

Friday, September 25, 1998

Los Alamos
NATIONAL LABORATORY

REQUEST NUMBER: 4660R

ANALYSIS TYPE: INORG

ATTN: Maren Beery
KEMRON
109 STARLITE PARK
MARIETTA, OH 45750

Please analyze the enclosed samples
according to the schedule indicated:

These samples are on:

SHIP DATE: 9/25/98
REPORT DUE: 10/25/98
TURN AROUND REQ'D: 30 days

LANL Request Number: 4660R
Per Agreement Number: 7797L0014-9S
Project Cost Code: MR3R12082642

RAD SCREENING: Not Required

COMMENTS: 15 - 1086 , GG;

LANL ER SMO CONTACT: Joylene Valdez MS#H865 5056659968

Signature: 

ANALYSIS ORDER CODE	ANALYTE(S)	SAMPLE ID	CONT ID	SAMPLE MATRIX	DATE SAMPLED	COMMENTS
METTAL		RE15-98-0029	05	S	9/23/98	
METTAL		RE15-98-0030	05	S	9/23/98	
METTAL		RE15-98-0031	05	S	9/23/98	
METTAL		RE15-98-0032	05	S	9/23/98	
METTAL		RE15-98-0033	05	S	9/23/98	
METTAL		RE15-98-0034	05	S	9/23/98	
METTAL		RE15-98-0035	05	S	9/23/98	
METTAL		RE15-98-0036	05	S	9/23/98	
METTAL		RE15-98-0037	05	S	9/23/98	

Friday, September 25, 1998

CHAIN OF CUSTODY DOCUMENT NUMBER: 4660RC

Los Alamos
NATIONAL LABORATORY

REQUEST NUMBER: 4660R
ANALYSIS TYPE: INORG

ATTN: Maren Beery
KEMRON
109 STARLITE PARK
MARIETTA, OH 45750

SAMPLE ID	CONT ID	CONTAINER DESCRIPTION	ANALYSIS ORDER CODE	PRESERVATIVE	MATRIX
RE15-98-0029	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0030	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0031	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0032	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0033	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0034	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0035	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0036	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0037	05	125 ml Polyethylene	METTAL	Ice	S

Final Page of CHAIN OF CUSTODY DOCUMENT FOR REQUEST NUMBER 4660R

Page 1

Relinquished By: _____ Date _____ Time _____

Received By: _____ Date _____ Time _____

PRINTED NAME

S. Hagelberg
SIGNATURE

PRINTED NAME

S. Hagelberg
SIGNATURE

PRINTED NAME

SIGNATURE

PRINTED NAME

SIGNATURE

PRINTED NAME

SIGNATURE

PRINTED NAME

SIGNATURE

Received for DISPOSAL By: _____ Date _____ Time _____

Remarks:

PRINTED NAME

SIGNATURE

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area 15	Send Lab Report to Nancy Ness	Field Unit Leader Roy Michelotti
Operable Unit 1086	M892	(505)665-7444
Date 09/23/98	LANL Destination SMO	Turnaround 30 days
OU Contact John McCann	LANL Contact John Miglio	Lab Report Required 10/23/98
Contact Phone No (505) 665-1091	LANL Mail Stop	Charge Code MR3R12082642

Relinquished by: <i>L. Karl Messers</i> (Signature): Affiliation: ICF Kaiser Engineers, Inc	Date: 9-25-98 (Signature): Affiliation:	Date: (Signature): Affiliation:	Date: (Signature): Affiliation:
Received by: <i>John Miglio</i> (Signature): Affiliation:	Time: 13:55 (Signature): Affiliation:	Time: (Signature): Affiliation:	Time: (Signature): Affiliation:
POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological Highly Toxic Flammable Skin Irritant Non-Hazard Other		SCREENING METHOD: NA SAMPLE DISPOSAL: Disposal by Lab	
Comments:			

Field Unique Cont			Sample		ANALYSIS REQUESTED:		REMARKS (Conditions of receipt, etc.)
Sample #/ID	ID	Date & Time Collected	Container Volume/Material	Matrix	Preserv	(SMO Order Codes)	
RE15-98-0029	01	09/23/98 1345	500 ml Polyethylene	Soil	None	GSPEC	
RE15-98-0029	02	09/23/98 1345	500 ml Polyethylene	Soil	None	H3	
RE15-98-0029	03	09/23/98 1345	125 ml Glass	Soil	Ice	HEXP	
RE15-98-0029	04	09/23/98 1345	125 ml Polyethylene	Soil	None	ISOU	
RE15-98-0029	05	09/23/98 1345	125 ml Polyethylene	Soil	Ice	METAL	
RE15-98-0029	06	09/23/98 1345	125 ml Glass	Soil	Ice	PESTPCB	
RE15-98-0029	07	09/23/98 1345	125 ml Glass	Soil	Ice	SEMIN	
RE15-98-0029	08	09/23/98 1345	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
RE15-98-0030	01	09/23/98 1400	500 ml Polyethylene	Soil	None	GSPEC	
RE15-98-0030	02	09/23/98 1400	500 ml Polyethylene	Soil	None	H3	
RE15-98-0030	03	09/23/98 1400	125 ml Glass	Soil	Ice	HEXP	
RE15-98-0030	04	09/23/98 1400	125 ml Polyethylene	Soil	None	ISOU	

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area 15	Send Lab Report to Nancy Ness	Field Unit Leader Roy Michelotti (505)665-7444
Operable Unit 1086	M892	
Date 09/23/98	LANL Destination SMO	Turnaround 30 days
OU Contact John McCann	LANL Contact John Miglio	Lab Report Required 10/23/98
Contact Phone No (505) 665-1091	LANL Mail Stop	Charge Code MR3R12082642

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
~RE15-98-0030	05	09/23/98 1400	125 ml Polyethylene	Soil	Ice	METAL	
~RE15-98-0030	06	09/23/98 1400	125 ml Glass	Soil	Ice	PESTPCB	
~RE15-98-0030	07	09/23/98 1400	125 ml Glass	Soil	Ice	SEMIN	
~RE15-98-0030	08	09/23/98 1400	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
~RE15-98-0031	01	09/23/98 1410	500 ml Polyethylene	Soil	None	GSPEC	
~RE15-98-0031	02	09/23/98 1410	500 ml Polyethylene	Soil	None	H3	
~RE15-98-0031	03	09/23/98 1410	125 ml Glass	Soil	Ice	HEXP	
~RE15-98-0031	04	09/23/98 1410	125 ml Polyethylene	Soil	None	ISOU	
~RE15-98-0031	05	09/23/98 1410	125 ml Polyethylene	Soil	Ice	METAL	
~RE15-98-0031	06	09/23/98 1410	125 ml Glass	Soil	Ice	PESTPCB	
~RE15-98-0031	07	09/23/98 1410	125 ml Glass	Soil	Ice	SEMIN	
~RE15-98-0031	08	09/23/98 1410	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
~RE15-98-0032	01	09/23/98 1435	500 ml Polyethylene	Soil	None	GSPEC	
~RE15-98-0032	02	09/23/98 1435	500 ml Polyethylene	Soil	None	H3	
~RE15-98-0032	03	09/23/98 1435	125 ml Glass	Soil	Ice	HEXP	
~RE15-98-0032	04	09/23/98 1435	125 ml Polyethylene	Soil	None	ISOU	
~RE15-98-0032	05	09/23/98 1435	125 ml Polyethylene	Soil	Ice	METAL	
~RE15-98-0032	06	09/23/98 1435	125 ml Glass	Soil	Ice	PESTPCB	
~RE15-98-0032	07	09/23/98 1435	125 ml Glass	Soil	Ice	SEMIN	
~RE15-98-0032	08	09/23/98 1435	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
~RE15-98-0033	01	09/23/98 1451	500 ml Polyethylene	Soil	None	GSPEC	
~RE15-98-0033	02	09/23/98 1451	500 ml Polyethylene	Soil	None	H3	
~RE15-98-0033	03	09/23/98 1451	125 ml Glass	Soil	Ice	HEXP	
~RE15-98-0033	04	09/23/98 1451	125 ml Polyethylene	Soil	None	ISOU	
~RE15-98-0033	05	09/23/98 1451	125 ml Polyethylene	Soil	Ice	METAL	

Original - LANL Destination

Yellow - RPF

Pink - FTL Copy

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area	15	Send Lab Report to Nancy Ness	Field Unit Leader	Roy Michelotti
Operable Unit	1086	M892		(505)665-7444
Date	09/23/98	LANL Destination	SMO	Turnaround 30 days
OU Contact	John McCann	LANL Contact	John Miglio	Lab Report Required 10/23/98
Contact Phone No (505)	665-1091	LANL Mail Stop		Charge Code MR3R12082642

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
RE15-98-0033	06	09/23/98 1451	125 ml Glass	Soil	Ice	PESTPCB	
RE15-98-0033	08	09/23/98 1451	125 ml Glass	Soil	Ice	SEMIN	
RE15-98-0033	09	09/23/98 1451	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
RE15-98-0034	01	09/23/98 1505	500 ml Polyethylene	Soil	None	GSPEC	
RE15-98-0034	02	09/23/98 1505	500 ml Polyethylene	Soil	None	H3	
RE15-98-0034	03	09/23/98 1505	125 ml Glass	Soil	Ice	HEXP	
RE15-98-0034	04	09/23/98 1505	125 ml Polyethylene	Soil	None	ISOU	
RE15-98-0034	05	09/23/98 1505	125 ml Polyethylene	Soil	Ice	METTAL	
RE15-98-0034	06	09/23/98 1505	125 ml Glass	Soil	Ice	PESTPCB	
RE15-98-0034	08	09/23/98 1505	125 ml Glass	Soil	Ice	SEMIN	
RE15-98-0034	09	09/23/98 1505	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
RE15-98-0035	01	09/23/98 1525	500 ml Polyethylene	Soil	None	GSPEC	
RE15-98-0035	02	09/23/98 1525	500 ml Polyethylene	Soil	None	H3	
RE15-98-0035	03	09/23/98 1525	125 ml Glass	Soil	Ice	HEXP	
RE15-98-0035	04	09/23/98 1525	125 ml Polyethylene	Soil	None	ISOU	
RE15-98-0035	05	09/23/98 1525	125 ml Polyethylene	Soil	Ice	METTAL	
RE15-98-0035	06	09/23/98 1525	125 ml Glass	Soil	Ice	PESTPCB	
RE15-98-0035	07	09/23/98 1525	125 ml Glass	Soil	Ice	SEMIN	
RE15-98-0035	08	09/23/98 1525	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
RE15-98-0036	01	09/23/98 1540	500 ml Polyethylene	Soil	None	GSPEC	
RE15-98-0036	02	09/23/98 1540	500 ml Polyethylene	Soil	None	H3	
RE15-98-0036	03	09/23/98 1540	125 ml Glass	Soil	Ice	HEXP	
RE15-98-0036	04	09/23/98 1540	125 ml Polyethylene	Soil	None	ISOU	
RE15-98-0036	05	09/23/98 1540	125 ml Polyethylene	Soil	Ice	METTAL	
RE15-98-0036	06	09/23/98 1540	125 ml Glass	Soil	Ice	PESTPCB	

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)
CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area	15	Send Lab Report to Nancy Ness	Field Unit Leader Roy Michelotti
Operable Unit	1086	M892	(505)665-7444
Date	09/23/98	LANL Destination SMO	Turnaround 30 days
OU Contact	John McCann	LANL Contact John Miglio	Lab Report Required 10/23/98
Contact Phone	No (505) 665-1091	LANL Mail Stop	Charge Code MR3R12082642

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
RE15-98-0036	08	09/23/98 1540	125 ml Glass	Soil	Ice	SEMIN	
RE15-98-0036	09	09/23/98 1540	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	
RE15-98-0037	01	09/23/98 1554	500 ml Polyethylene	Soil	None	GSPEC	
RE15-98-0037	02	09/23/98 1554	500 ml Polyethylene	Soil	None	H3	
RE15-98-0037	03	09/23/98 1554	125 ml Glass	Soil	Ice	HEXP	
RE15-98-0037	04	09/23/98 1554	125 ml Polyethylene	Soil	None	ISOU	
RE15-98-0037	05	09/23/98 1554	125 ml Polyethylene	Soil	Ice	METAL	
RE15-98-0037	06	09/23/98 1554	125 ml Glass	Soil	Ice	PESTPCB	
RE15-98-0037	07	09/23/98 1554	125 ml Glass	Soil	Ice	SEMIN	
RE15-98-0037	08	09/23/98 1554	125 ml Septum Amber G	Soil	Ice	VOAGCMSN	

SCREENING DATA RELEASE FORM

To: Field Support Facility

From: KARL MANESS, JCF KE

TA/OU: ~~1086/15~~ TA-15/1086

The following samples were received at the Field Support Facility (FSF) without screening data.

SAMPLE #

I understand that these samples will not be shipped until radiological screening data and corresponding C-O-C documentation arrive at the FSF. I further understand that it is my responsibility to ensure this information arrives in a timely manner to the FSF. If holding times are missed because screening data does arrive, I will pick up the samples and return them to the site from which they were collected.

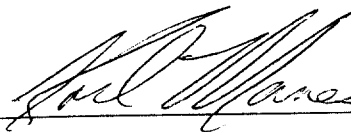
The following samples do not require screening data for the reasons stated below:

SAMPLES # RE 15-98-0029 thru RE 15-98-0037

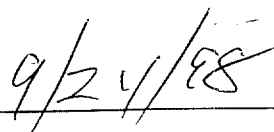
Reason:

Field Screening Data Attached

Signature



Date



Los Alamos National Laboratory
Los Alamos, NM 87545

Date: 09/24/98

NOTIFICATION OF RADIOACTIVE MATERIAL SHIPMENT

To: SND

Phone/Fax No. _____

From: ICF Kaiser

Phone/Fax No. 505 661-5200 661-5222

Please expect the following samples to arrive at your laboratory.

Sample ID #	Isotope (if known)	Activity per Unit Mass or Volume (pCi/g, μ Ci/L, etc.)	Contamination Level (d/m/100cm ²)		Comments
			Gross α	Gross β	
<u>REL5-98-0029</u>	<u>Du</u>	<u>< 2</u>	<u>NDA</u>	<u>NDA</u>	<u>Dry Soil</u>
<u>30</u>					
<u>31</u>					
<u>32</u>					
<u>33</u>					
<u>34</u>					
<u>35</u>					
<u>36</u>					
<u>37</u>	<u>Du</u>	<u>< 2</u>	<u>NDA</u>	<u>NDA</u>	<u>Dry Soil</u>

Screening Instrument: Ludlum 2221 w 2x2 Ludlum Model 12 P/C Probe

Analyst: Ph Bahr

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

COPY

Login #: L9809521
Report Date: 10/20/98
Work ID: 4660R/MR3R12082642
Date Received: 09/26/98

Los Alamos National Laboratory
SMO, TA-3, Bldg. 271
MS H865, Drop Point OIU
Los Alamos, NM 87545
Attention: Joylene Valdez

PO Number:
Account Number: LANL-295

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9809521-01	RE15-98-0029	L9809521-02	RE15-98-0030
L9809521-03	RE15-98-0031	L9809521-04	RE15-98-0032
L9809521-05	RE15-98-0033	L9809521-06	RE15-98-0034
L9809521-07	RE15-98-0035	L9809521-08	RE15-98-0036
L9809521-09	RE15-98-0037		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Maren M. Beery

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 98
COC Info: N/A

Lab Sample ID: L9809521-01
Client Sample ID: RE15-98-0029
Site/Work ID: 4660R/MR3R12082642

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	98		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....	mg/kg			2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Aluminum, Total.....	mg/kg	8300	ND	5.1	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Arsenic, Total.....	mg/kg	2.9		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Barium, Total.....	mg/kg	56		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Beryllium, Total.....	mg/kg	0.58		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Calcium, Total.....	mg/kg	1200		10	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Cadmium, Total.....	mg/kg		ND	0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Cobalt, Total.....	mg/kg	2.8		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Chromium, Total.....	mg/kg	5.4		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Copper, Total.....	mg/kg	3.3		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Iron, Total.....	mg/kg	8800	ND	2.0	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Mercury, Total.....	mg/kg			0.10	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Potassium, Total.....	mg/kg	1000		51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Magnesium, Total.....	mg/kg	1100		26	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Manganese, Total.....	mg/kg	230		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Sodium, Total.....	mg/kg	64		26	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Nickel, Total.....	mg/kg	3.9		2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Lead, Total.....	mg/kg	7.8		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Antimony, Total.....	mg/kg		ND	10	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Selenium, Total.....	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Thallium, Total.....	mg/kg		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total.....	mg/kg	10	ND	0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Zinc, Total.....	mg/kg	31		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 92
COC Info: N/A

Lab Sample ID: L9809521-02
Client Sample ID: RE15-98-0030
Site/Work ID: 4660R/MR3R12082642

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	92		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....	mg/kg			2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Aluminum, Total.....	mg/kg	6100	ND	5.4	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Arsenic, Total.....	mg/kg	2.9		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Barium, Total.....	mg/kg	50		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Beryllium, Total.....	mg/kg	0.58		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #19809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-02
Client Sample ID: RE15-98-0030
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 92
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Calcium, Total	mg/kg	980		11	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Cadmium, Total	mg/kg		ND	0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Cobalt, Total	mg/kg	2.3		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Chromium, Total	mg/kg	4.1		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Copper, Total	mg/kg	3.2		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Iron, Total	mg/kg	7800		2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total	mg/kg	740		54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Magnesium, Total	mg/kg	880		27	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Manganese, Total	mg/kg	260		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Sodium, Total	mg/kg	92		27	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Nickel, Total	mg/kg	3.8		2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Lead, Total	mg/kg	7.2		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Antimony, Total	mg/kg		ND	11	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Selenium, Total	mg/kg		ND	1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Thallium, Total	mg/kg		ND	0.27	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	7.7		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Zinc, Total	mg/kg	32		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A

% Solid: 93
COC Info: N/A

Matrix: Soil
Collected: 09/23/98 N/A

Lab Sample ID: L9809521-03
Client Sample ID: RE15-98-0031
Site/Work ID: 4660R/MR3R12082642

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	93		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total	mg/kg					N/A	JYH	10/16/98	10:58	6010B\3050A
Aluminum, Total	mg/kg	6400	ND	2.2	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Arsenic, Total	mg/kg	2.8		5.4	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Barium, Total	mg/kg	57		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Beryllium, Total	mg/kg		ND	0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Calcium, Total	mg/kg	920		0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Cadmium, Total	mg/kg		ND	11	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Cobalt, Total	mg/kg	4.0		0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Chromium, Total	mg/kg	4.8		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Copper, Total	mg/kg	3.3		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Iron, Total	mg/kg	8200		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A

RL - Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-03
Client Sample ID: RE15-98-0031
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 93
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time Method
Potassium, Total	mg/kg	820		54	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Magnesium, Total	mg/kg	890		27	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Manganese, Total	mg/kg	330		0.54	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Sodium, Total	mg/kg	74		27	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Nickel, Total	mg/kg	4.0		2.2	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Lead, Total	mg/kg	8.9		1.1	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Antimony, Total	mg/kg		ND	11	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Selenium, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Thallium, Total	mg/kg		ND	0.27	1	N/A	CRC	10/20/98	09:00 7841
Vanadium, Total	mg/kg	8.2		0.54	1	N/A	JYH	10/16/98	10:58 6010B\3050A
Zinc, Total	mg/kg	32		1.1	1	N/A	JYH	10/16/98	10:58 6010B\3050A

Lab Sample ID: L9809521-04
Client Sample ID: RE15-98-0032
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 97
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time Method
Percent Solids	% wt.	97		1.0	1	N/A	DKM	10/15/98	13:50 D2216-90
Silver, Total	mg/kg			2.1	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Aluminum, Total	mg/kg	6200	ND	5.2	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Arsenic, Total	mg/kg	2.6		1.0	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Barium, Total	mg/kg	56		0.52	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Beryllium, Total	mg/kg	910	ND	0.52	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Calcium, Total	mg/kg			10	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Cadmium, Total	mg/kg	2.6		0.52	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Cobalt, Total	mg/kg	4.9		1.0	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Chromium, Total	mg/kg	3.2		1.0	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Copper, Total	mg/kg	8300		2.1	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Iron, Total	mg/kg			0.10	1	N/A	KRA	10/01/98	10:12 7471A
Mercury, Total	mg/kg		ND	52	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Potassium, Total	mg/kg	820		26	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Magnesium, Total	mg/kg	900		26	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Manganese, Total	mg/kg	260		0.52	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Sodium, Total	mg/kg	55		2.1	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Nickel, Total	mg/kg	3.6		2.1	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Lead, Total	mg/kg	7.7		1.0	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Antimony, Total	mg/kg		ND	10	1	N/A	JYH	10/16/98	11:13 6010B\3050A

RL - Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-04
Client Sample ID: R815-98-0032
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 97
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time Method
Selenium, Total	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Thallium, Total	mg/kg		ND	0.26	1	N/A	CRC	10/20/98	09:00 7841
Vanadium, Total	mg/kg	8.9		0.52	1	N/A	JYH	10/16/98	11:13 6010B\3050A
Zinc, Total	mg/kg	34		1.0	1	N/A	JYH	10/16/98	11:13 6010B\3050A

Lab Sample ID: L9809521-05
Client Sample ID: R815-98-0033
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 98
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time Method
Percent Solids	% wt.	98		1.0	1	N/A	DKM	10/15/98	13:50 D2216-90
Silver, Total	mg/kg		ND	2.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Aluminum, Total	mg/kg	4300		5.1	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Arsenic, Total	mg/kg	2.2		1.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Barium, Total	mg/kg	34		0.51	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Beryllium, Total	mg/kg		ND	0.51	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Calcium, Total	mg/kg	710		10	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Cadmium, Total	mg/kg		ND	0.51	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Cobalt, Total	mg/kg	1.6		1.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Chromium, Total	mg/kg	3.2		1.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Copper, Total	mg/kg	2.7		1.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Iron, Total	mg/kg	6400		2.0	1	N/A	KRA	10/01/98	10:12 7471A\7471A
Mercury, Total	mg/kg		ND	0.10	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Potassium, Total	mg/kg	500		51	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Magnesium, Total	mg/kg	630		26	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Manganese, Total	mg/kg	220		0.51	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Sodium, Total	mg/kg	60		26	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Nickel, Total	mg/kg	2.9		2.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Lead, Total	mg/kg	6.4		1.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Antimony, Total	mg/kg		ND	10	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Selenium, Total	mg/kg		ND	1.0	1	N/A	JYH	10/20/98	09:00 7841
Thallium, Total	mg/kg		ND	0.26	1	N/A	CRC	10/16/98	11:16 6010B\3050A
Vanadium, Total	mg/kg	5.6		0.51	1	N/A	JYH	10/16/98	11:16 6010B\3050A
Zinc, Total	mg/kg	28		1.0	1	N/A	JYH	10/16/98	11:16 6010B\3050A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-06
Client Sample ID: RE15-98-0034
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 97
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	97		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....		ND	2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Aluminum, Total.....	5400		5.2	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Arsenic, Total.....	2.2		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Barium, Total.....	34		0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Beryllium, Total.....		ND	0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Calcium, Total.....	800		10	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Cadmium, Total.....		ND	0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Cobalt, Total.....	1.5		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Chromium, Total.....	3.5		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Copper, Total.....	3.0		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Iron, Total.....	6800		2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Mercury, Total.....		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total.....	640		52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Magnesium, Total.....	720		26	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Manganese, Total.....	190		0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Sodium, Total.....	62		26	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Nickel, Total.....	2.9		2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Lead, Total.....	6.0		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Antimony, Total.....		ND	10	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Selenium, Total.....		ND	1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Thallium, Total.....		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total.....	5.9		0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Zinc, Total.....	28		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 94
COC Info: N/A

Lab Sample ID: L9809521-07
Client Sample ID: RE15-98-0035
Site/Work ID: 4660R/MR3R12082642

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	94		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....		ND	2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Aluminum, Total.....	3500		5.3	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Arsenic, Total.....	2.3		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Barium, Total.....	28		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Beryllium, Total.....		ND	0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A

RL - Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-07
Client Sample ID: RE15-98-0035
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 94
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Calcium, Total	mg/kg	590	ND	11	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Cadmium, Total	mg/kg			0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Cobalt, Total	mg/kg	1.9		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Chromium, Total	mg/kg	3.3		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Copper, Total	mg/kg	2.1		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Iron, Total	mg/kg	9500		2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total	mg/kg	460		53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Magnesium, Total	mg/kg	490		27	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Manganese, Total	mg/kg	230		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Sodium, Total	mg/kg	41		27	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Nickel, Total	mg/kg		ND	2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Lead, Total	mg/kg	5.8		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Antimony, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Selenium, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Thallium, Total	mg/kg		ND	0.27	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	8.0		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Zinc, Total	mg/kg	42		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 95
COC Info: N/A

Lab Sample ID: L9809521-08
Client Sample ID: RE15-98-0036
Site/Work ID: 4660R/MR3R12082642

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	95		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total	mg/kg		ND	2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Aluminum, Total	mg/kg	3400		5.3	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Arsenic, Total	mg/kg	2.4		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Barium, Total	mg/kg	29		0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Beryllium, Total	mg/kg		ND	0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Calcium, Total	mg/kg	590		11	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Cadmium, Total	mg/kg		ND	0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Cobalt, Total	mg/kg	1.3		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Chromium, Total	mg/kg	3.6		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Copper, Total	mg/kg	2.2		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Iron, Total	mg/kg	6700		2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A

RL - Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-08
Client Sample ID: RE15-98-0036
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 95
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Potassium, Total	mg/kg	460		53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Magnesium, Total	mg/kg	510		26	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Manganese, Total	mg/kg	250		0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Sodium, Total	mg/kg	71		26	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Nickel, Total	mg/kg	3.1		2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Lead, Total	mg/kg	6.3		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Antimony, Total	mg/kg		ND	11	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Selenium, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Thallium, Total	mg/kg		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	4.6		0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Zinc, Total	mg/kg	31		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 100
COC Info: N/A

Lab Sample ID: L9809521-09
Client Sample ID: RE15-98-0037
Site/Work ID: 4660R/MR3R12082642

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	100		1.0	1	N/A	DKM	10/15/98	14:40	D2216-90
Silver, Total	mg/kg		ND	2.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Aluminum, Total	mg/kg	2200		5.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Arsenic, Total	mg/kg	1.3		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Barium, Total	mg/kg	20		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Beryllium, Total	mg/kg	2.4		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Calcium, Total	mg/kg	350		10	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Cadmium, Total	mg/kg		ND	0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Cobalt, Total	mg/kg	1.3		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Chromium, Total	mg/kg	1.6		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Copper, Total	mg/kg	1.7		2.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Iron, Total	mg/kg	3900		0.10	1	N/A	KRA	10/01/98	10:12	7471A
Mercury, Total	mg/kg		ND	50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Potassium, Total	mg/kg	300		25	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Magnesium, Total	mg/kg	330		25	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Manganese, Total	mg/kg	150		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Sodium, Total	mg/kg	136		25	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Nickel, Total	mg/kg		ND	2.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Lead, Total	mg/kg	4.8		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Antimony, Total	mg/kg		ND	10	1	N/A	JYH	10/16/98	11:30	6010B\3050A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-09
Client Sample ID: RE15-98-0037
Site/Work ID: 4660R/RE3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 100
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Selenium, Total	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Thallium, Total	mg/kg		ND	0.25	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	2.9		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Zinc, Total	mg/kg	17		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A

RL = Reporting Limit

KEMRON Environmental Services
 109 Starlite Park
 Marietta, Ohio 45750
 Phone: (740) 373-4071

Los Alamos National Laboratory
 SMO, TA-3, Bldg. 271
 MS H865, Drop Point 01U
 Los Alamos, NM 87545
 Attention: Joylene Valdez

Login #: L9809521
 Report Date: 10/20/98
 Work ID: 4660R/MR3R12082642
 Date received: 09/26/98

PO Number:
 Account Number: LANL-295

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9809521-01	RE15-98-0029	L9809521-02	RE15-98-0030
L9809521-03	RE15-98-0031	L9809521-04	RE15-98-0032
L9809521-05	RE15-98-0033	L9809521-06	RE15-98-0034
L9809521-07	RE15-98-0035	L9809521-08	RE15-98-0036
L9809521-09	RE15-98-0037		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10801

Maren M. Beery
 Certified By
 Maren M. Beery

John M. O-
 11/6/98

New

DATA PACKAGE (S) COC

TO:
EDIT/VALIDATION
ICF KAISER
505-661-5736

FROM: LOS ALAMOS NATL. LAB
SAMPLE MANAGEMENT
TA-3 BLDG. 271 MS: H865
LOS ALAMOS, NM
505-665-9968 OR 665-9967

This Chain of Custody is for the following data packages by REQUEST NUMBERS:

4685 / 4793 / 4660 / 4848 /
_____, _____, _____, _____,

Relinquished:

Jay Leavelle / 11-6-98
signature date

Data Packages receives:

Hert McR / 11/6/98
signature date

_____/_____
signature date (data relinquished)

_____/_____
signature date (data receives)

New

10043
208

DATA PACKAGE (S) COC

TO:
EDIT/VALIDATION
ICF KAISER
505-661-5736

FROM: LOS ALAMOS NATL. LAB
SAMPLE MANAGEMENT
TA-3 BLDG. 271 MS: H865
LOS ALAMOS, NM
505-665-9968 OR 665-9967

This Chain of Custody is for the following data packages by REQUEST NUMBERS:

4685, 4793, 4660, 4848,
_____, _____, _____, _____,

Relinquished:

Jay L. Wray, 11-6-98
signature date

Data Packages receives:

Herk McEl, 11/6/98
signature date

[Signature], 2/8/99 (data relinquished)
signature date

Jay L. Wray, 2-8-99 (data receives)
signature date

CHAIN OF CUSTODY FORM (Example)

SECTION I DATA PACKAGE INFORMATION (Relinquisher completes)

New Issue ☒ Yes ☐ No

Request Number(s):

4660

Data Package Requestor (check one):

☒ Editing/Validation

☐ User

Name (print)

Phone

Libby L. Gallegos

(505) 661-5758

Focus Area:

Z Number:

151019

SECTION II AUTHORIZING SIGNATURES (Relinquished/Received signatures)

Relinquished By:

Date:

6-12-01

I accept custody of the above listed data package(s).

Received By:

Date:

6/12/01

Relinquished By:

Date:

6/19/01

I accept custody of the above listed data package(s).

Received By:

Date:

6-19-01

Comments:

Los Alamos

Environmental Restoration Project

CHAIN OF CUSTODY FORM (Example)

SECTION I. DATA PACKAGE INFORMATION (Refinquirer completes)

New Issue ☒ Yes ☐ No

Request Number(s):

4660

Data Package Requestor (check one):

☒ Editing/Validation

☐ User

Name (print)

Phone

Libby L. Gallegos
505 661-5758

Focus Area:

Z Number:

151019

SECTION II. AUTHORIZING SIGNATURES (Relinquished/Received signatures)

Relinquished By:

Date:

6-12-01

I accept custody of the above listed data package(s).

Received By:

Date:

6/12/01

Relinquished By:

Date:

I accept custody of the above listed data package(s).

Received By:

Date:

Comments:

CCS/VALIDATION COVER SHEET

M Code _____ SDG/RN: **4660R** LAB NAME: **Kemron** LAB CODE _____

NAME OF VALIDATOR: **Herman Ramsey** COMPANY: **ICF Kaiser**

VALIDATION DATE: 12-Jan-99 EDS ENTRY DATE

ANALYTICAL SUITE:

<input type="radio"/> VOLATILES	<input type="radio"/> HIGH EXPLOSIVES
<input type="radio"/> SEMIVOLATILES	<input checked="" type="radio"/> INORGANICS
<input type="radio"/> PESTICIDES/AROCLORS	<input type="radio"/> RADIOCHEMISTRY

GENERAL CHECKLIST

PRESENT?

Ö if "yes"

0 if "no"

1. Case Narrative _____
2. Airbills (no. Of shipments____) _____
3. Chain-of-custody records _____
4. Sample tags _____
5. Sample log-in sheets _____
6. Internal lab sample transfer records
and tracking sheets _____
7. Other? Identify _____

Are all samples assigned to the SDG present? YES NO
Identify any samples in the assigned SDG/RN that are missing

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Comments/problems noted, including information about requests to the laboratory and agreed upon data of resolution and lab contact: (attach additional comment sheets as necessary)

Signature/1st validation: Herman Ramsey 1/12/99

Signature/2nd validation: _____

Qualifiers entered by: _____ Date: _____

CCS AND VALIDATION

Explanation of qualifiers (Q):

- U The analyte was analyzed for but not detected above the reported EQL
- J The analyte was positively identified, the associated numerical value is the approximate concentration of the analyte in the sample
 - J+ Likely has a high bias
 - J- Likely has a low bias
- UJ The analyte was analyzed for but not detected. The associated value is an estimate
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. Presence or absence cannot be verified.

Note: Any results qualified as "R" should be looked at for relevance for data use. Thus, "R" implies "PM" also, and must not be used alone
- P Use professional judgement based on data use . It usually has an "M" with it, indicating that a manual check should be made if the data that is qualified with the "P" is important to the data user.

In addition, PM also means that a decision must be made by the project manager/delegee regarding the need for further review of the data. This review should include some consideration of potential impact that could result from using the P qualified data. (For example, in the case of holding time exceedance, the project manager/delegee can decide to use the data with no qualification when analyltes of interest are known to not be adversely affected by holding time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria. Since this is likley because of sample non-homogeneity rather than lab error, the manager/delegee must decide how to use the data.)

- PM Manual review of raw data is recommended to determine if the defect impacts data use, as in "R" above.

REASON CODES FOR VALIDATION QUALIFIERS

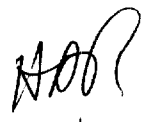
INORGANICS (I)

- 3 Spike recovery > upper limit (125%) and the results > the EDL.
- 3a Spike recovery < lower limit (75%) and the results are > the EDL.
- 3d Spike recovery < 30 % and results < EDL.
- 3e Spike recovery 30-74% and sample results < EDL.
- 4 Using the worse case blank, the sample results > the EDL but < 5X the concentration of the related analyte in the blank.
- 6 Recovery of analyte in the LCS > upper limit.
- 6a Recovery of analyte in the LCS < lower limit.
- 7 ICS recovery > 120% and results > EDL.
- 7a ICS recovery 50-79% .
- 7b ICS recovery < 50% and result < EDL.
- 8a For ICV and CCV, recovery is lower than specification
- 8b For ICV and CCV, recovery is higher than specification
- 8c For ICV and CCV, results are positive, but < MDL and recovery is lower than the specification.
- 8d For ICV and CCV, recovery is extremely low and detection may be impaired.
- 8e For ICV and CCV, recovery is abnormally high - apply to results > MDL.

- 9 Holding time for Hg has been exceeded. Positive results may be biased low and non-detects may potential be false negatives.

INORGANICS

<u>Calibration</u> Present? <input type="checkbox"/> yes no <u>Initial calibration verification</u> Present? <input type="checkbox"/> yes no <u>Continuing calibration verification</u> Present? <input type="checkbox"/> yes no	OK	Obtain from lab. Q=A	
<u>Blanks</u> (Applies to each) Present? <input type="checkbox"/> yes no <u>Initial & continuing calibration blanks</u> Analyze at each wavelength Beginning and end of each run ICB and CCB analyzed at a frequency of 10% or 2 hours If blank results > EDL reanalyze previous 10 samples <u>Preparation blank</u> One per batch ≤ EDL, or if concentration of analyte < 10X EDL, repeat all samples in batch	See comment	Obtain from lab. Q=A Use "worse" case blank. Sample results > EDL but < 5 X amount found in the blank should be qualified as <u>U</u> . <i>The following analyte was detected in the blank: Al, and Hg.</i> <i>The following analytes were detected in the ICB /or CCB: Al, and TI.</i>	<u>14</u>


1/12/99

<u>ICP Interference check sample</u> Present? ☐ yes no Solution contains Ag, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, V, & Zn Analyze at beginning of each run Each wavelength used for samples ICS results must be ± 20% of true value	OK	Obtain from lab. Q=A If the ICS recovery is >120% and the results are >EDL, qualify data as <u>J+</u> If recovery is 50-79%, qualify data as <u>J-</u> If ICS recovery is < 50% and results are < EDL, qualify results as <u>R</u> , <u>PM</u>	17 17a 17b				
<u>Spike sample analysis</u> Present? ☐ yes no One per run, per matrix, concentration, SDG % recovery: 75-125% (unless conc. > 4X spike conc.) <table><tr><td>Analyte</td><td>%Recovery</td></tr><tr><td>Mn</td><td>39.0</td></tr></table>	Analyte	%Recovery	Mn	39.0	J- See list	Obtain from lab. Q=A If spike recovery > 125% and results < EDL, OK If spike recovery < 75% and results are >EDL, qualify results as <u>J-</u> if same matrix, <u>P</u> if not. If spike recovery > 125% and results are >EDL, qualify data as <u>J+</u> if same matrix, <u>P</u> if not. If spike recovery 30-74% and sample results < EDL, qualify as <u>UJ</u> if same matrix, <u>P</u> if not. If spike recovery results < 30% and results < EDL, qualify as <u>R</u> , <u>PM</u> .	
Analyte	%Recovery						
Mn	39.0						

ND02
1/12/99

<p><u>Duplicate</u></p> <p>Present? <input checked="" type="checkbox"/> yes no</p> <p>One per batch of sample of like matrix for each SDG</p> <p>RPD : $\leq 20\%$ (advisory)</p> <p>If either the sample or duplicate value is less than 5 X EDL, there is a control limit of \pm EDL</p>	P	<p>Obtain from lab. Q=A</p> <p>Q=P because of nature of LANL samples.</p> <p><i>The following analytes exceeded %rpd limit: As, Ba, Cu, Pb, Mg, K, Tl, V, and Zn.</i></p>	
<p><u>Laboratory Control Sample (LCS)</u></p> <p>Aqueous LCS per batch/SDG</p> <p>% recovery : 80-120% (except Ag & Sb)</p> <p>A solid LCS was analyzed for this rn. All recoveries met aqueous criteria.</p>	OK	<p>If criterion not met, qualify each analyte associated with the LCS in the same batch as <u>J-</u></p> <p>for < 80% and <u>J+</u> for > 120%</p>	<p><u>I6a</u></p> <p><u>I6</u></p>
<p>Holding time</p> <p>Analyze water samples for Hg within 28 days of sample collection</p> <p>Analyze water samples for CN within 14 days of sample collection</p>	NA	<p>Compare analysis date with date of sample collection on the Analysis Request.</p> <p>Q=PM</p>	

HOR
1/2/99

Login #L9809521
October 20, 1998 04:28 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-01
Client Sample ID: RE15-98-0029
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 98
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	98		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....	mg/kg		ND	2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Aluminum, Total.....	mg/kg	8300		5.1	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Arsenic, Total.....	mg/kg	2.9		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Barium, Total.....	mg/kg	56		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Beryllium, Total.....	mg/kg	0.58		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Calcium, Total.....	mg/kg	1200		10	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Cadmium, Total.....	mg/kg		ND	0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Cobalt, Total.....	mg/kg	2.8		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Chromium, Total.....	mg/kg	5.4		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Copper, Total.....	mg/kg	3.3		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Iron, Total.....	mg/kg	8800		2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Potassium, Total.....	mg/kg		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Magnesium, Total.....	mg/kg	1000		51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Manganese, Total.....	mg/kg	1100		26	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Sodium, Total.....	mg/kg	230	(P)	0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Nickel, Total.....	mg/kg	64		26	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Lead, Total.....	mg/kg	3.9	(P)	2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Antimony, Total.....	mg/kg	7.8	(P)	1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Selenium, Total.....	mg/kg		ND	10	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Thallium, Total.....	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Vanadium, Total.....	mg/kg	10		0.26	1	N/A	CRC	10/20/98	09:00	7841
Zinc, Total.....	mg/kg	31	(P)	0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
	mg/kg			1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A

Lab Sample ID: L9809521-02
Client Sample ID: RE15-98-0030
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 92
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	92		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....	mg/kg		ND	2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Aluminum, Total.....	mg/kg	6100		5.4	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Arsenic, Total.....	mg/kg	2.9		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Barium, Total.....	mg/kg	50		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Beryllium, Total.....	mg/kg	0.58		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A

RL = Reporting Limit

KOR
1/12/99

Login #L9809521
October 20, 1998 04:28 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-02
Client Sample ID: RE15-98-0030
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 92
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Calcium, Total	mg/kg	980		11	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Cadmium, Total	mg/kg		ND	0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Cobalt, Total	mg/kg	2.3		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Chromium, Total	mg/kg	4.1		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Copper, Total	mg/kg	3.2		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Iron, Total	mg/kg	7800		2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total	mg/kg	740		54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Magnesium, Total	mg/kg	880		27	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Manganese, Total	mg/kg	260 (J-13a)		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Sodium, Total	mg/kg	92		27	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Nickel, Total	mg/kg	3.8		2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Lead, Total	mg/kg	7.2 (P)		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Antimony, Total	mg/kg		ND	11	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Selenium, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Thallium, Total	mg/kg		ND	0.27	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	7.7		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Zinc, Total	mg/kg	32 (P)		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A

Lab Sample ID: L9809521-03
Client Sample ID: RE15-98-0031
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 93
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	93		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total	mg/kg		ND	2.2	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Aluminum, Total	mg/kg	6400		5.4	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Arsenic, Total	mg/kg	2.8		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Barium, Total	mg/kg	57		0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Beryllium, Total	mg/kg		ND	0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Calcium, Total	mg/kg	920		11	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Cadmium, Total	mg/kg		ND	0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Cobalt, Total	mg/kg	4.0		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Chromium, Total	mg/kg	4.8		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Copper, Total	mg/kg	3.3		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Iron, Total	mg/kg	8200		2.2	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A

RL = Reporting Limit

KOP
1/12/99

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-03
Client Sample ID: RE15-98-0031
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 93
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Potassium, Total	mg/kg	820		54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Magnesium, Total	mg/kg	890		27	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Manganese, Total	mg/kg	330	(J-134)	0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Sodium, Total	mg/kg	74		27	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Nickel, Total	mg/kg	4.0	(P)	2.2	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Lead, Total	mg/kg	8.9	(P)	1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Antimony, Total	mg/kg		ND	11	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Selenium, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Thallium, Total	mg/kg		ND	0.27	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	8.2	(P)	0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Zinc, Total	mg/kg	32	(P)	1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A

Lab Sample ID: L9809521-04
Client Sample ID: RE15-98-0032
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 97
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	97		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total	mg/kg			2.1	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Aluminum, Total	mg/kg	6200	ND	5.2	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Arsenic, Total	mg/kg			1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Barium, Total	mg/kg	56		0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Beryllium, Total	mg/kg		ND	0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Calcium, Total	mg/kg	910		10	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Cadmium, Total	mg/kg		ND	0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Cobalt, Total	mg/kg	2.6		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Chromium, Total	mg/kg	4.9		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Copper, Total	mg/kg	3.2		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Iron, Total	mg/kg	8300		2.1	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Mercury, Total	mg/kg		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total	mg/kg	820		52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Magnesium, Total	mg/kg	900		26	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Manganese, Total	mg/kg	260	(J-134)	0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Sodium, Total	mg/kg	55		26	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Nickel, Total	mg/kg	3.6	(P)	2.1	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Lead, Total	mg/kg	7.7	(P)	1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Antimony, Total	mg/kg		ND	10	1	N/A	JYH	10/16/98	11:13	6010B\3050A

RL = Reporting Limit

1/12/99

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-04
Client Sample ID: RE15-98-0032
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 97
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Selenium, Total	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Thallium, Total	mg/kg		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	8.9	(P)	0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Zinc, Total	mg/kg	34	(P)	1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A

Lab Sample ID: L9809521-05
Client Sample ID: RE15-98-0033
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 98
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	98		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total	mg/kg		ND	2.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Aluminum, Total	mg/kg	4300		5.1	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Arsenic, Total	mg/kg	2.2		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Barium, Total	mg/kg	34		0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Beryllium, Total	mg/kg		ND	0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Calcium, Total	mg/kg	710		10	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Cadmium, Total	mg/kg		ND	0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Cobalt, Total	mg/kg	1.6		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Chromium, Total	mg/kg	3.2		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Copper, Total	mg/kg	2.7		2.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Iron, Total	mg/kg	6400		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Mercury, Total	mg/kg		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total	mg/kg	500		51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Magnesium, Total	mg/kg	630		26	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Manganese, Total	mg/kg	220 (T, T3A)		0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Sodium, Total	mg/kg	60		26	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Nickel, Total	mg/kg	2.9		2.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Lead, Total	mg/kg	6.4 (P)		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Antimony, Total	mg/kg		ND	10	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Selenium, Total	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Thallium, Total	mg/kg		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	5.6	(P)	0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Zinc, Total	mg/kg	28	(P)	1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A

NOB
1/12/97

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-06
Client Sample ID: RE15-98-0034
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 97
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	97		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....	mg/kg		ND	2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Aluminum, Total.....	mg/kg	5400		5.2	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Arsenic, Total.....	mg/kg	2.2		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Barium, Total.....	mg/kg	34		0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Beryllium, Total.....	mg/kg	800	ND	0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Calcium, Total.....	mg/kg			10	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Cadmium, Total.....	mg/kg		ND	0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Cobalt, Total.....	mg/kg	1.5		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Chromium, Total.....	mg/kg	3.5		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Copper, Total.....	mg/kg	3.0		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Iron, Total.....	mg/kg	6800		2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Mercury, Total.....	mg/kg		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total.....	mg/kg	640		52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Magnesium, Total.....	mg/kg	720		26	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Manganese, Total.....	mg/kg	190	(1-134)	0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Sodium, Total.....	mg/kg	62		26	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Nickel, Total.....	mg/kg	2.9	(P)	2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Lead, Total.....	mg/kg	6.0	(P)	1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Antimony, Total.....	mg/kg		ND	10	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Selenium, Total.....	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Thallium, Total.....	mg/kg		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total.....	mg/kg	5.9		0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Zinc, Total.....	mg/kg	28	(P)	1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A

Lab Sample ID: L9809521-07
Client Sample ID: RE15-98-0035
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 94
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	94		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....	mg/kg		ND	2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Aluminum, Total.....	mg/kg	3500		5.3	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Arsenic, Total.....	mg/kg	2.3		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Barium, Total.....	mg/kg	28		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Beryllium, Total.....	mg/kg		ND	0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A

RL = Reporting Limit

KD
1/12/99

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-07
Client Sample ID: RE15-98-0035
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 94
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Calcium, Total	mg/kg	590		11	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Cadmium, Total	mg/kg		ND	0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Cobalt, Total	mg/kg	1.9		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Chromium, Total	mg/kg	3.3		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Copper, Total	mg/kg	2.1		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Iron, Total	mg/kg	9500		2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total	mg/kg	460		53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Magnesium, Total	mg/kg	490		27	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Manganese, Total	mg/kg	230 (J-134)		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Sodium, Total	mg/kg	41		27	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Nickel, Total	mg/kg		ND	2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Lead, Total	mg/kg	5.8 (P)		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Antimony, Total	mg/kg		ND	11	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Selenium, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Thallium, Total	mg/kg		ND	0.27	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	8.0		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Zinc, Total	mg/kg	42 (P)		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A

Lab Sample ID: L9809521-08
Client Sample ID: RE15-98-0036
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 95
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	95		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total	mg/kg		ND	2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Aluminum, Total	mg/kg	3400		5.3	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Arsenic, Total	mg/kg	2.4		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Barium, Total	mg/kg	29		0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Beryllium, Total	mg/kg		ND	0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Calcium, Total	mg/kg	590		11	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Cadmium, Total	mg/kg		ND	0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Cobalt, Total	mg/kg	1.3		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Chromium, Total	mg/kg	3.6		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Copper, Total	mg/kg	2.2		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Iron, Total	mg/kg	6700		2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Mercury, Total	mg/kg		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A

RL = Reporting Limit

KDR
1/12/99

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-08
Client Sample ID: RE15-98-0036
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 95
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Potassium, Total	mg/kg	460		53	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Magnesium, Total	mg/kg	510		26	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Manganese, Total	mg/kg	250	(S, T, d)	0.53	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Sodium, Total	mg/kg	71		26	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Nickel, Total	mg/kg	3.1	(P)	2.1	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Lead, Total	mg/kg	6.3	(P)	1.1	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Antimony, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Selenium, Total	mg/kg		ND	1.1	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Thallium, Total	mg/kg		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	mg/kg	4.6		0.53	1	N/A	JYH	10/16/98	11:27	6010B/3050A
Zinc, Total	mg/kg	31	(P)	1.1	1	N/A	JYH	10/16/98	11:27	6010B/3050A

Lab Sample ID: L9809521-09
Client Sample ID: RE15-98-0037
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 100
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	100		1.0	1	N/A	DKM	10/15/98	14:40	D2216-90
Silver, Total	mg/kg		ND	2.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Aluminum, Total	mg/kg	2200		5.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Arsenic, Total	mg/kg	1.3		1.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Barium, Total	mg/kg	20		0.50	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Beryllium, Total	mg/kg	2.4		0.50	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Calcium, Total	mg/kg	350		10	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Cadmium, Total	mg/kg		ND	0.50	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Cobalt, Total	mg/kg	1.3		1.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Chromium, Total	mg/kg	1.6		1.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Copper, Total	mg/kg	1.7		1.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Iron, Total	mg/kg	3900		2.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Mercury, Total	mg/kg		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A/7471A
Potassium, Total	mg/kg	300		50	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Magnesium, Total	mg/kg	330		25	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Manganese, Total	mg/kg	150	(S, T, d)	0.50	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Sodium, Total	mg/kg	36		25	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Nickel, Total	mg/kg		ND	2.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Lead, Total	mg/kg	4.8	(P)	1.0	1	N/A	JYH	10/16/98	11:30	6010B/3050A
Antimony, Total	mg/kg		ND	10	1	N/A	JYH	10/16/98	11:30	6010B/3050A

RL = Reporting Limit

11/2/97

Login #L9809521
October 20, 1998 04:28 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-09
Client Sample ID: RE15-98-0037
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 100
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Selenium, Total.....	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Thallium, Total.....	mg/kg		ND	0.25	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total.....	mg/kg	2.9		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Zinc, Total.....	mg/kg	17	(P)	1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A

RL - Reporting Limit


1/12/99

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Phone: (740) 373-4071

Los Alamos National Laboratory
SMO, TA-3, Bldg. 271
MS H865, Drop Point 01U
Los Alamos, NM 87545
Attention: Joylene Valdez

LogIn #: L9809521
Report Date: 10/20/98
Work ID: 4660R/MR3R12082642
Date Received: 09/26/98

PO Number:
Account Number: LANL-295

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9809521-01	RE15-98-0029	L9809521-02	RE15-98-0030
L9809521-03	RE15-98-0031	L9809521-04	RE15-98-0032
L9809521-05	RE15-98-0033	L9809521-06	RE15-98-0034
L9809521-07	RE15-98-0035	L9809521-08	RE15-98-0036
L9809521-09	RE15-98-0037		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Maren M. Beery

Maren M Beery

Order #98-09-521
November 3, 1998
16:17

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

Lab ID# 7797L0014-8M

CLIENT: Los Alamos National Laboratory

LANL SDG/RN:
4660R

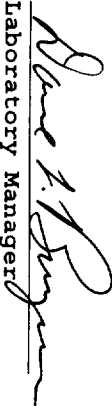
Sample Management:
Nine soil samples were received at Kemron Environmental Services on 09/26/98.

Client ID:
RE15-98-0029
RE15-98-0030
RE15-98-0031
RE15-98-0032
RE15-98-0033
RE15-98-0034
RE15-98-0035
RE15-98-0036
RE15-98-0037

Quality Control:
METALS - 6010/7000:
A post digestion spike was analyzed for manganese with 91.2% recovery. Some sample nonhomogeneity was indicated by the duplicate analysis.

Shipment Conditions:
The samples were received intact. Solid blue ice was present.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and in completeness, except as detailed in this QC Report.


Laboratory Manager

Date: 11/3/98

Friday, September 25, 1998

REQUEST NUMBER: 4660R

ANALYSIS TYPE: INORG

Los Alamos
NATIONAL LABORATORY

ATTN: Maren Beery
KEMRON
109 STARLITE PARK
MARIETTA, OH 45750

Please analyze the enclosed samples
according to the schedule indicated:

These samples are on:

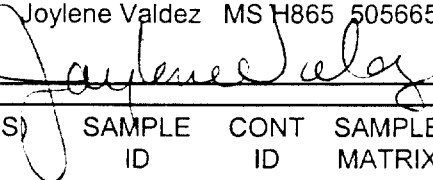
SHIP DATE: 9/25/98
REPORT DUE: 10/25/98
TURN AROUND REQ'D: 30 days

LANL Request Number: 4660R
Per Agreement Number: 7797L0014-9S
Project Cost Code: MR3R12082642

RAD SCREENING: Not Required

COMMENTS: 15 - 1086 , GG;

LANL ER SMO CONTACT: Joylene Valdez MS H865 5056659968

Signature: 

ANALYSIS ORDER CODE	ANALYTE(S)	SAMPLE ID	CONT ID	SAMPLE MATRIX	DATE SAMPLED	COMMENTS
METTAL		RE15-98-0029	05	S	9/23/98	
METTAL		RE15-98-0030	05	S	9/23/98	
METTAL		RE15-98-0031	05	S	9/23/98	
METTAL		RE15-98-0032	05	S	9/23/98	
METTAL		RE15-98-0033	05	S	9/23/98	
METTAL		RE15-98-0034	05	S	9/23/98	
METTAL		RE15-98-0035	05	S	9/23/98	
METTAL		RE15-98-0036	05	S	9/23/98	
METTAL		RE15-98-0037	05	S	9/23/98	

Friday, September 25, 1998

CHAIN OF CUSTODY DOCUMENT NUMBER: 4660RC

Los Alamos
NATIONAL LABORATORY

REQUEST NUMBER: 4660R

ANALYSIS TYPE: INORG

ATTN: Maren Beery
KEMRON
109 STARLITE PARK
MARIETTA, OH 45750

SAMPLE ID	CONT ID	CONTAINER DESCRIPTION	ANALYSIS ORDER CODE	PRESERVATIVE	MATRIX
RE15-98-0029	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0030	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0031	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0032	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0033	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0034	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0035	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0036	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0037	05	125 ml Polyethylene	METTAL	Ice	S

Final Page of CHAIN OF CUSTODY DOCUMENT FOR REQUEST NUMBER 4660R

Page 1

Exposure 9/25/98
Stored in
locked cooler
over weekend
C.B.

Relinquished By: SI Hagelberg SDHag Date 9-25-98 Time 1333
PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

Received for DISPOSAL By: Date Time

PRINTED NAME SIGNATURE

Received By: Brenda Gregory Brenda Gregory Date 9/25/98 Time 0800
PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

Remarks:

G.O.C. Deated
S/S intact
Solid blue ice present
bkg

U.S. EPA - CLP

3
BLANKS

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Preparation Blank Matrix (soil/water): SOIL_

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

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum	15.4	U	15.4	U	15.4	U	15.4	U	1.009	B	P
Antimony	9.7	U	9.7	U	9.7	U	9.7	U	0.485	U	P
Arsenic	4.9	U	4.9	U	4.9	U	4.9	U	0.245	U	P
Barium	0.3	U	0.3	U	0.3	U	0.3	U	0.015	U	P
Beryllium	0.1	U	0.1	U	0.1	U	0.1	U	0.004	U	P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U	0.030	U	P
Calcium	14.4	U	14.4	U	14.4	U	14.4	U	0.720	U	P
Chromium	2.8	U	2.8	U	2.8	U	2.8	U	0.140	U	P
Cobalt	1.5	U	1.5	U	1.5	U	1.5	U	0.075	U	P
Copper	2.7	U	2.7	U	2.7	U	2.7	U	0.135	U	P
Iron	23.7	U	23.7	U	23.7	U	23.7	U	1.185	U	P
Lead	7.0	U	7.0	U	7.0	U	7.0	U	0.350	U	P
Magnesium	33.0	U	33.0	U	33.0	U	33.0	U	1.650	U	P
Manganese	0.5	U	0.5	U	0.5	U	0.5	U	0.025	U	P
Mercury	0.0	U	0.0	U	0.0	U	0.0	U	0.006	B	CV
Nickel	1.9	U	1.9	U	1.9	U	1.9	U	0.095	U	P
Potassium	38.4	U	38.4	U	38.4	U	38.4	U	1.920	U	P
Selenium	11.4	U	11.4	U	11.4	U	11.4	U	0.570	U	P
Silver	2.4	U	2.4	U	2.4	U	2.4	U	0.120	U	P
Sodium	10.5	U	10.5	U	10.5	U	10.5	U	0.525	U	P
Thallium	0.6	U	0.6	U	0.7	B	0.7	B	0.030	U	F
Vanadium	3.6	U	3.6	U	3.6	U	3.6	U	0.180	U	P
Zinc	2.2	U	2.2	U	2.2	U	2.2	U	0.110	U	P
Cyanide											NR

U.S. EPA - CLP

3
BLANKS

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

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)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum			18.8	B							P
Antimony			9.7	U							P
Arsenic			4.9	U							P
Barium			0.3	U							P
Beryllium			0.1	U							P
Cadmium			0.6	U							P
Calcium			14.4	U							P
Chromium			2.8	U							P
Cobalt			1.5	U							P
Copper			2.7	U							P
Iron			23.7	U							P
Lead			7.0	U							P
Magnesium			33.0	U							P
Manganese			0.5	U							P
Mercury			0.0	U	0.0	U					CV
Nickel			1.9	U							P
Potassium			38.4	U							P
Selenium			11.4	U							P
Silver			2.4	U							P
Sodium			10.5	U							P
Thallium			0.6	U							F
Vanadium			3.6	U							P
Zinc			2.2	U							P
Cyanide											NR

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No: _____

SDG No.: 4660R_

ICP ID Number: IRIS_TJA_____

ICS Source: INORGANIC VE

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum	250000	250000	251630	255674.0	102.3	249920	252480.9	101.0
Antimony	500	500	10	490.8	98.2	3	497.1	99.4
Arsenic	250	250	9	255.3	102.1	6	253.9	101.6
Barium	250	250	1	235.6	94.2	1	235.8	94.3
Beryllium	250	250	0	231.4	92.6	0	236.8	94.7
Cadmium	500	500	1	465.4	93.1	0	462.3	92.5
Calcium	250000	250000	244059	246984.6	98.8	244727	246864.9	98.7
Chromium	250	250	3	226.5	90.6	3	229.2	91.7
Cobalt	250	250	-2	216.0	86.4	-2	221.0	88.4
Copper	250	250	0	231.5	92.6	2	238.3	95.3
Iron	100000	100000	93112	97949.5	97.9	93391	98158.4	98.2
Lead	500	500	-24	432.2	86.4	-24	426.8	85.4
Magnesium	250000	250000	241727	242488.6	97.0	242631	245500.4	98.2
Manganese	250	250	0	220.6	88.2	0	219.5	87.8
Mercury								
Nickel	500	500	-3	435.9	87.2	-3	438.0	87.6
Potassium	2500	2500	43	2537.1	101.5	49	2489.2	99.6
Selenium	250	250	0	257.5	103.0	-1	255.4	102.2
Silver	500	500	4	481.9	96.4	5	492.3	98.5
Sodium	1250	1250	13	1236.9	99.0	9	1222.6	97.8
Thallium								
Vanadium	250	250	-14	219.7	87.9	-14	210.1	84.0
Zinc	500	500	3	464.8	93.0	3	469.8	94.0

FORM IV - IN

ILM03.0

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MD21-0175S

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Matrix (soil/water): SOIL_

Level (low/med): LOW_

% Solids for Sample: _96.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony	75-125	93.7544	0.5052 U	102.12	91.8		P
Arsenic	75-125	435.2287	1.0277	408.50	106.3		P
Barium	75-125	422.9255	2.6228 B	408.50	102.9		P
Beryllium	75-125	11.0718	0.2913	10.21	105.6		P
Cadmium	75-125	11.3852	0.0312 U	10.21	111.5		P
Calcium							NR
Chromium	75-125	48.0550	6.8929	40.85	100.8		P
Cobalt	75-125	104.9238	0.5186 B	102.12	102.2		P
Copper	75-125	52.7873	0.1406 U	51.06	103.4		P
Iron							NR
Lead	75-125	111.7624	2.6267	102.12	106.9		P
Magnesium							NR
Manganese	75-125	180.9995	141.2111	102.12	39.0	N	P
Mercury							NR
Nickel	75-125	111.4082	3.3931	102.12	105.8		P
Potassium							NR
Selenium	75-125	448.1207	0.5938 U	408.50	109.7		P
Silver	75-125	9.9845	0.1250 U	10.21	97.8		P
Sodium							NR
Thallium	75-125	10.9783	0.2023 B	10.21	105.5		F
Vanadium	75-125	110.3649	0.6310 B	102.12	107.5		P
Zinc	75-125	127.4854	25.6131	102.12	99.8		P
Cyanide							NR

Comments:

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

RE15-0032S

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Matrix (soil/water): SOIL_

Level (low/med): LOW_

% Solids for Sample: 97.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium							NR
Cobalt							NR
Copper							NR
Iron							NR
Lead							NR
Magnesium							NR
Manganese							NR
Mercury	75-125	0.1567	0.0131 B	0.17	84.5		CV
Nickel							NR
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR
Cyanide							NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MD21-0177D

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

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

% Solids for Sample: _96.0 % Solids for Duplicate: _96.0

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

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	M
Aluminum		414.0918	359.9101	14.0		P
Antimony		0.5002	0.5077			P
Arsenic	0.5160	1.3837	1.0810	24.6		P
Barium		3.6402	2.6358	32.0		P
Beryllium	0.2580	0.3362	0.3092	8.4		P
Cadmium		0.0384	0.0350	9.3		P
Calcium	257.8380	1010.9933	891.5692	12.6		P
Chromium	0.5160	2.3696	2.1310	10.6		P
Cobalt		0.4719	0.4108	13.8		P
Copper		0.3890	0.1529	87.1		P
Iron		2669.1359	2337.2509	13.3		P
Lead		4.2503	3.3755	22.9	*	P
Magnesium		236.5923	157.3985	40.2		P
Manganese		180.8544	149.8472	18.8		P
Mercury						NR
Nickel		1.0862	0.9716	11.1		P
Potassium		224.8777	181.5281	21.3		P
Selenium		0.5879	0.5967			P
Silver		0.1238	0.1256			P
Sodium		171.1396	159.6547	6.9		P
Thallium		0.0384	0.0312	200.0		F
Vanadium		0.8349	0.5255	45.5		P
Zinc		26.4636	19.9532	28.1	*	P
Cyanide						NR

FORM VI - IN

ILM03.0

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

RE15-0036D

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

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

% Solids for Sample: _95.0 % Solids for Duplicate: _95.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead								NR
Magnesium								NR
Manganese								NR
Mercury		0.0170	B	0.0172	B	1.2		CV
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Cyanide								NR

FORM VI - IN

ILM03.0

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Solid LCS Source: K-1412_____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum				628.0	685.4		503.0	754.0
Antimony				50.0	50.3		40.0	60.0
Arsenic				50.0	51.8		40.0	60.0
Barium				500.0	501.5		400.0	600.0
Beryllium				50.0	51.8		40.0	60.0
Cadmium				50.0	50.0		40.0	60.0
Calcium				500.9	517.5		400.7	601.1
Chromium				50.0	50.6		40.0	60.0
Cobalt				50.0	49.2		40.0	60.0
Copper				50.0	49.3		40.0	60.0
Iron				103.3	105.4		82.7	124.0
Lead				50.3	51.9		40.3	60.4
Magnesium				500.0	505.7		400.0	600.0
Manganese				50.0	52.0		40.0	60.0
Mercury				0.167	0.149		0.134	0.200
Nickel				50.0	50.6		40.0	60.0
Potassium				2500.0	2523.9		2000.0	3000.0
Selenium				50.0	51.9		40.0	60.0
Silver				10.0	9.9		8.0	12.0
Sodium				2500.0	2560.5		2000.0	3000.0
Thallium				1.2	1.2		1.0	1.5
Vanadium				50.0	52.2		40.0	60.0
Zinc				50.7	50.9		40.6	60.8
Cyanide								

FORM VII - IN

ILM03.0

11

19R 3/120826-17 CCS/VALIDATION COVER SHEET

C CODE _____ SDG 4660 LAB NAME Kemion LAB CODE _____

NAME OF CCS CHECKER _____ COMPANY _____

NAME OF VALIDATOR _____ COMPANY _____

CCS DATA _____ VALIDATION DATE _____ EDS ENTRY DATE _____

ANALYTICAL SUITE:

☐ VOLATILES
☐ SEMIVOLATILES
☐ PESTICIDES

☐ HIGH EXPLOSIVE
☒ INORGANICS
☐ RADIOCHEMISTRY

GENERAL CHECKLIST

PRESENT
X IF "YES"
O IF "NO"

1. CASE NARRATIVE _____
2. AIRBILLS (NO. OF SHIPMENTS _____)
3. CHAIN-OF-CUSTODY RECORDS _____
4. SAMPLE TAGS _____
5. SAMPLE LOG-IN SHEETS _____
6. INTERNAL LAB SAMPLE TRANSFER RECORDS
AND TRACKING SHEETS _____
7. OTHER? IDENTIFY _____

ARE ALL SAMPLES ASSIGNED TO THE SDG PRESENT

/ YES

NO

IDENTIFY ANY SAMPLES IN THE ASSIGNED SDG?RN THAT ARE MISSING

COMMENTS/ PROBLEMS NOTED, INCLUDING INFORMATION ABOUT REQUEST TO THE
LABORATORY AND AGREED UPON DATA OF RESOLUTION AND LAB CONTACT:

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Los Alamos National Laboratory
SMO, TA-3, Bldg. 271
MS H865, Drop Point 01U
Los Alamos, NM 87545
Attention: Joylene Valdez

Login #: L9809521
Report Date: 10/20/98
Work ID: 4660R/MR3R12082642
Date Received: 09/26/98

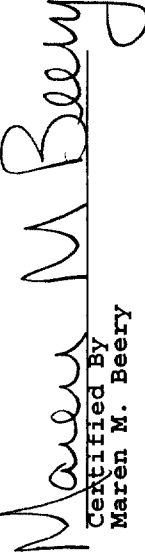
PO Number:
Account Number: LANL-295

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9809521-01	RE15-98-0029	L9809521-02	RE15-98-0030
L9809521-03	RE15-98-0031	L9809521-04	RE15-98-0032
L9809521-05	RE15-98-0033	L9809521-06	RE15-98-0034
L9809521-07	RE15-98-0035	L9809521-08	RE15-98-0036
L9809521-09	RE15-98-0037		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861


Certified By
Marlen M. Beery

Order #98-09-521
November 3, 1998
16:17

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

Lab ID# 7797L0014-8M

CLIENT: Los Alamos National Laboratory

LANL SDG/RN:
4660R

Sample Management:

Nine soil samples were received at Kemron Environmental Services on 09/26/98.

Client ID:

RE15-98-0029
RE15-98-0030
RE15-98-0031
RE15-98-0032
RE15-98-0033
RE15-98-0034
RE15-98-0035
RE15-98-0036
RE15-98-0037

Quality Control:


METALS - 6010/7000:

A post digestion spike was analyzed for manganese with 91.2% recovery. Some sample nonhomogeneity was indicated by the duplicate analysis.

Shipment Conditions:

The samples were received intact. Solid blue ice was present.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and in completeness, except as detailed in this QC Report.


Laboratory Manager

Date: 11/3/98

Login #L9809521
October 20, 1998 04:28 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-01
Client Sample ID: RE15-98-0029
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 98
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	98		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....									
Aluminum, Total.....	8300	ND	2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Arsenic, Total.....			5.1	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Barium, Total.....	2.9		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Beryllium, Total.....	56		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Calcium, Total.....	0.58		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Cadmium, Total.....	1200		10	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Cobalt, Total.....		ND	0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Chromium, Total.....	2.8		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Copper, Total.....	5.4		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Iron, Total.....	3.3		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Manganese, Total.....	8800		2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Potassium, Total.....		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Magnesium, Total.....	1000		51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Sodium, Total.....	1100		26	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Nickel, Total.....	230		0.51	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Lead, Total.....	64		26	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Antimony, Total.....	3.9		2.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Selenium, Total.....	7.8		1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Thallium, Total.....		ND	10	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Vanadium, Total.....		ND	1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A
Zinc, Total.....	10		0.26	1	N/A	JYH	10/16/98	10:52	6010B\3050A
	31		0.51	1	N/A	JYH	10/16/98	09:00	7841
			1.0	1	N/A	JYH	10/16/98	10:52	6010B\3050A

Lab Sample ID: L9809521-02
Client Sample ID: RE15-98-0030
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 92
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	92		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....									
Aluminum, Total.....		ND	2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Arsenic, Total.....	6100		5.4	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Barium, Total.....	2.9		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Beryllium, Total.....	50		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
	0.58		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-02
Client Sample ID: RE15-98-0030
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 92
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Calcium, Total.....	980		11	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Cadmium, Total.....		ND	0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Cobalt, Total.....	2.3		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Chromium, Total.....	4.1		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Copper, Total.....	3.2		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Iron, Total.....	7800		2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Mercury, Total.....		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total.....	740		54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Magnesium, Total.....	880		27	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Manganese, Total.....	260		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Sodium, Total.....	92		27	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Nickel, Total.....	3.8		2.2	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Lead, Total.....	7.2		1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Antimony, Total.....		ND	11	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Selenium, Total.....		ND	1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Thallium, Total.....		ND	1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A
Vanadium, Total.....	7.7		0.27	1	N/A	CRC	10/20/98	09:00	7841
Zinc, Total.....	32		0.54	1	N/A	JYH	10/16/98	10:55	6010B\3050A
			1.1	1	N/A	JYH	10/16/98	10:55	6010B\3050A

Lab Sample ID: L9809521-03
Client Sample ID: RE15-98-0031
Site/Work ID: 4660R/MR3R12082642
Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 93
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	93		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....		ND	2.2	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Aluminum, Total.....	6400		5.4	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Arsenic, Total.....	2.8		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Barium, Total.....	57		0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Beryllium, Total.....		ND	0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Calcium, Total.....	920		11	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Cadmium, Total.....		ND	0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Cobalt, Total.....	4.0		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Chromium, Total.....	4.8		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Copper, Total.....	3.3		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Iron, Total.....	8200		2.2	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Mercury, Total.....		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-03
Client Sample ID: RE15-98-0031
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 93
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Potassium, Total.....	820		54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Magnesium, Total.....	890		27	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Manganese, Total.....	330		0.54	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Sodium, Total.....	74		27	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Nickel, Total.....	4.0		2.2	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Lead, Total.....	8.9		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Antimony, Total.....		ND	11	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Selenium, Total.....		ND	1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Thallium, Total.....		ND	0.27	1	N/A	JYH	10/16/98	10:58	6010B\3050A
Vanadium, Total.....	8.2		0.54	1	N/A	JYH	10/20/98	09:00	7841
Zinc, Total.....	32		1.1	1	N/A	JYH	10/16/98	10:58	6010B\3050A

Lab Sample ID: L9809521-04
Client Sample ID: RE15-98-0032
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 97
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	97		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....		ND	2.1	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Aluminum, Total.....	6200		5.2	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Arsenic, Total.....	2.6		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Barium, Total.....	56		0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Beryllium, Total.....		ND	0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Calcium, Total.....	910		10	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Cadmium, Total.....		ND	0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Cobalt, Total.....	2.6		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Chromium, Total.....	4.9		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Copper, Total.....	3.2		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Iron, Total.....	8300		2.1	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Mercury, Total.....		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total.....	820		52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Magnesium, Total.....	900		26	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Manganese, Total.....	260		0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Sodium, Total.....	55		26	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Nickel, Total.....	3.6		2.1	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Lead, Total.....	7.7		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Antimony, Total.....		ND	10	1	N/A	JYH	10/16/98	11:13	6010B\3050A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-04
Client Sample ID: RE15-98-0032
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 97
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Selenium, Total		ND	1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Thallium, Total		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total	8.9		0.52	1	N/A	JYH	10/16/98	11:13	6010B\3050A
Zinc, Total	34		1.0	1	N/A	JYH	10/16/98	11:13	6010B\3050A

Lab Sample ID: L9809521-05
Client Sample ID: RE15-98-0033
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 98
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	98		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total		ND	2.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Aluminum, Total	4300		5.1	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Arsenic, Total	2.2		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Barium, Total	34		0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Beryllium, Total		ND	0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Calcium, Total	710		10	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Cadmium, Total		ND	0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Cobalt, Total			1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Chromium, Total	1.6		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Copper, Total	3.2		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Iron, Total	2.7		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Mercury, Total	6400		2.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Potassium, Total		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Magnesium, Total	500		51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Manganese, Total	630		26	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Sodium, Total	220		0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Nickel, Total	60		26	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Lead, Total	2.9		2.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Antimony, Total	6.4		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Selenium, Total		ND	10	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Thallium, Total		ND	1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A
Vanadium, Total		ND	0.26	1	N/A	CRC	10/20/98	09:00	7841
Zinc, Total	5.6		0.51	1	N/A	JYH	10/16/98	11:16	6010B\3050A
	28		1.0	1	N/A	JYH	10/16/98	11:16	6010B\3050A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-06
Client Sample ID: RE15-98-0034
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 97
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	97		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....			2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Aluminum, Total.....	5400	ND	5.2	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Arsenic, Total.....	2.2		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Barium, Total.....	34		0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Beryllium, Total.....		ND	0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Calcium, Total.....	800		10	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Cadmium, Total.....		ND	0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Cobalt, Total.....			1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Chromium, Total.....	1.5		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Copper, Total.....	3.5		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Iron, Total.....	3.0		2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Mercury, Total.....	6800		0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total.....	640	ND	52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Magnesium, Total.....	720		26	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Manganese, Total.....	190		0.52	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Sodium, Total.....	62		26	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Nickel, Total.....	2.9		2.1	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Lead, Total.....	6.0		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Antimony, Total.....		ND	10	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Selenium, Total.....		ND	1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Thallium, Total.....		ND	0.26	1	N/A	JYH	10/16/98	11:20	6010B\3050A
Vanadium, Total.....	5.9		0.52	1	N/A	CRC	10/20/98	09:00	7841
Zinc, Total.....	28		1.0	1	N/A	JYH	10/16/98	11:20	6010B\3050A

Lab Sample ID: L9809521-07
Client Sample ID: RE15-98-0035
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 94
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	94		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total.....			2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Aluminum, Total.....	3500	ND	5.3	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Arsenic, Total.....	2.3		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Barium, Total.....	28		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Beryllium, Total.....		ND	0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A

RL = Reporting Limit

Login #L9809521
October 20, 1998 04:28 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-07
Client Sample ID: RE15-98-0035
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 94
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Calcium, Total	590		11	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Cadmium, Total		ND	0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Cobalt, Total	1.9		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Chromium, Total	3.3		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Copper, Total	2.1		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Iron, Total	9500		2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Mercury, Total		ND	0.11	1	N/A	KRA	10/01/98	11:23	6010B\3050A
Potassium, Total	460		53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Magnesium, Total	490		27	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Manganese, Total	230		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Sodium, Total	41		27	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Nickel, Total		ND	2.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Lead, Total	5.8		1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Antimony, Total		ND	11	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Selenium, Total		ND	1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Thallium, Total		ND	1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A
Vanadium, Total	8.0		0.27	1	N/A	CRC	10/20/98	09:00	7841
Zinc, Total	42		0.53	1	N/A	JYH	10/16/98	11:23	6010B\3050A
			1.1	1	N/A	JYH	10/16/98	11:23	6010B\3050A

Lab Sample ID: L9809521-08
Client Sample ID: RE15-98-0036
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A

% Solid: 95
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	95		1.0	1	N/A	DKM	10/15/98	13:50	D2216-90
Silver, Total		ND	2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Aluminum, Total	3400		5.3	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Arsenic, Total	2.4		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Barium, Total	29		0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Beryllium, Total		ND	0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Calcium, Total	590		11	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Cadmium, Total		ND	0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Cobalt, Total	1.3		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Chromium, Total	3.6		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Copper, Total	2.2		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Iron, Total	6700		2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Mercury, Total		ND	0.11	1	N/A	KRA	10/01/98	10:12	7471A\7471A

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Login #L9809521
October 20, 1998 04:28 pm

Lab Sample ID: L9809521-08
Client Sample ID: RE15-98-0036
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 95
COC Info: N/A

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Potassium, Total	460		53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Magnesium, Total	510		26	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Manganese, Total	250		0.53	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Sodium, Total	71		26	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Nickel, Total	3.1		2.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Lead, Total	6.3		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Antimony, Total		ND	11	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Selenium, Total		ND	1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Thallium, Total		ND	0.26	1	N/A	JYH	10/16/98	11:27	6010B\3050A
Vanadium, Total	4.6		0.53	1	N/A	JYH	10/16/98	09:00	7841
Zinc, Total	31		1.1	1	N/A	JYH	10/16/98	11:27	6010B\3050A

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 100
COC Info: N/A

Lab Sample ID: L9809521-09
Client Sample ID: RE15-98-0037
Site/Work ID: 4660R/MR3R12082642

Analyte	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	100		1.0	1	N/A	DKM	10/15/98	14:40	D2216-90
Silver, Total		ND	2.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Aluminum, Total	2200		5.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Arsenic, Total	1.3		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Barium, Total	20		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Beryllium, Total	2.4		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Calcium, Total	350		10	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Cadmium, Total		ND	0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Cobalt, Total	1.3		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Chromium, Total	1.6		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Copper, Total	1.7		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Iron, Total	3900		2.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Mercury, Total		ND	0.10	1	N/A	KRA	10/01/98	10:12	7471A\7471A
Potassium, Total	300		50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Magnesium, Total	330		25	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Manganese, Total	150		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Sodium, Total	36		25	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Nickel, Total		ND	2.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Lead, Total	4.8		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Antimony, Total		ND	10	1	N/A	JYH	10/16/98	11:30	6010B\3050A

RL = Reporting Limit

Login #L9809521
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KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9809521-09
Client Sample ID: RE15-98-0037
Site/Work ID: 4660R/MR3R12082642

Matrix: Soil
Collected: 09/23/98 N/A
% Solid: 100
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Selenium, Total.....	mg/kg		ND	1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Thallium, Total.....	mg/kg		ND	0.25	1	N/A	CRC	10/20/98	09:00	7841
Vanadium, Total.....	mg/kg	2.9		0.50	1	N/A	JYH	10/16/98	11:30	6010B\3050A
Zinc, Total.....	mg/kg	17		1.0	1	N/A	JYH	10/16/98	11:30	6010B\3050A

Order #: 98-09-521
October 20, 1998 04:28 pm

**KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG46760	R54472	L9809521-01	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-01	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Digestion
WG46760	R54472	L9809521-02	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-02	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Digestion
WG46760	R54472	L9809521-03	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion

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KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG46760	R54472	L9809521-03	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-03	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Digestion
WG46760	R54472	L9809521-04	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-04	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-05	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Digestion
WG46760	R54472	L9809521-05	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion

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WG46760	R54472	L9809521-05	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-05	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Digestion
WG46760	R54472	L9809521-06	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-06	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Digestion
WG46760	R54472	L9809521-07	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion

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WG46760	R54472	L9809521-07	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-07	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Digestion
WG46760	R54472	L9809521-08	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-08	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-09	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Digestion
WG46760	R54472	L9809521-09	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion

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WG46760	R54472	L9809521-09	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46760	R54472	L9809521-09	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Digestion
WG46764	R54515	L9809521-01	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-02	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-03	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-04	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-05	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-06	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-07	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-08	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46764	R54515	L9809521-09	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Digestion
WG46823	R53344	L9809521-01	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-02	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-03	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-04	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-05	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-06	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-07	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-08	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46823	R53344	L9809521-09	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Digestion
WG46863	R53344	L9809521-01	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-02	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-03	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-04	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-05	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-06	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-07	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-08	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG46863	R53344	L9809521-09	Soil		Mercury, Total	7471A\7471A	KRA	23-SEP-1998	01-OCT-1998	10:12	Metals - AA
WG47774	R54237	L9809521-01	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionals
WG47774	R54237	L9809521-02	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionals
WG47774	R54237	L9809521-03	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionals
WG47774	R54237	L9809521-04	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionals
WG47774	R54237	L9809521-05	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionals

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WG47774	R54237	L9809521-06	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionalis
WG47774	R54237	L9809521-07	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionalis
WG47774	R54237	L9809521-08	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	13:50	Conventionalis
WG47775	R54242	L9809521-09	Soil		Percent Solids	D2216-90	DKM	23-SEP-1998	15-OCT-1998	14:40	Conventionalis
WG47805	R54472	L9809521-01	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-01	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:52	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP

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Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG47805	R54472	L9809521-02	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-02	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:55	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-03	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	10:58	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP
WG47805	R54472	L9809521-04	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:13	Metals - ICP

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WG47805	R54472	L9809521-05	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-05	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:16	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16 OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-06	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16 OCT-1998	11:20	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP

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WG47805	R54472	L9809521-07	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-07	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:23	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-08	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:27	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Aluminum, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Antimony, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Arsenic, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Barium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Beryllium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Cadmium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP

Order #: 98-09-521
October 20, 1998 04:28 pm

**KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG47805	R54472	L9809521-09	Soil		Calcium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Chromium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Cobalt, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Copper, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Iron, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Lead, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Magnesium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Manganese, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Nickel, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Potassium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Selenium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Silver, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Sodium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Vanadium, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG47805	R54472	L9809521-09	Soil		Zinc, Total	6010B\3050A	JYH	23-SEP-1998	16-OCT-1998	11:30	Metals - ICP
WG48008	R54515	L9809521-01	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-02	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-03	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-04	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-05	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-06	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-07	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-08	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA
WG48008	R54515	L9809521-09	Soil		Thallium, Total	7841	CRC	23-SEP-1998	20-OCT-1998	09:00	Metals - AA

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/06/98

ALC -- Ann L. Clark
BAD -- Becky A. Diehl
CEB -- Chad E. Barnes
CDB -- Christy D. Burton
CMS -- Crystal M. Stevens
CRC -- Carla R. Cochran
DIH -- Deanna I. Hesson
DKM -- Dewey K. Miller
DLN -- Deanna L. Norton
DLP -- Dorothy L. Payne
ECL -- Eric C. Lawson
FEH -- Fay E. Harmon
HV -- Hema Vilasagar
JLH -- Janice L. Holland
JMM -- Jim M. Monk
JWR -- John W. Richards
JYH -- Ji Y. Hu
KHA -- Kim H. Archer
KMS -- Kevin M. Stutler
KRA -- Kathy R. Albertson
MDA -- Mike D. Albertson

MDC -- Michael D. Cochran
MES -- Mary E. Schilling
MLS -- Michael L. Schimmel
MMB -- Maren M. Beery
RDC -- Rebecca D. Cutlip
RDS -- Rebecca D. Sutton
REF -- Ron E. Fertile
REK -- Robert E. Kyer
RSS -- Regina S. Simmons
RWC -- Rodney W. Campbell
SJK -- Cindy J. Kinney
SJM -- Shawn J. Marshall
SLP -- Sheri L. Pfalzgraf
SLT -- Stephanie L. Tepe
SMW -- Shauna M. Welch
SPL -- Steve P. Learn
TJW -- Thomas J. Ware
TRS -- Todd R. Stack
VC -- Vicki Collier
VMN -- Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description	Qualifier	Description
(A)	See the report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	NA	Not applicable
(C)	See the report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient for the MSA is less than 0.995	NF	Not found
<	Less than	NFL	No free liquid
>	Greater than	NI	Non-ignitable
B	Present in the method blank	NR	Analyte is not required to be analyzed
C	Confirmed by GC/MS	NS	Not spiked
*	Surrogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Confluent growth	QNS	Quantity not sufficient to perform analysis
D	The analyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surrogate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estimated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Present below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid	SMI	Sample matrix interference on surrogate
I	Semi-quantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present below nominal reporting limit	TNTC	Too numerous to count
L	Sample reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M	Duplicate injection precision not met	W	Post-digestion spike for furnace AA out of control limits
		X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

Friday, September 25, 1998

Los Alamos
NATIONAL LABORATORY

REQUEST NUMBER: 4660R

ANALYSIS TYPE: INORG

ATTN: Maren Beery
KEMRON
109 STARLITE PARK
MARIETTA, OH 45750

Please analyze the enclosed samples
according to the schedule indicated:

These samples are on:

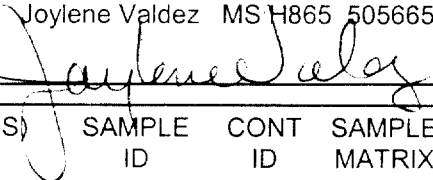
SHIP DATE: 9/25/98
REPORT DUE: 10/25/98
TURN AROUND REQ'D: 30 days

LANL Request Number: 4660R
Per Agreement Number: 7797L0014-9S
Project Cost Code: MR3R12082642

RAD SCREENING: Not Required

COMMENTS: 15 - 1086 , GG;

LANL ER SMO CONTACT: Joylene Valdez MS H865 5056659968

Signature: 

ANALYSIS ORDER CODE	ANALYTE(S)	SAMPLE ID	CONT ID	SAMPLE MATRIX	DATE SAMPLED	COMMENTS
METTAL		RE15-98-0029	05	S	9/23/98	
METTAL		RE15-98-0030	05	S	9/23/98	
METTAL		RE15-98-0031	05	S	9/23/98	
METTAL		RE15-98-0032	05	S	9/23/98	
METTAL		RE15-98-0033	05	S	9/23/98	
METTAL		RE15-98-0034	05	S	9/23/98	
METTAL		RE15-98-0035	05	S	9/23/98	
METTAL		RE15-98-0036	05	S	9/23/98	
METTAL		RE15-98-0037	05	S	9/23/98	

Friday, September 25, 1998

CHAIN OF CUSTODY DOCUMENT NUMBER: 4660RC

Los Alamos
NATIONAL LABORATORY

REQUEST NUMBER: 4660R
ANALYSIS TYPE: INORG

ATTN: Maren Beery
KEMRON
109 STARLITE PARK
MARIETTA, OH 45750

SAMPLE ID	CONT ID	CONTAINER DESCRIPTION	ANALYSIS ORDER CODE	PRESERVATIVE	MATRIX
RE15-98-0029	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0030	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0031	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0032	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0033	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0034	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0035	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0036	05	125 ml Polyethylene	METTAL	Ice	S
RE15-98-0037	05	125 ml Polyethylene	METTAL	Ice	S

Final Page of CHAIN OF CUSTODY DOCUMENT FOR REQUEST NUMBER 4660R

Page 1

*Estimated amount
stored in
locked cooler
over weekend
6/25*

Relinquished By: SI Hagelberg SAHag Date 9-25-98 Time 1333
PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

Received for DISPOSAL By: _____ Date _____ Time _____

PRINTED NAME SIGNATURE

Received By: Brenda Gregory Brenda Gregory Date 9/25/98 Time 0800
PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

PRINTED NAME SIGNATURE

Remarks:

QAC Dealed
S/S contact
Solid blue w/ present bag

QC SUMMARY

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Initial Calibration Source: INORGANIC ST ,

Continuing Calibration Source: INORGANIC VE

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	10000.0	10355.37	103.6	10000.0	10458.09	104.6	10279.78	102.8	P
Antimony	1200.0	1220.33	101.7	1200.0	1221.89	101.8	1229.02	102.4	P
Arsenic	400.0	416.43	104.1	400.0	420.36	105.1	422.33	105.6	P
Barium	1000.0	1026.37	102.6	1000.0	1024.68	102.5	1018.42	101.8	P
Beryllium	50.0	49.69	99.4	50.0	49.48	99.0	50.78	101.6	P
Cadmium	50.0	52.98	106.0	50.0	54.01	108.0	52.73	105.5	P
Calcium	10000.0	10400.11	104.0	10000.0	10477.11	104.8	10431.89	104.3	P
Chromium	500.0	513.49	102.7	500.0	513.54	102.7	518.96	103.8	P
Cobalt	200.0	204.33	102.2	200.0	203.38	101.7	209.29	104.6	P
Copper	500.0	506.82	101.4	500.0	499.32	99.9	514.71	102.9	P
Iron	4000.0	4102.38	102.6	4000.0	4153.17	103.8	4157.84	103.9	P
Lead	500.0	522.01	104.4	500.0	531.21	106.2	529.77	106.0	P
Magnesium	10000.0	10423.07	104.2	10000.0	10362.04	103.6	10496.87	105.0	P
Manganese	500.0	516.25	103.2	500.0	522.47	104.5	518.48	103.7	P
Mercury	1.0	0.99	99.0	1.0	1.00	100.0	0.99	99.0	CV
Nickel	500.0	521.87	104.4	500.0	524.37	104.9	528.42	105.7	P
Potassium	50000.0	52233.56	104.5	50000.0	51831.18	103.7	50838.73	101.7	P
Selenium	400.0	409.63	102.4	400.0	415.29	103.8	411.52	102.9	P
Silver	400.0	413.34	103.3	400.0	408.18	102.0	416.18	104.0	P
Sodium	50000.0	51973.21	103.9	50000.0	51539.63	103.1	51036.22	102.1	P
Thallium	25.0	24.22	96.9	25.0	23.87	95.5	26.53	106.1	F
Vanadium	1000.0	1050.80	105.1	1000.0	1062.94	106.3	1035.31	103.5	P
Zinc	1000.0	1035.93	103.6	1000.0	1043.03	104.3	1051.87	105.2	P
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: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Initial Calibration Source: INORGANIC ST

Continuing Calibration Source: INORGANIC VE

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				10000.0	10235.83	102.4	10282.30	102.8	P
Antimony				1200.0	1224.77	102.1	1227.22	102.3	P
Arsenic				400.0	417.90	104.5	417.45	104.4	P
Barium				1000.0	1013.83	101.4	1019.33	101.9	P
Beryllium				50.0	50.14	100.3	50.39	100.8	P
Cadmium				50.0	51.97	103.9	52.42	104.8	P
Calcium				10000.0	10350.08	103.5	10431.32	104.3	P
Chromium				500.0	511.63	102.3	514.53	102.9	P
Cobalt				200.0	206.01	103.0	207.02	103.5	P
Copper				500.0	509.14	101.8	515.60	103.1	P
Iron				4000.0	4110.75	102.8	4128.98	103.2	P
Lead				500.0	522.57	104.5	526.10	105.2	P
Magnesium				10000.0	10429.43	104.3	10439.33	104.4	P
Manganese				500.0	515.34	103.1	516.35	103.3	P
Mercury				1.0	1.01	101.0	1.03	103.0	CV
Nickel				500.0	522.47	104.5	525.59	105.1	P
Potassium				50000.0	50834.56	101.7	51426.28	102.9	P
Selenium				400.0	409.64	102.4	417.37	104.3	P
Silver				400.0	413.36	103.3	413.88	103.5	P
Sodium				50000.0	51122.44	102.2	51533.92	103.1	P
Thallium				25.0	27.04	108.2	27.30	109.2	F
Vanadium				1000.0	1022.23	102.2	1028.58	102.9	P
Zinc				1000.0	1043.50	104.4	1046.16	104.6	P
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: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Initial Calibration Source: INORGANIC ST

Continuing Calibration Source: INORGANIC VE

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
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				1.0	0.98	98.0			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

U.S. EPA - CLP

3
BLANKS

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Preparation Blank Matrix (soil/water): SOIL_

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum	15.4	U	15.4	U	15.4	U	15.4	U	1.009	B	P
Antimony	9.7	U	9.7	U	9.7	U	9.7	U	0.485	U	P
Arsenic	4.9	U	4.9	U	4.9	U	4.9	U	0.245	U	P
Barium	0.3	U	0.3	U	0.3	U	0.3	U	0.015	U	P
Beryllium	0.1	U	0.1	U	0.1	U	0.1	U	0.004	U	P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U	0.030	U	P
Calcium	14.4	U	14.4	U	14.4	U	14.4	U	0.720	U	P
Chromium	2.8	U	2.8	U	2.8	U	2.8	U	0.140	U	P
Cobalt	1.5	U	1.5	U	1.5	U	1.5	U	0.075	U	P
Copper	2.7	U	2.7	U	2.7	U	2.7	U	0.135	U	P
Iron	23.7	U	23.7	U	23.7	U	23.7	U	1.185	U	P
Lead	7.0	U	7.0	U	7.0	U	7.0	U	0.350	U	P
Magnesium	33.0	U	33.0	U	33.0	U	33.0	U	1.650	U	P
Manganese	0.5	U	0.5	U	0.5	U	0.5	U	0.025	U	P
Mercury	0.0	U	0.0	U	0.0	U	0.0	U	0.006	B	CV
Nickel	1.9	U	1.9	U	1.9	U	1.9	U	0.095	U	P
Potassium	38.4	U	38.4	U	38.4	U	38.4	U	1.920	U	P
Selenium	11.4	U	11.4	U	11.4	U	11.4	U	0.570	U	P
Silver	2.4	U	2.4	U	2.4	U	2.4	U	0.120	U	P
Sodium	10.5	U	10.5	U	10.5	U	10.5	U	0.525	U	P
Thallium	0.6	U	0.6	U	0.7	B	0.7	B	0.030	U	F
Vanadium	3.6	U	3.6	U	3.6	U	3.6	U	0.180	U	P
Zinc	2.2	U	2.2	U	2.2	U	2.2	U	0.110	U	P
Cyanide											NR

U.S. EPA - CLP

3
BLANKS

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

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)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum			18.8	B							P
Antimony			9.7	U							P
Arsenic			4.9	U							P
Barium			0.3	U							P
Beryllium			0.1	U							P
Cadmium			0.6	U							P
Calcium			14.4	U							P
Chromium			2.8	U							P
Cobalt			1.5	U							P
Copper			2.7	U							P
Iron			23.7	U							P
Lead			7.0	U							P
Magnesium			33.0	U							P
Manganese			0.5	U							P
Mercury			0.0	U	0.0	U					CV
Nickel			1.9	U							P
Potassium			38.4	U							P
Selenium			11.4	U							P
Silver			2.4	U							P
Sodium			10.5	U							P
Thallium			0.6	U							F
Vanadium			3.6	U							P
Zinc			2.2	U							P
Cyanide											NR

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No: _____

SDG No.: 4660R_

ICP ID Number: IRIS_TJA_____

ICS Source: INORGANIC VE

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum_	250000	250000	251630	255674.0	102.3	249920	252480.9	101.0
Antimony_	500	500	10	490.8	98.2	3	497.1	99.4
Arsenic_	250	250	9	255.3	102.1	6	253.9	101.6
Barium_	250	250	1	235.6	94.2	1	235.8	94.3
Beryllium_	250	250	0	231.4	92.6	0	236.8	94.7
Cadmium_	500	500	1	465.4	93.1	0	462.3	92.5
Calcium_	250000	250000	244059	246984.6	98.8	244727	246864.9	98.7
Chromium_	250	250	3	226.5	90.6	3	229.2	91.7
Cobalt_	250	250	-2	216.0	86.4	-2	221.0	88.4
Copper_	250	250	0	231.5	92.6	2	238.3	95.3
Iron_	100000	100000	93112	97949.5	97.9	93391	98158.4	98.2
Lead_	500	500	-24	432.2	86.4	-24	426.8	85.4
Magnesium	250000	250000	241727	242488.6	97.0	242631	245500.4	98.2
Manganese	250	250	0	220.6	88.2	0	219.5	87.8
Mercury_								
Nickel_	500	500	-3	435.9	87.2	-3	438.0	87.6
Potassium	2500	2500	43	2537.1	101.5	49	2489.2	99.6
Selenium_	250	250	0	257.5	103.0	-1	255.4	102.2
Silver_	500	500	4	481.9	96.4	5	492.3	98.5
Sodium_	1250	1250	13	1236.9	99.0	9	1222.6	97.8
Thallium_								
Vanadium_	250	250	-14	219.7	87.9	-14	210.1	84.0
Zinc_	500	500	3	464.8	93.0	3	469.8	94.0

FORM IV - IN

ILM03.0

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MD21-0175S

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Matrix (soil/water): SOIL_

Level (low/med): LOW_

% Solids for Sample: _96.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony	75-125	93.7544	0.5052 U	102.12	91.8		P
Arsenic	75-125	435.2287	1.0277	408.50	106.3		P
Barium	75-125	422.9255	2.6228 B	408.50	102.9		P
Beryllium	75-125	11.0718	0.2913	10.21	105.6		P
Cadmium	75-125	11.3852	0.0312 U	10.21	111.5		P
Calcium							NR
Chromium	75-125	48.0550	6.8929	40.85	100.8		P
Cobalt	75-125	104.9238	0.5186 B	102.12	102.2		P
Copper	75-125	52.7873	0.1406 U	51.06	103.4		P
Iron							NR
Lead	75-125	111.7624	2.6267	102.12	106.9		P
Magnesium							NR
Manganese	75-125	180.9995	141.2111	102.12	39.0	N	P
Mercury							NR
Nickel	75-125	111.4082	3.3931	102.12	105.8		P
Potassium							NR
Selenium	75-125	448.1207	0.5938 U	408.50	109.7		P
Silver	75-125	9.9845	0.1250 U	10.21	97.8		P
Sodium							NR
Thallium	75-125	10.9783	0.2023 B	10.21	105.5		F
Vanadium	75-125	110.3649	0.6310 B	102.12	107.5		P
Zinc	75-125	127.4854	25.6131	102.12	99.8		P
Cyanide							NR

Comments:

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

RE15-0032S

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Matrix (soil/water): SOIL_

Level (low/med): LOW_

% Solids for Sample: _97.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium							NR
Cobalt							NR
Copper							NR
Iron							NR
Lead							NR
Magnesium							NR
Manganese							NR
Mercury	75-125	0.1567	0.0131 B	0.17	84.5		CV
Nickel							NR
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR
Cyanide							NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MD21-0177D

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

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

% Solids for Sample: _96.0 % Solids for Duplicate: _96.0

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

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	M
Aluminum		414.0918	359.9101	14.0		P
Antimony		0.5002	0.5077			P
Arsenic	0.5160	1.3837	1.0810	24.6		P
Barium		3.6402	2.6358	32.0		P
Beryllium	0.2580	0.3362	0.3092	8.4		P
Cadmium		0.0384	0.0350	9.3		P
Calcium	257.8380	1010.9933	891.5692	12.6		P
Chromium	0.5160	2.3696	2.1310	10.6		P
Cobalt		0.4719	0.4108	13.8		P
Copper		0.3890	0.1529	87.1		P
Iron		2669.1359	2337.2509	13.3		P
Lead		4.2503	3.3755	22.9	*	P
Magnesium		236.5923	157.3985	40.2		P
Manganese		180.8544	149.8472	18.8		P
Mercury						NR
Nickel		1.0862	0.9716	11.1		P
Potassium		224.8777	181.5281	21.3		P
Selenium		0.5879	0.5967			P
Silver		0.1238	0.1256			P
Sodium		171.1396	159.6547	6.9		P
Thallium		0.0384	0.0312	200.0		F
Vanadium		0.8349	0.5255	45.5		P
Zinc		26.4636	19.9532	28.1	*	P
Cyanide						NR

FORM VI - IN

ILM03.0

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

RE15-0036D

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

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

% Solids for Sample: _95.0 % Solids for Duplicate: _95.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead								NR
Magnesium								NR
Manganese								NR
Mercury		0.0170	B	0.0172	B	1.2		CV
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Cyanide								NR

FORM VI - IN

ILM03.0

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: KEMRON_ENVIRONMENTAL_SERV

Contract: _____

Lab Code: _____

Case No.: 09521_

SAS No.: _____

SDG No.: 4660R_

Solid LCS Source: K-1412_____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum				628.0	685.4		503.0 754.0	109.1
Antimony				50.0	50.3		40.0 60.0	100.6
Arsenic				50.0	51.8		40.0 60.0	103.6
Barium				500.0	501.5		400.0 600.0	100.3
Beryllium				50.0	51.8		40.0 60.0	103.6
Cadmium				50.0	50.0		40.0 60.0	100.0
Calcium				500.9	517.5		400.7 601.1	103.3
Chromium				50.0	50.6		40.0 60.0	101.2
Cobalt				50.0	49.2		40.0 60.0	98.4
Copper				50.0	49.3		40.0 60.0	98.6
Iron				103.3	105.4		82.7 124.0	102.0
Lead				50.3	51.9		40.3 60.4	103.2
Magnesium				500.0	505.7		400.0 600.0	101.1
Manganese				50.0	52.0		40.0 60.0	104.0
Mercury				0.167	0.149		0.134 0.200	89.2
Nickel				50.0	50.6		40.0 60.0	101.2
Potassium				2500.0	2523.9		2000.0 3000.0	101.0
Selenium				50.0	51.9		40.0 60.0	103.8
Silver				10.0	9.9		8.0 12.0	99.0
Sodium				2500.0	2560.5		2000.0 3000.0	102.4
Thallium				1.2	1.2		1.0 1.5	100.0
Vanadium				50.0	52.2		40.0 60.0	104.4
Zinc				50.7	50.9		40.6 60.8	100.4
Cyanide								

FORM VII - IN

ILM03.0

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

ICP ID Number: _____ Date: 09/15/96

Flame AA ID Number : _____

Furnace AA ID Number : ZEEMAN2_____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony					NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			5		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium	276.80	BZ	10	0.6	F
Vanadium			50		NR
Zinc			20		NR

Comments:

FORM X - IN

ILM03.0

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

ICP ID Number: IRIS_TJA_____ Date: 08/07/98

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200	15.4	P
Antimony	206.80			9.7	P
Arsenic	189.00		10	4.9	P
Barium	455.40		200	0.3	P
Beryllium	313.00		5	0.1	P
Cadmium	228.80		5	0.6	P
Calcium	373.60		5000	14.4	P
Chromium	267.70		10	2.8	P
Cobalt	228.60		50	1.5	P
Copper	324.70		25	2.7	P
Iron	271.40		100	23.7	P
Lead	220.30		5	7.0	P
Magnesium	277.90		5000	33.0	P
Manganese	257.60		15	0.5	P
Mercury			0.2		NR
Nickel	231.60		40	1.9	P
Potassium	766.40		5000	38.4	P
Selenium	196.00		5	11.4	P
Silver	328.00		10	2.4	P
Sodium	589.50		5000	10.5	P
Thallium			10		NR
Vanadium	292.40		50	3.6	P
Zinc	213.80		20	2.2	P

Comments:

FORM X - IN

ILM03.0

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

ICP ID Number: _____ Date: 08/12/97

Flame AA ID Number : LEEMAN_HG_AA

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony					NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			5		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.0	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

FORM X - IN

ILM03.0

U.S. EPA - CLP

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

ICP ID Number: IRIS_TJA_____ Date: 09/01/98

Analyte	Wave-length (nm)	Interelement Correction Factors for :				
		Al	Ca	Fe	Mg	BA_
Aluminum	308.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.80	0.0000000	0.0000000	0.0000300	0.0000000	0.0000000
Arsenic	189.00	0.0000000	0.0000000	0.0000400	0.0000000	0.0000000
Barium	455.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000970
Calcium	373.60	0.0000000	0.0000000	0.0035200	0.0000000	0.0000000
Chromium	267.70	0.0000000	0.0000000	0.0000160	0.0000000	0.0000000
Cobalt	228.60	0.0000000	0.0000000	0.0000450	0.0000000	0.0000000
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0002070	0.0000000
Lead	220.30	0.0000220	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	277.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.60	0.0000000	0.0000000	0.0000000	0.0000190	0.0000000
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.00	0.0000520	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0002000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0001020	0.0000000	0.0000000
Zinc	213.80	0.0000000	0.0000000	0.0000760	0.0000000	0.0000000

Comments:

U.S. EPA - CLP

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

ICP ID Number: IRIS_TJA_____ Date: 09/01/98

Analyte	Wave-length (nm)	Interelement Correction Factors for :				
		BE_	CR_	CU_	MN_	MO_
Aluminum_	308.20	0.0000000	0.0000000	0.0000000	0.0018000	0.0202000
Antimony_	206.80	0.0000000	0.0154500	0.0000000	0.0000000	-0.0014800
Arsenic_	189.00	0.0000000	-0.0085530	0.0000000	0.0000000	-0.0006880
Barium_	455.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium_	313.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium_	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium_	373.60	0.0000000	0.0000000	0.0000000	0.0016000	0.0000000
Chromium_	267.70	0.0000000	0.0000000	0.0000000	0.0003400	0.0000000
Cobalt_	228.60	0.0000000	0.0001260	0.0000000	0.0000000	0.0000000
Copper_	324.70	0.0000000	-0.0000890	0.0000000	0.0000000	0.0000000
Iron_	271.40	0.0000000	0.0000000	0.0000000	0.0000800	-0.0137000
Lead_	220.30	0.0000000	0.0000000	0.0000000	0.0000000	-0.0017000
Magnesium_	277.90	0.0000000	-0.0051000	0.0000000	0.0013200	-0.0236000
Manganese_	257.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury_						
Nickel_	231.60	0.0128000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium_	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.00	0.0000000	0.0000000	0.0000000	0.0004300	0.0084400
Silver_	328.00	0.0000000	0.0000540	0.0000000	0.0000900	-0.0004900
Sodium_	589.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.80	0.0000000	0.0007840	0.0000000	0.0014900	-0.0029500
Vanadium_	292.40	0.0000000	-0.0028800	0.0000000	-0.0014300	-0.0074500
Zinc_	213.80	0.0000000	0.0000000	0.0009000	0.0002790	0.0000000

Comments:

U.S. EPA - CLP

11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

ICP ID Number: IRIS_TJA_____ Date: 09/01/98

Analyte	Wave-length (nm)	Interelement Correction Factors for :				
		NI_	TI_	V_	_____	_____
Aluminum	308.20	0.0000000	0.0013000	0.0674600		
Antimony	206.80	-0.0023400	0.0000000	-0.0010740		
Arsenic	189.00	0.0000000	0.0000000	0.0000000		
Barium	455.40	0.0000000	0.0000000	0.0000000		
Beryllium	313.00	0.0000000	0.0000000	0.0004670		
Cadmium	228.80	0.0000000	0.0000000	0.0000720		
Calcium	373.60	0.0041400	0.0000000	0.0000000		
Chromium	267.70	0.0000000	0.0000000	-0.0001480		
Cobalt	228.60	0.0000000	0.0014800	0.0000000		
Copper	324.70	0.0000000	-0.0007090	-0.0036680		
Iron	271.40	0.0000000	0.0000000	-0.1341610		
Lead	220.30	0.0000000	0.0000000	0.0000000		
Magnesium	277.90	0.0000000	0.0000000	0.0013030		
Manganese	257.60	0.0000000	0.0000000	-0.0000750		
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000		
Potassium	766.40	0.0000000	0.0000000	0.0000000		
Selenium	196.00	0.0000000	0.0000000	0.0000000		
Silver	328.00	0.0000000	0.0030000	0.0000000		
Sodium	589.50	0.0000000	0.0000000	0.0000000		
Thallium	190.80	0.0000000	-0.0027200	-0.0001000		
Vanadium	292.40	0.0000000	0.0008000	0.0000000		
Zinc	213.80	0.0040000	0.0000000	0.0000000		

Comments:

FORM XI (Part 2) - IN

ILM03.0

U.S. EPA - CLP

12

ICP LINEAR RANGES (QUARTERLY)

Lab Name: KEMRON_ENVIRONMENTAL_SERV Contract: _____

Lab Code: _____ Case No.: 09521_ SAS No.: _____ SDG No.: 4660R_

ICP ID Number: IRIS_TJA_____ Date: 09/01/98

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum_	10.00	350.0	P
Antimony_	40.00	10.0	P
Arsenic_	40.00	10.0	P
Barium_	10.00	50.0	P
Beryllium_	10.00	5.0	P
Cadmium_	40.00	10.0	P
Calcium_	10.00	400.0	P
Chromium_	40.00	60.0	P
Cobalt_	40.00	20.0	P
Copper_	10.00	40.0	P
Iron_	40.00	300.0	P
Lead_	40.00	50.0	P
Magnesium_	40.00	400.0	P
Manganese_	40.00	40.0	P
Mercury_			NR
Nickel_	40.00	50.0	P
Potassium_	10.00	300.0	P
Selenium_	40.00	10.0	P
Silver_	10.00	10.0	P
Sodium_	10.00	300.0	P
Thallium_	40.00	10.0	P
Vanadium_	40.00	30.0	P
Zinc_	40.00	50.0	P

Comments:

HARDCOPY DELIVERABLES

METALS

KEMRON ENVIRONMENTAL SERVICES ICP RUN LOGBOOK

ANALYST JVH DATE 10/16/98 TIME 9:26
 METHOD # 601013 SOP # WORK GROUP # 47805
 CAL STD SOURCE KHA101398A x 1LP ICV/CCV SOURCE JVH101298A x 1LP
 ICS AB SOURCE KHA101598A ICS A SOURCE JVH100898A POST SPK SOURCE DSS-01-08

Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
	50				27.	1CSAB			CV/UB
	1 1/200				28.	PBS PG/WG 47			
	2 1/100				29.	LCSS PG			
	3 1/4				30.	1017201			
	4 1/2				31.	1 01 Dup			
	5 x 2			ICV/UB	32.	1016829			
	1CSA				33.	29 MS			
	1CSAB			CV/UB	34.	29 MSD			
1.	PBS 11M/WG 46760				35.	30			
2.	LCSS 11M				36.	31			
3.	095230	MD21-98-0175			37.	32			
4.	01 MS		0175 MS		38.	1017202			
5.	01 MSD		0175 MSD		39.	03			
6.	02		0177		40.	04			
7.	02 Dup		0177 Dup		41.	05			
8.	0952103	RE15-98-0029			42.	07			
9.	02		0030		43.	08			
10.	03		0031	CV/UB	44.	09			
11.	04		0032		45.	10			
12.	05		0033		46.	11			
13.	06		0034		47.	12			
14.	07		0035		48.	12.9175			
15.	08		0036		49.	1215			
16.	09		0037		50.	1004703 MSD/5			
17.	0952501	MD21-98-0167			51.	1004708/5			
18.	02		0168		52.	09			
19.	03		0169		53.				
20.	04		0171	CV/UB	54.				
21.	05		0172		55.				
22.	06		0173		56.				
23.	07		0174		57.				
24.	07.9175		0174 9175		58.				
25.	0715		017415		59.				
26.	1CSA				60.				

Comments: _____

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key:

CCV - Continuing Calibration Verification

CCB = Continuing Calibration Blank

% D = Automatic Instrument Rerun due to % RSD > 20%

FRS = Full Recalibration Sequence

ID = Automatic Instrument Dilution

R = Analyst Rerun

BLK = Blank Rerun

19

Method: CLP5

Sample Name: S0

Operator:

Comment:

Run Time: 10/16/98 09:26 Type: Std

Mode: IR

Corr.Fact: 1.000000

Run Status: User Aborted

Elem	Ag3280	Al3082	As1890	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.24940	.15796	.02499	6.7487
Stddev	.00000	.00000	.00000	.0000
%RSD	.00000	.00000	.00000	.00000
#1	.24940	.15796	.02499	6.7487
Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04988	.33254	.16350	.09995
Stddev	.00000	.00000	.00000	.00000
%RSD	.00000	.00000	.00000	.00000
#1	.04988	.33254	.16350	.09995
Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.12702	-.22489	.08313	.66428
Stddev	.00000	.00000	.00000	.00000
%RSD	.00000	.00000	.00000	.00000
#1	-.12702	-.22489	.08313	.66428
Elem	K_7664	Li6707	Mg2779	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.12230	.88142	.00831	-.09370
Stddev	.00000	.00000	.00000	.00000
%RSD	.00000	.00000	.00000	.00000
#1	-.12230	.88142	.00831	-.09370
Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03748	.65137	-.01666	.00208
Stddev	.00000	.00000	.00000	.00000
%RSD	.00000	.00000	.00000	.00000
#1	.03748	.65137	-.01666	.00208
Elem	Sb2068	Se1960	Si2516	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.02082	-.01249	1.6138	.02082
Stddev	.00000	.00000	.0000	.00000
%RSD	.00000	.00000	.00000	.00000
#1	-.02082	-.01249	1.6138	.02082
Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.08676	-.01663	-.02082	.00554
Stddev	.00000	.00000	.00000	.00000
%RSD	.00000	.00000	.00000	.00000
#1	-.08676	-.01663	-.02082	.00554

Sample Name: S0 Run Time: 10/16/98 09:26

Elem	Zn2138
Units	Cts/S
Avg	.06039
Stddev	.00000
%RSD	.00000
#1	.06039

Method: CLP5

Sample Name: S0

Operator:

Comment:

Run Time: 10/16/98 09:34 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.08312	.11223	.02498	4.5612
Stddev	.02348	.04119	.00000	.2342
%RSD	28.244	36.704	.00405	5.1345

#1	.06652	.14136	.02498	4.7268
#2	.09973	.08311	.02497	4.3956

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.03739	.37408	.07480	.09678
Stddev	.11167	.03511	.05483	.02207
%RSD	298.70	9.3864	73.298	22.806

#1	.04158	.34925	.03603	.08117
#2	-.11635	.39890	.11358	.11239

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.16026	-.19980	.07482	.65287
Stddev	.00001	.00590	.03530	.00782
%RSD	.00431	2.9506	47.178	1.1978

#1	-.16026	-.20397	.09978	.64734
#2	-.16025	-.19564	.04986	.65840

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.43638	.76487	.00000	-.09158
Stddev	.00073	.35244	.0235	.00000
%RSD	.16813	46.078	481070.	.00442

#1	-.43690	.51566	-.01663	-.09158
#2	-.43586	1.0141	.01662	-.09157

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01977	.72160	.02498	-.02289
Stddev	.00441	.05152	.02355	.00883
%RSD	22.325	7.1397	94.283	38.565

#1	.01665	.68517	.04163	-.01665
#2	.02289	.75803	.00833	-.02914

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00624	-.00624	.81691	.01041
Stddev	.02060	.00294	.03970	.01472
%RSD	329.99	47.146	4.8599	141.42

#1	.00833	-.00833	.78883	.02081
#2	-.02081	-.00416	.84498	.00000

Sample Name: S0 Run Time: 10/16/98 09:34

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.08637	.08311	-.01769	-.02633
Stddev	.01717	.09402	.00638	.02548
%RSD	19.874	113.12	36.053	96.785

#1	-.07423	.01663	-.02220	-.04435
#2	-.09851	.14959	-.01318	-.00831

Elem	Zn2138
Units	Cts/S
Avg	.02706
Stddev	.00294
%RSD	10.875

#1	.02498
#2	.02914

Method: CLP5

Sample Name: S1

Operator:

Comment:

Run Time: 10/16/98 09:37 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	B_2496	Ba4554
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.30756	.37821	6.2526	4.5510
Stddev	.08235	.01755	.1561	.0519
%RSD	26.776	4.6411	2.4970	1.1412

#1	.24933	.39062	6.3630	4.5877~
#2	.36580	.36580	6.1422	4.5143~

Elem	Be3130	Ca3736	Cr2677	Cu3247
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.0390	.82707	.08326	.19119
Stddev	.0355	.03705	.04710	.08233
%RSD	3.4152	4.4796	56.570	43.060

#1	1.0140	.85327	.11656	.13298
#2	1.0641	.80087	.04995	.24941

Elem	Fe2714	K_7664	Li6707	Mg2779
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.80313	3.1233	5.0218	.12884
Stddev	.00048	.1795	.0009	.02936
%RSD	.05932	5.7469	.01783	22.789

#1	.80279	2.9964	5.0211	.14960
#2	.80346	3.2502	5.0224	.10808

Elem	Mn2576	Mo2020	Na5895	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.7745	.20710	21.565	.17484
Stddev	.0382	.00441	.023	.01766
%RSD	1.3773	2.1302	.10532	10.100

#1	2.7475	.20398	21.549	.16235
#2	2.8016	.21022	21.581	.18733

Elem	Sb2068	Si2516	Sn1899	Sr2152
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03538	1.3935	.06869	.03157
Stddev	.00883	.0044	.00294	.00343
%RSD	24.959	.31501	4.2874	10.881

#1	.04163	1.3904	.07077	.03400
#2	.02914	1.3966	.06660	.02914

Elem	Ti3349	V_2924	Zn2138	
Units	Cts/S	Cts/S	Cts/S	
Avg	2.0448	.03325	1.0522	
Stddev	.0474	.01960	.0073	
%RSD	2.3207	58.943	.69757	

#1	2.0113	.01939	1.0470	
#2	2.0784	.04711	1.0574	

Method: CLP5

Sample Name: S2

Operator:

Comment:

Run Time: 10/16/98 09:41 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.43232	.65679	.06244	8.3441
Stddev	.00018	.01148	.00589	.1416
%RSD	.04180	1.7483	9.4318	1.6968

#1	.43244	.64867	.06660	8.4442
#2	.43219	.66491	.05828	8.2440

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.0163	1.9205	1.6447	.17015
Stddev	.1272	.0361	.1071	.02871
%RSD	1.4110	1.8784	6.5111	16.870

#1	9.1063	1.9460	1.5690	.19045
#2	8.9264	1.8950	1.7204	.14985

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.01769	.40794	.42400	.95435
Stddev	.00147	.02356	.01158	.00641
%RSD	8.3163	5.7758	2.7310	.67174

#1	-.01665	.42461	.41581	.95888
#2	-.01873	.39128	.43219	.94981

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.4644	8.9059	.23279	5.6623
Stddev	.0521	.2036	.00010	.0808
%RSD	.80634	2.2867	.04186	1.4260

#1	6.5012	9.0499	.23285	5.6052
#2	6.4275	8.7619	.23272	5.7194

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.39754	42.785	.35383	.01353
Stddev	.00001	.204	.01176	.00442
%RSD	.00354	.47609	3.3240	32.640

#1	.39755	42.929	.34551	.01665
#2	.39753	42.641	.36214	.01041

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.09990	.00833	1.9221	.12072
Stddev	.00000	.01766	.0369	.00588
%RSD	.00354	212.13	1.9177	4.8730

#1	.09991	.02081	1.9482	.11656
#2	.09990	-.00416	1.8961	.12488

Sample Name: S2 Run Time: 10/16/98 09:41

Elem	Sr2152	Ti3349	V_2924	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.13633	4.0904	.10253	2.0918
Stddev	.00834	.0218	.01955	.0089
%RSD	6.1209	.53308	19.070	.42568
#1	.14223	4.0750	.08871	2.0980
#2	.13043	4.1058	.11636	2.0855

Method: CLP5

Sample Name: S3

Operator:

Comment:

Run Time: 10/16/98 09:44 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.0194	12.884	.77679	122.19
Stddev	.0721	.102	.02061	1.90
%RSD	.79913	.79264	2.6538	1.5557

#1	8.9684	12.812	.76222	120.84
#2	9.0703	12.956	.79137	123.53

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	223.45	37.625	35.537	1.5307
Stddev	1.96	.665	.190	.0133
%RSD	.87734	1.7677	.53510	.86610

#1	222.06	37.155	35.402	1.5401
#2	224.84	38.095	35.671	1.5213

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.8205	14.872	9.0027	7.2497
Stddev	.0957	.239	.2368	.1330
%RSD	2.5052	1.6039	2.6304	1.8346

#1	3.7528	14.703	8.8353	7.1557
#2	3.8881	15.040	9.1702	7.3438

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	176.37	197.19	6.0781	136.72
Stddev	2.74	2.62	.0775	1.90
%RSD	1.5546	1.3294	1.2747	1.3871

#1	174.43	195.33	6.0233	135.38
#2	178.31	199.04	6.1329	138.06

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.9404	1063.6	8.4843	1.3110
Stddev	.1325	17.0	.1531	.0280
%RSD	1.4821	1.5962	1.8048	2.1340

#1	8.8467	1051.6	8.3761	1.2912
#2	9.0341	1075.6	8.5926	1.3308

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.3470	.38527	33.597	3.3154
Stddev	.0736	.00883	.505	.0236
%RSD	3.1369	2.2930	1.5032	.71040

#1	2.2950	.37903	33.240	3.2988
#2	2.3991	.39152	33.954	3.3321

Sample Name: S3 Run Time: 10/16/98 09:44

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.2415	98.988	.37868	3.1659
Stddev	.0820	.993	.00344	.0299
%RSD	1.5637	1.0030	.90763	.94553

#1	5.1835	98.286	.38111	3.1448
#2	5.2994	99.690	.37625	3.1871

Elem	Zn2138
Units	Cts/S
Avg	48.980
Stddev	.780
%RSD	1.5932

#1	48.428
#2	49.531

Method: CLP5

Sample Name: S4

Operator:

Comment:

Run Time: 10/16/98 09:48 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	19.034	27.016	1.7033	260.82
Stddev	.164	.054	.0236	.68
%RSD	.86048	.20083	1.3873	.26037
#1	18.918	27.054	1.7201	260.34
#2	19.149	26.977	1.6866	261.31
Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	467.92	78.697	74.633	3.2359
Stddev	3.06	.561	.218	.0087
%RSD	.65458	.71271	.29201	.26885
#1	465.75	78.300	74.479	3.2298
#2	470.08	79.093	74.787	3.2421
Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.3012	32.209	18.784	15.451
Stddev	.0188	.063	.211	.018
%RSD	.22642	.19698	1.1225	.11653
#1	8.2879	32.165	18.635	15.438
#2	8.3145	32.254	18.933	15.464
Elem	K_7664	Li6707	Mg2779	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	365.91	418.48	12.961	293.28
Stddev	.09	2.02	.071	.31
%RSD	.02472	.48223	.54949	.10644
#1	365.98	417.06	13.011	293.06
#2	365.85	419.91	12.910	293.50
Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	19.146	2197.5	18.258	2.9548
Stddev	.018	2.0	.058	.0031
%RSD	.09581	.09040	.31842	.10382
#1	19.133	2198.9	18.217	2.9570
#2	19.159	2196.1	18.299	2.9527
Elem	Sb2068	Se1960	Si2516	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.1517	.86625	71.916	7.1632
Stddev	.0469	.00593	.081	.0415
%RSD	.91045	.68407	.11254	.57971
#1	5.1185	.87044	71.859	7.1926
#2	5.1848	.86206	71.974	7.1339

Sample Name: S4 Run Time: 10/16/98 09:48

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	11.353	205.75	.85445	6.6399
Stddev	.045	.68	.00102	.1232
%RSD	.39756	.33250	.11902	1.8555

#1	11.385	205.27	.85517	6.5527
#2	11.321	206.23	.85373	6.7270

Elem	Zn2138
Units	Cts/S
Avg	106.68
Stddev	.13
%RSD	.12281

#1	106.59
#2	106.78

Method: CLP5

Sample Name: S5

Operator:

Comment:

Run Time: 10/16/98 09:51 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	38.183	54.845	3.4984	522.92
Stddev	.188	.129	.0351	.15
%RSD	.49294	.23593	1.0037	.02808
#1	38.316	54.936	3.5232	523.03
#2	38.050	54.753	3.4735	522.82
Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	943.97	156.62	150.16	6.6047
Stddev	3.23	.35	.15	.0336
%RSD	.34206	.22530	.09921	.50803
#1	946.25	156.87	150.26	6.5810
#2	941.69	156.37	150.05	6.6284
Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	16.589	65.028	37.725	31.137
Stddev	.086	.010	.129	.017
%RSD	.51727	.01547	.34300	.05371
#1	16.650	65.021	37.817	31.126
#2	16.528	65.035	37.634	31.149
Elem	K_7664	Li6707	Mg2779	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	763.94	850.24	26.141	594.75
Stddev	.41	3.68	.018	.84
%RSD	.05362	.43329	.06753	.14158
#1	763.65	852.84	26.129	594.16
#2	764.23	847.63	26.154	595.35
Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	38.690	4480.3	36.787	6.0118
Stddev	.067	1.4	.038	.0033
%RSD	.17386	.03126	.10248	.05540
#1	38.643	4479.4	36.760	6.0094
#2	38.738	4481.3	36.814	6.0141
Elem	Sb2068	Se1960	Si2516	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	10.520	1.8137	147.30	14.558
Stddev	.005	.0207	.12	.004
%RSD	.04957	1.1430	.08439	.02664
#1	10.524	1.7991	147.22	14.555
#2	10.516	1.8284	147.39	14.560

Sample Name: S5 Run Time: 10/16/98 09:51

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	22.985	418.83	1.7540	13.715
Stddev	.004	.38	.0028	.024
%RSD	.01921	.08985	.16147	.17159

#1	22.988	419.09	1.7560	13.698
#2	22.982	418.56	1.7520	13.731

Elem	Zn2138
Units	Cts/S
Avg	219.49
Stddev	.17
%RSD	.07640

#1	219.61
#2	219.37

E1 Name	Slope	Y-int	Correlation	Date Stdized
Ag3280	46.8358	0.0833	0.9997070	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	-3.1542e-060	0	0	0.083125
S1	0.004	0.0047889	0.000789	19.7	0.30756
S2	0.008	0.0074525	-0.000547	-6.84	0.43232
S3	0.2	0.1908	-0.0092	-4.6	9.0194
S4	0.4	0.40461	0.00461	1.15	19.034
S5	0.8	0.81347	0.0135	1.68	38.183

E1 Name	Slope	Y-int	Correlation	Date Stdized
Al3082	2.6734	0.1121	0.9997395	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	4.5405e-050	0	0	0.11223
S1	0.1	0.099535	-0.000465	-0.465	0.37821
S2	0.2	0.20374	0.00374	1.87	0.65679
S3	5	4.7775	-0.223	-4.45	12.884
S4	10	10.063	0.0634	0.634	27.016
S5	20	20.473	0.473	2.37	54.845

E1 Name	Slope	Y-int	Correlation	Date Stdized
As1890	4.2742	0.0250	0.9988782	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	-1.8891e-060	0	0	0.024976
S2	0.008	0.0087634	0.000763	9.54	0.062441
S3	0.2	0.17589	-0.0241	-12.1	0.77679
S4	0.4	0.39267	-0.00733	-1.83	1.7033
S5	0.8	0.81263	0.0126	1.58	3.4984

E1 Name	Slope	Y-int	Correlation	Date Stdized
B_2496	25.4339	4.5451	0.9991515	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	0.000629990	0	0	4.5612
S1	0.1	0.067134	-0.0329	-32.9	6.2526
S2	0.2	0.14937	-0.0506	-25.3	8.3441
S3	5	4.6254	-0.375	-7.49	122.19
S4	10	10.076	0.0763	0.763	260.82
S5	20	20.381	0.381	1.91	522.92

E1 Name	Slope	Y-int	Correlation	Date Stdized
Ba4554	467.1705	-0.0411	0.9998338	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	7.8837e-060	0	0	-0.037385
S1	0.01	0.0098295	-0.00017	-1.7	4.551
S2	0.02	0.019388	-0.000612	-3.06	9.0163
S3	0.5	0.47839	-0.0216	-4.32	223.45
S4	1	1.0017	0.00169	0.169	467.92
S5	2	2.0207	0.0207	1.04	943.97

El Name	Slope	Y-int	Correlation	Date Stdized
Be3130	1538.2729	0.3728	0.9998334	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	8.5751e-070	0	0	0.37408
S1	0.0005	0.00043314	-6.69e-05	-13.4	1.039
S2	0.001	0.0010061	6.15e-06	0.615	1.9205
S3	0.025	0.024217	-0.000783	-3.13	37.625
S4	0.05	0.050917	0.000917	1.83	78.697
S5	0.1	0.10158	0.00158	1.58	156.62

El Name	Slope	Y-int	Correlation	Date Stdized
Ca3736	7.4215	0.0751	0.9998149	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	-3.3723e-050	0	0	0.074805
S1	0.1	0.10133	0.00133	1.33	0.82707
S2	0.2	0.2115	0.0115	5.75	1.6447
S3	5	4.7782	-0.222	-4.44	35.537
S4	10	10.046	0.0462	0.462	74.633
S5	20	20.223	0.223	1.11	150.16

El Name	Slope	Y-int	Correlation	Date Stdized
Cd2288	63.4081	0.0968	0.9990715	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	-7.9361e-070	0	0	0.09678
S2	0.001	0.0011563	0.000156	15.6	0.17015
S3	0.025	0.022613	-0.00239	-9.55	1.5307
S4	0.05	0.049506	-0.000494	-0.987	3.2359
S5	0.1	0.10263	0.00263	2.63	6.6047

El Name	Slope	Y-int	Correlation	Date Stdized
Co2286	41.3873	-0.1605	0.9997593	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	6.7393e-060	0	0	-0.16026
S2	0.004	0.0034515	-0.000549	-13.7	-0.017691
S3	0.1	0.096189	-0.00381	-3.81	3.8205
S4	0.2	0.20445	0.00445	2.23	8.3012
S5	0.4	0.4047	0.0047	1.18	16.589

El Name	Slope	Y-int	Correlation	Date Stdized
Cr2677	64.3530	-0.2005	0.9996288	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	1.0791e-050	0	0	-0.1998
S1	0.005	0.0044094	-0.000591	-11.8	0.083257
S2	0.01	0.0094548	-0.000545	-5.45	0.40794
S3	0.25	0.23421	-0.0158	-6.32	14.872
S4	0.5	0.50363	0.00363	0.726	32.209
S5	1	1.0136	0.0136	1.36	65.028

El Name	Slope	Y-int	Correlation	Date Stdized
Cu3247	37.5886	0.0740	0.9996362	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S1	0.005	0.0031185	-0.00188	-37.6	0.19119
S0	0	2.2677e-050	0	0	0.074824
S2	0.01	0.0093121	-0.000688	-6.88	0.424
S3	0.25	0.23754	-0.0125	-4.98	9.0027
S4	0.5	0.49776	-0.00224	-0.448	18.784
S5	1	1.0017	0.00166	0.166	37.725

El Name	Slope	Y-int	Correlation	Date Stdized
Fe2714	3.8464	0.6528	0.9989175	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	2.0238e-050	0	0	0.65287
S1	0.04	0.039086	-0.000914	-2.29	0.80313
S2	0.08	0.078401	-0.0016	-2	0.95435
S3	2	1.7151	-0.285	-14.2	7.2497
S4	4	3.8473	-0.153	-3.82	15.451
S5	8	7.9256	-0.0744	-0.93	31.137

El Name	Slope	Y-int	Correlation	Date Stdized
K_7664	7.4675	-0.4427	0.9995747	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	0.000840510	0	0	-0.43638
S1	0.5	0.47753	-0.0225	-4.49	3.1233
S2	1	0.92494	-0.0751	-7.51	6.4644
S3	25	23.678	-1.32	-5.29	176.37
S4	50	49.06	-0.94	-1.88	365.91
S5	100	102.36	2.36	2.36	763.94

El Name	Slope	Y-int	Correlation	Date Stdized
Li6707	418.3452	0.7626	0.9996676	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	5.3311e-060	0	0	0.76487
S1	0.01	0.010181	0.000181	1.81	5.0218
S2	0.02	0.019465	-0.000535	-2.67	8.9059
S3	0.5	0.46952	-0.0305	-6.1	197.19
S4	1	0.99851	-0.00149	-0.149	418.48
S5	2	2.0306	0.0306	1.53	850.24

El Name	Slope	Y-int	Correlation	Date Stdized
Mg2779	1.2933	-0.0002	0.9996850	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	0.000136830	0	0	-4.8876e-06
S1	0.1	0.099761	-0.000239	-0.239	0.12884
S2	0.2	0.18014	-0.0199	-9.93	0.23279
S3	5	4.6998	-0.3	-6	6.0781
S4	10	10.022	0.0217	0.217	12.961
S5	20	20.213	0.213	1.07	26.141

El Name	Slope	Y-int	Correlation	Date Stdized
Mn2576	585.5036	-0.0941	0.9996237	10/16/98 09:55:10

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	4.27e-06	0	0	-0.091577
S1	0.005	0.0048994	-0.000101	-2.01	2.7745
S2	0.01	0.0098315	-0.000169	-1.69	5.6623
S3	0.25	0.23367	-0.0163	-6.53	136.72
S4	0.5	0.50106	0.00106	0.212	293.28
S5	1	1.016	0.016	1.6	594.75

El Name	Slope	Y-int	Correlation	Date Stdized
Mo2020	19.0651	0.0196	0.9996490	10/16/98 09:55:10

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	7.1177e-060	0	0	0.019772
S1	0.01	0.0098329	-0.000167	-1.67	0.2071
S2	0.02	0.019822	-0.000178	-0.892	0.39754
S3	0.5	0.46791	-0.0321	-6.42	8.9404
S4	1	1.0032	0.00322	0.322	19.146
S5	2	2.0283	0.0283	1.42	38.69

El Name	Slope	Y-int	Correlation	Date Stdized
Na5895	44.2060	0.6919	0.9998295	10/16/98 09:55:10

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	0.000672080	0	0	0.7216
S1	0.5	0.47218	-0.0278	-5.56	21.565
S2	1	0.9522	-0.0478	-4.78	42.785
S3	25	24.044	-0.956	-3.82	1063.6
S4	50	49.695	-0.305	-0.609	2197.5
S5	100	101.34	1.34	1.34	4480.3

El Name	Slope	Y-int	Correlation	Date Stdized
Ni2316	36.1721	0.0244	0.9995589	10/16/98 09:55:10

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	1.5244e-050	0	0	0.024976
S1	0.005	0.0041583	-0.000842	-16.8	0.17484
S2	0.01	0.0091066	-0.000893	-8.93	0.35383
S3	0.25	0.23388	-0.0161	-6.45	8.4843
S4	0.5	0.50408	0.00408	0.815	18.258
S5	1	1.0163	0.0163	1.63	36.787

El Name	Slope	Y-int	Correlation	Date Stdized
Pb2203	5.9176	-0.0232	0.9987799	10/16/98 09:55:10

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	4.3998e-050	0	0	-0.022894
S2	0.01	0.006199	-0.0038	-38	0.013529
S3	0.25	0.22545	-0.0245	-9.82	1.311
S4	0.5	0.50324	0.00324	0.649	2.9548
S5	1	1.0198	0.0198	1.98	6.0118

El Name	Slope	Y-int	Correlation	Date Stdized
Sb2068	4.2785	-0.0064	0.9992847	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S)IR
S0	0	2.673e-05	0	0	-0.0062435
S1	0.012	0.0097563	-0.00224	-18.7	0.035384
S2	0.024	0.024837	0.000837	3.49	0.099905
S3	0.6	0.55006	-0.0499	-8.32	2.347
S4	1.2	1.2056	0.00558	0.465	5.1517
S5	2.4	2.4603	0.0603	2.51	10.52

El Name	Slope	Y-int	Correlation	Date Stdized
Se1960	2.1569	-0.0063	0.9987174	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S)IR
S2	0.008	0.0067756	-0.00122	-15.3	0.0083256
S3	0.2	0.18154	-0.0185	-9.23	0.38527
S4	0.4	0.40453	0.00453	1.13	0.86625
S0	0	2.0852e-050	0	0	-0.006244
S5	0.8	0.8438	0.0438	5.47	1.8137

El Name	Slope	Y-int	Correlation	Date Stdized
Si2516	14.2396	0.8135	0.9991415	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S)IR
S0	0	0.0002366	0	0	0.81691
S1	0.05	0.04073	-0.00927	-18.5	1.3935
S2	0.1	0.077852	-0.0221	-22.1	1.9221
S3	2.5	2.3023	-0.198	-7.91	33.597
S4	5	4.9933	-0.00668	-0.134	71.916
S5	10	10.288	0.288	2.88	147.3

El Name	Slope	Y-int	Correlation	Date Stdized
Sn1899	7.1318	0.0101	0.9993179	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S)IR
S0	0	4.5283e-050	0	0	0.010407
S1	0.01	0.0082171	-0.00178	-17.8	0.068687
S2	0.02	0.015513	-0.00449	-22.4	0.12072
S3	0.5	0.46346	-0.0365	-7.31	3.3154
S4	1	1.003	0.00299	0.299	7.1632
S5	2	2.0398	0.0398	1.99	14.558

El Name	Slope	Y-int	Correlation	Date Stdized
Sr2152	11.3798	-0.0864	0.9996531	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S)IR
S0	0	3.0418e-060	0	0	-0.086373
S1	0.01	0.010367	0.000367	3.67	0.031568
S2	0.02	0.019573	-0.000427	-2.14	0.13633
S3	0.5	0.46818	-0.0318	-6.36	5.2415
S4	1	1.0053	0.00525	0.525	11.353
S5	2	2.0274	0.0274	1.37	22.985

El Name	Slope	Y-int	Correlation	Date Stdized
Ti3349	206.5256	0.0808	0.9998118	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	1.1261e-050	0	0	0.08311
S1	0.01	0.00951	-0.00049	-4.9	2.0448
S2	0.02	0.019414	-0.000586	-2.93	4.0904
S3	0.5	0.47891	-0.0211	-4.22	98.988
S4	1	0.99586	-0.00414	-0.414	205.75
S5	2	2.0276	0.0276	1.38	418.83

El Name	Slope	Y-int	Correlation	Date Stdized
Tl1908	1.9222	-0.0180	0.9993355	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	0.000142860	0	0	-0.017691
S3	0.25	0.20635	-0.0437	-17.5	0.37868
S4	0.5	0.45386	-0.0461	-9.23	0.85445
S5	1	0.92186	-0.0781	-7.81	1.754

El Name	Slope	Y-int	Correlation	Date Stdized
V_2924	6.7960	-0.0265	0.9996557	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	1.989e-05	0	0	-0.02633
S1	0.01	0.0087869	-0.00121	-12.1	0.033251
S2	0.02	0.018981	-0.00102	-5.09	0.10253
S3	0.5	0.46974	-0.0303	-6.05	3.1659
S4	1	0.98091	-0.0191	-1.91	6.6399
S5	2	2.0219	0.0219	1.1	13.715

El Name	Slope	Y-int	Correlation	Date Stdized
Zn2138	106.8210	0.0255	0.9992993	10/16/98 09:55:10

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	1.4394e-050	0	0	0.027057
S1	0.01	0.0096109	-0.000389	-3.89	1.0522
S2	0.02	0.019343	-0.000657	-3.29	2.0918
S3	0.5	0.45828	-0.0417	-8.34	48.98
S4	1	0.99848	-0.00152	-0.152	106.68
S5	2	2.0545	0.0545	2.72	219.49

Method: CLP5

Sample Name: S5

Operator:

Comment:

Run Time: 10/16/98 09:55 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.79869	20.244	.82499	20.366	2.0128
Stddev	.00302	.065	.00551	.011	.0032
%RSD	.37773	.32031	.66760	.05518	.15758

#1	.79656	20.198	.82109	20.358	2.0105
#2	.80083	20.290	.82888	20.374	2.0150

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.80000	20.000	.80000	20.000	2.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.10010	20.167	.10274	.40064	1.0112
Stddev	.00011	.126	.00073	.00048	.0003
%RSD	.10620	.62267	.70883	.11938	.03479

#1	.10003	20.078	.10222	.40030	1.0109
#2	.10018	20.255	.10325	.40097	1.0114

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.10000	20.000	.10000	.40000	1.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0027	8.2387	101.68	2.0230	20.318
Stddev	.0023	.0323	.64	.0139	.074
%RSD	.23219	.39141	.63062	.68566	.36242

#1	1.0011	8.2159	101.23	2.0132	20.266
#2	1.0044	8.2615	102.14	2.0328	20.370

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	8.0000	100.00	2.0000	20.000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0169	2.0373	100.64	1.0129	1.0231
Stddev	.0022	.0071	.58	.0017	.0042
%RSD	.21904	.34742	.58052	.16693	.41287

#1	1.0154	2.0323	100.22	1.0117	1.0201
#2	1.0185	2.0423	101.05	1.0141	1.0261

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	2.0000	100.00	1.0000	1.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%

Sample Name: S5 Run Time: 10/16/98 09:55

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	2.4443	.83207	10.255	2.0530	2.0309
Stddev	.0041	.01631	.031	.0099	.0030
%RSD	.16917	1.9605	.30165	.48107	.14905
#1	2.4472	.82054	10.233	2.0460	2.0288
#2	2.4414	.84360	10.277	2.0600	2.0331
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.4000	.80000	10.000	2.0000	2.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Ti3349	Tl1908	V_2924	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	2.0203	1.0281	2.0389	2.0490	
Stddev	.0099	.0084	.0258	.0046	
%RSD	.48845	.82102	1.2652	.22530	
#1	2.0133	1.0222	2.0206	2.0457	
#2	2.0273	1.0341	2.0571	2.0522	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	2.0000	1.0000	2.0000	2.0000	
Range	5.0000%	5.0000%	5.0000%	5.0000%	

Method: CLP5	Sample Name: ICV			Operator:	
Comment:					
Run Time: 10/16/98	09:59	Type: QC	Mode: CONC	Corr.Fact: 1.000000	
Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.41334	10.355	.41643	10.069	1.0264
Stddev	.00151	.015	.00276	.001	.0028
%RSD	.36477	.14229	.66220	.01464	.27441
#1	.41228	10.366	.41838	10.070	1.0284
#2	.41441	10.345	.41448	10.068	1.0244
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.40000	10.000	.40000	10.000	1.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.04969	10.400	.05298	.20433	.51349
Stddev	.00006	.013	.00007	.00014	.00055
%RSD	.11233	.12042	.13289	.06821	.10722
#1	.04973	10.391	.05293	.20443	.51388
#2	.04965	10.409	.05303	.20423	.51310
Check ?	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	.05000	10.000	.05000	.20000	.50000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.50682	4.1024	52.234	1.0242	10.423
Stddev	.00381	.0034	.100	.0035	.159
%RSD	.75207	.08240	.19182	.34181	1.5268
#1	.50951	4.1000	52.163	1.0266	10.311
#2	.50412	4.1048	52.304	1.0217	10.536
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	4.0000	50.000	1.0000	10.000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.51625	1.0325	51.973	.52187	.52201
Stddev	.00065	.0032	.017	.00033	.00149
%RSD	.12650	.30652	.03249	.06269	.28475
#1	.51579	1.0302	51.961	.52164	.52306
#2	.51671	1.0347	51.985	.52210	.52096
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000	50.000	.50000	.50000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%

Sample Name: ICV Run Time: 10/16/98 09:59

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2203	.40963	5.1318	1.0479	1.0247
Stddev	.0007	.00543	.0130	.0041	.0022
%RSD	.05626	1.3266	.25374	.39387	.21894

#1	1.2208	.40579	5.1226	1.0508	1.0231
#2	1.2198	.41347	5.1410	1.0450	1.0263

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	1.0249	.51758	Q 1.0508	1.0359
Stddev	.0016	.00685	.0130	.0020
%RSD	.15746	1.3240	1.2347	.18925

#1	1.0261	.52243	1.0600	1.0345
#2	1.0238	.51274	1.0416	1.0373

Check ?	QC Pass	QC Pass	QC Fail	QC Pass
Value	1.0000	.50000	1.0000	1.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%

Method: CLP5

Sample Name: CCB

Operator:

Comment:

Run Time: 10/16/98 10:06 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00035	.00319	.00000	L -.10689	-.00002
Stddev	.00151	.02872	.0027	.00168	.00010
%RSD	426.18	899.80	64002.	1.5710	533.37

#1	-.00071	-.01712	.00194	-.10571	-.00009
#2	.00142	.02350	-.00195	-.10808	.00005

Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	.00163	.02801	.00504	.00569	.00048
Low Limit	-.00162	-.02801	-.00504	-.00569	-.00048

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00002	.00276	-.00035	-.00027	-.00038
Stddev	.00004	.00132	.00007	.00003	.00046
%RSD	257.46	47.915	20.202	12.988	121.06

#1	.00005	.00370	-.00039	-.00024	-.00070
#2	-.00001	.00183	-.00030	-.00029	-.00005

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00005	.04330	.00063	.00091	.00079
Low Limit	-.00005	-.04330	-.00063	-.00091	-.00079

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00131	.00300	-.00211	H .00068	-.01591
Stddev	.00032	.00151	.00573	.00006	.03183
%RSD	24.519	50.301	272.04	8.1366	200.02

#1	-.00108	.00193	.00195	.00064	.00659
#2	-.00153	.00407	-.00616	.00072	-.03842

Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	.00561	.01566	.06821	.00062	.01895
Low Limit	-.00561	-.01566	-.06821	-.00062	-.01895

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00002	.00066	-.00685	-.00056	-.00119
Stddev	.00001	.00070	.00416	.00146	.00025
%RSD	63.542	105.03	60.710	261.27	20.829

#1	.00001	.00115	-.00391	.00047	-.00136
#2	.00003	.00017	-.00980	-.00160	-.00101

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00019	.00258	.05651	.00136	.00817
Low Limit	-.00019	-.00258	-.05060	-.00154	-.00817

Sample Name: CCB Run Time: 10/16/98 10:06

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00191	-.00288	L -.03455	.00121	.00000
Stddev	.00345	.00547	.00197	.00041	.00142
%RSD	180.37	189.82	5.7051	34.038	55337.

#1	.00053	-.00674	-.03595	.00150	-.00100
#2	-.00436	.00099	-.03316	.00092	.00101

Check ?	LC Pass	LC Pass	LC Fail	LC Pass	LC Pass
High Limit	.01044	.00890	.00312	.00268	.00347
Low Limit	-.01044	-.00890	-.00312	-.00268	-.00347

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00039	-.00024	-.00079	.00012
Stddev	.00034	.00324	.00202	.00006
%RSD	87.221	1321.6	255.45	53.154

#1	-.00015	-.00253	.00064	.00007
#2	-.00063	.00204	-.00222	.00016

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00120	.01463	.00798	.00849
Low Limit	-.00120	-.01463	-.00798	-.00849

Method: CLP5

Sample Name: IC5A

Operator:

Comment:

Run Time: 10/16/98 10:10 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4550
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00410	251.63	.00862	-.12687	.00086
Stddev	.00126	.68	.00413	.00197	.00000
%RSD	30.640	.27164	47.882	1.5530	9.0370

#1	.00321	251.15	.01154	-.12548	.00086
#2	.00498	252.11	.00570	-.12826	.00070

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	250.00	.00000	.00000	.00000
Range	±.01600	±50.000	±.04000	±1.0000	±.02000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2670
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	244.06	.00086	-.00174	.00250
Stddev	.00001	.08	.00010	.00000	.00080
%RSD	50.775	.03375	12.087	.00578	33.930

#1	-.00002	244.00	.00079	-.00174	.00190
#2	-.00001	244.12	.00094	-.00174	.00310

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	250.00	.00000	.00000	.00000
Range	±.00100	±50.000	±.00400	±.01000	±.01000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2770
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00019	93.112	.04266	.01531	241.70
Stddev	.00063	.000	.01174	.00029	3.00
%RSD	327.24	.00008	27.529	1.8642	1.2670

#1	-.00025	93.112	.05096	.01511	243.80
#2	.00064	93.112	.03435	.01551	239.50

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	100.00	.00000	.00000	250.00
Range	±.01000	±20.000	±1.0000	±.20000	±50.000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2200
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00036	-.00005	.01270	-.00254	-.02360
Stddev	.00002	.00062	.00187	.00033	.00100
%RSD	6.5912	1231.1	14.750	12.840	4.2690

#1	-.00038	.00039	.01402	-.00231	-.02290
#2	-.00035	-.00049	.01137	-.00277	-.02430

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.00000	.00000	.00000	.00000
Range	±.01000	±.20000	±1.0000	±.04000	±.04000

Sample Name: ICSA Run Time: 10/16/98 10:10

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01031	-.00041	.01456	-.00083	-.00009
Stddev	.00552	.00960	.00041	.00330	.00164
%RSD	53.531	2323.7	2.8282	398.12	1758.9

#1	.01422	-.00720	.01486	.00151	.00107
#2	.00641	.00637	.01427	-.00317	-.00125

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.00000	.00000	.00000	.00000
Range	±.04000	±.04000	±1.0000	±1.0000	±.02000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00474	-.01664	-.01355	.00259
Stddev	.00009	.00125	.00086	.00032
%RSD	1.9606	7.4979	6.3708	12.262

#1	-.00480	-.01576	-.01416	.00236
#2	-.00467	-.01752	-.01294	.00281

Check ?	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.00000	.00000	.00000
Range	±.06000	±.08000	±.02000	±.02000

Sample Name: ICSAB Run Time: 10/16/98 10:13

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.49081	.25747	.01923	.00092	.00808
Stddev	.00548	.00829	.00352	.00000	.00311
%RSD	1.1158	3.2213	18.284	.00000	38.430

#1	.48694	.25160	.02171	.00092	.01028
#2	.49469	.26333	.01674	.00092	.00588

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	.25000	.00000	.00000	.00000
Range	±.10000	±.05000	±1.0000	±1.0000	±.02000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00507	.42401	.21972	.46480
Stddev	.00000	.00079	.00062	.00167
%RSD	.08369	.18570	.28005	.35897

#1	-.00507	.42457	.22015	.46362
#2	-.00506	.42346	.21928	.46598

Check ?	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.50000	.25000	.50000
Range	±.06000	±.10000	±.05000	±.10000

Method: CLP5

Sample Name: CCV

Operator:

Comment:

Run Time: 10/16/98

10:17 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.40818	10.458	.42036	10.028	1.0247
Stddev	.00425	.013	.00137	.033	.0038
%RSD	1.0423	.12206	.32482	.33145	.37230

#1	.40517	10.467	.42133	10.004	1.0220
#2	.41119	10.449	.41940	10.051	1.0274

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.40000	10.000	.40000	10.000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.04948	10.477	.05401	.20338	.51354
Stddev	.00016	.004	.00035	.00121	.00039
%RSD	.31553	.03437	.63914	.59646	.07661

#1	.04937	10.480	.05426	.20253	.51382
#2	.04959	10.475	.05377	.20424	.51326

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.05000	10.000	.05000	.20000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.49932	4.1532	51.831	1.0132	10.362
Stddev	.00122	.0105	.199	.0030	.109
%RSD	.24398	.25325	.38445	.29299	1.0520

#1	.49846	4.1457	51.690	1.0111	10.285
#2	.50019	4.1606	51.972	1.0153	10.439

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	4.0000	50.000	1.0000	10.000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.52247	1.0504	51.540	.52437	.53121
Stddev	.00017	.0014	.123	.00023	.00101
%RSD	.03323	.12863	.23928	.04308	.19082

#1	.52235	1.0513	51.452	.52453	.53050
#2	.52260	1.0494	51.627	.52421	.53193

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000	50.000	.50000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Method: CLP5

Sample Name: ICSAB

Operator:

Comment:

Run Time: 10/16/98

10:13 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.48186	255.67	.25531	-.13437	.23557
Stddev	.00022	1.94	.00135	.00174	.00156
%RSD	.04563	.75863	.53060	1.2923	.66168

#1	.48170	254.30	.25626	-.13314	.23447
#2	.48202	257.05	.25435	-.13559	.23667

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	250.00	.25000	.00000	.25000
Range	±.10000	±50.000	±.05000	±1.0000	±.05000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.23141	246.98	.46536	.21602	.22650
Stddev	.00158	1.15	.00101	.00177	.00132
%RSD	.68267	.46553	.21754	.81744	.58430

#1	.23029	246.17	.46465	.21727	.22556
#2	.23253	247.80	.46608	.21477	.22744

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.25000	250.00	.50000	.25000	.25000
Range	±.05000	±50.000	±.10000	±.05000	±.05000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.23147	97.950	2.5371	.01500	242.49
Stddev	.00158	.275	.0330	.00025	2.03
%RSD	.68359	.28066	1.3015	1.6936	.83747

#1	.23259	97.755	2.5604	.01482	243.92
#2	.23035	98.144	2.5137	.01518	241.05

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.25000	100.00	2.5000	.00000	250.00
Range	±.05000	±20.000	±.50000	±.20000	±50.000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.22055	.00143	1.2369	.43591	.43217
Stddev	.00042	.00000	.0120	.00108	.00071
%RSD	.18924	.00940	.96926	.24828	.16417

#1	.22025	.00143	1.2284	.43667	.43167
#2	.22084	.00143	1.2453	.43514	.43267

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.25000	.00000	1.2500	.50000	.50000
Range	±.05000	±.20000	±.25000	±.10000	±.10000

Sample Name: CCV Run Time: 10/16/98 10:17

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2219	.41529	5.1633	1.0663	1.0351
Stddev	.0097	.00270	.0052	.0037	.0038
%RSD	.79208	.65099	.09987	.34461	.36696
#1	1.2150	.41720	5.1597	1.0689	1.0378
#2	1.2287	.41338	5.1670	1.0638	1.0324
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Ti3349	Tl1908	V_2924	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	1.0260	.51295	1.0629	1.0430	
Stddev	.0033	.01810	.0081	.0025	
%RSD	.32045	3.5286	.76261	.23773	
#1	1.0237	.50015	1.0687	1.0413	
#2	1.0284	.52575	1.0572	1.0448	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	1.0000	.50000	1.0000	1.0000	
Range	10.000%	10.000%	10.000%	10.000%	

Method: CLP5

Sample Name: CCB

Operator:

Comment:

Run Time: 10/16/98 10:24 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00071	.00153	-.00049	L -.13402	-.00017
Stddev	.00050	.00451	.00069	.00035	.00004
%RSD	70.931	294.36	140.07	.26223	22.205

#1	.00106	-.00166	.00000	-.13377	~-.00014
#2	.00035	.00472	-.00098	-.13427	~-.00020

Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	.00163	.02801	.00504	.00569	.00048
Low Limit	-.00162	-.02801	-.00504	-.00569	-.00048

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00003	.00034	.00022	.00008	-.00044
Stddev	.00001	.00051	.00031	.00011	.00009
%RSD	25.339	147.40	141.87	131.48	20.696

#1	.00003	-.00001	.00000	.00001	-.00051
#2	.00004	.00070	.00044	.00016	-.00038

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00005	.04330	.00063	.00091	.00079
Low Limit	-.00005	-.04330	-.00063	-.00091	-.00079

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00130	-.00065	.03317	.00054	-.00948
Stddev	.00156	.00629	.00940	.00070	.00454
%RSD	119.84	971.89	28.350	129.53	47.907

#1	-.00240	-.00510	.02652	.00005	-.01269
#2	-.00020	.00380	.03982	.00104	-.00627

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00561	.01566	.06821	.00062	.01895
Low Limit	-.00561	-.01566	-.06821	-.00062	-.01895

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00110	-.00375	.00042	.00005
Stddev	.00000	.00023	.00068	.00024	.00050
%RSD	20.123	21.121	18.241	58.528	1094.2

#1	.00002	.00126	-.00423	.00059	-.00031
#2	.00001	.00094	-.00327	.00024	.00040

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00019	.00258	.05651	.00136	.00817
Low Limit	-.00019	-.00258	-.05060	-.00154	-.00817

Sample Name: CCB Run Time: 10/16/98 10:24

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00052	.00291	L -.03865	.00063	.00153
Stddev	.00551	.00273	.00010	.00041	.00004
%RSD	1051.9	93.987	.26710	65.581	2.7832

#1	.00442	.00097	-.03858	.00034	.00156
#2	-.00337	.00484	-.03872	.00092	.00150

Check ?	LC Pass	LC Pass	LC Fail	LC Pass	LC Pass
High Limit	.01044	.00890	.00312	.00268	.00347
Low Limit	-.01044	-.00890	-.00312	-.00268	-.00347

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	.00017	.00506	.00084	.00017
Stddev	.00000	.00771	.00144	.00011
%RSD	.04412	152.56	171.55	64.345

#1	.00017	.01051	.00186	.00009
#2	.00017	-.00040	-.00018	.00025

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00120	.01463	.00798	.00849
Low Limit	-.00120	-.01463	-.00798	-.00849

Method: CLP5

Sample Name: PBS UM/WG46760

Operator: JYH

Comment:

Run Time: 10/16/98

10:28 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00053	.02018	-.00196	-.15329	-.00013
Stddev	.00075	.02192	.00138	.00029	.00021
%RSD	142.26	108.64	70.632	.18861	159.01

#1	.00106	.00468	-.00293	-.15309	.00002
#2	.00000	.03568	-.00098	-.15350	-.00029

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00800	.10000	.04000	.50000	.01000
Low Limit	-.00800	-.10000	-.04000	-.50000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00313	.00037	-.00027	-.00086
Stddev	.00007	.00237	.00024	.00018	.00059
%RSD	620.26	75.741	66.171	65.719	68.964

#1	.00006	.00480	.00054	-.00039	-.00128
#2	-.00004	.00145	.00020	-.00014	-.00044

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00050	.20000	.00200	.00500	.00500
Low Limit	-.00050	-.20000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00135	.00495	.01525	.00018	-.00629
Stddev	.00219	.00278	.00436	.00076	.00001
%RSD	162.18	56.253	28.560	411.46	.15996

#1	-.00020	.00692	.01833	.00072	-.00628
#2	.00290	.00298	.01217	-.00035	-.00630

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00500	.02000	.50000	.10000	.10000
Low Limit	-.00500	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00000	.00017	-.00424	-.00045	-.00101
Stddev	.00001	.00046	.00001	.00049	.00299
%RSD	470.79	270.43	.25628	109.85	295.18

#1	-.00001	.00050	-.00425	-.00079	.00110
#2	.00001	-.00016	-.00423	-.00010	-.00312

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.01000	.10000	.50000	.02000	.04000
Low Limit	-.01000	-.10000	-.50000	-.02000	-.04000

Sample Name: PBS UM/WG46760

Run Time: 10/16/98 10:28

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00150	-.00287	-.04230	-.00025	.00089
Stddev	.00138	.01091	.00052	.00248	.00069
%RSD	92.257	379.62	1.2236	1004.3	77.778

#1	.00248	.00484	-.04266	.00150	.00137
#2	.00052	-.01059	-.04193	-.00200	.00040

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.02000	.02000	1.0000	.50000	.01000
Low Limit	-.02000	-.02000	-1.0000	-.50000	-.01000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00031	.00289	.00104	.00022
Stddev	.00046	.00353	.00115	.00012
%RSD	146.71	122.25	110.83	54.876

#1	-.00063	.00539	.00022	.00013
#2	.00001	.00039	.00185	.00030

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.03000	.04000	.01000	.02000
Low Limit	-.03000	-.04000	-.01000	-.02000

Method: CLP5	Sample Name: LCSS UM		Operator: JYH		
Comment:					
Run Time: 10/16/98	10:31	Type: Unk	Mode: CONC	Corr.Fact: 50.000000	

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	9.9075	685.42	51.801	45.727	501.50
Stddev	.0123	.12	.105	.255	.32
%RSD	.12425	.01813	.20313	.55777	.06463
#1	9.9162	685.51	51.727	45.547	501.73
#2	9.8988	685.33	51.876	45.907	501.27
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	12.000	754.00	60.000	60.000	600.00
Low Limit	8.0000	503.00	40.000	40.000	400.00
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	51.781	517.49	49.970	49.230	50.580
Stddev	.016	.15	.059	.226	.174
%RSD	.03004	.02990	.11887	.45924	.34440
#1	51.792	517.60	49.928	49.070	50.457
#2	51.770	517.38	50.012	49.390	50.703
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	60.000	601.09	60.000	60.000	60.000
Low Limit	40.000	400.73	40.000	40.000	40.000
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	49.299	105.39	2523.9	517.66	505.69
Stddev	.137	.35	20.7	.69	.89
%RSD	.27792	.33138	.82067	.13235	.17554
#1	49.396	105.15	2538.6	517.17	506.32
#2	49.202	105.64	2509.3	518.14	505.06
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	60.000	124.01	3000.0	600.00	600.00
Low Limit	40.000	82.672	2000.0	400.00	400.00
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	52.037	53.590	2560.5	50.573	51.854
Stddev	.115	.151	15.0	.155	.037
%RSD	.22150	.28180	.58548	.30677	.07099
#1	51.956	53.483	2571.1	50.464	51.880
#2	52.119	53.696	2549.9	50.683	51.828
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	60.000	60.000	3000.0	60.000	60.384
Low Limit	40.000	40.000	2000.0	40.000	40.256

Sample Name: LCSS UM Run Time: 10/16/98 10:31

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	50.284	51.938	H 613.04	L .22130	52.462
Stddev	.515	.409	1.46	.08259	.054
%RSD	1.0241	.78661	.23862	37.320	.10321

#1	49.920	51.649	612.01	.16290	52.423
#2	50.649	52.227	614.08	.27970	52.500

Check ?	LC Pass	LC Pass	LC Fail	LC Fail	LC Pass
High Limit	60.000	60.000	600.00	60.000	60.000
Low Limit	40.000	40.000	400.00	40.000	40.000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	51.848	49.591	52.163	50.889
Stddev	.059	.622	.537	.153
%RSD	.11355	1.2537	1.0301	.30145

#1	51.807	49.151	51.783	50.780
#2	51.890	50.030	52.543	50.997

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	60.000	60.000	60.000	60.828
Low Limit	40.000	40.000	40.000	40.552

Method: CLP5 Sample Name: 0952301

Operator: JYH

Comment: MD21-98-0175

Run Time: 10/16/98 10:35 Type: Unk

Mode: CONC

Corr.Fact: 50.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.49467	303.12	.98656	L -7.1716
Stddev	.02621	.44	.10308	.0087
%RSD	5.2982	.14508	10.448	.12090
#1	-.51320	303.43	.91367	-7.1777
#2	-.47614	302.81	1.0594	-7.1655
Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000
Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	2.5179	.27965	840.64	.02730
Stddev	.0182	.00349	2.31	.00349
%RSD	.72237	1.2490	.27518	12.804
#1	2.5308	.28212	842.27	.02977
#2	2.5051	.27718	839.00	.02483
Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000
Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.49787	6.6171	.12968	1925.6
Stddev	.00050	.0205	.07839	1.3
%RSD	.09980	.30993	60.449	.06593
#1	.49752	6.6316	.07425	1926.5
#2	.49822	6.6026	.18511	1924.7
Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000
Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	155.92	4.4827	142.22	135.56
Stddev	1.75	.0295	1.36	.24
%RSD	1.1219	.65873	.95746	.17569
#1	157.15	4.5036	143.19	135.73
#2	154.68	4.4618	141.26	135.39
Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952301 Run Time: 10/16/98 10:35

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.40194	126.34	3.2574	2.5216
Stddev	.06176	.46	.0325	.0126
%RSD	15.365	.36065	.99815	.49760

#1	.44561	126.66	3.2804	2.5305
#2	.35827	126.01	3.2344	2.5127

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.12551	-.09323	130.28	.55708
Stddev	.20682	.00060	.19	.06194
%RSD	164.79	.64653	.14908	11.118

#1	-.27175	-.09365	130.42	.51328
#2	.02074	-.09280	130.15	.60087

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.75470	83.811	-.31522	.60579
Stddev	.08196	.374	.05418	.12930
%RSD	10.860	.44604	17.189	21.344

#1	.69674	84.075	-.35353	.51436
#2	.81265	83.547	-.27690	.69722

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	24.589
Stddev	.036
%RSD	.14539

#1	24.614
#2	24.563

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 01 MS

Operator: JYH

Comment: MD21-98-0175 MS

Run Time: 10/16/98 10:38 Type: Unk

Mode: CONC

Corr.Fact: 49.019608

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	9.5852	722.87	417.82	L -7.0536	406.01
Stddev	.1243	.20	.58	.0057	1.57
%RSD	1.2964	.02706	.13879	.08098	.38781

#1	9.6731	722.73	417.41	-7.0576	404.90
#2	9.4973	723.01	418.23	-7.0496	407.13

Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	500.00	17500.	1000.0	5000.0	2500.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000	-.50000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2672
Units	ppm	ppm	ppm	ppm	ppm
Avg	10.629	868.22	10.930	100.73	46.133
Stddev	.025	.63	.062	.44	.088
%RSD	.23784	.07233	.56490	.43365	.19065

#1	10.611	867.78	10.886	100.42	46.071
#2	10.647	868.66	10.973	101.04	46.195

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	250.00	20000.	1000.0	1000.0	3000.0
Low Limit	-.02500	-5.0000	-.10000	-.25000	-.25000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	50.676	839.52	128.45	4.0696	108.20
Stddev	.537	1.82	1.31	.0165	.22
%RSD	1.0599	.21662	1.0172	.40588	.20343

#1	50.296	838.24	129.37	4.0579	108.04
#2	51.056	840.81	127.53	4.0813	108.35

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2000.0	15000.	15000.	2000.0	20000.
Low Limit	-1.0000	-1.0000	-25.000	-5.0000	-5.0000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	173.76	.50302	125.89	106.95	107.29
Stddev	.22	.05675	.07	.20	.09
%RSD	.12403	11.281	.05733	.18369	.08067

#1	173.61	.54315	125.94	106.81	107.23
#2	173.91	.46290	125.84	107.09	107.35

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2000.0	1000.0	15000.	2500.0	2500.0
Low Limit	-.50000	-5.0000	-25.000	-1.0000	-1.0000

Sample Name: 01 MS Run Time: 10/16/98 10:38

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	90.005	430.20	150.77	.48890	1.2587
Stddev	.101	.66	.36	.14169	.0148
%RSD	.11269	.15430	.23547	28.981	1.1777

#1	89.933	430.67	150.52	.58909	1.2482
#2	90.077	429.73	151.02	.38871	1.2691

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000	-.50000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	72.753	397.20	105.95	122.39
Stddev	.315	1.08	.15	.15
%RSD	.43233	.27066	.14519	.12311

#1	72.530	396.44	105.84	122.28
#2	72.975	397.96	106.06	122.49

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	500.00	1500.0	2500.0
Low Limit	-.50000	-1.0000	-.50000	-.50000

Method: CLP5 Sample Name: 01 MSD

Operator: JYH

Comment: MD21-98-0175 MSD

Run Time: 10/16/98 10:41 Type: Unk

Mode: CONC

Corr.Fact: 50.505051

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	9.6509	738.52	430.21	L -7.4142	415.80
Stddev	.1020	3.08	.21	.0146	.56
%RSD	1.0570	.41709	.04797	.19730	.13578

#1	9.7231	736.34	430.06	-7.4246	415.40
#2	9.5788	740.69	430.35	-7.4039	416.20

Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	500.00	17500.	1000.0	5000.0	2500.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000	-.50000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	10.935	885.46	11.190	103.17	47.045
Stddev	.041	1.73	.012	.16	.113
%RSD	.37847	.19528	.11052	.15755	.23999

#1	10.906	884.24	11.199	103.06	46.965
#2	10.965	886.68	11.181	103.29	47.125

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	250.00	20000.	1000.0	1000.0	3000.0
Low Limit	-.02500	-5.0000	-.10000	-.25000	-.25000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	51.817	851.58	129.98	4.4777	114.08
Stddev	.285	.53	1.33	.0000	.69
%RSD	.54925	.06228	1.0213	.00001	.60194

#1	51.616	851.20	130.92	4.4777	113.59
#2	52.019	851.95	129.04	4.4777	114.56

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2000.0	15000.	15000.	2000.0	20000.
Low Limit	-1.0000	-1.0000	-25.000	-5.0000	-5.0000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	176.20	.50992	126.65	109.30	110.01
Stddev	.00	.02334	.12	.08	.29
%RSD	.00178	4.5781	.09322	.07017	.26186

#1	176.19	.52642	126.57	109.24	109.81
#2	176.20	.49341	126.73	109.35	110.21

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2000.0	1000.0	15000.	2500.0	2500.0
Low Limit	-.50000	-5.0000	-25.000	-1.0000	-1.0000

Sample Name: 01 MSD Run Time: 10/16/98 10:41

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	92.861	442.70	150.96	.47422	1.3214
Stddev	.072	.62	.11	.06257	.0414
%RSD	.07711	.13947	.07495	13.194	3.1323

#1	92.911	442.26	150.88	.51847	1.3507
#2	92.810	443.14	151.04	.42998	1.2922

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000	-.50000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	72.202	408.75	108.86	124.09
Stddev	.105	.19	.26	.17
%RSD	.14549	.04582	.23909	.13622

#1	72.128	408.62	108.68	123.97
#2	72.277	408.88	109.04	124.21

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	500.00	1500.0	2500.0
Low Limit	-.50000	-1.0000	-.50000	-.50000

Method: CLP5 Sample Name: 0952302

Operator: JYH

Comment: MD21-98-0177

Run Time: 10/16/98 10:45 Type: Unk

Mode: CONC

Corr.Fact: 49.504951

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.50300	397.49	1.3282	L -7.1480
Stddev	.03564	2.18	.1362	.0401
%RSD	7.0859	.54920	10.254	.56119

#1	-.47780	399.03	1.4245	-7.1196
#2	-.52820	395.94	1.2319	-7.1763

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	3.4942	.32271	970.46	.03686
Stddev	.0114	.00046	3.35	.01036
%RSD	.32560	.14170	.34528	28.104

#1	3.5023	.32238	972.83	.02954
#2	3.4862	.32303	968.09	.04419

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.45301	2.2746	.37336	2562.1
Stddev	.02193	.0317	.04536	.8
%RSD	4.8414	1.3923	12.149	.03027

#1	.43750	2.2522	.34129	2562.7
#2	.46852	2.2970	.40544	2561.6

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	215.86	8.4903	227.11	173.60
Stddev	.48	.0883	4.74	.11
%RSD	.22251	1.0399	2.0873	.06530

#1	216.20	8.5528	230.46	173.52
#2	215.52	8.4279	223.75	173.68

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952302 Run Time: 10/16/98 10:45

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.35475	164.28	1.0426	4.0799
Stddev	.00005	.82	.0282	.3818
%RSD	.01353	.50193	2.7047	9.3585

#1	.35479	164.86	1.0626	4.3499
#2	.35472	163.69	1.0227	3.8099

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.08281	-.34278	140.52	.60938
Stddev	.06890	.06776	.01	.10221
%RSD	83.202	19.766	.01027	16.773

#1	-.03409	-.29487	140.51	.53710
#2	-.13152	-.39069	140.53	.68166

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.41205	118.47	-.38619	.80143
Stddev	.08541	.56	.09794	.19931
%RSD	20.728	.47586	25.360	24.869

#1	.35166	118.87	-.31694	.94236
#2	.47245	118.08	-.45545	.66050

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	25.403
Stddev	.000
%RSD	.00071

#1	25.402
#2	25.403

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952302 DUP

Comment: MD21-98--0177 DUP

Run Time: 10/16/98 10:48 Type: Unk

Mode: CONC

Operator: JYH

wrongy Corr factor

Corr.Fact: 50.505051

multiply all Results by 0.994

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.56409	347.29	1.0432	L -7.3958
Stddev	.01348	1.59	.1387	.0292
%RSD	2.3903	.45642	13.296	.39512

#1	-.57363	348.41	.94509	-7.4165
#2	-.55456	346.17	1.1412	-7.3751

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	2.5434	.29836	860.31	.03380
Stddev	.0169	.00008	.46	.01582
%RSD	.66375	.02680	.05392	46.795

#1	2.5554	.29831	860.64	.04499
#2	2.5315	.29842	859.99	.02262

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.39640	2.0562	.14755	2255.3
Stddev	.00880	.0369	.01464	4.2
%RSD	2.2192	1.7935	9.9232	.18494

#1	.40262	2.0823	.13720	2258.3
#2	.39018	2.0302	.15791	2252.4

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	175.16	5.1315	151.88	144.59
Stddev	.14	.0064	4.57	.26
%RSD	.07711	.12496	3.0117	.17738

#1	175.07	5.1360	148.65	144.78
#2	175.26	5.1269	155.11	144.41

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952302 DUP Run Time: 10/16/98 10:48

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.37012	154.06	.93753	3.2572
Stddev	.00397	.23	.00419	.2639
%RSD	1.0722	.14842	.44656	8.1027

#1	.37293	154.22	.93457	3.4438
#2	.36732	153.90	.94050	3.0705

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.19317	-.09502	132.92	.63645
Stddev	.10387	.41368	.43	.08342
%RSD	53.774	435.35	.32558	13.107

#1	-.11972	.19750	133.23	.57746
#2	-.26661	-.38754	132.62	.69543

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.20165	108.93	-.20117	.50713
Stddev	.00436	.25	.04085	.26224
%RSD	2.1618	.23106	20.306	51.710

#1	.19856	109.11	-.23006	.69256
#2	.20473	108.75	-.17229	.32170

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	19.254
Stddev	.017
%RSD	.08927

#1	19.266
#2	19.241

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952101

Operator: JYH

Comment: RE15-98-0029

Run Time: 10/16/98 10:52 Type: Unk

Mode: CONC

Corr.Fact: 50.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.53547	8113.5	2.8041	L -6.3142
Stddev	.02663	13.8	.3775	.0000
%RSD	4.9739	.17029	13.462	.00018

#1	-.51664	8103.7	2.5372	-6.3142
#2	-.55430	8123.3	3.0710	-6.3142

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	54.795	.56872	1213.2	.02432
Stddev	.187	.00351	.8	.00001
%RSD	.34114	.61730	.06564	.03013

#1	54.662	.57120	1213.7	.02431
#2	54.927	.56624	1212.6	.02432

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	2.7111	5.2813	3.1852	8670.9
Stddev	.0021	.0382	.0166	28.9
%RSD	.07571	.72251	.52234	.33309

#1	2.7126	5.3082	3.1735	8691.3
#2	2.7097	5.2543	3.1970	8650.5

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	1004.4	6.7856	1077.5	229.88
Stddev	4.2	.0239	5.9	.65
%RSD	.42254	.35274	.54981	.28078

#1	1001.4	6.7687	1073.3	230.34
#2	1007.4	6.8025	1081.7	229.43

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952101 Run Time: 10/16/98 10:52

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.49434	62.453	3.8413	7.6441
Stddev	.01154	.026	.0129	.1620
%RSD	2.3348	.04144	.33485	2.1191

#1	.50250	62.471	3.8322	7.7587
#2	.48618	62.435	3.8504	7.5296

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.31262	-.06633	176.72	1.7104
Stddev	.24256	.06936	.62	.0000
%RSD	77.589	104.56	.35232	.00072

#1	.14111	-.11538	177.16	1.7104
#2	.48414	-.01729	176.28	1.7104

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	7.4705	224.84	-.25888	9.8732
Stddev	.1381	.52	.42907	.1602
%RSD	1.8482	.23278	165.74	1.6227

#1	7.3729	224.47	-.56228	9.7599
#2	7.5681	225.21	.04452	9.9864

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	30.001
Stddev	.088
%RSD	.29257

#1	30.063
#2	29.939

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952102

Operator: JYH

Comment: RE15-98-0030

Run Time: 10/16/98 10:55 Type: Unk

Mode: CONC

Corr.Fact: 50.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.61405	5583.7	2.6327	L -6.8569
Stddev	.16332	9.1	.1719	.0087
%RSD	26.598	.16316	6.5274	.12670

#1	-.72954	5577.2	2.7542	-6.8630
#2	-.49856	5590.1	2.5112	-6.8507

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	45.674	.53379	905.79	.04211
Stddev	.052	.00345	1.83	.01915
%RSD	.11329	.64718	.20229	45.489

#1	45.710	.53623	904.49	.02856
#2	45.637	.53135	907.09	.05565

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	2.1173	3.8002	2.9210	7140.1
Stddev	.0446	.0365	.2190	2.4
%RSD	2.1061	.96176	7.4984	.03295

#1	2.0858	3.7744	2.7661	7138.4
#2	2.1489	3.8261	3.0758	7141.7

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	680.83	5.8007	807.66	235.88
Stddev	2.70	.0057	4.08	.05
%RSD	.39613	.09775	.50454	.01975

#1	678.92	5.8047	804.78	235.84
#2	682.74	5.7967	810.54	235.91

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952102 Run Time: 10/16/98 10:55

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.46634	84.437	3.4896	6.6390
Stddev	.00386	.072	.0081	.1864
%RSD	.82782	.08544	.23303	2.8082

#1	.46361	84.386	3.4838	6.5072
#2	.46907	84.488	3.4953	6.7708

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.30455	.04114	136.69	1.5061
Stddev	.06822	.27349	.11	.1652
%RSD	22.399	664.84	.08338	10.967

#1	.25631	-.15225	136.77	1.3893
#2	.35279	.23453	136.61	1.6228

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	5.6406	194.62	-.14501	7.0685
Stddev	.0647	.02	.16601	.0002
%RSD	1.1468	.00828	114.49	.00284

#1	5.5949	194.64	-.02762	7.0687
#2	5.6863	194.61	-.26240	7.0684

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	29.211
Stddev	.025
%RSD	.08564

#1	29.193
#2	29.228

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952103

Operator: JYH

Comment: RE15-98-0031

Run Time: 10/16/98 10:58 Type: Unk

Mode: CONC

Corr.Fact: 48.543690

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.59292	5943.4	2.5897	L -6.6113
Stddev	.04641	19.3	.1015	.0056
%RSD	7.8280	.32487	3.9191	.08524

#1	-.62574	5929.8	2.5179	-6.6153
#2	-.56010	5957.1	2.6615	-6.6073

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	52.667	.49370	855.44	.04282
Stddev	.164	.00172	3.16	.01352
%RSD	.31155	.34907	.36953	31.583

#1	52.551	.49248	853.21	.03326
#2	52.783	.49491	857.68	.05239

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	3.7138	4.4609	3.0347	7609.1
Stddev	.0222	.0462	.0289	18.8
%RSD	.59695	1.0360	.95315	.24751

#1	3.6981	4.4283	3.0552	7595.8
#2	3.7295	4.4936	3.0143	7622.4

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	758.90	6.2182	832.25	307.87
Stddev	4.20	.0451	5.06	.56
%RSD	.55361	.72513	.60820	.18088

#1	755.93	6.1863	828.67	307.48
#2	761.87	6.2501	835.83	308.27

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952103 Run Time: 10/16/98 10:58

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.48211	68.641	3.7436	8.2972
Stddev	.00743	.119	.0083	.3265
%RSD	1.5415	.17389	.22145	3.9352

#1	.48737	68.557	3.7494	8.5280
#2	.47686	68.726	3.7377	8.0663

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.12342	-.29512	155.87	1.6606
Stddev	.19946	.33057	.30	.0802
%RSD	161.61	112.01	.19031	4.8281

#1	-.01762	-.06137	155.66	1.7173
#2	.26446	-.52887	156.08	1.6039

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	5.2112	222.86	-.56156	7.6638
Stddev	.0063	.77	.11170	.2643
%RSD	.12085	.34425	19.891	3.4487

#1	5.2068	222.32	-.64055	7.4769
#2	5.2157	223.41	-.48258	7.8507

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	29.989
Stddev	.134
%RSD	.44817

#1	29.894
#2	30.084

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5

Sample Name: CCV

Operator:

Comment:

Run Time: 10/16/98

11:02 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.41618	10.280	.42233	10.104	1.0184
Stddev	.00149	.032	.00000	.008	.0053
%RSD	.35750	.30914	.00001	.07884	.51596

#1	.41723	10.302	.42233	10.098	1.0221
#2	.41513	10.257	.42233	10.109	1.0147

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.40000	10.000	.40000	10.000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.05078	10.432	.05273	.20929	.51896
Stddev	.00040	.043	.00014	.00017	.00050
%RSD	.79663	.40873	.26063	.08008	.09666

#1	.05106	10.462	.05263	.20941	.51860
#2	.05049	10.402	.05283	.20917	.51931

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.05000	10.000	.05000	.20000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.51471	4.1578	50.839	1.0038	10.497
Stddev	.00372	.0006	.337	.0066	.082
%RSD	.72213	.01525	.66226	.65887	.78137

#1	.51734	4.1574	51.077	1.0085	10.555
#2	.51209	4.1583	50.601	.99911	10.439

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	4.0000	50.000	1.0000	10.000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.51848	1.0366	51.036	.52842	.52977
Stddev	.00056	.0015	.450	.00032	.00547
%RSD	.10795	.14198	.88077	.06141	1.0322

#1	.51887	1.0377	51.354	.52865	.52590
#2	.51808	1.0356	50.718	.52819	.53363

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000	50.000	.50000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Sample Name: CCV Run Time: 10/16/98 11:02

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2290	.41152	5.1353	1.0593	1.0482
Stddev	.0007	.00820	.0087	.0021	.0035
%RSD	.05647	1.9925	.16965	.19414	.32989

#1	1.2295	.40572	5.1292	1.0578	1.0507
#2	1.2285	.41732	5.1415	1.0608	1.0458

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	1.0232	.52281	1.0353	1.0519
Stddev	.0080	.00072	.0135	.0023
%RSD	.78575	.13799	1.3084	.21652

#1	1.0289	.52230	1.0257	1.0535
#2	1.0175	.52332	1.0449	1.0503

Check ?	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	.50000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%

Method: CLP5

Sample Name: CCB

Operator:

Comment:

Run Time: 10/16/98

11:10 Type: Blank

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00142	.01268	.00097	L -.15644	-.00004
Stddev	.00151	.00207	.00275	.00023	.00010
%RSD	106.19	16.333	284.19	.14852	274.51

#1	.00035	.01414	-.00098	-.15628	--.00011
#2	.00248	.01121	.00292	-.15661	-.00003

Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	.00163	.02801	.00504	.00569	.00048
Low Limit	-.00162	-.02801	-.00504	-.00569	-.00048

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	H .00007	.00295	-.00003	-.00075	-.00054
Stddev	.00001	.00899	.00031	.00043	.00023
%RSD	12.857	304.91	1251.5	57.034	42.401

#1	.00006	.00931	.00020	-.00045	-.00038
#2	.00007	-.00341	-.00025	-.00105	-.00070

Check ?	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00005	.04330	.00063	.00091	.00079
Low Limit	-.00005	-.04330	-.00063	-.00091	-.00079

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00087	.00226	-.01344	.00011	H .01945
Stddev	.00157	.00135	.01402	.00054	.01820
%RSD	180.19	59.761	104.28	507.17	93.557

#1	.00024	.00130	-.02336	.00048	.00658
#2	-.00199	.00321	-.00353	-.00027	.03231

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.00561	.01566	.06821	.00062	.01895
Low Limit	-.00561	-.01566	-.06821	-.00062	-.01895

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00006	.00093	.00558	.00059	-.00154
Stddev	.00003	.00062	.00113	.00081	.00273
%RSD	53.852	66.022	20.159	137.94	177.82

#1	.00008	.00050	.00638	.00001	.00040
#2	.00004	.00137	.00479	.00117	-.00347

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00019	.00258	.05651	.00136	.00817
Low Limit	-.00019	-.00258	-.05060	-.00154	-.00817

Sample Name: CCB Run Time: 10/16/98 11:10

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00240	-.00288	L -.04164	.00150	.00040
Stddev	.00275	.00273	.00125	.00083	.00009
%RSD	114.59	94.898	2.9917	54.870	21.614

#1	-.00045	-.00095	-.04076	.00209	.00046
#2	-.00434	-.00482	-.04253	.00092	.00034

Check ?	LC Pass	LC Pass	LC Fail	LC Pass	LC Pass
High Limit	.01044	.00890	.00312	.00268	.00347
Low Limit	-.01044	-.00890	-.00312	-.00268	-.00347

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00007	.00130	-.00303	.00049
Stddev	.00000	.00298	.00230	.00002
%RSD	.87637	229.70	75.874	3.2116

#1	-.00007	-.00081	-.00141	.00050
#2	-.00007	.00341	-.00466	.00048

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00120	.01463	.00798	.00849
Low Limit	-.00120	-.01463	-.00798	-.00849

Method: CLP5 Sample Name: 0952104

Operator: JYH

Comment: RE15-98-0032

Run Time: 10/16/98 11:13 Type: Unk

Mode: CONC

Corr.Fact: 49.504951

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.53591	6039.1	2.5336	L -6.7665
Stddev	.04863	12.7	.1358	.0057
%RSD	9.0740	.20996	5.3608	.08486

#1	-.57029	6048.1	2.4376	-6.7706
#2	-.50152	6030.1	2.6297	-6.7625

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	54.726	.49240	884.72	.02908
Stddev	.096	.00436	.86	.01037
%RSD	.17603	.88580	.09708	35.658

#1	54.658	.49548	884.11	.03641
#2	54.794	.48932	885.33	.02175

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	2.5586	4.7493	3.0886	8046.0
Stddev	.0840	.0027	.0754	15.9
%RSD	3.2849	.05691	2.4420	.19717

#1	2.6181	4.7474	3.1419	8057.2
#2	2.4992	4.7512	3.0353	8034.7

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	794.35	6.6040	876.22	249.88
Stddev	1.76	.0573	.25	.28
%RSD	.22158	.86839	.02901	.11227

#1	795.59	6.5634	876.04	250.08
#2	793.10	6.6445	876.40	249.68

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952104 Run Time: 10/16/98 11:13

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.55945	53.691	3.4502	7.4952
Stddev	.01900	.172	.0044	.2220
%RSD	3.3967	.32067	.12810	2.9617

#1	.57289	53.569	3.4471	7.3382
#2	.54602	53.812	3.4533	7.6522

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.21067	.10723	156.21	1.6646
Stddev	.34167	.33758	.01	.1635
%RSD	162.18	314.82	.00765	9.8249

#1	-.03093	-.13147	156.22	1.5490
#2	.45227	.34594	156.20	1.7802

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	5.2631	229.74	-.39068	8.6131
Stddev	.1302	.38	.42288	.4582
%RSD	2.4743	.16544	108.24	5.3193

#1	5.3552	229.47	-.68970	8.2891
#2	5.1710	230.01	-.09165	8.9371

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	32.968
Stddev	.005
%RSD	.01416

#1	32.971
#2	32.965

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952105

Operator: JYH

Comment: RE15-98-0033

Run Time: 10/16/98 11:16 Type: Unk

Mode: CONC

Corr.Fact: 50.505051

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.47169	4197.6	2.1981	L -7.6375
Stddev	.06449	9.3	.0008	.0205
%RSD	13.673	.22095	.03879	.26819

#1	-.51729	4191.0	2.1987	-7.6230
#2	-.42609	4204.1	2.1974	-7.6520

Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	33.676	.41739	700.22	.02900
Stddev	.094	.00773	1.50	.01584
%RSD	.27813	1.8508	.21400	54.622

#1	33.742	.42285	699.16	.04020
#2	33.610	.41193	701.28	.01780

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	1.5395	3.1003	2.6015	6296.1
Stddev	.0145	.0320	.2851	13.3
%RSD	.94010	1.0328	10.959	.21172

#1	1.5497	3.1229	2.8031	6305.6
#2	1.5293	3.0777	2.3999	6286.7

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	493.67	5.6096	617.30	212.13
Stddev	.52	.0612	.26	.45
%RSD	.10452	1.0919	.04156	.21147

#1	494.04	5.6529	617.48	212.44
#2	493.31	5.5662	617.12	211.81

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952105 Run Time: 10/16/98 11:16

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.49271	58.729	2.8178	6.2373
Stddev	.04292	.025	.0326	.0631
%RSD	8.7115	.04282	1.1552	1.0123

#1	.52306	58.711	2.8408	6.2819
#2	.46236	58.747	2.7948	6.1926

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.02355	-.26620	100.73	1.6540
Stddev	.03547	.34583	.15	.0209
%RSD	150.60	129.91	.15368	1.2617

#1	-.00153	-.51074	100.84	1.6687
#2	.04863	-.02167	100.62	1.6392

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	3.9955	153.86	-.64052	5.4878
Stddev	.0719	.34	.20946	.0434
%RSD	1.7996	.22287	32.701	.79062

#1	4.0463	154.10	-.49241	5.5185
#2	3.9446	153.61	-.78863	5.4572

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	27.569
Stddev	.123
%RSD	.44722

#1	27.656
#2	27.482

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952106

Operator: JYH

Comment: RE15-98-0034

Run Time: 10/16/98 11:20 Type: Unk

Mode: CONC

Corr.Fact: 48.543690

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.44516	5259.8	2.1379	L -6.9374
Stddev	.04865	9.5	.3348	.0169
%RSD	10.929	.17980	15.661	.24327

#1	-.41076	5253.1	2.3747	-6.9255-
#2	-.47957	5266.5	1.9012	-6.9493-

Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	33.176	.49738	775.89	.02673
Stddev	.058	.00041	.78	.03382
%RSD	.17462	.08199	.10106	126.55

#1	33.135	.49767	776.45	.05064
#2	33.217	.49709	775.34	.00281

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	1.4409	3.3857	2.9530	6595.3
Stddev	.0307	.0069	.0613	10.3
%RSD	2.1275	.20406	2.0752	.15669

#1	1.4192	3.3808	2.9096	6602.6
#2	1.4625	3.3906	2.9963	6588.0

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	623.29	5.2136	696.77	181.55
Stddev	4.15	.0261	1.13	.27
%RSD	.66525	.50016	.16185	.14843

#1	620.36	5.1952	695.97	181.74
#2	626.22	5.2321	697.56	181.36

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952106 Run Time: 10/16/98 11:20

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.46838	59.693	2.8192	5.8510
Stddev	.03377	.457	.0239	.2297
%RSD	7.2094	.76497	.84776	3.9257

#1	.44450	59.371	2.8023	6.0134
#2	.49225	60.016	2.8361	5.6885

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.26065	.19243	123.87	1.4764
Stddev	.40139	.19851	.03	.1002
%RSD	153.99	103.16	.02524	6.7879

#1	-.02317	.33280	123.89	1.4055
#2	.54448	.05206	123.85	1.5472

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	4.3955	177.43	-.34767	5.6901
Stddev	.0753	.03	.19033	.1132
%RSD	1.7139	.01652	54.742	1.9901

#1	4.3422	177.45	-.48225	5.6100
#2	4.4488	177.41	-.21309	5.7702

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	26.810
Stddev	.046
%RSD	.17044

#1	26.842
#2	26.778

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952107

Operator: JYH

Comment: RE15-98-0035

Run Time: 10/16/98 11:23 Type: Unk

Mode: CONC

Corr.Fact: 50.251259

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.83545	3251.1	2.1971	L -7.9283
Stddev	.03551	7.4	.0693	.0087
%RSD	4.2508	.22859	3.1564	.11016

#1	-.81034	3256.4	2.2462	-7.9221
#2	-.86056	3245.9	2.1481	-7.9344

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	26.002	.33824	550.32	.01189
Stddev	.062	.00017	.84	.00348
%RSD	.23758	.05050	.15209	29.273

#1	26.046	.33812	550.92	.01435
#2	25.958	.33836	549.73	.00943

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	1.8142	3.0684	1.9525	8962.0
Stddev	.0280	.0185	.0334	1.4
%RSD	1.5459	.60128	1.7123	.01583

#1	1.7944	3.0814	1.9761	8961.0
#2	1.8340	3.0553	1.9288	8963.0

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	435.03	3.8751	462.10	219.24
Stddev	1.00	.0609	.91	.09
%RSD	.22962	1.5711	.19653	.04138

#1	435.74	3.9181	461.45	219.30
#2	434.32	3.8320	462.74	219.17

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.0000	-5.0000	-5.0000	-.50000

Sample Name: 0952107 Run Time: 10/16/98 11:23

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.92161	38.943	1.9406	5.4825
Stddev	.00009	.348	.0163	.3375
%RSD	.01025	.89335	.84157	6.1554

#1	.92168	39.189	1.9291	5.7211
#2	.92155	38.697	1.9522	5.2438

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.38383	-.27162	170.95	1.3375
Stddev	.10364	.27479	.32	.0000
%RSD	27.002	101.16	.18859	.00018

#1	.31054	-.07732	171.18	1.3375
#2	.45712	-.46593	170.73	1.3375

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	1.7883	280.91	-.18272	7.5078
Stddev	.1040	.79	.42749	.3769
%RSD	5.8178	.27984	233.96	5.0199

#1	1.8619	281.46	.11956	7.7743
#2	1.7147	280.35	-.48500	7.2413

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	39.342
Stddev	.010
%RSD	.02595

#1	39.335
#2	39.350

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952108

Operator: JYH

Comment: RE15-98-0036

Run Time: 10/16/98 11:27 Type: Unk

Mode: CONC

Corr.Fact: 48.076923

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.59065	3188.4	2.3219	L -7.4906
Stddev	.03504	3.1	.0328	.0306
%RSD	5.9331	.09849	1.4144	.40873

#1	-.61543	3186.2	2.2987	-7.4690
#2	-.56587	3190.6	2.3452	-7.5123

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	27.700	.43594	557.75	.05330
Stddev	.175	.00194	.24	.01504
%RSD	.63021	.44405	.04315	28.218

#1	27.576	.43457	557.58	.06393
#2	27.823	.43731	557.92	.04266

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	1.1946	3.4226	2.0803	6356.0
Stddev	.0026	.0108	.0909	5.7
%RSD	.21605	.31575	4.3673	.09042

#1	1.1964	3.4303	2.1446	6360.0
#2	1.1927	3.4150	2.0161	6351.9

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	436.11	5.0446	486.42	239.48
Stddev	.55	.0243	5.90	.37
%RSD	.12533	.48121	1.2129	.15478

#1	435.72	5.0274	482.25	239.74
#2	436.49	5.0617	490.60	239.22

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952108 Run Time: 10/16/98 11:27

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.76551	67.530	2.9597	5.9372
Stddev	.04451	.124	.0118	.1316
%RSD	5.8139	.18385	.40009	2.2160

#1	.73404	67.442	2.9513	6.0302
#2	.79699	67.618	2.9680	5.8441

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.11256	.01087	153.69	1.9114
Stddev	.06599	.00005	.39	.0596
%RSD	58.625	.50431	.25085	3.1162

#1	-.06590	.01091	153.96	1.8693
#2	-.15923	.01083	153.41	1.9535

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	2.5687	192.58	-.33924	4.3734
Stddev	.0104	.42	.25209	.2220
%RSD	.40350	.21608	74.311	5.0768

#1	2.5614	192.29	-.16098	4.5304
#2	2.5760	192.88	-.51749	4.2164

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	29.156
Stddev	.030
%RSD	.10451

#1	29.135
#2	29.178

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952109

Operator: JYH

Comment: RE15-98-0037

Run Time: 10/16/98 11:30 Type: Unk

Mode: CONC

Corr.Fact: 49.019608

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.32412	2214.4	1.3397	L -7.7101
Stddev	.02349	4.8	.3044	.0596
%RSD	7.2478	.21866	22.723	.77290

#1	-.34073	2211.0	1.5550	-7.7523
#2	-.30751	2217.9	1.1244	-7.6680

Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	19.848	2.3930	352.17	.02949
Stddev	.092	.0172	.58	.01194
%RSD	.46247	.71969	.16478	40.478

#1	19.783	2.3808	352.58	.02105
#2	19.913	2.4051	351.76	.03793

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	1.2550	1.5944	1.6625	3887.9
Stddev	.0079	.0221	.0905	6.1
%RSD	.62677	1.3890	5.4439	.15745

#1	1.2494	1.6101	1.7265	3892.2
#2	1.2606	1.5787	1.5985	3883.5

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	302.87	3.4805	333.44	150.12
Stddev	3.87	.0388	3.10	.42
%RSD	1.2787	1.1136	.93098	.27972

#1	300.13	3.4531	335.64	150.42
#2	305.61	3.5079	331.25	149.83

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952109 Run Time: 10/16/98 11:30

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.36249	35.929	1.5263	4.7711
Stddev	.01507	.240	.0438	.4390
%RSD	4.1560	.66917	2.8696	9.2008

#1	.37314	35.759	1.4954	4.4607
#2	.35184	36.099	1.5573	5.0816

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.08191	-.42477	155.57	.96123
Stddev	.00095	.06637	.01	.08097
%RSD	1.1658	15.625	.00832	8.4234

#1	.08123	-.37784	155.58	1.0185
#2	.08258	-.47170	155.56	.90398

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	2.1437	109.35	-.42126	2.8592
Stddev	.0613	.39	.24940	.3250
%RSD	2.8602	.35791	59.203	11.367

#1	2.1004	109.07	-.24491	2.6294
#2	2.1871	109.62	-.59762	3.0890

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	16.603
Stddev	.035
%RSD	.21296

#1	16.628
#2	16.578

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952501

Operator: JYH

Comment: MD21-98-0167

Run Time: 10/16/98 11:33 Type: Unk

Mode: CONC

Corr.Fact: 50.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.44192	3054.0	1.9413	L -7.6430
Stddev	.00025	1.4	.0349	.0608
%RSD	.05594	.04617	1.7962	.79527

#1	-.44174	3053.0	1.9659	-7.6000
#2	-.44209	3055.0	1.9166	-7.6860

Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	23.909	.33079	475.39	.25705
Stddev	.024	.00420	.11	.04005
%RSD	.10186	1.2699	.02295	15.583

#1	23.892	.33376	475.47	.22872
#2	23.926	.32782	475.31	.28537

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.75113	3.0021	2.0729	4636.6
Stddev	.00405	.0135	.0009	8.2
%RSD	.53940	.44992	.04131	.17595

#1	.75400	3.0117	2.0723	4642.3
#2	.74827	2.9926	2.0735	4630.8

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	424.96	6.4437	470.87	167.47
Stddev	2.44	.0040	7.42	.15
%RSD	.57305	.06133	1.5763	.09127

#1	423.24	6.4409	476.12	167.58
#2	426.69	6.4465	465.62	167.37

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952501 Run Time: 10/16/98 11:33

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.72199	104.37	2.1980	5.7926
Stddev	.01162	.46	.0124	.0374
%RSD	1.6093	.44120	.56626	.64497

#1	.71378	104.05	2.1892	5.7662
#2	.73021	104.70	2.2068	5.8190

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.11715	.12994	129.40	1.0097
Stddev	.03379	.27311	.26	.1239
%RSD	28.845	210.18	.19957	12.269

#1	.14105	-.06317	129.58	1.0973
#2	.09326	.32306	129.22	.92207

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	2.7065	112.71	-.51458	2.8844
Stddev	.0862	.09	.05908	.1165
%RSD	3.1867	.07908	11.482	4.0402

#1	2.7675	112.65	-.47280	2.8020
#2	2.6456	112.78	-.55636	2.9668

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	31.124
Stddev	.182
%RSD	.58414

#1	31.252
#2	30.995

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952502

Operator: JYH

Comment: MD21-98-0168

Run Time: 10/16/98 11:37 Type: Unk

Mode: CONC

Corr.Fact: 49.504951

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.41338	742.58	1.5026	L -7.9460
Stddev	.04919	1.34	.0005	.0286
%RSD	11.899	.18007	.03114	.36054
#1	-.44816	741.63	1.5022	-7.9257
#2	-.37860	743.52	1.5029	-7.9663
Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000
Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	9.9086	.18806	476.31	36.253
Stddev	.0414	.00198	.17	.017
%RSD	.41771	1.0551	.03546	.04739
#1	9.8793	.18946	476.19	36.265
#2	9.9379	.18666	476.43	36.241
Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000
Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.57972	4.7748	.92532	2763.2
Stddev	.01965	.0521	.10986	.1
%RSD	3.3895	1.0916	11.873	.00296
#1	.59361	4.7380	.84763	2763.1
#2	.56582	4.8117	1.0030	2763.2
Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000
Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	153.53	2.1232	172.76	165.65
Stddev	.82	.0190	3.19	.10
%RSD	.53215	.89562	1.8465	.06261
#1	154.10	2.1367	170.51	165.58
#2	152.95	2.1098	175.02	165.73
Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952502 Run Time: 10/16/98 11:37

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.65763	82.743	2.3742	6.0857
Stddev	.02301	.136	.0282	.1478
%RSD	3.4994	.16486	1.1872	2.4294

#1	.64136	82.839	2.3941	5.9812
#2	.67390	82.646	2.3542	6.1902

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.02724	-.08501	102.45	.92740
Stddev	.13684	.27020	.09	.18398
%RSD	502.28	317.86	.08610	19.838

#1	.06951	-.27607	102.51	1.0575
#2	-.12400	.10605	102.39	.79730

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	2.0592	91.780	-.64649	1.0628
Stddev	.1003	.185	.20115	.2862
%RSD	4.8734	.20103	31.114	26.932

#1	1.9883	91.650	-.78873	.86040
#2	2.1302	91.911	-.50426	1.2652

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	109.80
Stddev	.09
%RSD	.08612

#1	109.73
#2	109.86

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952503

Operator: JYH

Comment: MD21-98-0169

Run Time: 10/16/98 11:40 Type: Unk

Mode: CONC

Corr.Fact: 49.261082

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.67134	2282.9	1.9592	L -7.5525
Stddev	.02338	14.6	.2042	.0285
%RSD	3.4830	.64121	10.423	.37773

#1	-.65480	2293.3	1.8148	-7.5726
#2	-.68787	2272.6	2.1036	-7.5323

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	10.931	.39502	856.91	.04459
Stddev	.002	.00305	.87	.02399
%RSD	.01432	.77198	.10163	53.816

#1	10.930	.39287	857.53	.02762
#2	10.932	.39718	856.30	.06155

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.68440	1.8534	.85520	4169.8
Stddev	.03418	.0450	.10884	4.4
%RSD	4.9941	2.4276	12.727	.10567

#1	.66023	1.8216	.77824	4166.7
#2	.70857	1.8853	.93217	4172.9

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	317.80	5.8422	444.50	177.75
Stddev	3.11	.0532	1.51	.24
%RSD	.97978	.91098	.33955	.13776

#1	320.00	5.8045	445.57	177.58
#2	315.60	5.8798	443.43	177.93

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952503 Run Time: 10/16/98 11:40

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.65467	74.223	2.2265	2.8438
Stddev	.01512	.057	.0721	.1346
%RSD	2.3091	.07732	3.2368	4.7318

#1	.66536	74.183	2.1755	2.9390
#2	.64398	74.264	2.2774	2.7487

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.23971	-.24765	124.37	2.5626
Stddev	.30493	.06652	.30	.0610
%RSD	127.21	26.862	.24014	2.3814

#1	.02409	-.29469	124.16	2.6057
#2	.45533	-.20061	124.58	2.5194

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	2.8559	177.66	-.73374	2.2110
Stddev	.1785	.46	.06403	.4117
%RSD	6.2496	.26118	8.7261	18.622

#1	2.7297	177.98	-.77901	1.9199
#2	2.9821	177.33	-.68846	2.5021

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	18.390
Stddev	.071
%RSD	.38344

#1	18.340
#2	18.440

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952504

Operator: JYH

Comment: MD21-98-0171

Run Time: 10/16/98 11:44 Type: Unk

Mode: CONC

Corr.Fact: 49.261082

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.55580	201.81	1.1660	L -8.2181
Stddev	.08431	2.39	.0680	.0399
%RSD	15.168	1.1861	5.8298	.48584

#1	-.49619	200.11	1.1179	-8.1899
#2	-.61541	203.50	1.2141	-8.2463

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	3.4429	.38896	809.16	.05128
Stddev	.0346	.00092	.70	.00687
%RSD	1.0057	.23635	.08656	13.392

#1	3.4674	.38961	809.66	.04642
#2	3.4184	.38831	808.67	.05613

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.45105	1.0672	.03753	2511.8
Stddev	.00409	.0000	.02996	2.0
%RSD	.90634	.00416	79.844	.08096

#1	.45394	1.0672	.01634	2510.4
#2	.44816	1.0671	.05871	2513.2

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	116.89	3.2048	154.69	167.10
Stddev	1.72	.0195	3.21	.00
%RSD	1.4732	.60936	2.0781	.00161

#1	118.11	3.1910	156.96	167.10
#2	115.67	3.2186	152.42	167.10

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952504 Run Time: 10/16/98 11:44

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.47126	107.40	.63753	2.1831
Stddev	.01520	1.04	.01601	.0000
%RSD	3.2251	.96824	2.5120	.00100

#1	.46052	108.14	.62621	2.1831
#2	.48201	106.67	.64885	2.1831

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.06408	.11194	141.40	.70707
Stddev	.13572	.13451	.25	.12205
%RSD	211.81	120.16	.17999	17.261

#1	.03189	.20706	141.22	.62077
#2	-.16005	-.01683	141.58	.79338

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.40399	95.731	-.67517	.30552
Stddev	.04249	.729	.04337	.08485
%RSD	10.518	.76105	6.4231	27.773

#1	.37394	96.246	-.64451	.36552
#2	.43403	95.216	-.70584	.24552

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	17.809
Stddev	.019
%RSD	.10932

#1	17.796
#2	17.823

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5

Sample Name: CCV

Operator:

Comment:

Run Time: 10/16/98

11:48 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.41336	10.236	.41790	10.004	1.0138
Stddev	.00503	.038	.00478	.041	.0064
%RSD	1.2166	.36662	1.1447	.40549	.63106
#1	.40981	10.209	.41452	10.032	1.0093
#2	.41692	10.262	.42128	9.9750	1.0184
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.40000	10.000	.40000	10.000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.05014	10.350	.05197	.20601	.51163
Stddev	.00039	.008	.00003	.00109	.00157
%RSD	.77344	.08176	.06232	.52687	.30750
#1	.04987	10.344	.05195	.20678	.51274
#2	.05042	10.356	.05199	.20525	.51052
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.05000	10.000	.05000	.20000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.50914	4.1107	50.835	.99868	10.429
Stddev	.00541	.0169	.261	.01098	.032
%RSD	1.0618	.41159	.51325	1.0997	.30944
#1	.50531	4.1227	51.019	.99092	10.407
#2	.51296	4.0988	50.650	1.0064	10.452
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	4.0000	50.000	1.0000	10.000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.51534	1.0329	51.122	.52247	.52257
Stddev	.00339	.0115	.056	.00231	.00925
%RSD	.65844	1.1179	.10919	.44127	1.7697
#1	.51774	1.0410	51.083	.52410	.52911
#2	.51294	1.0247	51.162	.52084	.51603
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000	50.000	.50000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Sample Name: CCV Run Time: 10/16/98 11:48

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2248	.40964	5.1040	1.0556	1.0300
Stddev	.0042	.00811	.0266	.0009	.0011
%RSD	.33998	1.9793	.52178	.08230	.10430

#1	1.2277	.41537	5.1229	1.0562	1.0307
#2	1.2218	.40391	5.0852	1.0549	1.0292

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	1.0166	.51326	1.0222	1.0435
Stddev	.0063	.00191	.0124	.0032
%RSD	.61770	.37230	1.2109	.30728

#1	1.0122	.51461	1.0135	1.0458
#2	1.0210	.51191	1.0310	1.0412

Check ?	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	.50000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%

Method: CLP5

Sample Name: CCB

Operator:

Comment:

Run Time: 10/16/98 11:55 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.00089	.00157	-.00147	L -.16373
Stddev	.00075	.00456	.00345	.00069
%RSD	84.803	291.23	234.68	.42408

#1	-.00142	.00479	-.00390	-.16324
#2	-.00036	-.00166	.00097	-.16422

Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.00163	.02801	.00504	.00569
Low Limit	-.00162	-.02801	-.00504	-.00569

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	-.00005	.00000	.00594	-.00017
Stddev	.00028	.00007	.00474	.00024
%RSD	508.52	10016.	79.792	140.69

#1	-.00025	.00005	.00929	-.00035
#2	.00014	-.00005	.00259	.00000

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00048	.00005	.04330	.00063
Low Limit	-.00048	-.00005	-.04330	-.00063

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.00006	-.00070	-.00130	.00261
Stddev	.00014	.00027	.00157	.00297
%RSD	246.35	39.222	120.79	113.89

#1	.00016	-.00090	-.00242	.00471
#2	-.00004	-.00051	-.00019	.00051

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00091	.00079	.00561	.01566
Low Limit	-.00091	-.00079	-.00561	-.01566

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	.00660	.00036	H .03229	.00002
Stddev	.02973	.00028	.00910	.00002
%RSD	450.72	77.145	28.175	114.90

#1	-.01443	.00056	.02586	.00004
#2	.02762	.00017	.03873	.00000

Check ?	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	.06821	.00062	.01895	.00019
Low Limit	-.06821	-.00062	-.01895	-.00019

Sample Name: CCB Run Time: 10/16/98 11:55

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.00050	.00507	-.00033	-.00066
Stddev	.00000	.00088	.00032	.00249
%RSD	.12746	17.431	98.334	377.52

#1	.00050	.00444	-.00010	.00110
#2	.00050	.00569	-.00056	-.00242

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00258	.05651	.00136	.00817
Low Limit	-.00258	-.05060	-.00154	-.00817

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.00239	-.00481	L -.04230	.00150
Stddev	.00138	.00546	.00072	.00083
%RSD	57.550	113.53	1.7096	54.866

#1	-.00142	-.00095	-.04179	.00092
#2	-.00337	-.00867	-.04281	.00209

Check ?	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	.01044	.00890	.00312	.00268
Low Limit	-.01044	-.00890	-.00312	-.00268

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.00089	-.00043	-.00219	.00043
Stddev	.00095	.00006	.00450	.00260
%RSD	106.96	13.243	205.78	603.73

#1	.00156	-.00039	.00099	-.00141
#2	.00022	-.00047	-.00537	.00227

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00347	.00120	.01463	.00798
Low Limit	-.00347	-.00120	-.01463	-.00798

Elem	Zn2138
Units	ppm
Avg	.00004
Stddev	.00005
%RSD	152.03

#1	.00008
#2	.00000

Check ?	LC Pass
High Limit	.00849
Low Limit	-.00849

Method: CLP5 Sample Name: 0952505

Operator: JYH

Comment: MD21-98-0172

Run Time: 10/16/98 11:58 Type: Unk

Mode: CONC

Corr.Fact: 49.751244

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.40138	202.08	1.0845	L -8.1695
Stddev	.03463	.67	.0344	.0058
%RSD	8.6288	.33156	3.1700	.07049

#1	-.37689	201.60	1.1088	-8.1655
#2	-.42587	202.55	1.0601	-8.1736

Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	3.4085	.43131	896.79	.03216
Stddev	.0005	.00011	.49	.01734
%RSD	.01362	.02539	.05510	53.924

#1	3.4082	.43138	896.44	.04442
#2	3.4089	.43123	897.13	.01989

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.49493	1.0419	.35779	2036.6
Stddev	.00473	.0070	.10955	4.4
%RSD	.95560	.67151	30.617	.21655

#1	.49159	1.0369	.43526	2039.7
#2	.49828	1.0468	.28033	2033.5

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	121.66	3.7095	168.74	170.11
Stddev	.77	.0087	1.65	.22
%RSD	.63175	.23391	.97620	.12956

#1	121.12	3.7156	167.58	170.26
#2	122.20	3.7033	169.91	169.95

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952505 Run Time: 10/16/98 11:58

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.32928	114.08	.75649	2.4497
Stddev	.02309	.31	.00801	.1734
%RSD	7.0115	.27102	1.0589	7.0764

#1	.31295	113.86	.76215	2.3271
#2	.34560	114.29	.75082	2.5722

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.02465	-.35265	143.83	1.3823
Stddev	.03406	.33970	.00	.0411
%RSD	138.20	96.330	.00081	2.9725

#1	-.00056	-.11244	143.83	1.3533
#2	-.04874	-.59285	143.83	1.4114

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.79344	96.299	-.55904	.53311
Stddev	.08154	.938	.20152	.12989
%RSD	10.277	.97381	36.047	24.364

#1	.73579	96.962	-.41655	.44127
#2	.85110	95.636	-.70154	.62495

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	22.331
Stddev	.016
%RSD	.07319

#1	22.319
#2	22.342

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952506

Operator: JYH

Comment: MD21-98-0173

Run Time: 10/16/98 12:02 Type: Unk

Mode: CONC

Corr.Fact: 49.261082

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	-.45528	1229.3	1.1447	L -7.9194
Stddev	.02490	6.2	.0678	.0057
%RSD	5.4694	.50469	5.9197	.07194

#1	-.47289	1233.7	1.1927	-7.9154
#2	-.43767	1224.9	1.0968	-7.9234

Check ?	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	6.7939	.38367	805.15	.02001
Stddev	.0020	.00378	2.01	.00000
%RSD	.02957	.98533	.24980	.01290

#1	6.7953	.38100	806.58	.02000
#2	6.7925	.38635	803.73	.02001

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.52721	2.3024	.29815	2917.1
Stddev	.01026	.0475	.04646	6.8
%RSD	1.9469	2.0649	15.583	.23321

#1	.51995	2.2688	.33101	2921.9
#2	.53446	2.3360	.26530	2912.3

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	173.86	3.3747	212.52	167.53
Stddev	.69	.0081	1.35	.31
%RSD	.39545	.24124	.63488	.18516

#1	173.38	3.3689	213.48	167.75
#2	174.35	3.3804	211.57	167.31

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952506 Run Time: 10/16/98 12:02

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.43644	71.908	1.1400	1.8677
Stddev	.01903	.061	.0400	.1715
%RSD	4.3614	.08499	3.5109	9.1832

#1	.44990	71.865	1.1683	1.9890
#2	.42298	71.951	1.1117	1.7465

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.02157	-.10597	151.73	.66391
Stddev	.16884	.06723	.25	.14239
%RSD	782.80	63.445	.16788	21.447

#1	-.14095	-.15350	151.91	.56323
#2	.09782	-.05843	151.55	.76460

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.80814	105.90	-.19746	.95388
Stddev	.09136	.04	.30002	.04240
%RSD	11.306	.03924	151.94	4.4447

#1	.74353	105.93	-.40961	.98386
#2	.87274	105.87	.01469	.92390

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	22.170
Stddev	.053
%RSD	.23862

#1	22.208
#2	22.133

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952507

Operator: JYH

Comment: MD21-98-0174

Run Time: 10/16/98 12:05 Type: Unk

Mode: CONC

Corr.Fact: 49.504951

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.53962	590.17	1.0797	L -8.2058
Stddev	.01286	.00	.1022	.0344
%RSD	2.3823	.00071	9.4620	.41916

#1	-.53053	590.17	1.1519	-8.2301
#2	-.54871	590.17	1.0074	-8.1815

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	3.8171	.37308	877.26	.01007
Stddev	.0238	.00424	.70	.02760
%RSD	.62209	1.1370	.08019	274.04

#1	3.8003	.37608	877.76	.02959
#2	3.8338	.37008	876.76	-.00945

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	.50699	2.6436	.22296	2902.5
Stddev	.00714	.0091	.15429	2.3
%RSD	1.4093	.34259	69.199	.08046

#1	.51204	2.6372	.33206	2900.8
#2	.50194	2.6500	.11386	2904.1

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	134.41	3.8242	187.46	165.49
Stddev	1.59	.0195	1.80	.02
%RSD	1.1853	.51025	.96026	.01080

#1	133.29	3.8104	188.73	165.50
#2	135.54	3.8380	186.18	165.48

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 0952507 Run Time: 10/16/98 12:05

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.40611	81.799	1.2774	2.4821
Stddev	.00378	.167	.0725	.0246
%RSD	.93118	.20395	5.6786	.99290

#1	.40879	81.917	1.3287	2.4996
#2	.40344	81.681	1.2261	2.4647

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	-.04994	-.09073	149.89	.60938
Stddev	.06835	.00004	.35	.10221
%RSD	136.87	.04341	.23507	16.773

#1	-.00161	-.09076	149.65	.53711
#2	-.09827	-.09070	150.14	.68165

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	.53585	107.47	-.52404	.76537
Stddev	.14519	.14	.22066	.17111
%RSD	27.096	.12795	42.108	22.357

#1	.43318	107.37	-.36801	.64437
#2	.63852	107.56	-.68007	.88636

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	21.123
Stddev	.031
%RSD	.14660

#1	21.101
#2	21.145

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5 Sample Name: 0952507 .9PS

Operator: JYH

Comment: MD21-98-0174 .9PS

Run Time: 10/16/98 12:09 Type: Unk

Mode: CONC

Corr.Fact: 49.504951

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	9.1885	1043.6	50.474	42.399	483.66
Stddev	.0737	.6	.237	.118	.12
%RSD	.80201	.05868	.46976	.27759	.02461

#1	9.2406	1043.2	50.642	42.316	483.58
#2	9.1364	1044.0	50.306	42.482	483.74

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	17500.	1000.0	5000.0	2500.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000	-.50000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	50.616	1308.5	47.337	47.777	50.523
Stddev	.040	2.2	.050	.266	.184
%RSD	.07980	.16534	.10540	.55687	.36371

#1	50.587	1307.0	47.372	47.589	50.393
#2	50.644	1310.0	47.302	47.965	50.653

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	250.00	20000.	1000.0	1000.0	3000.0
Low Limit	-.02500	-5.0000	-.10000	-.25000	-.25000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	49.658	2619.0	2487.7	497.34	663.12
Stddev	.071	.9	.2	.11	.96
%RSD	.14368	.03513	.00706	.02292	.14492

#1	49.709	2619.6	2487.6	497.42	662.44
#2	49.608	2618.3	2487.8	497.25	663.80

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2000.0	15000.	15000.	2000.0	20000.
Low Limit	-1.0000	-1.0000	-25.000	-5.0000	-5.0000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	194.52	49.606	2520.1	49.270	50.813
Stddev	.08	.030	4.0	.221	.172
%RSD	.04271	.06116	.15793	.44922	.33924

#1	194.58	49.627	2523.0	49.114	50.935
#2	194.46	49.584	2517.3	49.427	50.692

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2000.0	1000.0	15000.	2500.0	2500.0
Low Limit	-.50000	-5.0000	-25.000	-1.0000	-1.0000

Sample Name: 0952507 .9PS Run Time: 10/16/98 12:09

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	49.140	50.407	622.48	.71058	47.787
Stddev	.203	.068	.29	.08177	.021
%RSD	.41256	.13502	.04640	11.507	.04498

#1	48.997	50.359	622.27	.76840	47.771
#2	49.283	50.455	622.68	.65276	47.802

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000	-.50000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	150.79	46.961	48.651	68.101
Stddev	.01	.370	.433	.081
%RSD	.00959	.78803	.89035	.11933

#1	150.81	46.699	48.345	68.044
#2	150.78	47.222	48.958	68.158

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	500.00	1500.0	2500.0
Low Limit	-.50000	-1.0000	-.50000	-.50000

Method: CLP5 Sample Name: 07/5

Operator: JYH

Comment: MD21-98-0174/5

Run Time: 10/16/98 12:12 Type: Unk

Mode: CONC

Corr.Fact: 247.524765

Elem	Ag3280	Al3082	As1890	B_2496
Units	ppm	ppm	ppm	ppm
Avg	L -.55360	586.47	1.4549	L -41.933
Stddev	.18539	.03	.1708	.215
%RSD	33.488	.00561	11.741	.51330

#1	-.68470	586.45	1.3341	-41.781
#2	-.42251	586.50	1.5757	-42.085

Check ?	LC Fail	LC Pass	LC Pass	LC Fail
High Limit	500.00	17500.	1000.0	5000.0
Low Limit	-.50000	-5.0000	-1.0000	-5.0000

Elem	Ba4554	Be3130	Ca3736	Cd2288
Units	ppm	ppm	ppm	ppm
Avg	3.8364	.36647	879.70	-.04230
Stddev	.0747	.00594	1.17	.16383
%RSD	1.9477	1.6205	.13342	387.26

#1	3.7836	.36227	880.53	.07354
#2	3.8893	.37067	878.87	-.15815

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	2500.0	250.00	20000.	1000.0
Low Limit	-.50000	-.02500	-5.0000	-.10000

Elem	Co2286	Cr2677	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm
Avg	1.4964	2.3169	.02885	2691.6
Stddev	.1578	.0791	.00184	2.5
%RSD	10.546	3.4160	6.3851	.09165

#1	1.3848	2.2610	.03015	2693.4
#2	1.6080	2.3729	.02755	2689.9

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	3000.0	2000.0	15000.
Low Limit	-.25000	-.25000	-1.0000	-1.0000

Elem	K_7664	Li6707	Mg2779	Mn2576
Units	ppm	ppm	ppm	ppm
Avg	140.80	3.8387	180.45	157.05
Stddev	2.05	.1045	3.37	.28
%RSD	1.4562	2.7213	1.8701	.17846

#1	139.35	3.9126	182.84	157.25
#2	142.25	3.7649	178.06	156.85

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	15000.	2000.0	20000.	2000.0
Low Limit	-25.000	-5.0000	-5.0000	-.50000

Sample Name: 07/5 Run Time: 10/16/98 12:12

Elem	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm
Avg	.55637	80.971	1.3420	2.8307
Stddev	.03800	.468	.2421	.6777
%RSD	6.8297	.57780	18.038	23.942

#1	.52950	80.641	1.5131	3.3099
#2	.58324	81.302	1.1708	2.3515

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	15000.	2500.0	2500.0
Low Limit	-5.0000	-25.000	-1.0000	-1.0000

Elem	Sb2068	Se1960	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm
Avg	.37640	-.27615	134.22	.66192
Stddev	.16811	2.7038	.64	.40875
%RSD	44.661	979.11	.47341	61.753

#1	.25753	-2.1880	134.67	.37289
#2	.49527	1.6357	133.77	.95095

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	500.00	500.00	2500.0	1000.0
Low Limit	-1.0000	-1.0000	-50.000	-5.0000

Elem	Sr2152	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm
Avg	2.8533	106.40	.83645	.63776
Stddev	.0960	.35	.14610	.57089
%RSD	3.3633	.33035	17.466	89.514

#1	2.7854	106.16	.93975	1.0414
#2	2.9211	106.65	.73314	.23408

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	1000.0	500.00	1500.0
Low Limit	-.50000	-.50000	-1.0000	-.50000

Elem	Zn2138
Units	ppm
Avg	20.484
Stddev	.002
%RSD	.01013

#1	20.482
#2	20.485

Check ?	LC Pass
High Limit	2500.0
Low Limit	-.50000

Method: CLP5

Sample Name: IC5A

Operator:

Comment:

Run Time: 10/16/98

12:15 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00463	249.92	.00571	-.16814	.00076
Stddev	.00000	.01	.00412	.00116	.00006
%RSD	.05007	.00256	72.229	.68811	8.3332

#1	.00463	249.92	.00279	-.16896	.00071
#2	.00463	249.92	.00863	-.16732	.00080

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	250.00	.00000	.00000	.00000
Range	±.01600	±50.000	±.04000	±1.0000	±.02000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	244.73	.00032	-.00162	.00272
Stddev	.00001	.37	.00031	.00058	.00018
%RSD	48.847	.15126	97.555	35.591	6.6322

#1	-.00002	244.47	.00054	-.00121	.00285
#2	-.00004	244.99	.00010	-.00203	.00259

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	250.00	.00000	.00000	.00000
Range	±.00100	±50.000	±.00400	±.01000	±.01000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00174	93.391	.04890	.01564	242.63
Stddev	.00219	.183	.02056	.00022	1.36
%RSD	125.68	.19611	42.051	1.3773	.55863

#1	.00019	93.521	.06344	.01549	243.59
#2	.00329	93.262	.03436	.01580	241.67

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	100.00	.00000	.00000	250.00
Range	±.01000	±20.000	±1.0000	±.20000	±50.000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00038	.00050	.00894	-.00254	-.02378
Stddev	.00002	.00093	.00052	.00016	.00224
%RSD	4.1634	186.92	5.7748	6.2529	9.4135

#1	-.00039	.00115	.00931	-.00243	-.02220
#2	-.00036	-.00016	.00858	-.00266	-.02537

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.00000	.00000	.00000	.00000
Range	±.01000	±.20000	±1.0000	±.04000	±.04000

Sample Name: ICSA Run Time: 10/16/98 12:15

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00300	-.00147	.00806	.00005	.00015
Stddev	.00068	.00274	.00114	.00289	.00069
%RSD	22.746	186.07	14.159	6242.6	458.02

#1	.00349	-.00341	.00886	.00209	.00064
#2	.00252	.00046	.00725	-.00200	-.00034

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.00000	.00000	.00000	.00000
Range	±.04000	±.04000	±1.0000	±1.0000	±.02000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00529	-.02079	-.01357	.00258
Stddev	.00067	.00310	.00085	.00012
%RSD	12.632	14.899	6.2992	4.7324

#1	-.00576	-.01860	-.01297	.00249
#2	-.00481	-.02298	-.01418	.00266

Check ?	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.00000	.00000	.00000
Range	±.06000	±.08000	±.02000	±.02000

Method: CLP5

Sample Name: ICSAB

Operator:

Comment:

Run Time: 10/16/98 12:19 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.49234	252.48	.25387	-.16994	.23582
Stddev	.00201	.33	.00897	.00145	.00006
%RSD	.40905	.12967	3.5335	.85167	.02592

#1	.49377	252.25	.24753	-.16892	.23578
#2	.49092	252.71	.26022	-.17096	.23586

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	250.00	.25000	.00000	.25000
Range	±.10000	±50.000	±.05000	±1.0000	±.05000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.23678	246.86	.46226	.22101	.22918
Stddev	.00040	1.21	.00115	.00013	.00063
%RSD	.16918	.49041	.24802	.06010	.27621

#1	.23649	246.01	.46145	.22110	.22873
#2	.23706	247.72	.46307	.22091	.22963

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.25000	250.00	.50000	.25000	.25000
Range	±.05000	±50.000	±.10000	±.05000	±.05000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.23829	98.158	2.4892	.01607	245.50
Stddev	.00184	.257	.0411	.00031	1.67
%RSD	.77180	.26142	1.6494	1.8988	.68074

#1	.23699	97.977	2.5183	.01628	246.68
#2	.23959	98.340	2.4602	.01585	244.32

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.25000	100.00	2.5000	.00000	250.00
Range	±.05000	±20.000	±.50000	±.20000	±50.000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.21947	.00055	1.2226	.43796	.42678
Stddev	.00059	.00000	.0053	.00227	.00748
%RSD	.26768	.45453	.43120	.51735	1.7515

#1	.21906	.00055	1.2263	.43636	.43206
#2	.21989	.00055	1.2189	.43956	.42149

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.25000	.00000	1.2500	.50000	.50000
Range	±.05000	±.20000	±.25000	±.10000	±.10000

Sample Name: ICSAB Run Time: 10/16/98 12:19

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.49708	.25538	.01522	.00267	.00912
Stddev	.00479	.00545	.00093	.00083	.00052
%RSD	.96387	2.1327	6.1270	30.888	5.6767

#1	.49370	.25923	.01588	.00326	.00948
#2	.50047	.25153	.01456	.00209	.00875

Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	.25000	.00000	.00000	.00000
Range	±.10000	±.05000	±1.0000	±1.0000	±.02000

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00560	.42419	.21011	.46979
Stddev	.00016	.00804	.01012	.00105
%RSD	2.9372	1.8961	4.8184	.22452

#1	-.00572	.42987	.21727	.46904
#2	-.00548	.41850	.20295	.47053

Check ?	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.50000	.25000	.50000
Range	±.06000	±.10000	±.05000	±.10000

Method: CLP5

Sample Name: CCV

Operator:

Comment:

Run Time: 10/16/98

12:22 Type: QC

Mode: CONC

Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.41388	10.282	.41745	10.041	1.0193
Stddev	.00122	.015	.00412	.026	.0050
%RSD	.29418	.15045	.98785	.25631	.49449
#1	.41302	10.271	.42037	10.022	1.0158
#2	.41475	10.293	.41454	10.059	1.0229
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.40000	10.000	.40000	10.000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.05039	10.431	.05242	.20702	.51453
Stddev	.00018	.006	.00080	.00035	.00051
%RSD	.35274	.05679	1.5246	.17062	.09895
#1	.05026	10.427	.05298	.20677	.51417
#2	.05051	10.436	.05185	.20727	.51489
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.05000	10.000	.05000	.20000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.51560	4.1290	51.426	1.0030	10.439
Stddev	.00306	.0011	.046	.0036	.019
%RSD	.59324	.02741	.09029	.35601	.18065
#1	.51343	4.1282	51.393	1.0005	10.453
#2	.51776	4.1298	51.459	1.0056	10.426
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	4.0000	50.000	1.0000	10.000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.51635	1.0332	51.534	.52559	.52610
Stddev	.00013	.0002	.010	.00048	.00422
%RSD	.02549	.02126	.02009	.09194	.80277
#1	.51644	1.0334	51.527	.52593	.52909
#2	.51626	1.0331	51.541	.52525	.52312
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000	50.000	.50000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Sample Name: CCV Run Time: 10/16/98 12:22

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2272	.41737	5.1097	1.0547	1.0371
Stddev	.0048	.00274	.0014	.0095	.0036
%RSD	.39292	.65637	.02733	.89907	.34791
#1	1.2306	.41544	5.1107	1.0614	1.0397
#2	1.2238	.41931	5.1087	1.0480	1.0346
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Ti3349	Tl1908	V_2924	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	1.0233	.51697	1.0286	1.0462	
Stddev	.0037	.00114	.0110	.0016	
%RSD	.36096	.21978	1.0727	.15419	
#1	1.0207	.51616	1.0364	1.0450	
#2	1.0260	.51777	1.0208	1.0473	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	1.0000	.50000	1.0000	1.0000	
Range	10.000%	10.000%	10.000%	10.000%	

Method: CLP5

Sample Name: CCB

Operator:

Comment:

Run Time: 10/16/98 12:30 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00142	.01877	-.00098	L -.16487	.00011
Stddev	.00000	.00656	.00138	.00139	.00005
%RSD	.00370	34.942	140.83	.84210	47.623

#1	.00142	.01413	.00000	-.16389	.00007
#2	.00142	.02341	-.00195	-.16586	.00014

Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	.00163	.02801	.00504	.00569	.00048
Low Limit	-.00162	-.02801	-.00504	-.00569	-.00048

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00425	.00039	-.00062	-.00015
Stddev	.00002	.00663	.00021	.00032	.00023
%RSD	184.22	155.81	53.118	51.479	151.20

#1	.00000	.00894	.00025	-.00040	-.00031
#2	.00003	-.00043	.00054	-.00085	.00001

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00005	.04330	.00063	.00091	.00079
Low Limit	-.00005	-.04330	-.00063	-.00091	-.00079

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00087	.00222	.00082	.00026	-.00627
Stddev	.00156	.00981	.02146	.00037	.01819
%RSD	180.05	442.11	2618.1	138.19	290.02

#1	.00024	-.00472	.01599	.00052	.00659
#2	-.00197	.00916	-.01435	.00001	-.01914

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00561	.01566	.06821	.00062	.01895
Low Limit	-.00561	-.01566	-.06821	-.00062	-.01895

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00000	.00072	.00250	.00002	.00004
Stddev	.0000	.00031	.00191	.00065	.00348
%RSD	703.15	43.063	76.599	4332.5	7773.6

#1	.00002	.00093	.00385	.00048	-.00242
#2	-.00003	.00050	.00114	-.00045	.00251

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00019	.00258	.05651	.00136	.00817
Low Limit	-.00019	-.00258	-.05060	-.00154	-.00817

Sample Name: CCB Run Time: 10/16/98 12:30

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00003	-.00674	L -.04274	.00063	.00122
Stddev	.00619	.00273	.00155	.00124	.00125
%RSD	21518.	40.460	3.6243	196.87	102.30

#1	-.00435	-.00481	-.04164	-.00025	.00034
#2	.00440	-.00867	-.04384	.00150	.00211

Check ?	LC Pass	LC Pass	LC Fail	LC Pass	LC Pass
High Limit	.01044	.00890	.00312	.00268	.00347
Low Limit	-.01044	-.00890	-.00312	-.00268	-.00347

Elem	Ti3349	Tl1908	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	-.00007	.00407	-.00120	-.00010
Stddev	.00023	.00080	.00086	.00011
%RSD	331.52	19.557	71.843	104.89

#1	-.00023	.00351	-.00181	-.00003
#2	.00009	.00464	-.00059	-.00018

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00120	.01463	.00798	.00849
Low Limit	-.00120	-.01463	-.00798	-.00849

KEMRON ENVIRONMENTAL SERVICES FURNACE RUN LOGBOOK

ANALYST CRC TL DATE 10-20-98 TIME 0900
 METHOD # 7841 SOP # ME504 WORK GROUP # 48008 48077
 CAL STD SOURCE CRC 10-10-98 TL ICV/CCV SOURCE CRC 10-14-98 ICV/CCV
 POST SPK SOURCE CRC 10-14-98 Fu.spk

48078, 48079

Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
	50				27.	msd 01	.1	1.02/50	-06
	52				28.	02		1.03/50	0177 -01
	510				29.	DUP 02		1.00/50	CCVCCB Blank
	520				30.03	PBW E			Wt 47754 -01
	550				31.	LCSW E			-04
					32.	10-331-01	.9		
					33.	Sp01			
					34.	10-318-07			-01
1.	ICV				35.	ms08			-05
2.	ICB			Blank CCVCCB	36.	msd09			-06
3.	PBS 5G			Wt 46744-03	37.	32			-02
4.	LCS 5G		1.00/50	-04	38.	DUP 32			-07
5.	09-521-01	.9	1.00/50	REIS 98-0029	39.	PBS KG		CCVCCB	Wt 47289-03
6.	Sp01				40.	LCS 5KG		1.00/50	-04
7.	09-525-01	.9	1.00/50	MD21 98-0167	41.	10-168-01		1.00/50	-01
8.	Sp01				42.	ms01		1.02/50	-05
9.	09-523-01	.9	1.03/50	MD21 98-0175	43.	msd01		1.02/50	-06
10.	Sp01				44.	02		1.00/50	-02
11.	09-521-02		1.01/50	REIS 98-0030	45.	DUP 02		1.02/50	-07
12.	03		1.04/50	-0031 CCVCCB	46.	03		1.00/50	
13.	04		1.02/50	-0032	47.	04	.9	1.02/50	
14.	05		1.07/50	-0033	48.	Sp04			CCVCCB
15.	06		1.02/50	-0034	49.	05		1.00/50	
16.	07		1.01/50	-0035	50.	06		1.05/50	
17.	08		1.03/50	-0036	51.	07		1.04/50	
18.	09		1.00/50	-0037	52.	08		1.00/50	
19.	09-525-02		1.02/50	MD21 98-0168	53.	09		1.01/50	
20.	03		1.01/50	0169	54.	10		1.00/50	
21.	04		1.00/50	0171	55.08	11		1.05/50	CCVCCB FRS
22.	05		1.00/50	0172 CCVCCB	56.	12		1.00/50	ICB Blank CCVCCB
23.	06		1.01/50	0173	57.	13		1.00/50	
24.	07		1.07/50	0174	58.	14		1.01/50	
25.	09-523-01	.1	1.03/50	0175 -01	59.	19		0.98/50	
26.	ms01	.1	1.02/50	-05	60.	20		1.09/50	

Comments: Box KG LCS ms msd
double spiked.

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key:

CCV = Continuing Calibration Verification
 CCB = Continuing Calibration Blank
 % D = Automatic Instrument Rerun due to % RSD > 20%
 FRS = Full Recalibration Sequence

ID = Automatic Instrument Dilution
 R = Analyst Rerun
 BLK = Blank Rerun

Cont. →

KEMRON ENVIRONMENTAL SERVICES FURNACE RUN LOGBOOK

ANALYST CR TL DATE 10-20-98 TIME 0900
 METHOD # _____ SOP # _____ WORK GROUP # _____
 CAL STD SOURCE _____ ICV/CCV SOURCE _____
 POST SPK SOURCE _____

Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
					27.	09			
					28.	10			
					29.				Blank x 3 CCB
					30.				CCB
					31.				
					32.				
					33.				
					34.				
1.	21		1-01/50		35.				
2.	22		1-04/50		36.				
3.	23		1-02/50		37.				
4.	24		1-01/50		38.				
5.	PBS LV			6647779-04	39.	CV CCB			
6.	LCSS LV		1-00/50	-05	40.				
7.	10-327-01	.9		MD21-98 -02	41.				
8.	Sp01				42.				
9.	01	.1			43.				
10.	MS01	.1		-08	44.				
11.	02			-0434	45.				
12.	03			-0435	46.				
13.	04			-0515	47.				
14.	05			-0436	48.				
15.	06			0437	49.				
16.	07			0438 -03	50.				
17.	DUP07			-09	51.				
18.	10-333-01	.9			52.				
19.	Sp01				53.				
20.	02				54.				
21.	03				55.				
22.	04			-01	56.				
23.	MS05			-06	57.				
24.	MSD06			-07	58.				
25.	07			CCV CCB	59.				
26.	08				60.				

Comments: _____

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key:

CCV - Continuing Calibration Verification
 CCB = Continuing Calibration Blank
 % D = Automatic Instrument Rerun due to % RSD > 20%
 FRS = Full Recalibration Sequence

ID = Automatic Instrument Dilution
 R = Analyst Rerun
 BLK = Blank Rerun

Varian Spectro00 300/400 Zeeman
QC Protocol Report

OPERATOR CRC
DATE 10/20/0900/98 ZP
PATCH 10/20/0900/98 ZP TL

Cara R. Cochran
CRC 10-20-48 TL

QC PROTOCOL PARAMETERS

Box: Sy, E, KG, LV

IF THERE IS AN ERROR STOP
QC SPIKE POSITION 52
RECOVERY LIMIT (%) 85
RECOVERY MINIMUM LIMIT (%) 40
CORRELATION COEFFICIENT (%) 0.999
OVERLOAD VOLUME REDUCTION 2
RECOVERY (%) LIMIT 20.0

TO 115 LOG: 48008, 48077,
48078, 48079

QC PROTOCOL PARAMETERS

INSTRUMENT MODE ABSORBANCE
CALIBRATION ROW CONCENTRATION
STANDARD NAME PEAK AREA
LAMP POSITION 4
LAMP CURRENT (mA) 10
SLIT WIDTH (mm) 0.5
SLIT HEIGHT NORMAL
WAVELENGTH (nm) 276.8
THERMAL STABILITY POSITION SAMPLE AUTOMIXING
WAVE CORRELATION 0.99
MEASUREMENT TIME (sec) 3.0
RECOVERY 2
BACKGROUND CORRECTION ON
MAXIMUM ABSORBANCE 0.55

FURNACE PARAMETERS

SPIN NO.	TEMPERATURE (°C)	TIME (sec)	GAS FLOW (L/min)	GAS TYPE	REACT COMPONENT
1	125	10.0	3.0	NORMAL	NO
2	125	20.0	3.0	NORMAL	NO
3	250	10.0	3.0	NORMAL	NO
4	250	10.0	3.0	NORMAL	NO
5	450	15.0	3.0	NORMAL	NO
6	450	15.0	3.0	NORMAL	NO
7	550	2.0	0.0	NORMAL	YES
8	550	2.0	0.0	NORMAL	YES
9	550	5.0	3.0	NORMAL	NO
10	550	12.0	3.0	NORMAL	NO
11	450	12.0	3.0	NORMAL	NO

SAMPLED PARAMETERS VOLUMES (μL)

	SOLUTION	BLANK	MODIFIER
BLANK	---	25	3
STANDARD 1	1	24	3
STANDARD 2	5	20	3
STANDARD 3	10	15	3
STANDARD 4	25	0	3
SAMPLE	25	0	3

RECALIBRATION RATE 0
RESLOPE RATE 0

INJECTOR INJECT NO. 1 HOT INJECT YES PRE INJECT NO
 TEMPERATURE 100
 INJECT RATE 2

99. PROTOCOL PARAMETERS

01. STANDARD ROW 0
02. STANDARD STANDARD POSITION 1
03. STANDARD BLANK POSITION 50
04. STANDARD STANDARD POSITION 1
05. STANDARD BLANK POSITION 50
06. STANDARD VOLUME (μL) 25
07. STANDARD CONCENTRATION 25.00 μg/L
08. STANDARD LIMIT (μg) 52 TO 120
09. OTHER ROW 0
10. OTHER STANDARD ROW 10
00. OTHER CONCENTRATION 50.00 μg/L
00. OTHER ROW CONCENTRATION 0.00 μg/L
00. OTHER STANDARD LIMIT 5.00 μg/L
00. OTHER STANDARD LIMIT 5.00 μg/L

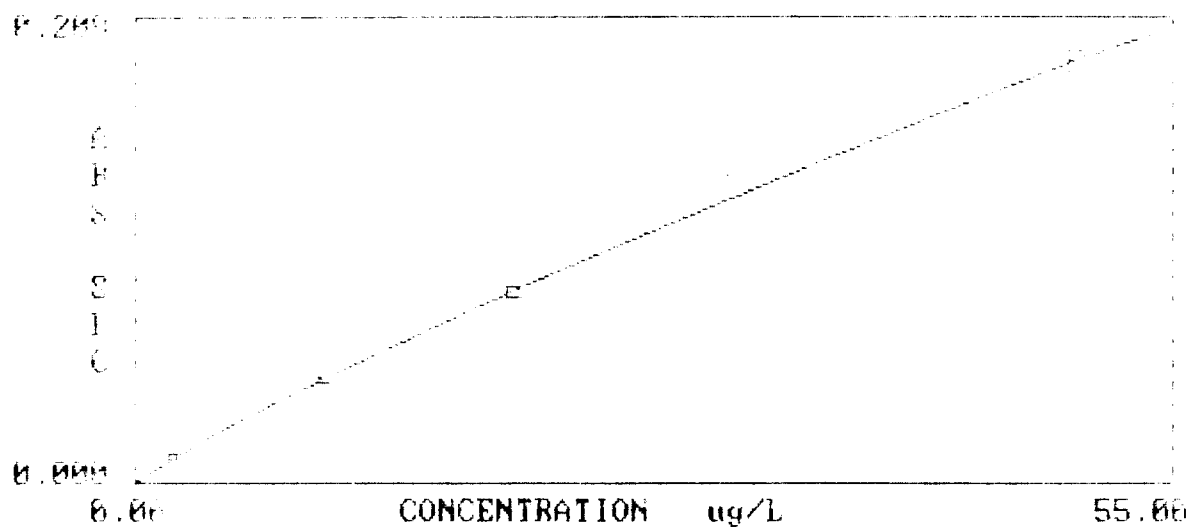
00. DETECTOR COMMENTS

0.4 μm x 100 μm x 100 μm (μm) : 250.0
Speed of Injection (μm) : 1.0
Maximum Air Temperature : 400°C
Recommended Air Temperature : 220°C
Recommended Air Flow : 2.0 L/min
Injection of acid solution, or
Injection of chloride solution (500-2000 μg/mL) plus reducing
agent such as ascorbic acid.
Response with 0.00 : 100% of 75 μg/mL gives about 0.2 Ω.

The 10 x 100 μm x 100 μm overcomes severe interferences from
hydrochloric acid, perchloric acid and sodium chloride. The
~ 10 μm provides higher working temperatures.
The 10 x 100 μm x 100 μm may require a different slit width.
The 10 x 100 μm x 100 μm is to isolate the analytical line.

CONCENTRATION	μg/L	μg/L	MEAN	READING
			ABS	
0.00	0.00	0.00	-0.000	-0.000
0.00	0.00	0.00	-0.000	-0.000

SAMPLE	CONC ug/L	XPED	MEAN ABS	READINGS	
STANDARD 1 QC	0.00	1.7	0.010	0.010 0.011 200oct98 09:03	CONCENTRATION LESS THAN IDL
STANDARD 2 QC	10.00	0.6	0.046	0.046 0.047 200oct98 09:09	
STANDARD 3 QC	20.00	1.3	0.066	0.067 0.065 200oct98 09:14	
STANDARD 4 QC	50.00	1.0	0.109	0.102 0.107 200oct98 09:20	



TCU QC	0.00	0.6	0.109	0.102 0.105 200oct98 09:26	
TCU QC	0.00	0.6	0.066	0.067 0.065 200oct98 09:31	CONCENTRATION LESS THAN IDL
TCU QC	0.00		0.066	0.067 0.065 200oct98 09:41	CONCENTRATION LESS THAN IDL
TCU QC	0.00		0.109	0.102 0.105	

SAMPLE	CONC REF	KRSI	MEAN ABS	READINGS	
COPI 1 R0	0.44	36.1	0.000	0.003	0.000
				200ct98	09:56
				ABS =	0.003
				CONCENTRATION LESS THAN 1%	
COPI 2 6644164-03	0.50	14.3	0.003	0.002	0.003
				200ct98	10:01
				CONCENTRATION LESS THAN 1%	
COPI 3 100000 1.00 20.54 R0 -04		0.7	0.104	0.105	0.104
				200ct98	10:06
COPI 4 COPI 15 35 0049		2.0	0.010	0.010	0.011
				200ct98	10:17
				CONCENTRATION LESS THAN 1%	
COPI 5 COPI 15 35 0049		1.3	0.103	0.102	0.104
				200ct98	10:17
COPI 6 COPI 15 35 0049		0.0	0.010	0.010	0.010
				200ct98	10:27
				CONCENTRATION LESS THAN 1%	
COPI 7 COPI 15 35 0049		0.0	0.101	0.101	0.103
				200ct98	10:27
COPI 8 COPI 15 35 0049		0.0	0.007	0.005	0.005
				200ct98	10:27
				CONCENTRATION LESS THAN 1%	
COPI 9 COPI 15 35 0049		0.0	0.104	0.107	0.100
				200ct98	10:30
COPI 10 COPI 15 35 0049		0.0	0.010	0.010	0.015
				200ct98	10:44
				CONCENTRATION LESS THAN 1%	
COPI 11 COPI 15 35 0049		0.0	0.014	0.013	0.015
				200ct98	10:49
				CONCENTRATION LESS THAN 1%	
COPI 12 COPI 15 35 0049		0.0	0.110	0.111	0.100
				200ct98	10:57
				XR =	103.1
COPI 13 COPI 15 35 0049		0.0	0.003	0.003	0.003
				200ct98	11:00
				ABS =	0.004
				CONCENTRATION LESS THAN 1%	
COPI 14 COPI 15 35 0049		0.0	0.010	0.015	0.017
				200ct98	11:05
				CONCENTRATION LESS THAN 1%	
COPI 15 COPI 15 35 0049		0.0	0.010	0.009	0.011
				200ct98	11:14

SAMPLE	CONC ug/L	%RSD	MEAN OPS	READINGS
0952101 1.00 BC -0034	0.76	5.3	0.014	0.015 0.014 200ct98 11:16 CONCENTRATION LESS THAN IDL
0952107 1.01 BC -0025	1.99	1.0	0.010	0.010 0.011 200ct98 11:22 CONCENTRATION LESS THAN IDL
0952108 1.03 BC -0034	2.35	6.6	0.012	0.013 0.012 200ct98 11:27 CONCENTRATION LESS THAN IDL
0952109 1.00 BC -0031	1.55	0.0	0.000	0.000 0.000 200ct98 11:32 CONCENTRATION LESS THAN IDL
0952500 1.00 BC -0021-53-002	0.76	0.0	0.004	0.004 0.004 200ct98 11:35 CONCENTRATION LESS THAN IDL
0952501 1.00 BC -0021-53-002	0.76	0.0	0.010	0.010 0.011 200ct98 11:43 CONCENTRATION LESS THAN IDL
0952502 1.00 BC -0021-53-002	0.76	0.0	0.004	0.003 0.007 200ct98 11:44 CONCENTRATION LESS THAN IDL
0952503 1.00 BC -0021-53-002	0.76	0.0	0.003	0.003 0.004 200ct98 11:51 CONCENTRATION LESS THAN IDL
0952504 1.00 BC	0.76	0.0	0.110	0.111 0.110 200ct98 12:00 XR = 100.0
0952505 1.00 BC	0.76	0.0	0.004	0.003 0.004 200ct98 12:00 ABS = 0.004 CONCENTRATION LESS THAN IDL
0952506 1.00 BC -0043	1.15	23.9	0.000	0.007 0.005 200ct98 12:11 CONCENTRATION LESS THAN IDL
0952507 1.00 BC -0044	0.76	0.0	0.005	0.005 0.005 200ct98 12:17 CONCENTRATION LESS THAN IDL
0952508 1.00 BC -0045	0.76	0.0	0.001	0.000 0.001 200ct98 12:18 CONCENTRATION LESS THAN IDL
0952509 1.00 BC -0046	0.76	0.0	0.002	0.001 0.005 200ct98 12:20 CONCENTRATION LESS THAN IDL

SAMPLE

COUNT
uB/L

%RSD

MEAN
ABS

READINGS

20552300 1.00
QC -0.74

0.76

36.3

0.004

0.005 0.003
200ct98 12:39

CONCENTRATION LESS THAN IBL

20552300 1.00
QC

0.52

54.2

0.003

0.001 0.005
200ct98 12:44

CONCENTRATION LESS THAN IBL

QC CCB

27.30

0.0

0.113

0.112 0.113
200ct98 12:49

QC CCB

0.07

75.0

0.001

0.001 0.002
200ct98 12:55

CONCENTRATION LESS THAN IBL

PLANN 00	0.00		0.003	0.003	0.003	200ct98 13:00	CONCENTRATION LESS THAN IDL
CCV 4 00	27.05	1.7	0.112	0.110	0.113	200ct98 13:12	NR = 108.2
CCV 4 00	0.37	53.0	0.002	0.003	0.001	200ct98 13:17	AKS = 0.002 CONCENTRATION LESS THAN IDL
PRW 5 00	0.24	99.0	0.001	0.002	0.000	200ct98 13:23	CONCENTRATION LESS THAN IDL
LOSV 5 00 - 04	0.00	0.0	0.100	0.100	0.100	200ct98 13:20	
1021000 00	0.01	10.0	0.001	0.001	0.000	200ct98 13:24	CONCENTRATION LESS THAN IDL
1021000 00 - 01	0.00	0.0	0.115	0.117	0.114	200ct98 13:30	
1021000 00 - 01	0.00	0.0	0.001	0.001	0.001	200ct98 13:44	CONCENTRATION LESS THAN IDL
1021000 00 - 01	0.00	0.0	0.100	0.100	0.100	200ct98 12:50	
1021000 00 - 01	0.00	0.0	0.100	0.100	0.100	200ct98 13:55	
1021000 00 - 01	0.00	0.0	0.001	0.001	0.001	200ct98 14:00	CONCENTRATION LESS THAN IDL
DUP 30 00 - 07	0.17	90.0	0.001	0.002	-0.000	200ct98 14:00	CONCENTRATION LESS THAN IDL
DUP 30 00 00-41297-03	0.15	10.0	0.001	0.001	0.001	200ct98 14:11	CONCENTRATION LESS THAN IDL
00-41297-03	0.15	0.0	0.114	0.115	0.114	200ct98 14:14	NR = 111.0
00-41297-03	0.15	0.0	0.002	0.002	0.001	200ct98 14:20	NR = 0.003 CONCENTRATION LESS THAN IDL

LCSS KC 1.00 55.03 0.1 0.110 0.110 0.111
 200ct90 14:32
 DF = 2.00

CAC 10-20-98

LCSS double

Spiked

SAMPLE CONC WRET MEAN READINGS
 APS

LCSS KC 1.00 55.03 0.1 0.110 0.110 0.111
 200ct90 14:32
 DF = 2.00

1016001 1.00 4.30 4.7 0.022 0.022 0.021
 200ct90 14:30
 CONCENTRATION LESS THAN 10L

MS 01 1.00 44.00 0.0 0.170 0.170 0.170
 200ct90 14:43

KOD 01 1.00 41.17 0.0 0.101 0.101 0.150
 200ct90 14:49

1016002 1.00 4.15 5.1 0.022 0.022 0.020
 200ct90 14:51
 CONCENTRATION LESS THAN 10L

DHF 01 1.00 4.00 6.0 0.004 0.004 0.004
 200ct90 15:00
 CONCENTRATION LESS THAN 10L

1016003 1.00 4.00 5.1 0.004 0.004 0.004
 200ct90 15:05

1016004 1.00 4.00 11.0 0.002 0.002 0.002
 200ct90 15:10
 CONCENTRATION LESS THAN 10L

01 01 01.00 41.00 1.0 0.100 0.100 0.100
 200ct90 15:14

001 01 01.00 41.00 1.1 0.117 0.117 0.110
 200ct90 15:17
 WRT = 114.4

001 01 01.00 41.00 0.0 0.004 0.004 0.004
 200ct90 15:27
 WRT = 0.005
 CONCENTRATION LESS THAN 10L

1016005 1.00 5.10 0.1 0.020 0.020 0.025
 200ct90 15:33

1016006 1.00 4.70 0.7 0.024 0.024 0.020
 200ct90 15:39
 CONCENTRATION LESS THAN 10L

1016007 1.00 0.00 1.0 0.020 0.020 0.020
 200ct90 15:44
 CONCENTRATION LESS THAN 10L

1016008 1.00 0.00 0.0 0.020 0.020 0.020
 200ct90 15:49

CAC 10-20-98
 A/S/MSD
 accurate
 spiked

1016000 1.01 3.74 4.6 0.019 0.020 0.017
 05 20Oct98 15:55
 CONCENTRATION LESS THAN 10%

SAMPLE CONC XRED MEAN READINGS
 ug/L ABS

1016010 1.05 3.97 4.6 0.022 0.020 0.021
 05 20Oct98 16:00
 CONCENTRATION LESS THAN 10%

1016011 1.05 4.54 7.3 0.023 0.022 0.024
 05 20Oct98 16:00
 CONCENTRATION LESS THAN 10%

CCV 27.92 0.3 0.115 0.115 0.115
 20Oct98 16:11

CCB 0.004 0.004 0.004 0.004 0.004
 20Oct98 16:16
 CONCENTRATION LESS THAN 10%

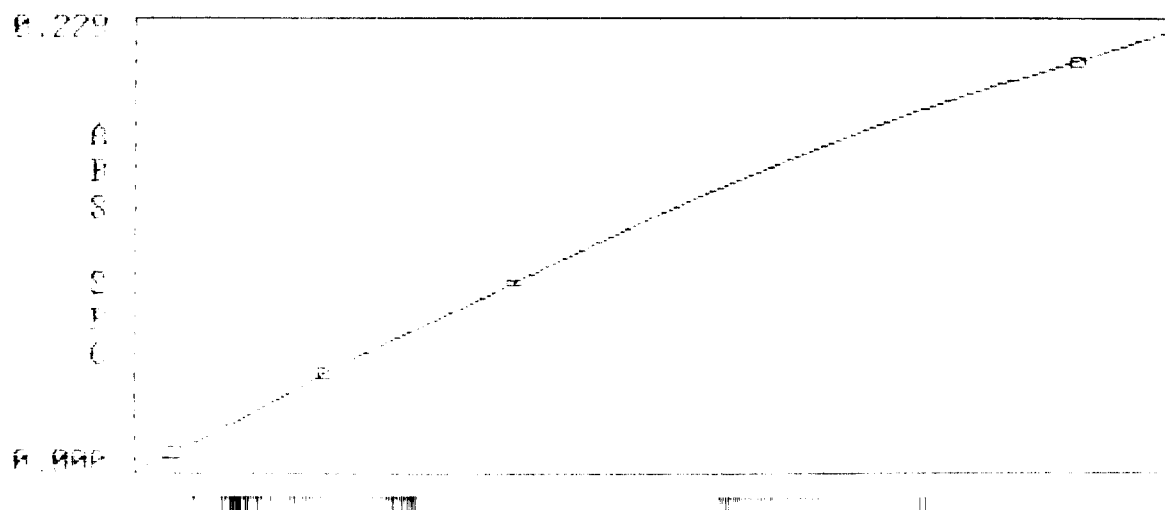
PL 0.000 0.000 0.000 0.000 0.000
 20Oct98 16:34
 CONCENTRATION LESS THAN 10%

STANDARD 0.000 0.000 0.000 0.000 0.010
 20Oct98 16:39
 CONCENTRATION LESS THAN 10%

STANDARD 0.000 0.000 0.000 0.000 0.050
 20Oct98 16:41

STANDARD 0.000 0.000 0.000 0.000 0.050
 20Oct98 16:51

STANDARD 0.000 0.000 0.000 0.000 0.050
 20Oct98 16:53



ICV	24.20	0.2	0.115	0.115	0.116
CC				200ct98	17:02
				%R =	97.0
ICV	-0.50	0.0	-0.002	-0.002	-0.002
CC				200ct98	17:00
				ABS =	-0.001
				CONCENTRATION LESS THAN IDL	
BLANK	0.00		-0.002	-0.002	-0.002
CC				200ct98	17:22
				CONCENTRATION LESS THAN IDL	

SAMPLE	DATE	TIME	MEAN	READING	
	MM/YY		OPR		
ICV	10/14	17:00	0.116	0.116	0.117
CC				200ct98	17:02
				%R =	96.0
CCF-1	0.12	45.7	0.001	0.001	0.001
CC				200ct98	17:22
				ABS =	0.002
				CONCENTRATION LESS THAN IDL	
1014012-1.00	0.12	32.1	0.019	0.021	0.019
CC				200ct98	17:30
				CONCENTRATION LESS THAN IDL	
1014012-1.00	0.12	0.0	0.001	0.022	0.021
CC				200ct98	17:44
				CONCENTRATION LESS THAN IDL	
1014012-1.00	0.12	5.7	0.019	0.018	0.020
CC				200ct98	17:49
				CONCENTRATION LESS THAN IDL	
1014012-0.00	0.12	0.0	0.019	0.019	0.019
CC				200ct98	17:54
				CONCENTRATION LESS THAN IDL	
1014012-0.00	0.12	0.0	0.020	0.020	0.020
CC				200ct98	18:00
				CONCENTRATION LESS THAN IDL	
1014012-1.00	0.12	0.0	0.017	0.018	0.010
CC				200ct98	18:05
				CONCENTRATION LESS THAN IDL	
1014012-1.00	0.12	0.0	0.014	0.014	0.015
CC				200ct98	18:10
				CONCENTRATION LESS THAN IDL	

1016000	1.00	3.0	0.010	0.010	0.010
00				200ct98	18:16
				CONCENTRATION LESS THAN IN	

1016004	1.01	4.00	0.020	0.020	0.019
00				200ct98	18:21
				CONCENTRATION LESS THAN IN	

000 111	-0.10	65.5	-0.001	-0.000	-0.001
00				200ct98	18:26
66-47779-04				CONCENTRATION LESS THAN IN	

000 2	25.30	9.3	0.120	0.120	0.120
00				200ct98	18:32
				XR =	101.2

000 2	0.93	6.3	0.004	0.004	0.004
00				200ct98	18:37
				ABC =	0.005
				CONCENTRATION LESS THAN IN	

SAMPLE	CONC	WGT	MEAN	READINGS	
	mg/L		ABC		
1000000	1.00	0.0	0.111	0.110	0.111
00				200ct98	18:42

4 1000000	1.00	0.0	0.000	0.007	0.001
00				200ct98	18:48
				CONCENTRATION LESS THAN IN	

000 111	0.70	0.0	0.117	0.117	0.110
00				200ct98	18:52

1000000	1.00	0.0	0.004	0.004	0.004
00				200ct98	18:56
				CONCENTRATION LESS THAN IN	

Δ 1000000	1.00	1.0	0.002	0.004	0.000
00				200ct98	19:04

1000000	1.00	0.00	0.000	0.011	0.000
00				200ct98	19:10
				CONCENTRATION LESS THAN IN	

1000000	1.00	0.00	0.010	0.014	0.012
00				200ct98	19:15
				CONCENTRATION LESS THAN IN	

1000000	1.00	0.00	0.007	0.007	0.007
00				200ct98	19:21
				CONCENTRATION LESS THAN IN	

1000000	1.00	0.00	0.005	0.005	0.000
00				200ct98	19:27
				CONCENTRATION LESS THAN IN	

1000000	1.00	0.00	0.014	0.014	0.011
00				200ct98	19:37
				CONCENTRATION LESS THAN IN	

CONC	0.01	0.04	0.101	0.110	0.100
00				200ct98	19:37
				%R =	102.4
0001	0.01	0.04	0.004	0.005	0.003
00				200ct98	19:43
				APC =	0.000
				CONCENTRATION LESS THAN IDL	

1032707	1.00	1.40	3.1	0.007	0.007
00				200ct98	19:48
-03				CONCENTRATION LESS THAN IDL	

DUP 07	1.04	1.00	1.5	0.007	0.007
00				200ct98	19:54
-09				CONCENTRATION LESS THAN IDL	

1033301	1.00	4.00	1.2	0.023	0.023
00				200ct98	19:59
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC	APC	MEAN	READINGS	
	0.01	0.04	0.00		

00	10.00	0.0	0.000	0.000	0.000
00				200ct98	20:00

1033301	1.00	4.00	1.2	0.021	0.021
00				200ct98	20:10
				CONCENTRATION LESS THAN IDL	

1033301	1.00	4.00	1.2	0.021	0.021
00				200ct98	20:14
				CONCENTRATION LESS THAN IDL	

1033301	1.00	4.00	1.2	0.010	0.010
00				200ct98	20:19
				CONCENTRATION LESS THAN IDL	

NO 05	0.00	17.70	0.0	0.000	0.000
00				200ct98	20:27

NO 05	1.00	17.00	0.0	0.007	0.007
00				200ct98	20:30

1033301	1.00	5.00	0.0	0.020	0.020
00				200ct98	20:37

0001	0.01	0.04	0.0	0.101	0.100
00				200ct98	20:43
				%R =	100.7

0001	0.01	0.04	0.0	0.005	0.005
00				200ct98	20:47
				APC =	0.000
				CONCENTRATION LESS THAN IDL	

1033301	1.00	5.00	1.2	0.010	0.010
00				200ct98	20:54
				CONCENTRATION LESS THAN IDL	

OK to 21-98
 Sample
 from 10333
 to MSA
 to 21-98

1033360	1.00	0.01	0.02	0.014	0.014	0.015
00					200ct98	20:59
					CONCENTRATION LESS THAN 1DL	

1033310	1.00	0.01	0.02	0.015	0.015	0.015
00					200ct98	21:04
					CONCENTRATION LESS THAN 1DL	

00	Blank	0.02	20.0	0.003	0.003	0.002
					200ct98	21:10
					CONCENTRATION LESS THAN 1DL	

00	Blank	0.02	20.2	0.002	0.002	0.002
					200ct98	21:15
					CONCENTRATION LESS THAN 1DL	

00	Blank	0.01	33.5	0.004	0.003	0.005
					200ct98	21:20
					CONCENTRATION LESS THAN 1DL	

000000	0.000	0.000	0.000	0.000	READING	
000000	0.000	0.000	0.000	0.000		
000000	0.000	0.000	0.000	0.110	0.110	0.110
00					200ct98	21:26
					MD	= 100.0
000000	0.000	0.000	0.000	0.004	0.004	0.005
00					200ct98	21:31
					APC	= 0.001
					CONCENTRATION LESS THAN 1DL	

KEMRON ENVIRONMENTAL SERVICES MERCURY RUN LOGBOOK

ANALYST Kathy R. Albrecht DATE 10/01/98 TIME 10:12
 METHOD # 7471 SOP # 405 WORK GROUP # 46842, 46863, 46864
 CAL STD SOURCE DSS 01-04 ICV/CCV SOURCE K DSS 01-05
 POST SPK SOURCE 10 ppb std (DSS 01-04) HRT 101-148

Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
	SO				27.	SP01		10/100	
	SO.2				28.	09-525-02 MD21-98-0168			
	S1.0				29.	03 MD21-98-0169			
	S2.0				30.	04 MD21-98-0171			
	S5.0				31.	05 MD21-98-0172			
	S10.0				32.	06 MD21-98-0173			CCV, CCB
					33.	07 MD21-98-0174			
					34.	PBS E (W046823-03)			
					35.	LCSS E (W046823-04)		10/100	
1.	ICV			CCV, CCB	36.	09-521-01 RE15-98-0029	0.9		
2.	ICB				37.	SP01			
3.	PBS A2 (W046822-02)				38.	02 RE15-98-0030			
4.	LCSS A2 (W046822-04)		10/100		39.	03 RE15-98-0031			
5.	09-464-01 CACU-98-0001	0.9			40.	04 RE15-98-0032			
6.	SP01				41.	MS04 (W046823-05)			
7.	02 CACU-98-0002				42.	MS04 (W046823-06)			CCV, CCB
8.	09-488-01 CAMO-98-0031	0.9			43.	05 RE15-98-0033			
9.	SP01				44.	06 RE15-98-0034			
10.	02 CAMO-98-0032				45.	07 RE15-98-0035			
11.	03 CAMO-98-0033				46.	08 RE15-98-0036			
12.	MS03 (W046822-05)			CCV, CCB	47.	DU08 (W046823-07)			
13.	MS03 (W046822-09)				48.	09 RE15-98-0037			
14.	04 CAMO-98-0034				49.	09-523-01 MD21-98-0175	0.9		
15.	09-499-01 RE00-98-0050	0.9			50.	SP01			
16.	SP01				51.	02 MD21-98-0177			
17.	02 RE00-98-0051				52.	09-527-01 RE00-98-0056	0.9		CCV, CCB
18.	03 RE00-98-0052				53.	SP01			
19.	04 RE00-98-0053				54.	02 RE00-98-0057			
20.	DU04 (W046822-07)				55.	03 RE00-98-0059			
21.	09-493-01 MD21-98-0334	0.9			56.	04 RE00-98-0060			
22.	SP01			CCV, CCB	57.	09-489-01	0.1	10/100	
23.	09-494-01 MD21-98-0330	0.9			58.	SP01			
24.	SP01				59.	02	0.1		
25.	02 MD21-98-0131				60.	PBS MQ (W046822-03)			
26.	09-525-01 MD21-98-0167	0.9							

continued on p. 1

Comments:

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key:

CCV = Continuing Calibration Verification
 CCB = Continuing Calibration Blank
 % D = Automatic Instrument Rerun due to % RSD > 20%
 FRS = Full Recalibration Sequence

ID = Automatic Instrument Dilution
 R = Analyst Rerun
 BLK = Blank Rerun

continued
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KEMRON ENVIRONMENTAL SERVICES MERCURY RUN LOGBOOK

ANALYST _____ DATE _____ TIME _____
METHOD # _____ SOP # _____ WORK GROUP # _____
CAL STD SOURCE _____ ICV/CCV SOURCE _____
POST SPK SOURCE _____

Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
					27.				
					28.				
					29.				
					30.				
					31.				
					32.				
					33.				
					34.				
1.	LCSS MQ (W04464204)		10/100		35.				
2.	09 514 01			ICV, CCB	36.				
3.	0201 (W04464207)				37.				
4.	02	0.9			38.				
5.	0402				39.				
6.	03				40.				
7.	04				41.				
8.	05				42.				
9.	06				43.				
10.	09 579 01	0.9			44.				
11.	5101				45.				
12.	02			ICV, CCB	46.				
13.	03				47.				
14.	04				48.				
15.	(W04464205) MS05				49.				
16.	(W04464206) MSD06			CCV, CCB	50.				
17.					51.				
18.					52.				
19.					53.				
20.					54.				
21.					55.				
22.					56.				
23.					57.				
24.					58.				
25.					59.				
26.					60.				

KRA
10/1/98

Comments: _____

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key: CCV - Continuing Calibration Verification
CCB = Continuing Calibration Blank
% D = Automatic Instrument Rerun due to % RSD > 20%
FRS = Full Recalibration Sequence

ID = Automatic Instrument Dilution
R = Analyst Rerun
BLK = Blank Rerun

*** Standard: 1 Rep: 1 Seq: 463 10:12:25 01 Oct 1998 HG
Hg .000 ppb 602
 Ave. Int. = 602 S. D. = 0

*** Standard: 2 Rep: 1 Seq: 464 10:15:01 01 Oct 1998 HG
Hg .200 ppb 5153
 Ave. Int. = 5153 S. D. = 0

*** Standard: 3 Rep: 1 Seq: 465 10:17:37 01 Oct 1998 HG
Hg 1.00 ppb 23955
 Ave. Int. = 23955 S. D. = 0

*** Standard: 4 Rep: 1 Seq: 466 10:20:17 01 Oct 1998 HG
Hg 2.00 ppb 46731
 Ave. Int. = 46731 S. D. = 0

*** Standard: 5 Rep: 1 Seq: 467 10:22:55 01 Oct 1998 HG
Hg 5.00 ppb 125465
 Ave. Int. = 125465 S. D. = 0

*** Standard: 6 Rep: 1 Seq: 468 10:25:42 01 Oct 1998 HG
Hg 10.0 ppb 250261
 Ave. Int. = 250261 S. D. = 0

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICV Seq: 469 10:28:36 01 Oct 1998 HG								
Hg	.987	ppb	.000 %	.987				
*** Sample ID: ICB Seq: 470 10:31:08 01 Oct 1998 HG								
Hg	.025	ppb	.000 %	.025				
*** Check Standard: 2 Ck2 Seq: 471 10:33:41 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		100.	1.00	1.00	ppb	.000 %		
*** Check Standard: 3 Ck3 Seq: 472 10:36:15 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		8.43	.017	.200	ppb	.000 %		
*** Sample ID: PBE A2 Seq: 473 10:38:48 01 Oct 1998 HG								
			WG46822-03					
Hg	.041	ppb	.000 %	.041				
*** Sample ID: LOBB A2 Seq: 474 10:41:20 01 Oct 1998 HG								
			WG46822-04					
Hg	155.	ppb	.000 %	155.				
*** Sample ID: 0946401 Seq: 475 10:43:52 01 Oct 1998 HG								
			CACV-98-0061					
Hg	5.93	ppb	.000 %	5.93				
*** Sample ID: EP01 Seq: 476 10:46:23 01 Oct 1998 HG								
			SPIKED					
Hg	179.	ppb	.000 %	179.				
*** %Rec. ID: EP01 Seq: 477 10:46:23 01 Oct 1998 HG								
			Spikes =1 Unspiked =1					
	Spike		%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)	
Hg	1.00	ppb	104.	.036	.000	1.08	.000	
*** Sample ID: 0946402 Seq: 478 10:48:57 01 Oct 1998 HG								
			CACV-98-0062					
Hg	5.10	ppb	.000 %	5.10				
*** Sample ID: 0948801 Seq: 479 10:51:28 01 Oct 1998 HG								
			CAMD-98-0231					
Hg	6.16	ppb	.000 %	6.16				
*** Sample ID: EP01 Seq: 480 10:53:59 01 Oct 1998 HG								
			SPIKED					
Hg	177.	ppb	.000 %	177.				

10:53:59 01 Oct 1998

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Protocol: clp2

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** %Rec. ID: SP01 Seq: 481 10:53:59 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
Hg	Spike		%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)	
Hg	1.00	ppb	102.	.037	.000	1.06	.000	
*** Sample ID: 0948802 Seq: 482 10:56:32 01 Oct 1998 HG								
CAMO-98-0232 Dil. Weight .60000 Volume 100.00								
Hg	4.36	ppb	.000 %	4.36				
*** Sample ID: 0948803 Seq: 483 10:59:04 01 Oct 1998 HG								
CAMO-98-0233 Dil. Weight .60000 Volume 100.00								
Hg	8.22	ppb	.000 %	8.22				
*** Sample ID: MS03 Seq: 484 11:01:36 01 Oct 1998 HG								
WE46B22-05 Dil. Weight .60000 Volume 100.00								
Hg	153.	ppb	.000 %	153.				
*** Check Standards: 2 11:04:08 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		96.2	.962	1.00	ppb	.000 %		
*** Check Standards: 3 11:06:43 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		17.1	.034	.200	ppb	.000 %		
*** Sample ID: MS202 Seq: 487 11:09:15 01 Oct 1998 HG								
WE46B22-06 Dil. Weight .60000 Volume 100.00								
Hg	154	ppb	.000 %	154.				
*** Sample ID: 0948804 Seq: 488 11:11:45 01 Oct 1998 HG								
CAMO-98-0234 Dil. Weight .60000 Volume 100.00								
Hg	3.86	ppb	.000 %	3.86				
*** Sample ID: 0948901 Seq: 489 11:14:15 01 Oct 1998 HG								
UNSPIKED RE00-98-0050 Dil. Weight .60000 Volume 100.00								
Hg	2200	ppb	.000 %	2200				
*** Sample ID: SP01 Seq: 490 11:17:11 01 Oct 1998 HG								
SPIKED Dil. Weight .60000 Volume 100.00								
Hg	2290	ppb	.000 %	2290				
*** %Rec. ID: SP01 Seq: 491 11:17:11 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
Hg	Spike		%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)	
Hg	1.00	L ppb	54.2	13.2	.000	13.7	.000	

diluted and sp. by KRA 10/1/98

11:20:07 01 Oct 1998

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Protocol: clp2 CLP2

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 0948902 <i>deleted</i> <i>KRA 10/1/98</i> Seq: 492 11:20:07 01 Oct 1998 HG								
Hg	2260	ppb	.000 %	2260				Dil. Weight .60000 Volume 100.0
RE00-98-0051								
*** Sample ID: 0948903 Seq: 493 11:23:07 01 Oct 1998 HG								
Hg	83.5	ppb	.000 %	83.5				Dil. Weight .60000 Volume 100.0
RE00-98-0052								
*** Sample ID: 0948904 Seq: 494 11:25:37 01 Oct 1998 HG								
Hg	142.	ppb	.000 %	142.				Dil. Weight .60000 Volume 100.0
RE00-98-0053								
*** Sample ID: DU04 Seq: 495 11:28:06 01 Oct 1998 HG								
Hg	162.	ppb	.000 %	162.				Dil. Weight .60000 Volume 100.0
WG46B22-07								
*** Sample ID: 0948901 Seq: 496 11:30:39 01 Oct 1998 HG								
Hg	15.0	ppb	.000 %	15.0				Dil. Weight .60000 Volume 100.0
UNSP15-21								
*** Sample ID: SP01 Seq: 497 11:33:10 01 Oct 1998 HG								
Hg	152.	ppb	.000 %	152.				Dil. Weight .60000 Volume 100.0
SP01E1								
*** XRef. ID: SP01 Seq: 498 11:33:10 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
Hg	1.00	ppb	100.	.090	.000	1.09	.000	
Avg(U) SD(U) Avg(S) SD(S)								
*** Check Standard: 2 OK2 Seq: 499 11:35:45 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		96.5	.965	1.00	ppb	.000 %		
*** Check Standard: 3 OK3 Seq: 500 11:38:19 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		7.63	.015	.200	ppb	.000 %		
*** Sample ID: 0949401 Seq: 501 11:40:50 01 Oct 1998 HG								
Hg	10.0	ppb	.000 %	10.0				Dil. Weight .60000 Volume 100.0
MD21-98-0130								
*** Sample ID: SP01 Seq: 502 11:43:18 01 Oct 1998 HG								
Hg	174.	ppb	.000 %	174.				Dil. Weight .60000 Volume 100.0
*** Sample ID: 0945402 Seq: 503 11:45:47 01 Oct 1998 HG								
Hg	3.29	ppb	.000 %	3.29				Dil. Weight .60000 Volume 100.0
MD21-98-0131								

11:48:15 01 Oct 1998

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Protocol: clp2 CLP2

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 0952501 Seq: 504 11:48:15 01 Oct 1998 HG								
UNSPIKED MD21-98-0167 Dil. Weight .60000 Volume 100.00								
Hg	7.96	ppb	.000 %	7.96				
*** Sample ID: SP01 Seq: 505 11:50:43 01 Oct 1998 HG								
SPIKED Dil. Weight .60000 Volume 100.00								
Hg	177.	ppb	.000 %	177.				
*** %Rec. ID: SP01 Seq: 506 11:50:43 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
	Spike		%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)	
Hg	1.00	ppb	101.	.048	.000	1.06	.000	
*** Sample ID: 0952502 Seq: 507 11:53:13 01 Oct 1998 HG								
MD21-98-0168 Dil. Weight .60000 Volume 100.00								
Hg	130.	ppb	.000 %	130.				
*** Sample ID: 0952503 Seq: 508 11:55:42 01 Oct 1998 HG								
MD21-98-0169 Dil. Weight .60000 Volume 100.00								
Hg	10.7	ppb	.000 %	10.7				
*** Sample ID: 0952504 Seq: 509 11:58:11 01 Oct 1998 HG								
MD21-98-0171 Dil. Weight .60000 Volume 100.00								
Hg	6.35	ppb	.000 %	6.35				
*** Sample ID: 0952505 Seq: 510 12:00:40 01 Oct 1998 HG								
MD21-98-0172 Dil. Weight .60000 Volume 100.00								
Hg	7.80	ppb	.000 %	7.80				
*** Sample ID: 0952506 Seq: 511 12:03:09 01 Oct 1998 HG								
MD21-98-0173 Dil. Weight .60000 Volume 100.00								
Hg	7.68	ppb	.000 %	7.68				
*** Check Standard: 2 CK2 Seq: 512 12:05:41 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		99.3	.993	1.00	ppb	.000 %		
*** Check Standard: 3 CK3 Seq: 513 12:08:16 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		11.9	.024	.200	ppb	.000 %		
*** Sample ID: 0952507 Seq: 514 12:13:07 01 Oct 1998 HG								
MD21-98-0174 Dil. Weight .60000 Volume 100.00								
Hg	8.51	ppb	.000 %	8.51				
*** Sample ID: PES E Seq: 515 12:15:35 01 Oct 1998 HG								
WG46B23-03								
Hg	.003	ppb	.000 %	.003				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: LCSS E Seq: 516 12:18:02 01 Oct 1998 HG								
			WG46823-04					Dil. Weight .60000 Volume 100.0
Hg	149.	ppb	.000 %	149.				
*** Sample ID: 0952101 Seq: 517 12:20:30 01 Oct 1998 HG								
			RE15-98-0029					Dil. Weight .60000 Volume 100.0
Hg	12.4	ppb	.000 %	12.4				
*** Sample ID: SP01 Seq: 518 12:22:58 01 Oct 1998 HG								
			SPIKED					Dil. Weight .60000 Volume 100.0
Hg	171.	ppb	.000 %	171.				
*** %Rec. ID: SP01 Seq: 519 12:22:58 01 Oct 1998 HG								
			Spikes =1 Unspiked =1					
	Spike		%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)	
Hg	1.00	ppb	95.4	.074	.000	1.03	.000	
*** Sample ID: 0952102 Seq: 520 12:25:30 01 Oct 1998 HG								
			RE15-98-0030					Dil. Weight .60000 Volume 100.0
Hg	11.0	ppb	.000 %	11.0				
*** Sample ID: 0952103 Seq: 521 12:27:58 01 Oct 1998 HG								
			RE15-98-0031					Dil. Weight .60000 Volume 100.0
Hg	13.2	ppb	.000 %	13.2				
*** Sample ID: 0952104 Seq: 522 12:30:26 01 Oct 1998 HG								
			RE15-98-0032					Dil. Weight .60000 Volume 100.0
Hg	12.6	ppb	.000 %	12.6				
*** Sample ID: MSD04 Seq: 523 12:32:54 01 Oct 1998 HG								
			WG46823-05					Dil. Weight .60000 Volume 100.0
Hg	152.	ppb	.000 %	152.				
*** Sample ID: MSD04 Seq: 524 12:35:24 01 Oct 1998 HG								
			WG46823-06					Dil. Weight .60000 Volume 100.0
Hg	154.	ppb	.000 %	154.				
*** Check Standard: 2 Ck2 Seq: 525 12:37:56 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		101.	1.01	1.00	ppb	.000 %		
*** Check Standard: 3 Ck3 Seq: 526 12:40:30 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		10.4	.021	.200	ppb	.000 %		
*** Sample ID: 0952105 Seq: 527 12:43:01 01 Oct 1998 HG								
			RE15-98-0033					Dil. Weight .60000 Volume 100.0
Hg	13.0	ppb	.000 %	13.0				

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12:45:32 01 Oct 1998

Protocol: clp2

CLP2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 0952106 Seq: 528 12:45:32 01 Oct 1998 HG								
RE15-98-0034 Dil. Weight .60000 Volume 100.0								
Hg	13.2	ppb	.000 %	13.2				
*** Sample ID: 0952107 Seq: 529 12:48:01 01 Oct 1998 HG								
RE15-98-0035 Dil. Weight .60000 Volume 100.0								
Hg	11.1	ppb	.000 %	11.1				
*** Sample ID: 0952108 Seq: 530 12:50:30 01 Oct 1998 HG								
RE15-98-0036 Dil. Weight .60000 Volume 100.0								
Hg	16.1	ppb	.000 %	16.1				
*** Sample ID: DU08 Seq: 531 12:52:59 01 Oct 1998 HG								
WG46823-07 Dil. Weight .60000 Volume 100.0								
Hg	16.4	ppb	.000 %	16.4				
*** Sample ID: 0952109 Seq: 532 12:55:28 01 Oct 1998 HG								
RE15-98-0037 Dil. Weight .60000 Volume 100.0								
Hg	8.77	ppb	.000 %	8.77				
*** Sample ID: 0952301 Seq: 533 12:57:57 01 Oct 1998 HG								
UNSPIKED MD21-98-0175 Dil. Weight .60000 Volume 100.0								
Hg	8.57	ppb	.000 %	8.57				
*** Sample ID: SP01 Seq: 534 13:00:26 01 Oct 1998 HG								
SPIKED Dil. Weight .60000 Volume 100.0								
Hg	177.	ppb	.000 %	177.				
*** %Rec. ID: SP01 Seq: 535 13:00:26 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
%Rcv. Avg(U) SD(U) Avg(S) SD(S)								
Hg	1.00	ppb	102.	.039	.000	1.06	.000	
*** Sample ID: 0952302 Seq: 536 13:02:57 01 Oct 1998 HG								
MD21-98-0177 Dil. Weight .60000 Volume 100.0								
Hg	5.66	ppb	.000 %	5.66				
*** Sample ID: 0952701 Seq: 537 13:05:26 01 Oct 1998 HG								
UNSPIKED RE00-98-0056 Dil. Weight .60000 Volume 100.0								
Hg	12.0	ppb	.000 %	12.0				
*** Check Standard: 2 Ck2 Seq: 538 13:07:58 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		103.	1.03	1.00	ppb	.000 %		
*** Check Standard: 3 Ck3 Seq: 539 13:10:32 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		8.70	.017	.200	ppb	.000 %		

13:13:03 01 Oct 1998

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Protocol: clp2 CLP2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: SP01 Seq: 540 13:13:03 01 Oct 1998 HG								
SPIKED Dil. Weight .60000 Volume 100.0								
Hg	188.	ppb	.000 %	188.				
*** %Rec. ID: SP01 Seq: 541 13:13:03 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
	Spike		%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)	
Hg	1.00	ppb	105.	.072	.000	1.13	.000	
*** Sample ID: 0952702 Seq: 542 13:15:33 01 Oct 1998 HG								
RE00-98-0057 Dil. Weight .60000 Volume 100.0								
Hg	7.45	ppb	.000 %	7.45				
*** Sample ID: 0952703 Seq: 543 13:18:03 01 Oct 1998 HG								
RE00-98-0059 Dil. Weight .60000 Volume 100.0								
Hg	30.2	ppb	.000 %	30.2				
*** Sample ID: 0952704 Seq: 544 13:20:34 01 Oct 1998 HG								
RE00-98-0060 Dil. Weight .60000 Volume 100.0								
Hg	11.6	ppb	.000 %	11.6				
*** Sample ID: 0948901 Seq: 545 13:23:04 01 Oct 1998 HG								
UNSPIKED Dil. Weight .60000 Volume 1000.								
Hg	2520	ppb	.000 %	2520				
*** Sample ID: SP01 Seq: 546 13:25:37 01 Oct 1998 HG								
SPIKED Dil. Weight .60000 Volume 1000.								
Hg	4190	ppb	.000 %	4190				
*** %Rec. ID: SP01 Seq: 547 13:25:37 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
	Spike		%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)	
Hg	1.00	ppb	100.	1.51	.000	2.51	.000	
*** Sample ID: 0948902 Seq: 548 13:28:12 01 Oct 1998 HG								
.1 Dil. Weight .60000 Volume 1000.								
Hg	2400	ppb	.000 %	2400				
*** Sample ID: FBS MQ Seq: 549 13:30:43 01 Oct 1998 HG								
WG46842-03								
Hg	.018	ppb	.000 %	.018				
*** Sample ID: LCSS MQ Seq: 550 13:33:14 01 Oct 1998 HG								
WG46842-04 Dil. Weight .60000 Volume 100.0								
Hg	151.	ppb	.000 %	151.				

13:35:46 01 Oct 1998

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Protocol: clp2 CLP2

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 0951401 Seq: 551 13:35:46 01 Oct 1998 HG								
Dil. Weight .60000 Volume 100.0								
Hg	8.97	ppb	.000 %	8.97				
*** Check Standard: 2 Ck2 Seq: 552 13:38:19 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		98.1	.981	1.00	ppb	.000 %		
*** Check Standard: 3 Ck3 Seq: 553 13:40:53 01 Oct 1998 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		13.3	.027	.200	ppb	.000 %		
*** Sample ID: DU01 Seq: 554 13:43:25 01 Oct 1998 HG								
WG46242-07 Dil. Weight .60000 Volume 100.0								
Hg	10.4	ppb	.000 %	10.4				
*** Sample ID: 0951402 Seq: 555 13:45:56 01 Oct 1998 HG								
UNSPINED .9 Dil. Weight .60000 Volume 100.0								
Hg	9.01	ppb	.000 %	9.01				
*** Sample ID: SP02 Seq: 556 13:48:27 01 Oct 1998 HG								
SPINNET Dil. Weight .60000 Volume 100.0								
Hg	177.	ppb	.000 %	177.				
*** %Rec. ID: SP02 Seq: 557 13:48:27 01 Oct 1998 HG								
Spikes =1 Unspiked =1								
Hg	Spike	%Rcv.	Avg(U)	SD(U)	Avg(S)	SD(S)		
	1.00	101.	.054	.000	1.06	.000		
*** Sample ID: 0951403 Seq: 558 13:50:59 01 Oct 1998 HG								
Dil. Weight .60000 Volume 100.0								
Hg	4.70	ppb	.000 %	4.70				
*** Sample ID: 0951404 Seq: 559 13:53:31 01 Oct 1998 HG								
Dil. Weight .60000 Volume 100.0								
Hg	7.04	ppb	.000 %	7.04				
*** Sample ID: 0951405 Seq: 560 13:56:03 01 Oct 1998 HG								
Dil. Weight .60000 Volume 100.0								
Hg	7.72	ppb	.000 %	7.72				
*** Sample ID: 0951406 Seq: 561 13:58:35 01 Oct 1998 HG								
Dil. Weight .60000 Volume 100.0								
Hg	10.5	ppb	.000 %	10.5				
*** Sample ID: 0957901 Seq: 562 14:01:07 01 Oct 1998 HG								
UNSPINED .9 Dil. Weight .60000 Volume 100.0								
Hg	30.0	ppb	.000 %	30.0				

14:03:40 01 Oct 1998

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Line	Conc.	Units	SD/RSD	1	2	3	4	5
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*** Sample ID: SP01 Seq: 563 14:03:40 01 Oct 1998 HG
SPIKED Dil. Weight .60000 Volume 100.00
Hg 196. ppb .000 % 196.

*** %Rec. ID: SP01 Seq: 564 14:03:40 01 Oct 1998 HG
Spikes =1 Unspiked =1
Hg Spike %Rcv. Avg(U) SD(U) Avg(S) SD(S)
1.00 ppb 99.3 .180 .000 1.17 .000

*** Sample ID: 0957902 Seq: 565 14:06:13 01 Oct 1998 HG
Dil. Weight .60000 Volume 100.00
Hg 24.7 ppb .000 % 24.7

*** Check Standard: 2 CK2 Seq: 566 14:08:47 01 Oct 1998 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 98.8 .968 1.00 ppb .000 %

*** Check Standard: 3 CK3 Seq: 567 14:11:21 01 Oct 1998 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 11.0 .022 .200 ppb .000 %

*** Sample ID: 0957903 Seq: 568 14:13:54 01 Oct 1998 HG
Dil. Weight .60000 Volume 100.00
Hg 26.6 ppb .000 % 26.6

*** Sample ID: 0957904 Seq: 569 14:16:27 01 Oct 1998 HG
Dil. Weight .60000 Volume 100.00
Hg 36.1 ppb .000 % 36.1

*** Sample ID: MSD05 Seq: 570 14:19:00 01 Oct 1998 HG
WG46842-05 Dil. Weight .60000 Volume 100.00
Hg 177. ppb .000 % 177.

*** Sample ID: MSD06 Seq: 571 14:21:33 01 Oct 1998 HG
WG46842-06 Dil. Weight .60000 Volume 100.00
Hg 174. ppb .000 % 174.

*** Check Standard: 2 CK2 Seq: 572 14:24:07 01 Oct 1998 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 96.0 .960 1.00 ppb .000 %

*** Check Standard: 3 CK3 Seq: 573 14:26:41 01 Oct 1998 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 12.9 .026 .200 ppb .000 %

DIGESTION DATA

General Digestion Log

Analyst(s): KAS
Date: 9-24-98 @ 3:00
LCS: 10 mL K1657
MS/MSD: 400 uL L1657K12.3 MeS
Witness: VC

ME401 - Method 3005A-Water
ME403 - Method 3050B-Soil
HNO₃ Lot #: M22026
HCl Lot #: M11039
H₂O₂ Lot #: M10600

Box: XM
Date: 10-20-98

Digestion Work Group: WG
Analytical Work Group: WG

KEMRON Number	Initial Wt/Vol	Final Volume	Metals	Due Date	Comments
PDS		100 mL			
LCS	2.00 g				
09 521-01	2.00		Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Pt, Se, Sn, V, Zn	10-20-98	LEVEL 4 LANC REIS 98-0029
02	2.00				0030
03	2.06				0031
04	2.02				0032
05	1.98				0033
06	2.06				0034
07	1.99				0035
08	2.08				0036
09	2.04				0037
525-01	2.00				LEVEL 4 LANC MD21-98-0167
02	2.02				0168
03	2.03				0169
04	2.03				0171
05	2.01				0172
06	2.03				0173
07	2.02				0174
523-01	2.00				0175
01MS	2.04				
01MS0	1.98				
02	2.02				0177
020-01	1.99				

Comments:

Reviewed By:

[Signature]

Furnace Digestion Log

Analyst(s): KAS
 Date: 9-29-98
 LCS: 2.5mL 0.55-01-01
 MS/MSD: 200uL CLPFSR-1
 Witness: UC

ME402 - Method 3020A-Water
 ME403 - Method 3050B-Soil
 Lot #: 1122026
 H₂O₂ Lot #: 110600

<input checked="" type="checkbox"/>

Box:

SQ

Digestion Work Group: WG 46764

Date: 10-20-98

Analytical Work Group: WG

KEMRON Number	Initial Wt/Vol	Final Volume	Metals	Due Date	Comments
PBS		50mL			
04-21-01	1.00g		7L	10-20-98	LEVEL 4 LANL REIS-98-0029
02	1.01				0030
03	1.06				0031
04	1.02				0032
05	1.07				0033
06	1.02				0034
07	1.01				0035
08	1.03				0036
09	1.00				0037
525-01	1.00				LEVEL 4 LANL HDZ-98-0167
02	1.02				0168
03	1.01				0169
04	1.06				0171
05	1.06				0172
06	1.01				0173
07	1.07				0174
523-01	1.03				LEVEL 4 LANL 0175
01MS	1.02		65		
01MSD	1.02		06		
02	1.03				0177
02 Dup	1.00		07		

Comments:

Reviewed By:

[Signature]

MERCURY PREPARATION LOG

Analyst(s): SK
Date: 09-30-98
LCS: LMF K16667
MS/MSD: LMF K16667
Witness: VC

ME404 - Method 7470A - Water	
ME405 - Method 7471A - Soil	X

Box: E
Due Date: 10-06-98
Digestion Work Group #: W546823
Pressure & Time 15psi for 15 min
Bath Temp @ start: —
Bath Temp @ end: —

[illegible]

ICV / CCV: DSS-01-05

Std's: 0, 0.2, 1.0, 2.0, 5.0, 10: DSS-01-04

Reviewed By:

Percent Solids Determination Log

Workgroup: 47774 Approval: DWR/10/16/98
ADT (on): DLN 10-15-98/1350 ADT (off): DLN 10/16/98 @ 0740

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	DRY WT 3B	DRY WT 3C
10-116-13	1.30	25.69	23.08		
-15	1.30	28.96	26.68		
-17	1.32	30.47	28.56		
-18	1.32	30.94	29.12		
10-347-01	1.31	22.11	3.75		
09-525/09-526-01	1.30	22.74	21.74		
-02	1.30	28.69	27.85		
-03	1.27	24.30	23.12		
-04	1.28	21.72	20.71		
-05	1.32	21.36	20.62		
✓ -06	1.31	22.97	22.20		
✓ -07	1.29	20.74	20.15		
09-521/522-01	1.29	25.15	24.69		
-02	1.31	27.71	25.64		
-03	1.31	24.21	22.66		
-04	1.30	26.32	25.59		
-05	1.29	33.09	32.30		
-06	1.28	22.92	22.28		
-07	1.28	21.89	20.72		
-08	1.29	24.61	22.77		
Duplicate 10-116-13	1.31	26.93	24.85		

Workgroup: 47775 Approval: JWR/10/16/98
ADT (on): DLN 10-15-98/1445 ADT (off): DLN 10/16/98 @ 0740

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	DRY WT 3B	DRY WT 3C
09-5211522-09	1.32	21.80	21.70		
Duplicate 09-5211522 -09	1.30	22.76	22.64		