	.1039	-.0224
34	9883-4MS1	.0382	.0021	.1028	-.0380
35	CCVAC	-.0001	.0004	.0253	5.000
36	CCB	-.0002	.0005	.0104	.0174
37	9883-4MSD1	.0391	.0024	.0971	-.0312
38	9883-5	.0947	-.0006	.0560	-.0381
39	9883-6	.0229	.0002	.0481	L-.0578
40	9883-7	.0173	.0005	.0435	L-.0549
41	9883-8	.0185	.0001	.0469	L-.0646
42	9883-9	.0581	-.0005	.0675	-.0049
43	9883-10	.0164	.0005	.0595	L-.0607
44	9883-11	.0200	-.0004	.0675	-.0234
45	9883-12	.0214	-.0000	.0823	L-.0644
46	9883-13	.0233	-.0003	.0857	-.0417
47	CCVAC	-.0003	.0008	.0264	4.982

CCA

10055

#	Sample Name	Sr	Ti	Sn	Tl		
48	CCB	-.0002	.0000	.0173	-.0352		
49	9883-14	.0248	.0015	.0446	.0065		
50	9883-15	.0397	.0028	.0713	-.0367		
51	PB 1561	-.0004	-.0002	.0184	.0016		
52	LCS 1561	.0001	.0011	.0195	1.821		
53	SpBLK 1561	-.0002	.0005	.0081	1.890		
54	CCVAC	-.0002	.0003	.0161	4.946		
55	CCB	-.0001	.0000	.0127	.0109		
56	8306-9	.0028	.0022	.0994	.0013		
57	8306-9MS1	.0027	.0029	.1051	1.794		
58	8306-9MSD1 CE	.0027	.0042	.0914	1.850		
59	8306-10 9-20-94	-.0000	.0017	.0287	-.0154		
60	8306-11	.0000	.0030	.0503	-.0154		
61	8306-12	.0001	.0029	.0481	-.0498		
62	ICSA	.0105	-.0074	.0150	.0106		
63	ICSAB	.0103	-.0073	.0150	.0416		
64	CCVAC	-.0003	.0008	.0081	5.072		
65	CCB	-.0002	.0002	.0104	-.0130		

Standardization Rpt. Tue 09-20-94 08:33:12 PM page 1

Method: MRD4PT Standard: SO 2-3.1

Elem	AL	BA	BE	CR	CO	CU	fe
Avge	6.168	7.898	.4559	.6800	1.474	.6109	3.740
SDev	.044	.064	.0019	.0035	.004	.0045	.015
%RSD	.7207	.8151	.4076	.5153	.2648	.7323	.3933
#1	6.117	7.825	.4538	.6764	1.470	.6058	3.724
#2	6.202	7.947	.4572	.6834	1.478	.6140	3.753
#3	6.184	7.921	.4568	.6802	1.474	.6130	3.744

Elem	FEHIGH	MN	NI	AG	V	ZN
Avge	.3689	.4191	1.095	.4945	1.273	.4041
SDev	.0027	.0013	.012	.0018	.005	.0009
%RSD	.7281	.3105	1.116	.3670	.3893	.2286
#1	.3700	.4178	1.097	.4928	1.268	.4030
#2	.3708	.4204	1.105	.4964	1.278	.4046
#3	.3658	.4192	1.081	.4942	1.274	.4046

10057

Standardization Rpt. Tue 09-20-94 08:36:35 PM page 1

Method: MRD4PT Standard: 2-3.2

Elem	AL	BA	BE	CR	CO	CU	fe
Avge	29.97	40.25	2.222	3.259	7.011	2.991	17.84
SDev	.20	.36	.011	.010	.017	.024	.06
%RSD	.6576	.8985	.4996	.3191	.2484	.8159	.3191
#1	30.20	40.67	2.235	3.270	7.020	3.019	17.89
#2	29.85	40.06	2.215	3.249	6.991	2.978	17.78
#3	29.87	40.02	2.216	3.259	7.023	2.976	17.83

Elem	FEHIGH	MN	NI	AG	V	ZN
Avge	1.757	2.008	5.179	2.393	6.185	1.932
SDev	.005	.005	.028	.006	.026	.003
%RSD	.2912	.2250	.5360	.2446	.4186	.1627
#1	1.761	2.012	5.211	2.398	6.215	1.933
#2	1.751	2.003	5.167	2.387	6.166	1.929
#3	1.759	2.007	5.160	2.395	6.176	1.935

10058

Standardization Rpt. Tue 09-20-94 08:40:01 PM page 1

Method: MRD4PT Standard: 2-3.3 S

Elem	AL	BA	BE	CR	CO	CU	fe
Avge	59.20	82.31	4.378	6.385	13.73	5.882	34.63
SDev	1.02	1.88	.056	.033	.07	.130	.30
%RSD	1.722	2.288	1.274	.5100	.5165	2.218	.8569
#1	58.10	80.28	4.317	6.347	13.65	5.743	34.30
#2	60.11	84.00	4.426	6.398	13.77	6.002	34.85
#3	59.39	82.65	4.392	6.408	13.77	5.902	34.76

Elem	FEHIGH	MN	NI	AG	V	ZN
Avge	3.449	3.927	10.15	4.732	12.21	3.835
SDev	.019	.026	.06	.043	.13	.018
%RSD	.5428	.6594	.5600	.9082	1.053	.4624
#1	3.428	3.897	10.09	4.684	12.06	3.815
#2	3.461	3.943	10.18	4.766	12.31	3.843
#3	3.459	3.941	10.19	4.746	12.25	3.847

10059

Standardization Rpt. Tue 09-20-94 08:43:25 PM page 1

Method: MRD4PT Standard: 4.1

Elem	AS	CD	PB	Se	Tl
Avge	.3365	.2422	.2542	.1195	.2904
SDev	.0024	.0005	.0021	.0024	.0048
%RSD	.7264	.2185	.8214	2.018	1.640
#1	.3338	.2418	.2566	.1172	.2850
#2	.3370	.2420	.2532	.1220	.2922
#3	.3386	.2428	.2528	.1192	.2940

Cak

10060

Standardization Rpt. Tue 09-20-94 08:46:49 PM page 1

Method: MRD4PT Standard: 4.2

Elem	AS	CD	PB	Se	Tl
Avge	.6451	.4635	.4932	.2345	.5570
SDev	.0057	.0018	.0056	.0034	.0031
%RSD	.8912	.3868	1.130	1.453	.5597
#1	.6390	.4614	.4886	.2384	.5606
#2	.6460	.4646	.4916	.2324	.5552
#3	.6504	.4644	.4994	.2326	.5552

10061

Standardization Rpt. Tue 09-20-94 08:50:13 PM page 1

Method: MRD4PT Standard: 4.3 5

Elem	AS	CD	PB	Se	Tl
Avge	1.339	.9673	1.016	.4887	1.152
SDev	.008	.0029	.005	.0068	.003
%RSD	.5675	.2992	.5161	1.391	.2793
#1	1.340	.9654	1.012	.4868	1.151
#2	1.346	.9706	1.016	.4962	1.156
#3	1.331	.9658	1.022	.4830	1.150

Clak

10062

Standardization Rpt. Tue 09-20-94 08:53:36 PM page 1

Method: MRD4PT Standard: 1.1 S

Elem	CA	MG	K	NA
Avge	9.937	6.606	.2210	8.253
SDev	.013	.053	.0028	.120
%RSD	.1323	.7984	1.267	1.450
#1	9.923	6.590	.2178	8.169
#2	9.949	6.665	.2222	8.390
#3	9.939	6.563	.2230	8.200

10063

Standardization Rpt. Tue 09-20-94 08:57:00 PM page 1

Method: MRD4PT Standard: S 1.2

Elem	CA	MG	K	NA
Avge	47.03	32.27	1.029	39.67
SDev	.11	.11	.004	.20
%RSD	.2264	.3486	.4218	.5026
#1	46.98	32.16	1.024	39.45
#2	46.95	32.26	1.031	39.84
#3	47.15	32.38	1.032	39.72

CCV

10064

Standardization Rpt. Tue 09-20-94 09:00:22 PM page 1

Method: MRD4PT Standard: S 1.3

Elem	CA	MG	K	NA
Avge	89.93	62.44	1.997	75.50
SDev	.02	.08	.002	.17
%RSD	.0221	.1342	.0966	.2231
#1	89.91	62.39	1.995	75.40
#2	89.95	62.54	1.996	75.69
#3	89.93	62.39	1.999	75.40

Ca

10065

Standardization Report Tue 09-20-94 09:00:26 PM page 1

Method: MRD4PT Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
AL	308.215	Multiple	Standards	3.33018	-.167787	09/20/94 08:36:42
SB	206.838	Multiple	Standards	4.41288	-.007711	09/20/94 08:36:42
AS	193.696	Multiple	Standards	7.48879	.033222	09/20/94 08:46:55
BA	493.409	Multiple	Standards	2.48155	-.000824	09/20/94 08:36:42
BE	313.042	Multiple	Standards	1.08714	-.003556	09/20/94 08:36:42
CD	228.802	Multiple	Standards	5.33926	-.001473	09/20/94 08:46:55
CA	317.933	Multiple	Standards	4.23673	-.040977	09/20/94 08:57:05
CR	267.716	Multiple	Standards	1.52602	-.005170	09/20/94 08:36:42
CO	228.616	Multiple	Standards	3.53194	-.006691	09/20/94 08:36:42
CU	324.754	Multiple	Standards	4.18009	-.010145	09/20/94 08:36:42
fe	259.940	Multiple	Standards	2.78778	-.021251	09/20/94 08:36:42
FEHIGH	271.441	Multiple	Standards	29.1330	-.047947	09/20/94 08:36:42
PB	220.353	Multiple	Standards	4.96227	.002276	09/20/94 08:46:55
MG	279.010	Multiple	Standards	6.22335	-.065821	09/20/94 08:57:05
MN	257.610	Multiple	Standards	3.70292	-.000968	09/20/94 08:36:42
NI	231.604	Multiple	Standards	3.81737	-.006342	09/20/94 08:36:42
K	766.491	Multiple	Standards	196.990	-2.59549	09/20/94 08:57:05
AG	328.068	Multiple	Standards	2.06288	.006348	09/20/94 08:36:42
NA	588.995	Multiple	Standards	5.09377	-.691526	09/20/94 08:57:05
V	292.402	Multiple	Standards	4.01519	-.002104	09/20/94 08:36:42
ZN	213.856	Multiple	Standards	5.15518	-.004324	09/20/94 08:36:42
Se	196.026	Multiple	Standards	10.2466	.041621	09/20/94 08:46:55
B	249.678	Multiple	Standards	13.2334	-.046285	09/20/94 08:36:42
Mo	202.030	Multiple	Standards	5.34766	-.004335	09/20/94 08:36:42
Sr	421.553	Multiple	Standards	.682460	-.000347	09/20/94 08:36:42
Ti	334.941	Multiple	Standards	2.51336	-.003177	09/20/94 08:36:42
Sn	189.989	Multiple	Standards	17.1084	.001299	09/20/94 08:36:42
Tl	190.864	Multiple	Standards	8.75653	-.002482	09/20/94 08:46:55

Analysis Report QC Standard Tue 09-20-94 09:03:51 PM page 1

Method: MRD4PT Sample Name: CCVAC ICV Operator: CME
Run Time: 09/20/94 21:00:31
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.46	-.0570	5.144	9.902	1.037	.9886	21.16
SDev	.07	.0047	.036	.101	.007	.0052	.04
%RSD	.6312	8.178	.7051	1.017	.6502	.5230	.2118
#1	10.44	-.0587	5.107	9.876	1.036	.9896	21.18
#2	10.41	-.0605	5.146	9.816	1.031	.9830	21.11
#3	10.54	-.0517	5.179	10.01	1.044	.9932	21.19
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	2.100	5.291	2.057	10.59	10.22	4.978	20.51
SDev	.006	.021	.018	.05	.06	.009	.16
%RSD	.2926	.3936	.8534	.5192	.5427	.1724	.7994
#1	2.099	5.307	2.050	10.58	10.28	4.982	20.48
#2	2.094	5.268	2.045	10.54	10.19	4.984	20.36
#3	2.107	5.299	2.077	10.65	10.19	4.968	20.69
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	1.045	5.264	20.58	1.051	20.62	5.209	1.047
SDev	.004	.011	.58	.006	.44	.028	.002
%RSD	.4283	.2058	2.820	.5347	2.139	.5328	.1455
#1	1.045	5.262	19.91	1.051	20.22	5.208	1.047
#2	1.040	5.255	20.90	1.045	20.55	5.182	1.045
#3	1.049	5.276	20.94	1.056	21.09	5.237	1.048
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	5.062	-.0092	-.0086	-.0002	.0003	.0150	5.031
SDev	.085	.0053	.0037	.0001	.0003	.0068	.067
%RSD	1.681	57.34	43.02	47.83	90.57	45.67	1.332
#1	5.063	-.0092	-.0108	-.0001	.0002	.0150	5.015
#2	4.977	-.0145	-.0043	-.0002	.0002	.0081	4.974
#3	5.147	-.0039	-.0108	-.0002	.0007	.0218	5.105
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10067

Analysis Report Blank Sample Tue 09-20-94 09:07:15 PM page 1

ICB

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/20/94 21:03:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0018	.0038	.0097	.0040	-.0001	.0002	-.0712
SDev	.0057	.0085	.0232	.0003	.0000	.0015	.0034
%RSD	309.5	226.6	238.2	7.212	3.363	727.6	4.810
#1	-.0039	-.0024	-.0132	.0041	-.0001	.0008	-.0749
#2	.0074	.0002	.0332	.0041	-.0001	.0014	-.0681
#3	.0021	.0135	.0092	.0036	-.0001	-.0015	-.0706
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	-.0001	-.0020	-.0018	-.0103	.0420	.0056	-.0500
SDev	.0018	.0015	.0000	.0012	.0331	.0083	.0080
%RSD	2218.	74.21	.0000	11.28	78.84	149.1	16.02
#1	-.0003	-.0025	-.0018	-.0112	.0043	.0003	-.0533
#2	-.0018	-.0032	-.0018	-.0090	.0665	.0013	-.0558
#3	.0019	-.0003	-.0018	-.0107	.0551	.0152	-.0408
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	-.0025	.1886	.0022	-.0086	.0003	-.0012
SDev	.0004	.0033	.3660	.0014	.0087	.0008	.0000
%RSD	1327.	131.8	194.1	64.25	100.6	239.3	1.070
#1	.0005	-.0048	-.2316	.0014	-.0171	.0003	-.0012
#2	-.0002	-.0041	.3593	.0039	.0002	-.0005	-.0012
#3	-.0002	.0013	.4381	.0014	-.0090	.0011	-.0012
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	.0457	-.0031	-.0043	-.0001	.0005	.0059	.0010
SDev	.0217	.0040	.0086	.0001	.0003	.0020	.0311
%RSD	47.43	132.3	197.4	66.08	57.87	33.70	3135.
#1	.0375	-.0066	-.0129	-.0002	.0003	.0047	-.0095
#2	.0703 bad blank	.0014	-.0043	-.0001	.0003	.0047	-.0235
#3	.0293 NO	-.0039	.0042	-.0001	.0008	.0081	.0360
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

use 0.0334

10068

Analysis Report QC Standard Tue 09-20-94 09:10:39 PM page 1

Method: MRD4PT Sample Name: ICSA Operator: CME
Run Time: 09/20/94 21:07:20
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	499.1	.0026	-.0662	.0179	-.0001	-.0001	470.7
SDev	2.7	.0339	.0634	.0003	.0000	.0022	1.0
%RSD	.5475	1328.	95.82	1.603	3.388	1571.	.2194
#1	501.8	.0417	-.1093	.0175	-.0001	.0017	469.8
#2	496.4	-.0183	-.0959	.0180	-.0001	.0005	470.4
#3	499.0	-.0157	.0066	.0180	-.0001	-.0026	471.8
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	.0092	.0032	.0063	178.5	166.8	.0517	485.3
SDev	.0016	.0007	.0013	.4	.3	.0135	1.6
%RSD	17.60	22.08	20.28	.2503	.1529	26.14	.3227
#1	.0073	.0025	.0049	178.8	166.7	.0442	486.7
#2	.0104	.0039	.0066	178.0	166.5	.0437	483.6
#3	.0098	.0032	.0074	178.7	167.0	.0673	485.6
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	.0102	-.6355	-.0004	-.2314	.0054	.0608
SDev	.0001	.0139	.3186	.0010	.0096	.0006	.0006
%RSD	.7347	135.8	50.13	276.4	4.140	11.64	.9024
#1	.0096	-.0025	-.8560	-.0015	-.2269	.0052	.0602
#2	.0095	.0250	-.2703	.0005	-.2249	.0050	.0611
#3	.0097	.0082	-.7804	-.0002	-.2424	.0062	.0612
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	-.0062	-.0181	.0106	.0106	-.0085	-.0010	.0043
SDev	.1038	.0031	.0037	.0001	.0008	.0138	.0833
%RSD	1677.	16.93	34.83	.7422	9.209	1408.	1947.
#1	.0703	-.0145	.0128	.0107	-.0093	.0116	-.0269
#2	~~.1244~~	-.0198	.0128	.0106	-.0077	-.0158	-.0590
#3	.0355	-.0198	.0064	.0106	-.0086	.0013	.0987
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

ave 0.0529 ~~.1244~~ not ~~above~~ below

10069

Analysis Report QC Standard Tue 09-20-94 09:14:02 PM page 1

Method: MRD4PT Sample Name: ICSAB Operator: CME
Run Time: 09/20/94 21:10:43
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	499.4	-.0098	-.0359	.4803	.4614	.9153	476.5
SDev	4.9	.0370	.0574	.0043	.0030	.0103	1.0
%RSD	.9743	378.0	159.9	.8910	.6405	1.127	.2170
#1	494.4	-.0525	-.0243	.4756	.4587	.9047	475.7
#2	499.7	.0111	.0149	.4811	.4609	.9253	476.0
#3	504.2	.0120	-.0982	.4841	.4646	.9159	477.6
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	.4663	.4586	.5018	179.2	168.3	.9667	488.2
SDev	.0014	.0025	.0047	.8	.6	.0017	2.9
%RSD	.2952	.5410	.9474	.4627	.3589	.1735	.6027
#1	.4648	.4560	.4965	178.5	167.8	.9681	485.2
#2	.4676	.4588	.5032	179.2	168.2	.9648	488.2
#3	.4664	.4609	.5057	180.1	169.0	.9671	491.1
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	.4686	.8953	-.1461	.9768	-.2796	.4663	.9972
SDev	.0016	.0119	.1795	.0041	.0043	.0018	.0036
%RSD	.3519	1.332	122.9	.4238	1.545	.3924	.3567
#1	.4669	.8816	-.1900	.9731	-.2816	.4650	.9939
#2	.4685	.9030	.0513	.9761	-.2826	.4654	.9968
#3	.4702	.9014	-.2995	.9813	-.2746	.4684	1.001
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	.0982	-.0233	.0092	.0105	-.0086	.0059	-.0380
SDev	.0850	.0031	.0044	.0001	.0004	.0176	.0145
%RSD	86.55	13.09	48.33	.7486	4.676	299.6	38.05
#1 use .0525	.0217	-.0198	.0128	.0106	-.0081	.0013	-.0213
#2	.0832	-.0251	.0042	.0104	-.0086	.0253	-.0473
#3	~~.1898~~	-.0251	.0106	.0106	-.0089	-.0090	-.0454
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

omit although as bad

10070

Analysis Report Tue 09-20-94 09:17:25 PM page 1

Method: MRD4PT Sample Name: PB 1566 222222 Operator: CME
Run Time: 09/20/94 21:14:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0367	.0023	.0060	-.0008	-.0001	.0002	-.0130
SDev	.0519	.0020	.0055	.0000	.0000	.0037	.0617
%RSD	141.5	87.60	92.22	.0000	1.891	1498.	473.9
#1	-.0073	.0011	.0093	-.0008	-.0001	-.0036	-.0613
#2	.0234	.0046	.0091	-.0008	-.0001	.0037	-.0342
#3	.0940	.0011	-.0004	-.0008	-.0001	.0007	.0565
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	-.0013	-.0025	-.0029	.0087	.0383	.0075	.0014
SDev	.0006	.0000	.0005	.0204	.0149	.0072	.0569
%RSD	48.73	.0000	16.65	235.8	38.96	94.84	3968.
#1	-.0018	-.0025	-.0026	-.0073	.0326	-.0007	-.0409
#2	-.0006	-.0025	-.0026	.0016	.0552	.0112	-.0209
#3	-.0015	-.0025	-.0035	.0317	.0270	.0121	.0661
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	-.0005	-.0046	-.2185	.0013	-.4253	-.0007	.0005
SDev	.0004	.0118	.1266	.0013	.0118	.0005	.0006
%RSD	92.60	259.5	57.95	104.6	2.765	63.59	118.1
#1	-.0010	-.0048	-.0740	-.0002	-.4389	-.0005	-.0002
#2	-.0002	-.0163	-.2710	.0022	-.4185	-.0005	.0009
#3	-.0002	.0074	-.3103	.0018	-.4185	-.0013	.0008
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	.0006	-.0057	-.0043	-.0004	.0005	.0059	-.0165
SDev	.0168	.0015	.0064	.0001	.0006	.0110	.0355
%RSD	2646.	26.80	148.0	20.09	115.2	187.7	215.3
#1	-.0035	-.0066	-.0108	-.0005	-.0002	-.0021	-.0480
#2	.0191	-.0039	.0021	-.0003	.0008	.0184	.0220
#3	-.0137	-.0066	-.0043	-.0003	.0009	.0013	-.0235
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10071

Analysis Report Tue 09-20-94 09:22:27 PM page 1

Method: MRD4PT Sample Name: LCS 1566 ZZZZZZ Operator: CME
Run Time: 09/20/94 21:17:30
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.42	1.701	1.839	18.97	.5471	.9652	25.33
SDev	.11	.008	.023	.13	.0034	.0064	.03
%RSD	.5727	.4727	1.237	.7079	.6256	.6655	.1006
#1	18.30	1.710	1.860	18.82	.5432	.9650	25.34
#2	18.46	1.695	1.815	19.06	.5485	.9717	25.36
#3	18.49	1.697	1.843	19.05	.5496	.9589	25.31
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	.9974	5.027	2.510	9.989	9.663	.9858	23.39
SDev	.0040	.009	.022	.032	.011	.0015	.14
%RSD	.3978	.1855	.8870	.3192	.1164	.1554	.5946
#1	.9935	5.019	2.485	9.952	9.664	.9842	23.22
#2	1.001	5.037	2.525	10.01	9.673	.9872	23.47
#3	.9974	5.025	2.521	10.01	9.651	.9861	23.47
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	1.511	4.035	24.49	.9929	24.62	4.943	2.054
SDev	.004	.018	.21	.0020	.22	.020	.004
%RSD	.2706	.4462	.8516	.1969	.8775	.4052	.1734
#1	1.506	4.039	24.25	.9907	24.39	4.920	2.050
#2	1.515	4.050	24.65	.9945	24.64	4.956	2.056
#3	1.511	4.015	24.57	.9936	24.82	4.953	2.056
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	.9668	-.0057	-.0043	-.0000	.0006	.0093	1.869
SDev	.0267	.0031	.0000	.0002	.0009	.0052	.060
%RSD	2.764	53.59	.0000	737.8	141.6	56.30	3.192
#1	.9948	-.0039	-.0043	.0002	.0016	.0150	1.834
#2	.9641	-.0092	-.0043	-.0002	.0001	.0047	1.834
#3	.9416	-.0039	-.0043	-.0001	.0001	.0081	1.938
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass

10072

Analysis Report Tue 09-20-94 09:27:29 PM page 1

Method: MRD4PT Sample Name: 222222 SpBLK 1566 Operator: CME
Run Time: 09/20/94 21:22:32
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.018	.4799	2.003	1.940	.0538	.0490	-.0678
SDev	.024	.0059	.029	.030	.0005	.0032	.001
%RSD	1.204	1.225	1.434	1.528	.8640	6.644	1.443
#1	1.992	.4770	1.971	1.906	.0533	.0486	-.0672
#2	2.022	.4761	2.009	1.952	.0538	.0524	-.0689
#3	2.039	.4867	2.028	1.962	.0542	.0460	-.0672
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	.2020	.5177	.2521	1.035	.9704	.4870	-.0682
SDev	.0034	.0033	.0027	.005	.0197	.0026	.0101
%RSD	1.658	.6448	1.066	.4388	2.031	.5371	14.78
#1	.1993	.5139	.2490	1.030	.9820	.4880	-.0574
#2	.2057	.5203	.2540	1.038	.9814	.4840	-.0698
#3	.2008	.5189	.2532	1.037	.9476	.4890	-.0773
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	.5155	.5250	-.2535	.0503	-.4654	.5031	.5110
SDev	.0037	.0096	.4138	.0006	.0054	.0051	.0025
%RSD	.7094	1.822	163.2	1.247	1.158	1.014	.4967
#1	.5113	.5159	.1667	.0505	-.4613	.4972	.5083
#2	.5172	.5350	-.2666	.0497	-.4633	.5060	.5133
#3	.5179	.5243	-.6606	.0509	-.4715	.5060	.5113
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	1.949	-.0066	-.0043	-.0003	-.0000	.0024	1.908
SDev	.009	.0026	.0000	.0000	.0006	.0086	.060
%RSD	.4855	40.19	.0000	.0000	80290.	353.0	3.171
#1	1.954	-.0039	-.0043	-.0003	-.0007	.0013	1.846
#2	1.938	-.0092	-.0043	-.0003	.0003	-.0055	1.912
#3	1.954	-.0066	-.0043	-.0003	.0003	.0116	1.967
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10073

Analysis Report Tue 09-20-94 09:32:31 PM page 1

ZZZZZZ

Method: MRD4PT Sample Name: 9887-1 Operator: CME
Run Time: 09/20/94 21:27:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0048	.0076	.0073	-.0008	-.0001	-.0001	.0181
SDev	.0097	.0082	.0035	.0000	.0000	.0030	.0030
%RSD	200.0	107.8	47.41	.0000	8.242	2592.	16.48
#1	.0047	.0170	.0093	-.0008	-.0001	.0016	.0209
#2	-.0146	.0029	.0094	-.0008	-.0001	.0016	.0149
#3	-.0046	.0029	.0033	-.0008	-.0001	-.0036	.0183
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	-.0024	-.0020	-.0029	-.0066	-.0294	.0019	-.0700
SDev	.0013	.0023	.0017	.0016	.0442	.0142	.0137
%RSD	54.91	114.6	60.03	24.50	150.3	731.0	19.52
#1	-.0039	-.0046	-.0043	-.0056	.0215	-.0136	-.0857
#2	-.0015	-.0003	-.0009	-.0084	-.0577	.0053	-.0609
#3	-.0018	-.0010	-.0035	-.0056	-.0521	.0142	-.0634
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	.0000	-.0063	-.5074	.0002	-.4273	-.0013	.0012
SDev	.0004	.0048	.3127	.0029	.0012	.0021	.0006
%RSD	3728.	75.18	61.64	1916.	.2752	158.6	50.73
#1	.0005	-.0010	-.8620	.0031	-.4267	-.0037	.0008
#2	-.0002	-.0102	-.3892	-.0028	-.4287	-.0005	.0019
#3	-.0002	-.0079	-.2710	.0001	-.4267	.0003	.0009
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	.0027	-.0048	-.0018	-.0001	.0002	-.0010	-.0258
SDev	.0222	.0055	.0038	.0001	.0006	.0052	.0177
%RSD	826.3	114.3	204.2	66.08	329.4	532.2	68.70
#1	.0088	.0014	-.0054	-.0001	.0008	-.0055	-.0463
#2	.0211	-.0092	-.0022	-.0002	-.0002	.0047	-.0165
#3	-.0219	-.0066	.0021	-.0001	-.0002	-.0021	-.0147
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10074

Analysis Report Tue 09-20-94 09:37:34 PM page 1

222222

Method: MRD4PT Sample Name: 9887-1MS1 Operator: CME
Run Time: 09/20/94 21:32:36
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.033	.4820	2.003	1.939	.0540	.0500	.0212
SDev	.003	.0187	.002	.022	.0004	.0012	.0021
%RSD	.1681	3.873	.0848	1.118	.7356	2.404	10.08
#1	2.036	.4726	2.004	1.962	.0545	.0493	.0192
#2	2.029	.5035	2.001	1.918	.0538	.0493	.0234
#3	2.034	.4699	2.004	1.937	.0538	.0514	.0209
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	.2043	.5198	.2524	1.043	1.010	.4999	-.0648
SDev	.0029	.0018	.0022	.003	.030	.0219	.0066
%RSD	1.412	.3420	.8765	.2944	2.970	4.381	10.19
#1	.2021	.5217	.2549	1.046	.9869	.4979	-.0723
#2	.2076	.5196	.2507	1.041	1.044	.5227	-.0598
#3	.2033	.5182	.2515	1.041	.9984	.4790	-.0624
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	.5184	.5296	-.2272	.0517	-.3927	.5058	.5195
SDev	.0015	.0165	.3611	.0013	.0041	.0024	.0010
%RSD	.2972	3.122	158.9	2.414	1.048	.4822	.2021
#1	.5202	.5319	-.5424	.0505	-.3971	.5085	.5205
#2	.5179	.5449	.1668	.0530	-.3920	.5037	.5184
#3	.5172	.5121	-.3060	.0517	-.3890	.5053	.5196
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	2.041	.0084	-.0043	-.0001	.0008	.0093	2.003
SDev	.021	.0015	.0000	.0001	.0009	.0129	.005
%RSD	1.016	18.16	.0000	66.08	102.8	139.5	.2629
#1	2.028	.0093	-.0043	-.0002	.0003	.0150	2.003
#2	2.065	.0066	-.0043	-.0001	.0019	.0184	1.998
#3	2.030	.0093	-.0043	-.0001	.0003	-.0055	2.009
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10075

Analysis Report Tue 09-20-94 09:42:36 PM page 1

ZZZZZZ

Method: MRD4PT Sample Name: 9887-1MSD1 Operator: CME
Run Time: 09/20/94 21:37:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.021	.4916	1.984	1.910	.0536	.0499	.0237
SDev	.006	.0042	.016	.003	.0001	.0005	.0027
%RSD	.3062	.8474	.8306	.1522	.2466	.9538	11.49
#1	2.014	.4901	1.983	1.911	.0538	.0495	.0226
#2	2.024	.4884	1.968	1.907	.0535	.0497	.0268
#3	2.025	.4963	2.001	1.912	.0535	.0504	.0217
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	.2041	.5174	.2501	1.031	1.018	.5035	-.0574
SDev	.0014	.0012	.0005	.003	.009	.0070	.0108
%RSD	.6907	.2365	.1930	.2667	.8556	1.386	18.90
#1	.2033	.5189	.2499	1.033	1.010	.5108	-.0449
#2	.2033	.5167	.2499	1.033	1.027	.4969	-.0623
#3	.2057	.5167	.2507	1.028	1.016	.5029	-.0648
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	.5125	.5123	.0748	.0524	-.4256	.5004	.5114
SDev	.0009	.0075	.1384	.0002	.0031	.0014	.0000
%RSD	.1671	1.470	185.0	.4565	.7180	.2772	.0057
#1	.5120	.5037	.2061	.0526	-.4287	.5012	.5114
#2	.5120	.5174	-.0697	.0526	-.4226	.4988	.5114
#3	.5135	.5159	.0879	.0522	-.4256	.5012	.5114
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	1.983	-.0075	-.0043	-.0001	.0008	.0081	1.896
SDev	.011	.0061	.0000	.0000	.0005	.0068	.035
%RSD	.5469	81.86	.0000	.0000	59.31	84.05	1.871
#1	1.995	-.0039	-.0043	-.0001	.0013	.0081	1.856
#2	1.975	-.0039	-.0043	-.0001	.0003	.0150	1.907
#3	1.979	-.0145	-.0043	-.0001	.0008	.0013	1.925
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10076

Analysis Report Tue 09-20-94 09:47:39 PM page 1

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Method: MRD4PT Sample Name: 9887-2 Operator: CME
Run Time: 09/20/94 21:42:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0100	.0070	.0077	.1549	-.0001	.0013	54.28
SDev	.0061	.0037	.0159	.0027	.0000	.0016	.01
%RSD	60.77	52.34	206.2	1.765	3.266	128.0	.0154
#1	.0167	.0100	-.0068	.1535	-.0001	.0028	54.27
#2	.0047	.0029	.0053	.1580	-.0001	-.0004	54.28
#3	.0087	.0082	.0247	.1530	-.0001	.0015	54.28
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	-.0022	-.0043	1.059	.9940	-.0024	11.84
SDev	.0022	.0015	.0017	.002	.0181	.0144	.04
%RSD	95.12	66.33	38.95	.1898	1.826	588.5	.3101
#1	-.0009	-.0010	-.0026	1.061	.9864	.0124	11.84
#2	-.0049	-.0017	-.0060	1.060	.9809	-.0034	11.88
#3	-.0012	-.0039	-.0043	1.057	1.015	-.0163	11.80
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	1.522	.0000	4.282	.0015	8.047	-.0005	-.0002
SDev	.002	.0042	.198	.0006	.040	.0008	.0010
%RSD	.1013	21070.	4.632	40.90	.4923	147.5	507.7
#1	1.521	.0028	4.492	.0021	8.041	.0003	-.0002
#2	1.524	-.0048	4.098	.0017	8.090	-.0014	-.0012
#3	1.522	.0021	4.256	.0009	8.011	-.0005	.0008
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	.0198	.0605	-.0043	.2186	.0006	-.0055	-.0123
SDev	.0186	.0100	.0000	.0011	.0003	.0091	.0295
%RSD	94.10	16.57	.0000	.4956	47.09	163.3	240.1
#1	.0027	.0490	-.0043	.2182	.0008	.0047	-.0455
#2	.0170	.0649	-.0043	.2198	.0008	-.0090	.0105
#3	.0396	.0675	-.0043	.2178	.0003	-.0124	-.0018
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10077

Analysis Report Tue 09-20-94 09:52:41 PM page 1

Method: MRD4PT Sample Name: 222222 116507-1 Operator: CME
Run Time: 09/20/94 21:47:43
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0015	.0020	.0053	.0526	-.0001	-.0018	23.60
SDev	.0077	.0077	.0249	.0003	.0000	.0024	.06
%RSD	510.7	383.0	466.9	.5446	4.713	132.2	.2735
#1	-.0093	.0073	-.0051	.0528	-.0001	-.0014	23.54
#2	.0060	.0055	.0337	.0523	-.0001	.0003	23.58
#3	-.0013	-.0068	-.0126	.0528	-.0001	-.0045	23.67
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	-.0025	-.0036	-.0043	.8742	.8041	.0014	9.604
SDev	.0012	.0015	.0014	.0068	.0235	.0015	.083
%RSD	48.86	40.51	33.73	.7733	2.918	111.8	.8624
#1	-.0036	-.0032	-.0035	.8803	.7777	.0000	9.697
#2	-.0012	-.0025	-.0035	.8669	.8228	.0010	9.539
#3	-.0027	-.0053	-.0060	.8753	.8117	.0030	9.575
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	.5035	-.0020	.8550	.0001	10.33	-.0021	.0189
SDev	.0024	.0019	.3966	.0017	.19	.0012	.0006
%RSD	.4726	95.31	46.38	1620.	1.870	59.73	3.088
#1	.5053	-.0002	.9075	-.0009	10.52	-.0024	.0192
#2	.5008	-.0041	1.223	.0020	10.13	-.0007	.0182
#3	.5045	-.0018	.4348	-.0009	10.34	-.0031	.0192
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	.0066	-.0050	.0612	-.0001	.0013	.0044
SDev	.0253	.0053	.0012	.0008	.0005	.0123	.0170
%RSD	467.2	79.62	24.47	1.345	645.3	949.7	386.4
#1	.0334	.0066	-.0065	.0620	-.0006	-.0124	-.0102
#2	-.0158	.0014	-.0043	.0604	.0004	.0047	.0231
#3	-.0014	.0119	-.0043	.0611	-.0001	.0116	.0003
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10078

Analysis Report QC Standard Tue 09-20-94 09:57:44 PM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CME
Run Time: 09/20/94 21:52:46
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.44	-.0582	5.088	9.860	1.032	.9835	21.03
SDev	.02	.0081	.014	.031	.002	.0038	.02
%RSD	.1836	13.98	.2735	.3100	.2137	.3823	.1114
#1	10.43	-.0527	5.079	9.835	1.029	.9857	21.00
#2	10.43	-.0544	5.104	9.852	1.032	.9792	21.04
#3	10.46	-.0676	5.081	9.894	1.034	.9857	21.04
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	2.083	5.246	2.045	10.51	10.20	4.949	20.47
SDev	.005	.007	.006	.02	.04	.019	.06
%RSD	.2387	.1294	.3122	.1506	.3434	.3877	.2699
#1	2.079	5.238	2.040	10.49	10.16	4.960	20.43
#2	2.080	5.252	2.044	10.51	10.22	4.926	20.46
#3	2.088	5.247	2.052	10.52	10.22	4.959	20.54
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	1.037	5.206	20.52	1.043	20.65	5.178	1.039
SDev	.002	.036	.30	.003	.12	.013	.001
%RSD	.1902	.6822	1.467	.3153	.5920	.2529	.0588
#1	1.035	5.172	20.58	1.041	20.59	5.164	1.039
#2	1.038	5.205	20.78	1.042	20.79	5.181	1.039
#3	1.038	5.243	20.19	1.047	20.56	5.190	1.038
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	4.985	-.0128	-.0043	-.0001	.0005	.0070	4.969
SDev	.056	.0081	.0000	.0000	.0003	.0071	.038
%RSD	1.130	63.37	.0000	.0000	60.56	101.7	.7747
#1	4.922	-.0198	-.0043	-.0001	.0006	.0047	4.930
#2	5.002	-.0039	-.0043	-.0001	.0001	.0013	5.007
#3	5.030	-.0145	-.0043	-.0001	.0006	.0150	4.970
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10079

Analysis Report Blank Sample Tue 09-20-94 10:02:46 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/20/94 21:57:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0033	-.0030	.0173	.0036	-.0001	.0012	-.0760
SDev	.0064	.0133	.0070	.0000	.0000	.0024	.0027
%RSD	193.9	440.1	40.51	.0000	7.933	198.1	3.584
#1	.0034	.0108	.0227	.0036	-.0001	.0025	-.0749
#2	-.0093	-.0156	.0094	.0036	-.0001	-.0015	-.0791
#3	-.0039	-.0042	.0198	.0036	-.0001	.0026	-.0740
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	-.0013	-.0022	-.0029	-.0095	-.0162	-.0050	-.0600
SDev	.0020	.0018	.0013	.0015	.0259	.0050	.0126
%RSD	155.9	80.19	44.05	15.46	159.8	99.82	20.92
#1	-.0003	-.0003	-.0018	-.0084	-.0013	-.0057	-.0484
#2	-.0036	-.0039	-.0043	-.0112	-.0462	-.0096	-.0733
#3	.0000	-.0025	-.0026	-.0090	-.0012	.0003	-.0583
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	-.0007	-.0058	-.3498	.0008	.0077	-.0016	-.0026
SDev	.0004	.0054	.4936	.0024	.0103	.0020	.0006
%RSD	59.46	91.93	141.1	283.6	134.1	129.0	22.38
#1	-.0002	-.0109	.1624	.0022	.0012	.0003	-.0032
#2	-.0010	-.0063	-.8226	-.0019	.0023	-.0037	-.0022
#3	-.0010	-.0002	-.3892	.0022	.0196	-.0013	-.0022
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	.0095	-.0075	-.0040	-.0001	.0002	.0081	-.0112
SDev	.0427	.0040	.0006	.0000	.0003	.0034	.0333
%RSD	448.4	54.14	15.52	.0000	175.1	42.02	296.5
#1	~~-.0383~~ BAD burn	-.0039	-.0043	-.0001	.0003	.0116	-.0480
#2	.0232	-.0066	-.0043	-.0001	-.0002	.0047	-.0024
#3	.0437	-.0119	-.0033	-.0001	.0003	.0081	.0168
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

Use 0.0334 DMT allowed

10080

Analysis Report Tue 09-20-94 10:07:48 PM page 1

PBW

Method: MRD4PT Sample Name: PB 1567 Operator: CME
Run Time: 09/20/94 22:02:50
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0176	.0129	.0321	-.0008	-.0001	-.0003	-.0624
SDev	.0091	.0062	.0017	.0000	.0000	.0026	.0032
%RSD	51.68	48.26	5.249	.0000	5.904	764.8	5.137
#1	.0134	.0188	.0301	-.0008	-.0001	-.0028	-.0647
#2	.0114	.0064	.0331	-.0008	-.0001	.0024	-.0639
#3	.0280	.0135	.0330	-.0008	-.0001	-.0007	-.0588
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	-.0006	-.0017	-.0035	-.0029	.0420	.0099	-.0525
SDev	.0011	.0000	.0000	.0006	.0310	.0115	.0118
%RSD	178.7	.0000	.0000	19.55	73.96	116.2	22.44
#1	-.0012	-.0017	-.0035	-.0029	.0214	.0033	-.0658
#2	.0006	-.0017	-.0035	-.0034	.0269	.0231	-.0434
#3	-.0012	-.0017	-.0035	-.0023	.0777	.0033	-.0483
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	.0008	.0179	.0032	H1294.	.0003	.0001
SDev	.0004	.0066	.0602	.0031	9.	.0014	.0006
%RSD	155.4	840.2	335.8	98.00	.7320	419.8	421.7
#1	-.0002	.0021	-.0346	.0010	H1297.	-.0013	.0008
#2	.0005	-.0063	.0048	.0018	H1283.	.0011	-.0002
#3	.0005	.0066	.0836	.0068	H1301.	.0012	-.0002
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0000	.0137	-.0015	.0020	.0003	.0446	.0325
SDev	.0480	.0040	.0033	.0001	.0005	.0040	.0280
%RSD	100400.	29.50	220.4	3.903	150.2	8.851	86.12
#1	ave 0.0273 ~~-.0547~~	.0093	-.0043	.0020	-.0002	.0424	.0045
#2	Dasburn .0191	.0172	.0021	.0020	.0003	.0424	.0325
#3	SMS .0355	.0146	-.0022	.0021	.0008	.0492	.0605
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10081

Analysis Report Tue 09-20-94 10:12:51 PM page 1

LCSW

Method: MRD4PT Sample Name: LCS 1567 Operator: CME
Run Time: 09/20/94 22:07:53
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.82	1.682	1.845	19.31	.5552	.9567	25.10
SDev	.14	.007	.011	.21	.0035	.0074	.06
%RSD	.7532	.4407	.5956	1.091	.6279	.7738	.2364
#1	18.85	1.690	1.833	19.35	.5556	.9600	25.04
#2	18.66	1.676	1.848	19.08	.5515	.9620	25.12
#3	18.94	1.680	1.854	19.49	.5584	.9483	25.15
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	1.0000	5.051	2.546	10.10	9.784	.9672	23.40
SDev	.00184	.015	.022	.04	.034	.0109	.15
%RSD	.1840	.2948	.8834	.4224	.3451	1.132	.6402
#1	.9980	5.043	2.553	10.10	9.756	.9562	23.38
#2	1.000	5.042	2.521	10.06	9.774	.9781	23.25
#3	1.002	5.068	2.565	10.14	9.821	.9673	23.55
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	1.519	4.034	24.52	1.001	24.63	4.994	2.056
SDev	.004	.025	.73	.004	.30	.028	.005
%RSD	.2949	.6228	2.973	.3519	1.204	.5645	.2466
#1	1.519	4.048	24.06	1.002	24.56	4.988	2.056
#2	1.514	4.005	25.36	.9970	24.38	4.969	2.052
#3	1.523	4.048	24.14	1.004	24.96	5.025	2.062
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	1.014	-.0039	-.0043	-.0000	-.0001	.0138	1.843
SDev	.037	.0095	.0000	.0001	.0008	.0052	.026
%RSD	3.646	242.3	.0000	278.9	952.3	37.75	1.401
#1	1.052	.0066	-.0043	.0001	.0001	.0150	1.873
#2	.9785	-.0119	-.0043	-.0001	.0006	.0184	1.824
#3	1.011	-.0066	-.0043	-.0001	-.0009	.0081	1.834
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass

10082

Analysis Report Tue 09-20-94 10:17:53 PM page 1

Method: MRD4PT Sample Name: SpBLK 1567 Operator: CME
Run Time: 09/20/94 22:12:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0011	-.0002	5.000	21.90	-.0002	.8718	-.0653
SDev	.0004	.0075	.009	.10	.0001	.0007	.0005
%RSD	36.41	3212.	.1828	.4574	85.75	.0770	.7496
#1	-.0013	-.0058	4.990	21.81	-.0001	.8722	-.0656
#2	-.0006	.0084	5.002	21.89	-.0003	.8721	-.0647
#3	-.0013	-.0033	5.008	22.01	-.0001	.8710	-.0656
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	NOCHECK	LC Pass	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	4.459	.0107	-.0032	.0025	-.0105	4.272	-.0633
SDev	.020	.0015	.0017	.0003	.0088	.024	.0237
%RSD	.4376	13.70	54.76	12.68	83.64	.5712	37.49
#1	4.445	.0096	-.0026	.0027	-.0029	4.262	-.0658
#2	4.450	.0103	-.0051	.0022	-.0084	4.254	-.0857
#3	4.481	.0124	-.0018	.0027	-.0201	4.300	-.0384
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	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	-.0002	-.0041	-.5102	4.505	1259.	-.0013	-.0019
SDev	.0000	.0073	.5768	.014	3.	.0021	.0006
%RSD	1.053	179.7	113.1	.3058	.2739	162.3	32.78
#1	-.0002	-.0125	-.4183	4.494	1255.	-.0005	-.0012
#2	-.0002	-.0002	-1.127	4.500	1262.	-.0037	-.0022
#3	-.0002	.0005	.0152	4.520	1260.	.0003	-.0022
Errors	NOCHECK	NOCHECK	NOCHECK	LC Pass	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	1.001	-.0057	-.0004	.0021	.0008	.0446	-.0159
SDev	.037	.0031	.0043	.0000	.0000	.0120	.0225
%RSD	3.663	53.59	1046.	.0000	.0064	26.92	141.6
#1	.9700	-.0039	.0042	.0021	.0008	.0458	-.0252
#2	.9925	-.0092	-.0043	.0021	.0008	.0321	.0098
#3	1.042	-.0039	-.0011	.0021	.0008	.0560	-.0323
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10083

Analysis Report Tue 09-20-94 10:22:55 PM page 1

R00101

Method: MRD4PT Sample Name: 9883-1 Operator: CME
Run Time: 09/20/94 22:17:57
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1166	-.0056	.0331	.3388	-.0001	.0007	1.086
SDev	.0011	.0048	.0053	.0013	.0000	.0006	.002
%RSD	.9893	86.79	15.90	.3686	3.136	87.79	.1624
#1	.1153	-.0006	.0326	.3377	-.0001	.0014	1.084
#2	.1173	-.0059	.0385	.3387	-.0001	.0003	1.087
#3	.1173	-.0103	.0281	.3401	-.0001	.0004	1.088
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	-.0017	.0063	-.0001	.1178	.1399	.0153	3.989
SDev	.0005	.0008	.0008	.0008	.0150	.0095	.011
%RSD	27.25	13.03	743.7	.7232	10.71	62.07	.2773
#1	-.0018	.0067	.0007	.1176	.1455	.0163	3.977
#2	-.0021	.0067	-.0001	.1187	.1229	.0242	3.993
#3	-.0012	.0053	-.0009	.1170	.1512	.0053	3.998
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	.1237	.0191	2.644	.0012	H1245.	-.0012	.1416
SDev	.0000	.0064	.350	.0009	4.	.0008	.0012
%RSD	.0034	33.27	13.24	81.79	.3107	66.24	.8296
#1	.1237	.0120	2.920	.0006	H1242.	-.0012	.1409
#2	.1237	.0211	2.250	.0023	H1245.	-.0004	.1429
#3	.1237	.0242	2.762	.0006	H1249.	-.0020	.1409
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	.0034	.0508	-.0043	.0113	.0011	.0652	-.0327
SDev	.0240	.0081	.0021	.0001	.0003	.0099	.0354
%RSD	713.5	15.93	49.35	1.213	25.65	15.16	108.3
#1	.0129	.0596	-.0043	.0111	.0010	.0595	.0076
#2	-.0240	.0437	-.0022	.0114	.0015	.0595	L-.0590
#3	.0211	.0490	-.0065	.0113	.0010	.0766	-.0467
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10084

Analysis Report Tue 09-20-94 10:27:57 PM page 1

R00101MS

Method: MRD4PT Sample Name: 9883-1MS1 Operator: CME
Run Time: 09/20/94 22:22:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1028	.0041	5.004	22.05	-.0002	.9029	1.005
SDev	.0021	.0100	.013	.09	.0001	.0066	.007
%RSD	2.082	241.4	.2548	.4199	85.87	.7271	.7169
#1	.1013	.0132	4.992	22.12	-.0003	.8953	.9970
#2	.1053	.0058	5.018	21.94	-.0001	.9066	1.008
#3	.1020	-.0066	5.003	22.08	-.0001	.9067	1.011
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	4.561	.0204	.0041	.0914	.0737	4.378	3.780
SDev	.028	.0016	.0008	.0006	.0116	.046	.007
%RSD	.6115	8.002	20.55	.6102	15.77	1.054	.1816
#1	4.530	.0194	.0032	.0914	.0645	4.332	3.780
#2	4.570	.0223	.0049	.0908	.0698	4.379	3.774
#3	4.584	.0194	.0041	.0919	.0868	4.424	3.787
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	.1170	.0321	2.602	4.578	H1199.	-.0004	.1320
SDev	.0008	.0149	.641	.014	8.	.0016	.0022
%RSD	.6367	46.40	24.62	.3077	.6464	365.1	1.631
#1	.1163	.0425	1.906	4.567	H1206.	-.0021	.1296
#2	.1170	.0150	3.167	4.573	H1191.	.0012	.1327
#3	.1178	.0387	2.733	4.594	H1199.	-.0004	.1337
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	1.074	.0561	-.0043	.0108	.0018	.0560	-.0309
SDev	.036	.0031	.0000	.0000	.0008	.0034	.0143
%RSD	3.351	5.452	.0000	.0000	42.81	6.105	46.37
#1	1.040	.0543	-.0043	.0108	.0020	.0595	-.0432
#2	1.070	.0596	-.0043	.0108	.0025	.0560	-.0151
#3	1.111	.0543	-.0043	.0108	.0010	.0526	-.0344
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

Cal

10085

Analysis Report Tue 09-20-94 10:33:00 PM page 1

R0010 1MSD

Method: MRD4PT Sample Name: 9883-1MSD1 Operator: CME
Run Time: 09/20/94 22:28:02
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1202	.0084	5.058	22.40	-.0001	.8908	1.015
SDev	.0004	.0044	.052	.17	.0000	.0094	.013
%RSD	.3200	52.31	1.026	.7417	3.268	1.059	1.253
#1	.1206	.0060	5.022	22.22	-.0001	.8835	1.002
#2	.1199	.0058	5.035	22.43	-.0001	.8875	1.016
#3	.1199	.0135	5.118	22.55	-.0001	.9015	1.028
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	4.577	.0216	.0018	.0957	.1169	4.395	3.767
SDev	.034	.0007	.0013	.0017	.0032	.045	.024
%RSD	.7487	3.276	69.47	1.781	2.734	1.030	.6477
#1	4.539	.0209	.0016	.0942	.1151	4.355	3.741
#2	4.585	.0216	.0032	.0953	.1150	4.386	3.770
#3	4.606	.0223	.0007	.0975	.1206	4.444	3.790
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	.1155	.0295	2.523	4.579	H1200.	-.0004	.1320
SDev	.0007	.0073	.159	.028	6.	.0008	.0006
%RSD	.6428	24.65	6.312	.6069	.5177	195.0	.4361
#1	.1148	.0211	2.379	4.548	H1193.	.0004	.1317
#2	.1155	.0341	2.694	4.588	H1201.	-.0004	.1327
#3	.1163	.0334	2.497	4.601	H1205.	-.0012	.1316
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	1.068	.0561	-.0043	.0110	.0023	.0503	-.0198
SDev	.037	.0061	.0000	.0001	.0003	.0086	.0218
%RSD	3.489	10.90	.0000	1.243	12.63	17.10	109.7
#1	1.038	.0596	-.0043	.0108	.0025	.0424	-.0449
#2	1.056	.0490	-.0043	.0110	.0020	.0492	-.0082
#3	1.109	.0596	-.0043	.0111	.0025	.0595	-.0064
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10086

Analysis Report Tue 09-20-94 10:38:02 PM page 1

R00201

Method: MRD4PT Sample Name: 9883-2 Operator: CME
Run Time: 09/20/94 22:33:04
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1188	.0060	.0167	.3009	-.0001	.0005	3.462
SDev	.0058	.0112	.0151	.0000	.0000	.0018	.016
%RSD	4.897	186.4	90.29	.0000	3.152	369.6	.4586
#1	.1139	-.0066	.0148	.3009	-.0001	.0026	3.444
#2	.1173	.0101	.0327	.3009	-.0001	-.0007	3.467
#3	.1253	.0145	.0027	.3009	-.0001	-.0004	3.475
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	.0136	.0010	.3124	.3167	-.0001	5.927
SDev	.0021	.0022	.001	.0020	.0163	.0064	.013
%RSD	117.9	15.92	96.32	.6269	5.160	7725.	.2183
#1	-.0039	.0117	.0016	.3105	.3262	-.0074	5.916
#2	.0003	.0159	.0016	.3122	.2979	.0046	5.941
#3	-.0018	.0131	-.0001	.3144	.3261	.0026	5.923
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	.2660	.0504	1.264	.0002	H1281.	-.0011	.1360
SDev	.0011	.0084	.240	.0011	8.	.0008	.0012
%RSD	.4248	16.61	18.96	445.7	.6195	74.16	.8758
#1	.2647	.0532	.9884	-.0002	H1289.	-.0019	.1346
#2	.2670	.0410	1.422	-.0006	H1280.	-.0003	.1367
#3	.2662	.0570	1.382	.0015	H1273.	-.0011	.1367
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	.0218	.0508	-.0043	.0247	.0009	.0595	-.0340
SDev	.0206	.0061	.0000	.0001	.0003	.0000	.0478
%RSD	94.59	12.04	.0000	.3193	32.74	.0000	140.6
#1	.0437	.0543	-.0043	.0246	.0007	.0595	.0191
#2	.0191	.0437	-.0043	.0248	.0007	.0595	-.0475
#3	.0027	.0543	-.0043	.0246	.0012	.0595	L-.0737
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10087

Analysis Report Tue 09-20-94 10:43:06 PM page 1

Method: MRD4PT Sample Name: 9883-3 RD0301 Operator: CME
Run Time: 09/20/94 22:38:08
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0049	-.0071	.0164	.2033	-.0001	-.0019	.5759
SDev	.0114	.0033	.0085	.0017	.0000	.0006	.0052
%RSD	230.6	47.26	51.98	.8572	4.675	30.28	.8950
#1	-.0026	-.0085	.0095	.2017	-.0001	-.0015	.5725
#2	.0180	-.0033	.0138	.2051	-.0001	-.0026	.5818
#3	-.0006	-.0095	.0259	.2032	-.0001	-.0017	.5733
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	-.0003	.0018	.0096	.0914	.1230	.0389	3.556
SDev	.0006	.0019	.0005	.0015	.0611	.0115	.023
%RSD	213.1	104.6	5.006	1.614	49.67	29.62	.6490
#1	-.0003	.0004	.0091	.0903	.1061	.0511	3.534
#2	-.0009	.0039	.0099	.0930	.1907	.0283	3.554
#3	.0003	.0011	.0099	.0908	.0721	.0372	3.580
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	.1371	.0120	.3850	.0003	H1175.	-.0017	.1317
SDev	.0008	.0069	.0602	.0015	11.	.0012	.0010
%RSD	.5499	57.35	15.63	442.4	.8997	69.23	.7563
#1	.1363	.0189	.3981	-.0011	H1163.	-.0028	.1327
#2	.1378	.0120	.4375	.0019	H1184.	-.0020	.1317
#3	.1371	.0051	.3193	.0002	H1178.	-.0004	.1307
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0035	.0561	-.0036	.0053	.0001	.0526	.0150
SDev	.0478	.0015	.0012	.0001	.0006	.0034	.0186
%RSD	1378.	2.726	34.10	1.476	828.7	6.502	123.3
#1	~~-.0567~~ -.0232	.0569	-.0022	.0054	-.0006	.0526	-.0048
#2	.0355	.0543	-.0043	.0054	.0004	.0560	.0179
#3	.0109	.0569	-.0043	.0052	.0004	.0492	.0320
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10088

Analysis Report Tue 09-20-94 10:48:10 PM page 1

Method: MRD4PT Sample Name: 9883-4 L00101 Operator: CME
Run Time: 09/20/94 22:43:12
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.247	-.0030	.0365	.8972	-.0001	.0216	5.898
SDev	.011	.0049	.0128	.0069	.0000	.0007	.005
%RSD	.8698	161.4	35.08	.7672	.0569	3.177	.0817
#1	1.255	.0026	.0270	.8990	-.0001	.0224	5.900
#2	1.235	-.0062	.0511	.8896	-.0001	.0212	5.893
#3	1.252	-.0054	.0315	.9030	-.0001	.0213	5.902
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	.0192	.1873	1.485	1.462	1.348	13.17	19.76
SDev	.0003	.0004	.011	.007	.020	.05	.07
%RSD	1.586	.2177	.7445	.4638	1.510	.3848	.3479
#1	.0192	.1876	1.490	1.466	1.365	13.23	19.78
#2	.0189	.1869	1.473	1.455	1.325	13.13	19.68
#3	.0196	.1876	1.494	1.467	1.353	13.16	19.82
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	2.026	.5304	4.574	.0009	H1259.	-.0011	4.712
SDev	.007	.0038	.202	.0014	9.	.0000	.011
%RSD	.3285	.7197	4.420	152.7	.6817	1.339	.2302
#1	2.029	.5266	4.350	.0026	H1264.	-.0011	4.722
#2	2.018	.5304	4.744	.0001	H1250.	-.0011	4.701
#3	2.030	.5342	4.626	.0001	H1264.	-.0011	4.714
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0192	.0737	-.0036	.0400	.0008	.1039	-.0224
SDev	.0184	.0040	.0012	.0002	.0003	.0091	.0331
%RSD	95.78	5.486	34.10	.5211	35.21	8.709	147.7
#1	-.0404	.0702	-.0043	.0401	.0010	.0971	.0149
#2	-.0076	.0728	-.0022	.0398	.0010	.1142	-.0340
#3	-.0096	.0781	-.0043	.0402	.0005	.1005	-.0481
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

Cal

10089

Analysis Report Tue 09-20-94 10:53:12 PM page 1

Method: MRD4PT Sample Name: 9883-4MS1 L001DIMS Operator: CME
Run Time: 09/20/94 22:48:14
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.198	.0049	5.000	22.50	-.0001	.8784	5.529
SDev	.006	.0112	.041	.15	.0000	.0089	.038
%RSD	.4752	227.5	.8223	.6536	2.009	1.018	.6852
#1	1.192	-.0060	4.955	22.33	-.0001	.8684	5.494
#2	1.203	.0043	5.036	22.60	-.0001	.8854	5.525
#3	1.198	.0165	5.009	22.57	-.0001	.8815	5.569
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	4.477	.1873	1.433	1.380	1.299	16.26	18.55
SDev	.033	.0029	.008	.008	.025	.07	.11
%RSD	.7268	1.524	.5900	.6067	1.950	.4489	.5977
#1	4.442	.1869	1.424	1.371	1.273	16.19	18.42
#2	4.482	.1847	1.439	1.380	1.323	16.26	18.58
#3	4.506	.1904	1.438	1.388	1.301	16.34	18.64
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	1.880	.4848	4.202	4.431	H1221.	.0002	4.348
SDev	.011	.0072	.039	.022	1.	.0005	.022
%RSD	.5754	1.488	.9389	.4912	.8137	210.8	.4963
#1	1.868	.4930	4.202	4.409	H1210.	-.0003	4.325
#2	1.881	.4792	4.163	4.433	H1227.	.0005	4.350
#3	1.890	.4823	4.242	4.452	H1226.	.0005	4.368
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	1.074	.0728	-.0036	.0382	.0021	.1028	-.0380
SDev	.035	.0027	.0012	.0002	.0003	.0052	.0205
%RSD	3.218	3.635	34.10	.5453	13.51	5.084	53.85
#1	1.050	.0702	-.0043	.0380	.0025	.0971	L-.0613
#2	1.113	.0755	-.0043	.0383	.0020	.1039	-.0298
#3	1.058	.0728	-.0022	.0384	.0020	.1074	-.0229
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10090

Analysis Report QC Standard Tue 09-20-94 10:58:16 PM page 1

Method: MRD4PT Sample Name: CCVAC (CCV) Operator: CME
Run Time: 09/20/94 22:53:17
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.51	-.0498	5.214	9.911	1.058	.9897	21.41
SDev	.07	.0085	.036	.090	.004	.0059	.03
%RSD	.6440	16.97	.6931	.9089	.4143	.5956	.1190
#1	10.55	-.0596	5.174	9.968	1.058	.9890	21.42
#2	10.55	-.0445	5.245	9.959	1.062	.9842	21.38
#3	10.43	-.0454	5.224	9.807	1.053	.9959	21.43
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	2.105	5.299	2.052	10.63	10.33	4.966	20.63
SDev	.001	.006	.016	.03	.04	.018	.1
%RSD	.0509	.1209	.7647	.2604	.4084	.3670	.4843
#1	2.106	5.307	2.061	10.65	10.38	4.970	20.69
#2	2.103	5.295	2.062	10.65	10.30	4.982	20.69
#3	2.105	5.297	2.034	10.60	10.31	4.946	20.52
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	1.047	5.312	19.70	1.047	20.26	5.235	1.050
SDev	.003	.012	.08	.003	.35	.020	.004
%RSD	.2957	.2313	.4165	.2591	1.708	.3779	.3377
#1	1.050	5.301	19.64	1.047	20.57	5.248	1.046
#2	1.048	5.310	19.79	1.049	20.31	5.245	1.050
#3	1.044	5.325	19.68	1.044	19.89	5.212	1.053
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	5.232	-.0092	-.0026	-.0001	.0004	.0253	5.000
SDev	.063	.0070	.0040	.0001	.0003	.0091	.054
%RSD	1.201	75.85	158.7	66.08	81.77	35.85	1.079
#1	5.217	-.0066	.0021	-.0001	.0002	.0184	5.021
#2	5.301	-.0039	-.0043	-.0001	.0007	.0355	4.938
#3	5.178	-.0172	-.0054	-.0002	.0002	.0218	5.040
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10091

Analysis Report Blank Sample Tue 09-20-94 11:03:20 PM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/20/94 22:58:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0035	.0023	.0023	.0036	-.0001	-.0004	-.0754
SDev	.0069	.0113	.0147	.0000	.0000	.0019	.0021
%RSD	198.2	493.3	639.4	.0000	1.845	453.2	2.827
#1	-.0113	-.0059	-.0146	.0036	-.0001	.0008	-.0774
#2	-.0013	-.0024	.0093	.0036	-.0001	.0006	-.0732
#3	.0021	.0152	.0123	.0036	-.0001	-.0026	-.0757
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	-.0024	-.0025	-.0026	-.0107	.0044	-.0047	-.0600
SDev	.0009	.0014	.0000	.001	.0056	.0085	.0052
%RSD	37.79	57.61	.0000	9.062	127.4	181.2	8.633
#1	-.0024	-.0010	-.0026	-.0118	.0044	-.0136	-.0558
#2	-.0033	-.0039	-.0026	-.0101	-.0012	-.0037	-.0583
#3	-.0015	-.0025	-.0026	-.0101	.0101	.0033	-.0658
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	-.0010	-.0038	-.4023	.0017	.0012	-.0010	-.0022
SDev	.0000	.0042	.2022	.0005	.0020	.0005	.0010
%RSD	.1614	110.7	50.25	28.55	164.9	45.00	46.48
#1	-.0010	-.0018	-.3498	.0014	.0012	-.0005	-.0033
#2	-.0010	-.0010	-.6256	.0014	.0033	-.0013	-.0022
#3	-.0010	-.0086	-.2316	.0022	-.0008	-.0013	-.0012
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	-.0035	-.0013	-.0047	-.0002	.0005	.0104	.0174
SDev	.0106	.0046	.0022	.0001	.0003	.0071	.0500
%RSD	307.3	354.9	47.46	47.83	57.96	68.33	287.7
#1	-.0096	-.0039	-.0022	-.0002	.0003	.0081	.0553
#2	.0088	-.0039	-.0065	-.0002	.0008	.0047	-.0393
#3	-.0096	.0040	-.0054	-.0001	.0003	.0184	.0360
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10092

Analysis Report Tue 09-20-94 11:08:22 PM page 1

L00101MSD

Method: MRD4PT Sample Name: 9883-4MSD1 Operator: CME
Run Time: 09/20/94 23:03:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.240	.0089	5.131	23.30	.0001	.8909	5.435
SDev	.002	.0095	.043	.12	.0001	.0063	.028
%RSD	.1641	106.6	.8440	.5182	204.0	.7045	.5216
#1	1.238	.0174	5.103	23.17	-.0001	.8848	5.413
#2	1.240	-.0014	5.109	23.32	.0001	.8973	5.424
#3	1.242	.0108	5.181	23.41	.0001	.8904	5.467
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	4.543	.1876	1.472	1.581	1.442	16.42	18.96
SDev	.022	.0031	.008	.008	.022	.06	.09
%RSD	.4813	1.642	.5456	.5289	1.560	.3351	.4875
#1	4.520	.1840	1.464	1.573	1.442	16.36	18.87
#2	4.544	.1897	1.474	1.581	1.419	16.43	18.97
#3	4.564	.1890	1.480	1.590	1.464	16.47	19.05
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	1.906	.4993	3.703	4.527	H1261.	-.0018	4.396
SDev	.007	.0086	.120	.018	3.	.0008	.020
%RSD	.3901	1.719	3.251	.4077	.2032	45.11	.4491
#1	1.899	.5067	3.572	4.513	H1260.	-.0018	4.381
#2	1.906	.4899	3.808	4.519	H1259.	-.0026	4.390
#3	1.914	.5014	3.730	4.548	H1263.	-.0010	4.418
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	1.071	.0781	-.0040	.0391	.0024	.0971	-.0312
SDev	.026	.0079	.0016	.0001	.0000	.0034	.0670
%RSD	2.460	10.17	41.07	.2013	.1274	3.524	215.0
#1	1.060	.0702	-.0054	.0391	.0024	.0937	L-.0860
#2	1.101	.0781	-.0043	.0391	.0024	.0971	.0436
#3	1.052	.0860	-.0022	.0392	.0025	.1005	L-.0511
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10093

Analysis Report Tue 09-20-94 11:13:24 PM page 1

Method: MRD4PT Sample Name: 9883-5 L00102 Operator: CME
Run Time: 09/20/94 23:08:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1386	.0103	.0269	.6096	-.0001	.0032	89.24
SDev	.0020	.0100	.0134	.0065	.0000	.0007	.15
%RSD	1.442	97.57	49.92	1.068	1.824	20.95	.1735
#1	.1406	-.0009	.0353	.6027	-.0001	.0035	89.12
#2	.1386	.0186	.0114	.6106	-.0001	.0037	89.18
#3	.1366	.0132	.0339	.6156	-.0001	.0024	89.41
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	.1442	.0091	.2079	.2189	1.860	37.11
SDev	.0005	.0029	.0000	.0020	.0056	.006	.25
%RSD	88.38	1.979	.0000	.9669	2.578	.3479	.6744
#1	.0009	.1417	.0091	.2057	.2245	1.853	36.83
#2	.0000	.1438	.0091	.2096	.2189	1.860	37.19
#3	.0006	.1473	.0091	.2085	.2132	1.866	37.31
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	2.096	.5098	2.687	.0015	H1235.	-.0013	.3075
SDev	.008	.0134	.256	.0008	13.	.0005	.0031
%RSD	.3882	2.624	9.537	56.59	1.075	35.31	1.005
#1	2.087	.5090	2.674	.0006	H1220.	-.0010	.3047
#2	2.099	.5235	2.438	.0023	H1242.	-.0019	.3108
#3	2.103	.4968	2.950	.0015	H1244.	-.0011	.3068
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0219	.0728	-.0033	.0947	-.0006	.0560	-.0381
SDev	.0114	.0079	.0011	.0010	.0006	.0068	.0073
%RSD	52.08	10.90	32.76	1.062	101.7	12.21	19.13
#1	-.0240	.0728	-.0043	.0936	-.0009	.0629	-.0358
#2	-.0322	.0649	-.0022	.0951	.0001	.0492	-.0463
#3	-.0096	.0808	-.0033	.0955	-.0009	.0560	-.0323
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10094

Analysis Report Tue 09-20-94 11:18:26 PM page 1

L00103

Method: MRD4PT Sample Name: 9883-6 Operator: CME
Run Time: 09/20/94 23:13:28
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0147	-.0109	.0112	.3969	-.0001	.0030	6.630
SDev	.0127	.0105	.0018	.0050	.0000	.0040	.032
%RSD	86.40	96.44	16.33	1.259	4.774	132.2	.4757
#1	.0027	-.0195	.0133	.4022	-.0001	.0058	6.596
#2	.0280	.0008	.0101	.3962	-.0001	.0048	6.634
#3	.0134	-.0141	.0102	.3923	-.0001	-.0015	6.659
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	.0006	.1807	.0046	.0367	.0458	4.967	48.29
SDev	.0016	.0022	.0005	.0011	.0456	.033	.25
%RSD	252.0	1.194	10.44	3.036	99.45	.6632	.5211
#1	-.0012	.1784	.0041	.0367	-.0068	4.929	48.58
#2	.0015	.1812	.0049	.0379	.0723	4.986	48.17
#3	.0015	.1826	.0049	.0356	.0721	4.987	48.13
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	1.655	.7877	.5450	-.0007	H1252.	-.0017	.7224
SDev	.001	.0093	.2085	.0015	15.	.0012	.0006
%RSD	.0679	1.175	38.26	229.1	1.216	71.60	.0779
#1	1.656	.7777	.3874	-.0019	H1269.	-.0020	.7221
#2	1.654	.7892	.7815	.0010	H1245.	-.0028	.7221
#3	1.655	.7961	.4663	-.0011	H1241.	-.0004	.7231
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0076	.0578	-.0029	.0229	.0002	.0481	L-.0578
SDev	.0134	.0040	.0012	.0001	.0010	.0020	.0010
%RSD	177.6	6.992	42.46	.3441	449.7	4.110	1.771
#1	.0068	.0622	-.0022	.0230	-.0009	.0458	L-.0572
#2	-.0199	.0569	-.0043	.0229	.0011	.0492	L-.0590
#3	-.0096	.0543	-.0022	.0229	.0006	.0492	L-.0572
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10095

Analysis Report Tue 09-20-94 11:23:30 PM page 1

Method: MRD4PT Sample Name: 9883-7 (L0010) Operator: CME
Run Time: 09/20/94 23:18:31
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0143	.0111	.0375	.3403	-.0001	-.0004	2.567
SDev	.0071	.0063	.0101	.0006	.0000	.0017	.007
%RSD	49.93	56.88	27.02	.1684	5.604	421.9	.2648
#1	.0220	.0179	.0489	.3406	-.0001	-.0019	2.560
#2	.0127	.0099	.0295	.3406	-.0001	-.0007	2.566
#3	.0080	.0055	.0341	.3396	-.0001	.0014	2.574
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	.0014	.1485	-.0001	-.0034	.0082	4.111	40.32
SDev	.0012	.0018	.0008	.0006	.0430	.023	.09
%RSD	80.07	1.197	743.7	16.36	525.5	.5521	.2322
#1	.0028	.1487	.0007	-.0034	.0551	4.102	40.40
#2	.0006	.1501	-.0009	-.0029	-.0012	4.094	40.34
#3	.0009	.1466	-.0001	-.0040	-.0294	4.137	40.22
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	1.555	.5754	.8088	.0015	H1213.	-.0012	.4000
SDev	.002	.0196	.3575	.0009	1.	.0014	.0006
%RSD	.0999	3.411	44.20	56.33	.7890	116.6	.1546
#1	1.557	.5976	1.216	.0018	H1224.	.0004	.3995
#2	1.554	.5602	.6643	.0022	H1212.	-.0020	.3997
#3	1.555	.5686	.5462	.0006	H1205.	-.0020	.4007
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	.0143	.0940	-.0036	.0173	.0005	.0435	L-.0549
SDev	.0085	.0070	.0086	.0002	.0003	.0071	.0159
%RSD	59.67	7.450	238.7	1.370	63.41	16.37	28.89
#1	.0047	.0913	.0042	.0174	.0006	.0355	-.0380
#2	.0170	.1019	-.0129	.0174	.0006	.0458	L-.0695
#3	.0211	.0887	-.0022	.0170	.0001	.0492	L-.0572
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

Cal

10096

Analysis Report Tue 09-20-94 11:28:32 PM page 1

L00105

Method: MRD4PT Sample Name: 9883-8 Operator: CME
Run Time: 09/20/94 23:23:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0143	.0003	.0256	.3426	-.0001	.0025	1.237
SDev	.0057	.0062	.0125	.0034	.0000	.0029	.002
%RSD	40.26	1964.	48.71	1.004	1.862	115.0	.1426
#1	.0194	.0059	.0356	.3406	-.0001	.0003	1.236
#2	.0080	.0015	.0297	.3466	-.0001	.0014	1.239
#3	.0154	-.0064	.0116	.3406	-.0001	.0058	1.235
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	.0026	.1984	.0077	.1207	.1173	12.02	44.02
SDev	.0009	.0015	.0013	.0012	.0149	.06	.22
%RSD	34.39	.7412	16.61	.9613	12.74	.4752	.4938
#1	.0015	.1967	.0066	.1204	.1003	11.99	43.90
#2	.0031	.1989	.0074	.1220	.1229	12.09	44.28
#3	.0031	.1996	.0091	.1198	.1285	11.99	43.90
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	1.660	.7146	.9814	.0010	H1241.	-.0006	1.234
SDev	.008	.0123	.1421	.0007	9.	.0005	.002
%RSD	.4566	1.717	14.48	70.05	.7595	76.39	.1696
#1	1.657	.7006	1.100	.0014	H1235.	-.0003	1.232
#2	1.668	.7235	.8237	.0014	H1252.	-.0011	1.236
#3	1.654	.7197	1.021	.0002	H1237.	-.0003	1.233
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0076	.0834	-.0036	.0185	.0001	.0469	L-.0646
SDev	.0114	.0027	.0012	.0001	.0008	.0020	.0516
%RSD	150.9	3.173	34.10	.7382	538.0	4.210	79.86
#1	-.0055	.0860	-.0043	.0184	-.0000	.0492	L-.0926
#2	.0027	.0808	-.0022	.0186	.0010	.0458	L-.0962
#3	-.0199	.0834	-.0043	.0185	-.0005	.0458	-.0051
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10097

Analysis Report Tue 09-20-94 11:33:35 PM page 1

Method: MRD4PT Sample Name: 9883-9 L00106 Operator: CME
Run Time: 09/20/94 23:28:36
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0675	.0004	.0313	.4134	-.0001	.0032	67.38
SDev	.0020	.0100	.0052	.0072	.0000	.0006	.24
%RSD	3.012	2500.	16.52	1.741	4.759	19.95	.3595
#1	.0693	-.0111	.0343	.4062	-.0001	.0024	67.11
#2	.0653	.0048	.0343	.4205	-.0001	.0035	67.45
#3	.0680	.0075	.0253	.4136	-.0001	.0036	67.58
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	.0118	.1085	.0191	.2650	.2415	44.20	23.73
SDev	.0008	.0026	.0000	.0017	.0196	.20	.25
%RSD	6.498	2.348	.0000	.6429	8.103	.4590	1.037
#1	.0125	.1113	.0191	.2631	.2301	43.97	23.48
#2	.0110	.1063	.0191	.2664	.2640	44.36	23.97
#3	.0119	.1077	.0191	.2653	.2302	44.26	23.75
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	1.082	.3749	3.560	.0008	H1165.	-.0016	8.373
SDev	.007	.0128	.457	.0012	21.	.0012	.041
%RSD	.6663	3.416	12.82	154.0	1.779	75.72	.4923
#1	1.074	.3830	4.046	.0015	H1145.	-.0003	8.326
#2	1.088	.3601	3.140	.0015	H1187.	-.0019	8.404
#3	1.084	.3815	3.495	-.0006	H1164.	-.0027	8.388
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0308	.0499	-.0043	.0581	-.0005	.0675	-.0049
SDev	.0136	.0015	.0000	.001	.0006	.0020	.0098
%RSD	44.31	3.064	.0000	1.645	121.5	2.929	199.1
#1	-.0465	.0490	-.0043	.0571	.0002	.0697	-.0066
#2	-.0219	.0516	-.0043	.0590	-.0008	.0663	-.0137
#3	-.0240	.0490	-.0043	.0581	-.0008	.0663	.0056
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

Cal

10098

Analysis Report Tue 09-20-94 11:38:37 PM page 1

L00107

Method: MRD4PT Sample Name: 9883-10 Operator: CME
Run Time: 09/20/94 23:33:39
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0069	-.0087	.0424	.3300	-.0001	-.0008	1.144
SDev	.0067	.0135	.0261	.0046	.0000	.0017	.001
%RSD	96.18	155.7	61.49	1.389	3.636	220.3	.0741
#1	.0074	.0031	.0543	.3327	-.0001	.0012	1.144
#2	.0001	-.0234	.0125	.3327	-.0001	-.0016	1.143
#3	.0134	-.0057	.0603	.3248	-.0001	-.0020	1.144
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	.0006	.1913	.0007	.0349	.0458	1.600	53.31
SDev	.0020	.0011	.0000	.0012	.0416	.020	.32
%RSD	318.1	.5640	.0000	3.328	90.93	1.273	.6046
#1	.0028	.1925	.0007	.0345	.0608	1.620	53.53
#2	.0003	.1904	.0007	.0339	-.0013	1.599	53.46
#3	-.0012	.1911	.0007	.0362	.0779	1.579	52.94
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	2.122	.6620	14.79	.0035	H1184.	-.0009	.1619
SDev	.010	.0031	.38	.0011	12.	.0009	.0010
%RSD	.4842	.4661	2.587	31.76	.9949	101.5	.6291
#1	2.128	.6648	14.88	.0039	H1190.	-.0004	.1629
#2	2.128	.6625	15.12	.0022	H1191.	-.0004	.1609
#3	2.110	.6586	14.37	.0043	H1170.	-.0019	.1619
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0185	.4716	-.0043	.0164	.0005	.0595	L-.0607
SDev	.0516	.0125	.0000	.0001	.0005	.0034	.0398
%RSD	278.9	2.652	.0000	.8302	107.5	5.754	65.65
#1	.0293	.4857	-.0043	.0166	.0010	.0595	L-.1033
#2	L-.0731	.4619	-.0043	.0164	-.0000	.0560	L-.0542
#3	-.0117	.4672	-.0043	.0163	.0005	.0629	-.0244
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10099

Analysis Report Tue 09-20-94 11:43:39 PM page 1

LD0108

Method: MRD4PT Sample Name: 9883-11 Operator: CME
Run Time: 09/20/94 23:38:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0271	-.0064	.0056	.3719	-.0001	.0111	9.699
SDev	.0031	.0041	.0104	.0041	.0000	.0022	.045
%RSD	11.34	63.83	185.9	1.092	3.090	19.67	.4633
#1	.0254	-.0088	-.0064	.3674	-.0001	.0133	9.650
#2	.0307	-.0087	.0116	.3729	-.0001	.0089	9.709
#3	.0254	-.0017	.0116	.3754	-.0001	.0110	9.738
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	.0009	.1664	.0317	.2876	.2773	10.51	60.06
SDev	.0015	.0019	.0017	.0019	.0214	.05	.47
%RSD	163.3	1.123	5.282	.6715	7.709	.4877	.7770
#1	.0009	.1657	.0317	.2854	.2528	10.46	59.56
#2	-.0006	.1650	.0300	.2888	.2924	10.53	60.11
#3	.0025	.1685	.0333	.2888	.2866	10.55	60.49
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	1.698	.8276	.5817	-.0002	H1180.	-.0018	.9712
SDev	.011	.0038	.5559	.0012	12.	.0008	.0016
%RSD	.6371	.4551	95.57	699.3	1.041	43.81	.1605
#1	1.686	.8251	1.173	-.0014	H1167.	-.0018	.9695
#2	1.699	.8258	.0695	.0011	H1182.	-.0026	.9726
#3	1.708	.8320	.5027	-.0002	H1191.	-.0010	.9715
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0212	.0516	-.0043	.0200	-.0004	.0675	-.0234
SDev	.0136	.0027	.0000	.0002	.0006	.0040	.0132
%RSD	64.28	5.125	.0000	1.183	134.7	5.858	56.64
#1	-.0178	.0543	-.0043	.0197	-.0011	.0697	-.0093
#2	-.0096	.0490	-.0043	.0201	-.0001	.0629	-.0357
#3	-.0363	.0516	-.0043	.0201	-.0001	.0697	-.0252
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10100

Analysis Report Tue 09-20-94 11:48:44 PM page 1

Method: MRD4PT Sample Name: 9883-12 (L00109) Operator: CME
Run Time: 09/20/94 23:43:44
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2509	-.0058	.0259	.3481	-.0001	.0011	4.201
SDev	.0083	.0082	.0396	.0072	.0000	.0016	.008
%RSD	3.319	142.0	152.9	2.071	8.496	140.4	.1987
#1	.2425	.0010	-.0174	.3486	-.0001	.0029	4.203
#2	.2511	-.0148	.0349	.3550	-.0001	.0003	4.192
#3	.2591	-.0034	.0602	.3406	-.0001	.0001	4.208
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	.0352	.4018	.0110	.6192	.5761	10.98	64.25
SDev	.0012	.0036	.001	.0041	.0363	.02	.60
%RSD	3.502	.8848	8.748	.6637	6.301	.1406	.9390
#1	.0345	.4051	.0116	.6160	.5347	10.96	64.27
#2	.0345	.3981	.0099	.6238	.6026	10.98	64.84
#3	.0366	.4023	.0116	.6177	.5910	10.99	63.63
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	3.409	1.215	.7391	-.0001	H1265.	.0003	1.162
SDev	.018	.018	.5418	.0032	24.	.0020	.004
%RSD	.5362	1.449	73.30	3347.	1.873	600.5	.3563
#1	3.411	1.195	.6209	-.0022	H1262.	.0000	1.161
#2	3.426	1.221	.2662	-.0017	H1289.	-.0015	1.166
#3	3.390	1.229	1.330	.0036	H1242.	.0025	1.158
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0294	.0993	-.0043	.0214	-.0000	.0823	L-.0645
SDev	.0155	.0046	.0000	.0003	.0008	.0020	.0199
%RSD	52.73	4.617	.0000	1.325	2271.	2.401	30.89
#1	-.0363	.0940	-.0043	.0214	-.0002	.0834	-.0417
#2	-.0117	.1019	-.0043	.0218	-.0007	.0800	L-.0785
#3	-.0403	.1019	-.0043	.0212	.0008	.0834	L-.0732
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low

10101

Analysis Report Tue 09-20-94 11:53:47 PM page 1

Method: MRD4PT Sample Name: 9083-13 L00110 Operator: CME
Run Time: 09/20/94 23:48:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2434	-.0161	.0171	.3299	-.0001	.0001	23.01
SDev	.0062	.0028	.0045	.0024	.0000	.0022	.03
%RSD	2.543	17.74	26.41	.7422	5.736	1491.	.1254
#1	.2365	-.0173	.0122	.3282	-.0001	-.0016	22.98
#2	.2485	-.0128	.0180	.3287	-.0001	-.0006	23.01
#3	.2452	-.0181	.0211	.3327	-.0001	.0026	23.04
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	.0598	.3891	.0147	.7465	.7134	18.25	63.71
SDev	.0009	.0011	.0005	.0022	.0422	.04	.17
%RSD	1.530	.2773	3.293	.2988	5.921	.1978	.2609
#1	.0589	.3889	.0141	.7465	.6646	18.26	63.76
#2	.0598	.3882	.0149	.7443	.7378	18.21	63.53
#3	.0608	.3903	.0149	.7487	.7378	18.27	63.85
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	3.199	1.368	.6482	.0006	H1300.	-.0007	1.391
SDev	.005	.023	.5349	.0013	6.	.0014	.003
%RSD	.1625	1.658	82.52	212.8	.4493	218.0	.2004
#1	3.197	1.343	.0310	-.0009	H1302.	-.0023	1.394
#2	3.196	1.376	.9372	.0016	H1293.	.0002	1.389
#3	3.205	1.386	.9765	.0012	H1304.	.0002	1.390
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0178	.0869	-.0001	.0233	-.0003	.0857	-.0417
SDev	.0282	.0040	.0047	.0001	.0008	.0138	.0617
%RSD	158.2	4.651	8240.	.3380	248.1	16.14	147.9
#1	-.0424	.0860	-.0054	.0233	-.0012	.1005	L-.0790
#2	.0129	.0834	.0021	.0233	.0004	.0732	.0295
#3	-.0240	.0913	.0032	.0234	-.0001	.0834	L-.0756
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

Cal

10102

Analysis Report QC Standard Tue 09-20-94 11:58:51 PM page 1

Method: MRD4PT Sample Name: CCVAC (CCV) Operator: CME
Run Time: 09/20/94 23:53:52
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.25	-.0525	5.044	9.588	1.034	.9703	21.10
SDev	.05	.0136	.042	.053	.003	.0080	.04
%RSD	.4825	25.89	.8279	.5488	.3095	.8189	.1664
#1	10.26	-.0560	5.010	9.589	1.034	.9769	21.12
#2	10.19	-.0640	5.032	9.535	1.030	.9725	21.06
#3	10.29	-.0375	5.091	9.640	1.037	.9615	21.11
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	2.068	5.209	1.997	10.44	10.16	4.871	20.11
SDev	.005	.019	.010	.03	.02	.004	.07
%RSD	.2625	.3671	.5116	.2567	.2283	.0728	.3640
#1	2.071	5.223	1.995	10.44	10.19	4.867	20.09
#2	2.062	5.187	1.988	10.41	10.16	4.874	20.05
#3	2.072	5.218	2.008	10.46	10.14	4.872	20.19
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	1.024	5.210	19.12	1.023	19.55	5.125	1.032
SDev	.002	.018	.78	.005	.24	.016	.001
%RSD	.1822	.3472	4.058	.4470	1.242	.3218	.1178
#1	1.024	5.220	19.99	1.024	19.64	5.135	1.030
#2	1.022	5.189	18.49	1.019	19.27	5.106	1.032
#3	1.026	5.221	18.89	1.028	19.73	5.134	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	5.101	-.0066	-.0075	-.0003	.0008	.0264	4.982
SDev	.021	.0026	.0019	.0001	.0003	.0071	.024
%RSD	.4027	40.19	24.56	30.81	35.70	26.99	.4911
#1	5.124	-.0092	-.0065	-.0002	.0012	.0184	5.007
#2	5.086	-.0066	-.0065	-.0002	.0006	.0287	4.958
#3	5.094	-.0039	-.0097	-.0003	.0007	.0321	4.982
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10103

Analysis Report Blank Sample Wed 09-21-94 00:03:55 AM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/20/94 23:58:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0075	.0058	.0153	.0043	-.0001	-.0005	-.0726
SDev	.0045	.0056	.0091	.0003	.0000	.001	.0013
%RSD	60.49	96.07	59.38	6.657	3.155	182.2	1.783
#1	-.0126	.0091	.0109	.0046	-.0001	-.0015	-.0715
#2	-.0039	.0090	.0093	.0041	-.0001	-.0005	-.0740
#3	-.0059	-.0006	.0258	.0041	-.0001	.0004	-.0723
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	-.0022	-.0035	-.0105	.0138	-.0080	-.0616
SDev	.0003	.0011	.0008	.0009	.0181	.0116	.0052
%RSD	14.41	48.67	24.19	8.134	131.1	145.3	8.381
#1	-.0021	-.0025	-.0026	-.0095	-.0068	.0023	-.0558
#2	-.0018	-.0010	-.0043	-.0112	.0271	-.0206	-.0633
#3	-.0024	-.0032	-.0035	-.0107	.0213	-.0057	-.0658
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	-.0056	-.1003	.0049	-.0239	-.0013	-.0015
SDev	.0004	.0050	.1983	.0006	.0082	.0008	.0006
%RSD	157.3	89.74	197.7	12.92	34.46	62.04	39.34
#1	.0005	-.0048	.0836	.0055	-.0314	-.0013	-.0012
#2	.0005	-.0109	-.0740	.0043	-.0151	-.0021	-.0012
#3	-.0002	-.0010	-.3104	.0047	-.0253	-.0005	-.0022
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	.0232	-.0039	-.0043	-.0002	-.0000	.0173	-.0352
SDev	.0322	.0053	.0000	.0001	.0003	.0052	.0544
%RSD	139.0	134.4	.0000	47.83	23200.	30.27	154.8
#1	.0375	-.0039	-.0043	-.0001	-.0002	.0218	.0273
#2	~~-.0137~~	.0014	-.0043	-.0002	-.0002	.0184	-.0726
#3	.0457	-.0092	-.0043	-.0002	.0003	.0116	-.0603
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10104

Analysis Report Wed 09-21-94 00:08:57 AM page 1

L06111

Method: MRD4PT Sample Name: 9883-14 Operator: CME
Run Time: 09/21/94 00:03:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.3995	.0073	.0384	.3951	-.0001	.0006	2.950
SDev	.0017	.0102	.0138	.0063	.0000	.0025	.006
%RSD	.4196	139.0	36.07	1.591	3.279	384.5	.2118
#1	.4010	.0170	.0304	.3962	-.0001	.0035	2.954
#2	.3977	-.0033	.0544	.4007	-.0001	-.0009	2.952
#3	.3997	.0082	.0304	.3883	-.0001	-.0007	2.943
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	.0003	.0044	.0166	.3038	.2866	.1026	1.509
SDev	.0020	.0011	.0000	.0024	.0391	.0142	.010
%RSD	617.7	24.66	.0000	.8000	13.63	13.83	.6895
#1	-.0018	.0046	.0166	.3027	.2641	.0904	1.500
#2	.0006	.0032	.0166	.3066	.2640	.0993	1.505
#3	.0022	.0053	.0166	.3021	.3317	.1182	1.520
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	.0708	.0064	2.212	.0016	H1217.	-.0011	.3295
SDev	.0004	.0087	.142	.0012	15.	.0008	.0006
%RSD	.5895	136.0	6.421	74.19	1.206	75.29	.1892
#1	.0711	-.0033	2.251	.0023	H1216.	-.0019	.3303
#2	.0711	.0135	2.054	.0002	H1231.	-.0011	.3292
#3	.0704	.0089	2.330	.0023	H1202.	-.0003	.3292
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	-.0226	.0552	-.0043	.0248	.0015	.0446	.0065
SDev	.0063	.0040	.0000	.0002	.0003	.0040	.0268
%RSD	27.71	7.328	.0000	.6352	19.28	8.851	414.9
#1	-.0240	.0543	-.0043	.0249	.0017	.0492	-.0239
#2	-.0158	.0516	-.0043	.0249	.0012	.0424	.0164
#3	-.0281	.0596	-.0043	.0246	.0017	.0424	.0269
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10105

Analysis Report Wed 09-21-94 00:14:00 AM page 1

L00112

Method: MRD4PT Sample Name: 9883-15 Operator: CME
Run Time: 09/21/94 00:09:02
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1910	.0035	.0380	.7188	-.0001	.0062	13.13
SDev	.0157	.0129	.0103	.0048	.0000	.0017	.06
%RSD	8.226	366.3	27.02	.6658	1.774	27.09	.4801
#1	.1925	.0021	.0320	.7223	-.0001	.0066	13.10
#2	.1746	-.0086	.0322	.7208	-.0001	.0077	13.09
#3	.2059	.0170	.0499	.7134	-.0001	.0044	13.20
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	.0054	.0072	.0082	.1198	.0854	.3599	3.970
SDev	.001	.0011	.0017	.0017	.0345	.0134	.011
%RSD	18.13	14.98	20.27	1.396	40.39	3.726	.2700
#1	.0043	.0060	.0066	.1215	.0779	.3467	3.972
#2	.0061	.0081	.0099	.1181	.0553	.3735	3.980
#3	.0058	.0074	.0082	.1198	.1230	.3595	3.958
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	.1133	.0267	4.812	-.0006	H1315.	-.0023	.4376
SDev	.0008	.0104	.181	.0026	12.	.0005	.001
%RSD	.6576	38.97	3.752	402.3	.9411	20.32	.2253
#1	.1141	.0387	4.654	.0002	H1323.	-.0029	.4385
#2	.1126	.0196	5.009	-.0035	H1322.	-.0021	.4366
#3	.1133	.0219	4.772	.0014	H1301.	-.0020	.4376
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	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	.0218	.0781	-.0043	.0397	.0028	.0743	-.0367
SDev	.0072	.0079	.0000	.0002	.0009	.0040	.0124
%RSD	33.00	10.17	.0000	.5253	31.33	5.318	33.93
#1	.0293	.0860	-.0043	.0399	.0033	.0697	-.0256
#2	.0150	.0781	-.0043	.0395	.0018	.0766	-.0343
#3	.0211	.0702	-.0043	.0396	.0033	.0766	L-.0501
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10106

Analysis Report Wed 09-21-94 00:19:03 AM page 1

ZZZZZZ

Method: MRD4PT Sample Name: PB 1561 Operator: CME
Run Time: 09/21/94 00:14:05
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0079	-.0115	-.0017	-.0008	-.0001	-.0007	-.0709
SDev	.0083	.0107	.0328	.0000	.0000	.0014	.0032
%RSD	104.8	92.54	1980.	.0000	10.31	185.3	4.524
#1	-.0053	-.0033	.0093	-.0008	-.0001	.0006	-.0723
#2	-.0173	-.0236	-.0385	-.0008	-.0001	-.0021	-.0732
#3	-.0013	-.0077	.0242	-.0008	-.0001	-.0006	-.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	-.0020	-.0032	-.0043	-.0112	-.0012	.0043	-.0625
SDev	.0019	.0032	.0008	.001	.0168	.0134	.0235
%RSD	92.51	102.5	19.48	8.611	1379.	313.3	37.68
#1	-.0036	-.0060	-.0043	-.0118	-.0011	.0082	-.0807
#2	-.0024	-.0039	-.0051	-.0118	-.0181	-.0106	-.0708
#3	.0000	.0004	-.0035	-.0101	.0155	.0152	-.0359
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	-.0091	-.1660	-.0009	-.4324	-.0010	-.0026
SDev	.0004	.0051	.4566	.0010	.0108	.0026	.0006
%RSD	2203.	55.61	275.1	110.8	2.497	250.5	23.94
#1	-.0002	-.0033	-.4680	-.0011	-.4440	-.0029	-.0033
#2	-.0002	-.0125	-.3892	-.0019	-.4307	-.0021	-.0022
#3	.0005	-.0117	.3593	.0002	-.4226	.0019	-.0022
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	.0129	.0005	-.0026	-.0004	-.0002	.0184	.0016
SDev	.0266	.0015	.0016	.0001	.0005	.0068	.0605
%RSD	206.1	323.1	64.01	18.00	298.3	37.18	3775.
#1	.0273	.0014	-.0011	-.0005	-.0002	.0253	.0518
#2	-.0178	.0014	-.0022	-.0005	-.0007	.0116	.0185
#3	.0293	-.0013	-.0043	-.0003	.0003	.0184	-.0655
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

Cla

10107

Analysis Report Wed 09-21-94 00:24:05 AM page 1

Method: MRD4PT Sample Name: LCS 1561 zzzzzz Operator: CME
Run Time: 09/21/94 00:19:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.25	1.663	1.821	18.50	.5440	.9454	25.42
SDev	.22	.009	.046	.28	.0055	.0092	.06
%RSD	1.220	.5690	2.509	1.539	1.011	.9742	.2178
#1	18.50	1.656	1.857	18.82	.5503	.9503	25.49
#2	18.18	1.673	1.836	18.40	.5415	.9348	25.40
#3	18.07	1.658	1.769	18.27	.5401	.9511	25.39
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	.9753	5.004	2.454	9.997	9.730	.9619	23.01
SDev	.0035	.026	.034	.083	.018	.0106	.24
%RSD	.3600	.5274	1.404	.8342	.1804	1.102	1.041
#1	.9788	5.033	2.493	10.09	9.731	.9563	23.28
#2	.9718	5.000	2.441	9.958	9.712	.9553	22.94
#3	.9754	4.980	2.428	9.940	9.747	.9741	22.82
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	1.479	3.996	23.06	.9754	23.48	4.901	2.016
SDev	.009	.030	.18	.0057	.48	.041	.006
%RSD	.5877	.7572	.7901	.5877	2.053	.8290	.2741
#1	1.489	4.027	23.27	.9821	24.02	4.947	2.022
#2	1.476	3.967	22.95	.9721	23.33	4.888	2.012
#3	1.473	3.993	22.95	.9721	23.10	4.869	2.013
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	.9859	-.0039	-.0043	.0001	.0011	.0195	1.821
SDev	.0341	.0000	.0000	.0002	.0005	.0040	.046
%RSD	3.459	.0000	.0000	145.6	44.08	20.21	2.511
#1	1.017	-.0039	-.0043	-.0001	.0006	.0150	1.810
#2	.9497	-.0039	-.0043	.0002	.0011	.0218	1.782
#3	.9907	-.0039	-.0043	.0002	.0016	.0218	1.871
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass

10108

Analysis Report Wed 09-21-94 00:29:08 AM page 1

Method: MRD4PT Sample Name: SpBLK 1561 Operator: CME
Run Time: 09/21/94 00:24:10
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.022	.4761	2.020	1.904	.0536	.0481	-.0754
SDev	.025	.0038	.01	.027	.0006	.0001	.0018
%RSD	1.261	.8068	.4910	1.435	1.080	.1896	2.338
#1	2.001	.4779	2.025	1.876	.0531	.0481	-.0740
#2	2.014	.4717	2.009	1.906	.0535	.0482	-.0749
#3	2.050	.4787	2.026	1.931	.0542	.0481	-.0774
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	.2012	.5142	.2462	1.028	.9894	.4850	-.0764
SDev	.0005	.0022	.0034	.007	.0201	.0087	.0080
%RSD	.2317	.4197	1.372	.6334	2.029	1.785	10.49
#1	.2018	.5118	.2432	1.021	1.010	.4810	-.0673
#2	.2008	.5146	.2457	1.029	.9875	.4949	-.0798
#3	.2011	.5160	.2499	1.034	.9704	.4790	-.0823
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	.5105	.5179	-.4374	.0516	-.4195	.4991	.5103
SDev	.0020	.0088	.0992	.0002	.0051	.0040	.0018
%RSD	.3835	1.696	22.68	.4717	1.214	.8083	.3531
#1	.5090	.5266	-.5425	.0517	-.4195	.4948	.5093
#2	.5098	.5182	-.4242	.0517	-.4246	.4996	.5093
#3	.5127	.5090	-.3454	.0513	-.4144	.5028	.5124
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	2.030	.0111	-.0065	-.0002	.0005	.0081	1.890
SDev	.060	.0040	.0037	.0001	.0003	.0103	.029
%RSD	2.973	36.56	57.23	64.92	57.94	126.1	1.557
#1	1.995	.0119	-.0108	-.0001	.0008	.0081	1.916
#2	1.995	.0146	-.0043	-.0003	.0003	.0184	1.858
#3	2.100	.0066	-.0043	-.0002	.0003	-.0021	1.897
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10109

Analysis Report QC Standard Wed 09-21-94 00:34:13 AM page 1

Method: MRD4PT Sample Name: CCVAC CCV Operator: CME
Run Time: 09/21/94 00:29:14
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.30	-.0501	5.043	9.711	1.036	.9801	21.11
SDev	.08	.0082	.052	.099	.007	.0038	.02
%RSD	.7345	16.45	1.030	1.024	.6635	.3848	.0820
#1	10.38	-.0594	5.102	9.816	1.043	.9844	21.09
#2	10.23	-.0437	5.003	9.618	1.030	.9780	21.12
#3	10.31	-.0473	5.025	9.701	1.034	.9778	21.11
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	2.071	5.219	2.019	10.49	10.15	4.883	20.40
SDev	.005	.008	.020	.04	.02	.014	.12
%RSD	.2251	.1447	.9991	.3669	.2332	.2886	.5663
#1	2.072	5.223	2.041	10.52	10.13	4.892	20.52
#2	2.066	5.210	2.002	10.45	10.14	4.867	20.29
#3	2.075	5.223	2.014	10.48	10.18	4.891	20.38
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	1.029	5.227	19.28	1.023	20.10	5.139	1.037
SDev	.003	.041	.39	.002	.24	.023	.001
%RSD	.2911	.7839	2.012	.1996	1.187	.4511	.1035
#1	1.032	5.272	18.85	1.024	20.37	5.160	1.037
#2	1.026	5.215	19.40	1.021	19.91	5.114	1.037
#3	1.029	5.193	19.60	1.025	20.03	5.143	1.035
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	5.071	-.0101	-.0029	-.0002	.0003	.0161	4.946
SDev	.020	.0015	.0034	.0001	.0003	.0052	.144
%RSD	.3971	15.11	118.2	64.92	90.73	32.41	2.908
#1	5.094	-.0119	-.0043	-.0001	.0007	.0218	5.107
#2	5.059	-.0092	-.0054	-.0002	.0002	.0116	4.830
#3	5.059	-.0092	.0010	-.0003	.0002	.0150	4.900
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10110

Analysis Report Blank Sample Wed 09-21-94 00:39:17 AM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 00:34:18
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0056	.0050	.0042	.0068	.0002	.0010	-.0656
SDev	.0060	.0052	.0057	.0003	.0001	.0012	.0017
%RSD	106.5	104.5	136.1	4.223	59.77	122.6	2.585
#1	-.0013	.0011	.0108	.0066	.0001	.0016	-.0672
#2	.0094	.0108	.0017	.0066	.0001	.0017	-.0639
#3	.0087	.0029	.0002	.0071	.0004	-.0004	-.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	-.0011	-.0006	-.0023	-.0071	.0325	-.0033	-.0475
SDev	.0002	.0020	.0005	.0003	.0352	.0109	.0166
%RSD	16.02	358.6	20.61	4.517	108.2	326.6	34.94
#1	-.0012	-.0017	-.0026	-.0073	-.0070	.0072	-.0583
#2	-.0012	-.0017	-.0026	-.0073	.0438	-.0146	-.0558
#3	-.0009	.0018	-.0018	-.0068	.0607	-.0027	-.0284
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	.0005	.0013	-.1134	.0071	.0739	.0009	-.0012
SDev	.0000	.0070	.0788	.0009	.0146	.0009	.0000
%RSD	1.862	541.4	69.46	12.26	19.70	109.4	2.223
#1	.0005	-.0048	-.1922	.0064	.0705	.0003	-.0012
#2	.0005	-.0002	-.1134	.0080	.0899	.0003	-.0012
#3	.0005	.0089	-.0346	.0068	.0613	.0020	-.0013
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	.0280	-.0048	-.0047	-.0001	-.0000	.0127	.0109
SDev	.0304	.0085	.0016	.0001	.0003	.0052	.0096
%RSD	108.8	176.5	34.83	66.08	61240.	41.14	88.21
#1	.0539	-.0145	-.0043	-.0002	-.0002	.0116	.0010
#2	-.0055	.0014	-.0065	-.0001	.0003	.0184	.0203
#3	.0355	-.0013	-.0033	-.0001	-.0002	.0081	.0115
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10111

Analysis Report Wed 09-21-94 00:44:19 AM page 1

222222

Method: MRD4PT Sample Name: 8309-9 Operator: CME
Run Time: 09/21/94 00:39:21 CE 9-20-94
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2114	-.0033	.0318	.0857	.0002	.0458	.1508
SDev	.0043	.0030	.0009	.0006	.0000	.0012	.0013
%RSD	2.025	92.04	2.850	.6687	2.274	2.662	.8583
#1	.2145	-.0051	.0312	.0860	.0002	.0465	.1497
#2	.2132	-.0051	.0312	.0850	.0002	.0465	.1522
#3	.2065	.0002	.0328	.0860	.0002	.0444	.1505
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	.0008	.0707	.4385	.4031	100.2	.1561
SDev	.0008	.0029	.0005	.0008	.0392	.2	.0066
%RSD	2.836	338.2	.6830	.1942	9.719	.1572	4.204
#1	.0263	-.0017	.0701	.4393	.4483	99.98	.1511
#2	.0272	.0039	.0709	.4376	.3804	100.3	.1635
#3	.0278	.0004	.0709	.4387	.3805	100.2	.1536
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	.0095	.0603	.1820	.0008	1.333	.0293	9.171
SDev	.0000	.0051	.2904	.0016	.011	.0017	.013
%RSD	.1139	8.425	159.6	191.2	.8172	5.657	.1456
#1	.0095	.0578	-.0413	.0015	1.340	.0280	9.157
#2	.0095	.0662	.5103	.0019	1.320	.0311	9.172
#3	.0095	.0570	.0770	-.0010	1.339	.0287	9.184
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	-.0321	-.0101	-.0043	.0028	.0022	.0994	.0013
SDev	.0114	.0040	.0000	.0001	.0003	.0099	.0329
%RSD	35.53	39.97	.0000	4.888	13.18	9.938	2561.
#1	-.0301	-.0066	-.0043	.0029	.0024	.0937	-.0168
#2	-.0219	-.0145	-.0043	.0028	.0024	.1108	.0392
#3	-.0444	-.0092	-.0043	.0027	.0019	.0937	-.0186
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10112

Analysis Report Wed 09-21-94 00:52:41 AM page 1

Method: MRD4PT Sample Name: 8302-9MS1 Operator: CME
Run Time: 09/21/94 00:47:43
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.234	.3222	1.952	1.969	.0515	.0921	.1878
SDev	.017	.0103	.042	.021	.0003	.0043	.0031
%RSD	.7448	3.186	2.142	1.078	.6777	4.687	1.627
#1	2.215	.3312	1.904	1.945	.0511	.0932	.1870
#2	2.239	.3110	1.977	1.975	.0516	.0873	.1912
#3	2.247	.3242	1.975	1.985	.0518	.0957	.1853
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	.2232	.4894	.3287	1.538	1.425	102.6	.3761
SDev	.0009	.0018	.0032	.008	.036	.5	.0124
%RSD	.3947	.3632	.9629	.5283	2.538	.5163	3.311
#1	.2237	.4878	.3251	1.529	1.410	102.5	.3885
#2	.2237	.4913	.3301	1.544	1.466	103.2	.3762
#3	.2222	.4892	.3310	1.540	1.399	102.1	.3636
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	.4993	.5510	-.1439	.0473	1.461	.5112	9.178
SDev	.0019	.0146	.2956	.0011	.016	.0024	.026
%RSD	.3754	2.644	205.5	2.330	1.116	.4758	.2808
#1	.4973	.5357	.1581	.0477	1.445	.5088	9.156
#2	.5010	.5647	-.1569	.0481	1.477	.5136	9.206
#3	.4995	.5525	-.4328	.0460	1.461	.5112	9.170
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	2.103	-.0242	-.0050	.0027	.0029	.1051	1.794
SDev	.043	.0015	.0065	.0000	.0005	.0052	.042
%RSD	2.059	6.307	129.5	.0000	17.48	4.974	2.353
#1	2.063	-.0251	-.0065	.0027	.0034	.1039	1.755
#2	2.149	-.0225	.0021	.0027	.0029	.1005	1.790
#3	2.098	-.0251	-.0108	.0027	.0024	.1108	1.839
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10113

Analysis Report Wed 09-21-94 01:01:03 AM page 1

Method: MRD4PT Sample Name: 8308-9MSD1 Operator: CME
Run Time: 09/21/94 00:56:05
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.247	.3187	1.995	1.922	.0513	.0938	.1658
SDev	.013	.0088	.014	.020	.0003	.0012	.0045
%RSD	.5826	2.772	.7163	1.050	.5111	1.319	2.705
#1	2.255	.3278	2.008	1.920	.0511	.0944	.1675
#2	2.232	.3101	1.980	1.903	.0511	.0946	.1692
#3	2.254	.3181	1.998	1.943	.0516	.0924	.1607
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	.2261	.4948	.3270	1.508	1.432	103.9	.2093
SDev	.0011	.0014	.0035	.008	.020	.3	.0066
%RSD	.4741	.2855	1.064	.5128	1.368	.3131	3.154
#1	.2271	.4948	.3259	1.506	1.444	104.1	.2118
#2	.2262	.4934	.3243	1.501	1.444	103.5	.2143
#3	.2250	.4963	.3310	1.516	1.410	104.0	.2019
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	.5010	.5640	-.0648	.0481	1.353	.5144	9.248
SDev	.0020	.0008	.2903	.0018	.025	.0014	.017
%RSD	.3908	.1354	448.3	3.758	1.840	.2695	.1848
#1	.5002	.5632	.1585	.0494	1.342	.5152	9.245
#2	.4995	.5647	.0402	.0490	1.336	.5128	9.233
#3	.5032	.5640	-.3930	.0461	1.382	.5152	9.267
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	2.099	-.0172	.0007	.0027	.0042	.0914	1.850
SDev	.049	.0079	.0044	.0001	.0008	.0040	.065
%RSD	2.329	46.24	678.3	5.139	18.23	4.323	3.530
#1	2.065	-.0092	.0021	.0027	.0044	.0937	1.924
#2	2.155	-.0172	-.0043	.0028	.0049	.0937	1.821
#3	2.077	-.0251	.0042	.0025	.0034	.0868	1.804
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10114

Analysis Report Wed 09-21-94 01:09:25 AM page 1

Method: MRD4PT Sample Name: 830~~8~~6-10 222222 Operator: CME
Run Time: 09/21/94 01:04:27 CE 9-20-94
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0422	.0117	.0144	.0038	-.0001	-.0002	-.0209
SDev	.0080	.0038	.0173	.0003	.0000	.0012	.0034
%RSD	18.81	32.87	119.8	7.525	6.759	636.9	16.37
#1	.0447	.0135	.0029	.0036	-.0001	.0006	-.0240
#2	.0334	.0073	.0060	.0036	-.0001	-.0015	-.0215
#3	.0487	.0143	.0343	.0041	-.0001	.0003	-.0173
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	.0055	-.0027	.0188	.0460	.0740	.0046	-.0500
SDev	.0025	.0025	.0013	.0008	.0366	.0179	.0289
%RSD	45.32	92.30	6.779	1.850	49.47	392.9	57.80
#1	.0061	-.0025	.0191	.0468	.0721	.0032	-.0359
#2	.0028	-.0053	.0174	.0451	.0384	-.0126	-.0832
#3	.0076	-.0003	.0200	.0462	.1115	.0231	-.0309
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	.0018	.0082	-.3103	.0021	-.4626	-.0010	.0199
SDev	.0004	.0053	.7909	.0021	.0016	.0017	.0012
%RSD	24.66	65.46	254.9	101.0	.3363	172.7	5.940
#1	.0020	.0135	-.2315	.0027	-.4643	-.0004	.0192
#2	.0013	.0028	-1.138	-.0002	-.4613	-.0029	.0192
#3	.0020	.0082	.4382	.0039	-.4623	.0004	.0213
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	.0273	-.0260	-.0036	-.0000	.0017	.0287	-.0154
SDev	.0089	.0015	.0012	.0001	.0006	.0034	.0392
%RSD	32.76	5.879	34.10	278.9	34.57	11.93	254.8
#1	.0232	-.0251	-.0043	-.0001	.0013	.0287	.0272
#2	.0211	-.0278	-.0043	-.0001	.0013	.0253	-.0498
#3	.0375	-.0251	-.0022	.0001	.0024	.0321	-.0236
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10115

Analysis Report Wed 09-21-94 01:14:28 AM page 1

ZZZZZZ

Method: MRD4PT Sample Name: 830~~8~~-11 Operator: CME

Run Time: 09/21/94 01:09:30 CE 9-20-94

Comment:

Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0795	.0052	.0177	-.0008	-.0001	-.0002	.0164
SDev	.0069	.0126	.0130	.0000	.0000	.0031	.0018
%RSD	8.716	242.1	73.57	.0000	1.843	1482.	10.78
#1	.0740	-.0033	.0087	-.0008	-.0001	.0006	.0158
#2	.0773	-.0007	.0117	-.0008	-.0001	-.0037	.0149
#3	.0873	.0196	.0326	-.0008	-.0001	.0024	.0183
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	.0092	-.0029	.0325	.1001	.1079	.0055	-.0375
SDev	.0011	.0011	.0000	.0021	.0408	.0100	.0115
%RSD	11.52	36.91	.0000	2.109	37.82	181.9	30.76
#1	.0080	-.0039	.0325	.0986	.0609	-.0008	-.0508
#2	.0098	-.0017	.0325	.0992	.1343	.0171	-.0308
#3	.0098	-.0032	.0325	.1025	.1286	.0002	-.0309
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	.0028	.0051	-.1921	.0005	-.4616	-.0018	.0155
SDev	.0000	.0088	.1805	.0009	.0033	.0005	.0006
%RSD	.4081	172.3	93.97	186.7	.7094	27.06	4.020
#1	.0028	.0135	-.3891	-.0002	-.4603	-.0021	.0151
#2	.0028	-.0041	-.0345	.0002	-.4654	-.0020	.0162
#3	.0028	.0059	-.1527	.0014	-.4593	-.0012	.0151
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	.0362	-.0269	-.0036	.0000	.0030	.0503	-.0154
SDev	.0217	.0031	.0012	.0002	.0003	.0110	.0253
%RSD	60.08	11.37	34.10	914.3	9.591	21.85	164.5
#1	.0560	-.0251	-.0043	-.0001	.0029	.0424	-.0446
#2	.0129	-.0304	-.0043	-.0001	.0034	.0458	-.0026
#3	.0396	-.0251	-.0022	.0002	.0029	.0629	.0009
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

Cal

10116

Analysis Report Wed 09-21-94 01:19:31 AM page 1

ZZZZZZ

Method: MRD4PT Sample Name: 8309-12 Operator: CME

Run Time: 09/21/94 01:14:33 CE 9-20-94

Comment:

Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0753	.0149	.0177	-.0008	-.0001	.0019	.0152
SDev	.0018	.0040	.0156	.0000	.0000	.0005	.0018
%RSD	2.340	26.71	88.30	.0000	4.948	24.52	11.58
#1	.0740	.0108	.0356	-.0008	-.0001	.0024	.0166
#2	.0773	.0187	.0102	-.0008	-.0001	.0016	.0158
#3	.0746	.0152	.0072	-.0008	-.0001	.0016	.0133
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	.0064	-.0027	.0213	.0852	.0890	.0019	-.0292
SDev	.0022	.0016	.001	.0011	.0370	.0032	.0080
%RSD	34.24	60.69	4.523	1.308	41.52	169.4	27.34
#1	.0070	-.0017	.0208	.0852	.1228	.0042	-.0259
#2	.0083	-.0017	.0225	.0841	.0495	-.0018	-.0235
#3	.0040	-.0046	.0208	.0864	.0948	.0032	-.0384
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	.0028	.0061	-.1921	.0014	-.4623	-.0010	.0114
SDev	.0000	.0024	.3758	.0014	.0027	.0012	.0006
%RSD	.3704	40.05	195.6	101.1	.5830	127.7	5.225
#1	.0028	.0043	.1624	.0031	-.4613	.0004	.0110
#2	.0028	.0089	-.1527	.0006	-.4654	-.0013	.0110
#3	.0028	.0051	-.5861	.0006	-.4603	-.0020	.0121
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	.0266	-.0251	-.0040	.0001	.0029	.0481	-.0498
SDev	.0327	.0026	.0006	.0000	.0000	.0020	.0317
%RSD	122.9	10.54	15.52	.0000	.0068	4.110	63.60
#1	.0047	-.0278	-.0043	.0001	.0029	.0492	L-.0831
#2	.0109	-.0251	-.0033	.0001	.0029	.0492	-.0200
#3	.0642	-.0225	-.0043	.0001	.0029	.0458	-.0463
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

10117

Analysis Report QC Standard Wed 09-21-94 01:24:34 AM page 1

Method: MRD4PT Sample Name: ICSA Operator: CME
Run Time: 09/21/94 01:19:36
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	493.4	.0122	-.0114	.0180	.0000	.0008	468.9
SDev	3.9	.0177	.0823	.0000	.0001	.0038	1.5
%RSD	.7822	145.2	722.6	.0000	1115.	507.1	.3163
#1	490.4	-.0025	-.0558	.0180	.0002	.0012	467.2
#2	492.1	.0072	.0836	.0180	-.0001	-.0033	470.0
#3	497.8	.0319	-.0619	.0180	-.0001	.0044	469.6
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	.0101	.0056	.0066	176.8	164.9	.0540	483.6
SDev	.0026	.0008	.0008	.7	.7	.0170	2.7
%RSD	25.84	14.69	12.71	.4139	.4158	31.41	.5521
#1	.0073	.0060	.0057	176.0	164.2	.0734	481.1
#2	.0125	.0046	.0074	176.9	165.0	.0472	483.1
#3	.0104	.0060	.0066	177.5	165.5	.0415	486.4
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	.0089	-.0051	-.3120	-.0018	-.2325	.0052	.0598
SDev	.0007	.0038	.3621	.0019	.0039	.0012	.0006
%RSD	7.744	74.28	116.0	103.2	1.697	22.78	.9974
#1	.0096	-.0033	-.7083	-.0001	-.2306	.0065	.0592
#2	.0084	-.0025	.0017	-.0015	-.2371	.0047	.0602
#3	.0085	-.0094	-.2295	-.0039	-.2299	.0043	.0602
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	.0580	-.0136	.0096	.0105	-.0074	.0150	.0106
SDev	.0980	.0076	.0070	.0001	.0004	.0191	.0414
%RSD	169.0	56.00	73.29	.7518	5.210	127.1	390.6
#1	-.0506	-.0225	.0160	.0106	-.0071	.0355	.0485
#2	.1400	-.0092	.0106	.0104	-.0073	-.0021	.0168
#3	.0847	-.0092	.0021	.0104	-.0078	.0116	-.0336
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10118

Analysis Report QC Standard Wed 09-21-94 01:29:37 AM page 1

Method: MRD4PT Sample Name: ICSAB Operator: CME
Run Time: 09/21/94 01:24:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	492.4	-.0091	.0106	.4693	.4568	.9149	474.3
SDev	2.7	.0466	.0508	.0024	.0013	.0077	1.2
%RSD	.5437	510.8	481.4	.5216	.2903	.8462	.2441
#1	489.4	-.0524	-.0467	.4677	.4553	.9060	473.3
#2	494.5	.0403	.0504	.4722	.4578	.9187	474.0
#3	493.4	-.0153	.0280	.4682	.4573	.9200	475.6
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	.4587	.4539	.4943	177.5	166.7	.9333	485.2
SDev	.0027	.0019	.0017	.6	.4	.0130	1.9
%RSD	.5913	.4118	.3521	.3278	.2399	1.395	.3889
#1	.4566	.4525	.4923	176.8	166.3	.9484	483.0
#2	.4578	.4532	.4956	177.8	166.6	.9254	486.2
#3	.4618	.4560	.4948	177.8	167.1	.9262	486.2
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	.4634	.8986	-.6512	.9691	-.2732	.4635	.9911
SDev	.0018	.0097	.1960	.0027	.0053	.0026	.0048
%RSD	.3894	1.076	30.10	.2771	1.950	.5530	.4865
#1	.4613	.8968	-.4700	.9661	-.2762	.4608	.9856
#2	.4644	.8900	-.8593	.9699	-.2671	.4659	.9928
#3	.4645	.9091	-.6244	.9712	-.2764	.4638	.9948
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	.0306	-.0331	.0121	.0103	-.0073	.0150	.0416
SDev	.0640	.0095	.0012	.0000	.0001	.0103	.0210
%RSD	209.0	28.87	10.24	.0000	1.743	68.50	50.48
#1	ave -.0060 .0033	-.0225	.0128	.0103	-.0074	.0047	.0630
#2	pas -.0152	-.0410	.0106	.0103	-.0073	.0253	.0407
#3	9/21/94 ~~-.1037~~ bad blank	-.0357	.0128	.0103	-.0072	.0150	.0211
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK

10119

Analysis Report QC Standard Wed 09-21-94 01:34:40 AM page 1

Method: MRD4PT Sample Name: CCVAC Operator: CMI
Run Time: 09/21/94 01:29:42
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.43	-.0573	5.105	9.864	1.036	.9869	21.09
SDev	.05	.0028	.045	.070	.003	.0068	.03
%RSD	.4704	4.868	.8883	.7061	.2438	.6922	.1488
#1	10.38	-.0597	5.150	9.790	1.033	.9893	21.08
#2	10.44	-.0579	5.059	9.873	1.036	.9922	21.12
#3	10.47	-.0542	5.107	9.929	1.038	.9792	21.06
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	2.091	5.266	2.053	10.49	10.20	4.959	20.47
SDev	.004	.009	.015	.03	.03	.028	.06
%RSD	.2071	.1771	.7128	.2666	.2771	.5673	.2879
#1	2.090	5.257	2.038	10.46	10.20	4.979	20.41
#2	2.096	5.276	2.053	10.49	10.22	4.970	20.48
#3	2.087	5.264	2.067	10.52	10.17	4.927	20.52
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	1.041	5.243	20.37	1.029	21.03	5.191	1.040
SDev	.002	.028	.02	.002	.30	.017	.002
%RSD	.1489	.5375	.1120	.2084	1.433	.3355	.1892
#1	1.040	5.211	20.35	1.030	20.83	5.171	1.038
#2	1.043	5.252	20.39	1.026	20.90	5.201	1.042
#3	1.041	5.265	20.39	1.030	21.38	5.202	1.040
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	4.997	-.0066	-.0083	-.0003	.0008	.0081	5.072
SDev	.059	.0046	.0034	.0001	.0003	.0034	.121
%RSD	1.186	69.62	41.64	30.81	35.88	42.02	2.393
#1	5.041	-.0039	-.0097	-.0002	.0006	.0047	5.051
#2	4.930	-.0039	-.0043	-.0003	.0012	.0081	5.203
#3	5.022	-.0119	-.0108	-.0002	.0006	.0116	4.963
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass

10120

Analysis Report Blank Sample Wed 09-21-94 01:39:44 AM page 1

Method: MRD4PT Sample Name: CCB Operator: CME
Run Time: 09/21/94 01:34:45
Comment:
Mode: CONC Corr. Factor: 1

Elem	AL	SB	AS	BA	BE	CD	CA
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0090	-.0054	.0178	.0051	-.0001	-.0006	-.0698
SDev	.0053	.0027	.0071	.0000	.0000	.0011	.0037
%RSD	59.04	50.53	40.06	.0000	2.095	195.5	5.293
#1	-.0039	-.0024	.0123	.0051	-.0001	-.0005	-.0672
#2	-.0086	-.0060	.0153	.0051	-.0001	.0005	-.0681
#3	-.0146	-.0077	.0258	.0051	-.0001	-.0017	-.0740
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	-.0004	-.0008	-.0021	-.0099	-.0013	.0073	-.0500
SDev	.0011	.0004	.0005	.0009	.0395	.0131	.0128
%RSD	276.2	50.72	23.40	8.591	2936.	181.1	25.55
#1	-.0015	-.0010	-.0018	-.0101	.0381	.0122	-.0533
#2	.0006	-.0010	-.0018	-.0090	-.0014	.0172	-.0359
#3	-.0003	-.0003	-.0026	-.0107	-.0408	-.0076	-.0609
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	.0005	.0008	.0967	.0055	.0539	.0008	-.0022
SDev	.0000	.0029	.2850	.0008	.0178	.0005	.0010
%RSD	2.127	369.0	294.7	15.14	33.10	58.02	45.05
#1	.0005	.0028	.2805	.0064	.0542	.0011	-.0012
#2	.0005	-.0025	.2412	.0055	.0359	.0011	-.0033
#3	.0005	.0021	-.2316	.0047	.0715	.0003	-.0023
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	.0382	-.0128	-.0036	-.0002	.0002	.0104	-.0130
SDev	.0052	.0061	.0012	.0001	.0003	.0040	.0126
%RSD	13.50	47.90	34.10	64.92	174.4	37.90	97.32
#1	.0437	-.0092	-.0043	-.0001	.0003	.0150	-.0270
#2	.0334	-.0198	-.0043	-.0002	.0003	.0081	-.0095
#3	.0375	-.0092	-.0022	-.0003	-.0002	.0081	-.0025
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK

10121

COLD VAPOR DATA

10122

2pgs ok DB 9/20/94 Page 1 of 2 Hg

Varian SpectrAA 10/20 System Report

Stdrg 49 NB1123
Dil pg 20 NB1493

OPERATOR 0074
DATE 9.20.94
BATCH NO.

PROGRAM 8 Hg

D L Robb
9-20-94

INSTRUMENT MODE	ABSORBANCE
CALIBRATION MODE	CONCENTRATION
MEASUREMENT MODE	INTEGRATION
LAMP POSITION	4
LAMP CURRENT (mA)	4
SLIT WIDTH (nm)	0.5
WAVELENGTH (nm)	253.7
FLAME	AIR-ACETYLENE
SAMPLE INTRODUCTION	MANUAL
DELAY TIME	0
TIME CONSTANT	0.05
MEASUREMENT TIME (sec)	2.0
REPLICATES	4
BACKGROUND CORRECTION	ON
OXIDANT FLOW	3.5
ACETYLENE FLOW	1.5

reportable:
9883-1, 1MS, 1MSD 2+3 TCLP

r = 0.9999

SAMPLE	CONC	%RSD	MEAN ABS	READINGS			
1307 BLANK	0.00		0.000	0.000	0.000	-0.001	0.000
1308 STANDARD 1	0.50	2.9	0.010	0.010	0.010	0.010	0.010
1309 STANDARD 2	1.00	2.7	0.019	0.020	0.019	0.019	0.019
1310 STANDARD 3	3.00	0.8	0.059	0.060	0.059	0.059	0.059
1311 STANDARD 4	5.00	0.4	0.096	0.096	0.095	0.095	0.096
1312 STANDARD 5	10.00	0.2	0.196	0.196	0.196	0.196	0.197
1313 ICV	6.08	0.2	0.117	0.117	0.117	0.117	0.117
1314 ICB	-0.06	21.1	-0.001	-0.001	-0.002	-0.001	-0.001
1315 CRA	0.21	14.7	0.004	0.004	0.004	0.005	0.004
1316 941 LCS	5.21	1.2	0.100	0.098	0.100	0.101	0.100
1317 941 PBLK	-0.08	40.2	-0.002	-0.001	-0.002	-0.001	-0.002
1318 4.0 Known	3.87	0.3	0.076	0.075	0.076	0.076	0.076
1319 300076.13	2.69 2x	0.5	0.053	0.053	0.053	0.053	0.053
1320 300076.13.13DUP	2.71 2x	0.4	0.053	0.054	0.053	0.054	0.053
1321 300076.13.13SP	3.85 2x	0.3	0.076	0.075	0.076	0.076	0.075
1322 300076.14	3.32 10x	1.2	0.065	0.066	0.065	0.066	0.064
1323 300076.14.14DUP	2.63 10x	0.7	0.052	0.052	0.052	0.051	0.052
1324 300076.14.14SP	3.63 10x	0.5	0.071	0.071	0.071	0.071	0.072
1325 CCV	4.14	1.1	0.081	0.081	0.082	0.080	0.080
1326 CCB	-0.07	18.0	-0.001	-0.001	-0.001	-0.001	-0.002
1327 942 LCS	4.93	0.3	0.094	0.094	0.094	0.095	0.095
1328 942 TCLP PBLK	-0.11	7.1	-0.002	-0.002	-0.002	-0.002	-0.002
1329 9883.1 TCLP	-0.11	16.1	-0.002	-0.002	-0.002	-0.003	-0.002
1330 9883.1 TCLPMS	10.12	0.3	0.199	0.198	0.199	0.199	0.199
1331 9883.1 TCLPMSD	10.04	0.2	0.197	0.197	0.197	0.197	0.196

Page 2 of 2 Hg

SAMPLE	CONC	%RSD	MEAN ABS	READINGS			
1332 9883.1 TCLP ms	4.78 2x	0.4	0.092	0.093	0.092	0.092	0.092
1333 9883.1 TCLP msD	4.72 2x	0.5	0.091	0.091	0.091	0.091	0.092
1334 9883.2 TCLP	-0.01	99.9	-0.000	0.000	-0.000	-0.000	-0.001
1335 9883.3 TCLP	-0.12	13.1	-0.002	-0.002	-0.003	-0.002	-0.002
CCV	4.02	0.6	0.079	0.079	0.078	0.078	0.079
CCB	-0.10	15.0	-0.002	-0.002	-0.002	-0.002	-0.002

D L Robb 9-20-94

OTHER INORGANIC DATA

ARDL, INC.

METALS PREPARATION LOG

Contract: POCE | Batch:1567 P | Method: SW846/3010

Date: ~~8/21/94~~ 9/20/94 JKC | Matrix: TCLP | 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
9883-1	100ml	100ml
9883-1 ms	100ml	100ml
9883-1 msd	100ml	100ml
9883-2	100ml	100ml
9883-3	100ml	100ml
9883-4	100ml	100ml
9883-4 ms	100ml	100ml
9883-4 msd	100ml	100ml
9883-5	100ml	100ml
9883-6	100ml	100ml
9883-7	100ml	100ml
9883-8	100ml	100ml
9883-9	100ml	100ml
9883-10	100ml	100ml
9883-11	100ml	100ml
9883-12	100ml	100ml
9883-13	100ml	100ml
9883-14	100ml	100ml
9883-15	100ml	100ml

QC Solution	Mls Added	Solution Used	Reference # (Book #-Pg #)	Spk\Witness
Spike P (ICP/FLAA)		ICP SPEX Spike One		\
TCLP (ICP/FLAA)	1	TCLP Spike	NB 1427 P.70	JKC \ CAH
LCS P (ICP/FLAA)	5.5	Leeman's LCS	NB 1484 P.70	JKC \ CAH
Spike Blank (ICP/FLAA)		SPEX Spike One		\
Spike BlankTCLP (ICP/FLAA)	1	TCLP Spike	NB 1484 P.70	JKC \ CAH

TCLP Log Reference	NB 1442 P.74

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
C. Hall	9/20/94	DC Operator	10126 9-21-94

D L Robb 9-20-94

ARDL, Inc.
METALS PREPARATION LOG

Contract: POCE | Batch:942 | Method: SW846/CV7470

Date: 9/20/94 | Matrix: TCLP | Analyst: D L Robb

ARDL Sample No.	Initial Weight (gram/ vol)	Final Volume (ml)
PB	100ml	100ml
LCS 5.0ppb	100ml	100ml
0.5ppb	100ml	100ml
1.0ppb	100ml	100ml
3.0ppb	100ml	100ml
5.0ppb	100ml	100ml
10.0ppb	100ml	100ml
ICV 6.0ppb	100ml	100ml
CCV 4.0ppb	100ml	100ml
9883-1	100ml	100ml
9883-1 MS	100ml	100ml
9883-1 MSD	100ml	100ml
9883-2	100ml	100ml
9883-3	100ml	100ml

QC Solution	ml Added	Spiking Std.	Reference# (Book #/ pg #)	Spike/Witness
Spike	1.0ml	100 ppb Hg	NR	/
LCS	5.0ml	100 ppb Hg	NB1123 P.49	DLR / AJR
TCLP Spike	1.0ml	1000 ppb Hg	NB 1475 P.61	DLR / AJR

TCLP Log Reference
NB 1442 P.74

Continued on Page

Read and Understood By

D L Robb — Signed | 9-20-94 — Date | D C Upcraft — Signed | 10127 9-20-94 — Date

ARDL, Inc.

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
(TUMBLING LOG)

DATE ON TUMBLER: 9/19/94
TIME ON TUMBLER: 1530

ANALYST [signature]
TIME OFF TUMBLER: 0830
DATE OFF TUMBLER: 9/20/94

ARDL #	PRELIMINARY EVALUATION 1st pH	2nd pH	EXTRACTION FLUID NUMBER	SAMPLE Wt. (G)	EXTRACTION FLUID VOLUME	INITIAL pH	FINAL pH (18hr)
9883-1	7.85	1.55	1	100.08	2000	4.90	4.70
9883-2	5.70	1.50	1	100.07	2000	4.90	4.70
9883-3	6.25	1.65	1	100.01	2000	4.85	4.65
9883-4	6.45	1.65	1	100.03	2000	4.35	4.15
9883-5	7.65	1.80	1	100.17	2000	4.95	4.85
9883-6	6.65	1.70	1	100.01	2000	4.95	4.80
9883-7	7.55	1.70	1	100.05	2000	4.90	4.75
9883-8	6.35	1.70	1	100.08	2000	4.90	4.75
9883-9	6.45	1.65	1	100.02	2000	4.90	4.85
9883-10	6.55	1.80	1	100.35	2000	4.90	4.70
9883-11	6.85	1.55	1	100.09	2000	4.95	4.75
9883-12	6.65	1.75	1	100.02	2000	4.35	4.15
9883-13	6.45	1.70	1	100.13	2000	4.50	4.20
9883-14	5.35	1.65	1	100.37	2000	4.90	4.65
9883-15	6.35	1.65	1	100.05	2000	4.90	4.70
Prep Blank	NR	NR	1	NR	2000	4.85	4.85

% SOLID LOG REFERENCE
NR

Continued on Page

Read and Understood By

[signature] 9/20/94 [signature] 9/26/94

Signed Date Signed Date

10128

COLOR/CLARITY

TCLP Extracts

SAMPLE #	BEFORE COLOR	BEFORE TEXTURE	BEFORE ARTIFACTS (SOIL)	BEFORE CLARITY (WATER)	AFTER COLOR	AFTER CLARITY
9883-4	colorless			clear	colorless	clear
9883-5	colorless			clear	colorless	clear
9883-6	colorless			clear	colorless	clear
9883-7	colorless			clear	colorless	clear
9883-8	colorless			clear	colorless	clear
9883-9	colorless			clear	colorless	clear
9883-10	colorless			clear	colorless	clear
9883-11	colorless			clear	colorless	clear
9883-12	colorless			clear	colorless	clear
9883-13	colorless			clear	colorless	clear
9883-14	colorless			clear	colorless	clear
9883-15	colorless			clear	colorless	clear
9883-1	colorless			clear	colorless	clear
9883-2	colorless			clear	colorless	clear
9883-3	colorless			clear	colorless	clear

CLP STANDARD NOTEBOOK PAGES

10130

Package 9883

Run date 940920

ICP STANDARD PAGES

STANDARD PREPARATION			
	NB #	PAGE	CERT. #
ICAL 1	1484	2/68/65	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

10131

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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DCLipscomb 4-7-94

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
DCLipscomb	4-7-94	O Collier	4-7-94

10132

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

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DCUpchurch 8-29-94

Read and Understood By

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

PROJECT _____ Notebook No. 1127

Continued From Page _____

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

10134

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 deionized water and triple rinsed bottles. All glassware used is class A.

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

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Continued on Page

Read and Understood By

Signed	Date	Signed	Date
DC Upsch	2-21-94	CEat	2-22-94

DC Upsch 4-7-94

10135

Signed	Date	Signed	Date
DC Upsch	4-7-94	J Collier	4-7-94

OJECT _____ 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. Kochelakota, Chemical Production Manager, Date: AUG 93

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DC Lipcraft
7-22-94

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
DC Lipcraft	7/22/94	CEa	7-22-94

10136

4
ROJECT

Notebook No.

Continued From Page

Standard 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. Kochelakota, Chemical Production Manager Date: AUG 94

SPEX

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Continued on Page

Read and Understood By

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

10137

OJECT _____ 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

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4-25-94 JJ

Continued on Page

Read and Understood By

10138

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

Received 8/10/94

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Continued on Page

Read and Understood By

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

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 94

SPEX

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

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DC Upcraft 8-29-94

Continued On Page

Read and Understood By

10140

Signed	Date	Signed	Date
Edwin Black	8/29/94	DC Upcraft	8/29/94

Notebook No. 1427

PROJECT

Continued From Page

SPEX

CERTIFICATE OF ANALYSIS

Catalog Number: INT-A1

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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Continued on Page

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10141

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

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		9/21/94

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
10143

Read and Understood By

Signed | Date | Signed | Date
9/26/98

CRI 1
0.5ml 6-87AS → 25ml HNO_3 → 500ml

Steve Reed
8-2-94
0730

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

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

ICAL 5
1ml of spike 5-45AS → 4ml HNO_3 → 200ml

ICAL 1.2
10ml of spike 5-80AS → 12.5ml HNO_3 → 250ml

ICAL 1.3
20ml of spike 5-80AS → 12.5ml HNO_3 → 250ml

Steve Reed
8-2-94
0900

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
Steve Reed	8-2-94	DC Upcraft	8/2/94

ICAL 2-3.3

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

ICAL 2-3.2

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

ICAL 4.1

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

ICAL 4.3

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

CEat
8-11-94
0915

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
		Debbie Jones	9/27/94

CCVAC

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

CEat
9-13-94
0830

ICAL 1.3

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

CEat
9-13-94
1400

Continued on Page

Read and Understood By

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

PROJECT _____ Notebook No. 1484

Continued From Page _____

CCVAC

2ml OF Spx 6-55AS
2ml OF Spx 6-57AS } → 10 ml HNO_3 → 200 ml

CCVB

1ml OF Spx 6-56AS → 25ml HNO_3 → 500 ml

Clat
8-20-94

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
			9/26/94

10147

PROJECT

Notebook No. 1484

Continued From Page

ICSA

20 ml of spike 6-108 ATS → 10 ml HNO_3 → 200 ml

Steve Red

8-5-94

1030

Continued on Page

Read and Understood By

10148

Signed: Steve Red Date: 8/9/94

Signed: DC Upchurch Date: 8/9/94

USP

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

} 100 ml

Spike Blank P

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

Continued on Page

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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.

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QC Analyst: Ruth Jakes

Date: August 3, 1994

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Phone (508) 454-4442
FAX (508) 452-7429

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C. Hawk 8/4/94

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
C. Hawk	8/4/94	[illegible]	10150 8/10/94

PLASMA-PURE™

Standard Certificate

Catalog Number: 202-00519 **Lot Number:** 402301

Starting Material: 2-% Std 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.

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QC Analyst: Rick Iacs

Date: April 21, 1994

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4-26-94 JRC

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
J Collier	4-26-94	QC Uperaft	4-26-94

10151

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 Martin

Date: April 21, 1994

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4-28-94

Continued on Page

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

10152

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:** 5x 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: Rich Iales

Date: August 3, 1994

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14/94

Continued on Page

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Signed	Date	Signed	Date
[signature]	8/4/94	[signature]	8/10/94

10153

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 Martin

Date: November 30, 1993

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Signed	Date	Signed	Date
J Collier	12-3-93	D C Lepcrafr	12-8-93

10154

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.

SPEX

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Continued on Page

Read and Understood By

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

SOLUTIONS Plus, Inc.
2275 Cassens Dr. • Suite 147 • Fenton, Missouri 63026 • Telephone: 314-349-4922

CERTIFICATE OF CONTENTS

TCLP SPIKE (Toxicity Characteristic Leachate Procedure)

Lot 940513

Expiration Date: May, 1995
(12 months)

Product: Mixed Element Standard
Contains 2500 ppm: Barium
500 ppm: Arsenic, Chromium, Lead, Silver
100 ppm: Cadmium, Selenium

		NIST Std #
Solute: Barium Nitrate	99.999%	3104-292206
Arsenic Trioxide	99.99	3103-292801
Chromium Nitrate	99.99	3112-192210
Lead Metal	99.9995	3128-191312
Silver Metal	99.999	3151-291003
Cadmium Metal	99.999	3108-191507
Selenium Metal	99.999+	3149-190301

Rec'd
5-18-94

Solvent: 5% Nitric Acid, Select

Standardized against NIST Standard.
(Formerly NBS)

Noble Lomax III
Noble Lomax III
Quality Control

5-19-94

Continued on Page

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10156

Signed	Date	Signed	Date
J Collier	5-14-94	DC Upcraft	5-19-94

PROJECT _____ Notebook No. 1484

Continued From Page _____

LCSP

1	Leeman CLP STD	499001	0.5ml	100ml
2	↓	462801	1.0ml	
3	↓	462802	1.0ml	
4	↓	499004	2.0ml	
5	NB1484 P.67	414705	1.0ml	

Spike Blank LP

1ml Spex Spike I Lot # 6-88AS → 100ml

Spike Blank TCLP

1ml Solutions Plus TCLP Spike Lot # 940513 → 100ml

Continued on Page

Read and Understood By

J. Collier — Signed — 9-20-94 — Date

_____ — Signed — 9/20/94 — Date

10157

PROJECT

Continued From Page

Hg Stock Std (See pg 61 NB 1475) 5000 ppb

2 ml of 5000 ppb → 1 ml HNO_3 → 100 ml → 100 ppb

2 ml of 5000 ppb → 1 ml HNO_3 → 100 ml → 100 ppb

Calibration Std
0.5 ml of 100 ppb → 100 ml → 0.5 ppb
1.0 ml of 100 ppb → 100 ml → 1.0 ppb
3.0 ml of 100 ppb → 100 ml → 3.0 ppb
5.0 ml of 100 ppb → 100 ml → 5.0 ppb
10.0 ml of 100 ppb → 100 ml → 10.0 ppb

ICV/CCV/CRA
6.0 ml of 100 ppb → 100 ml → 6.0 ppb
4.0 ml of 100 ppb → 100 ml → 4.0 ppb
CRA 0.5 ml of 100 ppb → 100 ml → 0.5 ppb

D L Robb 9-20-94
0815

Hg Known stock 100 ppb (See pg 46 NB 1123)

4 ml of 100 ppb → 1 ml HNO_3 → 100 ml → 4.0 ppb

D L Robb
9-20-94

Multiblemond (As, Se, Pb, Tl, Sb, Cd, Cr) 1000 ppb Stock See pg 28 NB 1475
(A) 4 ml of 1000 ppb → 1 ml HNO_3 → 100 ml ⇒ 40 ppb
5 ml of 1000 ppb → 1 ml HNO_3 → 100 ml ⇒ 50 ppb
2 ml of 1000 ppb → 1 ml HNO_3 → 100 ml ⇒ 20 ppb

(B) 4 ml of 1000 ppb → 1 ml HNO_3 → 100 ml ⇒ 40 ppb

Blank 0 ml of 1000 ppb → 2 ml HNO_3
CRA - 1 ml CRA Stock standard (pg 38 NB 1426) → 2 ml HNO_3 → 200 ml ⇒ CRA working solution @ CRDL levels.

Continued on Page

AJR 9-20-94
0815 10158

Read and Understood By

Signed Date Signed Date 9/26/94

Hg Stock Standard

Ⓐ Fisher Lot No. 931265-24 - 1000 ppm Expires March 1995

5 ml of 1000 ppm → 10 ml HNO_3 → 1 L ⇒ 5000 ppb

Ⓑ Leeman Labs Lot No. 499005 - 1000 ppm Expires August 1995
Standard certificate on page 11 NB 1487

5 ml of 1000 ppm → 10 ml HNO_3 → 1 L ⇒ 5000 ppb

TCLP Spiking solution
Leeman Labs Lot No. 442003 Expires Feb. 1995
Standard certificate on page 20 NB 1487

1 ml of 1000 ppm → 10 ml HNO_3 → 1 L ⇒ 1000 ppb

Stock expires September 30, 1994

L. Ruemmler 8-31-94
0900

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
L Ruemmler	8-31-94		8/31/94

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
Ruemmler	8/31/94		8/31/1994

9873-1 MS 5ml → 25ml → 5X
9873-1 MSD 5ml → 25ml → 5X
LCSF (Batch 1553) 12.5ml → 25ml → 2X
} in 3% HCL

D L Robb 9-15-94

D.R. 9-20-94
~~Hg dilution~~ Hg dilution

9883-1 MS TCLP
9883-1 MSD TCLP
} 50 ml → 100 ml → 2X

D L Robb 9-20-94

BH dilution

LCS Batch 1557 12.5ml → 25ml → 2X
LCS Batch 1561 12.5ml → 25ml → 2X
8306-9 MS 5ml → 25ml → 5X
8306-9 MSD 5ml → 25ml → 5X
9878-1 MS 5ml → 25ml → 5X
9878-1 MSD 5ml → 25ml → 5X
9878-1 5ml → 25ml → 5X
9878-4 5ml → 25ml → 5X
9879-1 5ml → 25ml → 5X
9879-1 MS 5ml → 25ml → 5X
9879-1 MSD 5ml → 25ml → 5X
} in 3% HCL

D L Robb 9-20-94

8306-9
-9MS
-9MSD
} 1ml SAMPLE → 1000ml ⇒ 1000X IN 1% HNO_3

8306-9
-9MS
-9MSD
} 10ml OF 100X DILUTION ⇒ 100ml ⇒ 10,000X

J. Ruemmler
9-21-94

Continued on Page

Read and Understood By

Signed Date Signed Date 9/27/94