Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources.* AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

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Reference:	17
Title:	Emission Test Results For No. 2 And No. 4 Aggregate Kilns, Solite Corporation, Leaksville Plant, Cascade, Virginia, IEA, Research Triangle Park, NC, August 8, 1992.

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AP-42 Section 11.20
Reference 17
Report Sect. 4
Reference 18
PART I OF II

REPORT NO.: 192-92-72

PROJECT: 1381-004

DATE: August 8, 1992

TYPE: **EMISSION TEST REPORT**

EMISSION TEST RESULTS FOR NO. 2 AND NO. 4 AGGREGATE KILNS SOLITE CORPORATION, LEAKSVILLE PLANT CASCADE, VIRGINIA

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PART I OF II

Leaksville #1

SUMMARY OF COMPLIANCE T[illegible] OPERATING CONDITIONS

Complete a separate form for each run of a specified test condition, use same identification codes as on Forms CC-3 and CTN-3.

1. Unit #: 1; Mode: A; Test Condition (1,2 or N/A): N/A;
   Run No.: 1; Test Date: 6/18/92
2. Run Start Time (hr.min): 10:05; Run End Time (hr.min): 12:26
   If there were any interruptions in sampling, discuss cause, duration, and impact on stack sampling: _____
   Sample Times/PM/HCl/Cl_2: 10:05 to 13:03. Metals 10:05 to 11:02. Cr^{+6} 11:18 to 12:26.
3. Operating Conditions:

	Run Avg	60-min. Avg(a)
Max. Production Rate (specify units) Raw Feed Rate (tons/hr)	13.7	13.9
Max. PM Control Device Inlet Temp. (degrees F)(b)	423.3	N/A
Max. Combustion Chamber Temp (degrees F)(b)	2473	N/A
APCS Operating Parameters (List applicable parameters, see Section 266.103(c)(1)(ix-xiii))	Run Avg	N/A
Min. Pressure Drop Across Baghouse (in. H2O)	3.2	N/A
HW Fuel Feed Rate (lbs/hr)	2700	2733

Stream No. (e)		1	2	3	4
Stream Type (e.g., coal, shale, sludge, liquid solvents, etc.)		HWD Fuel	Shale		
Category (e.g., Fuel, Raw Material, Pumpable HW, Nonpumpable HW)		100% Pumpable HWD	Raw Material		
Mass Feed Rate (g/hr)		1240782	1.081x10(7)		
Thermal Feed Rate (Btu/hr)		3.307x10(7)	N/A		
Ash Feed Rate (g/hr)(i)		N/A	N/A		
Chlorine and Chloride (g/hr)		20923.18	<3048.48		
Antimony (g/hr)		3.62	< 4.85		
Arsenic (g/hr)		318.20	81.98		
Barium (g/hr)		175.37	1355.92		
Beryllium (g/hr)		70.71	43.17		
Cadmium (g/hr)		529.71	< 5.60		
Chromium (g/hr)	Total	188.59	940.28		
	Cr^{+6}(spike)	161.17	0		
Lead (g/hr)		4988.30	258.74		
Mercury (g/hr)		0.19	<0.50		
Silver (g/hr)		<0.85	<8.71		
Thallium (g/hr)		<0.48	21.64		

(a) Indicate highest or lowerst 60-minute rolling average as appropriate.
(b) Not applicable if complying with Tier I or adjusted Tier I metals feed rate screening limits.
(c) Indicate highest 60-minute rolling averages for maximum flue gas flow rate and if chosen, maximum suspended solids content of scrubber water where applicable. Indicate lowest 60-minute averages for all other APCS parameters.
(d) Owners/operators of furnaces monitoring metals concentrations in collected PM are not required to determine metals feed rates in nonhazardous waste feed streams.
(e) Copy form and add additional pages if more than four streams were fed during test.
(f) Owners/opertors of cement and lighweight aggregate kilns are not required to determine ash feed rates of feed streams.

Leaksville #1

COMPLIANCE CERTIFICATION FORM 4 (cc-4)
SUMMARY OF COMPLIANCE TEST OPERATING CONDITIONS

Complete a separate form for each run of a specified test condition, use same identification codes as on Forms CC-3 and CTN-3.

1. Unit #: 1; Mode: A; Test Condition (1,2 or N/A): N/A;
   Run No.: 2; Test Date: 6/18/92
2. Run Start Time (hr.min): 12:55; Run End Time (hr.min): 15:21
   If there were any interruptions in sampling, discuss cause, duration, and impact on stack sampling: _____
   Sample Times/PM/HCl/Cl_2: 12:55 to 15:02. Metals 13:55 to 13:58. Cr^{+6} 14:18 to 15:21.
3. Operating Conditions:

	Run Avg	60-min Avg(a)
Max. Production Rate (specify units) Raw Feed Rate (tons/hr)	13.7	14.0
Max. PM Control Device Inlet Temp. (degrees F)(b)	401.1	N/A
Max. Combustion Chamber Temp (degrees F)(b)	2448	N/A
APCS Operating Parameters (List applicable parameters, see Section 266.103(c)(1)(ix-xiii))	**Run Avg**	**N/A**
Min. Pressure Drop Across Baghouse (in. H2O)	5.20	N/A
HW Fuel Feed Rate (lbs/hr)	2523	2654

Stream No. (e)		1	2	3	4
Stream Type (e.g., coal, shale, sludge, liquid solvents, etc.)		HWD Fuel	Shale		
Category (e.g., Fuel, Raw Material, Pumpable HW, Nonpumpable HW)		100% Pumpable HWD	Raw Material		
Mass Feed Rate (g/hr)		1204916	1.289x10(7)		
Thermal Feed Rate (Btu/hr)		2.654x10(7)	N/A		
Ash Feed Rate (g/hr)(f)		N/A	N/A		
Chlorine and Chloride (g/hr)		113262.1	< 5084.82		
Antimony (g/hr)		3.29	< 4.96		
Arsenic (g/hr)		344.37	58.35		
Barium (g/hr)		136.95	1233.06		
Beryllium (g/hr)		73.64	21.23		
Cadmium (g/hr)		59.24	< 5.72		
Chromium (g/hr)	Total	193.64	1478.59		
	Cr^{+6}(spike)	173.28	0		
Lead (g/hr)		4975.73	< 26.70		
Mercury (g/hr)		0.48	< 0.51		
Silver (g/hr)		< 0.84	< 8.90		
Thallium (g/hr)		< 0.48	< 18.18		

(a) Indicate highest or lowerst 60-minute rolling average as appropriate.
(b) Not applicable if complying with Tier I or adjusted Tier I metals feed rate screening limits.
(c) Indicate highest 60-minute rolling averages for maximum flue gas flow rate and if chosen, maximum suspended solids content of scrubber water where applicable. Indicate lowest 60-minute averages for all other APCS parameters.
(d) Owners/operators of furnaces monitoring metals concentrations in collected PM are not required to determine metals feed rates in nonhazardous waste feed streams.
(e) Copy form and add additional pages if more than four streams were fed during test.
(f) Owners/opertors of cement and lighweight aggregate kilns are not required to determine ash feed rates of feed streams.

Leaksville IP1

SUMMARY OF COMPLIANCE TES OPERATING CONDITIONS

Complete a separate form for each run of a specified test condition, use same identification codes as on Forms CC-3 and CTN-3.

1. Unit #: 1 ; Mode: A ; Test Condition (1,2 or N/A): N/A;
   Run No.: 3 ; Test Date: 6/18/92
2. Run Start Time (hr.min): 15:55 ; Run End Time (hr.min): 18:34
   If there were any interruptions in sampling, discuss cause, duration, and impact on stack sampling: _____
   Sample Times/PM/HCl/Cl$_2$: 15:55 to 17:52. Metals 16:14 to 17:12. Cr^{+6} 17:26 to 18:34.
3. Operating Conditions:

	Run Avg	60-min Avg(a)
Max. Production Rate (specify units) Raw Feed Rate (tons/hr)	13.8	14.2
Max. PM Control Device Inlet Temp. (degrees F)(b)	412.3	N/A
Max. Combustion Chamber Temp (degrees F)(b)	2425	N/A
APCS Operating Parameters (List applicable parameters, see Section 266.103(c)(1)(ix-xiii))	**Run Avg**	**N/A**
Min. Pressure Drop Across Baghouse (in. H2O)	6.10	N/A
HW Fuel Feed Rate (lbs/hr)	2502	2558

Stream No. (e)	1	2	3	4
Stream Type (e.g., coal, shale, sludge, liquid solvents, etc.)	HWD Fuel	Shale		
Category (e.g., Fuel, Raw Material, Pumpable HW, Nonpumpable HW)	100% Pumpable HWD	Raw Material		
Mass Feed Rate (g/hr)	116.1332	1.289x10(7)		
Thermal Feed Rate (Btu/hr)	2.737x10(7)	N/A		
Ash Feed Rate (g/hr)(f)	N/A	N/A		
Chlorine and Chloride (g/hr)	854.319	<512.112		
Antimony (g/hr)	2.78	<4.75		
Arsenic (g/hr)	296.85	85.78		
Barium (g/hr)	198.96	1374.89		
Beryllium (g/hr)	105.41	14.97		
Cadmium (g/hr)	57.613	<5.48		
Chromium (g/hr) Total	206.85	1066.30		
Cr^{+6}(spike)	176.30	0		
Lead (g/hr)	502.281	<25.55		
Mercury (g/hr)	0.40	<0.49		
Silver (g/hr)	< 0.78	<8.52		
Thallium (g/hr)	<0.45	18.01		

(a) Indicate highest or lowerst 60-minute rolling average as appropriate.
(b) Not applicable if complying with Tier I or adjusted Tier I metals feed rate screening limits.
(c) Indicate highest 60-minute rolling averages for maximum flue gas flow rate and if chosen, maximum suspended solids content of scrubber water where applicable. Indicate lowest 60-minute averages for all other APCS parameters.
(d) Owners/operators of furnaces monitoring metals concentrations in collected PM are not required to determine metals feed rates in nonhazardous waste feed streams.
(e) Copy form and add additional pages if more than four streams were fed during test.
(f) Owners/opertors of cement and lighweight aggregate kilns are not required to determine ash feed rates of feed streams.

COMPLIANCE CERTIFICATION FORM 4 (cc-4)
SUMMARY OF COMPLIANCE TE OPERATING CONDITIONS

Leaksville #2

Complete a separate form for each run of a specified test condition, use same identification codes as on Forms CC-3 and CTN-3.

1. Unit #: 2 ; Mode: A ; Test Condition (1,2 or N/A): N/A;
   Run No.: 1 ; Test Date: 6/16/92
2. Run Start Time (hr.min): 10:05 ; Run End Time (hr.min): 12:26
   If there were any interruptions in sampling, discuss cause, duration, and impact on stack sampling: _____
   Sample Times/PM/HCl/Cl_2: 10:05 to 12:03. Metals 10:05 to 11:02. Cr^{+6} 11:18 to 12:26.
3. Operating Conditions:

	Run Avg	60-min Avg(a)
Max. Production Rate (specify units) Raw Feed Rate (tons/hr)	13.7	13.9
Max. PM Control Device Inlet Temp. (degrees F)(b)	423.3	N/A
Max. Combustion Chamber Temp (degrees F)(b)	2473	N/A
APCS Operating Parameters (List applicable parameters, see Section 266103(c)(1)(ix-xiii))	Run Avg	N/A
Min. Pressure Drop Across Baghouse (in. H2O)	3.2	N/A
HW Fuel Feed Rate (lbs/hr)	2700	2733

Stream No. (e)		1	2	3	4
Stream Type (e.g., coal, shale, sludge, liquid solvents, etc.)		HWD Fuel	Shale		
Category (e.g., Fuel, Raw Material, Pumpable HW, Nonpumpable HW)		100% Pumpable HWD	Raw Material		
Mass Feed Rate (g/hr)		1240762	1.08x10(7)		
Thermal Feed Rate (Btu/hr)		3.307x10(7)	N/A		
Ash Feed Rate (g/hr)(f)		N/A	N/A		
Chlorine and Chloride (g/hr)		2092318	<5048.48		
Antimony (g/hr)		3.62	< 4.85		
Arsenic (g/hr)		318.20	81.98		
Barrium (g/hr)		175.37	1356.92		
Beryllium (g/hr)		70.71	43.17		
Cadmium (g/hr)		529.71	< 5.60		
Chromium (g/hr)	Total	188.59	940.28		
	Cr^{+6}(spike)	161.17	0		
Lead (g/hr)		4988.30	258.74		
Mercury (g/hr)		0.19	<0.50		
Silver (g/hr)		< 0.85	< 8.71		
Thallium (g/hr)		< 0.48	21.64		

(a) Indicate highest or lowerst 60-minute rolling average as appropriate.
(b) Not applicable if complying with Tier I or adjusted Tier I metals feed rate screening limits.
(c) Indicate highest 60-minute rolling averages for maximum flue gas flow rate and if chosen, maximum suspended solids content of scrubber water where applicable. Indicate lowest 60-minute averages for all other APCS parameters.
(d) Owners/operators of furnaces monitoring metals concentrations in collected PM are not required to determine metals feed rates in nonhazardous waste feed streams.
Copy form and add additional pages if more than four streams were fed during test.
Owners/opertors of cement and lighweight aggregate kilns are not required to determine ash feed rates of feed streams.

COMPLIANCE CERTIFICATION FORM 4 (CC-4)

SUMMARY OF COMPLIANCE TEST OPERATING CONDITIONS

Leaksville #2

Complete a separate form for each run of a specified test condition, use same identification codes as on Forms CC-3 and CTN-3.

1. Unit #: 2 ; Mode: A ; Test Condition (1,2 or N/A): N/A;
   Run No.: 2 ; Test Date: 6/18/92
2. Run Start Time (hr.min): 12:55 ; Run End Time (hr.min): 15:21
   If there were any interruptions in sampling, discuss cause, duration, and impact on stack sampling: _____
   Sample Times/PM/HCl/Cl_2: 12:55 to 15:02, Metals 12:55 to 13:58. Cr^{+6} 14:18 to 15:21.
3. Operating Conditions:

	Run Avg	60-min Avg(a)
Max. Production Rate (specify units) Raw Feed Rate (tons/hr)	13.7	14.0
Max. PM Control Device Inlet Temp. (degrees F)(b)	4011	N/A
Max. Combustion Chamber Temp (degrees F)(b)	2448	N/A
APCS Operating Parameters (List applicable parameters, see Section 266.103(c)(1)(ix-xiii))	**Run Avg**	**N/A**
Min. Pressure Drop Across Baghouse (in. H2O)	5.20	N/A
HW Fuel Feed Rate (lbs/hr)	2523	2654

Stream No. (e)	1	2	3	4
Stream Type (e.g., coal, shale, sludge, liquid solvents, etc.)	HWD Fuel	Shale		
Category (e.g., Fuel, Raw Material, Pumpable HW, Nonpumpable HW)	100% Pumpable HWD	Raw Material		
Mass Feed Rate (g/hr)	1204916	1289x10(7)		
Thermal Feed Rate (Btu/hr)	2.654x10(7)	N/A		
Ash Feed Rate (g/hr)(f)	N/A	N/A		
Chlorine and Chloride (g/hr)	11326.21	< 5084.82		
Antimony (g/hr)	3.29	< 4.96		
Arsenic (g/hr)	344.37	58.35		
Barium (g/hr)	136.95	1233.06		
Beryllium (g/hr)	73.64	21.23		
Cadmium (g/hr)	591.24	< 5.72		
Chromium (g/hr) Total	193.64	1478.59		
Cr+6(spike)	173.28	0		
Lead (g/hr)	4975.73	< 26.70		
Mercury (g/hr)	0.48	< 0.51		
Silver (g/hr)	< 0.84	< 8.90		
Thallium (g/hr)	< 0.48	< 18.18		

(a) Indicate highest or lowerst 60-minute rolling average as appropriate.
(b) Not applicable if complying with Tier I or adjusted Tier I metals feed rate screening limits.
(c) Indicate highest 60-minute rolling averages for maximum flue gas flow rate and if chosen, maximum suspended solids content of scrubber water where applicable. Indicate lowest 60-minute averages for all other APCS parameters.
(d) Owners/operators of furnaces monitoring metals concentrations in collected PM are not required to determine metals feed rates in nonhazardous waste feed streams.
( ) Copy form and add additional pages if more than four streams were fed during test.
Owners/opertors of cement and lighweight aggregate kilns are not required to determine ash feed rates of feed streams.

Leaksville #2

COMPLIANCE CERTIFICATION FORM 4 (CC-4)

SUMMARY OF COMPLIANCE TE OPERATING CONDITIONS

Complete a separate form for each run of a specified test condition, use same identification codes as on Forms CC-3 and CTN-3.

1. Unit #: 2 ; Mode: A ; Test Condition (1,2 or N/A): N/A;
   Run No.: 3 ; Test Date: 6/18/92
2. Run Start Time (hr.min): 15:55 ; Run End Time (hr.min): 18:34
   If there were any interruptions in sampling, discuss cause, duration, and impact on stack sampling: _____
   Sample Times/PM/HCl/Cl_2: 15:55 to 17:52. Metals 16:14 to 17:12. Cr^{+6} 17:26 to 18:34.
3. Operating Conditions:

	Run Avg	60-min Avg(a)
Max. Production Rate (specify units) Raw Feed Rate (tons/hr)	13.8	14.2
Max. PM Control Device Inlet Temp. (degrees F)(b)	412.3	N/A
Max. Combustion Chamber Temp (degrees F)(b)	2425	N/A
APCS Operating Parameters (List applicable parameters, see Section 266.103(c)(1)(ix-xiii))	Run Avg	N/A
Min. Pressure Drop Across Baghouse (in. H2O)	6.10	N/A
HW Fuel Feed Rate (lbs/hr)	2502	2558

Stream No. (e)		1	2	3	4
Stream Type (e.g., coal, shale, sludge, liquid solvents, etc.)		HWD Fuel	Shale		
Category (e.g., Fuel, Raw Material, Pumpable HW, Nonpumpable HW)		100% Pumpable HWD	Raw Material		
Mass Feed Rate (g/hr)		1161382	1.289x10(7)		
Thermal Feed Rate (Btu/hr)		2.737x10(7)	N/A		
Ash Feed Rate (g/hr)(f)		N/A	N/A		
Chlorine and Chloride (g/hr)		8543.19	<5121.12		
Antimony (g/hr)		2.78	<4.75		
Arsenic (g/hr)		296.85	85.78		
Barium (g/hr)		198.96	1374.89		
Beryllium (g/hr)		105.41	14.97		
Cadmium (g/hr)		576.13	<5.48		
Chromium (g/hr)	Total	206.85	1066.30		
	Cr^{+6}(spike)	176.30	0		
Lead (g/hr)		5022.81	<25.55		
Mercury (g/hr)		0.40	<0.49		
Silver (g/hr)		<0.78	<8.52		
Thallium (g/hr)		<0.45	18.01		

(a) Indicate highest or lowerst 60-minute rolling average as appropriate.
(b) Not applicable if complying with Tier I or adjusted Tier I metals feed rate screening limits.
(c) Indicate highest 60-minute rolling averages for maximum flue gas flow rate and if chosen, maximum suspended solids content of scrubber water where applicable. Indicate lowest 60-minute averages for all other APCS parameters.
(d) Owners/operators of furnaces monitoring metals concentrations in collected PM are not required to determine metals feed rates in nonhazardous waste feed streams.
(Copy form and add additional pages if more than four streams were fed during test.
Owners/opertors of cement and lighweight aggregate kilns are not required to determine ash feed rates of feed streams.

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1. INTRODUCTION

Emission tests were conducted at the No. 2 and No. 4 Rotary Aggregate Kilns of the Solite Corporation's plant in Cascade, Virginia during June 16-18, 1992. Stack sampling was conducted by personnel from Industrial & Environmental Analysts, Inc. (IEA) and their subcontractor DEECO, Inc. Process samples were collected by personnel from IEA and Solite. Sample analysis was performed at Triangle Laboratories, Inc. in Research Triangle Park, NC; Research Triangle Institute in Research Triangle Park, NC; Ross Analytical Services, Inc. in Strongsville, OH; and CAE Analytical Services in Palatine, IL.

Testing was conducted on each kiln to demonstrate compliance with the Resource Conservation and Recovery Act (RCRA) 40 CFR Parts 266.104(b) through 266.107 performance standards for carbon monoxide, particulate matter, metals, hydrogen chloride and chlorine emissions. The objective of this compliance test program was to demonstrate that each Lightweight Aggregate Kiln is capable of burning hazardous waste within the following emission limits:

- Particulate matter (PM) emissions less than 180 mg/dscm (0.08 gr/dscf) corrected to 7 percent oxygen.
- Compliance with EPA's tiered screening emission limits for selected metals (Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ag and Tl), hydrogen chloride (HCl), and chlorine (Cl_2).
- Compliance with a 100 ppmv carbon monoxide (CO) emission limit based on a 60-minute rolling average and continuous correction to 7% oxygen.

The trial burn program was designed by Solite Corporation and their contractor (Four Nines, Inc.) to demonstrate the capabilities of each Aggregate Kiln to effectively utilize waste fuel materials within the performance parameters set forth in the applicable regulations. To demonstrate compliance with the applicable Tier III requirements, the Liquid Burnable Material (LBM) feed was spiked with tetrachloroethene, arsenic, cadmium, chromium, and lead.

Process samples of LBM feed were collected for analyses of metals, chlorine, ash, Btu content, density, and water content and the LBM flow rate was determined. Process samples of raw feed, aggregate product, and baghouse dust were collected for analyses of metals analysis, chlorine, and water content.

2. SUMMARY OF RESULTS

The No. 2 kiln and the No. 4 kiln were tested with triplicate sampling runs while both were operated at one process condition. Each test run was approximately three hours long. Each test involved sampling the stack gas emissions with three separate manual sampling trains; a combined particulate matter/HCl/Cl_2 train; a multiple metals train; and a hexavalent chromium train. A continuous emission monitoring system (CEMS) was also operated during each test run to measure stack gas concentrations of oxygen (O_2), carbon dioxide (CO_2), carbon monoxide (CO), and total hydrocarbons (THC).

Table 2-1 presents a summary of the three-run average concentrations of PM (corrected to 7% O_2), and the mass emission rates of HCl, Cl_2, metals, hexavalent chromium, and the CO and THC concentrations (rolling one-hour average corrected to 7% O_2). Most of the measured stack emission rates and concentrations were below the applicable emission standards for these two sources. The exception concerns Kiln 2. The HCl emissions is above its allowable limit. One possible explanation could be that the kilns were spiked with identical amounts of chlorine containing compounds. Kiln 2 is able to put out 26 percent of the total emissions of the facility and Kiln 4 can emit 48 percent. Any spiking of the kilns should have been proportionate and not equal to each other. For metals, any values shown as "less than" (<) indicate that one or more of the results were below the detectable limit for a given analyte, with the detection limit being used when calculating the average. In particular, the metals sampling train analysis was performed on two fractions, the probe wash and filter fraction and the impinger solutions, with the analytical results for the two fractions being summed. If one or the other fraction was below the detection limit, then the results for the entire sample train were reported as "less than", with the detection limit value used in the calculation.

Table 2-2 and Table 2-3 present a summary of the stack gas conditions measured during each test run for Kiln No. 2 and Kiln No. 4, respectively. The measured and calculated stack gas parameters for Kiln No. 2 were in good agreement among the three trains for each sampling run. All sampling runs on Kiln No. 2 were performed within the acceptable isokinetic variation range. The measured and calculated stack gas parameters for Kiln No. 4 were in good agreement among the three trains for each sampling run. All sampling runs on Kiln No. 4 were performed within the acceptable isokinetic variation range.

Table 2-4 presents the results for each particulate matter/HCl/Cl_2 sampling run for Kiln No. 2 and Kiln No. 4, respectively, in milligrams per dry standard cubic meter (mg/M^3), grains per dry standard cubic feet corrected to 7% O_2 for particulate matter, and grams/hour (g/hr) for HCl and Cl_2. The particulate emissions for Kiln No. 4 were about twice that of Kiln No. 2. The HCl and Cl_2 emissions were about the same from both kilns.

Table 2-5 presents the results for each multiple metals and hexavalent chromium sampling runs for Kiln No. 2 and Kiln No. 4, respectively, in micrograms per cubic meter ($\mu g/M^3$) and grams/hour (g/hr). The results for the multiple metals results were blank corrected following the specified procedures in Method 0012. These procedures do not allow for direct blank correction for blank values exceeding 1 μg, and other blank correction values are calculated. The techniques employed are documented in Appendix A.

TABLE 2-1. SUMMARY OF MEASURED AND ALLOWABLE EMISSION RATES AND CONCENTRATIONS

Constituent	Kiln No. 2 Measured[1]	Kiln No. 4 Measured	Kilns 2 & 4 Allowable[2]
Particulate Matter (gr/dscf)[3]	0.004	0.010	0.08
HCl (g/hr)	27,100	30,600	81,072
Cl_2 (g/hr)	617	548	2,448
Antimony (g/hr)	<0.058	0.081	3,477.2
Arsenic (g/hr)	0.112	0.107	8.59
Barium (g/hr)	<0.598	<0.432	579,032.8
Beryllium (g/hr)	<0.028	<0.025	6.23
Cadmium (g/hr)	2.720	0.899	21.29
Total Chromium (g/hr)	<0.422	<0.050	N/A[4]
Hexavalent Chromium (g/hr)	<0.038	<0.067	2.11
Lead (g/hr)	<4.887	6.149	1,042.26
Mercury (g/hr)	<0.228	<0.153	926.45
Silver (g/hr)	<0.438	<0.087	34,741.97
Thallium (g/hr)	<0.027	<0.024	5,790.33
Carbon Monoxide (ppm)[5]	58.8	90.1	100
Total Hydrocarbons (ppm)[5]	4.81	3.29	20

[1]Average of three test runs.
[2]Based on Tier III dispersion monitoring.
[3]Corrected to 7% oxygen.
[4]Not Applicable
[5]Continuous 60-minute rolling average corrected to 7% oxygen.

TABLE 2-2. STACK GAS CONDITIONS FOR KILN NO. 2

Sampling Train	Stack Gas Parameters							Isokinetic Variation
	Temp. (°F)	O_2	CO_2	Moisture	Velocity (ft/s)	Gas Flow Rate (dscfm)	Gas Flow Rate (acfm)	
Kiln No. 2, Sampling Run 1, June 18, 1992, 08:31 to 12:03								
PM/HCl/Cl_2	339.5	17.0%	3.9%	6.1%	58.99	32,800	52,200	91.2%
Metals	355.0	17.0%	3.8%	5.4%	59.71	32,000	52,800	100.3%
Hex. Cr	356.1	16.9%	3.9%	4.6%	60.43	32,600	53,400	100.6%
Average	350.2	17.0%	3.9%	5.4%	59.71	32,500	52,500	---
Kiln No. 2, Sampling Run 2, June 18, 1992, 12:55 to 15:02								
PM/HCl/Cl_2	340.9	17.2%	3.6%	6.3%	57.36	31,000	50,800	92.9%
Metals	349.0	17.1%	3.7%	6.0%	61.87	33,200	54,700	97.5%
Hex. Cr	342.4	17.5%	3.4%	6.2%	61.11	33,000	54,100	105.2%
Average	344.1	17.3%	3.6%	6.2%	60.11	32,400	53,200	---
Kiln No. 2, Sampling Run 3, June 18, 1992, 15:55 to 17:52								
PM/HCl/Cl_2	339.6	17.2%	3.5%	6.9%	55.46	29,700	49,100	92.3%
Metals	344.3	17.2%	3.5%	6.7%	57.49	30,700	50,900	109.4%
Hex. Cr	350.5	17.0%	3.7%	6.1%	57.63	30,700	51,000	105.5%
Average	344.8	17.1%	3.6%	6.6%	56.86	30,400	50,300	---

TABLE 2-3. STACK GAS CONDITIONS FOR KILN NO. 4

Sampling Train	Stack Gas Parameters							Isokinetic Variation
	Temp. (°F)	O_2	CO_2	Moisture	Velocity (ft/s)	Gas Flow Rate (dscfm)	Gas Flow Rate (acfm)	
Kiln No. 4, Sampling Run 1, June 16, 1992, 10:50 to 13:01								
PM/HCl/Cl_2	346.2	15.9%	5.3%	9.7%	52.29	27,100	46,300	93.5%
Metals	340.0	16.2%	4.9 %	10.3%	54.03	28,000	47,800	100.1%
Hex. Cr	346.2	15.8%	5.4%	9.1%	55.72	29,100	49,300	99.5%
Average	344.1	16.0%	5.2%	9.7%	54.01	28,100	47,800	---
Kiln No. 4, Sampling Run 2, June 16, 1992, 14:57 to 16:32								
PM/HCl/Cl_2	333.5	15.9%	5.1%	10.0%	51.80	27,100	45,800	94.7%
Metals	340.1	15.8%	5.1%	10.9%	54.42	28,100	48,200	103.3%
Hex. Cr	343.0	15.9%	5.0 %	12.7%	56.06	28,300	49,600	105.3%
Average	338.9	15.9%	5.1%	11.2%	54.09	27,800	47,900	---
Kiln No. 4, Sampling Run 3, June 16, 1992, 19:20 to 21:25								
PM/HCl/Cl_2	349.5	16.2%	4.6%	9.5%	53.24	27,500	47,100	96.8%
Metals	347.5	16.3%	4.5%	6.7%	55.98	30,000	49,500	100.5%
Hex. Cr	351.5	15.9%	4.8 %	14.0%	55.22	27,100	48,900	108.3%
Average	349.5	16.1%	4.6%	10.1%	54.81	28,200	48,500	---

TABLE 2-4. PARTICULATE MATTER, HCl, AND CHLORINE STACK GAS RESULTS

Test Run	Particulate Matter		Hydrogen Chloride		Chlorine	
	mg/cu.M	gr/dscf[1]	mg/cu.M	g/hr	mg/cu.M	g/hr
Kiln No. 2						
Run 1	2.60	0.004	559	30,400	25.5	1,380
Run 2	4.11	0.007	471	24,800	3.09	163
Run 3	3.42	0.006	516	26,000	6.04	305
Average	3.38	0.006	515	27,100	11.5	616
Kiln No. 4						
Run 1	5.62	0.007	698	32,200	27.0	1,250
Run 2	3.96	0.005	723	33,400	0.19	8.82
Run 3	14.2	0.018	559	26,100	8.35	390
Average	7.93	0.010	660	30,600	11.8	550

[1]Corrected to 7% oxygen

TABLE 2-5 MULTIPLE METALS AND HEXAVALENT CHROMIUM STACK GAS RESULTS

Metal	Run 1		Run 2		Run 3		Average	
	ug/cu.M	g/hr	ug/cu.M	g/hr	ug/cu.M	g/hr	ug/cu.M	g/hr
Kiln No. 2								
Antimony	<1.09	<0.059	1.55	0.088	0.538	0.028	<1.06	<0.058
Arsenic	1.95	0.106	3.01	0.170	1.13	0.059	2.03	0.112
Barium	<14.7	<0.800	<10.7	<0.602	<7.15	<0.392	<10.8	<0.598
Beryllium	<0.422	<0.023	<0.651	<0.037	<0.458	<0.024	<0.510	<0.028
Cadmium	4.85	0.264	36.5	2.06	112	5.84	51.1	2.72
Chromium	<6.87	<0.374	<8.588	<0.484	<7.84	<0.409	<7.77	<0.422
Hex. Cr	<0.945	<0.052	<0.600	<0.034	<0.518	<0.027	<0.688	<0.038
Lead	46.4	2.52	<81.3	<4.59	145	7.56	<90.8	<4.89
Mercury	<3.16	<0.172	<5.15	<0.291	<4.21	<0.220	<4.18	<0.228
Silver	<1.07	<0.058	<21.3	<1.20	<1.03	<0.054	<7.81	<0.438
Thallium	<0.378	<0.021	<0.792	<0.045	<0.282	<0.015	<0.484	<0.027
Kiln No. 4								
Antimony	1.460	0.069	1.40	0.067	2.10	0.107	1.65	0.081
Arsenic	1.51	0.072	3.58	0.171	1.50	0.077	2.20	0.107
Barium	<4.50	<0.214	<12.4	<0.593	<9.60	<0.490	<8.84	<0.432
Beryllium	<0.372	0.018	<0.837	<0.040	<0.35	<0.018	<0.52	<0.025
Cadmium	22.1	1.05	30.6	1.46	3.60	0.184	18.8	0.899
Chromium	9.28	0.442	<14.0	<0.668	<3.71	<0.189	<8.99	<0.433
Hex. Cr	<1.10	<0.053	1.872	0.090	<1.26	<0.058	<1.40	<0.067
Lead	36.1	1.72	196	9.35	145	7.38	126	6.15
Mercury	<3.61	<0.172	<2.84	<0.136	<2.95	<0.150	<3.13	<0.153
Silver	<1.70	<0.081	<2.15	<0.103	<1.50	<0.077	<1.78	<0.087
Thallium	<0.369	<0.018	<0.43	<0.021	<0.63	<0.032	<0.478	<0.024

Arsenic, lead (front half only), and cadmium were detected in all samples. Some of the other metals have "less than" values with high numbers. As stated before, the metals detection is done in two parts, the front and back halves. In some instances the results for one half would be detectable and the other would not. This would result in a total value with a "<" in front of it. Therefore, all of the "less than" values should not be assumed to be not detected. For both kilns, lead had the highest stack concentration of all target metals. The metals results for each kiln were fairly consistent for each run, with arsenic, cadmium, and lead having the greatest run-to-run variability. Chromium also varied significantly for Kiln No. 4. Hexavalent chromium was only detected in one sample, and, in all cases, the results for hexavalent chromium were lower than the total chromium emissions.

3. PROCESS OPERATION PARAMETERS

The No. 2 and No. 4 rotary aggregate kilns burn liquid waste as fuel from the Oldover storage tank farm. Kiln No. 2 and Kiln No. 4 are 9 ft. in diameter and 120 ft. long with a maximum fuel feed rate of 42.4 mmBtu/hr. The typical feed material is a shale from an adjacent quarry, which is crushed and sized before feeding at the cold end of the kiln. Lightweight aggregate is produced by heating the shale to a temperature of at least 1800°F, the temperature at which the material expands, or "bloats." Exhaust gases from the kilns go to ducting for gas cooling, then to fabric filter baghouses for particulate removal. The operation is such that only one kiln uses one baghouse at a time. The system uses induced draft fans at the exit of each baghouse which discharges to single exhaust stacks.

Figure 3-1 provides a diagram depicting the various locations where the process samples were collected. Tables 3-1 and 3-2 presents a summary of the analytical results for the product, baghouse dust, LBM, and raw feed samples collected during each test run for Kiln No. 2 and Kiln No. 4, respectively.

For total chlorides, ash, heating value, density, and moisture the only source from which any real data was retrieved is LBM, for both kilns.

The analytes found in significant quantity in the raw feed, for both kilns, are arsenic, barium, beryllium, chromium, and thallium. Most others gave values below detection limits.

The same is true for the product stream, only those analytes mentioned above were found in significant quantity.

It is in the baghouse where three additional analytes were detected. Some mercury, large amounts of chromium and very large amounts of lead were measured in the baghouse dust of both kilns.

Thallium, silver, and beryllium (except Kiln No. 2, Run 2) were the only metals not detected in the LBM samples. Cadmium was not detected in the LBM samples from Kiln No. 4.

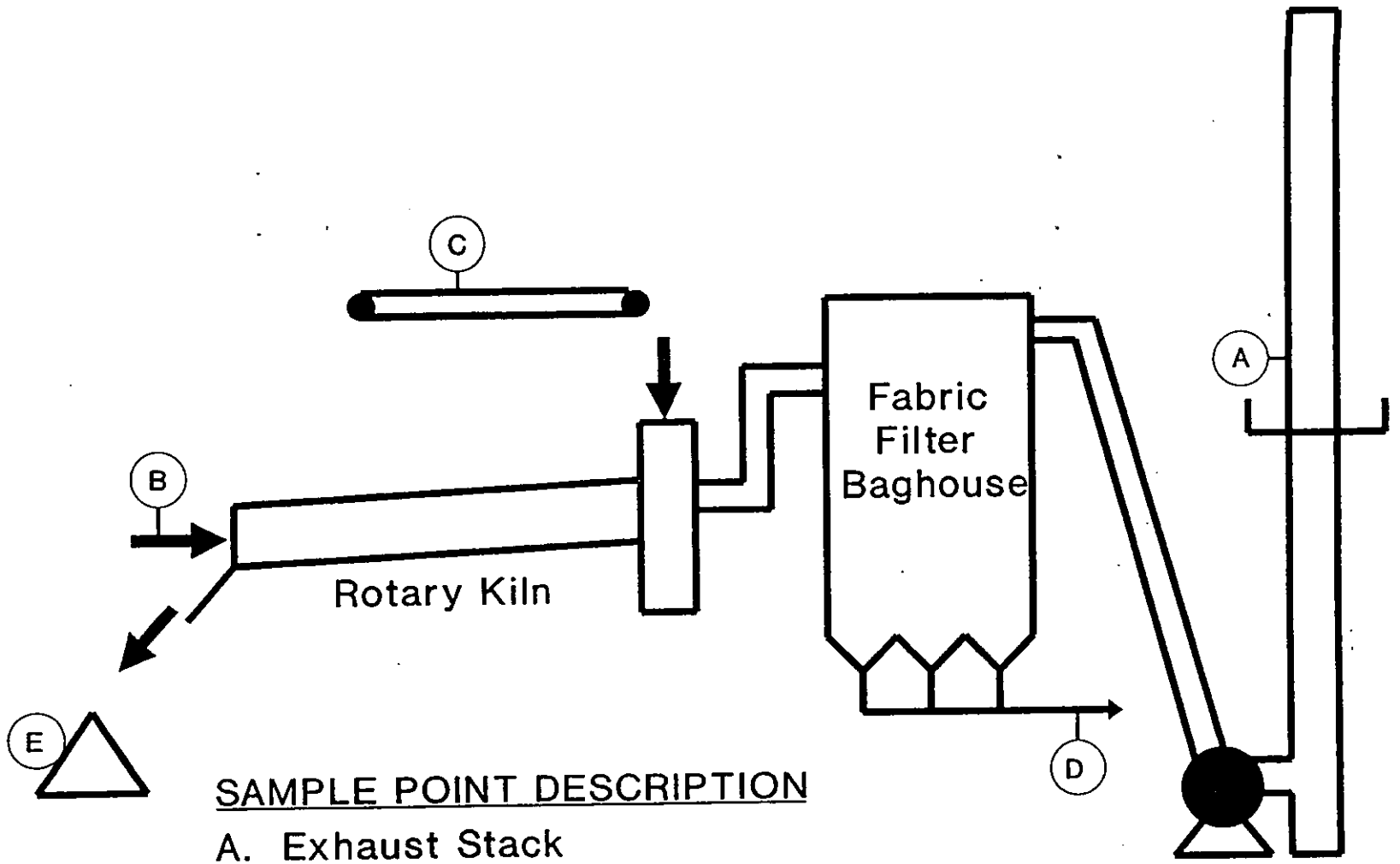


Figure 3-1. Diagram of process sampling locations.

TABLE 3-1. SUMMARY OF PROCESS SAMPLE ANALYSES FOR KILN NO. 2

	Raw Feed				Product				Baghouse Dust				*LBM*			
Analytical Parameter	Run 1	Run 2	Run 3	Avg.	Run 1	Run 2	Run 3	Avg.	Run 1	Run 2	Run 3	Avg.	Run 1	Run 2	Run 3	Avg.
Total Chloride (%)	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	NA	NA	NA	NA	1.69	0.94	0.76	1.13
Ash (%)	NA[1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.22	0.33	0.67	0.41
Heating Value (Btu/lb)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,100	10000	10700	10,900
Density (g/mL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.909	0.903	0.903	0.905
Moisture (%)	<0.5	<0.5	0.72	<0.57	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (mg/Kg)	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	2.99	2.74	2.49	2.74
Arsenic (mg/Kg)	6.59	4.59	7.05	6.08	4.25	4.08	4.98	4.44	19.1	7.23	35.5	20.6	0.33	0.20	3.19	1.24
Barium (mg/Kg)	109	97.0	113	106.3	205	219	262	229	148	172	150	157	145	114	178	146
Beryllium (mg/Kg)	3.47	1.67	1.23	2.12	1.95	2.38	2.22	2.18	4.01	13.5	6.86	8.12	<0.07	0.08	<0.07	<0.07
Cadmium (mg/Kg)	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	5.92	34.0	34.6	24.8	3.61	3.13	2.85	3.20
Total Chromium (mg/Kg)	74.5	118	82.7	91.7	95.1	58.7	47.8	67.2	55.8	72.4	58.8	62.3	22.1	16.9	26.3	21.8
Lead (mg/Kg)	20.8	<2.1	<2.1	<8.3	41.4	<2.1	<2.1	15.2	412	724	735	624	139	108	159	135
Mercury (mg/Kg)	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	0.09	<0.07	0.16	0.40	0.36	0.31
Silver (mg/Kg)	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70
Thallium (mg/Kg)	1.74	1.43	1.48	1.55	1.20	1.44	1.62	1.42	1.85	1.91	1.86	1.87	<0.40	<0.40	<0.40	<0.40

[1] Sample not analyzed for this parameter.
N/A = Not Analyzed

TABLE 3-2. SUMMARY OF PROCESS SAMPLE ANALYSES FOR KILN NO. 4

	Raw Food				Product				Baghouse Dust				LBM			
Analytical Parameter	Run 1	Run 2[1]	Run 3	Avg.	Run 1	Run 2[1]	Run 3	Avg.	Run 1	Run 2[1]	Run 3	Avg.	Run 1	Run 2[1]	Run 3	Avg.
Total Chlorides (%)	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	NA	NA	NA	NA	2.19	2.40	2.53	2.37
Ash (%)	NA[2]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.05	<0.08	<0.05	<0.05
Heating value (Btu/lb)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14,800	14,500	14,600	14,600
Density (g/mL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.930	0.928	0.923	0.927
Moisture (%)	<0.5	0.99	0.56	<0.68	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	22	<0.5	<7.7
Antimony (mg/Kg)	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	2.48	3.35	3.33	3.05
Arsenic (mg/Kg)	4.20	5.20	3.71	4.37	3.09	5.01	7.88	5.33	43.6	49.5	155	82.7	6.40	1.22	<0.20	<2.61
Barium (mg/Kg)	100	111.3	114	108.4	175	185	224	195	139	139	147	142	81.9	67.3	58.2	69.1
Beryllium (mg/Kg)	1.34	4.11	1.51	2.32	8.94	2.61	1.75	4.43	4.02	8.17	14.5	8.90	<0.07	<0.07	<0.07	<0.07
Cadmium (mg/Kg)	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	102	185	265	184	<0.45	<0.45	<0.45	<0.45
Total Chromium (mg/Kg)	107	101.3	88.9	99.1	46.1	61.0	41.1	49.4	56.7	68.9	79.3	68.3	9.23	7.85	6.20	7.76
Lead (mg/Kg)	<2.1	<2.1	<2.1	<2.1	27.9	34.9	<2.1	<21.6	1,370	2,090	2,210	1,890	35.2	24.8	18.7	26.2
Mercury (mg/Kg)	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	0.10	0.11	0.11	0.19	0.16	0.10	0.15
Silver (mg/Kg)	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70
Thallium (mg/Kg)	1.49	1.58	1.49	1.52	1.34	1.43	1.31	1.36	2.65	2.84	2.76	2.75	<0.40	<0.40	<0.40	<0.40

[1] Average of duplicate analyses.
[2] Sample not analyzed for this parameter.
N/A = Not Analyzed

4. SAMPLING AND ANALYTICAL PROCEDURES

Table 4-1 presents a summary of the overall sampling and analytical protocols used for the Certificate of Compliance test program for Kiln No. 2 and Kiln No. 4. All sampling and analytical methods employed for this test program were performed in accordance with the procedures outlined in the Methods Manual for Compliance with the BIF Regulations - Burning Hazardous Waste in Boilers and Industrial Furnaces, EPA/530-SW-91-010, December 1990, and those referenced in EPA-SW-846.

4.1 Sampling Point, Flue Gas Velocity, and Volumetric Flow Rate Determination

The stack gas sampling ports were located at the exhaust stack at an average 14.42 ft. (3.3 duct diameters) above the junction of the duct breaching. The CEM port was located slightly above the isokinetic ports. This location meets the minimum specifications for selection of a measurement site as outlined in EPA Method 1. Schematics of each sampling location are shown in Figures 4-1 and 4-2 for Kiln No. 2 and Kiln No. 4, respectively.

A 24-point velocity/particulate traverse in each of two perpendicular directions was made at each sampling location using a type-S pitot tube and sampling nozzle (glass) in accordance with EPA Methods 2 and 5 procedures. Gas temperatures were measured using calibrated Type K thermocouples and digital readout devices.

Dry gas molecular weight was determined using the oxygen and carbon dioxide measurements following EPA Method 3A employing the IEA continuous emission monitoring system (CEMS). Stack gas moisture was measured in accordance with EPA Method 4 procedures for the condensation option contained within Methods 12, 13, and 0050.

4.2 Sampling and Analysis for Flue Gas Metals

EPA Method 0012 sampling trains were used to collect metals stack gas samples from the Kiln No. 2 and Kiln No. 4 sampling locations. A glass nozzle and glass probe liner were used with a quartz fiber filter and a Teflon filter support. The first two impingers each contained 100 ml 5% nitric acid/10% hydrogen peroxide solution, the third impinger was empty, the fourth and fifth impingers each contained 100 ml 10% sulfuric acid/4% potassium permanganate solution, and the last impinger contained silica gel.

Analytical procedures followed those outlined in EPA Methods 0012 in Methods Manual for Compliance with the BIF Regulations - Burning Hazardous Waste in Boilers and Industrial Furnaces, EPA/530-SW-91-010, December 1990, and those referenced in EPA-SW-846. The probe and nozzle rinses and the quartz filter were subjected to microwave digestion with concentrated hydrogen fluoride and nitric acid. After an aliquot was removed for mercury analysis, the 5% nitric acid/10% hydrogen peroxide solution was reduced to near dryness, and digested with nitric acid and hydrogen peroxide. The metals, except

TABLE 4-1. SUMMARY OF SAMPLING AND ANALYTICAL METHODS USED FOR CERTIFICATION OF COMPLIANCE TEST PROGRAM ON LIGHTWEIGHT AGGREGATE KILNS NO. 2 AND NO. 4

Test Parameter	Sampling Procedure or Method	No. of Samples	Analytical Parameters	Analytical Procedure
<u>Stack Gas Streams</u> Stack gas flow	EPA Method 2 pitot tube	During each isokinetic test run	N/A	EPA Method 2 Inclined manometer
Dry gas molecular weight	EPA Method 3A continuous	During whole testing period	O_2, CO_2	EPA Method 3A electrochemical & nondispersive IR
Stack gas moisture	EPA Method 4 traverse integrated	During each isokinetic test run	Moisture content	EPA Method 4 condensation and gravimetric
Particulate matter concentration	EPA Method 5 isokinetic traverse integrated	Three 120-min test runs; 60 ft^3 minimum gas sample	Particulate matter	EPA Method 5 desiccation and gravimetric
Hydrogen chloride and chlorine gas concentration	EPA Method 0050 isokinetic traverse integrated back-half of EPA Method 5	Three 120-min test runs; 60 ft^3 minimum gas sample	HCl and Cl_2	EPA Method 9057 ion chromatography
Metals concentration	EPA Method 0012 Multiple Metals isokinetic traverse integrated	Three 60-min test runs; 45 ft^3 minimum gas sample	Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ag, and Tl	Microwave digestion EPA 6010 ICP GFAAS EPA 7041 (Sb) EPA 7060 (As) EPA 7241 (Pb) EPA 7841 (Tl) CVAAs EPA 7470 (Hg)
Hexavalent Chromium (Cr^{+6}) concentration	EPA Method 0013 isokinetic traverse integrated	Three 60-min test runs; 45 ft^3 minimum gas sample	Cr^{+6}	EPA 0013 ion chromatography with a post column reactor
Carbon monoxide concentration	EPA Method 10 continuous	During whole testing period	Carbon monoxide	EPA Method 10 gas filter correlation NDIR
Total hydrocarbons concentration	EPA Method 25A continuous	During whole testing period	THC as C_3H_8	EPA Method 25A FID

(continued)

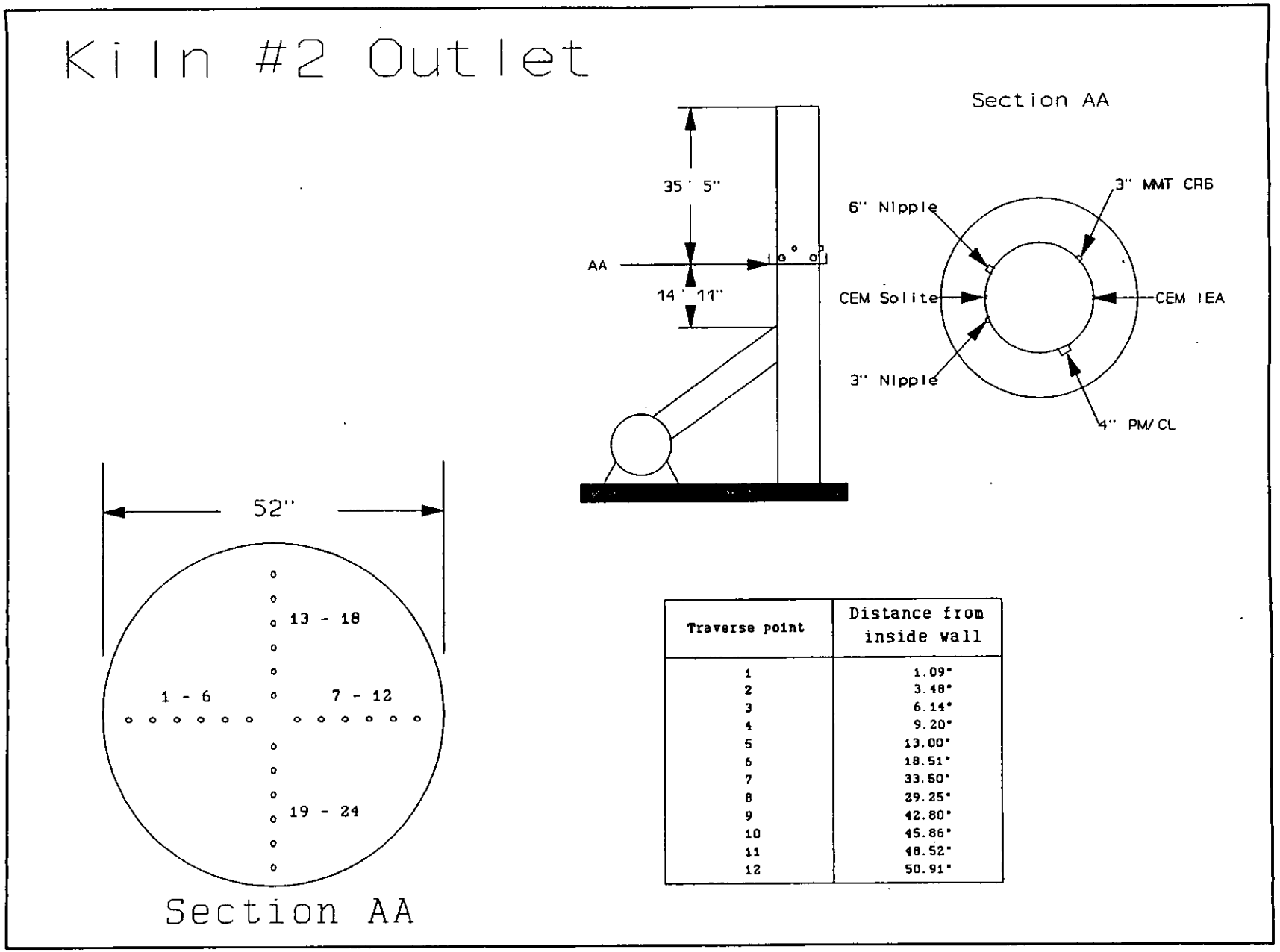
TABLE 4-1 (Continued).

Test Parameter	Sampling Procedure or Method	No. of Samples	Analytical Parameters	Analytical Procedure
<u>Waste Feed Stream</u> Liquid Burnable Materials	S004 tap	One grab every 15 minutes field composite 500-mL glass container	Metals Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ag, and Tl	EPA 3040 solvent dilution EPA 3050 acid digestion EPA 6010 ICP GFAAS EPA 7041 (Sb) EPA 7060 (As) EPA 7241 (Pb) EPA 7841 (Tl) CVAAs EPA 7470 (Hg)
		One grab every 15 minutes field composite 500-mL glass container	Chlorine	ASTM D808 bomb combustion absorption and titration
			Ash	ASTM D482 combustion and gravimetry
			Btu Content	ASTM D2382 high-precision bomb calorimetry
			Density	Std Method 213 calibrated flask
			Water Content	Karl Fisher titration
LBM Flow Rate	Mass flow meters	Continuous	Flow rate	N/A
<u>APCE Residuals</u> Baghouse dust concentration	S004 tap	One grab every 30 minutes field composite 1-L glass container	Metals	EPA 6010, 7000s ICAP & AAS

(continued)

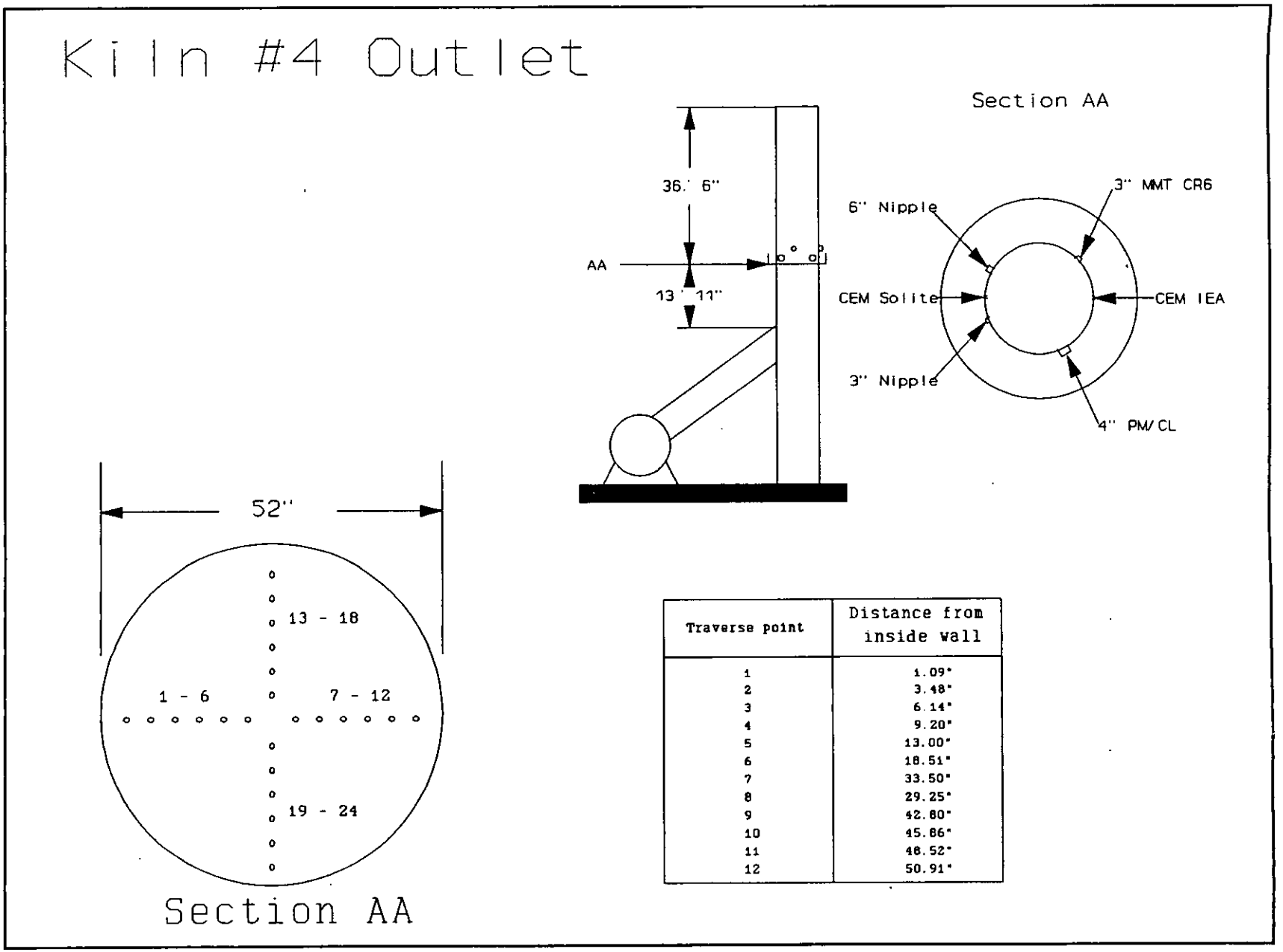
TABLE 4-1 (Continued).

Test Parameter	Sampling Procedure or Method	No. of Samples	Analytical Parameters	Analytical Procedure
<u>Kiln Feed Stream</u> Raw Feed	S007 trowel scoop	One grab every 30 minutes field composite 500-mL glass container	Metals Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ag, and Tl	EPA 3050 acid digestion EPA 6010 ICP GFAAS EPA 7041 (Sb) EPA 7060 (As) EPA 7241 (Pb) EPA 7841 (Tl) CVAAs EPA 7470 (Hg)
		One grab every 30 minutes field composite 500-mL glass container	Chlorine	ASTM D4208 bomb combustion ion selective electrode
			Water Content	ASTM D3173 modified pulverize, dry and gravimetry
<u>Product Stream</u> Lwt. Aggregate	S006 trier-corer	One grab every 30 minutes field composite 500-mL glass container	Metals Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ag, and Tl	EPA 3050 acid digestion EPA 6010 ICP GFAAS EPA 7041 (Sb) EPA 7060 (As) EPA 7241 (Pb) EPA 7841 (Tl) CVAAs EPA 7470 (Hg)
		One grab every 30 minutes field composite 500-mL glass container	Chlorine	ASTM D4208 bomb combustion ion selective electrode
			Water Content	ASTM D3173 modified pulverize, dry and gravimetry



Traverse point	Distance from inside wall
1	1.09"
2	3.48"
3	6.14"
4	9.20"
5	13.00"
6	18.51"
7	33.50"
8	29.25"
9	42.80"
10	45.86"
11	48.52"
12	50.91"

Figure 4-1. Schematic of stack sampling location for Kiln No. 2.



Traverse point	Distance from inside wall
1	1.09"
2	3.48"
3	6.14"
4	9.20"
5	13.00"
6	18.51"
7	33.50"
8	29.25"
9	42.80"
10	45.86"
11	48.52"
12	50.91"

Figure 4-2. Schematic of stack sampling location for Kiln No. 4.

mercury, in these solutions were measured employing Inductively-Coupled Plasmography (ICP). Mercury analysis was performed by Cold-Vapor Atomic Absorption Spectroscopy (CVASS). Samples with low levels of antimony, arsenic, lead, and thallium were subjected to addition analysis employing the more-sensitive Graphite Furnace Atomic Absorption Spectroscopy (GFAAS).

4.3 Sampling and Analysis for Flue Gas Hexavalent Chromium

EPA Method 0013 sampling trains were used to collect stack gas samples for hexavalent chromium from the Kiln No. 2 and Kiln No. 4 sampling locations. After the glass nozzle, a Teflon union tee, a Teflon probe and recirculation line, and a peristaltic pump fitted with C-flex tubing were used for recirculation of the impinger solution. Due to the high acid gas levels in the stack gas, the first Teflon impinger contained 250 ml of 0.5 N potassium hydroxide solution. The second and third Teflon impingers each contained 75 ml of 0.1 N potassium hydroxide solution, the fourth Teflon impinger was empty, and the last impinger contained silica gel.

At the conclusion of sampling, each sample train was purged with nitrogen for 30 minutes at ten liters per minute. During sample recovery, the pH of all impinger solutions were checked, and found to be above 8.5. Following sampling recovery, the impinger solutions were filtered though 0.45 μm Teflon membrane filters.

Analytical procedures followed those outlined in EPA Method 0013 in Methods Manual for Compliance with the BIF Regulations - Burning Hazardous Waste in Boilers and Industrial Furnaces, EPA/530-SW-91-010, December 1990. The filtered impinger solutions were analyzed by ion chromatography, with the separated hexavalent chromium being reacted with a diphenylcarbizide solution to form a hexavalent chromium specific chromophore that was measured with a spectrophotometer set at 520 nm.

4.4 Sampling and Analysis for Flue Gas Particulate Matter, HCl, and Cl_2

EPA Method 0050 sampling trains were used to measure stack gas samples for particulate matter, hydrogen chloride, and chlorine (PM/HCl/Cl_2) from the Kiln No. 2 and Kiln No. 4 sampling locations. A glass nozzle and glass probe liner were used with a tare-weighed quartz fiber filter and a Teflon filter support. The first of two impingers each contained 100 ml of 0.1 N sulfuric acid solution, the third and fourth impingers each contained 100 ml of 0.1 N sodium hydroxide solution, and the last impinger contained silica gel. The sampling procedures and chloride analysis followed those outlined in EPA Methods 0050 and 9057 in Methods Manual for Compliance with the BIF Regulations - Burning Hazardous Waste in Boilers and Industrial Furnaces, EPA/530-SW-91-010, December 1990. Particulate matter was determined by gravimetric analysis. HCl was determined by measuring the chloride ion content of the sulfuric acid impinger solutions. Cl_2 was determined by measuring the chloride ion content of the sodium hydroxide impinger solutions. The chloride ions in these solutions were measured by ion chromatography, with the separated chloride ions being measured with a conductivity detector.

4.5 Continuous Measurement of Carbon Monoxide and Total Hydrocarbons

Carbon monoxide was measured continuously in the flue gas using the procedures outlined in EPA Method 10. A gas sample was transferred continuously to a Thermo Electron Model 48 gas filter correlation NDIR analyzer. Output from the analyzer was directed to a data acquisition system which corrects to 7% oxygen (using the Method 3A values) and records one-minute averages.

Total hydrocarbons were measured continuously in the flue gas using the procedures outlined in EPA Method 25A. A heated sample line was used to transfer the gas sample to a JUM Model VE-7 THC instrumental analyzer using flame ionization detection. Output from the analyzer was directed to a data acquisition system which corrects to 7% oxygen (using the Method 3A values) and records one-minute averages.

4.6 Waste Feed Sampling

Waste feed liquid stream samples were obtained from an in-line sample tap already present at the site. All liquid waste samples were collected at 15-minute intervals in conjunction with the flue gas sampling. Sample collection of the process streams was coordinated with the flue gas sampling such that sampling for the same analyte was completed at the same time (e.g., process samples for a test run were collected during the same time period as the flue gas sampling test run).

At each 15 minute interval, a 100-mL grab sample for metals and a 100-mL grab sample for physical parameter analyses were collected. The 100-mL grab samples were composited immediately after collection into a 1-gallon jar at the sampling location, with the lid placed on the 1-gallon container between grab sampling events. At the end of a test run, aliquots for different analyses were taken from the gallon composite jar and stored in 500-mL amber glass bottles with Teflon-lined caps.

The following is a brief summary of the general procedures followed during the collection of liquid process stream samples:

1. The sample line was purged appropriately to assure the sample was not collected from a static line.

2. The precleaned container was rinsed with liquid from the sample stream.

3. The required volume (typically 100 mL) was collected and transferred to the compositing container.

4. The compositing container was placed in the cooler. Custody of the sample was maintained until it was transferred to the designated field sample custodian.

4.7 Baghouse Dust Sampling

During each test run, the baghouse dust was collected in an empty silo. At the completion of each test run, the baghouse dust was emptied into a truck, and a sample was taken from the truck, for metals and physical analytical parameters analysis.

4.8 Raw Feed Sampling

Samples of the raw feed stream were collected at 30-minute intervals from the belt feeder to the kiln's cold end using a scoop. The grab samples were field composited into two containers -- one for metals analysis and the other for chlorine and moisture analysis.

4.9 Aggregate Product Sampling

Samples of the hot aggregate product were collected with a shovel at 30-minute intervals, and placed in an aluminum pan to cool. After cooling, about 100 mL was taken from each subsample, and composited in a 950 mL sample jar. The composited samples were submitted for metals, chlorine, and moisture analyses.

5. QA/QC PROCEDURES

The objective of a quality assurance/quality control (QA/QC) program is to assure that the precision and accuracy of all environmental data generated by IEA for clients are commensurate with data quality objectives (DQO's). DQO's are based on a common understanding of the intended end use(s) of the data, the measurement process, and the availability of resources. Once DQO's are established, formally or informally, QC protocol can be defined for the measurements.

In this project, the final data user will be Solite Corporation. The data quality objectives in this project are to certify compliance with "Boiler and Industrial Furnace Regulations (Paragraph 266.103c)". All sections and procedures of the QA/QC plan were followed to meet these objectives.

All of the equipment used was calibrated according to the procedures outlined in the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, EPA-600/4-77-027b.

5.1 Method 5-Type Sampling Equipment Calibrations

For sampling Methods 0012, 0013, and 0050, the procedures and equipment used to measure stack gas velocity and temperature measurements and the metering system used to maintain isokinetic sampling conditions and to determine the sample gas volume were subjected to pretest and posttest calibrations and/or inspections as required by the appropriate EPA methods.

5.1.1 Barometer

Barometric pressure values were obtained from a calibrated Airguide barometer, verified by phone call to a local airport, and corrected for elevation to sample port level (0.01 inches Hg per 10 ft. elevation).

5.1.2 Probe Nozzle

The probe nozzles used during testing were calibrated initially by the manufacturer and thereafter by the field sampling crew by checking for dimensional roundness. This was done by taking three separate measurements using alternative inside diameters and calculating the average. A micrometer with a minimum tolerance of 0.001 inch is used for measuring. If a deviation of more than 0.004 inch is found between any measurements, the nozzle is either discarded or repaired and remeasured. The nozzle calibration data sheets for this test program are included in Appendix E.

5.1.3 Pitot Tubes

Each pitot tube used in sampling meets the design specifications for type-S pitot tubes in EPA Method 2. Therefore, a maximum value baseline coefficient (C_p) of 0.84 is assigned to each pitot tube. Calibration by the manufacturer for pitot face-opening alignment included measuring the external tubing diameter (dimension D_t), the base-to-opening plane distance (dimensions P_a and P_b), and the face opening misalignment angles, with all terms as described in Figures 2-2 and 2-3 of EPA Method 2. Pitot tubes were visually inspected for structural integrity at the completion of each test. Inspection sheets for pitot tubes are included in Appendix E.

5.1.4 Calibration Meter and Metering System

The secondary reference meter equipment arrangement for calibration is shown in Figure 5.7 of EPA Method 5. The following prescribed procedures were followed. A wet test meter with a 1 ft^3/rev capacity and $\pm$ 1 percent accuracy is used as the primary calibrant. The dry gas meter's pump is run for a minimum of 5 minutes at a flow rate of 0.35 cfm to condition the interior surface of the wet test meter. Leak checks are performed and if satisfactory, triplicate runs at no less than five different flow rates are done. A calibration curve is prepared and the meter is recalibrated after 200 hours of operation or annually, whichever comes first.

The calibration set-up for the dry gas metering system using the secondary reference meter in lieu of the wet test meter is given in Figure 5.5 of EPA Method 5. A leak check of the metering system before calibration was performed as shown in Figure 5.4 of EPA Method 5. The metering systems's pump was operated for 5 minutes at an orifice manometer setting of 0.5 inches H_20 to heat up the pump and system to stabilize the meter inlet and outlet temperatures. Values for the orifice setting (delta H), wet test meter volume (V_w), corresponding dry test meter volume (V_d) dry test meter inlet and outlet gas temperatures (t_{di} and t_{dn}), and time were recorded for the initial calibration. Then the ratio of the wet test meter to the dry test meter (gamma) and the orifice pressure differential that equates to 0.75 cfm at standard conditions (delta H@) were calculated.

A post-test meter calibration was made on the dry gas meter used during the test to check its accuracy against the pre-test calibration. This post-test calibration check was made using the average orifice setting obtained during each test run and by setting the vacuum at the maximum value obtained during each test run. These test runs were made against IEA's secondary reference dry gas meter, which was calibrated against a wet test meter.

The calibration data sheets for the dry gas meters are included in Appendix E.

5.1.5 Thermocouples and Digital Indicators

Thermocouples were calibrated by comparing them against an ASTM-3F mercury-in-glass thermometer at approximately 32°F (ice water), ambient temperature, approximately 100°F (hot oil). Each thermocouple was calibrated against temperature ranges to which it is typically exposed during test conditions, and they agreed within 1.5 percent (expressed in °R) of the reference thermometer throughout the entire calibration range. Also, thermocouples were checked at ambient temperature at the test site to verify calibration.

Digital indicators were checked by feeding a series of millivolt signal strengths to the input and comparing the indicator reading with the reading the signal should have generated. Acceptable calibration error did not exceed 0.5 percent when temperatures are expressed in °R.

The calibration data sheets for the thermocouples and digital indicators are included in Appendix E.

5.1.6 Pretest and Posttest Leak Checks of Sampling Trains

Each Method 0012, 0013, and 0050 sampling trains were subjected to pretest and posttest leak checks. The leak check results are summarized in Table 5-1. For all sampling runs the posttest leak checks were acceptable, although the first particulate sampling run on Kiln No. 2 almost failed the posttest leak check, because a high vacuum was used on the train.

5.2 Analytical QA/QC Results

Analytical measurements for precision were made on stack gas and process samples by means for replicate analyses. The analytical accuracies were demonstrated by spike compound recoveries; no correction to analysis results was made. A Lab Control Sample (LCS) was also prepared and analyzed with the samples from this project. Blanks of each reagent and/or filter used in each sample train were submitted for analysis of the appropriate target analyte. The results for replicate analyses, spike analyses, LCS analyses, and analyses of reagent blanks are summarized in Table 5-2 for the stack gas samples and Table 5-3 for the process samples, and discussed below in the appropriate section for each analytical procedure.

5.2.1 Analyses for Hydrogen Chloride and Chlorine

Stack Gas Samples - Hydrogen chloride and chlorine were measured in the stack gas samples as the chloride ion in the dilute sulfuric acid solution and the dilute sodium hydroxide solution, respectively. The duplicate analysis reported for two samples, with relative percent differences (RPDs) of 0.010% and 0.10%, were well within the 5% criteria required by the method. The spike recovery was 96%, and the results for the LCS analysis were within 0.5% of the expected value. The reagent blanks submitted for analysis were both less than the analytical detection limit.

5.2.2 Analyses for Metals and Hexavalent Chromium

Stack Gas Samples - Analysis for hexavalent chromium involved the use of an ion chromatograph with a post-column reactor (IC/PCR). The duplicate analysis for one sample resulted in an RPD below detection, well within the required 5% criteria required for the method. The spike recovery was 105%, and the results for the LCS analyses were within +3.0% and +4.0% of the expected value. The reagent blank submitted for analysis was less than the analytical detection limit.

Analysis for metals in the flue gas samples involved complex digestion steps generating several fractions for subsequent analysis by three different procedures. From the duplicate analysis some analytes were below detection limits. In general, however most analytes were found in sufficient quantity to provide estimates of precision. For all of the analytes in Table 5-2 there are two values, for front and back halves, respectively. For mercury analysis, all sample fractions were analyzed in duplicate, with RPDs ranging from 0.0% to 54.5%, a rather wide range.

Matrix spikes are not required for ICP analysis. Only mercury required a spike prior to CVAAS analysis, which had a recovery of 78% in one front half sample.

Results for the analyses of LCSs for metals ranged from -2.82% to +8.57%, all well within the 25% required by the method.

The reagent blank submitted for analysis had levels below the detection limits for all metals except arsenic and lead that had 5.675 μg, and 1,020 μg, respectively. The blank correction procedures for the method do not permit subtraction of high blank values. The blank correction values used and the procedures to determine those values are provided in Appendix D.

Process Samples - Most of the process sample analytes had fairly consistent RPD values for the four samples tested. The exceptions include antimony, which had only one detectable point, arsenic and silver, which both had at least one point that would be considered an outlier. Chlorine had RPD values of 11 and 33. The rest of the compounds tested either had low or no RPD values.

Spike recoveries were fairly consistent with a few exceptions evident, such as antimony's three zeroes for spike recovery along with a single value of 39 percent. Chlorides had very consistent spike recoveries. No other spike data was provided.

No LCS values were provided for the process samples.

TABLE 5-1. SUMMARY OF SAMPLE TRAIN LEAK CHECKS FOR KILN NO. 2 AND KILN NO. 4

Sample Train	Initial Leak Rate		Final Leak Rate	
	CFM	inches Hg	CFM	inches Hg
Kiln No. 2, Run 1				
Part./Cl/HCl	.003	10	.018	19
Hex. Chrome	.000	10	.001	11
Multi Metals	.007	10	.010	10
Kiln No. 2, Run 2				
Part./Cl/HCl	.002	10	.000	6
Hex. Chrome	.001	12	.001	11
Multi Metals	.005	10	.000	7
Kiln No. 2, Run 3				
Part./Cl/HCl	.001	10	.004	6
Hex. Chrome	.002	12	.002	11
Multi Metals	.005	11	.002	12
Kiln No. 4, Run 1				
Part./Cl/HCl	.000	10	.000	6
Hex. Chrome	.001	10	.001	11
Multi Metals	.005	11	.004	8
Kiln No. 4, Run 2				
Part./Cl/HCl	.010	10	.010	10
Hex. Chrome	.003	11	.004	8
Multi Metals	.001	11	.005	17
Kiln No. 4, Run 3				
Part./Cl/HCl	.002	10	.001	10
Hex. Chrome	.001	11	.001	9
Multi Metals	.001	9	.004	10

TABLE 5-2. SUMMARY ANALYTICAL QA/QC RESULTS FOR STACK GAS SAMPLES

Analytical Parameter	Duplicate Analysis (RPD)	Spike Recovery	Laboratory Control Sample	Reagent Blank
Chlorides	0.01% 0.10%	96% 95%	+0.5%	<0.05 (mg/L)
Hexavalent Cr	N/A[1]	105%	+3.0% +4.0%	<0.0015 (μg/ml)
Antimony	N/A N/A	NR[2]	N/A	<2.181 μg
Arsenic	9.13% 1.36%	NR	+8.57%	5.675 μg
Barium	1.35% 10.1%	NR	+1.16%	<29.98 μg
Beryllium	0.28% 19.9%	NR	-2.72%	<1.978 μg
Cadmium	0.48% 3.99%	NR	+4.87%	<0.693 μg
Total Chromium	21.1% 12.0%	NR	-2.82%	<36.23 μg
Lead	0.85% 6.58%	NR	+4.26%	1,020 μg
Mercury	0% to 54.5%[3]	78%	-2.0%	<2.36 μg
Silver	13.6% N/A	NR	-1.72%	<5.15 μg
Thallium	N/A N/A	NR	N/A	<0.936 μg

[1] N/A = Not applicable due to sample value being below the detection limit.
[2] Matrix spike not required by the method.
[3] All mercury samples analyzed in duplicate. Samples with higher imprecision at or near the analytical detection limit.

TABLE 5-3 SUMMARY ANALYTICAL QA/QC RESULTS FOR PROCESS SAMPLES

Analytical Parameter	Duplicate Analysis (RPD)	Spike Recovery	Laboratory Control Sample
Chlorides	11 33	76% 74%	NR[1]
Ash	NC[2]	N/A[3]	NR
Heating Value	1	N/A	NR
Density	0	N/A	NR
Moisture	NC	N/A	NR
Antimony	NC NC NC 21	0% 0% 0% 39%	NR
Arsenic	1 5 112 44	42% 70% 35% 37%	NR
Barium	7 1 6 2	95% 124% 93% 95%	NR
Beryllium	12 5 1 6	99% 99% 92% 89%	NR
Cadmium	12 8 0 7	76% 71% 88% 80%	NR
Total Chromium	6 2 2 5	92% 105% 93% 92%	NR

TABLE 5-3 (Continued)

Analytical Parameter	Duplicate Analysis (RPD)	Spike Recovery	Laboratory Control Sample
Lead	11 2 4 4	98% 103% 111% 86%	NR
Mercury	3 1 1 2	95% 97% 104% 89%	NR
Silver	142 30 4 4	28% 14% 82% 41%	NR
Thallium	3 3 2 16	132% 125% 134% 102%	NR

[1]Not Required
[2]Not Calculable
[3]Not Applicable

5.3 Oxygen, Carbon Dioxide, Carbon Monoxide, and Total Hydrocarbons CEMS Calibrations

Calibration procedures were performed in accordance with those outlined in EPA Reference Method 3A for oxygen and carbon dioxide, EPA Method 10 for carbon monoxide, and EPA Method 25A for total hydrocarbons. Each analyzer was calibrated before, and after test run #1, and after the end of the test series. The results of the CEM calibration checks are included in Appendix C.

The pre-test calibrations consisted of the following two steps:

- Internal (direct to instrument) calibration of each analyzer to adjust calibration and check linearity.
- External (through the entire sampling system) calibration to check the system bias on zero and span gases.

The post test calibration consisted of an external system bias calibration check.

5.3.1 Internal Calibration

Each analyzer was calibrated using a certified zero and span (mid range) gas. Zero and span gases were directed to each analyzer through the appropriate plumbing, the calibration gas flow rates were adjusted to the correct flow rate and the analyzer was adjusted with the appropriate span pot.

After the analyzer was properly adjusted, the linearity was checked using a low and high range calibration gas. The maximum allowable limit for linearity $\pm 2\%$ of the analyzer range. All analyzers were demonstrated to be linear within these limits.

5.3.2 External Calibration

The external calibration bias check was performed by placing the CEM system in the sampling mode and injecting a zero and span gas into the sample line at the probe exit. This check shows if there is any sampling system related bias, and also serves as a check of the sample line integrity.

5.3.3 Calibration Gases

EPA Protocol #1 and/or $\pm 2\%$ NIST-traceable gases were used for calibration as required by the various Reference Methods used in this test project. The log of the calibration gases used for this test program is included in Appendix C.

5.4 Sample Chain-of-Custody

Sample chain-of-custody records for sample transfer to laboratory, log-in, identification assignment, analysis request, and sample storage are given in Appendix D.

AP-42 Section 11.20
Reference 17
Report Sect. 4
Reference 18
PART II OF II

Appendix A

Equations Used and Calculations

PART II OF II
SOLITE CORPORATION
LEAKSVILLE PLANT
CASCADE, VA
REPORT DATE 8/8/92

SOURCE SAMPLING CALCULATIONS

The equations used for source sampling calculations are presented. These equations are divided into two parts -- equipment calibration and source test calculations. Gaseous source test equations are included to aid the reader reviewing emission test reports and to give a quick reference to mathematical expresions used in source testing.

EQUIPMENT CALIBRATION EQUATIONS

Orifice Meter Calibration Using Test Meter

Test meter volumetric flowrate (Q_m) in cubic feet per minute

$$Q_m = [\text{Test meter } V_f - \text{Test meter } V_i] \times [\text{Test meter corr. factor}]$$

Proportionality Factor (K_m)

$$K_m = Q_m \sqrt{\frac{P_m \, M_m}{T_m \, \Delta H}}$$

Orifice meter $\Delta H_@$ Flow Rate

1. English units $\Delta H_@ = \dfrac{0.9244}{K_m^2}$

where $\Delta H_@ = 0.75$ cfm at 68°F and 29.92 in. Hg

1. Metric units $\Delta H_@ = \dfrac{0.3306}{K_m^2}$

where $\Delta H_@ = 0.021$ m^3/min at 20°C and 760 mm Hg

Sampling Meter Console Calibration

Ratio of the accuracy of the Console Gas Meter Calibration Test Meter (Y). Tolerance 1 ± 0.02.

$$Y = \frac{V_T \, T_m \, P_b}{V_m \, T_T \, (P_b + \Delta H/13.6)}$$

Meter Console Orifice Meter Calibration ($\Delta H_@$)

$$1. \quad \Delta H_@ = \frac{K\ \Delta H}{P_b\ T_m} \left[\frac{T_T \Theta}{V_T} \right]^2$$

where $K = 0.0317$ *English units*
$= 0.0012$ *metric units*

Source Sampling Nomograph Calibration

Isokinetic ΔH Equation

$$\text{Isokinetic } \Delta H = \left[846.72\ D_n^4\ \Delta H_@\ C_p^2\ (1-B_{ws})^2\ \frac{M_d\ T_m\ P_s}{M_s\ T_s\ P_m} \right] \Delta p$$

Sampling Nozzle Equation

$$D_n = \sqrt{\frac{0.0358\ Q_m\ P_m}{T_m\ C_p\ (1-B_{ws})}} \sqrt{\frac{T_s\ M_s}{P_s\ \Delta p_{avg}}}$$

SOURCE SAMPLING EQUATIONS

Method 1 - Traverse Point Selection

Equal Area Equation (circular ducts)

$$P = 50 \left[1 - \sqrt{\frac{2j - 1}{2n}} \right]$$

Equivalent Diameter for a Rectangular Duct

$$D_E = \frac{2(\text{length})(\text{width})}{\text{length} + \text{width}}$$

Method 2 - Gas Velocity and Volumetric Flow Rate

Average Stack Gas Velocity

$$v_s = K_p C_p \left(\sqrt{\Delta p}\right)_{avg} \sqrt{\frac{T_s}{P_s\ M_s}}$$

Average Dry Stack Gas Volumetric Flow Rate (dscfm) at Standard Conditions (Q_{sd})

$$Q_{sd} = 60\ (1-B_{ws})\ v_s\ A_s \left[\frac{T_{std}}{P_{std}}\right] \frac{P_s}{T_s}$$

Average Actual Stack Gas Volumetric Flow Rate (acfm)

$$Q_s = v_s\ A_s$$

Method 3 - Orsat Analysis for Dry Gas Molecular Weight

Stack Gas Dry Molecular Weight

$$M_d = \Sigma M_x B_x = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$$

Stack Gas Wet Molecular Weight

$$M_s = M_d(1-B_{ws}) + 18\ B_{ws}$$

Percent Excess Air (%EA),

$$\%EA = \frac{(\%O_2) - 0.05(\%CO)}{0.264(\%N_2) - (\%O_2 - \%CO)} \times 100$$

Method 4 - Reference Moisture Content of Stack Gas

Volume Water Vapor Condensed at Standard Conditions (V_{wc})

$$V_{wc} = \frac{(ml\ H_2O)\ \sigma_w\ R\ T_{std}}{P_{std}\ M_w} = K_1\ (V_f - V_i)$$

where $K_1 = 0.04707\ ft^3/ml$ for English units
$= 0.001333\ m^3/ml$ for metric units

Silica Gel Water Vapor Catch (V_{wsg})

$$V_{wsg} = K_2 \ (W_f - W_i)$$

where $K_2 = 0.04715\ ft^3/ml$ for English units
$= 0.001335\ m^3/ml$ for metric units

Gas Volume at Standard Conditions

$$V_{mstd} = V_m \ Y \left(\frac{T_{std}}{P_{std}}\right)\left(\frac{P_b + (\Delta H/13.6)}{T_m}\right)$$

Moisture Content of Stack Gas

$$B_{ws} = \frac{V_{wc} + V_{wsg}}{V_{wc} + V_{wsg} + V_{mstd}}$$

Method 5 - Particulate Emissions Testing

Dry Gas Volume Metered at Standard Conditions

Leak Rate Adjustment - no component changes during run

$$V_{madj} = V_m - (L_p - L_a)\theta$$

Leak Rate Adjustment - one or more component changes during run

$$V_{madj} = [V_m - (L_1 - L_a)\theta_1 - \sum_{i=2}^{n}(L_i - L_a)\theta_i - (L_p - L_a)\theta_p]$$

Sampling Meter Dry Gas Volume at Standard Conditions

$$V_{mstd} = V_m \ Y \left(\frac{T_{std}}{P_{std}}\right)\left(\frac{P_b + (\Delta H/13.6)}{T_m}\right)$$

Isokinetic Variation

Raw Data

$$\%I = 100 \times \frac{T_s \ [K_3 \ V_{lc} + (V_m/T_m) \ (P_b + \Delta H/13.6)}{60 \ \theta_s \ v_s \ P_s \ A_n}$$

where

$$K_3 = 0.003454 \frac{mm\ Hg\ m^3}{ml\ °K}\ metric\ units$$

$$= 0,002669 \frac{in.\ Hg\ ft^3}{ml\ °R}\ English\ units$$

Note: This equation includes a correction for the pressure differential across the dry gas meter measured by the orifice meter -- average sampling run ΔH readings.

Intermediate Data

$$\%I = 100 \times \frac{T_s\ V_{mstd}\ P_{std}}{T_{std}\ v_s\ \Theta\ A_n\ P_s\ 60\ (1-B_{ws})} = K_4 \frac{T_s\ V_{mstd}}{v_s\ \Theta\ A_n\ P_s\ (1-B_{ws})}$$

where

$K_4 = 4.320$ *for metric units*
$= 0.09450$ *for English units*

Particulate Concentration Correction to 7% Oxygen

$$c_s(7\%\ O_2) = c_s \times \frac{14}{21 - \%O_2}$$

Method 0030 - Volatile Organic Sampling Train

Gas Volume at Standard Conditions

$$V_{mstd} = V_m\ Y \frac{T_{std}\ P_b}{P_{std}\ T_m} = K_1\ Y \frac{V_m\ P_b}{T_m}$$

where

$K_1 = 0.3858$ *°K/mm Hg for metric units*
$= 17.64$ *°R/in. Hg for English units*

Destruction and Removal Efficiency (DRE)

$$DRE = 100 \times \frac{W_{in} - W_{out}}{W_{in}}$$

TABLE X-X
PARTICULATE EMISSIONS SUMMARY
Kiln #2, Exhaust Stack
Virginia Solite, Cascade VA

filename:BIGMETH5.wk1

SYMBOL	SAMPLING PARAMETERS / MEASURED DATA AT STACK	UNITS	RUN NO.==> K2-1 DATE==> 6/18/92 RUN TIME==> 831-1203	K2-2 6/18/92 1255-1502	K2-3 6/18/92 1555-1752	AVERAGE
(Y)	Dry Gas Meter Calibration Factor	--	0.998	0.998	0.998	
(Vi)	Initial Meter Volume	cf	614.585	708.578	785.620	
(Vf)	Final Meter Volume	cf	708.276	785.369	858.522	
(Lp)	Leak Check Correction	cfm	0	0	0	
(Vm)	Total Meter Volume	cf	93.691	76.791	72.902	81.128
(t)	Sampling Time	min.	120	120	120	120
(Vwc)	Volume of Water Collected	mL	100.1	87.0	90.0	92.4
(Vwsg)	Silica Gel Weight Increase	g	19.7	14.2	16.3	16.7
(Vlc)	Total Water Collected	mL	119.8	101.2	106.3	109.1
(Pbar)	Barometric Pressure	in. Hg	29.60	29.60	29.50	29.57
(Pg)	Stack Static Pressure	in. H2O	-0.51	-0.51	-0.51	
(¯H)	Avg. Orifice Pressure Drop ¯H	in. H2O	2.36	1.46	1.34	
(Ts)	Avg. Stack Gas Temperature	¯F	339.5	340.9	339.6	340.0
(Tm)	Avg. Dry Gas Meter Temperature	¯F	102.0	107.0	102.9	
(Dn)	Nozzle Diameter	inches	0.259	0.235	0.235	
(Ds)	Diameter of Stack	inches	52.000	52.000	52.000	
(W)	Width of Stack	inches	0.000	0.000	0.000	
(L)	Length of Stack	inches	0.000	0.000	0.000	
(Cp)	Pitot Tube Coefficient	--	0.84	0.84	0.84	
(¯p)§	Avg. Square Root Velocity Head ¯p	(in. H2O)§	0.845	0.820	0.791	
(%O2)	Stack Gas Oxygen	%	17.0	17.2	17.2	17.1
(%CO2)	Stack Gas Carbon Dioxide	%	3.9	3.6	3.5	3.7
(%N2)	Stack Gas Nitrogen	%	79.1	79.2	79.3	79.2
	CALCULATED STACK GAS DATA					
(Ps)	Stack Gas Pressure	in. Hg	29.56	29.56	29.46	29.53
(%Bws)	Stack Gas Moisture	%	6.1	6.3	6.9	6.5
(%B'w)	Moisture at Saturation	%	97.3	97.3	97.6	
(Vmstd)	Standard Dry Gas Meter Volume	dscf	86.762	70.485	67.175	74.807
(Md)	Dry Gas Molecular Weight	lb/lb-mole	29.30	29.26	29.25	29.27
(Ms)	Wet Gas Molecular Weight	lb/lb-mole	28.61	28.55	28.47	28.54
(vs)	Stack Gas Velocity	ft/s	58.99	57.36	55.46	57.3
(A)	Stack Area	ft2	14.75	14.75	14.75	
(Qsd)	Volumetric Gas Flow Rate	dscfm	32,000	31,000	29,700	30,900
(Qa)	Volumetric Gas Flow Rate	acfm	52,200	50,800	49,100	50,700
(I)	Isokinetic Variation	%	91.2	92.9	92.3	

TABLE X-X
PARTICULATE EMISSIONS SUMMARY
Kiln #2, Exhaust Stack, Page 2
Virginia Solite, Cascade VA

filename:BIGMETH5.wk1

	SAMPLING PARAMETERS	RUN NO.==> / DATE==> / RUN TIME==>	K2-1 6/18/92 831-1203	K2-2 6/18/92 1255-1502	K2-3 6/18/92 1555-1752	AVERAGE
Symbol	PARTICULATE COLLECTION ANALYSIS	Units				
(Wfi)	Tare Weight of Filter	g	0.36090	0.36590	0.36670	
(Wff)	Final Filter Weight	g	0.36210	0.36580	0.36660	
(mf)	Weight on Filter	mg	1.2	-0.1	-0.1	
(Wai)	Acetone Rinse Tare Weight	g	111.3543	107.5916	108.0054	
(Waf)	Acetone Rinse Final Weight	g	111.3595	107.5999	108.012	
(ma)	Weight in Acetone Rinse	mg	5.2	8.3	6.6	
(Vaw)	Acetone Volume Used in Rinse	mL	100	150	145	
(Va)	Acetone Volume Used in Blank	mL	100	100	100	
(Wa)	Weight in Acetone Blank	g	0.0037	0.0037	0.0037	
(Ca)	Acetone Blank Correction	g/mL	0.00001	0.00001	0.00001	
(mn)	Total Particulate Collected	mg	6.40	8.20	6.50	7.03
	Conc. of Particulate in Gas Sample	mg/CMeter	2.604639	4.107775	3.416512	3.38
	Grains per Dry Standard Cubic Feet	gr./dscf	0.001138	0.001795	0.001493	0.00
	Grains per DSCF @ 7% oxygen	gr./dscf	0.004056	0.006743	0.005608	0.01
	Total Particulate flow in Stack	Lbs./hr.	0.311918	0.476552	0.37931	0.39
	CHLORINE AND HCL RECOVERY DATA					
	Volume in H2SO4 Impinger	mL	545	291	377	
	Concentration of Cl In H2SO4 Impinger	mg/L	2449.97	3140.24	2529.4	
	Total Cl in H2SO4 Impinger	mg	1335.234	913.8098	953.5838	
	Volume in NaOH Impinger	mL	415	244	233	
	Concentration in NaOH Impinger	mg/L	75.36	24.61	47.96	
	Total Cl in NaOH Impinger	mg	31.2744	6.00484	11.17468	
	Concentration of Cl in H2SO4 blank	mg/L	0	0	0	
	Concentration of Cl in NaOH blank	mg/L	0	0	0	
	Total HCl recovered	mg	1373.159	939.7655	980.6692	
	Total Cl2 recovered	mg	62.55233	6.1754	11.49208	
	Concentration of HCl in Gas Sample	mg/CMeter	558.9104	470.8418	515.5475	515.10
	Concentration of Cl2 in Gas Sample	mg/CMeter	25.46037	3.094002	6.041502	11.53
	Total HCl flow in Stack	Lbs./hr.	66.9321	54.62344	57.23738	59.60
	Total HCl flow in Stack	g/hr.	30387.18	24799.04	25985.77	27057.33
	Total Cl2 flow in Stack	Lbs./hr.	3.048997	0.358942	0.670743	1.36
	Total Cl2 flow in Stack	g/hr.	1384.245	162.9598	304.5172	617.24

TABLE X-X
HEXAVALENT CHROMIUM Emissions Summary
KILN #2, EXHAUST STACK
VIRGINIA SOLITE, CASCADE VA

filename:HEXCHROM.WQ1

	SAMPLING PARAMETERS	RUN NO.==> K2-1 / DATE==> 6/18/92 / RUN TIME==> 1118-1220	K2-2 6/18/92 1418-1521	K2-3 6/18/92 1726-1831	AVERAGE
SYMBOL	MEASURED DATA AT STACK	UNITS			
(Y)	Dry Gas Meter Calibration Factor	--	0.998	1.067	1.067	
(Vi)	Initial Meter Volume	cf	516.347	629.592	750.369	
(Vf)	Final Meter Volume	cf	568.158	688.514	805.634	
(Lp)	Leak Check Correction	cfm	0	0	0	
(Vm)	Total Meter Volume	cf	51.811	58.922	55.265	55.333
(t)	Sampling Time	min.	60	60	60	60
(Vwc)	Volume of Water Collected	mL	14.0	52.0	44.0	36.7
(Vwsg)	Silica Gel Weight Increase	g	35.4	30.5	31.8	32.6
(Vlc)	Total Water Collected	mL	49.4	82.5	75.8	69.2
(Pbar)	Barometric Pressure	in. Hg	29.65	29.62	29.50	29.59
(Pg)	Stack Static Pressure	in. H2O	-0.51	-0.51	-0.51	
(¯H)	Avg. Orifice Pressure Drop ¯H	in. H2O	2.52	3.27	2.87	
(Ts)	Avg. Stack Gas Temperature	¯F	356.1	342.4	350.5	349.7
(Tm)	Avg. Dry Gas Meter Temperature	¯F	97.2	99.2	99.8	
(Dn)	Nozzle Diameter	inches	0.258	0.276	0.276	
(Ds)	Diameter of Stack	inches	52.000	52.000	52.000	
(W)	Width of Stack	inches	0.000	0.000	0.000	
(L)	Length of Stack	inches	0.000	0.000	0.000	
(Cp)	Pitot Tube Coefficient	--	0.84	0.84	0.84	
(¯p)§	Avg. Square Root Velocity Head ¯p	(in. H2O)§	0.860	0.873	0.818	
(%O2)	Stack Gas Oxygen	%	16.9	17.5	17.0	17.1
(%CO2)	Stack Gas Carbon Dioxide	%	3.9	3.4	3.7	3.7
(%N2)	Stack Gas Nitrogen	%	79.2	79.1	79.3	79.2
	CALCULATED STACK GAS DATA					
(Ps)	Stack Gas Pressure	in. Hg	29.61	29.58	29.46	29.55
(%Bws)	Stack Gas Moisture	%	4.6	6.2	6.1	5.6
(%B'w)	Moisture at Saturation	%	97.1	97.2	97.6	
(Vmstd)	Standard Dry Gas Meter Volume	dscf	48.475	58.669	54.746	53.963
(Md)	Dry Gas Molecular Weight	lb/lb-mole	29.30	29.24	29.27	29.27
(Ms)	Wet Gas Molecular Weight '	lb/lb-mole	28.78	28.55	28.58	28.64
(vs)	Stack Gas Velocity	ft/s	60.43	61.11	57.63	59.7
(A)	Stack Area	ft2	14.75	14.75	14.75	
(Qsd)	Volumetric Gas Flow Rate	dscfm	32,700	33,000	30,700	32,133
(Qa)	Volumetric Gas Flow Rate	acfm	53,500	54,100	51,000	52,867
(I)	Isokinetic Variation	%	100.5	105.2	105.5	

HEXAVALENT CHROMIUM Emissions Analysis

Volume in Impinger	mL	865	664	535	
Conc. of Hex Chromium in KOH Impinger	mg/L	< 0.0015	< 0.0015	< 0.0015	
Total Hex Chromium Recovered	mg	< 0.001298	< 0.000996	< 0.000803	
Volume of Blank	ml	830	830	830	
Conc. of Hex Chromium in blank	mg/L	0	0	0	
Conc. of Hex Chromium in Gas Sample	mg/CMeter	< 0.000945	< 0.0006	< 0.000518	< 0.000687
Total Flow of Hex Chromium in Stack	g/hr.	< 0.052462	< 0.033614	< 0.026972	< 0.037683
Total Flow of Hex Chromium in Stack	Lbs./hr.	< 0.000116	< 7.4E-05	< 5.94E-05	< 8.3E-05

TABLE X-X
Metals Emissions Summary
KILN #2, EXHAUST STACK
VIRGINIA SOLITE, CASCADE VA

filename:METALS.WQ1

SYMBOL	SAMPLING PARAMETERS / MEASURED DATA AT STACK	UNITS	RUN NO.==> K2-1 DATE==> 6/18/92 RUN TIME==> 831-1102	K2-2 6/18/92 1255-1358	K2-3 6/18/92 1550-1712	AVERAGE
(Y)	Dry Gas Meter Calibration Factor	--	0.998	0.998	0.998	
(Vi)	Initial Meter Volume	cf	457.647	568.429	688.784	
(Vf)	Final Meter Volume	cf	516.141	627.660	750.222	
(Lp)	Leak Check Correction	cfm	0	0	0	
(Vm)	Total Meter Volume	cf	58.494	59.231	61.438	59.721
(t)	Sampling Time	min.	60	60	60	60
(Vwc)	Volume of Water Collected	mL	54.0	63.0	77.0	64.7
(Vwsg)	Silica Gel Weight Increase	g	12.5	12.0	9.9	11.5
(Vlc)	Total Water Collected	mL	66.5	75.0	86.9	76.1
(Pbar)	Barometric Pressure	in. Hg	29.60	29.62	29.50	29.57
(Pg)	Stack Static Pressure	in. H2O	-0.51	-0.51	-0.51	
(¯H)	Avg. Orifice Pressure Drop ¯H	in. H2O	3.25	3.49	2.91	
(Ts)	Avg. Stack Gas Temperature	¯F	355.0	349.0	344.3	349.4
(Tm)	Avg. Dry Gas Meter Temperature	¯F	97.9	99.8	97.6	
(Dn)	Nozzle Diameter	inches	0.277	0.277	0.277	
(Ds)	Diameter of Stack	inches	52.000	52.000	52.000	
(W)	Width of Stack	inches	0.000	0.000	0.000	
(L)	Length of Stack	inches	0.000	0.000	0.000	
(Cp)	Pitot Tube Coefficient	--	0.84	0.84	0.84	
(¯p)§	Avg. Square Root Velocity Head ¯p	(in. H2O)§	0.848	0.881	0.818	
(%O2)	Stack Gas Oxygen	%	17.0	17.1	17.2	17.1
(%CO2)	Stack Gas Carbon Dioxide	%	3.8	3.7	3.5	3.7
(%N2)	Stack Gas Nitrogen	%	79.2	79.2	79.3	79.2
	CALCULATED STACK GAS DATA					
(Ps)	Stack Gas Pressure	in. Hg	29.56	29.58	29.46	29.54
(%Bws)	Stack Gas Moisture	%	5.4	6.0	6.7	6.0
(%B'w)	Moisture at Saturation	%	97.3	97.2	97.6	
(Vmstd)	Standard Dry Gas Meter Volume	dscf	54.566	55.104	57.150	55.607
(Md)	Dry Gas Molecular Weight	lb/lb-mole	29.29	29.28	29.25	29.27
(Ms)	Wet Gas Molecular Weight	lb/lb-mole	28.68	28.60	28.50	28.59
(vs)	Stack Gas Velocity	ft/s	59.71	61.87	57.49	59.7
(A)	Stack Area	ft2	14.75	14.75	14.75	
(Qsd)	Volumetric Gas Flow Rate	dscfm	32,000	33,200	30,700	31,967
(Qa)	Volumetric Gas Flow Rate	acfm	52,800	54,700	50,900	52,800
(I)	Isokinetic Variation	%	100.3	97.5	109.4	

Metals Emissions — Kiln #2

Run 1

FlowRate dscfh	Sample Vol dscf		Front (ug)		Back (ug)		Total (ug)		ug/cmeter		Mass Flows lbs./hr.		g/hr.	
1920000	54.566	Ag	0.682	<	0.971	<	1.653	<	1.070	<	-0.000	<	0.058	
1920000	54.566	As	2.451		0.554		3.005		1.945		0.000		0.106	
1920000	54.566	Ba	19.95	<	2.78	<	22.73	<	14.711	<	0.002	<	0.800	
1920000	54.566	Be	0.374	<	0.278	<	0.652	<	0.422	<	0.000	<	0.023	
1920000	54.566	Cd	5.45		2.05		7.5		4.854		0.001		0.264	
1920000	54.566	Cr	8.95	<	1.67	<	10.62	<	6.873	<	0.001	<	0.374	
1920000	54.566	Pb	70.75		0.91		71.66		46.378		0.006		2.521	
1920000	54.566	Sb	< 0.475		1.21	<	1.685	<	1.091	<	0.000	<	0.059	
1920000	54.566	Tl	0.32	<	0.264	<	0.584	<	0.378	<	0.000	<	0.021	
1920000	54.566	Hg	< 0.4		4.48	<	4.88	<	3.158	<	0.000	<	0.172	

Run 2

FlowRate dscfh	Sample Vol dscf		Front (ug)		Back (ug)		Total (ug)		ug/cmeter		Mass Flows lbs./hr.		g/hr.	
1992000	55.104	Ag	32.26	<	1.02	<	33.28	<	21.328	<	0.003	<	1.203	
1992000	55.104	As	3.933		0.765		4.698		3.011		0.000		0.170	
1992000	55.104	Ba	13.75	<	2.91	<	16.66	<	10.677	<	0.001	<	0.602	
1992000	55.104	Be	0.725	<	0.291	<	1.016	<	0.651	<	0.000	<	0.037	
1992000	55.104	Cd	55.55		1.44		56.99		36.523		0.005		2.060	
1992000	55.104	Cr	11.65	<	1.75	<	13.4	<	8.588	<	0.001	<	0.484	
1992000	55.104	Pb	126.55	<	0.276	<	126.826	<	81.279	<	0.010	<	4.585	
1992000	55.104	Sb	0.722		1.7		2.422		1.552		0.000		0.088	
1992000	55.104	Tl	0.96	<	0.276	<	1.236	<	0.792	<	0.000	<	0.045	
1992000	55.104	Hg	< 0.4		7.64	<	8.04	<	5.153	<	0.001	<	0.291	

Run 3

FlowRate dscfh	Sample Vol dscf		Front (ug)		Back (ug)		Total (ug)		ug/cmeter		Mass Flows lbs./hr.		g/hr.	
1842000	57.15	Ag	0.7144	<	0.949	<	1.6634	<	1.028	<	0.000	<	0.054	
1842000	57.15	As	1.46		0.365		1.825		1.128		0.000		0.059	
1842000	57.15	Ba	9.45	<	2.71	<	12.16	<	7.514	<	0.001	<	0.392	
1842000	57.15	Be	0.47	<	0.271	<	0.741	<	0.458	<	0.000	<	0.024	
1842000	57.15	Cd	179.55		1.55		181.1		111.906		0.013		5.837	
1842000	57.15	Cr	11.05	<	1.63	<	12.68	<	7.835	<	0.001	<	0.409	
1842000	57.15	Pb	233.7		0.747		234.447		144.871		0.017		7.556	
1842000	57.15	Sb	0.03		0.841		0.871		0.538		0.000		0.028	
1842000	57.15	Tl	< 0.2	<	0.257	<	0.457	<	0.282	<	0.000	<	0.015	
1842000	57.15	Hg	< 0.4		6.42	<	6.82	<	4.214	<	0.000	<	0.220	

Note: ALL VALUES ARE CORRECTED FOR BLANKS PER SPECIFIED METHOD

For Explanation of Blank Correction Calculations

KILN 2

Run 1 (ug)

	F(used)	F(Measu.)	Correction	Code
Ag	0.682	0.718	0.036	C
As	2.451	2.58	0.129	C
Ba	19.95	31.4	11.45	A
Be	0.374	0.394	0.02	C
Cd	5.45	16.9	11.45	A
Cr	8.95	20.4	11.45	A
Pb	70.75	82.2	11.45	A
Sb	< 0.475	< 0.5	0.025	C
Tl	0.32	0.32	0	B
Hg	< 0.4	< 0.4	0	B

Run 2 (ug)

	F(used)	F(Measu.)	Correction	Code
Ag	32.26	36.4	4.14	B
As	3.933	4.14	0.207	C
Ba	13.75	25.2	11.45	A
Be	0.725	0.763	0.038	C
Cd	55.55	67	11.45	A
Cr	11.65	23.1	11.45	A
Pb	126.55	138	11.45	A
Sb	0.722	0.76	0.038	C
Tl	0.96	0.96	0	B
Hg	< 0.4	< 0.4	0	B

Run 3 (ug)

	F(used)	F(Measu.)	Correction	Code
Ag	0.7144	0.752	0.0376	C
As	1.46	6.5	5.04	B
Ba	9.45	20.9	11.45	A
Be	0.47	2.16	1.69	B
Cd	179.55	191	11.45	A
Cr	11.05	22.5	11.45	A
Pb	233.7	246	12.3	C
Sb	0.03	1.49	1.46	B
Tl	< 0.2	< 0.2	0	B
Hg	< 0.4	< 0.4	0	B

For Explanation of Blank Correction Calculations

KILN #2

Run 1
(ug)

	Back		B(Measu.)	Correction	Code
Ag	< 0.971	<	0.971	0	D
As	0.554		0.583	0.029	F
Ba	< 2.78	<	2.78	0	D
Be	< 0.278	<	0.278	0	D
Cd	2.05		2.05	0	D
Cr	< 1.67	<	1.67	0	D
Pb	0.91		0.957	0.047	F
Sb	1.21		1.21	0	D
Tl	< 0.264	<	0.278	0.014	F
Hg	4.48		6.44	1.96	D

RUN 2

	Back		B(Measu.)	Correction	Code
Ag	< 1.02	<	1.02	0	D
As	0.765		1.4	0.635	D
Ba	< 2.91	<	2.91	0	D
Be	< 0.291	<	0.291	0	D
Cd	1.44		1.44	0	D
Cr	< 1.75	<	1.75	0	D
Pb	< 0.276	<	0.291	0.015	F
Sb	1.7		1.7	0	D
Tl	< 0.276	<	0.291	0.015	F
Hg	7.64		9.6	1.96	D

RUN 3

	Back		B(Measu.)	Correction	Code
Ag	< 0.949	<	0.949	0	D
As	0.365		1	0.635	D
Ba	< 2.71	<	2.71	0	D
Be	< 0.271	<	0.271	0	D
Cd	1.55		1.55	0	D
Cr	< 1.63	<	1.63	0	D
Pb	0.747		0.786	0.039	F
Sb	0.841		0.841	0	D
Tl	< 0.257	<	0.271	0.014	F
Hg	6.42		8.38	1.96	D

BLANK

	F(measu.)		B(measu.)
Ag	4.14	<	1.01
As	5.04		0.635
Ba	27.1	<	2.88
Be	1.69	<	0.288
Cd	116	<	0.577
Cr	34.5	<	1.73
Pb	1020		2.6
Sb	1.46	<	0.721
Tl	< 0.2		0.736
Hg	< 0.4		1.96

Values Used in Blank Correction as per Method.

For Front Half

Code	Definition
A	A ug
B	M (fhb), when this value is expressed as a "less-than", a null value is used
C	5% of M (fh)

For Back Half

D	M (bhb), when this value is expressed as a "less-than", a null value is used
E	1 ug
F	5% of M (bh)

TABLE X-X
PARTICULATE EMISSIONS SUMMARY
KILN #4, EXHAUST STACK

VIRGINIA SOLITE, CASCADE VA

filename:BIGMETH5.wk1

	SAMPLING PARAMETERS	RUN NO.==>	K4-1	K4-2	K4-3	
		DATE==>	6/16/92	6/16/92	6/16/92	
		RUN TIME==>	1050-1301	1457-1632	1920-2125	AVERAGE
SYMBOL	MEASURED DATA AT STACK	UNITS				
(Y)	Dry Gas Meter Calibration Factor	--	0.998	0.998	0.998	
(Vi)	Initial Meter Volume	cf	333.548	425.852	519.264	
(Vf)	Final Meter Volume	cf	425.502	519.022	614.029	
(Lp)	Leak Check Correction	cfm	0	0	0	
(Vm)	Total Meter Volume	cf	91.954	93.170	94.765	93.296
(t)	Sampling Time	min.	120	120	120	120
(Vwc)	Volume of Water Collected	mL	176.9	185.0	181.4	181.1
(Vwsg)	Silica Gel Weight Increase	g	19.2	21.3	20.8	20.4
(Vlc)	Total Water Collected	mL	196.1	206.3	202.2	201.5
(Pbar)	Barometric Pressure	in. Hg	29.62	29.62	29.62	29.62
(Pg)	Stack Static Pressure	in. H2O	-0.51	-0.51	-0.51	
(¯H)	Avg. Orifice Pressure Drop ¯H	in. H2O	2.14	2.26	2.34	
(Ts)	Avg. Stack Gas Temperature	¯F	346.2	333.5	349.5	343.1
(Tm)	Avg. Dry Gas Meter Temperature	¯F	96.0	94.8	85.1	
(Dn)	Nozzle Diameter	inches	0.277	0.277	0.277	
(Ds)	Diameter of Stack	inches	52.000	52.000	52.000	
(W)	Width of Stack	inches	0.000	0.000	0.000	
(L)	Length of Stack	inches	0.000	0.000	0.000	
(Cp)	Pitot Tube Coefficient	--	0.84	0.84	0.84	
(¯p)§	Avg. Square Root Velocity Head ¯p	(in. H2O)§	0.743	0.741	0.754	
(%O2)	Stack Gas Oxygen	%	15.9	15.9	16.2	16.0
(%CO2)	Stack Gas Carbon Dioxide	%	5.3	5.1	4.6	5.0
(%N2)	Stack Gas Nitrogen	%	78.8	79.0	79.2	79.0
	CALCULATED STACK GAS DATA					
(Ps)	Stack Gas Pressure	in. Hg	29.58	29.58	29.58	29.58
(%Bws)	Stack Gas Moisture	%	9.7	10.0	9.5	9.7
(%B'w)	Moisture at Saturation	%	97.2	97.2	97.2	
(Vmstd)	Standard Dry Gas Meter Volume	dscf	86.131	87.459	90.539	88.043
(Md)	Dry Gas Molecular Weight	lb/lb-mole	29.48	29.45	29.38	29.44
(Ms)	Wet Gas Molecular Weight	lb/lb-mole	28.37	28.31	28.30	28.33
(vs)	Stack Gas Velocity	ft/s	52.29	51.80	53.24	52.4
(A)	Stack Area	ft2	14.75	14.75	14.75	
(Qsd)	Volumetric Gas Flow Rate	dscfm	27,100	27,100	27,500	27,233
(Qa)	Volumetric Gas Flow Rate	acfm	46,300	45,800	47,100	46,400
(I)	Isokinetic Variation	%	93.5	94.7	96.8	

TABLE X-X
PARTICULATE EMISSIONS SUMMARY
KILN #4; EXHAUST STACK, Page 2
VIRGINIA SOLITE, CASCADE VA

filename:BIGMETH5.wk1

Symbol	SAMPLING PARAMETERS	Units	RUN NO.==> K4-1	K4-2	K4-3	AVERAGE
			DATE==> 6/16/92	6/16/92	6/16/92	
			RUN TIME==> 1050-1301	1457-1632	1920-2125	
	PARTICULATE COLLECTION ANALYSIS					
(Wfi)	Tare Weight of Filter	g	0.36410	0.36780	0.36580	
(Wff)	Final Filter Weight	g	0.36410	0.36790	0.36690	
(mf)	Weight on Filter	mg	0	0.1	1.1	
(Wai)	Acetone Rinse Tare Weight	g	119.3034	109.5081	119.5735	
(Waf)	Acetone Rinse Final Weight	g	119.3171	109.5178	119.6088	
(ma)	Weight in Acetone Rinse	mg	13.7	9.7	35.3	
(Vaw)	Acetone Volume Used in Rinse	mL	175	180	155	
(Va)	Acetone Volume Used in Blank	mL	100	100	100	
(Wa)	Weight in Acetone Blank	g	0.0037	0.0037	0.0037	
(Ca)	Acetone Blank Correction	g/mL	0.00001	0.00001	0.00001	
(mn)	Total Particulate Collected	mg	13.70	9.80	36.40	19.97
	Conc. of Particulate in Gas Sample	mg/CMeter	5.616554	3.956512	14.19724	7.92
	Grains per Dry Standard Cubic Feet	gr./DSCF	0.002454	0.001729	0.006203	0.00
	Grains per DSCF @ 7% O2	gr./DSCF	0.006822	0.004806	0.018346	0.01
	Total Particulate flow in Stack	Lbs./hr.	0.571017	0.402245	1.461097	0.81
	CHLORINE AND HCL RECOVERY DATA					
	Volume in H2SO4 Impinger	mL	510	520	490	
	Concentration of Cl In H2SO4 Impinger	mg/L	3245.77	3348.41	2843.41	
	Total Cl in H2SO4 Impinger	mg	1655.343	1741.173	1393.271	
	Volume in NaOH Impinger	mL	380	331	300	
	Concentration in NaOH Impinger	mg/L	86.71	1.44	69.44	
	Total Cl in NaOH Impinger	mg	32.9498	0.47664	20.832	
	Concentration of Cl in H2SO4 blank	mg/L	< 0.05	< 0.05	< 0.05	
	Concentration of Cl in NaOH blank	mg/L	< 0.05	< 0.05	< 0.05	
	Total HCl recovered	mg	1702.335	1790.602	1432.82	
	Total Cl2 recovered	mg	65.86532	0.473158	21.40828	
	Concentration of HCl in Gas Sample	mg/CMeter	697.9722	723.0171	558.8675	659.95
	Concentration of Cl2 in Gas Sample	mg/CMeter	27.00536	0.191054	8.350243	11.85
	Total HCl flow in Stack	Lbs./hr.	70.96053	73.50676	57.51537	67.33
	Total HCl flow in Stack	g/hr.	32216.08	33372.07	26111.98	30566.71
	Total Cl2 flow in Stack	Lbs./hr.	2.745546	0.019424	0.859358	1.21
	Total Cl2 flow in Stack	g/hr.	1246.478	8.818413	390.1485	548.48

TABLE X-X
HEXAVALENT CHROMIUM EMISSIONS SUMMARY
KILN #4, EXHAUST STACK
VIRGINIA SOLITE, CASCADE VA

filename:HEXCHROM.WQ1

	SAMPLING PARAMETERS	RUN NO.==> / DATE==> / RUN TIME==>	K4-1 6/16/92 1227-1333	K4-2 6/16/92 1645-1750	K4-3 6/16/92 2050-2155	AVERAGE
SYMBOL	MEASURED DATA AT STACK	UNITS				
(Y)	Dry Gas Meter Calibration Factor	--	0.998	0.998	0.998	
(Vi)	Initial Meter Volume	cf	238.821	337.038	420.882	
(Vf)	Final Meter Volume	cf	289.935	374.239	457.346	
(Lp)	Leak Check Correction	cfm	0	0	0	
(Vm)	Total Meter Volume	cf	51.114	37.201	36.464	41.593
(t)	Sampling Time	min.	60	60	60	60
(Vwc)	Volume of Water Collected	mL	93.5	107.6	122.1	107.7
(Vwsg)	Silica Gel Weight Increase	g	10.8	2.8	0.0	4.5
(Vlc)	Total Water Collected	mL	104.3	110.4	122.1	112.3
(Pbar)	Barometric Pressure	in. Hg	29.71	29.72	29.68	29.70
(Pg)	Stack Static Pressure	in. H2O	-0.51	-0.51	-0.51	
(¯H)	Avg. Orifice Pressure Drop ¯H	in. H2O	2.54	1.33	1.27	
(Ts)	Avg. Stack Gas Temperature	¯F	346.2	343.0	351.5	346.9
(Tm)	Avg. Dry Gas Meter Temperature	¯F	85.9	82.6	78.7	
(Dn)	Nozzle Diameter	inches	0.276	0.233	0.233	
(Ds)	Diameter of Stack	inches	52.000	52.000	52.000	
(W)	Width of Stack	inches	0.000	0.000	0.000	
(L)	Length of Stack	inches	0.000	0.000	0.000	
(Cp)	Pitot Tube Coefficient	--	0.84	0.84	0.84	
(¯p)§	Avg. Square Root Velocity Head ¯p	(in. H2O)§	0.794	0.794	0.775	
(%O2)	Stack Gas Oxygen	%	15.8	15.9	15.9	15.9
(%CO2)	Stack Gas Carbon Dioxide	%	5.4	5.0	4.8	5.1
(%N2)	Stack Gas Nitrogen	%	78.8	79.1	79.3	79.1
	CALCULATED STACK GAS DATA					
(Ps)	Stack Gas Pressure	in. Hg	29.67	29.68	29.64	29.67
(%Bws)	Stack Gas Moisture	%	9.1	12.7	14.0	11.9
(%B'w)	Moisture at Saturation	%	96.9	96.9	97.0	
(Vmstd)	Standard Dry Gas Meter Volume	dscf	48.911	35.827	35.323	40.020
(Md)	Dry Gas Molecular Weight	lb/lb-mole	29.50	29.44	29.40	29.45
(Ms)	Wet Gas Molecular Weight	lb/lb-mole	28.45	27.99	27.81	28.08
(vs)	Stack Gas Velocity	ft/s	55.72	56.06	55.22	55.7
(A)	Stack Area	ft2	14.75	14.75	14.75	
(Qsd)	Volumetric Gas Flow Rate	dscfm	29,100	28,300	27,100	28,167
(Qa)	Volumetric Gas Flow Rate	acfm	49,300	49,600	48,900	49,267
(I)	Isokinetic Variation	%	99.5	105.3	108.3	
	HEXAVALENT CHROMIUM Emissions Analysis					
	Volume in Impinger	mL	983	940	843	
	Conc. of Hex Chromium in KOH Impinger	mg/L	< 0.0015	0.00202	< 0.0015	
	Total Hex Chromium Recovered	mg	< 0.001475	0.001899	< 0.001265	
	Volume of Blank	ml	0	0	0	
	Concentration of Hex Chromium in blank	mg/L	0	0	0	
	Conc. of Hex Chromium in Gas Sample	mg/CMeter	< 0.001065	0.001872	< 0.001264	< 0.0014
	Total Flow of Hex Chromium in Stack	g/hr.	< 0.052756	0.0901	< 0.058351	< 0.067069
	Total Flow of Hex Chromium in Stack	Lbs./hr.	< 0.000116	0.000198	< 0.000129	< 0.000148

TABLE X-X
Metals Emissions Summary
KILN #4, EXHAUST STACK
VIRGINIA SOLITE, CASCADE VA

filename:METALS.WQ1

	SAMPLING PARAMETERS	RUN NO.==> / DATE==> / RUN TIME==>	K4-1 6/16/92 1050-1200	K4-2 6/16/92 1457-1611	K4-3 6/16/92 1920-2025	AVERAGE
SYMBOL	MEASURED DATA AT STACK	UNITS				
(Y)	Dry Gas Meter Calibration Factor	--	0.998	0.998	0.998	
(Vi)	Initial Meter Volume	cf	194.034	290.164	374.392	
(Vf)	Final Meter Volume	cf	238.646	336.538	420.678	
(Lp)	Leak Check Correction	cfm	0	0	0	
(Vm)	Total Meter Volume	cf	44.612	46.374	46.286	45.757
(t)	Sampling Time	min.	60	60	60	60
(Vwc)	Volume of Water Collected	mL	58.9	71.2	20.2	50.1
(Vwsg)	Silica Gel Weight Increase	g	46.2	44.5	47.6	46.1
(Vlc)	Total Water Collected	mL	105.1	115.7	67.8	96.2
(Pbar)	Barometric Pressure	in. Hg	29.62	29.71	29.68	29.67
(Pg)	Stack Static Pressure	in. H2O	-0.51	-0.51	-0.51	
($\bar{}$H)	Avg. Orifice Pressure Drop $\bar{}$H	in. H2O	1.96	2.10	2.09	
(Ts)	Avg. Stack Gas Temperature	$\bar{}$F	340.0	340.1	347.5	342.5
(Tm)	Avg. Dry Gas Meter Temperature	$\bar{}$F	81.0	84.5	79.3	
(Dn)	Nozzle Diameter	inches	0.263	0.263	0.259	
(Ds)	Diameter of Stack	inches	52.000	52.000	52.000	
(W)	Width of Stack	inches	0.000	0.000	0.000	
(L)	Length of Stack	inches	0.000	0.000	0.000	
(Cp)	Pitot Tube Coefficient	--	0.84	0.84	0.84	
($\bar{}$p)§	*Avg. Square Root Velocity Head $\bar{}$p*	*(in. H2O)§*	0.769	0.775	0.799	
(%O2)	Stack Gas Oxygen	%	16.2	15.8	16.3	16.1
(%CO2)	Stack Gas Carbon Dioxide	%	4.9	5.1	4.5	4.8
(%N2)	Stack Gas Nitrogen	%	78.9	79.1	79.2	79.1
	CALCULATED STACK GAS DATA					
(Ps)	Stack Gas Pressure	in. Hg	29.58	29.67	29.64	29.63
(%Bws)	Stack Gas Moisture	%	10.3	10.9	6.7	9.3
(%B'w)	Moisture at Saturation	%	97.2	96.9	97.0	
(Vmstd)	Standard Dry Gas Meter Volume	dscf	42.946	44.490	44.788	44.074
(Md)	Dry Gas Molecular Weight	lb/lb-mole	29.43	29.45	29.37	29.42
(Ms)	Wet Gas Molecular Weight	lb/lb-mole	28.25	28.20	28.62	28.36
(vs)	Stack Gas Velocity	ft/s	54.03	54.42	55.98	54.8
(A)	Stack Area	ft2	14.75	14.75	14.75	
(Qsd)	Volumetric Gas Flow Rate	dscfm	28,000	28,100	30,000	28,700
(Qa)	Volumetric Gas Flow Rate	acfm	47,800	48,200	49,500	48,500
(I)	Isokinetic Variation	%	100.1	103.3	100.5	

Metals Emissions — Kiln #4

Run 1

FlowRate dscfh	Sample Vol dscf		Front		Back		Total		ug/cmeter		Mass Flows lbs./hr.		g/hr.
1680000	42.946	Ag	1.15	<	0.915	<	2.065	<	1.698	<	0.000	<	0.081
1680000	42.946	As	1.12		0.715		1.835		1.509		0.000		0.072
1680000	42.946	Ba	2.85	<	2.62	<	5.47	<	4.498	<	0.000	<	0.214
1680000	42.946	Be	< 0.19	<	0.262	<	0.452	<	0.372	<	0.000	<	0.018
1680000	42.946	Cd	10.75		16.1		26.85		22.079		0.002		1.050
1680000	42.946	Cr	8.75		2.54		11.29		9.284		0.001		0.442
1680000	42.946	Pb	43.15		0.75		43.9		36.099		0.004		1.717
1680000	42.946	Sb	0.92		0.85		1.77		1.455		0.000		0.069
1680000	42.946	Tl	< 0.2	<	0.249	<	0.449	<	0.369	<	0.000	<	0.018
1680000	42.946	Hg	< 0.4		3.99	<	4.39	<	3.610	<	0.000	<	0.172

Run 2

FlowRate dscfh	Sample Vol dscf		Front		Back		Total		ug/cmeter		Mass Flows lbs./hr.		g/hr.
1686000	44.49	Ag	1.8	<	0.913	<	2.713	<	2.153	<	0.000	<	0.103
1686000	44.49	As	3.15		1.365		4.515		3.584		0.000		0.171
1686000	44.49	Ba	13.05	<	2.61	<	15.66	<	12.430	<	0.001	<	0.593
1686000	44.49	Be	0.793	<	0.261	<	1.054	<	0.837	<	0.000	<	0.040
1686000	44.49	Cd	35.15		3.43		38.58		30.623		0.003		1.462
1686000	44.49	Cr	16.05	<	1.57	<	17.62	<	13.986	<	0.001	<	0.668
1686000	44.49	Pb	239.4		7.25		246.65		195.762		0.021		9.347
1686000	44.49	Sb	0.32		1.44		1.76		1.397		0.000		0.067
1686000	44.49	Tl	< 0.2		0.347	<	0.547	<	0.434	<	0.000	<	0.021
1686000	44.49	Hg	< 0.4		3.18	<	3.58	<	2.842	<	0.000	<	0.136

Run 3

FlowRate dscfh	Sample Vol dscf		Front		Back		Total		ug/cmeter		Mass Flows lbs./hr.		g/hr.
1800000	44.788	Ag	1	<	0.905	<	1.905	<	1.502	<	0.000	<	0.077
1800000	44.788	As	1.33		0.575		1.905		1.502		0.000		0.077
1800000	44.788	Ba	9.6	<	2.58	<	12.18	<	9.604	<	0.001	<	0.490
1800000	44.788	Be	< 0.19	<	0.258	<	0.448	<	0.353	<	0.000	<	0.018
1800000	44.788	Cd	3.11		1.46		4.57		3.603		0.000		0.184
1800000	44.788	Cr	3.15	<	1.55	<	4.7	<	3.706	<	0.000	<	0.189
1800000	44.788	Pb	179.55		4.14		183.69		144.836		0.016		7.382
1800000	44.788	Sb	1.21		1.45		2.66		2.097		0.000		0.107
1800000	44.788	Tl	< 0.2		0.601	<	0.801	<	0.632	<	0.000	<	0.032
1800000	44.788	Hg	< 0.4		3.34	<	3.74	<	2.949	<	0.000	<	0.150

Note: ALL VALUES ARE CORRECTED FOR BLANKS PER SPECIFIED METHOD

For Explanation of Blank Correction Calculations

KILN 4

Run 1

	F(used)	F(Measu.)	Correction	Code
Ag	1.15	1.21	0.06	C
As	1.12	1.18	0.06	C
Ba	2.85	14.3	11.45	A
Be	< 0.19	< 0.2	0.01	C
Cd	10.75	22.2	11.45	A
Cr	8.75	20.2	11.45	A
Pb	43.15	54.6	11.45	A
Sb	0.92	0.97	0.05	C
Tl	< 0.2	< 0.2	0	B
Hg	< 0.4	< 0.4	0	B

Run 2

	F(used)	F(Measu.)	Correction	Code
Ag	1.8	1.89	0.09	C
As	3.15	3.32	0.17	C
Ba	13.05	24.5	11.45	A
Be	0.793	0.835	0.042	C
Cd	35.15	46.6	11.45	A
Cr	16.05	27.5	11.45	A
Pb	239.4	252	12.6	C
Sb	0.32	1.78	1.46	B
Tl	< 0.2	< 0.2	0	B
Hg	< 0.4	< 0.4	0	B

Run 3

	F(used)	F(Measu.),	Correction	Code
Ag	1	1.05	0.05	C
As	1.33	1.4	0.07	C
Ba	9.6	10.1	0.5	C
Be	< 0.19	< 0.2	0.01	C
Cd	3.11	3.27	0.16	C
Cr	3.15	14.6	11.45	A
Pb	179.55	191	11.45	A
Sb	1.21	1.27	0.06	C
Tl	< 0.2	< 0.2	0	B
Hg	< 0.4	< 0.4	0	B

For Explanation of Blank Correction Calculations

Kiln #4

RUN 1

	Back		B(Measu.)	Correction	Code
Ag	< 0.915	<	0.915	0	D
As	0.715		1.35	0.635	D
Ba	< 2.62	<	2.62	0	D
Be	< 0.262	<	0.262	0	D
Cd	16.1		16.1	0	D
Cr	2.54		2.54	0	D
Pb	0.75		1.75	1	E
Sb	0.85		0.85	0	D
Tl	< 0.249	<	0.262	0.013	F
Hg	3.99		5.95	1.96	D

RUN 2

	Back		B(Measu.)	Correction	Code
Ag	< 0.913	<	0.913	0	D
As	1.365		2	0.635	D
Ba	< 2.61	<	2.61	0	D
Be	< 0.261	<	0.261	0	D
Cd	3.43		3.43	0	D
Cr	< 1.57	<	1.57	0	D
Pb	7.25		8.25	1	E
Sb	1.44		1.44	0	D
Tl	0.347		0.365	0.018	F
Hg	3.18		5.14	1.96	D

RUN 3

	Back		B(Measu.)	Correction	Code
Ag	< 0.905	<	0.905	0	D
As	0.575		1.21	0.635	D
Ba	< 2.58	<	2.58	0	D
Be	< 0.258	<	0.258	0	D
Cd	1.46		1.46	0	D
Cr	< 1.55	<	1.55	0	D
Pb	4.14		5.14	1	E
Sb	1.45		1.45	0	D
Tl	0.601		0.633	0.032	F
Hg	3.34		5.3	1.96	D

BLANK

	F(measu.)		B(measu.)
Ag	4.14	<	1.01
As	5.04		0.635
Ba	27.1	<	2.88
Be	1.69	<	0.288
Cd	116	<	0.577
Cr	34.5	<	1.73
Pb	1020		2.6
Sb	1.46	<	0.721
Tl	< 0.2		0.736
Hg	< 0.4		1.96

Values Used in Blank Correction as per Method.

For Front Half

Code	Definition
A	A ug
B	M (fhb), when this value is expressed as a "less-than", a null value is used
C	5% of M (fh)

For Back Half

D	M (bhb), when this value is expressed as a "less-than", a null value is used
E	1 ug
F	5% of M (bh)

Particulate Spreadsheet

```
A1: U [W1] ||
B1: [W9] 'Name file for source (e.g.. /fs [esc] [esc] a:acmepm) if not already
O1: [W6] ||
P1: [W1] 'TO BEGIN, BLANK ALL FIELD DATA VALUES BY PRESSING ALT X
A2: U [W1] ||
B2: [W9] '    saved on floppy disk.
Q2: [W6] 'CALCULATIONS FOR SQUARE ROOT OF ~P FOR PITOT TUBE
AJ2: "TEMP
AK2: "VP H2O
A3: U [W1] ||
B3: [W9] 'Type [Alt M] to get a menu to: A) move around spreadsheet,
Q3: [W6] 'filename:
S3: [W6] +C14
AJ3: +"     "&@CHAR(176)&"F"
AK3: "in. Hg
A4: U [W1] ||
B4: [W9] '     B) print parts of spreadsheet, or C) get help instructions.
Q4: [W6] 'ENTER NUMBER OF POINTS===>
U4: (F0) U [W6] 24
AJ4: 50
AK4: 0.3626
A5: U [W1] ||
B5: [W9] 'Use arrow keys to go to desired cells.  Enter number and go to next
O5: [W6] \-
P5: [W1] ^|
Q5: [W6] \-
R5: [W7] \-
S5: [W6] \-
T5: [W8] \-
U5: [W6] \-
V5: [W1] ^|
W5: [W6] \-
X5: [W7] \-
Y5: [W6] \-
Z5: [W8] \-
AA5: [W6] \-
AB5: [W1] ^|
AC5: [W6] \-
AD5: [W7] \-
AE5: [W6] \-
AF5: [W8] \-
AG5: [W6] \-
AH5: [W1] ^|
AJ5: 51
AK5: 0.3764
A6: U [W1] ||
B6: [W9] '    cell.
P6: [W1] ^|
Q6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
V6: [W1] ^|
W6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
AB6: [W1] ^|
AC6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
AH6: [W1] ^|
AJ6: 52
AK6: 0.3906
A7: U [W1] ||
B7: [W9] 'You must enter ~p, ~H, stack gas T, and DGM T individual values from
O7: [W6] "POINT
P7: [W1] ^|
S7: [W6] +F14
V7: [W1] ^|
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Y7: [W6] +H14
AB7: [W1] ^|
AE7: [W6] +J14
AH7: [W1] ^|
AJ7: 53
AK7: 0.4052
A8: U [W1] ||
B8: [W9] '    the field data sheets.
O8: [W6] "NO.
P8: [W1] ^|
Q8: [W6] ^~p
R8: [W7] ^SQRT ~p
S8: [W6] ^~H
T8: [W8] ^Stack T
U8: [W6] ^DGM T
V8: [W1] ^|
W8: [W6] ^~p
X8: [W7] ^SQRT ~p
Y8: [W6] ^~H
Z8: [W8] ^Stack T
AA8: [W6] ^DGM T
AB8: [W1] ^|
AC8: [W6] ^~p
AD8: [W7] ^SQRT ~p
AE8: [W6] ^~H
AF8: [W8] ^Stack T
AG8: [W6] ^DGM T
AH8: [W1] ^|
AJ8: 54
AK8: 0.4203
C9: U [W41] 'TABLE X-X
O9: [W6] \-
P9: [W1] ^|
Q9: [W6] \-
R9: [W7] \-
S9: [W6] \-
T9: [W8] \-
U9: [W6] \-
V9: [W1] ^|
W9: [W6] \-
X9: [W7] \-
Y9: [W6] \-
Z9: [W8] \-
AA9: [W6] \-
AB9: [W1] ^|
AC9: [W6] \-
AD9: [W7] \-
AE9: [W6] \-
AF9: [W8] \-
AG9: [W6] \-
AH9: [W1] ^|
AJ9: 55
AK9: 0.4359
C10: U [W41] 'PARTICULATE EMISSIONS SUMMARY
O10: U [W6] 1
P10: [W1] ^|
Q10: (F2) U [W6] 0.75
R10: (F3) [W7] +Q10^0.5
S10: (F2) U [W6] 2.43
T10: U [W8] 355
U10: U [W6] 96
V10: [W1] ^|
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W10: (F2) U [W6] 0.73
X10: (F3) [W7] +W10^0.5
Y10: (F2) U [W6] 1.5
Z10: U [W8] 347
AA10: U [W6] 105
AB10: [W1] ^|
AC10: (F2) U [W6] 0.68
AD10: (F3) [W7] +AC10^0.5
AE10: (F2) U [W6] 1.43
AF10: U [W8] 334
AG10: U [W6] 100
AH10: [W1] ^|
AJ10: 56
AK10: 0.452
C11: U [W41] 'Kiln #2, Exhaust Stack
O11: U [W6] 2
P11: [W1] ^|
Q11: (F2) U [W6] 0.68
R11: (F3) [W7] +Q11^0.5
S11: (F2) U [W6] 2.21
T11: U [W8] 355
U11: U [W6] 97
V11: [W1] ^|
W11: (F2) U [W6] 0.75
X11: (F3) [W7] +W11^0.5
Y11: (F2) U [W6] 1.6
Z11: U [W8] 355
AA11: U [W6] 106
AB11: [W1] ^|
AC11: (F2) U [W6] 0.74
AD11: (F3) [W7] +AC11^0.5
AE11: (F2) U [W6] 1.56
AF11: U [W8] 340
AG11: U [W6] 101
AH11: [W1] ^|
AJ11: 57
AK11: 0.4586
C12: U [W41] 'Virginia Solite, Cascade VA
H12: [W9] '
O12: U [W6] 3
P12: [W1] ^|
Q12: (F2) U [W6] 0.6
R12: (F3) [W7] +Q12^0.5
S12: (F2) U [W6] 1.95
T12: U [W8] 357
U12: U [W6] 97
V12: [W1] ^|
W12: (F2) U [W6] 0.7
X12: (F3) [W7] +W12^0.5
Y12: (F2) U [W6] 1.5
Z12: U [W8] 355
AA12: U [W6] 106
AB12: [W1] ^|
AC12: (F2) U [W6] 0.68
AD12: (F3) [W7] +AC12^0.5
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```
AE12: (F2) U [W6] 1.43
AF12: U [W8] 341
AG12: U [W6] 101
AH12: [W1] ^|
AJ12: 58
AK12: 0.4858
O13: U [W6] 4
```

```
P13: [W1] ^|
Q13: (F2) U [W6] 0.56
R13: (F3) [W7] +Q13^0.5
S13: (F2) U [W6] 1.82
T13: U [W8] 357
U13: U [W6] 101
V13: [W1] ^|
W13: (F2) U [W6] 0.64
X13: (F3) [W7] +W13^0.5
Y13: (F2) U [W6] 1.4
Z13: U [W8] 355
AA13: U [W6] 107
AB13: [W1] ^|
AC13: (F2) U [W6] 0.65
AD13: (F3) [W7] +AC13^0.5
AE13: (F2) U [W6] 1.37
AF13: U [W8] 342
AG13: U [W6] 101
AH13: [W1] ^|
AJ13: 59
AK13: 0.5035
B14: [W9] 'filename:
C14: U [W41] 'BIGMETH5.wk1
D14: [W10] "RUN NO.==>
F14: U [W9] 'K2-1
H14: U [W9] 'K2-2
I14: U [W2] '
J14: U [W9] 'K2-3
O14: U [W6] 5
P14: [W1] ^|
Q14: (F2) U [W6] 0.52
R14: (F3) [W7] +Q14^0.5
S14: (F2) U [W6] 1.69
T14: U [W8] 356
U14: U [W6] 102
V14: [W1] ^|
W14: (F2) U [W6] 0.58
X14: (F3) [W7] +W14^0.5
Y14: (F2) U [W6] 1.2
Z14: U [W8] 355
AA14: U [W6] 107
AB14: [W1] ^|
AC14: (F2) U [W6] 0.53
AD14: (F3) [W7] +AC14^0.5
AE14: (F2) U [W6] 1.07
AF14: U [W8] 342
AG14: U [W6] 101
AH14: [W1] ^|
AJ14: 60
AK14: 0.5218
D15: [W10] "DATE==>
F15: U [W9] '6/18/92
H15: U [W9] '6/18/92
J15: U [W9] '6/18/92
O15: U [W6] 6
P15: [W1] ^|
Q15: (F2) U [W6] 0.56
R15: (F3) [W7] +Q15^0.5
S15: (F2) U [W6] 1.82
T15: U [W8] 358
U15: U [W6] 103
V15: [W1] ^|
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```
W15: (F2) U [W6] 0.53
X15: (F3) [W7] +W15^0.5
Y15: (F2) U [W6] 1.1
Z15: U [W8] 356
AA15: U [W6] 107
AB15: [W1] ^|
AC15: (F2) U [W6] 0.55
AD15: (F3) [W7] +AC15^0.5
AE15: (F2) U [W6] 1.16
AF15: U [W8] 344
AG15: U [W6] 101
AH15: [W1] ^|
AJ15: 61
AK15: 0.5407
C16: [W41] 'SAMPLING PARAMETERS
D16: [W10] "RUN TIME==>
F16: U [W9] '831-1203
H16: U [W9] '1255-1502
J16: U [W9] '1555-1752
L16: [W9] ^AVERAGE
O16: U [W6] 7
P16: [W1] ^|
Q16: (F2) U [W6] 0.73
R16: (F3) [W7] +Q16^0.5
S16: (F2) U [W6] 2.37
T16: U [W8] 358
U16: U [W6] 104
V16: [W1] ^|
W16: (F2) U [W6] 0.78
X16: (F3) [W7] +W16^0.5
Y16: (F2) U [W6] 1.6
Z16: U [W8] 356
AA16: U [W6] 107
AB16: [W1] ^|
AC16: (F2) U [W6] 0.61
AD16: (F3) [W7] +AC16^0.5
AE16: (F2) U [W6] 1.28
AF16: U [W8] 344
AG16: U [W6] 101
AH16: [W1] ^|
AJ16: 62
AK16: 0.5601
B17: [W9] \-
C17: [W41] \-
D17: [W10] \-
E17: [W2] \-
F17: [W9] \-
G17: [W2] \-
H17: [W9] \-
I17: [W2] \-
J17: [W9] \-
K17: [W2] \-
L17: [W9] \-
O17: U [W6] 8
P17: [W1] ^|
Q17: (F2) U [W6] 1
R17: (F3) [W7] +Q17^0.5
S17: (F2) U [W6] 3.25
T17: U [W8] 355
U17: U [W6] 105
V17: [W1] ^|
W17: (F2) U [W6] 0.89
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```
X17: (F3) [W7] +W17^0.5
Y17: (F2) U [W6] 1.9
Z17: U [W8] 359
AA17: U [W6] 107
AB17: [W1] ^|
AC17: (F2) U [W6] 0.74
AD17: (F3) [W7] +AC17^0.5
AE17: (F2) U [W6] 1.56
AF17: U [W8] 345
AG17: U [W6] 101
AH17: [W1] ^|
AJ17: 63
AK17: 0.5802
B18: [W9] ^SYMBOL
C18: [W41] 'MEASURED DATA AT STACK
D18: [W10] ^UNITS
O18: U [W6] 9
P18: [W1] ^|
Q18: (F2) U [W6] 0.64
R18: (F3) [W7] +Q18^0.5
S18: (F2) U [W6] 2.08
T18: U [W8] 278
U18: U [W6] 105
V18: [W1] ^|
W18: (F2) U [W6] 0.83
X18: (F3) [W7] +W18^0.5
Y18: (F2) U [W6] 1.8
Z18: U [W8] 357
AA18: U [W6] 108
AB18: [W1] ^|
AC18: (F2) U [W6] 0.84
AD18: (F3) [W7] +AC18^0.5
AE18: (F2) U [W6] 1.77
AF18: U [W8] 342
AG18: U [W6] 101
AH18: [W1] ^|
AJ18: 64
AK18: 0.6009
B19: [W9] ^(Y)
C19: [W41] 'Dry Gas Meter Calibration Factor
D19: [W10] ^--
F19: U [W9] 0.998
H19: U [W9] +F19
J19: U [W9] +F19
O19: U [W6] 10
P19: [W1] ^|
Q19: (F2) U [W6] 0.9
R19: (F3) [W7] +Q19^0.5
S19: (F2) U [W6] 2.92
```

```
T19: U [W8] 281
U19: U [W6] 105
V19: [W1] ^|
W19: (F2) U [W6] 0.75
X19: (F3) [W7] +W19^0.5
Y19: (F2) U [W6] 1.6
Z19: U [W8] 333
AA19: U [W6] 108
AB19: [W1] ^|
AC19: (F2) U [W6] 0.84
AD19: (F3) [W7] +AC19^0.5
AE19: (F2) U [W6] 1.77
AF19: U [W8] 333
```

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AG19: U [W6] 102
AH19: [W1] ^|
AJ19: 65
AK19: 0.6222
B20: [W9] ^(Vi)
C20: [W41] 'Initial Meter Volume
D20: [W10] ^cf
F20: (F3) U [W9] 614.585
H20: (F3) U [W9] 708.578
J20: (F3) U [W9] 785.62
O20: U [W6] 11
P20: [W1] ^|
Q20: (F2) U [W6] 0.68
R20: (F3) [W7] +Q20^0.5
S20: (F2) U [W6] 2.21
T20: U [W8] 286
U20: U [W6] 104
V20: [W1] ^|
W20: (F2) U [W6] 0.78
X20: (F3) [W7] +W20^0.5
Y20: (F2) U [W6] 1.6
Z20: U [W8] 350
AA20: U [W6] 108
AB20: [W1] ^|
AC20: (F2) U [W6] 0.8
AD20: (F3) [W7] +AC20^0.5
AE20: (F2) U [W6] 1.68
AF20: U [W8] 326
AG20: U [W6] 103
AH20: [W1] ^|
AJ20: 66
AK20: 0.6442
A21: U [W1] ||
C21: [W41] '  IF NO INTERMEDIATE LEAK CHECK WAS DONE. ENTER 0
F21: [W9] 0
O21: U [W6] 12
P21: [W1] ^|
Q21: (F2) U [W6] 0.56
R21: (F3) [W7] +Q21^0.5
S21: (F2) U [W6] 1.82
T21: U [W8] 288
U21: U [W6] 96
V21: [W1] ^|
W21: (F2) U [W6] 0.76
X21: (F3) [W7] +W21^0.5
Y21: (F2) U [W6] 1.6
Z21: U [W8] 282
```

```
AA21: U [W6] 107
AB21: [W1] ^|
AC21: (F2) U [W6] 0.56
AD21: (F3) [W7] +AC21^0.5
AE21: (F2) U [W6] 1.18
AF21: U [W8] 318
AG21: U [W6] 103
AH21: [W1] ^|
AJ21: 67
AK21: 0.6669
A22: U [W1] ||
C22: [W41] 'Volume Before Intermed Leak Check
D22: [W10] ^cf
F22: U [W9] 0
O22: U [W6] 13
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```
P22: [W1] ^|
Q22: (F2) U [W6] 0.45
R22: (F3) [W7] +Q22^0.5
S22: (F2) U [W6] 1.39
T22: U [W8] 347
U22: U [W6] 103
V22: [W1] ^|
W22: (F2) U [W6] 0.47
X22: (F3) [W7] +W22^0.5
Y22: (F2) U [W6] 0.99
Z22: U [W8] 320
AA22: U [W6] 106
AB22: [W1] ^|
AC22: (F2) U [W6] 0.46
AD22: (F3) [W7] +AC22^0.5
AE22: (F2) U [W6] 0.97
AF22: U [W8] 329
AG22: U [W6] 102
AH22: [W1] ^|
AJ22: 68
AK22: 0.6903
A23: U [W1] ||
C23: [W41] 'Volume After Intermed Leak Check
D23: [W10] ^cf
F23: U [W9] 0
H23: U [W9] 0
J23: U [W9] 0
O23: U [W6] 14
P23: [W1] ^|
Q23: (F2) U [W6] 0.62
R23: (F3) [W7] +Q23^0.5
S23: (F2) U [W6] 2.01
T23: U [W8] 355
U23: U [W6] 103
V23: [W1] ^|
W23: (F2) U [W6] 0.53
X23: (F3) [W7] +W23^0.5
Y23: (F2) U [W6] 1.1
Z23: U [W8] 329
AA23: U [W6] 108
AB23: [W1] ^|
AC23: (F2) U [W6] 0.42
AD23: (F3) [W7] +AC23^0.5
AE23: (F2) U [W6] 0.89
AF23: U [W8] 343
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AG23: U [W6] 102
AH23: [W1] ^|
AJ23: 69
AK23: 0.7144
B24: [W9] ^(Vf)
C24: [W41] 'Final Meter Volume
D24: [W10] ^cf
F24: (F3) U [W9] 708.276
H24: (F3) U [W9] 785.369
J24: (F3) U [W9] 858.522
O24: U [W6] 15
P24: [W1] ^|
Q24: (F2) U [W6] 0.64
R24: (F3) [W7] +Q24^0.5
S24: (F2) U [W6] 2.08
T24: U [W8] 355
U24: U [W6] 102
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```
V24: [W1] ^|
W24: (F2) U [W6] 0.52
X24: (F3) [W7] +W24^0.5
Y24: (F2) U [W6] 1.1
Z24: U [W8] 332
AA24: U [W6] 108
AB24: [W1] ^|
AC24: (F2) U [W6] 0.45
AD24: (F3) [W7] +AC24^0.5
AE24: (F2) U [W6] 0.95
AF24: U [W8] 347
AG24: U [W6] 102
AH24: [W1] ^|
AJ24: 70
AK24: 0.7392
B25: [W9] ^(Lp)
C25: [W41] 'Leak Check Correction
D25: [W10] ^cfm
F25: U [W9] 0
H25: U [W9] 0
J25: U [W9] 0
O25: U [W6] 16
P25: [W1] ^|
Q25: (F2) U [W6] 0.58
R25: (F3) [W7] +Q25^0.5
S25: (F2) U [W6] 1.88
T25: U [W8] 353
U25: U [W6] 101
V25: [W1] ^|
W25: (F2) U [W6] 0.56
X25: (F3) [W7] +W25^0.5
Y25: (F2) U [W6] 1.2
Z25: U [W8] 334
AA25: U [W6] 109
AB25: [W1] ^|
AC25: (F2) U [W6] 0.48
AD25: (F3) [W7] +AC25^0.5
AE25: (F2) U [W6] 1.01
AF25: U [W8] 348
AG25: U [W6] 103
AH25: [W1] ^|
AJ25: 71
AK25: 0.7648

A26: U [W1] ||
C26: [W41] ||
F26: (H) [W9] @IF(F25-0.02>0,F25,0)
H26: (H) [W9] @IF(H25-0.02>0,H25,0)
J26: (H) [W9] @IF(J25-0.02>0,J25,0)
O26: U [W6] 17
P26: [W1] ^|
Q26: (F2) U [W6] 0.55
R26: (F3) [W7] +Q26^0.5
S26: (F2) U [W6] 1.78
T26: U [W8] 355
U26: U [W6] 101
V26: [W1] ^|
W26: (F2) U [W6] 0.54
X26: (F3) [W7] +W26^0.5
Y26: (F2) U [W6] 1.1
Z26: U [W8] 339
AA26: U [W6] 109
AB26: [W1] ^|
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AC26: (F2) U [W6] 0.48
AD26: (F3) [W7] +AC26^0.5
AE26: (F2) U [W6] 1.01
AF26: U [W8] 347
AG26: U [W6] 104
AH26: [W1] ^|
AJ26: 72
AK26: 0.7912
B27: [W9] ^(Vm)
C27: [W41] 'Total Meter Volume
D27: [W10] ^cf
F27: (F3) [W9] (F24-F23)+(F22-F20)-(0.02-F24)*F26
H27: (F3) [W9] (H24-H23)+(H22-H20)-(0.02-H24)*H26
J27: (F3) [W9] (J24-J23)+(J22-J20)-(0.02-J24)*J26
L27: (F3) [W9] @AVG(F27..J27)
O27: U [W6] 18
P27: [W1] ^|
Q27: (F2) U [W6] 0.53
R27: (F3) [W7] +Q27^0.5
S27: (F2) U [W6] 1.72
T27: U [W8] 358
U27: U [W6] 101
V27: [W1] ^|
W27: (F2) U [W6] 0.54
X27: (F3) [W7] +W27^0.5
Y27: (F2) U [W6] 1.1
Z27: U [W8] 342
AA27: U [W6] 109
AB27: [W1] ^|
AC27: (F2) U [W6] 0.47
AD27: (F3) [W7] +AC27^0.5
AE27: (F2) U [W6] 0.99
AF27: U [W8] 347
AG27: U [W6] 105
AH27: [W1] ^|
AJ27: 73
AK27: 0.8183
B28: [W9] ^(t)
C28: [W41] 'Sampling Time
D28: [W10] ^min.
F28: U [W9] 120

H28: U [W9] 120
J28: U [W9] 120
L28: (F0) [W9] @AVG(F28..J28)
O28: U [W6] 19
P28: [W1] ^|
Q28: (F2) U [W6] 0.72
R28: (F3) [W7] +Q28^0.5
S28: (F2) U [W6] 2.34
T28: U [W8] 358
U28: U [W6] 102
V28: [W1] ^|
W28: (F2) U [W6] 0.91
X28: (F3) [W7] +W28^0.5
Y28: (F2) U [W6] 1.9
Z28: U [W8] 342
AA28: U [W6] 108
AB28: [W1] ^|
AC28: (F2) U [W6] 0.49
AD28: (F3) [W7] +AC28^0.5
AE28: (F2) U [W6] 1.03
AF28: U [W8] 348
```

```
AG28: U [W6] 105
AH28: [W1] ^|
AJ28: 74
AK28: 0.8462
B29: [W9] ^(Vwc)
C29: [W41] 'Volume of Water Collected
D29: [W10] ^mL
F29: (F1) U [W9] (F31-F30)
H29: (F1) U [W9] (H31-H30)
J29: (F1) U [W9] (J31-J30)
L29: (F1) [W9] @AVG(F29..J29)
O29: U [W6] 20
P29: [W1] ^|
Q29: (F2) U [W6] 0.93
R29: (F3) [W7] +Q29^0.5
S29: (F2) U [W6] 3.02
T29: U [W8] 357
U29: U [W6] 103
V29: [W1] ^|
W29: (F2) U [W6] 1.2
X29: (F3) [W7] +W29^0.5
Y29: (F2) U [W6] 2.5
Z29: U [W8] 346
AA29: U [W6] 107
AB29: [W1] ^|
AC29: (F2) U [W6] 0.52
AD29: (F3) [W7] +AC29^0.5
AE29: (F2) U [W6] 1.09
AF29: U [W8] 351
AG29: U [W6] 106
AH29: [W1] ^|
AJ29: 75
AK29: 0.875
B30: [W9] ^(Vwsg)
C30: [W41] 'Silica Gel Weight Increase
D30: [W10] ^g
F30: (F1) U [W9] 19.7
H30: (F1) U [W9] 14.2
J30: (F1) U [W9] 16.3

L30: (F1) [W9] @AVG(F30..J30)
O30: U [W6] 21
P30: [W1] ^|
Q30: (F2) U [W6] 1.1
R30: (F3) [W7] +Q30^0.5
S30: (F2) U [W6] 3.57
T30: U [W8] 353
U30: U [W6] 103
V30: [W1] ^|
W30: (F2) U [W6] 1.1
X30: (F3) [W7] +W30^0.5
Y30: (F2) U [W6] 2.3
Z30: U [W8] 344
AA30: U [W6] 106
AB30: [W1] ^|
AC30: (F2) U [W6] 0.66
AD30: (F3) [W7] +AC30^0.5
AE30: (F2) U [W6] 1.39
AF30: U [W8] 354
AG30: U [W6] 106
AH30: [W1] ^|
AJ30: 76
AK30: 0.9046
```

```
B31: [W9] ^(Vlc)
C31: [W41] 'Total Water Collected
D31: [W10] ^mL
F31: (F1) [W9] 119.8
H31: (F1) [W9] 101.2
J31: (F1) [W9] 106.3
L31: (F1) [W9] @AVG(F31..J31)
O31: U [W6] 22
P31: [W1] ^|
Q31: (F2) U [W6] 1.2
R31: (F3) [W7] +Q31^0.5
S31: (F2) U [W6] 3.9
T31: U [W8] 328
U31: U [W6] 104
V31: [W1] ^|
W31: (F2) U [W6] 0.06
X31: (F3) [W7] +W31^0.5
Y31: (F2) U [W6] 0.13
Z31: U [W8] 335
AA31: U [W6] 105
AB31: [W1] ^|
AC31: (F2) U [W6] 0.67
AD31: (F3) [W7] +AC31^0.5
AE31: (F2) U [W6] 1.41
AF31: U [W8] 353
AG31: U [W6] 106
AH31: [W1] ^|
AJ31: 77
AK31: 0.9352
B32: [W9] ^(Pbar)
C32: [W41] 'Barometric Pressure
D32: [W10] ^in. Hg
F32: (F2) U [W9] 29.6
H32: (F2) U [W9] 29.6
J32: (F2) U [W9] 29.5
L32: (F2) [W9] @AVG(F32..J32)
O32: U [W6] 23
```

```
P32: [W1] ^|
Q32: (F2) U [W6] 1.2
R32: (F3) [W7] +Q32^0.5
S32: (F2) U [W6] 3.9
T32: U [W8] 326
U32: U [W6] 104
V32: [W1] ^|
W32: (F2) U [W6] 0.78
X32: (F3) [W7] +W32^0.5
Y32: (F2) U [W6] 1.6
Z32: U [W8] 330
AA32: U [W6] 104
AB32: [W1] ^|
AC32: (F2) U [W6] 0.92
AD32: (F3) [W7] +AC32^0.5
AE32: (F2) U [W6] 1.94
AF32: U [W8] 349
AG32: U [W6] 106
AH32: [W1] ^|
AJ32: 78
AK32: 0.9666
B33: [W9] ^(Pg)
C33: [W41] 'Stack Static Pressure
D33: [W10] ^in. H2O
F33: U [W9] -0.51
```

```
G33: U [W2] '
H33: U [W9] -0.51
J33: U [W9] -0.51
O33: U [W6] 24
P33: [W1] ^|
Q33: (F2) U [W6] 0.79
R33: (F3) [W7] +Q33^0.5
S33: (F2) U [W6] 2.56
T33: U [W8] 320
U33: U [W6] 105
V33: [W1] ^|
W33: (F2) U [W6] 0.79
X33: (F3) [W7] +W33^0.5
Y33: (F2) U [W6] 1.7
Z33: U [W8] 329
AA33: U [W6] 105
AB33: [W1] ^|
AC33: (F2) U [W6] 1
AD33: (F3) [W7] +AC33^0.5
AE33: (F2) U [W6] 2.11
AF33: U [W8] 284
AG33: U [W6] 107
AH33: [W1] ^|
AJ33: 79
AK33: 0.9989
B34: [W9] ^(¯H)
C34: [W41] 'Avg. Orifice Pressure Drop ¯H
D34: [W10] ^in. H2O
F34: (F2) [W9] 2.36
G34: (F2) [W2] '
H34: (F2) [W9] 1.46
J34: (F2) [W9] 1.34
O34: U [W6] 25
P34: [W1] ^|
R34: (F3) [W7] +Q34^0.5
```

```
V34: [W1] ^|
X34: (F3) [W7] +W34^0.5
AB34: [W1] ^|
AD34: (F3) [W7] +AC34^0.5
AH34: [W1] ^|
AJ34: 80
AK34: 1.032
B35: [W9] ^(Ts)
C35: [W41] 'Avg. Stack Gas Temperature
D35: [W10] +"     "&@CHAR(176)&"F"
F35: (F1) [W9] 339.5
H35: (F1) [W9] 340.9
J35: (F1) [W9] 339.6
L35: (F1) [W9] @AVG(F35..J35)
O35: U [W6] 26
P35: [W1] ^|
R35: (F3) [W7] +Q35^0.5
V35: [W1] ^|
X35: (F3) [W7] +W35^0.5
AB35: [W1] ^|
AD35: (F3) [W7] +AC35^0.5
AH35: [W1] ^|
AJ35: 81
AK35: 1.066
B36: [W9] ^(Tm)
C36: [W41] 'Avg. Dry Gas Meter Temperature
D36: [W10] +"     "&@CHAR(176)&"F"
```

```
F36: (F1) [W9] 102
H36: (F1) [W9] 107
J36: (F1) [W9] 102.9
O36: U [W6] 27
P36: [W1] ^|
R36: (F3) [W7] +Q36^0.5
V36: [W1] ^|
X36: (F3) [W7] +W36^0.5
AB36: [W1] ^|
AD36: (F3) [W7] +AC36^0.5
AH36: [W1] ^|
AJ36: 82
AK36: 1.102
B37: [W9] ^(Dn)
C37: [W41] 'Nozzle Diameter
D37: [W10] ^inches
F37: (F3) U [W9] 0.259
H37: (F3) U [W9] 0.235
J37: (F3) U [W9] 0.235
O37: U [W6] 28
P37: [W1] ^|
R37: (F3) [W7] +Q37^0.5
V37: [W1] ^|
X37: (F3) [W7] +W37^0.5
AB37: [W1] ^|
AD37: (F3) [W7] +AC37^0.5
AH37: [W1] ^|
AJ37: 83
AK37: 1.138
A38: U [W1] ||
C38: [W41] '  FOR STACK DIMENSIONS, ENTER 0 WHERE SIZE IS NOT APPROPRIATE
O38: U [W6] 29
P38: [W1] ^|
```

```
R38: (F3) [W7] +Q38^0.5
V38: [W1] ^|
X38: (F3) [W7] +W38^0.5
AB38: [W1] ^|
AD38: (F3) [W7] +AC38^0.5
AH38: [W1] ^|
AJ38: 84
AK38: 1.175
B39: [W9] ^(Ds)
C39: [W41] 'Diameter of Stack
D39: [W10] ^inches
F39: (F3) U [W9] 52
H39: (F3) U [W9] 52
J39: (F3) U [W9] 52
O39: U [W6] 30
P39: [W1] ^|
R39: (F3) [W7] +Q39^0.5
V39: [W1] ^|
X39: (F3) [W7] +W39^0.5
AB39: [W1] ^|
AD39: (F3) [W7] +AC39^0.5
AH39: [W1] ^|
AJ39: 85
AK39: 1.213
B40: [W9] ^(W)
C40: [W41] 'Width of Stack
D40: [W10] ^inches
F40: (F3) U [W9] 0
H40: (F3) U [W9] 0
```

```
J40: (F3) U [W9] 0
O40: U [W6] 31
P40: [W1] ^|
R40: (F3) [W7] +Q40^0.5
V40: [W1] ^|
X40: (F3) [W7] +W40^0.5
AB40: [W1] ^|
AD40: (F3) [W7] +AC40^0.5
AH40: [W1] ^|
AJ40: 86
AK40: 1.253
B41: [W9] ^(L)
C41: [W41] 'Length of Stack
D41: [W10] ^inches
F41: (F3) U [W9] 0
H41: (F3) U [W9] 0
J41: (F3) U [W9] 0
O41: U [W6] 32
P41: [W1] ^|
R41: (F3) [W7] +Q41^0.5
V41: [W1] ^|
X41: (F3) [W7] +W41^0.5
AB41: [W1] ^|
AD41: (F3) [W7] +AC41^0.5
AH41: [W1] ^|
AJ41: 87
AK41: 1.293
B42: [W9] ^(Cp)
C42: [W41] 'Pitot Tube Coefficient
D42: [W10] ^--
F42: (F2) U [W9] 0.84
```

```
H42: (F2) U [W9] +F42
J42: (F2) U [W9] +F42
O42: U [W6] 33
P42: [W1] ^|
R42: (F3) [W7] +Q42^0.5
V42: [W1] ^|
X42: (F3) [W7] +W42^0.5
AB42: [W1] ^|
AD42: (F3) [W7] +AC42^0.5
AH42: [W1] ^|
AJ42: 88
AK42: 1.335
B43: [W9] ^(¯p)§
C43: [W41] 'Avg. Square Root Velocity Head ¯p
D43: [W10] ^(in. H2O)§
F43: (F3) [W9] 0.845
H43: (F3) [W9] 0.82
J43: (F3) [W9] 0.791
O43: U [W6] 34
P43: [W1] ^|
R43: (F3) [W7] +Q43^0.5
V43: [W1] ^|
X43: (F3) [W7] +W43^0.5
AB43: [W1] ^|
AD43: (F3) [W7] +AC43^0.5
AH43: [W1] ^|
AJ43: 89
AK43: 1.378
B44: [W9] ^(%O2)
C44: [W41] 'Stack Gas Oxygen
D44: [W10] ^%
```

```
F44: (F1) U [W9] 17
H44: (F1) U [W9] 17.2
I44: (F1) U [W2] '
J44: (F1) U [W9] 17.2
L44: (F1) [W9] (F44+H44+J44)/3
O44: U [W6] 35
P44: [W1] ^|
R44: (F3) [W7] +Q44^0.5
V44: [W1] ^|
X44: (F3) [W7] +W44^0.5
AB44: [W1] ^|
AD44: (F3) [W7] +AC44^0.5
AH44: [W1] ^|
AJ44: 90
AK44: 1.422
B45: [W9] ^(%CO2)
C45: [W41] 'Stack Gas Carbon Dioxide
D45: [W10] ^%
F45: (F1) U [W9] 3.9
H45: (F1) U [W9] 3.6
J45: (F1) U [W9] 3.5
L45: (F1) [W9] @AVG(F45..J45)
O45: U [W6] 36
P45: [W1] ^|
R45: (F3) [W7] +Q45^0.5
V45: [W1] ^|
X45: (F3) [W7] +W45^0.5
AB45: [W1] ^|
AD45: (F3) [W7] +AC45^0.5
```

```
AH45: [W1] ^|
AJ45: 91
AK45: 1.467
B46: [W9] ^(%N2)
C46: [W41] 'Stack Gas Nitrogen
D46: [W10] ^%
F46: (F1) U [W9] 100-F44-F45
H46: (F1) U [W9] 100-H44-H45
J46: (F1) U [W9] 100-J44-J45
L46: (F1) [W9] @AVG(F46..J46)
O46: U [W6] 37
P46: [W1] ^|
R46: (F3) [W7] +Q46^0.5
V46: [W1] ^|
X46: (F3) [W7] +W46^0.5
AB46: [W1] ^|
AD46: (F3) [W7] +AC46^0.5
AH46: [W1] ^|
AJ46: 92
AK46: 1.513
A47: U [W1] ||
B47: [W9] ^(ppmCO)
C47: [W41] 'Stack Gas Carbon Monoxide
D47: [W10] ^ppm
F47: U [W9] 0
H47: U [W9] 0
J47: U [W9] 0
L47: (F1) [W9] @AVG(F47..J47)
O47: U [W6] 38
P47: [W1] ^|
R47: (F3) [W7] +Q47^0.5
V47: [W1] ^|
X47: (F3) [W7] +W47^0.5
```

```
AB47: [W1] ^|
AD47: (F3) [W7] +AC47^0.5
AH47: [W1] ^|
AJ47: 93
AK47: 1.561
O48: U [W6] 39
P48: [W1] ^|
R48: (F3) [W7] +Q48^0.5
V48: [W1] ^|
X48: (F3) [W7] +W48^0.5
AB48: [W1] ^|
AD48: (F3) [W7] +AC48^0.5
AH48: [W1] ^|
AJ48: 94
AK48: 1.61
C49: [W41] 'CALCULATED STACK GAS DATA
O49: U [W6] 40
P49: [W1] ^|
R49: (F3) [W7] +Q49^0.5
V49: [W1] ^|
X49: (F3) [W7] +W49^0.5
AB49: [W1] ^|
AD49: (F3) [W7] +AC49^0.5
AH49: [W1] ^|
AJ49: 95
AK49: 1.66
B50: [W9] ^(Ps)

C50: [W41] 'Stack Gas Pressure
D50: [W10] ^in. Hg
F50: (F2) [W9] (F33/13.6+F32)
H50: (F2) [W9] (H33/13.6+H32)
J50: (F2) [W9] (J33/13.6+J32)
L50: (F2) [W9] @AVG(F50..J50)
O50: U [W6] 41
P50: [W1] ^|
R50: (F3) [W7] +Q50^0.5
V50: [W1] ^|
X50: (F3) [W7] +W50^0.5
AB50: [W1] ^|
AD50: (F3) [W7] +AC50^0.5
AH50: [W1] ^|
AJ50: 96
AK50: 1.712
B51: [W9] ^(%Bws)
C51: [W41] 'Stack Gas Moisture
D51: [W10] ^%
F51: (F1) [W9] (F31*0.04707)/((F31*0.04707)+F53)*100
H51: (F1) [W9] (H31*0.04707)/((H31*0.04707)+H53)*100
J51: (F1) [W9] (J31*0.04707)/((J31*0.04707)+J53)*100
L51: (F1) [W9] @AVG(F51..J51)
O51: U [W6] 42
P51: [W1] ^|
R51: (F3) [W7] +Q51^0.5
V51: [W1] ^|
X51: (F3) [W7] +W51^0.5
AB51: [W1] ^|
AD51: (F3) [W7] +AC51^0.5
AH51: [W1] ^|
AJ51: 97
AK51: 1.765
B52: [W9] ^(%B'w)
C52: [W41] 'Moisture at Saturation
```

```
D52: [W10] ^%
F52: (F1) [W9] (@VLOOKUP(F35,$AJ$4..$AK$164,1)/(F50)*100)
H52: (F1) [W9] (@VLOOKUP(H35,$AJ$4..$AK$164,1)/(H50)*100)
J52: (F1) [W9] (@VLOOKUP(J35,$AJ$4..$AK$164,1)/(J50)*100)
O52: U [W6] 43
P52: [W1] ^|
R52: (F3) [W7] +Q52^0.5
V52: [W1] ^|
X52: (F3) [W7] +W52^0.5
AB52: [W1] ^|
AD52: (F3) [W7] +AC52^0.5
AH52: [W1] ^|
AJ52: 98
AK52: 1.819
B53: [W9] ^(Vmstd)
C53: [W41] 'Standard Dry Gas Meter Volume
D53: [W10] ^dscf
F53: (F3) [W9] (17.64*(F27)*F19*(F50)/(F36+460))
H53: (F3) [W9] (17.64*(H27)*H19*(H50)/(H36+460))
J53: (F3) [W9] (17.64*(J27)*J19*(J50)/(J36+460))
L53: (F3) [W9] @AVG(F53..J53)
O53: U [W6] 44
P53: [W1] ^|
R53: (F3) [W7] +Q53^0.5
V53: [W1] ^|

X53: (F3) [W7] +W53^0.5
AB53: [W1] ^|
AD53: (F3) [W7] +AC53^0.5
AH53: [W1] ^|
AJ53: 99
AK53: 1.875
B54: [W9] ^(Md)
C54: [W41] 'Dry Gas Molecular Weight
D54: [W10] ^lb/lb-mole
F54: (F2) [W9] (0.44*(F45)+0.32*(F44)+0.28*(F46+F47/10000))
H54: (F2) [W9] (0.44*(H45)+0.32*(H44)+0.28*(H46+H47/10000))
J54: (F2) [W9] (0.44*(J45)+0.32*(J44)+0.28*(J46+J47/10000))
L54: (F2) [W9] @AVG(F54..J54)
O54: U [W6] 45
P54: [W1] ^|
R54: (F3) [W7] +Q54^0.5
V54: [W1] ^|
X54: (F3) [W7] +W54^0.5
AB54: [W1] ^|
AD54: (F3) [W7] +AC54^0.5
AH54: [W1] ^|
AJ54: 100
AK54: 1.932
B55: [W9] ^(Ms)
C55: [W41] 'Wet Gas Molecular Weight
D55: [W10] ^lb/lb-mole
F55: (F2) [W9] (F54*(1-((F58*F51)+((-F58+1)*F52))/100))+18*(((F58*F51)+((-F58+1)*F52))/100)
H55: (F2) [W9] (H54*(1-((H58*H51)+((-H58+1)*H52))/100))+18*(((H58*H51)+((-H58+1)*H52))/100)
J55: (F2) [W9] (J54*(1-((J58*J51)+((-J58+1)*J52))/100))+18*(((J58*J51)+((-J58+1)*J52))/100)
L55: (F2) [W9] @AVG(F55..J55)
O55: U [W6] 46
P55: [W1] ^|
R55: (F3) [W7] +Q55^0.5
V55: [W1] ^|
X55: (F3) [W7] +W55^0.5
AB55: [W1] ^|
AD55: (F3) [W7] +AC55^0.5
```

```
AH55: [W1] ^|
AJ55: 101
AK55: 1.992
B56: [W9] ^(vs)
C56: [W41] 'Stack Gas Velocity
D56: [W10] ^ft/s
F56: (F2) [W9] (85.49*(F42)*(F43)*((F35+460)/((F50)*(F55)))^0.5)
H56: (F2) [W9] (85.49*(H42)*(H43)*((H35+460)/((H50)*(H55)))^0.5)
J56: (F2) [W9] (85.49*(J42)*(J43)*((J35+460)/((J50)*(J55)))^0.5)
L56: (F1) [W9] @AVG(F56..J56)
O56: U [W6] 47
P56: [W1] ^|
R56: (F3) [W7] +Q56^0.5
V56: [W1] ^|
X56: (F3) [W7] +W56^0.5
AB56: [W1] ^|
AD56: (F3) [W7] +AC56^0.5
AH56: [W1] ^|
AJ56: 102
AK56: 2.052
B57: [W9] ^(A)
C57: [W41] 'Stack Area
D57: [W10] ^ft2
```

```
F57: (F2) [W9] (+F39/24)^2*@PI+(F40*F41/144)
H57: (F2) [W9] (+H39/24)^2*@PI+(H40*H41/144)
J57: (F2) [W9] (+J39/24)^2*@PI+(J40*J41/144)
O57: U [W6] 48
P57: [W1] ^|
R57: (F3) [W7] +Q57^0.5
V57: [W1] ^|
X57: (F3) [W7] +W57^0.5
AB57: [W1] ^|
AD57: (F3) [W7] +AC57^0.5
AH57: [W1] ^|
AJ57: 103
AK57: 2.114
A58: U [W1] ||
F58: (H) [W9] +F51<=F52
H58: (H) [W9] +H51<=H52
J58: (H) [W9] +J51<=J52
O58: [W6] \-
P58: [W1] ^|
Q58: (F4) [W6] \-
R58: (F4) [W7] \-
S58: (F2) [W6] \-
T58: [W8] \-
U58: [W6] \-
V58: [W1] ^|
W58: (F4) [W6] \-
X58: (F3) [W7] \-
Y58: [W6] \-
Z58: [W8] \-
AA58: [W6] \-
AB58: [W1] ^|
AC58: (F4) [W6] \-
AD58: (F3) [W7] \-
AE58: [W6] \-
AF58: [W8] \-
AG58: [W6] \-
AH58: [W1] ^|
AJ58: 104
AK58: 2.178
```

```
A59: U [W1] ||
B59: [W9] ^(Qsd)
C59: [W41] 'Volumetric Gas Flow Rate
D59: [W10] ^dscfs
F59: (F0) [W9] (F$57)*F$56*(1-((F$58*F51)+((-F58+1)*F52))/100)*528/(460+F35)*((F32+(F33/13.6))/29.92)
H59: (F0) [W9] (H$57)*H$56*(1-((H$58*H51)+((-H58+1)*H52))/100)*528/(460+H35)*((H32+(H33/13.6))/29.92)
J59: (F0) [W9] (J$57)*J$56*(1-((J$58*J51)+((-J58+1)*J52))/100)*528/(460+J35)*((J32+(J33/13.6))/29.92)
L59: (F0) [W9] @AVG(F59..J59)
O59: [W6] ^AVGS
P59: [W1] ^|
R59: (F3) [W7] @SUM(R10..R57)/$U$4
S59: (F2) [W6] @SUM(S10..S57)/$U$4
T59: (F1) [W8] @SUM(T10..T57)/$U$4
U59: (F1) [W6] @SUM(U10..U57)/$U$4
V59: [W1] ^|
X59: (F3) [W7] @SUM(X10..X57)/$U$4
Y59: (F2) [W6] @SUM(Y10..Y57)/$U$4
Z59: (F1) [W8] @SUM(Z10..Z57)/$U$4
AA59: (F1) [W6] @SUM(AA10..AA57)/$U$4
AB59: [W1] ^|
AD59: (F3) [W7] @SUM(AD10..AD57)/$U$4
```

```
AE59: (F2) [W6] @SUM(AE10..AE57)/$U$4
AF59: (F1) [W8] @SUM(AF10..AF57)/$U$4
AG59: (F1) [W6] @SUM(AG10..AG57)/$U$4
AH59: [W1] ^|
AJ59: 105
AK59: 2.243
B60: [W9] ^(Qsd)
C60: [W41] 'Volumetric Gas Flow Rate
D60: [W10] ^dscfm
F60: (,0) [W9] @ROUND(60*F59,-2)
H60: (,0) [W9] @ROUND(60*H59,-2)
J60: (,0) [W9] @ROUND(60*J59,-2)
L60: (,0) [W9] @AVG(F60..J60)
O60: [W6] \-
P60: [W1] ^|
Q60: (F4) [W6] \-
R60: (F4) [W7] \-
S60: [W6] \-
T60: [W8] \-
U60: [W6] \-
V60: [W1] ^|
W60: (F4) [W6] \-
X60: (F3) [W7] \-
Y60: [W6] \-
Z60: [W8] \-
AA60: [W6] \-
AB60: [W1] ^|
AC60: (F4) [W6] \-
AD60: (F3) [W7] \-
AE60: [W6] \-
AF60: [W8] \-
AG60: [W6] \-
AH60: [W1] ^|
AJ60: 106
AK60: 2.31
A61: U [W1] ||
B61: [W9] ^(Qsd)
C61: [W41] 'Volumetric Gas Flow Rate
D61: [W10] ^dscfh
F61: (S2) [W9] @ROUND(60*F60,-4)
H61: (S2) [W9] @ROUND(60*H60,-4)
```

```
J61: (S2) [W9] @ROUND(60*J60,-4)
L61: (S2) [W9] @AVG(F61..J61)
AJ61: 107
AK61: 2.379
B62: [W9] ^(Qa)
C62: [W41] 'Volumetric Gas Flow Rate
D62: [W10] ^acfm
F62: (,0) [W9] @ROUND(60*F56*F57,-2)
H62: (,0) [W9] @ROUND(60*H56*H57,-2)
J62: (,0) [W9] @ROUND(60*J56*J57,-2)
L62: (,0) [W9] @AVG(F62..J62)
AJ62: 108
AK62: 2.449
A63: U [W1] ||
B63: [W9] ^(%EA)
C63: [W41] 'Percent Excess Air
D63: [W10] ^%
F63: (F1) [W9] 100*(F44-(0.05*F45))/((0.264*F46)-F44+(0.5*(F47/10^4)))
H63: (F1) [W9] 100*(H44-(0.05*H45))/((0.264*H46)-H44+(0.5*(H47/10^4)))
J63: (F1) [W9] 100*(J44-(0.05*J45))/((0.264*J46)-J44+(0.5*(J47/10^4)))
L63: (F1) [W9] @AVG(F63..J63)
AJ63: 109
AK63: 2.921
B64: [W9] ^(I)
C64: [W41] 'Isokinetic Variation
D64: [W10] ^%
F64: (F1) [W9] (0.0945*(F35+460)*F53/((F50)*F56*((0.5*F37)^2*3.1417/144)*F28*(1-F51/100)))
H64: (F1) [W9] (0.0945*(H35+460)*H53/((H50)*H56*((0.5*H37)^2*3.1417/144)*H28*(1-H51/100)))
J64: (F1) [W9] (0.0945*(J35+460)*J53/((J50)*J56*((0.5*J37)^2*3.1417/144)*J28*(1-J51/100)))
AJ64: 110
AK64: 2.596
AJ65: 111
AK65: 2.672
AJ66: 112
AK66: 2.749
AJ67: 113
AK67: 2.829
AJ68: 114
AK68: 2.911
AJ69: 115
AK69: 2.995
AJ70: 116
AK70: 3.081
AJ71: 117
AK71: 3.169
V72: U [W1] '
AJ72: 118
AK72: 3.259
AJ73: 119
AK73: 3.351
AJ74: 120
AK74: 3.446
AJ75: 121
AK75: 3.543
AJ76: 122
AK76: 3.642
AJ77: 123
AK77: 3.744
AJ78: 124
AK78: 3.848
AJ79: 125
AK79: 3.954
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AJ80: 126
AK80: 4.063
AJ81: 127
AK81: 4.174
AJ82: 128
AK82: 4.289
AJ83: 129
AK83: 4.406
AJ84: 130
AK84: 4.525
AJ85: 131
AK85: 4.647
AJ86: 132
AK86: 4.772
AJ87: 133
AK87: 4.9
C88: U [W41] 'TABLE X-X



AJ88: 134
AK88: 5.031
C89: U [W41] 'PARTICULATE EMISSIONS SUMMARY
AJ89: 135
AK89: 5.165
C90: U [W41] 'Kiln #2, Exhaust Stack, Page 2
AJ90: 136
AK90: 5.302
C91: U [W41] 'Virginia Solite, Cascade VA
H91: [W9] '
AJ91: 137
AK91: 5.442
AJ92: 138
AK92: 5.585
B93: [W9] 'filename:
C93: U [W41] 'BIGMETH5.wk1
D93: [W10] "RUN NO.==>
F93: U [W9] 'K2-1
H93: U [W9] 'K2-2
I93: U [W2] '
J93: U [W9] 'K2-3
AJ93: 139
AK93: 5.732
D94: [W10] "DATE==>
F94: U [W9] '6/18/92
H94: U [W9] '6/18/92
J94: U [W9] '6/18/92
AJ94: 140
AK94: 2.881
C95: [W41] 'SAMPLING PARAMETERS
D95: [W10] "RUN TIME==>
F95: U [W9] '831-1203
H95: U [W9] '1255-1502
J95: U [W9] '1555-1752
L95: [W9] ^AVERAGE
AJ95: 141
AK95: 6.034
B96: [W9] \-
C96: [W41] \-
D96: [W10] \-
E96: [W2] \-
F96: [W9] \-
G96: [W2] \-
H96: [W9] \-
I96: [W2] \-
```

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J96: [W9] \-
K96: [W2] \-
L96: [W9] \-
AJ96: 142
AK96: 6.19
B97: [W9] ^Symbol
C97: [W41] 'PARTICULATE COLLECTION ANALYSIS
D97: [W10] ^Units
AJ97: 143
AK97: 6.38
B98: [W9] ^(Wfi)
C98: [W41] 'Tare Weight of Filter
D98: [W10] ^g
F98: (F5) U [W9] 0.3609
H98: (F5) U [W9] 0.3659

J98: (F5) U [W9] 0.3667
AJ98: 144
AK98: 6.513
B99: [W9] ^(Wff)
C99: [W41] 'Final Filter Weight
D99: [W10] ^g
F99: (F5) U [W9] 0.3621
H99: (F5) U [W9] 0.3658
J99: (F5) U [W9] 0.3666
AJ99: 145
AK99: 6.68
B100: [W9] ^(mf)
C100: [W41] 'Weight on Filter
D100: [W10] ^mg
F100: [W9] ((F99-F98)*1000)
H100: [W9] ((H99-H98)*1000)
J100: [W9] ((J99-J98)*1000)
AJ100: 146
AK100: 6.85
B101: [W9] ^(Wai)
C101: [W41] 'Acetone Rinse Tare Weight
D101: [W10] ^g
F101: U [W9] 111.3543
H101: U [W9] 107.5916
J101: U [W9] 108.0054
AJ101: 147
AK101: 7.024
B102: [W9] ^(Waf)
C102: [W41] 'Acetone Rinse Final Weight
D102: [W10] ^g
F102: U [W9] 111.3595
H102: U [W9] 107.5999
J102: U [W9] 108.012
AJ102: 148
AK102: 7.202
B103: [W9] ^(ma)
C103: [W41] 'Weight in Acetone Rinse
D103: [W10] ^mg
F103: [W9] ((F102-F101)*1000)
H103: [W9] ((H102-H101)*1000)
J103: [W9] ((J102-J101)*1000)
AJ103: 149
AK103: 7.384
B104: [W9] ^(Vaw)
C104: [W41] 'Acetone Volume Used in Rinse
D104: [W10] ^mL
F104: U [W9] 100
```

H104: U [W9] 150
J104: U [W9] 145
AJ104: 150
AK104: 7.569
B105: [W9] ^(Va)
C105: [W41] 'Acetone Volume Used in Blank
D105: [W10] ^mL
F105: U [W9] 100
H105: U [W9] 100
J105: U [W9] 100
AJ105: 151
AK105: 7.759
B106: [W9] ^(Wa)

C106: [W41] 'Weight in Acetone Blank
D106: [W10] ^g
F106: U [W9] 0.0037
H106: U [W9] 0.0037
J106: U [W9] 0.0037
AJ106: 152
AK106: 7.952
B107: [W9] ^(Ca)
C107: [W41] 'Acetone Blank Correction
D107: [W10] ^g/mL
F107: (F5) [W9] 7.9E-06
H107: (F5) [W9] 7.9E-06
J107: (F5) [W9] 7.9E-06
AJ107: 153
AK107: 8.15
B108: [W9] ^(mn)
C108: [W41] 'Total Particulate Collected
D108: [W10] ^mg
F108: (F2) [W9] (F100+F103-F104*($F$107))
H108: (F2) [W9] (H100+H103-H104*($F$107))
J108: (F2) [W9] (J100+J103-J104*($F$107))
L108: (F2) [W9] @AVG(F108..J108)
AJ108: 154
AK108: 8.351
C109: [W41] 'Conc. of Particulate in Gas Sample
D109: [W10] ^mg/CMeter
F109: [W9] ((F108/F53)*35.3145)
H109: [W9] ((H108/H53)*35.3145)
J109: [W9] ((J108/J53)*35.3145)
L109: (F2) [W9] @AVG(F109..J109)
AJ109: 155
AK109: 8.557
C110: [W41] 'Grains per Dry Standard Cubic Feet
D110: [W10] ^gr./dscf
F110: [W9] (F108*15.43/(F53*1000))
H110: [W9] (H108*15.43/(H53*1000))
J110: [W9] (J108*15.43/(J53*1000))
L110: (F2) [W9] @AVG(F110..J110)
AJ110: 156
AK110: 8.767
C111: [W41] 'Grains per DSCF @ 7% oxygen
D111: [W10] ^gr./dscf
F111: [W9] ((13.9/(20.9-F44))*F110)
H111: [W9] ((13.9/(20.9-H44))*H110)
J111: [W9] ((13.9/(20.9-J44))*J110)
L111: (F2) [W9] @AVG(F111..J111)
AJ111: 157
AK111: 8.981
C112: [W41] 'Total Particulate flow in Stack

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D112: [W10] ^Lbs./hr.
F112: [W9] ((F109/35.3145)*F61/454000)
H112: [W9] ((H109/35.3145)*H61/454000)
J112: [W9] ((J109/35.3145)*J61/454000)
L112: (F2) [W9] @AVG(F112..J112)
AJ112: 158
AK112: 9.2
AJ113: 159
AK113: 9.424
AJ114: 160
AK114: 9.652

AJ115: 161
AK115: 9.885
C116: [W41] 'CHLORINE AND HCL RECOVERY DATA
AJ116: 162
AK116: 10.12
C117: [W41] 'Volume in H2SO4 Impinger
D117: [W10] ^mL
F117: [W9] 545
H117: [W9] 291
J117: [W9] 377
AJ117: 163
AK117: 10.36
C118: [W41] 'Concentration of Cl In H2SO4 Impinger
D118: [W10] ^mg/L
F118: [W9] 2449.97
H118: [W9] 3140.24
J118: [W9] 2529.4
AJ118: 164
AK118: 10.61
C119: [W41] 'Total Cl in H2SO4 Impinger
D119: [W10] ^mg
F119: [W9] ((F117/1000)*F118)
H119: [W9] ((H117/1000)*H118)
J119: [W9] ((J117/1000)*J118)
AJ119: 165
AK119: 10.86
C120: [W41] 'Volume in NaOH Impinger
D120: [W10] ^mL
F120: [W9] 415
H120: [W9] 244
J120: [W9] 233
AJ120: 166
AK120: 11.12
C121: [W41] 'Concentration in NaOH Impinger
D121: [W10] ^mg/L
F121: [W9] 75.36
H121: [W9] 24.61
J121: [W9] 47.96
AJ121: 167
AK121: 11.38
C122: [W41] 'Total Cl in NaOH Impinger
D122: [W10] ^mg
F122: [W9] ((F120/1000)*F121)
H122: [W9] ((H120/1000)*H121)
J122: [W9] ((J120/1000)*J121)
AJ122: 168
AK122: 11.65
AJ123: 169
AK123: 11.92
C124: [W41] 'Concentration of Cl in H2SO4 blank
D124: [W10] ^mg/L
```

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F124: [W9] 0
H124: [W9] 0
J124: [W9] 0
AJ124: 170
AK124: 12.2
C125: [W41] 'Concentration of Cl in NaOH blank
D125: [W10] ^mg/L
F125: [W9] 0
H125: [W9] 0

J125: [W9] 0
AJ125: 171
AK125: 12.48
AJ126: 172
AK126: 12.77
C127: [W41] 'Total HCl recovered
D127: [W10] ^mg
F127: [W9] ((F118-F124)*(F117/1000)*36.46/35.453)
H127: [W9] ((H118-H124)*(H117/1000)*36.46/35.453)
J127: [W9] ((J118-J124)*(J117/1000)*36.46/35.453)
AJ127: 173
AK127: 13.07
C128: [W41] 'Total Cl2 recovered
D128: [W10] ^mg
F128: [W9] ((F121-F125)*(F120/1000)*70.91/35.453)
H128: [W9] ((H121-H125)*(H120/1000)*36.46/35.453)
J128: [W9] ((J121-J125)*(J120/1000)*36.46/35.453)
AJ128: 174
AK128: 13.37
AJ129: 175
AK129: 13.67
C130: [W41] 'Concentration of HCl in Gas Sample
D130: [W10] ^mg/CMeter
F130: [W9] ((F127/F53)*35.3145)
H130: [W9] ((H127/H53)*35.3145)
J130: [W9] ((J127/J53)*35.3145)
L130: (F2) [W9] @AVG(F130..J130)
AJ130: 176
AK130: 13.98
C131: [W41] 'Concentration of Cl2 in Gas Sample
D131: [W10] ^mg/CMeter
F131: [W9] ((F128/F53)*35.3145)
H131: [W9] ((H128/H53)*35.3145)
J131: [W9] ((J128/J53)*35.3145)
L131: (F2) [W9] @AVG(F131..J131)
AJ131: 177
AK131: 14.3
L132: (F2) [W9] '
AJ132: 178
AK132: 14.62
C133: [W41] 'Total HCl flow in Stack
D133: [W10] ^Lbs./hr.
F133: [W9] ((F130/35.3145)*F61/454000)
H133: [W9] ((H130/35.3145)*H61/454000)
J133: [W9] ((J130/35.3145)*J61/454000)
L133: (F2) [W9] @AVG(F133..J133)
AJ133: 179
AK133: 14.96
C134: [W41] 'Total HCl flow in Stack
D134: [W10] ^g/hr.
F134: [W9] (F133*454)
H134: [W9] (H133*454)
J134: [W9] (J133*454)
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L134: (F2) [W9] @AVG(F134..J134)
AJ134: 180
AK134: 15.29
C135: [W41] 'Total Cl2 flow in Stack
D135: [W10] ^Lbs./hr.
F135: [W9] ((F131/35.3145)*F61/454000)
H135: [W9] ((H131/35.3145)*H61/454000)

J135: [W9] ((J131/35.3145)*J61/454000)
L135: (F2) [W9] @AVG(F135..J135)
AJ135: 181
AK135: 15.63
C136: [W41] 'Total Cl2 flow in Stack
D136: [W10] ^g/hr.
F136: [W9] (F135*454)
H136: [W9] (H135*454)
J136: [W9] (J135*454)
L136: (F2) [W9] @AVG(F136..J136)
AJ136: 182
AK136: 15.98
AJ137: 183
AK137: 16.34
AJ138: 184
AK138: 16.7
AJ139: 185
AK139: 17.07
AJ140: 186
AK140: 17.44
AJ141: 187
AK141: 17.82
AJ142: 188
AK142: 18.21
AJ143: 189
AK143: 18.61
AJ144: 1+AJ143
AK144: 19.01
B145: U [W9] '
AJ145: 1+AJ144
AK145: 19.42
AJ146: 1+AJ145
AK146: 19.84
AJ147: 1+AJ146
AK147: 20.27
AJ148: 1+AJ147
AK148: 20.7
AJ149: 1+AJ148
AK149: 21.14
AJ150: 1+AJ149
AK150: 21.5
AJ151: 1+AJ150
AK151: 22.05
AJ152: 1+AJ151
AK152: 22.52
AJ153: 1+AJ152
AK153: 22.99
AJ154: 1+AJ153
AK154: 23.47
AJ155: 1+AJ154
AK155: 23.96
AJ156: 1+AJ155
AK156: 24.46
AJ157: 1+AJ156
AK157: 24.97
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AJ158: 1+AJ157
AK158: 25.48
AJ159: 1+AJ158
AK159: 26
AJ160: 1+AJ159

AK160: 26.53
AJ161: 1+AJ160
AK161: 27.07
AJ162: 1+AJ161
AK162: 27.62
AJ163: 1+AJ162
AK163: 28.18
AJ164: 1+AJ163
AK164: 28.75

```
A1: U [W1] ||
B1: [W9] 'Name file for source (e.g., /fs [esc] [esc] a:acmepm) if not already
O1: [W6] ||
P1: [W1] 'TO BEGIN, BLANK ALL FIELD DATA VALUES BY PRESSING ALT X
A2: U [W1] ||
B2: [W9] '    saved on floppy disk.
Q2: [W6] 'CALCULATIONS FOR SQUARE ROOT OF ΔP FOR PITOT TUBE
AJ2: "TEMP
AK2: "VP H2O
A3: U [W1] ||
B3: [W9] 'Type [Alt M] to get a menu to: A) move around spreadsheet,
Q3: [W6] 'filename:
S3: [W6] +C14
AJ3: +"     "&@CHAR(176)&"F"
AK3: "in. Hg
A4: U [W1] ||
B4: [W9] '     B) print parts of spreadsheet, or C) get help instructions.
Q4: [W6] 'ENTER NUMBER OF POINTS===>
U4: (F0) U [W6] 24
AJ4: 50
AK4: 0.3626
A5: U [W1] ||
B5: [W9] 'Use arrow keys to go to desired cells.  Enter number and go to next
O5: [W6] \-
P5: [W1] ^|
Q5: [W6] \-
R5: [W7] \-
S5: [W6] \-
T5: [W8] \-
U5: [W6] \-

V5: [W1] ^|
W5: [W6] \-
X5: [W7] \-
Y5: [W6] \-
Z5: [W8] \-
AA5: [W6] \-
AB5: [W1] ^|
AC5: [W6] \-
AD5: [W7] \-
AE5: [W6] \-
AF5: [W8] \-
AG5: [W6] \-
AH5: [W1] ^|
AJ5: 51
AK5: 0.3764
A6: U [W1] ||
B6: [W9] '    cell.
P6: [W1] ^|
Q6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
V6: [W1] ^|
W6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
AB6: [W1] ^|
AC6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
AH6: [W1] ^|
AJ6: 52
AK6: 0.3906
A7: U [W1] ||
B7: [W9] 'You must enter ΔP, ΔH, stack gas T, and DGM T individual values from
O7: [W6] "POINT
P7: [W1] ^|
S7: [W6] +F14
V7: [W1] ^|
```

```
Y7: [W6] +H14
AB7: [W1] ^|
AE7: [W6] +J14
AH7: [W1] ^|
AJ7: 53
AK7: 0.4052
A8: U [W1] ||
B8: [W9] '    the field data sheets.
O8: [W6] "NO.
P8: [W1] ^|
Q8: [W6] ^~p
R8: [W7] ^SQRT ~p
S8: [W6] ^~H
T8: [W8] ^Stack T
U8: [W6] ^DGM T
V8: [W1] ^|
W8: [W6] ^~p
X8: [W7] ^SQRT ~p
Y8: [W6] ^~H
Z8: [W8] ^Stack T
AA8: [W6] ^DGM T
AB8: [W1] ^|
AC8: [W6] ^~p
AD8: [W7] ^SQRT ~p
AE8: [W6] ^~H
AF8: [W8] ^Stack T
AG8: [W6] ^DGM T
AH8: [W1] ^|
```

```
AJ8: 54
AK8: 0.4203
C9: U [W41] 'TABLE X-X
O9: [W6] \-
P9: [W1] ^|
Q9: [W6] \-
R9: [W7] \-
S9: [W6] \-
T9: [W8] \-
U9: [W6] \-
V9: [W1] ^|
W9: [W6] \-
X9: [W7] \-
Y9: [W6] \-
Z9: [W8] \-
AA9: [W6] \-
AB9: [W1] ^|
AC9: [W6] \-
AD9: [W7] \-
AE9: [W6] \-
AF9: [W8] \-
AG9: [W6] \-
AH9: [W1] ^|
AJ9: 55
AK9: 0.4359
C10: U [W41] 'HEXAVALENT CHROMIUM Emissions Summary
O10: U [W6] 1
P10: [W1] ^|
Q10: (F2) U [W6] 0.89
R10: (F3) [W7] +Q10^0.5
S10: (F2) U [W6] 2.9
T10: U [W8] 353
U10: U [W6] 101
V10: [W1] ^|
```

```
W10: (F2) U [W6] 0.91
X10: (F3) [W7] +W10^0.5
Y10: (F2) U [W6] 3.8
Z10: U [W8] 335
AA10: U [W6] 96
AB10: [W1] ^|
AC10: (F2) U [W6] 0.89
AD10: (F3) [W7] +AC10^0.5
AE10: (F2) U [W6] 3.7
AF10: U [W8] 350
AG10: U [W6] 92
AH10: [W1] ^|
AJ10: 56
AK10: 0.452
C11: U [W41] 'KILN #2, EXHAUST STACK
O11: U [W6] 2
P11: [W1] ^|
Q11: (F2) U [W6] 0.99
R11: (F3) [W7] +Q11^0.5
S11: (F2) U [W6] 3.3
T11: U [W8] 357
U11: U [W6] 100
V11: [W1] ^|
W11: (F2) U [W6] 0.98
X11: (F3) [W7] +W11^0.5
Y11: (F2) U [W6] 4.1
```

```
Z11: U [W8] 342
AA11: U [W6] 98
AB11: [W1] ^|
AC11: (F2) U [W6] 1
AD11: (F3) [W7] +AC11^0.5
AE11: (F2) U [W6] 4.2
AF11: U [W8] 350
AG11: U [W6] 95
AH11: [W1] ^|
AJ11: 57
AK11: 0.4586
C12: U [W41] 'VIRGINIA SOLITE, CASCADE VA
H12: [W9] '
O12: U [W6] 3
P12: [W1] ^|
Q12: (F2) U [W6] 0.94
R12: (F3) [W7] +Q12^0.5
S12: (F2) U [W6] 3.1
T12: U [W8] 359
U12: U [W6] 100
V12: [W1] ^|
W12: (F2) U [W6] 0.97
X12: (F3) [W7] +W12^0.5
Y12: (F2) U [W6] 4.07
Z12: U [W8] 345
AA12: U [W6] 99
AB12: [W1] ^|
AC12: (F2) U [W6] 0.95
AD12: (F3) [W7] +AC12^0.5
AE12: (F2) U [W6] 3.99
AF12: U [W8] 354
AG12: U [W6] 96
AH12: [W1] ^|
AJ12: 58
AK12: 0.4858
O13: U [W6] 4
```

```
P13: [W1] ^|
Q13: (F2) U [W6] 0.89
R13: (F3) [W7] +Q13^0.5
S13: (F2) U [W6] 2.9
T13: U [W8] 360
U13: U [W6] 101
V13: [W1] ^|
W13: (F2) U [W6] 0.94
X13: (F3) [W7] +W13^0.5
Y13: (F2) U [W6] 3.9
Z13: U [W8] 346
AA13: U [W6] 100
AB13: [W1] ^|
AC13: (F2) U [W6] 0.87
AD13: (F3) [W7] +AC13^0.5
AE13: (F2) U [W6] 3.65
AF13: U [W8] 356
AG13: U [W6] 97
AH13: [W1] ^|
AJ13: 59
AK13: 0.5035
B14: [W9] 'filename:
C14: U [W41] 'HEXCHROM.WQ1
D14: [W10] "RUN NO.==>

F14: U [W9] 'K2-1
H14: U [W9] 'K2-2
I14: U [W2] '
J14: U [W9] 'K2-3
O14: U [W6] 5
P14: [W1] ^|
Q14: (F2) U [W6] 0.78
R14: (F3) [W7] +Q14^0.5
S14: (F2) U [W6] 2.6
T14: U [W8] 360
U14: U [W6] 101
V14: [W1] ^|
W14: (F2) U [W6] 0.89
X14: (F3) [W7] +W14^0.5
Y14: (F2) U [W6] 3.73
Z14: U [W8] 346
AA14: U [W6] 100
AB14: [W1] ^|
AC14: (F2) U [W6] 0.82
AD14: (F3) [W7] +AC14^0.5
AE14: (F2) U [W6] 3.4
AF14: U [W8] 356
AG14: U [W6] 98
AH14: [W1] ^|
AJ14: 60
AK14: 0.5218
D15: [W10] "DATE==>
F15: U [W9] '6/18/92
H15: U [W9] '6/18/92
J15: U [W9] '6/18/92
O15: U [W6] 6
P15: [W1] ^|
Q15: (F2) U [W6] 0.65
R15: (F3) [W7] +Q15^0.5
S15: (F2) U [W6] 2.17
T15: U [W8] 360
U15: U [W6] 101
V15: [W1] ^|
```

```
W15: (F2) U [W6] 0.77
X15: (F3) [W7] +W15^0.5
Y15: (F2) U [W6] 3.2
Z15: U [W8] 346
AA15: U [W6] 100
AB15: [W1] ^|
AC15: (F2) U [W6] 0.66
AD15: (F3) [W7] +AC15^0.5
AE15: (F2) U [W6] 2.77
AF15: U [W8] 356
AG15: U [W6] 98
AH15: [W1] ^|
AJ15: 61
AK15: 0.5407
C16: [W41] 'SAMPLING PARAMETERS
D16: [W10] "RUN TIME==>
F16: U [W9] '1118-1220
H16: U [W9] '1418-1521
J16: U [W9] '1726-1831
L16: [W9] ^AVERAGE
O16: U [W6] 7
P16: [W1] ^|
```

```
Q16: (F2) U [W6] 0.56
R16: (F3) [W7] +Q16^0.5
S16: (F2) U [W6] 1.87
T16: U [W8] 356
U16: U [W6] 100
V16: [W1] ^|
W16: (F2) U [W6] 0.68
X16: (F3) [W7] +W16^0.5
Y16: (F2) U [W6] 2.8
Z16: U [W8] 346
AA16: U [W6] 101
AB16: [W1] ^|
AC16: (F2) U [W6] 0.59
AD16: (F3) [W7] +AC16^0.5
AE16: (F2) U [W6] 2.47
AF16: U [W8] 354
AG16: U [W6] 98
AH16: [W1] ^|
AJ16: 62
AK16: 0.5601
B17: [W9] \-
C17: [W41] \-
D17: [W10] \-
E17: [W2] \-
F17: [W9] \-
G17: [W2] \-
H17: [W9] \-
I17: [W2] \-
J17: [W9] \-
K17: [W2] \-
L17: [W9] \-
O17: U [W6] 8
P17: [W1] ^|
Q17: (F2) U [W6] 0.64
R17: (F3) [W7] +Q17^0.5
S17: (F2) U [W6] 2.1
T17: U [W8] 356
U17: U [W6] 99
V17: [W1] ^|
W17: (F2) U [W6] 0.72
```

```
X17: (F3) [W7] +W17^0.5
Y17: (F2) U [W6] 3
Z17: U [W8] 344
AA17: U [W6] 100
AB17: [W1] ^|
AC17: (F2) U [W6] 0.63
AD17: (F3) [W7] +AC17^0.5
AE17: (F2) U [W6] 2.64
AF17: U [W8] 354
AG17: U [W6] 98
AH17: [W1] ^|
AJ17: 63
AK17: 0.5802
B18: [W9] ^SYMBOL
C18: [W41] 'MEASURED DATA AT STACK
D18: [W10] ^UNITS
O18: U [W6] 9
P18: [W1] ^|
Q18: (F2) U [W6] 0.77
R18: (F3) [W7] +Q18^0.5

S18: (F2) U [W6] 2.57
T18: U [W8] 356
U18: U [W6] 99
V18: [W1] ^|
W18: (F2) U [W6] 0.8
X18: (F3) [W7] +W18^0.5
Y18: (F2) U [W6] 3.36
Z18: U [W8] 344
AA18: U [W6] 100
AB18: [W1] ^|
AC18: (F2) U [W6] 0.66
AD18: (F3) [W7] +AC18^0.5
AE18: (F2) U [W6] 2.7
AF18: U [W8] 353
AG18: U [W6] 99
AH18: [W1] ^|
AJ18: 64
AK18: 0.6009
B19: [W9] ^(Y)
C19: [W41] 'Dry Gas Meter Calibration Factor
D19: [W10] ^--
F19: U [W9] 0.998
H19: U [W9] 1.067
J19: U [W9] 1.067
O19: U [W6] 10
P19: [W1] ^|
Q19: (F2) U [W6] 0.82
R19: (F3) [W7] +Q19^0.5
S19: (F2) U [W6] 2.7
T19: U [W8] 354
U19: U [W6] 100
V19: [W1] ^|
W19: (F2) U [W6] 0.83
X19: (F3) [W7] +W19^0.5
Y19: (F2) U [W6] 3.48
Z19: U [W8] 342
AA19: U [W6] 100
AB19: [W1] ^|
AC19: (F2) U [W6] 0.6
AD19: (F3) [W7] +AC19^0.5
AE19: (F2) U [W6] 2.52
AF19: U [W8] 350
```

```
AG19: U [W6] 99
AH19: [W1] ^|
AJ19: 65
AK19: 0.6222
B20: [W9] ^(Vi)
C20: [W41] 'Initial Meter Volume
D20: [W10] ^cf
F20: (F3) U [W9] 516.347
H20: (F3) U [W9] 629.592
J20: (F3) U [W9] 750.369
O20: U [W6] 11
P20: [W1] ^|
Q20: (F2) U [W6] 0.8
R20: (F3) [W7] +Q20^0.5
S20: (F2) U [W6] 2.67
T20: U [W8] 353
U20: U [W6] 100
V20: [W1] ^|
```

```
W20: (F2) U [W6] 0.75
X20: (F3) [W7] +W20^0.5
Y20: (F2) U [W6] 3.15
Z20: U [W8] 345
AA20: U [W6] 100
AB20: [W1] ^|
AC20: (F2) U [W6] 0.6
AD20: (F3) [W7] +AC20^0.5
AE20: (F2) U [W6] 2.52
AF20: U [W8] 349
AG20: U [W6] 99
AH20: [W1] ^|
AJ20: 66
AK20: 0.6442
A21: U [W1] ||
C21: [W41] '  IF NO INTERMEDIATE LEAK CHECK WAS DONE ENTER 0
F21: [W9] 0
O21: U [W6] 12
P21: [W1] ^|
Q21: (F2) U [W6] 0.8
R21: (F3) [W7] +Q21^0.5
S21: (F2) U [W6] 2.67
T21: U [W8] 353
U21: U [W6] 100
V21: [W1] ^|
W21: (F2) U [W6] 0.74
X21: (F3) [W7] +W21^0.5
Y21: (F2) U [W6] 3.1
Z21: U [W8] 342
AA21: U [W6] 100
AB21: [W1] ^|
AC21: (F2) U [W6] 0.58
AD21: (F3) [W7] +AC21^0.5
AE21: (F2) U [W6] 2.43
AF21: U [W8] 348
AG21: U [W6] 99
AH21: [W1] ^|
AJ21: 67
AK21: 0.6669
A22: U [W1] ||
C22: [W41] 'Volume Before Intermed Leak Check
D22: [W10] ^cf
F22: U [W9] 0
O22: U [W6] 13
```

```
P22: [W1] ^|
Q22: (F2) U [W6] 1
R22: (F3) [W7] +Q22^0.5
S22: (F2) U [W6] 3.3
T22: U [W8] 351
U22: U [W6] 99
V22: [W1] ^|
W22: (F2) U [W6] 1.1
X22: (F3) [W7] +W22^0.5
Y22: (F2) U [W6] 4.62
Z22: U [W8] 342
AA22: U [W6] 98
AB22: [W1] ^|
AC22: (F2) U [W6] 0.8
AD22: (F3) [W7] +AC22^0.5
AE22: (F2) U [W6] 3.36
```

```
AF22: U [W8] 348
AG22: U [W6] 97
AH22: [W1] ^|
AJ22: 68
AK22: 0.6903
A23: U [W1] ||
C23: [W41] 'Volume After Intermed Leak Check
D23: [W10] ^cf
F23: U [W9] 0
H23: U [W9] 0
J23: U [W9] 0
O23: U [W6] 14
P23: [W1] ^|
Q23: (F2) U [W6] 1.2
R23: (F3) [W7] +Q23^0.5
S23: (F2) U [W6] 4
T23: U [W8] 359
U23: U [W6] 99
V23: [W1] ^|
W23: (F2) U [W6] 1.2
X23: (F3) [W7] +W23^0.5
Y23: (F2) U [W6] 5.04
Z23: U [W8] 344
AA23: U [W6] 99
AB23: [W1] ^|
AC23: (F2) U [W6] 0.92
AD23: (F3) [W7] +AC23^0.5
AE23: (F2) U [W6] 3.86
AF23: U [W8] 350
AG23: U [W6] 97
AH23: [W1] ^|
AJ23: 69
AK23: 0.7144
B24: [W9] ^(Vf)
C24: [W41] 'Final Meter Volume
D24: [W10] ^cf
F24: (F3) U [W9] 568.158
H24: (F3) U [W9] 688.514
J24: (F3) U [W9] 805.634
O24: U [W6] 15
P24: [W1] ^|
Q24: (F2) U [W6] 1.2
R24: (F3) [W7] +Q24^0.5
S24: (F2) U [W6] 4
T24: U [W8] 359
U24: U [W6] 99
```

```
V24: [W1] ^|
W24: (F2) U [W6] 1.1
X24: (F3) [W7] +W24^0.5
Y24: (F2) U [W6] 4.62
Z24: U [W8] 345
AA24: U [W6] 99
AB24: [W1] ^|
AC24: (F2) U [W6] 1.1
AD24: (F3) [W7] +AC24^0.5
AE24: (F2) U [W6] 4.6
AF24: U [W8] 352
AG24: U [W6] 97
AH24: [W1] ^|
AJ24: 70
```

```
AK24: 0.7392
B25: [W9] ^(Lp)
C25: [W41] 'Leak Check Correction
D25: [W10] ^cfm
F25: U [W9] 0
H25: U [W9] 0
J25: U [W9] 0
O25: U [W6] 16
P25: [W1] ^|
Q25: (F2) U [W6] 1.1
R25: (F3) [W7] +Q25^0.5
S25: (F2) U [W6] 3.67
T25: U [W8] 360
U25: U [W6] 98
V25: [W1] ^|
W25: (F2) U [W6] 1.1
X25: (F3) [W7] +W25^0.5
Y25: (F2) U [W6] 4.62
Z25: U [W8] 345
AA25: U [W6] 99
AB25: [W1] ^|
AC25: (F2) U [W6] 0.99
AD25: (F3) [W7] +AC25^0.5
AE25: (F2) U [W6] 4.15
AF25: U [W8] 352
AG25: U [W6] 97
AH25: [W1] ^|
AJ25: 71
AK25: 0.7648
A26: U [W1] ||
C26: [W41] ||
F26: (H) [W9] @IF(F25-0.02>0,F25,0)
H26: (H) [W9] @IF(H25-0.02>0,H25,0)
J26: (H) [W9] @IF(J25-0.02>0,J25,0)
O26: U [W6] 17
P26: [W1] ^|
Q26: (F2) U [W6] 0.89
R26: (F3) [W7] +Q26^0.5
S26: (F2) U [W6] 2.97
T26: U [W8] 360
U26: U [W6] 99
V26: [W1] ^|
W26: (F2) U [W6] 0.91
X26: (F3) [W7] +W26^0.5
Y26: (F2) U [W6] 3.82
Z26: U [W8] 344
AA26: U [W6] 99
AB26: [W1] ^|
```

```
AC26: (F2) U [W6] 0.69
AD26: (F3) [W7] +AC26^0.5
AE26: (F2) U [W6] 2.89
AF26: U [W8] 352
AG26: U [W6] 97
AH26: [W1] ^|
AJ26: 72
AK26: 0.7912
B27: [W9] ^(Vm)
C27: [W41] 'Total Meter Volume
D27: [W10] ^cf
F27: (F3) [W9] (F24-F23)+(F22-F20)-(0.02-F24)*F26

H27: (F3) [W9] (H24-H23)+(H22-H20)-(0.02-H24)*H26
J27: (F3) [W9] (J24-J23)+(J22-J20)-(0.02-J24)*J26
L27: (F3) [W9] @AVG(F27..J27)
O27: U [W6] 18
P27: [W1] ^|
Q27: (F2) U [W6] 0.57
R27: (F3) [W7] +Q27^0.5
S27: (F2) U [W6] 1.9
T27: U [W8] 360
U27: U [W6] 99
V27: [W1] ^|
W27: (F2) U [W6] 0.65
X27: (F3) [W7] +W27^0.5
Y27: (F2) U [W6] 2.73
Z27: U [W8] 343
AA27: U [W6] 99
AB27: [W1] ^|
AC27: (F2) U [W6] 0.59
AD27: (F3) [W7] +AC27^0.5
AE27: (F2) U [W6] 2.47
AF27: U [W8] 352
AG27: U [W6] 97
AH27: [W1] ^|
AJ27: 73
AK27: 0.8183
B28: [W9] ^(t)
C28: [W41] 'Sampling Time
D28: [W10] ^min.
F28: U [W9] 60
H28: U [W9] 60
J28: U [W9] 60
L28: (F0) [W9] @AVG(F28..J28)
O28: U [W6] 19
P28: [W1] ^|
Q28: (F2) U [W6] 0.46
R28: (F3) [W7] +Q28^0.5
S28: (F2) U [W6] 1.53
T28: U [W8] 358
U28: U [W6] 99
V28: [W1] ^|
W28: (F2) U [W6] 0.51
X28: (F3) [W7] +W28^0.5
Y28: (F2) U [W6] 2.14
Z28: U [W8] 342
AA28: U [W6] 99
AB28: [W1] ^|
AC28: (F2) U [W6] 0.47
AD28: (F3) [W7] +AC28^0.5
AE28: (F2) U [W6] 1.97
AF28: U [W8] 350
```

```
AG28: U [W6] 97
AH28: [W1] ^|
AJ28: 74
AK28: 0.8462
B29: [W9] ^(Vwc)
C29: [W41] 'Volume of Water Collected
D29: [W10] ^mL
F29: (F1) U [W9] (F31-F30)
H29: (F1) U [W9] (H31-H30)
J29: (F1) U [W9] (J31-J30)

L29: (F1) [W9] @AVG(F29..J29)
O29: U [W6] 20
P29: [W1] ^|
Q29: (F2) U [W6] 0.46
R29: (F3) [W7] +Q29^0.5
S29: (F2) U [W6] 1.53
T29: U [W8] 358
U29: U [W6] 99
V29: [W1] ^|
W29: (F2) U [W6] 0.49
X29: (F3) [W7] +W29^0.5
Y29: (F2) U [W6] 2.05
Z29: U [W8] 340
AA29: U [W6] 99
AB29: [W1] ^|
AC29: (F2) U [W6] 0.43
AD29: (F3) [W7] +AC29^0.5
AE29: (F2) U [W6] 1.8
AF29: U [W8] 350
AG29: U [W6] 97
AH29: [W1] ^|
AJ29: 75
AK29: 0.875
B30: [W9] ^(Vwsg)
C30: [W41] 'Silica Gel Weight Increase
D30: [W10] ^g
F30: (F1) U [W9] 35.4
H30: (F1) U [W9] 30.5
J30: (F1) U [W9] 31.8
L30: (F1) [W9] @AVG(F30..J30)
O30: U [W6] 21
P30: [W1] ^|
Q30: (F2) U [W6] 0.44
R30: (F3) [W7] +Q30^0.5
S30: (F2) U [W6] 1.46
T30: U [W8] 355
U30: U [W6] 100
V30: [W1] ^|
W30: (F2) U [W6] 0.48
X30: (F3) [W7] +W30^0.5
Y30: (F2) U [W6] 2.01
Z30: U [W8] 348
AA30: U [W6] 99
AB30: [W1] ^|
AC30: (F2) U [W6] 0.42
AD30: (F3) [W7] +AC30^0.5
AE30: (F2) U [W6] 1.76
AF30: U [W8] 348
AG30: U [W6] 97
AH30: [W1] ^|
AJ30: 76
AK30: 0.9046
```

```
B31: [W9] ^(Vlc)
C31: [W41] 'Total Water Collected
D31: [W10] ^mL
F31: (F1) [W9] 49.4
H31: (F1) [W9] 82.5
J31: (F1) [W9] 75.8
L31: (F1) [W9] @AVG(F31..J31)
O31: U [W6] 22

P31: [W1] ^|
Q31: (F2) U [W6] 0.44
R31: (F3) [W7] +Q31^0.5
S31: (F2) U [W6] 1.46
T31: U [W8] 350
U31: U [W6] 101
V31: [W1] ^|
W31: (F2) U [W6] 0.46
X31: (F3) [W7] +W31^0.5
Y31: (F2) U [W6] 1.93
Z31: U [W8] 335
AA31: U [W6] 99
AB31: [W1] ^|
AC31: (F2) U [W6] 0.43
AD31: (F3) [W7] +AC31^0.5
AE31: (F2) U [W6] 1.8
AF31: U [W8] 345
AG31: U [W6] 97
AH31: [W1] ^|
AJ31: 77
AK31: 0.9352
B32: [W9] ^(Pbar)
C32: [W41] 'Barometric Pressure
D32: [W10] ^in. Hg
F32: (F2) U [W9] 29.65
H32: (F2) U [W9] 29.62
J32: (F2) U [W9] 29.5
L32: (F2) [W9] @AVG(F32..J32)
O32: U [W6] 23
P32: [W1] ^|
Q32: (F2) U [W6] 0.46
R32: (F3) [W7] +Q32^0.5
S32: (F2) U [W6] 1.53
T32: U [W8] 350
U32: U [W6] 101
V32: [W1] ^|
W32: (F2) U [W6] 0.38
X32: (F3) [W7] +W32^0.5
Y32: (F2) U [W6] 1.59
Z32: U [W8] 332
AA32: U [W6] 99
AB32: [W1] ^|
AC32: (F2) U [W6]
AD32: (F3) [W7] +A
AE32: (F2) U [W6]
AF32: U [W8] 342
AG32: U [W6] 97
AH32: [W1] ^|
AJ32: 78
AK32: 0.9666
B33: [W9] ^(Pg)
C33: [W41] 'Stack Static Pressure
D33: [W10] ^in. H2O
F33: U [W9] -0.51
```

```
G33: U [W2] '
H33: U [W9] -0.51
J33: U [W9] -0.51
O33: U [W6] 24
P33: [W1] ^|
Q33: (F2) U [W6] 0.46

R33: (F3) [W7] +Q33^0.5
S33: (F2) U [W6] 1.53
T33: U [W8] 349
U33: U [W6] 101
V33: [W1] ^|
W33: (F2) U [W6] 0.4
X33: (F3) [W7] +W33^0.5
Y33: (F2) U [W6] 1.68
Z33: U [W8] 335
AA33: U [W6] 99
AB33: [W1] ^|
AC33: (F2) U [W6] 0.39
AD33: (F3) [W7] +AC33^0.5
AE33: (F2) U [W6] 1.63
AF33: U [W8] 341
AG33: U [W6] 97
AH33: [W1] ^|
AJ33: 79
AK33: 0.9989
B34: [W9] ^(~H)
C34: [W41] 'Avg. Orifice Pressure Drop ~H
D34: [W10] ^in. H2O
F34: (F2) [W9] 2.52
H34: (F2) [W9] 3.27
J34: (F2) [W9] 2.87
O34: U [W6] 25
P34: [W1] ^|
R34: (F3) [W7] +Q34^0.5
V34: [W1] ^|
X34: (F3) [W7] +W34^0.5
AB34: [W1] ^|
AD34: (F3) [W7] +AC34^0.5
AH34: [W1] ^|
AJ34: 80
AK34: 1.032
B35: [W9] ^(Ts)
C35: [W41] 'Avg. Stack Gas Temperature
D35: [W10] +"     "&@CHAR(176)&"F"
F35: (F1) [W9] 356.1
H35: (F1) [W9] 342.4
J35: (F1) [W9] 350.5
L35: (F1) [W9] @AVG(F35..J35)
O35: U [W6] 26
P35: [W1] ^|
R35: (F3) [W7] +Q35^0.5
V35: [W1] ^|
X35: (F3) [W7] +W35^0.5
AB35: [W1] ^|
AD35: (F3) [W7] +AC35^0.5
AH35: [W1] ^|
AJ35: 81
AK35: 1.066
B36: [W9] ^(Tm)
C36: [W41] 'Avg. Dry Gas Meter Temperature
D36: [W10] +"     "&@CHAR(176)&"F"
F36: (F1) [W9] 97.2
```

```
H36: (F1) [W9] 99.2
J36: (F1) [W9] 99.8
O36: U [W6] 27
P36: [W1] ^|

R36: (F3) [W7] +Q36^0.5
V36: [W1] ^|
X36: (F3) [W7] +W36^0.5
AB36: [W1] ^|
AD36: (F3) [W7] +AC36^0.5
AH36: [W1] ^|
AJ36: 82
AK36: 1.102
B37: [W9] ^(Dn)
C37: [W41] 'Nozzle Diameter
D37: [W10] ^inches
F37: (F3) U [W9] 0.258
H37: (F3) U [W9] 0.276
J37: (F3) U [W9] 0.276
O37: U [W6] 28
P37: [W1] ^|
R37: (F3) [W7] +Q37^0.5
V37: [W1] ^|
X37: (F3) [W7] +W37^0.5
AB37: [W1] ^|
AD37: (F3) [W7] +AC37^0.5
AH37: [W1] ^|
AJ37: 83
AK37: 1.138
A38: U [W1] ||
C38: [W41] '  FOR STACK DIMENSIONS, ENTER 0 WHERE SIZE IS NOT APPROPRIATE
O38: U [W6] 29
P38: [W1] ^|
R38: (F3) [W7] +Q38^0.5
V38: [W1] ^|
X38: (F3) [W7] +W38^0.5
AB38: [W1] ^|
AD38: (F3) [W7] +AC38^0.5
AH38: [W1] ^|
AJ38: 84
AK38: 1.175
B39: [W9] ^(Ds)
C39: [W41] 'Diameter of Stack
D39: [W10] ^inches
F39: (F3) U [W9] 52
H39: (F3) U [W9] 52
J39: (F3) U [W9] 52
O39: U [W6] 30
P39: [W1] ^|
R39: (F3) [W7] +Q39^0.5
V39: [W1] ^|
X39: (F3) [W7] +W39^0.5
AB39: [W1] ^|
AD39: (F3) [W7] +AC39^0.5
AH39: [W1] ^|
AJ39: 85
AK39: 1.213
B40: [W9] ^(W)
C40: [W41] 'Width of Stack
D40: [W10] ^inches
F40: (F3) U [W9] 0
H40: (F3) U [W9] 0
J40: (F3) U [W9] 0
```

```
O40: U [W6] 31
P40: [W1] ^|


R40: (F3) [W7] +Q40^0.5
V40: [W1] ^|
X40: (F3) [W7] +W40^0.5
AB40: [W1] ^|
AD40: (F3) [W7] +AC40^0.5
AH40: [W1] ^|
AJ40: 86
AK40: 1.253
B41: [W9] ^(L)
C41: [W41] 'Length of Stack
D41: [W10] ^inches
F41: (F3) U [W9] 0
H41: (F3) U [W9] 0
J41: (F3) U [W9] 0
O41: U [W6] 32
P41: [W1] ^|
R41: (F3) [W7] +Q41^0.5
V41: [W1] ^|
X41: (F3) [W7] +W41^0.5
AB41: [W1] ^|
AD41: (F3) [W7] +AC41^0.5
AH41: [W1] ^|
AJ41: 87
AK41: 1.293
B42: [W9] ^(Cp)
C42: [W41] 'Pitot Tube Coefficient
D42: [W10] ^--
F42: (F2) U [W9] 0.84
H42: (F2) U [W9] +F42
J42: (F2) U [W9] +F42
O42: U [W6] 33
P42: [W1] ^|
R42: (F3) [W7] +Q42^0.5
V42: [W1] ^|
X42: (F3) [W7] +W42^0.5
AB42: [W1] ^|
AD42: (F3) [W7] +AC42^0.5
AH42: [W1] ^|
AJ42: 88
AK42: 1.335
B43: [W9] ^(¯p)§
C43: [W41] 'Avg. Square Root Velocity Head ¯p
D43: [W10] ^(in. H2O)§
F43: (F3) [W9] 0.86
H43: (F3) [W9] 0.873
J43: (F3) [W9] 0.818
O43: U [W6] 34
P43: [W1] ^|
R43: (F3) [W7] +Q43^0.5
V43: [W1] ^|
X43: (F3) [W7] +W43^0.5
AB43: [W1] ^|
AD43: (F3) [W7] +AC43^0.5
AH43: [W1] ^|
AJ43: 89
AK43: 1.378
B44: [W9] ^(%O2)
C44: [W41] 'Stack Gas Oxygen
D44: [W10] ^%
F44: (F1) U [W9] 16.9
```

```
H44: (F1) U [W9] 17.5
J44: (F1) U [W9] 17
L44: (F1) [W9] @AVG(F44..J44)
O44: U [W6] 35
P44: [W1] ^|
R44: (F3) [W7] +Q44^0.5
V44: [W1] ^|
X44: (F3) [W7] +W44^0.5
AB44: [W1] ^|
AD44: (F3) [W7] +AC44^0.5
AH44: [W1] ^|
AJ44: 90
AK44: 1.422
B45: [W9] ^(%CO2)
C45: [W41] 'Stack Gas Carbon Dioxide
D45: [W10] ^%
F45: (F1) U [W9] 3.9
H45: (F1) U [W9] 3.4
J45: (F1) U [W9] 3.7
L45: (F1) [W9] @AVG(F45..J45)
O45: U [W6] 36
P45: [W1] ^|
R45: (F3) [W7] +Q45^0.5
V45: [W1] ^|
X45: (F3) [W7] +W45^0.5
AB45: [W1] ^|
AD45: (F3) [W7] +AC45^0.5
AH45: [W1] ^|
AJ45: 91
AK45: 1.467
B46: [W9] ^(%N2)
C46: [W41] 'Stack Gas Nitrogen
D46: [W10] ^%
F46: (F1) U [W9] 100-F44-F45
H46: (F1) U [W9] 100-H44-H45
J46: (F1) U [W9] 100-J44-J45
L46: (F1) [W9] @AVG(F46..J46)
O46: U [W6] 37
P46: [W1] ^|
R46: (F3) [W7] +Q46^0.5
V46: [W1] ^|
X46: (F3) [W7] +W46^0.5
AB46: [W1] ^|
AD46: (F3) [W7] +AC46^0.5
AH46: [W1] ^|
AJ46: 92
AK46: 1.513
A47: U [W1] ||
B47: [W9] ^(ppmCO)
C47: [W41] 'Stack Gas Carbon Monoxide
D47: [W10] ^ppm
F47: U [W9] 0
H47: U [W9] 0
J47: U [W9] 0
L47: (F1) [W9] @AVG(F47..J47)
O47: U [W6] 38
P47: [W1] ^|
R47: (F3) [W7] +Q47^0.5
V47: [W1] ^|
X47: (F3) [W7] +W47^0.5
```

```
AB47: [W1] ^|
AD47: (F3) [W7] +AC47^0.5
AH47: [W1] ^|
AJ47: 93
AK47: 1.561
O48: U [W6] 39
P48: [W1] ^|
R48: (F3) [W7] +Q48^0.5
V48: [W1] ^|
X48: (F3) [W7] +W48^0.5
AB48: [W1] ^|
AD48: (F3) [W7] +AC48^0.5
AH48: [W1] ^|
AJ48: 94
AK48: 1.61
C49: [W41] 'CALCULATED STACK GAS DATA
O49: U [W6] 40
P49: [W1] ^|
R49: (F3) [W7] +Q49^0.5
V49: [W1] ^|
X49: (F3) [W7] +W49^0.5
AB49: [W1] ^|
AD49: (F3) [W7] +AC49^0.5
AH49: [W1] ^|
AJ49: 95
AK49: 1.66
B50: [W9] ^(Ps)
C50: [W41] 'Stack Gas Pressure
D50: [W10] ^in. Hg
F50: (F2) [W9] (F33/13.6+F32)
H50: (F2) [W9] (H33/13.6+H32)
J50: (F2) [W9] (J33/13.6+J32)
L50: (F2) [W9] @AVG(F50..J50)
O50: U [W6] 41
P50: [W1] ^|
R50: (F3) [W7] +Q50^0.5
V50: [W1] ^|
X50: (F3) [W7] +W50^0.5
AB50: [W1] ^|
AD50: (F3) [W7] +AC50^0.5
AH50: [W1] ^|
AJ50: 96
AK50: 1.712
B51: [W9] ^(%Bws)
C51: [W41] 'Stack Gas Moisture
D51: [W10] ^%
F51: (F1) [W9] (F31*0.04707)/((F31*0.04707)+F53)*100
H51: (F1) [W9] (H31*0.04707)/((H31*0.04707)+H53)*100
J51: (F1) [W9] (J31*0.04707)/((J31*0.04707)+J53)*100
L51: (F1) [W9] @AVG(F51..J51)
O51: U [W6] 42
P51: [W1] ^|
R51: (F3) [W7] +Q51^0.5
V51: [W1] ^|
X51: (F3) [W7] +W51^0.5
AB51: [W1] ^|
AD51: (F3) [W7] +AC51^0.5
AH51: [W1] ^|
AJ51: 97
AK51: 1.765
```

```
B52: [W9] ^(%B'w)
C52: [W41] 'Moisture at Saturation
D52: [W10] ^%
F52: (F1) [W9] (@VLOOKUP(F35,$AJ$4..$AK$164,1)/(F50)*100)
H52: (F1) [W9] (@VLOOKUP(H35,$AJ$4..$AK$164,1)/(H50)*100)
J52: (F1) [W9] (@VLOOKUP(J35,$AJ$4..$AK$164,1)/(J50)*100)
O52: U [W6] 43
P52: [W1] ^|
R52: (F3) [W7] +Q52^0.5
V52: [W1] ^|
X52: (F3) [W7] +W52^0.5
AB52: [W1] ^|
AD52: (F3) [W7] +AC52^0.5
AH52: [W1] ^|
AJ52: 98
AK52: 1.819
B53: [W9] ^(Vmstd)
C53: [W41] 'Standard Dry Gas Meter Volume
D53: [W10] ^dscf
F53: (F3) [W9] (17.64*(F27)*F19*(F50)/(F36+460))
H53: (F3) [W9] (17.64*(H27)*H19*(H50)/(H36+460))
J53: (F3) [W9] (17.64*(J27)*J19*(J50)/(J36+460))
L53: (F3) [W9] @AVG(F53..J53)
O53: U [W6] 44
P53: [W1] ^|
R53: (F3) [W7] +Q53^0.5
V53: [W1] ^|
X53: (F3) [W7] +W53^0.5
AB53: [W1] ^|
AD53: (F3) [W7] +AC53^0.5
AH53: [W1] ^|
AJ53: 99
AK53: 1.875
B54: [W9] ^(Md)
C54: [W41] 'Dry Gas Molecular Weight
D54: [W10] ^lb/lb-mole
F54: (F2) [W9] (0.44*(F45)+0.32*(F44)+0.28*(F46+F47/10000))
H54: (F2) [W9] (0.44*(H45)+0.32*(H44)+0.28*(H46+H47/10000))
J54: (F2) [W9] (0.44*(J45)+0.32*(J44)+0.28*(J46+J47/10000))
L54: (F2) [W9] @AVG(F54..J54)
O54: U [W6] 45
P54: [W1] ^|
R54: (F3) [W7] +Q54^0.5
V54: [W1] ^|
X54: (F3) [W7] +W54^0.5
AB54: [W1] ^|
AD54: (F3) [W7] +AC54^0.5
AH54: [W1] ^|
AJ54: 100
AK54: 1.932
B55: [W9] ^(Ms)
C55: [W41] 'Wet Gas Molecular Weight
D55: [W10] ^lb/lb-mole
F55: (F2) [W9] (F54*(1-((F58*F51)+((-F58+1)*F52))/100))+18*(((F58*F51)+((-F58+1)*F52))/100)
H55: (F2) [W9] (H54*(1-((H58*H51)+((-H58+1)*H52))/100))+18*(((H58*H51)+((-H58+1)*H52))/100)
J55: (F2) [W9] (J54*(1-((J58*J51)+((-J58+1)*J52))/100))+18*(((J58*J51)+((-J58+1)*J52))/100)
L55: (F2) [W9] @AVG(F55..J55)
O55: U [W6] 46
P55: [W1] ^|
R55: (F3) [W7] +Q55^0.5
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```
V55: [W1] ^|
X55: (F3) [W7] +W55^0.5
AB55: [W1] ^|
AD55: (F3) [W7] +AC55^0.5
AH55: [W1] ^|
AJ55: 101
AK55: 1.992
B56: [W9] ^(vs)
C56: [W41] 'Stack Gas Velocity
D56: [W10] ^ft/s
F56: (F2) [W9] (85.49*(F42)*(F43)*((F35+460)/((F50)*(F55)))^0.5)
H56: (F2) [W9] (85.49*(H42)*(H43)*((H35+460)/((H50)*(H55)))^0.5)
J56: (F2) [W9] (85.49*(J42)*(J43)*((J35+460)/((J50)*(J55)))^0.5)
L56: (F1) [W9] @AVG(F56..J56)
O56: U [W6] 47
P56: [W1] ^|
R56: (F3) [W7] +Q56^0.5
V56: [W1] ^|
X56: (F3) [W7] +W56^0.5
AB56: [W1] ^|
AD56: (F3) [W7] +AC56^0.5
AH56: [W1] ^|
AJ56: 102
AK56: 2.052
B57: [W9] ^(A)
C57: [W41] 'Stack Area
D57: [W10] ^ft2
F57: (F2) [W9] (+F39/24)^2*@PI+(F40*F41/144)
H57: (F2) [W9] (+H39/24)^2*@PI+(H40*H41/144)
J57: (F2) [W9] (+J39/24)^2*@PI+(J40*J41/144)
O57: U [W6] 48
P57: [W1] ^|
R57: (F3) [W7] +Q57^0.5
V57: [W1] ^|
X57: (F3) [W7] +W57^0.5
AB57: [W1] ^|
AD57: (F3) [W7] +AC57^0.5
AH57: [W1] ^|
AJ57: 103
AK57: 2.114
A58: U [W1] ||
F58: (H) [W9] +F51<=F52
H58: (H) [W9] +H51<=H52
J58: (H) [W9] +J51<=J52
O58: [W6] \-
P58: [W1] ^|
Q58: (F4) [W6] \-
R58: (F4) [W7] \-
S58: (F2) [W6] \-
T58: [W8] \-
U58: [W6] \-
V58: [W1] ^|
W58: (F4) [W6] \-
X58: (F3) [W7] \-
Y58: [W6] \-
Z58: [W8] \-
AA58: [W6] \-
AB58: [W1] ^|
AC58: (F4) [W6] \-
AD58: (F3) [W7] \-
AE58: [W6] \-
AF58: [W8] \-
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AG58: [W6] \-
AH58: [W1] ^|
AJ58: 104
AK58: 2.178
A59: U [W1] ||
B59: [W9] ^(Qsd)
C59: [W41] 'Volumetric Gas Flow Rate
D59: [W10] ^dscfs
F59: (F0) [W9] (F$57)*F$56*(1-((F$58*F51)+((-F58+1)*F52))/100)*528/(460+F35)*((F32+(F33/13.6))/29.92)
H59: (F0) [W9] (H$57)*H$56*(1-((H$58*H51)+((-H58+1)*H52))/100)*528/(460+H35)*((H32+(H33/13.6))/29.92)
J59: (F0) [W9] (J$57)*J$56*(1-((J$58*J51)+((-J58+1)*J52))/100)*528/(460+J35)*((J32+(J33/13.6))/29.92)
L59: (F0) [W9] @AVG(F59..J59)
O59: [W6] ^AVGS
P59: [W1] ^|
R59: (F3) [W7] @SUM(R10..R57)/$U$4
S59: (F2) [W6] @SUM(S10..S57)/$U$4
T59: (F1) [W8] @SUM(T10..T57)/$U$4
U59: (F1) [W6] @SUM(U10..U57)/$U$4
V59: [W1] ^|
X59: (F3) [W7] @SUM(X10..X57)/$U$4
Y59: (F2) [W6] @SUM(Y10..Y57)/$U$4
Z59: (F1) [W8] @SUM(Z10..Z57)/$U$4
AA59: (F1) [W6] @SUM(AA10..AA57)/$U$4
AB59: [W1] ^|
AD59: (F3) [W7] @SUM(AD10..AD57)/$U$4
AE59: (F2) [W6] @SUM(AE10..AE57)/$U$4
AF59: (F1) [W8] @SUM(AF10..AF57)/$U$4
AG59: (F1) [W6] @SUM(AG10..AG57)/$U$4
AH59: [W1] ^|
AJ59: 105
AK59: 2.243
B60: [W9] ^(Qsd)
C60: [W41] 'Volumetric Gas Flow Rate
D60: [W10] ^dscfm
F60: (,0) [W9] @ROUND(60*F59,-2)
H60: (,0) [W9] @ROUND(60*H59,-2)
J60: (,0) [W9] @ROUND(60*J59,-2)
L60: (,0) [W9] @AVG(F60..J60)
O60: [W6] \-
P60: [W1] ^|
Q60: (F4) [W6] \-
R60: (F4) [W7] \-
S60: [W6] \-
T60: [W8] \-
U60: [W6] \-
V60: [W1] ^|
W60: (F4) [W6] \-
X60: (F3) [W7] \-
Y60: [W6] \-
Z60: [W8] \-
AA60: [W6] \-
AB60: [W1] ^|
AC60: (F4) [W6] \-
AD60: (F3) [W7] \-
AE60: [W6] \-
AF60: [W8] \-
AG60: [W6] \-
AH60: [W1] ^|
```

```
AJ60: 106
AK60: 2.31
A61: U [W1] ||
B61: [W9] ^(Qsd)
```

```
C61: [W41] 'Volumetric Gas Flow Rate
D61: [W10] ^dscfh
F61: (S2) [W9] @ROUND(60*F60,-4)
H61: (S2) [W9] @ROUND(60*H60,-4)
J61: (S2) [W9] @ROUND(60*J60,-4)
L61: (S2) [W9] @AVG(F61..J61)
AJ61: 107
AK61: 2.379
B62: [W9] ^(Qa)
C62: [W41] 'Volumetric Gas Flow Rate
D62: [W10] ^acfm
F62: (,0) [W9] @ROUND(60*F56*F57,-2)
H62: (,0) [W9] @ROUND(60*H56*H57,-2)
J62: (,0) [W9] @ROUND(60*J56*J57,-2)
L62: (,0) [W9] @AVG(F62..J62)
AJ62: 108
AK62: 2.449
A63: U [W1] ||
B63: [W9] ^(%EA)
C63: [W41] 'Percent Excess Air
D63: [W10] ^%
F63: (F1) [W9] 100*(F44-(0.05*F45))/((0.264*F46)-F44+(0.5*(F47/10^4)))
H63: (F1) [W9] 100*(H44-(0.05*H45))/((0.264*H46)-H44+(0.5*(H47/10^4)))
J63: (F1) [W9] 100*(J44-(0.05*J45))/((0.264*J46)-J44+(0.5*(J47/10^4)))
L63: (F1) [W9] @AVG(F63..J63)
AJ63: 109
AK63: 2.921
B64: [W9] ^(I)
C64: [W41] 'Isokinetic Variation
D64: [W10] ^%
F64: (F1) [W9] (0.0945*(F35+460)*F53/((F50)*F56*((0.5*F37)^2*3.1417/144)*F28*(1-F51/100)))
H64: (F1) [W9] (0.0945*(H35+460)*H53/((H50)*H56*((0.5*H37)^2*3.1417/144)*H28*(1-H51/100)))
J64: (F1) [W9] (0.0945*(J35+460)*J53/((J50)*J56*((0.5*J37)^2*3.1417/144)*J28*(1-J51/100)))
AJ64: 110
AK64: 2.596
AJ65: 111
AK65: 2.672
AJ66: 112
AK66: 2.749
AJ67: 113
AK67: 2.829
C68: [W41] 'HEXAVALENT CHROMIUM Emissions Analysis
AJ68: 114
AK68: 2.911
AJ69: 115
AK69: 2.995
C70: [W41] 'Volume in Impinger
D70: [W10] ^mL
F70: [W9] 865
H70: [W9] 664
J70: [W9] 535
AJ70: 116
AK70: 3.081
C71: [W41] 'Conc. of Hex Chromium in KOH Impinger
D71: [W10] ^mg/L
E71: [W2] '<
F71: [W9] 0.0015
G71: [W2] '<
H71: [W9] 0.0015
I71: [W2] '<
J71: [W9] 0.0015
AJ71: 117
```

```
AK71: 3.169
C72: [W41] 'Total Hex Chromium Recovered
D72: [W10] ^mg
E72: [W2] (E71)
F72: [W9] (F70*F71/1000)
G72: [W2] (G71)
H72: [W9] (H70*H71/1000)
I72: [W2] (I71)
J72: [W9] (J70*J71/1000)
AJ72: 118
AK72: 3.259
C73: [W41] 'Volume of Blank
D73: [W10] ^ml
F73: [W9] 635+195
H73: [W9] 830
J73: [W9] 830
AJ73: 119
AK73: 3.351
C74: [W41] 'Conc. of Hex Chromium in blank
D74: [W10] ^mg/L
F74: [W9] 0
H74: [W9] 0
J74: [W9] 0
AJ74: 120
AK74: 3.446
AJ75: 121
AK75: 3.543
C76: [W41] 'Conc. of Hex Chromium in Gas Sample
D76: [W10] ^mg/CMeter
E76: [W2] (E72)
F76: [W9] ((F72-(F73*F74/1000))*35.3145/F53)
G76: [W2] (G72)
H76: [W9] ((H72-(H73*H74/1000))*35.3145/H53)
I76: [W2] (I72)
J76: [W9] ((J72-(J73*J74/1000))*35.3145/J53)
K76: [W2] '<
L76: [W9] ((F76+H76+J76)/3)
AJ76: 122
AK76: 3.642
C77: [W41] 'Total Flow of Hex Chromium in Stack
D77: [W10] ^g/hr.
E77: [W2] (E76)
F77: [W9] (F78*454)
G77: [W2] (G76)
H77: [W9] (H78*454)
I77: [W2] (I76)
J77: [W9] (J78*454)
K77: [W2] (K76)
L77: [W9] ((F77+H77+J77)/3)
AJ77: 123
AK77: 3.744
C78: [W41] 'Total Flow of Hex Chromium in Stack
D78: [W10] ^Lbs./hr.
E78: [W2] (E76)

F78: [W9] ((F76/454000)*F61/35.3145)
G78: [W2] (G76)
H78: [W9] ((H76/454000)*H61/35.3145)
I78: [W2] (I76)
J78: [W9] ((J76/454000)*J61/35.3145)
K78: [W2] '<
L78: [W9] ((F78+H78+J78)/3)
AJ78: 124
```

AK78: 3.848
AJ79: 125
AK79: 3.954
AJ80: 126
AK80: 4.063
AJ81: 127
AK81: 4.174
AJ82: 128
AK82: 4.289
AJ83: 129
AK83: 4.406
AJ84: 130
AK84: 4.525
AJ85: 131
AK85: 4.647
AJ86: 132
AK86: 4.772
AJ87: 133
AK87: 4.9
AJ88: 134
AK88: 5.031
AJ89: 135
AK89: 5.165
AJ90: 136
AK90: 5.302
AJ91: 137
AK91: 5.442
AJ92: 138
AK92: 5.585
AJ93: 139
AK93: 5.732
AJ94: 140
AK94: 2.881
AJ95: 141
AK95: 6.034
AJ96: 142
AK96: 6.19
AJ97: 143
AK97: 6.38
AJ98: 144
AK98: 6.513
AJ99: 145
AK99: 6.68
AJ100: 146
AK100: 6.85
AJ101: 147
AK101: 7.024
AJ102: 148
AK102: 7.202
AJ103: 149
AK103: 7.384
AJ104: 150

AK104: 7.569
AJ105: 151
AK105: 7.759
AJ106: 152
AK106: 7.952
AJ107: 153
AK107: 8.15
AJ108: 154
AK108: 8.351
AJ109: 155

AK109: 8.557
AJ110: 156
AK110: 8.767
AJ111: 157
AK111: 8.981
AJ112: 158
AK112: 9.2
AJ113: 159
AK113: 9.424
AJ114: 160
AK114: 9.652
AJ115: 161
AK115: 9.885
AJ116: 162
AK116: 10.12
AJ117: 163
AK117: 10.36
AJ118: 164
AK118: 10.61
AJ119: 165
AK119: 10.86
AJ120: 166
AK120: 11.12
AJ121: 167
AK121: 11.38
AJ122: 168
AK122: 11.65
AJ123: 169
AK123: 11.92
AJ124: 170
AK124: 12.2
AJ125: 171
AK125: 12.48
AJ126: 172
AK126: 12.77
AJ127: 173
AK127: 13.07
AJ128: 174
AK128: 13.37
AJ129: 175
AK129: 13.67
AJ130: 176
AK130: 13.98
AJ131: 177
AK131: 14.3
AJ132: 178
AK132: 14.62
AJ133: 179
AK133: 14.96
AJ134: 180

AK134: 15.29
AJ135: 181
AK135: 15.63
AJ136: 182
AK136: 15.98
AJ137: 183
AK137: 16.34
AJ138: 184
AK138: 16.7
AJ139: 185
AK139: 17.07
AJ140: 186

AK140: 17.44
AJ141: 187
AK141: 17.82
AJ142: 188
AK142: 18.21
AJ143: 189
AK143: 18.61
AJ144: 1+AJ143
AK144: 19.01
AJ145: 1+AJ144
AK145: 19.42
AJ146: 1+AJ145
AK146: 19.84
AJ147: 1+AJ146
AK147: 20.27
AJ148: 1+AJ147
AK148: 20.7
AJ149: 1+AJ148
AK149: 21.14
AJ150: 1+AJ149
AK150: 21.5
AJ151: 1+AJ150
AK151: 22.05
AJ152: 1+AJ151
AK152: 22.52
AJ153: 1+AJ152
AK153: 22.99
AJ154: 1+AJ153
AK154: 23.47
AJ155: 1+AJ154
AK155: 23.96
AJ156: 1+AJ155
AK156: 24.46
AJ157: 1+AJ156
AK157: 24.97
AJ158: 1+AJ157
AK158: 25.48
AJ159: 1+AJ158
AK159: 26
AJ160: 1+AJ159
AK160: 26.53
AJ161: 1+AJ160
AK161: 27.07
AJ162: 1+AJ161
AK162: 27.62
AJ163: 1+AJ162
AK163: 28.18
AJ164: 1+AJ163

AK164: 28.75

Metals Spreadsheet

```
A1: U [W1] ||
B1: [W9] 'Name file for source (e.g.. /fs [esc] [esc] a:acmepm) if not already
O1: [W6] ||
P1: [W1] 'TO BEGIN, BLANK ALL FIELD DATA VALUES BY PRESSING ALT X
A2: U [W1] ||
B2: [W9] '    saved on floppy disk.
Q2: [W6] 'CALCULATIONS FOR SQUARE ROOT OF ~P FOR PITOT TUBE
AJ2: "TEMP
AK2: "VP H2O
A3: U [W1] ||
B3: [W9] 'Type [Alt M] to get a menu to: A) move around spreadsheet,
Q3: [W6] 'filename:
S3: [W6] +C14
AJ3: +"     "&@CHAR(176)&"F"
AK3: "in. Hg
A4: U [W1] ||
B4: [W9] '     B) print parts of spreadsheet, or C) get help instructions.
Q4: [W6] 'ENTER NUMBER OF POINTS===>
U4: (F0) U [W6] 24
AJ4: 50
AK4: 0.3626
A5: U [W1] ||
B5: [W9] 'Use arrow keys to go to desired cells.  Enter number and go to next
O5: [W6] \-
P5: [W1] ^|
Q5: [W6] \-
R5: [W7] \-
S5: [W6] \-
T5: [W8] \-
U5: [W6] \-
V5: [W1] ^|
W5: [W6] \-
X5: [W7] \-
Y5: [W6] \-
Z5: [W8] \-
AA5: [W6] \-
AB5: [W1] ^|
AC5: [W6] \-
AD5: [W7] \-
AE5: [W6] \-
AF5: [W8] \-
AG5: [W6] \-
AH5: [W1] ^|
AJ5: 51
AK5: 0.3764
A6: U [W1] ||
B6: [W9] '    cell.
P6: [W1] ^|
Q6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
V6: [W1] ^|
W6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
AB6: [W1] ^|
AC6: [W6] 'DATA INPUT FROM FIELD DATA SHEETS
AH6: [W1] ^|
AJ6: 52
AK6: 0.3906
A7: U [W1] ||
B7: [W9] 'You must enter ~p, ~H, stack gas T, and DGM T individual values from
O7: [W6] "POINT
P7: [W1] ^|
```

```
S7: [W6] +F14
V7: [W1] ^|
Y7: [W6] +H14
AB7: [W1] ^|
AE7: [W6] +J14
AH7: [W1] ^|
AJ7: 53
AK7: 0.4052
A8: U [W1] ||
B8: [W9] '    the field data sheets.
O8: [W6] "NO.
P8: [W1] ^|
Q8: [W6] ^~p
R8: [W7] ^SQRT ~p
S8: [W6] ^~H
T8: [W8] ^Stack T
U8: [W6] ^DGM T
V8: [W1] ^|
W8: [W6] ^~p
X8: [W7] ^SQRT ~p
Y8: [W6] ^~H
Z8: [W8] ^Stack T
AA8: [W6] ^DGM T
AB8: [W1] ^|
AC8: [W6] ^~p
AD8: [W7] ^SQRT ~p
AE8: [W6] ^~H
AF8: [W8] ^Stack T
AG8: [W6] ^DGM T
AH8: [W1] ^|
AJ8: 54
AK8: 0.4203
C9: U [W41] 'TABLE X-X
O9: [W6] \-
P9: [W1] ^|
Q9: [W6] \-
R9: [W7] \-
S9: [W6] \-
T9: [W8] \-
U9: [W6] \-
V9: [W1] ^|
W9: [W6] \-
X9: [W7] \-
Y9: [W6] \-
Z9: [W8] \-
AA9: [W6] \-
AB9: [W1] ^|
AC9: [W6] \-
AD9: [W7] \-
AE9: [W6] \-
AF9: [W8] \-
AG9: [W6] \-
AH9: [W1] ^|
AJ9: 55
AK9: 0.4359
C10: U [W41] 'Metals Emissions Summary
O10: U [W6] 1
P10: [W1] ^|
Q10: (F2) U [W6] 0.84
R10: (F3) [W7] +Q10^0.5
```

```
S10: (F2) U [W6] 3.72
```

```
T10: U [W8] 353
U10: U [W6] 90
V10: [W1] ^|
W10: (F2) U [W6] 0.95
X10: (F3) [W7] +W10^0.5
Y10: (F2) U [W6] 4.2
Z10: U [W8] 355
AA10: U [W6] 97
AB10: [W1] ^|
AC10: (F2) U [W6] 0.9
AD10: (F3) [W7] +AC10^0.5
AE10: (F2) U [W6] 3.83
AF10: U [W8] 342
AG10: U [W6] 95
AH10: [W1] ^|
AJ10: 56
AK10: 0.452
C11: U [W41] 'KILN #2, EXHAUST STACK
O11: U [W6] 2
P11: [W1] ^|
Q11: (F2) U [W6] 0.85
R11: (F3) [W7] +Q11^0.5
S11: (F2) U [W6] 3.76
T11: U [W8] 355
U11: U [W6] 91
V11: [W1] ^|
W11: (F2) U [W6] 0.97
X11: (F3) [W7] +W11^0.5
Y11: (F2) U [W6] 4.29
Z11: U [W8] 357
AA11: U [W6] 98
AB11: [W1] ^|
AC11: (F2) U [W6] 1
AD11: (F3) [W7] +AC11^0.5
AE11: (F2) U [W6] 4.24
AF11: U [W8] 344
AG11: U [W6] 95
AH11: [W1] ^|
AJ11: 57
AK11: 0.4586
C12: U [W41] 'VIRGINIA SOLITE, CASCADE VA
H12: [W9] '
O12: U [W6] 3
P12: [W1] ^|
Q12: (F2) U [W6] 0.89
R12: (F3) [W7] +Q12^0.5
S12: (F2) U [W6] 3.94
T12: U [W8] 357
U12: U [W6] 92
V12: [W1] ^|
W12: (F2) U [W6] 0.95
X12: (F3) [W7] +W12^0.5
Y12: (F2) U [W6] 4.2
Z12: U [W8] 358
AA12: U [W6] 99
AB12: [W1] ^|
AC12: (F2) U [W6] 0.92
AD12: (F3) [W7] +AC12^0.5
AE12: (F2) U [W6] 3.91
AF12: U [W8] 344
AG12: U [W6] 96
AH12: [W1] ^|
```

```
AJ12: 58
AK12: 0.4858
O13: U [W6] 4
P13: [W1] ^|
Q13: (F2) U [W6] 0.94
R13: (F3) [W7] +Q13^0.5
S13: (F2) U [W6] 4.16
T13: U [W8] 359
U13: U [W6] 94
V13: [W1] ^|
W13: (F2) U [W6] 0.86
X13: (F3) [W7] +W13^0.5
Y13: (F2) U [W6] 3.8
Z13: U [W8] 358
AA13: U [W6] 99
AB13: [W1] ^|
AC13: (F2) U [W6] 0.85
AD13: (F3) [W7] +AC13^0.5
AE13: (F2) U [W6] 3.62
AF13: U [W8] 344
AG13: U [W6] 96
AH13: [W1] ^|
AJ13: 59
AK13: 0.5035
B14: [W9] 'filename:
C14: U [W41] 'METALS.WQ1
D14: [W10] "RUN NO.==>
F14: U [W9] 'K2-1
H14: U [W9] 'K2-2
I14: U [W2] '
J14: U [W9] 'K2-3
O14: U [W6] 5
P14: [W1] ^|
Q14: (F2) U [W6] 0.84
R14: (F3) [W7] +Q14^0.5
S14: (F2) U [W6] 3.72
T14: U [W8] 358
U14: U [W6] 95
V14: [W1] ^|
W14: (F2) U [W6] 0.78
X14: (F3) [W7] +W14^0.5
Y14: (F2) U [W6] 3.45
Z14: U [W8] 357
AA14: U [W6] 100
AB14: [W1] ^|
AC14: (F2) U [W6] 0.76
AD14: (F3) [W7] +AC14^0.5
AE14: (F2) U [W6] 3.2
AF14: U [W8] 345
AG14: U [W6] 97
AH14: [W1] ^|
AJ14: 60
AK14: 0.5218
D15: [W10] "DATE==>
F15: U [W9] '6/18/92
H15: U [W9] '6/18/92
J15: U [W9] '6/18/92
```

```
O15: U [W6] 6
P15: [W1] ^|
Q15: (F2) U [W6] 0.73
R15: (F3) [W7] +Q15^0.5
S15: (F2) U [W6] 3.2
```

```
T15: U [W8] 358
U15: U [W6] 95
V15: [W1] ^|
W15: (F2) U [W6] 0.7
X15: (F3) [W7] +W15^0.5
Y15: (F2) U [W6] 3.1
Z15: U [W8] 356
AA15: U [W6] 99
AB15: [W1] ^|
AC15: (F2) U [W6] 0.69
AD15: (F3) [W7] +AC15^0.5
AE15: (F2) U [W6] 2.9
AF15: U [W8] 345
AG15: U [W6] 97
AH15: [W1] ^|
AJ15: 61
AK15: 0.5407
C16: [W41] 'SAMPLING PARAMETERS
D16: [W10] "RUN TIME==>
F16: U [W9] '831-1102
H16: U [W9] '1255-1358
J16: U [W9] '1550-1712
L16: [W9] ^AVERAGE
O16: U [W6] 7
P16: [W1] ^|
Q16: (F2) U [W6] 0.56
R16: (F3) [W7] +Q16^0.5
S16: (F2) U [W6] 2.48
T16: U [W8] 356
U16: U [W6] 96
V16: [W1] ^|
W16: (F2) U [W6] 0.63
X16: (F3) [W7] +W16^0.5
Y16: (F2) U [W6] 2.79
Z16: U [W8] 356
AA16: U [W6] 98
AB16: [W1] ^|
AC16: (F2) U [W6] 0.56
AD16: (F3) [W7] +AC16^0.5
AE16: (F2) U [W6] 2.38
AF16: U [W8] 345
AG16: U [W6] 97
AH16: [W1] ^|
AJ16: 62
AK16: 0.5601
B17: [W9] \-
C17: [W41] \-
D17: [W10] \-
E17: [W2] \-
F17: [W9] \-
G17: [W2] \-
H17: [W9] \-
I17: [W2] \-
J17: [W9] \-
K17: [W2] \-
L17: [W9] \-
O17: U [W6] 8
P17: [W1] ^|
Q17: (F2) U [W6] 0.6
R17: (F3) [W7] +Q17^0.5
S17: (F2) U [W6] 2.6
T17: U [W8] 356
```

```
U17: U [W6] 97
V17: [W1] ^|
W17: (F2) U [W6] 0.73
X17: (F3) [W7] +W17^0.5
Y17: (F2) U [W6] 3.2
Z17: U [W8] 356
AA17: U [W6] 99
AB17: [W1] ^|
AC17: (F2) U [W6] 0.57
AD17: (F3) [W7] +AC17^0.5
AE17: (F2) U [W6] 2.42
AF17: U [W8] 344
AG17: U [W6] 97
AH17: [W1] ^|
AJ17: 63
AK17: 0.5802
B18: [W9] ^SYMBOL
C18: [W41] 'MEASURED DATA AT STACK
D18: [W10] ^UNITS
O18: U [W6] 9
P18: [W1] ^|
Q18: (F2) U [W6] 0.67
R18: (F3) [W7] +Q18^0.5
S18: (F2) U [W6] 2.96
T18: U [W8] 356
U18: U [W6] 98
V18: [W1] ^|
W18: (F2) U [W6] 0.8
X18: (F3) [W7] +W18^0.5
Y18: (F2) U [W6] 3.54
Z18: U [W8] 356
AA18: U [W6] 99
AB18: [W1] ^|
AC18: (F2) U [W6] 0.61
AD18: (F3) [W7] +AC18^0.5
AE18: (F2) U [W6] 2.59
AF18: U [W8] 344
AG18: U [W6] 97
AH18: [W1] ^|
AJ18: 64
AK18: 0.6009
B19: [W9] ^(Y)
C19: [W41] 'Dry Gas Meter Calibration Factor
D19: [W10] ^--
F19: U [W9] 0.998
H19: U [W9] +F19
J19: U [W9] +F19
O19: U [W6] 10
P19: [W1] ^|
Q19: (F2) U [W6] 0.71
R19: (F3) [W7] +Q19^0.5
S19: (F2) U [W6] 3.14
T19: U [W8] 355
```

```
U19: U [W6] 98
V19: [W1] ^|
W19: (F2) U [W6] 0.84
X19: (F3) [W7] +W19^0.5
Y19: (F2) U [W6] 3.7
Z19: U [W8] 354
AA19: U [W6] 100
AB19: [W1] ^|
AC19: (F2) U [W6] 0.63
```

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AD19: (F3) [W7] +AC19^0.5
AE19: (F2) U [W6] 2.68
AF19: U [W8] 343
AG19: U [W6] 98
AH19: [W1] ^|
AJ19: 65
AK19: 0.6222
B20: [W9] ^(Vi)
C20: [W41] 'Initial Meter Volume
D20: [W10] ^cf
F20: (F3) U [W9] 457.647
H20: (F3) U [W9] 568.429
J20: (F3) U [W9] 688.784
O20: U [W6] 11
P20: [W1] ^|
Q20: (F2) U [W6] 0.43
R20: (F3) [W7] +Q20^0.5
S20: (F2) U [W6] 1.9
T20: U [W8] 353
U20: U [W6] 98
V20: [W1] ^|
W20: (F2) U [W6] 0.85
X20: (F3) [W7] +W20^0.5
Y20: (F2) U [W6] 3.76
Z20: U [W8] 352
AA20: U [W6] 100
AB20: [W1] ^|
AC20: (F2) U [W6] 0.6
AD20: (F3) [W7] +AC20^0.5
AE20: (F2) U [W6] 2.5
AF20: U [W8] 344
AG20: U [W6] 98
AH20: [W1] ^|
AJ20: 66
AK20: 0.6442
A21: U [W1] ||
C21: [W41] '  IF NO INTERMEDIATE LEAK CHECK WAS DONE ENTER 0
F21: [W9] 0
O21: U [W6] 12
P21: [W1] ^|
Q21: (F2) U [W6] 0.84
R21: (F3) [W7] +Q21^0.5
S21: (F2) U [W6] 3.7
T21: U [W8] 355
U21: U [W6] 99
V21: [W1] ^|
W21: (F2) U [W6] 0.85
X21: (F3) [W7] +W21^0.5
Y21: (F2) U [W6] 3.76
Z21: U [W8] 353
AA21: U [W6] 100
```

```
AB21: [W1] ^|
AC21: (F2) U [W6] 0.58
AD21: (F3) [W7] +AC21^0.5
AE21: (F2) U [W6] 2.47
AF21: U [W8] 338
AG21: U [W6] 98
AH21: [W1] ^|
AJ21: 67
AK21: 0.6669
A22: U [W1] ||
C22: [W41] 'Volume Before Intermed Leak Check
```

```
D22: [W10] ^cf
F22: U [W9] 0
O22: U [W6] 13
P22: [W1] ^|
Q22: (F2) U [W6] 1.1
R22: (F3) [W7] +Q22^0.5
S22: (F2) U [W6] 4.87
T22: U [W8] 351
U22: U [W6] 99
V22: [W1] ^|
W22: (F2) U [W6] 1
X22: (F3) [W7] +W22^0.5
Y22: (F2) U [W6] 4.4
Z22: U [W8] 352
AA22: U [W6] 100
AB22: [W1] ^|
AC22: (F2) U [W6] 0.89
AD22: (F3) [W7] +AC22^0.5
AE22: (F2) U [W6] 3.79
AF22: U [W8] 337
AG22: U [W6] 99
AH22: [W1] ^|
AJ22: 68
AK22: 0.6903
A23: U [W1] ||
C23: [W41] 'Volume After Intermed Leak Check
D23: [W10] ^cf
F23: U [W9] 0
H23: U [W9] 0
J23: U [W9] 0
O23: U [W6] 14
P23: [W1] ^|
Q23: (F2) U [W6] 1.2
R23: (F3) [W7] +Q23^0.5
S23: (F2) U [W6] 5.3
T23: U [W8] 360
U23: U [W6] 99
V23: [W1] ^|
W23: (F2) U [W6] 1.1
X23: (F3) [W7] +W23^0.5
Y23: (F2) U [W6] 4.87
Z23: U [W8] 356
AA23: U [W6] 100
AB23: [W1] ^|
AC23: (F2) U [W6] 0.96
AD23: (F3) [W7] +AC23^0.5
AE23: (F2) U [W6] 4.08
AF23: U [W8] 348
AG23: U [W6] 98
```

```
AH23: [W1] ^|
AJ23: 69
AK23: 0.7144
B24: [W9] ^(Vf)
C24: [W41] 'Final Meter Volume
D24: [W10] ^cf
F24: (F3) U [W9] 516.141
H24: (F3) U [W9] 627.66
J24: (F3) U [W9] 750.222
O24: U [W6] 15
P24: [W1] ^|
Q24: (F2) U [W6] 0.88
R24: (F3) [W7] +Q24^0.5
```

```
S24: (F2) U [W6] 3.89
T24: U [W8] 361
U24: U [W6] 100
V24: [W1] ^|
W24: (F2) U [W6] 1.1
X24: (F3) [W7] +W24^0.5
Y24: (F2) U [W6] 4.87
Z24: U [W8] 357
AA24: U [W6] 100
AB24: [W1] ^|
AC24: (F2) U [W6] 0.99
AD24: (F3) [W7] +AC24^0.5
AE24: (F2) U [W6] 4.2
AF24: U [W8] 349
AG24: U [W6] 99
AH24: [W1] ^|
AJ24: 70
AK24: 0.7392
B25: [W9] ^(Lp)
C25: [W41] 'Leak Check Correction
D25: [W10] ^cfm
F25: U [W9] 0
H25: U [W9] 0
J25: U [W9] 0
Q25: U [W6] 16
P25: [W1] ^|
Q25: (F2) U [W6] 1.2
R25: (F3) [W7] +Q25^0.5
S25: (F2) U [W6] 5.3
T25: U [W8] 362
U25: U [W6] 101
V25: [W1] ^|
W25: (F2) U [W6] 1
X25: (F3) [W7] +W25^0.5
Y25: (F2) U [W6] 4.43
Z25: U [W8] 357
AA25: U [W6] 100
AB25: [W1] ^|
AC25: (F2) U [W6] 0.96
AD25: (F3) [W7] +AC25^0.5
AE25: (F2) U [W6] 4.08
AF25: U [W8] 350
AG25: U [W6] 99
AH25: [W1] ^|
AJ25: 71
AK25: 0.7648
A26: U [W1] ||

C26: [W41] ||
F26: (H) [W9] @IF(F25-0.02>0,F25,0)
H26: (H) [W9] @IF(H25-0.02>0,H25,0)
J26: (H) [W9] @IF(J25-0.02>0,J25,0)
O26: U [W6] 17
P26: [W1] ^|
Q26: (F2) U [W6] 0.9
R26: (F3) [W7] +Q26^0.5
S26: (F2) U [W6] 3.9
T26: U [W8] 362
U26: U [W6] 102
V26: [W1] ^|
W26: (F2) U [W6] 0.92
X26: (F3) [W7] +W26^0.5
Y26: (F2) U [W6] 4.07
```

```
Z26: U [W8] 353
AA26: U [W6] 101
AB26: [W1] ^|
AC26: (F2) U [W6] 0.82
AD26: (F3) [W7] +AC26^0.5
AE26: (F2) U [W6] 3.49
AF26: U [W8] 350
AG26: U [W6] 99
AH26: [W1] ^|
AJ26: 72
AK26: 0.7912
B27: [W9] ^(Vm)
C27: [W41] 'Total Meter Volume
D27: [W10] ^cf
F27: (F3) [W9] (F24-F23)+(F22-F20)-(0.02-F24)*F26
H27: (F3) [W9] (H24-H23)+(H22-H20)-(0.02-H24)*H26
J27: (F3) [W9] (J24-J23)+(J22-J20)-(0.02-J24)*J26
L27: (F3) [W9] @AVG(F27..J27)
O27: U [W6] 18
P27: [W1] ^|
Q27: (F2) U [W6] 0.67
R27: (F3) [W7] +Q27^0.5
S27: (F2) U [W6] 2.96
T27: U [W8] 360
U27: U [W6] 101
V27: [W1] ^|
W27: (F2) U [W6] 0.81
X27: (F3) [W7] +W27^0.5
Y27: (F2) U [W6] 3.58
Z27: U [W8] 348
AA27: U [W6] 101
AB27: [W1] ^|
AC27: (F2) U [W6] 0.51
AD27: (F3) [W7] +AC27^0.5
AE27: (F2) U [W6] 2.17
AF27: U [W8] 350
AG27: U [W6] 99
AH27: [W1] ^|
AJ27: 73
AK27: 0.8183
B28: [W9] ^(t)
C28: [W41] 'Sampling Time
D28: [W10] ^min.
F28: U [W9] 60
H28: U [W9] 60
J28: U [W9] 60
L28: (F0) [W9] @AVG(F28..J28)
O28: U [W6] 19
P28: [W1] ^|
Q28: (F2) U [W6] 0.41
R28: (F3) [W7] +Q28^0.5
S28: (F2) U [W6] 1.81
T28: U [W8] 356
U28: U [W6] 102
V28: [W1] ^|
W28: (F2) U [W6] 0.64
X28: (F3) [W7] +W28^0.5
Y28: (F2) U [W6] 2.8
Z28: U [W8] 344
AA28: U [W6] 101
AB28: [W1] ^|
AC28: (F2) U [W6] 0.47
```

```
S24: (F2) U [W6] 3.89
T24: U [W8] 361
U24: U [W6] 100
V24: [W1] ^|
W24: (F2) U [W6] 1.1
X24: (F3) [W7] +W24^0.5
Y24: (F2) U [W6] 4.87
Z24: U [W8] 357
AA24: U [W6] 100
AB24: [W1] ^|
AC24: (F2) U [W6] 0.99
AD24: (F3) [W7] +AC24^0.5
AE24: (F2) U [W6] 4.2
AF24: U [W8] 349
AG24: U [W6] 99
AH24: [W1] ^|
AJ24: 70
AK24: 0.7392
B25: [W9] ^(Lp)
C25: [W41] 'Leak Check Correction
D25: [W10] ^cfm
F25: U [W9] 0
H25: U [W9] 0
J25: U [W9] 0
O25: U [W6] 16
P25: [W1] ^|
Q25: (F2) U [W6] 1.2
R25: (F3) [W7] +Q25^0.5
S25: (F2) U [W6] 5.3
T25: U [W8] 362
U25: U [W6] 101
V25: [W1] ^|
W25: (F2) U [W6] 1
X25: (F3) [W7] +W25^0.5
Y25: (F2) U [W6] 4.43
Z25: U [W8] 357
AA25: U [W6] 100
AB25: [W1] ^|
AC25: (F2) U [W6] 0.96
AD25: (F3) [W7] +AC25^0.5
AE25: (F2) U [W6] 4.08
AF25: U [W8] 350
AG25: U [W6] 99
AH25: [W1] ^|
AJ25: 71
AK25: 0.7648
A26: U [W1] ||

C26: [W41] ||
F26: (H) [W9] @IF(F25-0.02>0,F25,0)
H26: (H) [W9] @IF(H25-0.02>0,H25,0)
J26: (H) [W9] @IF(J25-0.02>0,J25,0)
O26: U [W6] 17
P26: [W1] ^|
Q26: (F2) U [W6] 0.9
R26: (F3) [W7] +Q26^0.5
S26: (F2) U [W6] 3.9
T26: U [W8] 362
U26: U [W6] 102
V26: [W1] ^|
W26: (F2) U [W6] 0.92
X26: (F3) [W7] +W26^0.5
Y26: (F2) U [W6] 4.07
```

```
Z26: U [W8] 353
AA26: U [W6] 101
AB26: [W1] ^|
AC26: (F2) U [W6] 0.82
AD26: (F3) [W7] +AC26^0.5
AE26: (F2) U [W6] 3.49
AF26: U [W8] 350
AG26: U [W6] 99
AH26: [W1] ^|
AJ26: 72
AK26: 0.7912
B27: [W9] ^(Vm)
C27: [W41] 'Total Meter Volume
D27: [W10] ^cf
F27: (F3) [W9] (F24-F23)+(F22-F20)-(0.02-F24)*F26
H27: (F3) [W9] (H24-H23)+(H22-H20)-(0.02-H24)*H26
J27: (F3) [W9] (J24-J23)+(J22-J20)-(0.02-J24)*J26
L27: (F3) [W9] @AVG(F27..J27)
O27: U [W6] 18
P27: [W1] ^|
Q27: (F2) U [W6] 0.67
R27: (F3) [W7] +Q27^0.5
S27: (F2) U [W6] 2.96
T27: U [W8] 360
U27: U [W6] 101
V27: [W1] ^|
W27: (F2) U [W6] 0.81
X27: (F3) [W7] +W27^0.5
Y27: (F2) U [W6] 3.58
Z27: U [W8] 348
AA27: U [W6] 101
AB27: [W1] ^|
AC27: (F2) U [W6] 0.51
AD27: (F3) [W7] +AC27^0.5
AE27: (F2) U [W6] 2.17
AF27: U [W8] 350
AG27: U [W6] 99
AH27: [W1] ^|
AJ27: 73
AK27: 0.8183
B28: [W9] ^(t)
C28: [W41] 'Sampling Time
D28: [W10] ^min.
F28: U [W9] 60
H28: U [W9] 60

J28: U [W9] 60
L28: (F0) [W9] @AVG(F28..J28)
O28: U [W6] 19
P28: [W1] ^|
Q28: (F2) U [W6] 0.41
R28: (F3) [W7] +Q28^0.5
S28: (F2) U [W6] 1.81
T28: U [W8] 356
U28: U [W6] 102
V28: [W1] ^|
W28: (F2) U [W6] 0.64
X28: (F3) [W7] +W28^0.5
Y28: (F2) U [W6] 2.8
Z28: U [W8] 344
AA28: U [W6] 101
AB28: [W1] ^|
AC28: (F2) U [W6] 0.47
```

```
AD28: (F3) [W7] +AC28^0.5
AE28: (F2) U [W6] 2
AF28: U [W8] 347
AG28: U [W6] 99
AH28: [W1] ^|
AJ28: 74
AK28: 0.8462
B29: [W9] ^(Vwc)
C29: [W41] 'Volume of Water Collected
D29: [W10] ^mL
F29: (F1) U [W9] (F31-F30)
H29: (F1) U [W9] (H31-H30)
J29: (F1) U [W9] (J31-J30)
L29: (F1) [W9] @AVG(F29..J29)
O29: U [W6] 20
P29: [W1] ^|
Q29: (F2) U [W6] 0.44
R29: (F3) [W7] +Q29^0.5
S29: (F2) U [W6] 1.94
T29: U [W8] 353
U29: U [W6] 101
V29: [W1] ^|
W29: (F2) U [W6] 0.61
X29: (F3) [W7] +W29^0.5
Y29: (F2) U [W6] 2.7
Z29: U [W8] 337
AA29: U [W6] 102
AB29: [W1] ^|
AC29: (F2) U [W6] 0.46
AD29: (F3) [W7] +AC29^0.5
AE29: (F2) U [W6] 1.95
AF29: U [W8] 345
AG29: U [W6] 99
AH29: [W1] ^|
AJ29: 75
AK29: 0.875
B30: [W9] ^(Vwsg)
C30: [W41] 'Silica Gel Weight Increase
D30: [W10] ^g
F30: (F1) U [W9] 12.5
H30: (F1) U [W9] 12
J30: (F1) U [W9] 9.9
L30: (F1) [W9] @AVG(F30..J30)
```

```
O30: U [W6] 21
P30: [W1] ^|
Q30: (F2) U [W6] 0.48
R30: (F3) [W7] +Q30^0.5
S30: (F2) U [W6] 2.1
T30: U [W8] 350
U30: U [W6] 100
V30: [W1] ^|
W30: (F2) U [W6] 0.62
X30: (F3) [W7] +W30^0.5
Y30: (F2) U [W6] 2.7
Z30: U [W8] 332
AA30: U [W6] 101
AB30: [W1] ^|
AC30: (F2) U [W6] 0.45
AD30: (F3) [W7] +AC30^0.5
AE30: (F2) U [W6] 1.91
AF30: U [W8] 343
AG30: U [W6] 99
```

```
AH30: [W1] ^|
AJ30: 76
AK30: 0.9046
B31: [W9] ^(Vlc)
C31: [W41] 'Total Water Collected
D31: [W10] ^mL
F31: (F1) [W9] 66.5
H31: (F1) [W9] 75
J31: (F1) [W9] 86.9
L31: (F1) [W9] @AVG(F31..J31)
O31: U [W6] 22
P31: [W1] ^|
Q31: (F2) U [W6] 0.51
R31: (F3) [W7] +Q31^0.5
S31: (F2) U [W6] 2.25
T31: U [W8] 348
U31: U [W6] 100
V31: [W1] ^|
W31: (F2) U [W6] 0.53
X31: (F3) [W7] +W31^0.5
Y31: (F2) U [W6] 2.3
Z31: U [W8] 331
AA31: U [W6] 101
AB31: [W1] ^|
AC31: (F2) U [W6] 0.45
AD31: (F3) [W7] +AC31^0.5
AE31: (F2) U [W6] 1.91
AF31: U [W8] 341
AG31: U [W6] 98
AH31: [W1] ^|
AJ31: 77
AK31: 0.9352
B32: [W9] ^(Pbar)
C32: [W41] 'Barometric Pressure
D32: [W10] ^in. Hg
F32: (F2) U [W9] 29.6
H32: (F2) U [W9] 29.62
J32: (F2) U [W9] 29.5
L32: (F2) [W9] @AVG(F32..J32)
O32: U [W6] 23
P32: [W1] ^|

Q32: (F2) U [W6] 0.51
R32: (F3) [W7] +Q32^0.5
S32: (F2) U [W6] 2.25
T32: U [W8] 344
U32: U [W6] 100
V32: [W1] ^|
W32: (F2) U [W6] 0.37
X32: (F3) [W7] +W32^0.5
Y32: (F2) U [W6] 1.63
Z32: U [W8] 320
AA32: U [W6] 101
AB32: [W1] ^|
AC32: (F2) U [W6] 0.41
AD32: (F3) [W7] +AC32^0.5
AE32: (F2) U [W6] 1.74
AF32: U [W8] 342
AG32: U [W6] 97
AH32: [W1] ^|
AJ32: 78
AK32: 0.9666
B33: [W9] ^(Pg)
```

```
C33: [W41] 'Stack Static Pressure
D33: [W10] ^in. H2O
F33: U [W9] -0.51
G33: U [W2] '
H33: U [W9] -0.51
J33: U [W9] -0.51
O33: U [W6] 24
P33: [W1] ^|
Q33: (F2) U [W6] 0.5
R33: (F3) [W7] +Q33^0.5
S33: (F2) U [W6] 2.21
T33: U [W8] 342
U33: U [W6] 101
V33: [W1] ^|
W33: (F2) U [W6] 0.37
X33: (F3) [W7] +W33^0.5
Y33: (F2) U [W6] 1.63
Z33: U [W8] 321
AA33: U [W6] 100
AB33: [W1] ^|
AC33: (F2) U [W6] 0.39
AD33: (F3) [W7] +AC33^0.5
AE33: (F2) U [W6] 1.66
AF33: U [W8] 340
AG33: U [W6] 97
AH33: [W1] ^|
AJ33: 79
AK33: 0.9989
B34: [W9] ^(~H)
C34: [W41] 'Avg. Orifice Pressure Drop ~H
D34: [W10] ^in. H2O
F34: (F2) [W9] 3.25
H34: (F2) [W9] 3.49
J34: (F2) [W9] 2.91
O34: U [W6] 25
P34: [W1] ^|
R34: (F3) [W7] +Q34^0.5
V34: [W1] ^|
X34: (F3) [W7] +W34^0.5
```

```
Z34: U [W8] '
AB34: [W1] ^|
AD34: (F3) [W7] +AC34^0.5
AH34: [W1] ^|
AJ34: 80
AK34: 1.032
B35: [W9] ^(Ts)
C35: [W41] 'Avg. Stack Gas Temperature
D35: [W10] +"     "&@CHAR(176)&"F"
F35: (F1) [W9] 355
H35: (F1) [W9] 349
J35: (F1) [W9] 344.3
L35: (F1) [W9] @AVG(F35..J35)
O35: U [W6] 26
P35: [W1] ^|
R35: (F3) [W7] +Q35^0.5
V35: [W1] ^|
X35: (F3) [W7] +W35^0.5
AB35: [W1] ^|
AD35: (F3) [W7] +AC35^0.5
AH35: [W1] ^|
AJ35: 81
AK35: 1.066
```

```
B36: [W9] ^(Tm)
C36: [W41] 'Avg. Dry Gas Meter Temperature
D36: [W10] +"     "&@CHAR(176)&"F"
F36: (F1) [W9] 97.9
H36: (F1) [W9] 99.8
J36: (F1) [W9] 97.6
O36: U [W6] 27
P36: [W1] ^|
R36: (F3) [W7] +Q36^0.5
V36: [W1] ^|
X36: (F3) [W7] +W36^0.5
AB36: [W1] ^|
AD36: (F3) [W7] +AC36^0.5
AH36: [W1] ^|
AJ36: 82
AK36: 1.102
B37: [W9] ^(Dn)
C37: [W41] 'Nozzle Diameter
D37: [W10] ^inches
F37: (F3) U [W9] 0.277
H37: (F3) U [W9] 0.277
J37: (F3) U [W9] 0.277
O37: U [W6] 28
P37: [W1] ^|
R37: (F3) [W7] +Q37^0.5
V37: [W1] ^|
X37: (F3) [W7] +W37^0.5
AB37: [W1] ^|
AD37: (F3) [W7] +AC37^0.5
AH37: [W1] ^|
AJ37: 83
AK37: 1.138
A38: U [W1] ||
C38: [W41] '  FOR STACK DIMENSIONS, ENTER 0 WHERE SIZE IS NOT APPROPRIATE
O38: U [W6] 29
P38: [W1] ^|
R38: (F3) [W7] +Q38^0.5
V38: [W1] ^|
X38: (F3) [W7] +W38^0.5
AB38: [W1] ^|
AD38: (F3) [W7] +AC38^0.5
AH38: [W1] ^|
AJ38: 84
AK38: 1.175
B39: [W9] ^(Ds)
C39: [W41] 'Diameter of Stack
D39: [W10] ^inches
F39: (F3) U [W9] 52
H39: (F3) U [W9] 52
J39: (F3) U [W9] 52
O39: U [W6] 30
P39: [W1] ^|
R39: (F3) [W7] +Q39^0.5
V39: [W1] ^|
X39: (F3) [W7] +W39^0.5
AB39: [W1] ^|
AD39: (F3) [W7] +AC39^0.5
AH39: [W1] ^|
AJ39: 85
AK39: 1.213
B40: [W9] ^(W)
C40: [W41] 'Width of Stack
```

```
D40: [W10] ^inches
F40: (F3) U [W9] 0
H40: (F3) U [W9] 0
J40: (F3) U [W9] 0
O40: U [W6] 31
P40: [W1] ^|
R40: (F3) [W7] +Q40^0.5
V40: [W1] ^|
X40: (F3) [W7] +W40^0.5
AB40: [W1] ^|
AD40: (F3) [W7] +AC40^0.5
AH40: [W1] ^|
AJ40: 86
AK40: 1.253
B41: [W9] ^(L)
C41: [W41] 'Length of Stack
D41: [W10] ^inches
F41: (F3) U [W9] 0
H41: (F3) U [W9] 0
J41: (F3) U [W9] 0
O41: U [W6] 32
P41: [W1] ^|
R41: (F3) [W7] +Q41^0.5
V41: [W1] ^|
X41: (F3) [W7] +W41^0.5
AB41: [W1] ^|
AD41: (F3) [W7] +AC41^0.5
AH41: [W1] ^|
AJ41: 87
AK41: 1.293
B42: [W9] ^(Cp)
C42: [W41] 'Pitot Tube Coefficient
D42: [W10] ^--
F42: (F2) U [W9] 0.84
H42: (F2) U [W9] +F42
```

```
J42: (F2) U [W9] +F42
O42: U [W6] 33
P42: [W1] ^|
R42: (F3) [W7] +Q42^0.5
V42: [W1] ^|
X42: (F3) [W7] +W42^0.5
AB42: [W1] ^|
AD42: (F3) [W7] +AC42^0.5
AH42: [W1] ^|
AJ42: 88
AK42: 1.335
B43: [W9] ^(¯p)§
C43: [W41] 'Avg. Square Root Velocity Head ¯p
D43: [W10] ^(in. H2O)§
F43: (F3) [W9] 0.848
H43: (F3) [W9] 0.881
J43: (F3) [W9] 0.818
O43: U [W6] 34
P43: [W1] ^|
R43: (F3) [W7] +Q43^0.5
V43: [W1] ^|
X43: (F3) [W7] +W43^0.5
AB43: [W1] ^|
AD43: (F3) [W7] +AC43^0.5
AH43: [W1] ^|
AJ43: 89
AK43: 1.378
```

```
B44: [W9] ^(%O2)
C44: [W41] 'Stack Gas Oxygen
D44: [W10] ^%
F44: (F1) U [W9] 17
H44: (F1) U [W9] 17.1
J44: (F1) U [W9] 17.2
L44: (F1) [W9] @AVG(F44..J44)
O44: U [W6] 35
P44: [W1] ^|
R44: (F3) [W7] +Q44^0.5
V44: [W1] ^|
X44: (F3) [W7] +W44^0.5
AB44: [W1] ^|
AD44: (F3) [W7] +AC44^0.5
AH44: [W1] ^|
AJ44: 90
AK44: 1.422
B45: [W9] ^(%CO2)
C45: [W41] 'Stack Gas Carbon Dioxide
D45: [W10] ^%
F45: (F1) U [W9] 3.8
H45: (F1) U [W9] 3.7
J45: (F1) U [W9] 3.5
L45: (F1) [W9] @AVG(F45..J45)
O45: U [W6] 36
P45: [W1] ^|
R45: (F3) [W7] +Q45^0.5
V45: [W1] ^|
X45: (F3) [W7] +W45^0.5
AB45: [W1] ^|
AD45: (F3) [W7] +AC45^0.5
AH45: [W1] ^|
AJ45: 91
AK45: 1.467
B46: [W9] ^(%N2)
C46: [W41] 'Stack Gas Nitrogen
D46: [W10] ^%
F46: (F1) U [W9] 100-F44-F45
H46: (F1) U [W9] 100-H44-H45
J46: (F1) U [W9] 100-J44-J45
L46: (F1) [W9] @AVG(F46..J46)
O46: U [W6] 37
P46: [W1] ^|
R46: (F3) [W7] +Q46^0.5
V46: [W1] ^|
X46: (F3) [W7] +W46^0.5
AB46: [W1] ^|
AD46: (F3) [W7] +AC46^0.5
AH46: [W1] ^|
AJ46: 92
AK46: 1.513
A47: U [W1] ||
B47: [W9] ^(ppmCO)
C47: [W41] 'Stack Gas Carbon Monoxide
D47: [W10] ^ppm
F47: U [W9] 0
H47: U [W9] 0
J47: U [W9] 0
L47: (F1) [W9] @AVG(F47..J47)
O47: U [W6] 38
P47: [W1] ^|
R47: (F3) [W7] +Q47^0.5
```

```
V47: [W1] ^|
X47: (F3) [W7] +W47^0.5
AB47: [W1] ^|
AD47: (F3) [W7] +AC47^0.5
AH47: [W1] ^|
AJ47: 93
AK47: 1.561
O48: U [W6] 39
P48: [W1] ^|
R48: (F3) [W7] +Q48^0.5
V48: [W1] ^|
X48: (F3) [W7] +W48^0.5
AB48: [W1] ^|
AD48: (F3) [W7] +AC48^0.5
AH48: [W1] ^|
AJ48: 94
AK48: 1.61
C49: [W41] 'CALCULATED STACK GAS DATA
O49: U [W6] 40
P49: [W1] ^|
R49: (F3) [W7] +Q49^0.5
V49: [W1] ^|
X49: (F3) [W7] +W49^0.5
AB49: [W1] ^|
AD49: (F3) [W7] +AC49^0.5
AH49: [W1] ^|
AJ49: 95
AK49: 1.66
B50: [W9] ^(Ps)
C50: [W41] 'Stack Gas Pressure
D50: [W10] ^in. Hg

F50: (F2) [W9] (F33/13.6+F32)
H50: (F2) [W9] (H33/13.6+H32)
J50: (F2) [W9] (J33/13.6+J32)
L50: (F2) [W9] @AVG(F50..J50)
O50: U [W6] 41
P50: [W1] ^|
R50: (F3) [W7] +Q50^0.5
V50: [W1] ^|
X50: (F3) [W7] +W50^0.5
AB50: [W1] ^|
AD50: (F3) [W7] +AC50^0.5
AH50: [W1] ^|
AJ50: 96
AK50: 1.712
B51: [W9] ^(%Bws)
C51: [W41] 'Stack Gas Moisture
D51: [W10] ^%
F51: (F1) [W9] (F31*0.04707)/((F31*0.04707)+F53)*100
H51: (F1) [W9] (H31*0.04707)/((H31*0.04707)+H53)*100
J51: (F1) [W9] (J31*0.04707)/((J31*0.04707)+J53)*100
L51: (F1) [W9] @AVG(F51..J51)
O51: U [W6] 42
P51: [W1] ^|
R51: (F3) [W7] +Q51^0.5
V51: [W1] ^|
X51: (F3) [W7] +W51^0.5
AB51: [W1] ^|
AD51: (F3) [W7] +AC51^0.5
AH51: [W1] ^|
AJ51: 97
AK51: 1.765
```

```
B52: [W9] ^(%B'W)
C52: [W41] 'Moisture at Saturation
D52: [W10] ^%
F52: (F1) [W9] (@VLOOKUP(F35,$AJ$4..$AK$164,1)/(F50)*100)
H52: (F1) [W9] (@VLOOKUP(H35,$AJ$4..$AK$164,1)/(H50)*100)
J52: (F1) [W9] (@VLOOKUP(J35,$AJ$4..$AK$164,1)/(J50)*100)
O52: U [W6] 43
P52: [W1] ^|
R52: (F3) [W7] +Q52^0.5
V52: [W1] ^|
X52: (F3) [W7] +W52^0.5
AB52: [W1] ^|
AD52: (F3) [W7] +AC52^0.5
AH52: [W1] ^|
AJ52: 98
AK52: 1.819
B53: [W9] ^(Vmstd)
C53: [W41] 'Standard Dry Gas Meter Volume
D53: [W10] ^dscf
F53: (F3) [W9] (17.64*(F27)*F19*(F50)/(F36+460))
H53: (F3) [W9] (17.64*(H27)*H19*(H50)/(H36+460))
J53: (F3) [W9] (17.64*(J27)*J19*(J50)/(J36+460))
L53: (F3) [W9] @AVG(F53..J53)
O53: U [W6] 44
P53: [W1] ^|
R53: (F3) [W7] +Q53^0.5
V53: [W1] ^|
X53: (F3) [W7] +W53^0.5
AB53: [W1] ^|
```

```
AD53: (F3) [W7] +AC53^0.5
AH53: [W1] ^|
AJ53: 99
AK53: 1.875
B54: [W9] ^(Md)
C54: [W41] 'Dry Gas Molecular Weight
D54: [W10] ^lb/lb-mole
F54: (F2) [W9] (0.44*(F45)+0.32*(F44)+0.28*(F46+F47/10000))
H54: (F2) [W9] (0.44*(H45)+0.32*(H44)+0.28*(H46+H47/10000))
J54: (F2) [W9] (0.44*(J45)+0.32*(J44)+0.28*(J46+J47/10000))
L54: (F2) [W9] @AVG(F54..J54)
O54: U [W6] 45
P54: [W1] ^|
R54: (F3) [W7] +Q54^0.5
V54: [W1] ^|
X54: (F3) [W7] +W54^0.5
AB54: [W1] ^|
AD54: (F3) [W7] +AC54^0.5
AH54: [W1] ^|
AJ54: 100
AK54: 1.932
B55: [W9] ^(Ms)
C55: [W41] 'Wet Gas Molecular Weight
D55: [W10] ^lb/lb-mole
F55: (F2) [W9] (F54*(1-((F58*F51)+((-F58+1)*F52))/100))+18*(((F58*F51)+((-F58+1)*F52))/100)
H55: (F2) [W9] (H54*(1-((H58*H51)+((-H58+1)*H52))/100))+18*(((H58*H51)+((-H58+1)*H52))/100)
J55: (F2) [W9] (J54*(1-((J58*J51)+((-J58+1)*J52))/100))+18*(((J58*J51)+((-J58+1)*J52))/100)
L55: (F2) [W9] @AVG(F55..J55)
O55: U [W6] 46
P55: [W1] ^|
R55: (F3) [W7] +Q55^0.5
V55: [W1] ^|
X55: (F3) [W7] +W55^0.5
```

```
AB55: [W1] ^|
AD55: (F3) [W7] +AC55^0.5
AH55: [W1] ^|
AJ55: 101
AK55: 1.992
B56: [W9] ^(vs)
C56: [W41] 'Stack Gas Velocity
D56: [W10] ^ft/s
F56: (F2) [W9] (85.49*(F42)*(F43)*((F35+460)/((F50)*(F55)))^0.5)
H56: (F2) [W9] (85.49*(H42)*(H43)*((H35+460)/((H50)*(H55)))^0.5)
J56: (F2) [W9] (85.49*(J42)*(J43)*((J35+460)/((J50)*(J55)))^0.5)
L56: (F1) [W9] @AVG(F56..J56)
O56: U [W6] 47
P56: [W1] ^|
R56: (F3) [W7] +Q56^0.5
V56: [W1] ^|
X56: (F3) [W7] +W56^0.5
AB56: [W1] ^|
AD56: (F3) [W7] +AC56^0.5
AH56: [W1] ^|
AJ56: 102
AK56: 2.052
B57: [W9] ^(A)
C57: [W41] 'Stack Area
D57: [W10] ^ft2
F57: (F2) [W9] (+F39/24)^2*@PI+(F40*F41/144)
H57: (F2) [W9] (+H39/24)^2*@PI+(H40*H41/144)
```

```
J57: (F2) [W9] (+J39/24)^2*@PI+(J40*J41/144)
O57: U [W6] 48
P57: [W1] ^|
R57: (F3) [W7] +Q57^0.5
V57: [W1] ^|
X57: (F3) [W7] +W57^0.5
AB57: [W1] ^|
AD57: (F3) [W7] +AC57^0.5
AH57: [W1] ^|
AJ57: 103
AK57: 2.114
A58: U [W1] ||
F58: (H) [W9] +F51<=F52
H58: (H) [W9] +H51<=H52
J58: (H) [W9] +J51<=J52
O58: [W6] \-
P58: [W1] ^|
Q58: (F4) [W6] \-
R58: (F4) [W7] \-
S58: (F2) [W6] \-
T58: [W8] \-
U58: [W6] \-
V58: [W1] ^|
W58: (F4) [W6] \-
X58: (F3) [W7] \-
Y58: [W6] \-
Z58: [W8] \-
AA58: [W6] \-
AB58: [W1] ^|
AC58: (F4) [W6] \-
AD58: (F3) [W7] \-
AE58: [W6] \-
AF58: [W8] \-
AG58: [W6] \-
AH58: [W1] ^|
```

```
AJ58: 104
AK58: 2.178
A59: U [W1] ||
B59: [W9] ^(Qsd)
C59: [W41] 'Volumetric Gas Flow Rate
D59: [W10] ^dscfs
F59: (F0) [W9] (F$57)*F$56*(1-((F$58*F51)+((-F58+1)*F52))/100)*528/(460+F35)*((F32+(F33/13.6))/29.92)
H59: (F0) [W9] (H$57)*H$56*(1-((H$58*H51)+((-H58+1)*H52))/100)*528/(460+H35)*((H32+(H33/13.6))/29.92)
J59: (F0) [W9] (J$57)*J$56*(1-((J$58*J51)+((-J58+1)*J52))/100)*528/(460+J35)*((J32+(J33/13.6))/29.92)
L59: (F0) [W9] @AVG(F59..J59)
O59: [W6] ^AVGS
P59: [W1] ^|
R59: (F3) [W7] @SUM(R10..R57)/$U$4
S59: (F2) [W6] @SUM(S10..S57)/$U$4
T59: (F1) [W8] @SUM(T10..T57)/$U$4
U59: (F1) [W6] @SUM(U10..U57)/$U$4
V59: [W1] ^|
X59: (F3) [W7] @SUM(X10..X57)/$U$4
Y59: (F2) [W6] @SUM(Y10..Y57)/$U$4
Z59: (F1) [W8] @SUM(Z10..Z57)/$U$4
AA59: (F1) [W6] @SUM(AA10..AA57)/$U$4
AB59: [W1] ^|
AD59: (F3) [W7] @SUM(AD10..AD57)/$U$4
AE59: (F2) [W6] @SUM(AE10..AE57)/$U$4
AF59: (F1) [W8] @SUM(AF10..AF57)/$U$4
```

```
AG59: (F1) [W6] @SUM(AG10..AG57)/$U$4
AH59: [W1] ^|
AJ59: 105
AK59: 2.243
B60: [W9] ^(Qsd)
C60: [W41] 'Volumetric Gas Flow Rate
D60: [W10] ^dscfm
F60: (,0) [W9] @ROUND(60*F59,-2)
H60: (,0) [W9] @ROUND(60*H59,-2)
J60: (,0) [W9] @ROUND(60*J59,-2)
L60: (,0) [W9] @AVG(F60..J60)
O60: [W6] \-
P60: [W1] ^|
Q60: (F4) [W6] \-
R60: (F4) [W7] \-
S60: [W6] \-
T60: [W8] \-
U60: [W6] \-
V60: [W1] ^|
W60: (F4) [W6] \-
X60: (F3) [W7] \-
Y60: [W6] \-
Z60: [W8] \-
AA60: [W6] \-
AB60: [W1] ^|
AC60: (F4) [W6] \-
AD60: (F3) [W7] \-
AE60: [W6] \-
AF60: [W8] \-
AG60: [W6] \-
AH60: [W1] ^|
AJ60: 106
AK60: 2.31
A61: U [W1] ||
B61: [W9] ^(Qsd)
C61: [W41] 'Volumetric Gas Flow Rate
D61: [W10] ^dscfh
```

```
F61: (S2) [W9] @ROUND(60*F60,-4)
H61: (S2) [W9] @ROUND(60*H60,-4)
J61: (S2) [W9] @ROUND(60*J60,-4)
L61: (S2) [W9] @AVG(F61..J61)
AJ61: 107
AK61: 2.379
B62: [W9] ^(Qa)
C62: [W41] 'Volumetric Gas Flow Rate
D62: [W10] ^acfm
F62: (,0) [W9] @ROUND(60*F56*F57,-2)
H62: (,0) [W9] @ROUND(60*H56*H57,-2)
J62: (,0) [W9] @ROUND(60*J56*J57,-2)
L62: (,0) [W9] @AVG(F62..J62)
AJ62: 108
AK62: 2.449
A63: U [W1] ||
B63: [W9] ^(%EA)
C63: [W41] 'Percent Excess Air
D63: [W10] ^%
F63: (F1) [W9] 100*(F44-(0.05*F45))/((0.264*F46)-F44+(0.5*(F47/10^4)))
H63: (F1) [W9] 100*(H44-(0.05*H45))/((0.264*H46)-H44+(0.5*(H47/10^4)))
J63: (F1) [W9] 100*(J44-(0.05*J45))/((0.264*J46)-J44+(0.5*(J47/10^4)))
L63: (F1) [W9] @AVG(F63..J63)

AJ63: 109
AK63: 2.921
B64: [W9] ^(I)
C64: [W41] 'Isokinetic Variation
D64: [W10] ^%
F64: (F1) [W9] (0.0945*(F35+460)*F53/((F50)*F56*((0.5*F37)^2*3.1417/144)*F28*(1-F51/100)))
H64: (F1) [W9] (0.0945*(H35+460)*H53/((H50)*H56*((0.5*H37)^2*3.1417/144)*H28*(1-H51/100)))
J64: (F1) [W9] (0.0945*(J35+460)*J53/((J50)*J56*((0.5*J37)^2*3.1417/144)*J28*(1-J51/100)))
AJ64: 110
AK64: 2.596
AJ65: 111
AK65: 2.672
AJ66: 112
AK66: 2.749
AJ67: 113
AK67: 2.829
AJ68: 114
AK68: 2.911
AJ69: 115
AK69: 2.995
AJ70: 116
AK70: 3.081
AJ71: 117
AK71: 3.169
AJ72: 118
AK72: 3.259
AJ73: 119
AK73: 3.351
AJ74: 120
AK74: 3.446
AJ75: 121
AK75: 3.543
AJ76: 122
AK76: 3.642
AJ77: 123
AK77: 3.744
AJ78: 124
AK78: 3.848
AJ79: 125
```

AK79: 3.954
AJ80: 126
AK80: 4.063
AJ81: 127
AK81: 4.174
AJ82: 128
AK82: 4.289
AJ83: 129
AK83: 4.406
AJ84: 130
AK84: 4.525
AJ85: 131
AK85: 4.647
AJ86: 132
AK86: 4.772
AJ87: 133
AK87: 4.9
AJ88: 134
AK88: 5.031
AJ89: 135
AK89: 5.165

AJ90: 136
AK90: 5.302
AJ91: 137
AK91: 5.442
AJ92: 138
AK92: 5.585
AJ93: 139
AK93: 5.732
AJ94: 140
AK94: 2.881
AJ95: 141
AK95: 6.034
AJ96: 142
AK96: 6.19
AJ97: 143
AK97: 6.38
AJ98: 144
AK98: 6.513
AJ99: 145
AK99: 6.68
AJ100: 146
AK100: 6.85
AJ101: 147
AK101: 7.024
AJ102: 148
AK102: 7.202
AJ103: 149
AK103: 7.384
AJ104: 150
AK104: 7.569
AJ105: 151
AK105: 7.759
AJ106: 152
AK106: 7.952
AJ107: 153
AK107: 8.15
AJ108: 154
AK108: 8.351
AJ109: 155
AK109: 8.557
AJ110: 156

AK110: 8.767
AJ111: 157
AK111: 8.981
AJ112: 158
AK112: 9.2
AJ113: 159
AK113: 9.424
AJ114: 160
AK114: 9.652
AJ115: 161
AK115: 9.885
AJ116: 162
AK116: 10.12
AJ117: 163
AK117: 10.36
AJ118: 164
AK118: 10.61
AJ119: 165
AK119: 10.86

AJ120: 166
AK120: 11.12
AJ121: 167
AK121: 11.38
AJ122: 168
AK122: 11.65
AJ123: 169
AK123: 11.92
AJ124: 170
AK124: 12.2
AJ125: 171
AK125: 12.48
AJ126: 172
AK126: 12.77
AJ127: 173
AK127: 13.07
AJ128: 174
AK128: 13.37
AJ129: 175
AK129: 13.67
AJ130: 176
AK130: 13.98
AJ131: 177
AK131: 14.3
AJ132: 178
AK132: 14.62
AJ133: 179
AK133: 14.96
AJ134: 180
AK134: 15.29
AJ135: 181
AK135: 15.63
AJ136: 182
AK136: 15.98
AJ137: 183
AK137: 16.34
AJ138: 184
AK138: 16.7
AJ139: 185
AK139: 17.07
AJ140: 186
AK140: 17.44
AJ141: 187

AK141: 17.82
AJ142: 188
AK142: 18.21
AJ143: 189
AK143: 18.61
AJ144: 1+AJ143
AK144: 19.01
AJ145: 1+AJ144
AK145: 19.42
AJ146: 1+AJ145
AK146: 19.84
AJ147: 1+AJ146
AK147: 20.27
AJ148: 1+AJ147
AK148: 20.7
AJ149: 1+AJ148
AK149: 21.14

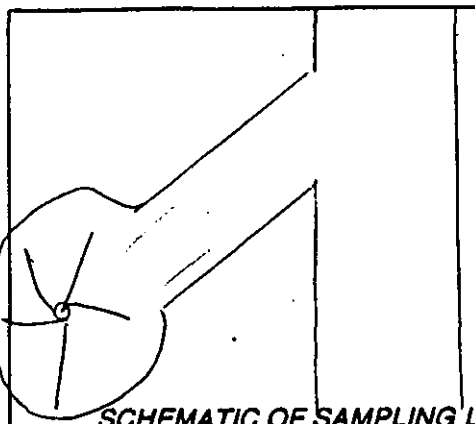
AJ150: 1+AJ149
AK150: 21.5
AJ151: 1+AJ150
AK151: 22.05
AJ152: 1+AJ151
AK152: 22.52
AJ153: 1+AJ152
AK153: 22.99
AJ154: 1+AJ153
AK154: 23.47
AJ155: 1+AJ154
AK155: 23.96
AJ156: 1+AJ155
AK156: 24.46
AJ157: 1+AJ156
AK157: 24.97
AJ158: 1+AJ157
AK158: 25.48
AJ159: 1+AJ158
AK159: 26
AJ160: 1+AJ159
AK160: 26.53
AJ161: 1+AJ160
AK161: 27.07
AJ162: 1+AJ161
AK162: 27.62
AJ163: 1+AJ162
AK163: 28.18
AJ164: 1+AJ163
AK164: 28.75

Appendix B

Field Sampling Data Sheets

EPA METHOD 1
TRAVERSE POINT LOCATION FOR CIRCULAR DUCTS

PLANT Solite Corp.
CITY Cascade STATE VA
SAMPLING LOCATION Stack 2
INSIDE OF FAR WALL TO OUTSIDE OF NIPPLE, (DISTANCE A) 58" in
INSIDE OF NEAR WALL TO OUTSIDE OF NIPPLE, (DISTANCE B) 6" in
NEAREST UPSTREAM DISTURBANCE
DISTURBANCE 14 Feet 11 in
NEAREST DOWNSTREAM DISTURBANCE
DISTURBANCE 35 Feet 5 in
SAMPLER CM RS DATE 6-17-92



SCHEMATIC OF SAMPLING LOCATION

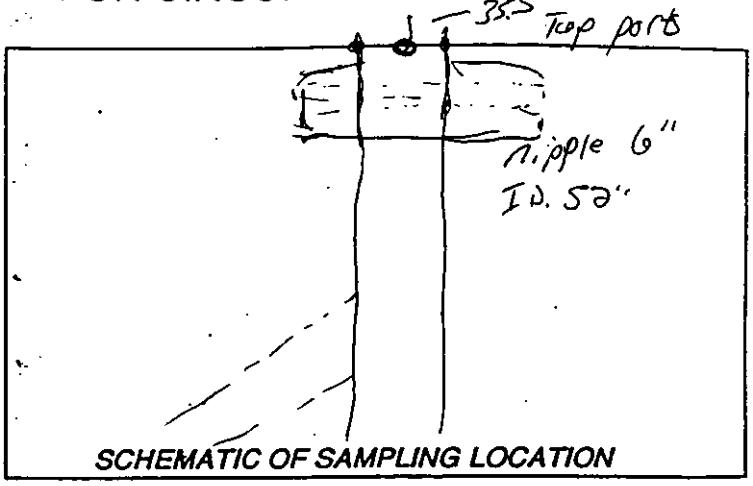
TRAVERSE POINT NUMBER	FRACTION OF STACK I.D.	STACK I.D.	PRODUCT OF COLUMNS 2 AND 3 (TO NEAREST 1/8-INCH)	DISTANCE B	TRAVERSE DISTANCE FROM OUTSIDE OF NIPPLE (SUM OF COLUMNS 4 & 5)
1		58		6	7.09
2					9.48
3					12.1
4					15.2
5					19.0
6					24.5
7					39.4
8					45.0
9					48.7
10					51.8
11					54.5
12					56.9

epa1circ.wk1

EPA METHOD 1
TRAVERSE POINT LOCATION FOR CIRCULAR DUCTS

35.5 Feet

PLANT Solite
CITY Cascade STATE VA/NC
SAMPLING LOCATION
INSIDE OF FAR WALL TO OUTSIDE OF NIPPLE, (DISTANCE A) 58"
INSIDE OF NEAR WALL TO OUTSIDE OF NIPPLE, (DISTANCE B) 6"
NEAREST UPSTREAM DISTURBANCE
DISTURBANCE 19.11"
NEAREST DOWNSTREAM DISTURBANCE
DISTURBANCE 35.5 Feet
SAMPLER CM PS DATE 6-15-98



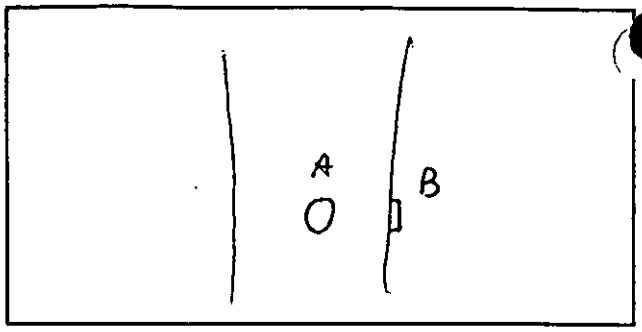
SCHEMATIC OF SAMPLING LOCATION

TRAVERSE POINT NUMBER	FRACTION OF STACK I.D.	STACK I.D.	PRODUCT OF COLUMNS 2 AND 3 (TO NEAREST 1/8-INCH)	DISTANCE B	TRAVERSE DISTANCE FROM OUTSIDE OF NIPPLE (SUM OF COLUMNS 4 & 5)
1		58		6"	7.09
2					9.48
3					12.1
4					15.2
5					19.0
6					24.5
7					35.4
8					45.0
9					48.7
10					51.8
11					~~56.9~~ 54.5
12					56.9

epa1circ.wk1

PRELIMINARY VELOCITY TRAVERSE / CYCLONIC FLOW CHECK
EPA METHOD 2

PLANT: Solite
SOURCE: Kiln Stack #2
DATE: 6/17/92
STACK I.D. (inches): 58.0
BAROMETRIC PRESSURE (in. Hg):
STACK STATIC PRESSURE (in. H2O): -0.63
TESTERS: BS / CM
PITOT NO. | TYPE | COEFF



TRAVERSE POINT LAYOUT SCHEMATIC

TRAVERSE POINT NUMBER	VELOCITY HEAD Δp (in. H2O)	STACK TEMP (°F)	NULL ANGLE (ø)
A 1	0.89	329	5.0
2	0.98	330	1.0
3	0.84	332	5.0
4	0.92	334	4.0
5	0.86	334	8.0
6	0.74	334	10.0
7	0.65	333	10.0
8	0.41	333	4.0
9	0.76	332	7.0
10	0.64	331	7.0
11	0.58	330	12.0
12	0.30	330	15.0
AVERAGE	SQRT		

TRAVERSE POINT NUMBER	VELOCITY HEAD Δp (in. H2O)	STACK TEMP (°F)	NULL ANGLE (ø)
B 1	1.5	330	7.0
2	1.4	337	1.0
3	1.5	337	8.0
4	1.3	337	6.0
5	0.73	336	2.0
6	0.56	336	2.0
7	0.61	335	3.0
8	0.61	336	2.0
9	0.55	336	6.0
10	0.35	332	9.0
11	0.21	335	10.0
12	0.27	334	9.0
AVERAGE	SQRT		

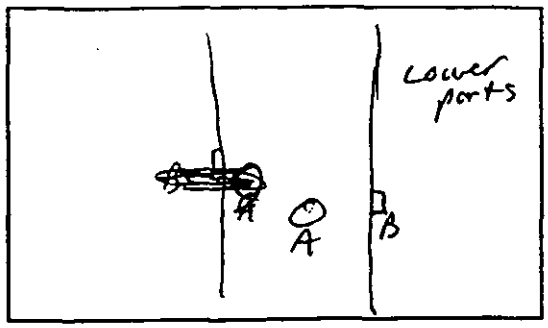
POST PITOT LEAK CHECK PASSED [ ] [ ] FAILED

MEASUREMENT DEVICE

MICROMETER [ ] 0-10" MANOMETER [ ]
MAGNEHELIC [ ] OTHER [ ] EXPLAIN:

PRELIMINARY VELOCITY TRAVERSE
EPA METHOD 2

ANT/CLIENT Solite
SOURCE Stack 2 (Metals / Hex Chrome)
DATE 6/17/92
STACK I.D. (inches) 58.0
BAROMETRIC PRESSURE (in. Hg)
STACK GAUGE PRESSURE (in. H2O) -0.63
OPERATORS BS / CM
PITOT NO. | TYPE | COEFF



TRAVERSE POINT LAYOUT SCHEMATIC

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
A 1	0.83	259
2	0.85	266
3	0.92	280
4	0.95	293
5	0.97	310
6	0.77	318
7	0.71	324
8	0.69	326
9	0.67	328
10	0.63	329
11	0.56	328
12	0.42	327
AVERAGE	SQRT .841	307.3

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
A 1	1.1	290
2	1.3	303
3	1.2	314
4	1.0	320
5	0.87	327
6	0.78	332
7	0.69	334
8	0.85	335
9	0.90	335
10	0.89	335
11	0.78	333
12	0.56	322
AVERAGE	SQRT .948	323

POST PITOT LEAK CHECK PASSED [✓] FAILED [ ] .91

MEASUREMENT DEVICE
MICROMETER [ ]
0-10" MANOMETER [ ]
MAGNEHELIC [ ]
OTHER [ ]

.75 Δp
Total
Ave Δp .83

EXPLAIN:

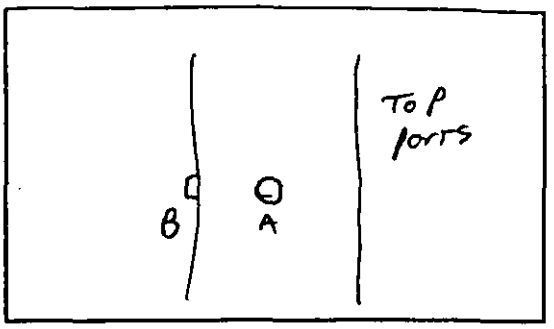
Ave T_s = 315.3

prevelo.wk1

PRELIMINARY VELOCITY TRAVERSE
EPA METHOD 2

PLANT/CLIENT Solite
SOURCE Stack #2 (M5/HCL)
DATE 6/17/92
STACK I.D. (inches) 58.0
BAROMETRIC PRESSURE (in. Hg)
STACK GAUGE PRESSURE (in. H2O) -0.70
OPERATORS BS/CM

PITOT NO.	TYPE	COEFF



TRAVERSE POINT LAYOUT SCHEMATIC

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
A 1	0.76	297
2	0.86	313
3	0.88	319
4	0.88	323
5	0.87	326
6	0.81	329
7	0.78	330
8	0.80	332
9	0.82	333
10	0.84	334
11	0.79	333
12	0.73	324
AVERAGE	SQRT, 904	324

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
B 1	0.37	246
2	0.36	265
3	0.38	277
4	0.40	288
5	0.46	300
6	0.56	313
7	0.70	325
8	0.97	333
9	1.3	335
10	1.4	336
11	0.99	337
12	0.64	336
AVERAGE	SQRT, 819	307

POST PITOT LEAK CHECK PASSED ✓ FAILED

Ave .71

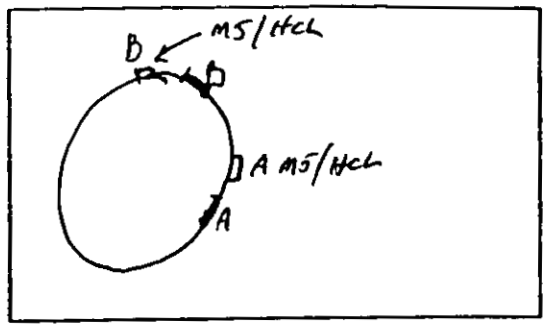
MEASUREMENT DEVICE
MICROMETER
Ave: .82 0-10" MANOMETER
MAGNEHELIC
OTHER
EXPLAIN:

.74 Ave ΔP 316 Ave Ts

prevelo.wk1

PRELIMINARY VELOCITY TRAVERSE
EPA METHOD 2

PLANT/CLIENT: Solite
SOURCE: #4 (M5/HCl)
DATE: 6/15/92
STACK I.D. (inches): 58.0
BAROMETRIC PRESSURE (in. Hg): 29.40
STACK GAUGE PRESSURE (in. H2O): -.45
OPERATORS: B/CM
PITOT NO. | TYPE | COEFF



TRAVERSE POINT LAYOUT SCHEMATIC

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
A 1	.55	255
2	.57	255
3	.57	262
4	.55	273
5	.56	286
6	.65	288
7	.83	303
8	.89	314
9	1.2	324
10	1.1	325
11	.91	328
12	.57	328
AVERAGE	SQRT .961	295

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
B 1	.57	303
2	.79	314
3	.87	317
4	.88	318
5	.78	321
6	.75	325
7	.74	328
8	.85	330
9	.83	~~332~~ 332
10	.72	333
11	.60	333
12	.52	332
AVERAGE	SQRT	323

309°

POST PITOT LEAK CHECK PASSED [✓] FAILED [ ]

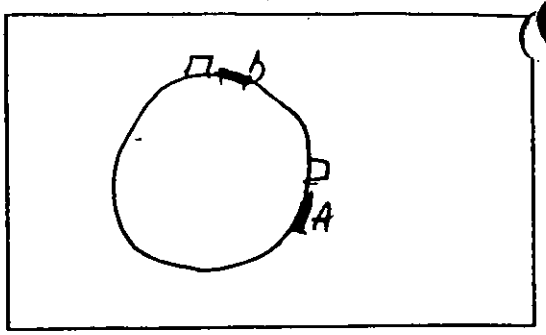
MEASUREMENT DEVICE
MICROMETER [ ]
0–10" MANOMETER [ ]
MAGNEHELIC [ ]
OTHER [ ] EXPLAIN:

.71

prevelo.wk1

PRELIMINARY VELOCITY TRAVERSE
EPA METHOD 2

PLANT/CLIENT Solite
SOURCE #4 (multi-metals / Hexchrome)
DATE 6/15/92
STACK I.D. (inches) 52.0
BAROMETRIC PRESSURE (in. Hg) 29.40
STACK GAUGE PRESSURE (in. H2O) -.58
OPERATORS AS / CM
PITOT NO. | TYPE | COEFF



TRAVERSE POINT LAYOUT SCHEMATIC

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
A 1	.67	313
2	.68	316
3	.62	316
4	.54	318
5	.49	320
6	.54	322
7	.82	324
8	1.0	327
9	1.1	328
10	.95	329
11	.82	331
12	.69	331
Avg	SQRT .872	
AVERAGE	SQRT .86	320

TRAVERSE POINT NUMBER	VELOCITY HEAD (in. H2O)	STACK TEMP (°F)
B 1	.57	301
2	.68	306
3	.72	308
4	.75	311
5	.80	313
6	.78	316
7	.79	318
8	.92	323
9	1.0	326
10	.94	328
11	.82	329
12	.72	324
AVERAGE	SQRT .872	320

POST PITOT LEAK CHECK PASSED [✓] FAILED [ ]

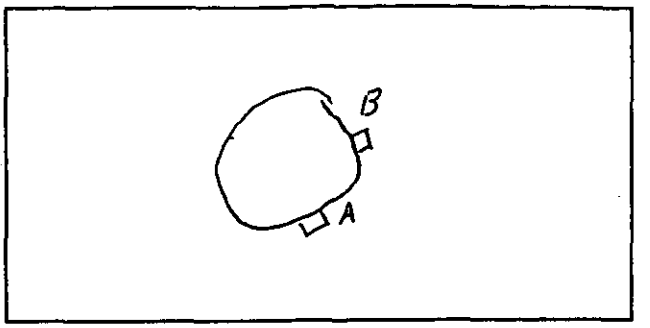
MEASUREMENT DEVICE
MICROMETER [ ]
0-10" MANOMETER [ ]
MAGNEHELIC [ ]
OTHER [ ] EXPLAIN:

.74

prevelo.wk1

PRELIMINARY VELOCITY TRAVERSE / CYCLONIC FLOW CHECK
EPA METHOD 2

PLANT Solvit
SOURCE Alm #4 Stack
DATE 6-17-93
STACK I.D. (inches) 52
BAROMETRIC PRESSURE (in. Hg) 29.77
STACK STATIC PRESSURE (in. H2O) -.52 .47
TESTERS JAB PS
PITOT NO. | TYPE | COEFF



TRAVERSE POINT LAYOUT SCHEMATIC

TRAVERSE POINT NUMBER	VELOCITY HEAD Δp (in. H2O)	STACK TEMP (°F)	NULL ANGLE (ø)
A 1	0.50		8°
2	0.56		5°
3	0.54		4°
4	0.44		12°
5	0.46		4°
6	0.57		0°
7	0.80		5°
8	0.95		8°
9	1.0		10°
10	0.96		6°
11	0.72		6°
12	0.41		11
AVERAGE	SQRT		

TRAVERSE POINT NUMBER	VELOCITY HEAD Δp (in. H2O)	STACK TEMP (°F)	NULL ANGLE (ø)
B 1	0.41		15°
2	0.44		10°
3	0.50		20°
4	0.51		16°
5	0.52		18°
6	0.49		4°
7	0.57		14°
8	0.50		20°
9	0.48		4°
10	0.42		2°
11	0.47		5°
12	0.15		6°
AVERAGE	SQRT		

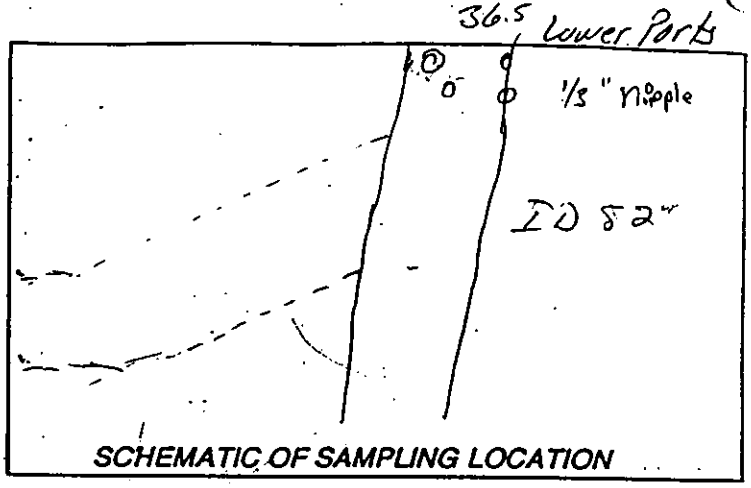
POST PITOT LEAK CHECK PASSED [ ] [ ] FAILED

MEASUREMENT DEVICE

MICROMETER [ ] 0–10" MANOMETER [ ]
MAGNEHELIC [ ] OTHER [ ] EXPLAIN:

EPA METHOD 1
TRAVERSE POINT LOCATION FOR CIRCULAR DUCTS

PLANT Solite
CITY Cascade STATE VA/NC
SAMPLING LOCATION Stack 4
INSIDE OF FAR WALL TO OUTSIDE OF NIPPLE, (DISTANCE A) 52 1/4"
INSIDE OF NEAR WALL TO OUTSIDE OF NIPPLE, (DISTANCE B) 1/4"
NEAREST UPSTREAM DISTURBANCE
DISTURBANCE 13.11" 156"
NEAREST DOWNSTREAM DISTURBANCE
DISTURBANCE 36.5 feet
SAMPLER Cm PS DATE 6-15-92



SCHEMATIC OF SAMPLING LOCATION

TRAVERSE POINT NUMBER	FRACTION OF STACK I.D.	STACK I.D.	PRODUCT OF COLUMNS 2 AND 3 (TO NEAREST 1/8-INCH)	DISTANCE B	TRAVERSE DISTANCE FROM OUTSIDE OF NIPPLE (SUM OF COLUMNS 4 & 5)
1		52.		.25	1.34
2					3.73
3					6.38
4					9.45
5					13.2
6					18.7
7					33.7
8					39.2
9					43.0
10					46.1
11					48.7
12					51.1

epa1circ.wk1

EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	4/16/92	No. 4 Kiln Exhaust Stack	Particulate/Chlorides	

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
PS	29.62	-.51	75	Q261	52"	.84	5" Glass	.277	X-4

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
13.5	MH	1.992	.998	5-B	5B	G9	N/A	10.0	0.000	6.0	0.000	3.85

EPA METHOD 3				RUN 1	RUN 2	RUN 3	AVG	AMBIENT	PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
Collection Method	CEMS, 3A	15.9	%O2						✓	✓
Analysis Method	CEMS, 3A	5.3	%CO2							

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
A 1	0	1050	333.548	0.49	1.9	337	232	258		64	90	3.5
2	5		337.03	0.53	2.04	339	247	260		46	89	3.5
3	10		340.77	0.55	2.1	341	253	259		48	90	4.0
4	15		344.60	0.52	2.0	342	250	251		51	91	4.0
5	20		348.31	0.50	1.9	344	250	261		52	92	4.0
6	25		351.94	0.48	1.8	345	256	249		53	92	4.0
7	30		355.49	0.48	1.8	346	250	257		54	94	4.0
8	35		359.03	0.56	2.2	348	250	264		55	95	4.0
9	40		362.93	0.57	2.2	349	246	251		55	96	4.0
10	45		366.89	0.63	2.4	347	256	255		55	96	4.0
11	50		371.00	0.86	3.3	348	253	262		54	96	5.0
12	55		375.67	0.61	2.3	346	255	252		57	98	4.0
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC In.Hg
	X		X	X	X	X					X	X

0-9

EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/16/92	No. 4 Kiln Exhaust Stack	Particulate/Chlorides	1

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (In. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
B 1	60	1150 / 1201	379.763	0.47	1.8	342	233	247		63	97	3.5
2	65		383.29	0.54	2.1	345	248	242		53	97	4.0
3	70		387.13	0.50	1.9	346	250	249		55	98	4.0
4	75		390.75	0.42	1.6	347	254	250		57	99	3.5
5	80		394.12	0.38	1.5	347	249	256		57	99	3.5
6	85		397.36	0.40	1.5	348	254	261		58	99	3.5
7	90		400.59	0.42	1.6	348	250	251		58	99	3.5
8	95		403.95	0.54	2.1	349	249	253		55	100	4.0
9	100		407.77	0.61	2.3	350	254	259		52	99	4.0
10	105		411.78	0.79	3.04	353	254	249		50	99	5.0
11	110		416.36	0.80	3.1	352	252	250		49	100	5.0
12	115		420.07	0.75	2.9	350	249	259		51	100	5.0
	120	1301	425.50Z									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC In.Hg
	91.954	0.743	2.14	346.2	Sheet Checked By:	96.0	5.0

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EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/16/92	No. 4 Kiln Exhaust Stack	Particulate/Chlorides	2

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
Clark Melvin	29.62	-.51	78°F	Q2164	52"	0.84	5' - glass	.279	X-4

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
~~13.5~~ 8.7	M4	1.992	0.998	5-B	5-B	69	N/A	~~10~~	~~0.01~~	10	0.01	~~3.85~~ 4.05

EPA METHOD 3				RUN 1	RUN 2	RUN 3	AVG	AMBIENT	PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
Collection Method	CEMS, 3A	15.9	%O2						✓	
Analysis Method	CEMS, 3A	5.1	%CO2							

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
A 1	0	1457	425.852	.54	~~2.20~~ 2.20	336	~~253~~ 253	251		61	93	3
2	5		427.628	.52	2.16	337	252	260		61	93	3
3	10		433.366	.54	2.20	339	252	255		58	94	3
4	15		437.292	.47	1.91	338	256	251		59	94	3
5	20		440.988	.54	2.20	339	249	261		56	94	3
6	25		444.752	.49	1.92	339	252	249		55	94	3
7	30		448.268	.55	2.20	344	255	262		54	94	3
8	35		452.318	.65	2.65	346	251	262		54	96	~~3~~
9	40		456.512	.77	3.14	346	256	255		56	96	3
10	45		461.020	.77	3.14	341	249	255		58	95	3
11	50		465.549	.61	2.48	297	255	261		58	96	3
12	55		469.662	.61	2.48	272	250	256		58	96	3
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg
	✓		✓	✓	✓	✓					✓	✓

EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/16/92	No. 4 Kiln Exhaust Stack	Particulate/Chlorides	2

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
B 1	60	1558/1602	473.775	.50	2.12	336	244	261		60	95	3
2	65		477.540	.53	2.16	338	248	249		62	96	3
3	70		481.316	.50	2.12	339	257	255		60	96	3
4	75		485.078	.34	1.38	339	252	255		60	96	3
5	80		488.210	.38	1.55	340	250	252		58	96	3
6	85		491.254	.38	1.55	340	254	256		58	96	3
7	90		494.396	.50	2.04	344	250	252		56	96	3
8	95		498.196	.67	2.73	346	255	253		57	95	3
9	100		502.431	.67	2.73	345	250	262		58	93	3
10	105		506.730	.69	2.81	347	247	253		58	94	3
11	110		511.058	.54	2.20	342	248	260		58	94	3
12	115		515.431	.54	2.20	274	247	251		60	94	3
	120		519.022	END								
		1632										

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F
120	93.170	0.741	2.26	333

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AVG DGM °F	MAX VAC In.Hg
94.8	3.0

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EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/16/92	No. 4 Kiln Exhaust Stack	Particulate/Chlorides	3

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
BS	29.62	-0.51	78	Ø 263	52"	0.84	5" - glass	.277	X-4

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M4	1.992	0.998	5-B	5-B	G-9	N/A	10.0	0.002	10.0	0.001	4.08

EPA METHOD 3

				RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS, 3A	16.2	%O2					
Analysis Method	CEMS, 3A	4.6	%CO2					

PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
✓	

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
A 1	0	1920	519.264	0.44	1.8	345	234	259		52	84	3.5
2	5		522.71	0.57	2.3	346	257	252		48	83	4.0
3	10		526.62	0.56	2.3	350	253	264		46	84	4.0
4	15		530.53	0.60	2.4	352	254	256		47	85	4.0
5	20		534.55	0.61	2.5	352	246	248		47	86	4.0
6	25		538.65	0.58	2.4	350	235	259		49	86	4.0
7	30		542.66	0.62	2.5	349	232	261		49	85	4.0
8	35		546.78	0.61	2.5	351	239	250		51	85	4.0
9	40		550.88	0.65	2.6	352	237	261		53	85	4.0
10	45		555.07	0.85	3.5	351	236	252		54	85	5.0
11	50		559.90	0.79	3.2	350	242	255		55	86	5.0
12	55		564.50	0.69	2.8	350	241	255		58	85	5.0
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC In Hg
	X		X	X	X	X					X	X

EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/16/92	No. 4 Kiln Exhaust Stack	Particulate/Chlorides	3

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (In. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
B1	60/6	2020/2025	568.886	0.52	2.1	345	242	248		60	85	4.0
2	5		572.66	0.60	~~2.3~~ 2.4	346	245	252		48	87	4.0
3	10		578.70	0.55	2.2	348	245	262		46	84	4.0
4	15		580.61	0.42	1.7	348	256	251		47	84	3.5
5	20		584.00	0.55	2.2	349	249	250		48	85	4.0
6	25		587.88	0.46	1.9	349	251	262		48	85	4.0
7	30		591.47	0.41	1.7	350	249	254		48	86	3.5
8	35		594.89	0.40	1.6	350	254	252		52	85	3.5
9	40		598.16	0.46	1.9	349	252	263		54	85	4.0
10	45		601.74	0.50	2.04	351	252	256		54	86	4.0
11	50		605.43	0.58	2.4	351	249	251		57	86	4.5
12	55		609.49	0.75	3.1	353	251	263		59	86	5.0
	60	2125	614.029									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC In.Hg
120	94.675	0.754	2.335	349.5	Sheet Checked By:	85.1	5.0

S1-9

EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Hexavalent Chromium	

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.72	-.51	73		52	.84	Teflon 5'	.276	X-5

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
13.3	M-11	2.07	.998	Hex-2	Hex-2	G-18		10	.001	11	.001	3.96

EPA METHOD 3

			RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS 3A	15.8 %O2	15.75				
Analysis Method	CEMS 3A	5.4 %CO2	5.4				

PITOT SYSTEM LEAK CHECK: INITIAL ✓ FINAL

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1	0	12:27	238.921	.64	2.53	324				59	86	5
2	2.5		240.95	.75	2.97	345				62	83	7
3	5		243.2	.79	3.1	348				58	83	8
4	7.5		245.55	.80	3.16	348				60	83	9
5	10		247.9	.69	2.73	349				61	84	8
6	12.5		250.15	.65	2.57	349				60	84	7
7	15		252.35	.59	2.33	348				59	85	6
8	17.5		254.4	.69	2.73	349				59	86	7
9	20		256.65	.75	2.97	349				60	88	8
10	22.5		259.05	.87	3.44	349				59	88	8
11	25		261.5	.72	2.85	350				59	89	6
12	27.5	12:57	263.85	.72	2.85	348				59	89	6
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg
	X		X	X	X	X					X	X

y-4

104.3

EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/16/92	No. 4 Kiln Exhaust Stack	Hexavalent Chromium	

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (In. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
A 1	30	1303	266.121	.58	2.29	343				62	84	5
2	32.5		268.0	.56	2.2	346				61	85	5
3	35		270.1	.48	1.9	348				62	84	5
4	37.5		272.0	.46	1.82	348				62	86	5
5	40		273.7	.45	1.78	349				63	87	5
6	42.5		275.5	.60	2.37	349				60	87	5
7	45		277.55	.62	2.45	352				60	87	6
8	47.5		279.6	.90	3.5	351				59	86	9
9	50		281.9	.95	3.8	350				58	87	9
10	52.5		284.7	.79	3.1	349				60	88	7
11	55		287.2	.23	.91	344				61	85	3
12	57.5		289.65	.21	.83	344				61	86	3
	60	1333	291.935									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC In.Hg
60	51.114	0.794	2.54	~~345~~ 343	Sheet Checked By:	85.9	9.0

MSN

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EPA METHOD 0013 TESTING FIELD DATA

[redacted] AND CITY	DATE	SAMPLING [redacted]	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Hexavalent Chromium	2

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.72	-.51	80		52"	.84	Teflon 5'	.233	X-B23

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL in. Hg)	TRAIN LEAK CHECK (INITIAL CFM)	TRAIN LEAK CHECK (FINAL in. Hg)	TRAIN LEAK CHECK (FINAL CFM)	K FACTOR
8.7	M-11	2.08	.998	Hex 2	H-Y2			11	.003	8	.004	2.13

EPA METHOD 3				RUN 1	RUN 2	RUN 3	AVG	AMBIENT	PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
Collection Method	CEMS 3A	15.9	%O2	15.9					✓	
Analysis Method	CEMS 3A	5.0	%CO2	5.0						

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
B 1	0	16:45	337.038	.55	1.1	337				60	82	5
2	2.5		338.53	.68	1.44	340				61	82	5
3	5		340.1	.48	1.0	340				62	81	4
4	7.5		341.5	.47	1.0	340				63	82	4
5	10		342.9	.45	.95	340				61	81	4
6	12.5		344.26	.40	.85	340				62	82	3
7	15		345.55	.47	1.0	342				62	82	3
8	17.5		346.9	.63	1.3	345				60	82	4
9	20		348.45	.72	1.5	345				59	83	4
10	22.5		349.75	.75	1.6	344				59	82	4
11	25		351.8	.64	1.36	342				59	83	4
12	27.5		353.37	.58	1.2	341				59	83	3
	TOTAL TIME	17:13	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in. Hg
	X		X	X	X	X					X	X

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EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Hexavalent Chromium	2

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
A	30	~~17:15~~ 1720	354.852	.68	1.4	342				60	84	4
2	32.5		356.35	.60	1.2	343				59	84	4
3	35		357.868	.56	1.1	343				57	84	4
4	37.5		359.286	.55	1.1	343				57	84	4
5	40		360.886	.45	.95	343				57	84	4
6	42.5		362.168	.51	1.0	343				56	84	4
7	45		363.5	.62	1.3	345				54	82	5
7	47.5		365.0	.80	1.7	347				54	82	5
9	50		366.73	1.0	2.13	349				53	82	6
10	52.5		368.65	.96	2.0	348				54	82	5
11	55		370.55	.92	1.9	345				35	82	6
12	57.5		372.4	.91	1.9	344				56	83	6
	60	17:50	374.239									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F	AVG DGM °F	MAX VAC In.Hg
60	37.201	~~0.791~~ .794 avg	1.33	342.0	82.6	6.0

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EPA METHOD 0010 TESTING FIELD DATA

AND CITY	DATE	SAMPLING [illegible] N	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Hexavalent Chromium	3

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.68	-.51	74		52	.84	Teflon 5'	.233	X-23

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) In. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) In. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M-11	2.08	.998	Hex 2	Hex 2		—	11	.001	9	.001	2.13

EPA METHOD 3				RUN 1	RUN 2	RUN 3	AVG	AMBIENT	PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
Collection Method	CEMS 3A	15.9	%O2	15.95					✓	✓
Analysis Method	CEMS 3A	4.8	%CO2	4.85						

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1 B	0	20:50	420.882	.62	1.32	348				60	77	3
2	2.5		422.35	.65	1.38	346				62	77	4
3	5		423.8	.62	1.32	353				63	78	4
4	7.5		425.35	.55	1.17	353				62	78	4
5	10		426.7	.45	.95	353				63	78	4
6	12.5		428.22	.61	1.3	354				63	78	5
7	15		429.96	.59	1.25	354				64	81	5
8	17.5		431.3	.73	1.55	354				48	81	5
9	20		433.0	.71	1.72	354				42	81	5
10	22.5		434.70	.53	1.1	351				44	80	4
11	25		436.2	.50	1.0	349				44	80	4
12	27.5		437.6	.50	1.0	348				47	79	3
	TOTAL TIME	21:20	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC In.Hg
	✓		✓	✓	✓	✓					✓	✓

EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Hexavalent Chromium	3

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1 A	30	2128 / 1125	438.761	.52	1.1	349				62	78	3
2	32.5		440.35	.48	1.0	350				61	78	3
3	35		441.95	.50	1.0	352				61	78	4
4	37.5		443.1	.50	1.0	352				59	78	4
5	40		444.5	.45	.95	351				58	79	4
6	42.5		445.85	.43	.91	352				57	77	3
7	45		447.15	.33	1.1	354				55	78	4
8	47.5		448.55	.79	1.68	356				57	79	5
9	50		450.25	.80	1.7	356				53	79	5
10	52.5		452.0	.88	1.9	354				51	81	5
11	55		453.9	.81	1.7	346				51	78	4
12	57.5		455.65	.75	1.6	346				51	78	4
	60	2155	457.346									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC In.Hg
60	36.464	0.775	~~1.28~~ 1.27	~~351~~	Sheet Checked By:	~~78.8~~ 78.	5.0

12-21

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Multi-Metals	1

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.62	-.51	75	Q47	52	.84	5' Glass	.263	#1

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
13.5	M-11	2.08	.998	Deca 1	Deca 1	Deca 1		11	.005	8	.004	3.27

EPA METHOD 3

Collection Method	CEMS 3A	16.2	%O2
Analysis Method	CEMS 3A	4.9	%CO2

	RUN 1	RUN 2	RUN 3	AVG	AMBIENT

PITOT SYSTEM LEAK CHECK: INITIAL ✓ FINAL ✓

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1B	0	1050	194.034	.63	2.06	338	249	252		62	74	3
2	2.5		196.0	.72	2.35	339	255	257		51	78	3
3	5		198.0	.72	2.35	339	259	257		48	78	3
4	7.5		200.0	.70	2.28	339	256	256		47	79	3
5	10		202.0	.64	2.09	340	256	257		48	79	3
6	12.5		203.95	.50	1.63	341	255	258		50	79	3
7	15		205.7	.19	.62	342	256	257		50	79	3
8	17.5		206.85	.58	1.89	344	258	262		53	80	3
9	20		208.6	.74	2.4	344	263	260		53	82	3
10	22.5		210.65	.78	2.55	341	257	262		51	80	4
11	25		212.8	.73	2.38	340	258	265		52	81	4
12	27.5	1120	214.85	.76	2.48	339	254	263		52	81	
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg
	30		X	X	X	X					X	X

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	4-16-92	No. 4 Kiln Exhaust Stack	Multi-Metals	1

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
A 1	30	1130	217.026	.50	1.63	332	258	257		60	81	3
2	32.5		218.7	.48	1.57	338	259	256		50	81	3
3	35		220.27	.49	1.6	339	255	257		46	82	3
4	37.5		222.05	.42	1.37	340	259	251		48	82	3
5	40		223.65	.42	1.37	339	258	250		48	82	2
6	42.5		225.2	.45	1.47	339	257	256		48	82	3
7	45		226.85	.50	1.63	341	255	255		49	83	3
8	47.5		228.53	.69	2.25	345	256	253		50	84	4
9	50		230.3	.65	2.1	345	258	256		50	85	3
10	52.5		232.55	.71	2.32	339	257	257		49	82	4
11	55		234.5	.76	2.48	340	257	257		51	85	4
12	57.5		236.6	.70	2.28	337	260	256		52	85	4
	60	1200	238.646									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F
60	44.612	0.769	~~1.97~~ 1.96	342.0

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AVG DGM °F	MAX VAC In.Hg
81.2	4.0

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Multi-Metals	2

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.71	-.51	78	Q-24	52"	.84	5' Glass	.263	D-#1

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M-11	2.08	.998	Deco 2	Deco 2	Deco1	—	11	.001	17	.005	3.46 ~~3.29~~

EPA METHOD 3

				RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS 3A	15.8	%O2					
Analysis Method	CEMS 3A	5.1	%CO2					

PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
✓	

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1 ~~B~~	0	14:57	290.164	.47	1.42	337	251	253		60	85	3
2 ~~#~~	2.5		291.9	.67	2.3	339	259	255		47	85	4
~~#~~3	5		293.9	.66	2.28	340	261	257		47	85	4
4	7.5		295.9	.65	2.24	343	258	252		48	85	4
5	10		297.9	.54	1.86	343	259	264		49	86	3
6	12.5		299.75	.55	1.9	343	258	261		49	85	3
7	15		301.6	.25	.86	342	259	262		49	84	2
8	17.5		303.0	.57	1.97	341	258	263		47	84	3
9	20		304.78	.69	2.38	340	257	263		47	84	4
10	22.5		306.85	.72	2.49	340	259	258		49	84	4
11	25		308.95	.63	2.17	337	259	263		50	83	4
12	27.5		310.95	.69	2.38	332	255	260		52	84	4
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg
	30		X	X	X	X					X	X

313.058

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Multi-Metals	2

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
(A	30	15:27 / 1341	313.018	.51	1.76	339	250	257		60	84	3
2	32.5		314.95	.53	1.83	339	256	258		55	84	3
3	35		316.97	.50	1.7	340	254	261		51	85	3
4	37.5		318.52	.46	1.59	341	257	259		48	85	3
5	40		320.2	.43	1.49	340	249	249		48	84	3
6	42.5		321.85	.47	1.62	341	251	252		48	84	3
7	45		323.5	.56	1.9	342	251	252		49	84	3
8	47.5		325.3	.69	2.4	341	252	251		49	84	4
9	50		327.35	.89	3.09	342	250	252		49	84	5
10	52.5		329.65	.81	2.8	342	251	247		50	85	4
11	55		331.95	.89	3.0	340	250	253		50	85	5
12	57.5		334.24	.85	2.9	339	252	251		50	85	5
	60	16:11	336.538									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC in.Hg
60	46.374	0.775	2.10	342	Sheet Checked By:	84.5	5.0

B-25

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Multi-Metals	3

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.68	-.51	80	Q-41	52	.84	5' Glass	.259	#5

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) In. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) In. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M-11	2.08	.998	Deco-1	Deco1		—	9	.001	10	.004	3.26

EPA METHOD 3				RUN 1	RUN 2	RUN 3	AVG	AMBIENT	PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
Collection Method	CEMS 3A	16.3	%O2						✓	✓
Analysis Method	CEMS 3A	4.5	%CO2							

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	Δ P VELOCITY HEAD (in. H2O)	Δ H ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
B 1	0	1920	374.392	.64	1.95	348	248	254		61	78	3
2	2.5		376.25	.69	2.2	349	252	252		46	78	4
3	5		378.2	.65	2.1	351	253	251		45	79	4
4	7.5		380.18	.61	1.98	351	253	252		46	80	3
5	10		382.09	.60	1.95	352	251	253		46	80	3
6	12.5		383.92	.46	1.5	351	252	252		47	80	3
7	15		385.96	.31	1.0	352	255	252		48	80	3
7	17.5		387.75	.70	2.2	352	253	251		48	80	4
9	20		389.13	.48	1.5	351	253	248		49	80	4
10	22.5		391.25	.57	1.8	350	251	249		49	80	4
11	25		393.45	.74	2.4	348	254	252		49	80	4
12	27.5		395.54	.75	2.4	348	253	248		49	80	4
	TOTAL TIME	1950	DGM VOLUME	AVG SQRT Δ P	AVG Δ H	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg
	X		X	X	X	X					X	X

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EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-16-92	No. 4 Kiln Exhaust Stack	Multi-Metals	23

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
A 1	30	1950 / 1955	397.639	.55	1.8	342	249	249		60	79	3
2	32.5		399.43	.62	2.0	348	250	254		51	79	3
3	35		401.3	.54	1.76	347	253	253		48	79	3
4	37.5		403.05	.51	1.66	343	254	253		46	79	3
5	40		404.76	.50	1.6	344	253	253		46	79	3
6	42.5		406.45	.46	1.5	343	251	255		47	79	3
7	45		408.1	.50	1.6	345	252	254		47	79	3
8	47.5		409.8	.79	2.57	348	251	254		47	79	4
9	50		411.85	.83	2.7	348	252	253		46	79	4
10	52.5		414.1	.91	2.4	344	255	250		46	79	4
11	55		416.26	.86	2.8	342	253	252		47	79	5
12	57.5		418.5	.80	2.6	342	254	251		47	79	4
	60	2025	420.678									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F
60	46.286	0.799	2.09	342.5

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AVG DGM °F	MAX VAC In.Hg
79.3	5.0

EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/18/92	No. 2 Kiln Exhaust Stack	Particulate/Chlorides	1

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
CM PS	29.60	-0.51	72°	Q 270	58.0"	0.84	5ft Glass	.259	#5

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M4	1.992	0.998	5T	5T	G9	N/A	10	0.003	19	0.018	3.25

EPA METHOD 3

		RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS, 3A	17.0 %O2				
Analysis Method	CEMS, 3A	3.9 %CO2				

PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
0.0	0.0

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
A 1	0	0831	614.585	.75	2.43	355	255	249		60	96	9
2	5	Stop 0836 Start 1006	618.612	.68	2.21	355	255	257		48	97	8
3	10		622.620	.60	1.95	357	255	261		49	97	7
4	15		626.147	.56	1.82	357	255	254		47	101	6
5	20		629.686	.52	1.69	356	257	255		48	102	6
6	25		632.933	.56	1.82	358	255	258		50	103	6
7	30		636.362	.73	2.37	358	255	251		50	104	7
8	35		640.410	1.0	3.25	355	255	261		51	105	12
9	40		645.012	.64	2.08	278	255	258		52	105	7
10	45		648.792	.90	2.92	281	255	248		52	105	11
11	50		653.044	.68	2.21	286	255	253		52	104	8
12	55		656.919	.56	1.82	288	255	258		52	96	8
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in. Hg

15-2d

EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/18/92	No. 2 Kiln Exhaust Stack	Particulate/Chlorides	1

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
B 1	60	~~11:03~~ 11:03	660.688	.45	1.39	347	255	248		60	103	5
2	65		663.806	.62	2.01	355	255	249		56	103	6
3	70		667.253	.64	2.08	355	255	250		55	102	6
4	75		670.926	.58	1.88	353	255	260		53	101	6
5	80		674.439	.55	1.78	355	255	248		53	101	6
6	85		677.918	.53	1.72	358	255	258		54	101	6
7	90		681.392	.72	2.34	358	255	254		54	102	6
8	95		684.839	.93	3.02	357	255	255		55	103	11
9	100		689.168	1.1	3.57	353	253	253		55	103	14
10	105		694.158	1.2	3.90	328	255	258		58	104	17
11	110		699.049	1.2	3.90	326	256	257		59	104	17
12	115		704.042	.79	2.56	320	255	258		60	105	11
	120	12:03	708.276	END								

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F	AVG DGM °F	MAX VAC in.Hg
		.845	2.36	339.5	102	

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EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/18/92	No. 2 Kiln Exhaust Stack	Particulate/Chlorides	2

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
CM PS	29.60	-0.51	72°	Q 308	~~88~~.0"	0.84	5f - Glass	~~2.35~~ 2.54	~~#5~~ #3

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M4	1.992	0.998	55	5T	6G	N/A	10.0	0.002	6.0	0.000	~~3.25~~ 2.11

EPA METHOD 3				RUN 1	RUN 2	RUN 3	AVG	AMBIENT	PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
Collection Method	CEMS, 3A	17.2	%O2							
Analysis Method	CEMS, 3A	3.6	%CO2							

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
A 1	0	1255	708.578	0.73	1.5	347	255	251		64	105	2.0
2	5		711.87	0.75	1.6	355	255	256		56	106	2.0
3	10		715.27	0.70	1.5	355	255	250		55	106	2.0
4	15		718.53	0.64	1.4	355	255	247		56	107	2.0
5	20		721.70	0.58	1.2	355	255	260		55	107	2.0
6	25		724.61	0.53	1.1	356	255	247		53	107	2.0
7	30		727.41	0.78	1.6	356	255	251		53	107	2.0
8	35		730.82	0.89	1.9	359	255	258		54	107	3.0
9	40		734.51	0.83	1.8	357	255	253		53	108	3.0
10	45		738.32	0.75	1.6	353	255	257		54	108	3.0
11	50		741.52	0.78	1.6	350	255	261		55	108	3.0
12	55		744.89	0.76	1.6	282	255	248		55	107	3.0
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg

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EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/18/92	No. 2 Kiln Exhaust Stack	Particulate/Chlorides	2

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (In. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
B 1	60	1355 / 1402	748.210	0.47	0.99	320	255	244		62	106	2.0
2	65		750.91	0.53	1.1	329	255	255		54	108	2.0
3	70		753.84	0.52	1.1	332	255	261		51	108	2.0
4	75		756.75	0.56	1.2	334	255	245		51	109	2.0
5	80		759.69	0.54	1.1	339	255	250		52	109	2.0
6	85		762.58	0.54	1.1	342	255	244		52	109	2.0
7	90		765.47	0.91	1.9	342	255	260		53	108	3.0
8	95		769.13	1.2	2.5	346	255	252		53	107	3.5
9	100		773.34	1.1	2.3	344	255	265		55	106	3.0
10	105		777.40	0.06	0.13	335	255	255		56	105	1.0
11	110		778.69	0.78	1.6	330	255	252		56	104	3.0
12	115		781.84	0.79	1.7	329	255	245		57	105	3.0
	120	1502	785.369									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC In.Hg
		.820	1.46	340.9		107.0	

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EPA METHOD 0050 TEST[illegible]G FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/18/92	No. 2 Kiln Exhaust Stack	Particulate/Chlorides	3

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
BS / CM	29.50	-0.51	72°	Ⓠ 307	58.0"	0.84	5FT - Glass	.235	X-6

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) In. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) In. Hg	TRAIN LEAK CHECK (FINAL) CFM	2.11 K FACTOR
8.7	M4	1.992	0.998	5T	5T	6G	N/A	10	0.001	6	0.004	[illegible]

EPA METHOD 3

				RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS, 3A	17.2	%O2					
Analysis Method	CEMS, 3A	3.5	%CO2					

PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
0.0	0.0

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
A1	0	15:55	785.620	.68	1.43	334	255	255		67	100	2
2	5		788.748	.74	1.56	340	255	252		56	101	2
3	10		792.010	.68	1.43	341	255	258		53	101	2
4	15		795.156	.65	1.37	342	255	250		52	101	2
5	20		798.231	.53	1.07	342	255	252		54	101	2
6	25		801.096	.55	1.16	344	255	258		54	101	2
7	30		803.992	.61	1.28	344	255	252		55	101	2
8	35		806.910	.74	1.56	345	255	252		54	101	2
9	40		810.182	.84	1.77	342	255	256		54	101	2
10	45		813.646	.84	1.77	333	255	249		54	102	2
11	50		817.128	.80	1.68	326	255	256		55	103	2
12	55		820.456	.56	1.18	318	255	253		55	103	2
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg

EPA METHOD 0050 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6/18/92	No. 2 Kiln Exhaust Stack	Particulate/Chlorides	3

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (In. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
B1	60	1651/1652	823.398	.46	.970	329	255	248		59	102	2
2	65		826.111	.42	.886	343	255	256		53	102	2
3	70		828.697	.45	.949	347	255	258		53	102	2
4	75		831.318	.48	1.01	348	255	250		53	103	2
5	80		834.032	.48	1.01	347	255	253		53	104	2
6	85		836.789	.47	.991	347	255	256		52	105	2
7	90		839.514	.49	1.03	348	255	252		52	105	2
8	95		842.268	.52	1.09	351	255	258		52	106	2
9	100		845.038	.66	1.39	354	255	251		45	106	2
10	105		848.038	.67	1.41	353	255	258		46	106	2
11	110		851.138	.92	1.94	349	255	260		47	106	2
12	115		854.751	1.0	2.11	284	255	250		49	107	2
	120		858.522	END								

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F
		.791	1.34	3396

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AVG DGM °F	MAX VAC In.Hg
102.9	

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EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Hexavalent Chromium	1

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.65	-.51	79		52"	.84	Teflon 5'	.258	#2

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y) (Assumed moist)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) In. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) In. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	Mull	2.08	.998	Hex 1	Hex 1	G10	F	10	.000	11	.001	3.34

EPA METHOD 3

				RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS 3A	16.9	%O2 (dry)					
Analysis Method	CEMS 3A	3.9	%CO2 (dry)					

PITOT SYSTEM LEAK CHECK	
INITIAL	FINAL
✓	✓

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (In. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
A 1	0	11:18	514.347	.89	2.9	353				62	101	8
2	2.5		518.65	.99	3.3	357				61	100	8
3	5		521.12	.94	3.1	359				61	100	9
4	7.5		523.53	.89	2.9	360				60	101	9
5	10		525.9	.78	2.6	360				62	101	8
6	12.5		528.14	.65	2.17	360				61	101	6
7	15		530.2	.56	1.87	354				60	100	6
8	17.5		532.14	.64	2.1	356				56	99	6
9	20		534.1	.77	2.57	354				55	99	7
10	22.5		536.27	.82	2.7	354				56	100	7
11	25		538.54	.80	2.67	353				58	100	7
12	27.5		540.8	.80	2.69	353				59	100	7
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC In.Hg

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1203

EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Hexavalent Chromium	1

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
B 1	30	11:48 / 11:50	542.033	1.0	3.3	351				60	99	8
2	32.5		545.5	1.2	4.0	359				59	99	8 10
3	35		548.14	1.2	4.0	359				58	99	10
4	37.5		550.9	1.1	3.67	360				57	98	10
5	40		553.54	.89	2.97	360				57	99	9
6	42.5		556.0	.57	1.9	360				58	99	6
7	45		558.04	.46	1.53	358				59	99	4
8	47.5		559.57	.46	1.53	358				59	99	4
9	50		561.5	.44	1.46	355				59	100	4
10	52.5		563.14	.44	1.46	350				59	101	4
11	55		564.76	.46	1.53	350				60	101	4
12	57.5		566.23	.46	1.53	349				62	101	4
	60		568.158									
		1220										

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC In.Hg
		.860	2.52	356.1		99.8	

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EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Hexavalent Chromium	2

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.62	-.51	82		52	.84	Teflon	.276	X5

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) In. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) In. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M-11	2.08	.998	Hex 2	Hex 2	-	—	12	.001	11	.001	4.2

EPA METHOD 3

				RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS 3A	17.5	%O2					
Analysis Method	CEMS 3A	3.4	%CO2					

PITOT SYSTEM LEAK CHECK	
INITIAL	FINAL
✓	✓

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1A	0	14:18	629.592	.91	3.8	335				60	96	7
2	2.5		632.2	.98	4.1	342				61	98	8
3	5		634.93	.97	4.07	345				61	99	9
4	7.5		637.66	.94	3.9	346				62	100	10
5	10		640.39	.89	3.7	346				61	100	9
6	12.5		643.03	.79	3.2	346				60	100	8
7	15		645.55	.68	2.8	346				62	101	7
8	17.5		647.92	.72	3.0	344				61	100	7
9	20		650.31	.80	3.36	344				60	100	7
10	22.5		652.84	.83	3.48	342				60	100	7
11	25		655.37	.75	3.15	345				60	100	6
12	27.5		657.87	.74	3.1	342				62	100	6
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC In.Hg

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1502

EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA		No. 2 Kiln Exhaust Stack	Hexavalent Chromium	2

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
B 1	30	1448/1451	660.275	1.1	4.62	342				63	98	10
2	32.5		663.14	1.2	5.04	344				58	99	10
3	35		666.15	1.1	4.62	345				58	99	10
4	37.5		669.13	1.1	4.62	345				59	99	10
5	40		672.04	.91	3.82	344				60	99	9
6	42.5		674.78	.65	2.73	343				61	99	6
7	45		677.14	.51	2.14	342				62	99	5
8	47.5		679.2	.49	2.05	340				63	99	5
9	50		681.15	.48	2.01	338				61	99	5
10	52.5		683.11	.46	1.93	335				61	99	4
11	55		685.0	.38	1.59	332				61	99	4
12	57.5	1521	686.75	.40	1.68	333				61	99	4
	60	1	688.314									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F	AVG DGM °F	MAX VAC in.Hg
		.873	3.27	342.4	99.2	

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EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Hexavalent Chromium	3

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.5	-.51	98		52"	.84	Teflon 5'	.276	X-5

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M-11	2.08	.995	Hot 1	Hot 1		—	12	.002	11	.002	4.2

EPA METHOD 3

				RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS 3A	17.0	%O2					
Analysis Method	CEMS 3A	3.7	%CO2					

PITOT SYSTEM LEAK CHECK	
INITIAL ✓	FINAL ✓

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1A	0	17:26	750.369	.89	3.7	350				62	92	6
2"	2.5		752.96	1.0	4.2	350				52	95	8
3	5		755.7	.95	3.99	354				49	96	8
4	7.5		758.43	.87	3.65	356				53	97	8
5	10		761.05	.82	3.40	356				54	98	7
6"	12.5		763.62	.660	2.77	356				56	98	7
7	15		765.97	.59	2.49	354				58	98	6
8	17.5		768.15	.63	2.64	354				59	98	6
9	20		770.4	.66	2.7	353				61	99	6
10	22.5		772.65	.60	2.52	350				62	99	6
11	25		774.87	.60	2.52	349				62	99	6
12	29.5		777.07	.58	2.43	348				62	99	6
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg
	30											

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779,348

EPA METHOD 0013 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	4-18-97	No. 2 Kiln Exhaust Stack	Hexavalent Chromium	3

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1B	30	1756/1801	779,348	.80	3.36	348				62	97	5
2	32.5		781.7	.92	3,86	350				57	97	7
3	35		784,39	1.1	4.6	352				56	97	9
4	37.5		787.3	.99	4 15	352				57	97	9
5	40		790.07	.69	2.89	352				59	97	6
6	42.5		792.5	.59	2.47	352				61	97	6
7	45		794.66	.47	1.97	350				62	97	4
8	47.5		796.63	.43	1.8	350				63	97	4
9	50		798.47	.42	1.76	348				63	97	4
10	52.5		800.28	.43	1.8	345				63	97	4
11	55		802.14	.37	1.55	342				64	97	3.5
12	57.5		803.88	.39	1.63	341				63	97	3.5
	60	1831	805.634									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F	AVG DGM °F	MAX VAC In.Hg
		.818	2.87	350.5	97.2	

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EPA METHOD 0012 TEST[illegible]G FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Multi-Metals	1

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.60	-	78	232	52"	.84	5' Glass	.277	X-4

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) In. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) In. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M-11	2.08	.998	Pac 1	Pac 1	—	—	10	.007	10	.010	4.43

EPA METHOD 3

				RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS 3A	17.0	%O2					
Analysis Method	CEMS 3A	3.8	%CO2					

PITOT SYSTEM LEAK CHECK: INITIAL ✓ FINAL ✓

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	Δ P VELOCITY HEAD (in. H2O)	Δ H ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
A 1	0	0831	457.647	.84	3.72	353	251	255		41	90	5
2	2.5		460.2	.85	3.76	355	255	264		51	91	5
3	5	8:37:20 10:05:20	462.78	.89	3.94	357	251	262		50	92	5
4	7.5		465.55	.94	4.16	359	243	254		54	94	5
5	10		468.29	.84	3.72	358	256	248		44	95	5
6	12.5		470.92	.73	3.2	358	256	246		46	95	5
7	15		473.5	.56	2.48	356	254	247		48	96	4
8	17.5		475.67	.60	2.6	356	254	245		50	97	4
9	20		477.6	.67	2.96	356	255	243		52	98	3
10	22.5		480.15	.71	3.14	355	254	244		52	98	5
11	25		482.55	.43	1.9	353	255	242		53	98	4
12	27.5		484.72	.84	3.7	355	254	243		52	99	5
	TOTAL TIME	10:29	DGM VOLUME	AVG SQRT Δ P	AVG Δ H	AVG STACK °F					AVG DGM °F	MAX VAC In. Hg
	31											

02-69

10 59 1102

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	4-19-92	No. 2 Kiln Exhaust Stack	Multi-Metals	1

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1B	30	1029 / 10:32	487.291	1.1	4.87	351	244	250		60	99	6
2	32.5		490.25	1.2	5.3	360	257	247		57	99	7
3	35		493.33	.88	3.89	361	252	244		54	100	5
4	37.5		496.2	1.2	5.3	362	255	252		54	101	7
5	40		499.1	.90	3.98	362	256	257		55	102	6
6	42.5		501.9	.67	2.96	360	254	253		54	101	5
7	45		503.85	.41	1.81	356	254	249		55	102	3
8	47.5		506.13	.44	1.94	353	248	249		56	101	3
9	50		508.02	.48	2.1	350	252	247		55	100	4
10	52.5		510.0	.51	2.25	348	254	246		55	100	4
11	55		312.03	.51	2.25	344	252	244		55	100	4
12	57.5		514.1	.50	2.21	342	255	243		56	101	4
	60	↗	516.141									
		11:02										

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F		AVG DGM °F	MAX VAC in.Hg
		.848	3.25	355		97.9	

Sheet Checked By: _____

MSN MAH GMS

1h-9

EPA METHOD 0012 TEST[illegible]G FIELD DATA

PLANT AND CITY	DATE	SAMPLING [illegible]TION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Multi-Metals	2

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.62	-.51	80	# [illegible] 25	52	.84	5' Glass	.297	X-4

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL in. Hg	TRAIN LEAK CHECK (INITIAL CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
	11	2.08	.998	Dec 2	Dec 2	→	—	10	.005	7.0	0.000	4.43

EPA METHOD 3

Collection Method	CEMS 3A	17.1	%O2
Analysis Method	CEMS 3A	3.7	%CO2

	RUN 1	RUN 2	RUN 3	AVG	AMBIENT

PITOT SYSTEM LEAK CHECK INITIAL	PITOT SYSTEM LEAK CHECK FINAL
✓	✓

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1A	0	12:55	568.429	.95	4.2	355	242	262		60	97	5
2	2.5		571.03	.97	4.29	357	249	252		50	98	6
3	5		574.0	.95	4.2	358	252	258		49	99	6
4	7.5		576.84	.86	3.8	358	254	247		50	99	5
5	10		579.52	.78	3.45	357	254	249		50	100	5
6	12.5		582.1	.70	3.1	356	253	242		53	97	5
7	15		584.52	.63	2.79	356	251	257		53	98	4
8	17.5		586.84	.73	3.2	356	255	253		54	99	4
9	20		589.2	.80	3.54	356	255	253		54	99	5
10	22.5		591.8	.84	3.7	354	254	256		54	100	5
11	25		594.42	.85	3.76	352	254	255		54	100	5
12	27.5		596.92	.85	3.76	353	252	254		55	100	5
	TOTAL TIME		DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in.Hg
	30											

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Multi-Metals	2

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (In. H2O)	ΔH ORIFICE (In. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (In. Hg)
1	30	1325/1328	599.733	1.0	4.4	352	248	253		60	100	6
2	32.5		602.55	1.1	4.87	356	253	252		52	100	6
3	35		605.48	1.1	4.87	357	251	255		51	100	6
4	37.5		608.5	1.0	4.43	357	256	255		51	100	6
5	40		611.38	.92	4.07	353	250	250		53	101	6
6	42.5		614.13	.81	3.58	348	250	253		54	101	5
7	45		616.77	.64	2.8	344	255	250		54	101	5
8	47.5		619.18	.61	2.7	337	254	253		55	102	5
9	50		621.48	.62	2.7	332	256	252		54	101	4
10	52.5		623.76	.53	2.3	331	253	253		54	101	4
11	55		625.98	.37	1.63	320	256	250		55	101	3
12	57.5		627.46	.39	1.43	321	252	254		54	100	3
	60	1358										

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F	AVG DGM °F	MAX VAC In.Hg
		.881	3.49	349	99.8	

Sheet Checked By: _____

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EPA METHOD 0012 TEST RUN FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-97	No. 2 Kiln Exhaust Stack	Multi-Metals	3

OPERATORS	BAROM PRESS (in. Hg)	STATIC PRESS (in. H2O)	AMBIENT TEMP (°F)	FILTER TYPE & FILTER NUMBER(S)	STACK ID (in.)	PITOT TUBE Cp	PROBE LENGTH AND MATERIAL	NOZZLE Diameter	NOZZLE ID No.
JAB	29.50	-.51	79	Q 3	52"	.84	5' Glass	.1297	X-4

ASSUMED MOISTURE (%)	DGM BOX NO.	DGM ΔH@	DGM CAL FACTOR (Y)	STACK THERM NO.	STACK PITOT NO.	IMPINGER THERM NO.	ORSAT NO.	TRAIN LEAK CHECK (INITIAL) in. Hg	TRAIN LEAK CHECK (INITIAL) CFM	TRAIN LEAK CHECK (FINAL) in. Hg	TRAIN LEAK CHECK (FINAL) CFM	K FACTOR
8.7	M-11	2.05	.998	Deco 1	Deco 1	—	—	11	.005	12	.002	~~4.26~~

EPA METHOD 3

			RUN 1	RUN 2	RUN 3	AVG	AMBIENT
Collection Method	CEMS 3A	17.2 %O2					
Analysis Method	CEMS 3A	3.5 %CO2					

PITOT SYSTEM LEAK CHECK	
INITIAL	FINAL
✓	✓

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	2.9 ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
1A	0	1550	688.784	.90	3.83	342	242	241		62	95	20
2	2.5	1550:43 1552	690.73	1.0	~~4.25~~ 2.0	344	244	253		61	95	20
3	5	1556	~~688.949~~ 699.495	.92	3.91	344	245	257		50	96	2
4	7.5		702.64	.85	3.62	344	250	255		47	96	2
5	10		705.25	.76	3.2	345	253	257		48	97	2.5
6	12.5		707.74	.69	2.9	345	253	247		49	97	2
7	15		710.03	.56	2.38	345	256	257		49	97	2
8	17.5		712.2	.57	2.42	344	250	253		51	97	2
9	20		713.93	.61	2.59	344	254	255		51	97	2
10	22.3		716.63	.63	2.68	343	254	250		51	98	2
11	25		718.95	.60	2.5	344	250	253		51	98	2
12	27.5		721.14	.58	2.47	338	254	245		51	98	2
	TOTAL TIME	1640	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F					AVG DGM °F	MAX VAC in. Hg
	30											

691.890
698.949 11:14

6-44

1651
1652

EPA METHOD 0012 TESTING FIELD DATA

PLANT AND CITY	DATE	SAMPLING LOCATION	SAMPLE TYPE	RUN NUMBER
Virginia Solite, Cascade, VA	6-18-92	No. 2 Kiln Exhaust Stack	Multi-Metals	3

TRAVERSE POINT NUMBER	ELAPSED TEST TIME (min)	CLOCK TIME (24-hr)	GAS METER READING Vm (ft3)	ΔP VELOCITY HEAD (in. H2O)	ΔH ORIFICE (in. H2O)	STACK TEMP (°F)	PROBE TEMP (°F)	FILTER OVEN TEMP (°F)		SIL GEL IMPINGER TEMP (°F)	DGM IN/OUT TEMP (°F)	SAMPLE TRAIN VACUUM (in. Hg)
B	30	1640/1642	723.231	.89	3.79	337	251	257		53	99	3
2	32.5	1644.5	725.85	.96	4.08	348	255	255		44	98	3
3	35	1647	728.62	.99	4.2	349	254	25		43	99	3
4	37.5		731.45	.96	4.08	350	251	252		43	99	3
5	40		734.24	.82	3.49	350	249	254		44	99	2
6	42.5		736.77	.51	2.17	350	257	249		44	99	2
7	45		738.88	.47	2.0	347	255	251		44	99	2
8	47.5		740.85	.46	1.95	345	248	245		45	99	2
9	50		742.75	.45	1.91	343	255	251		45	99	2
10	52.5		744.65	.45	1.91	341	252	251		44	98	2
11	55		746.54	.41	1.74	342	254	254		44	97	2
12	57.5	1712	748.43	.39	1.66	340	258	254		44	97	2
	60		950.222									

TOTAL TIME	DGM VOLUME	AVG SQRT ΔP	AVG ΔH	AVG STACK °F
		.818	2.91	344.3

Sheet Checked By: _____

AVG DGM °F	MAX VAC In.Hg
97.6	

S1-9

PARTICULATE / CHLORIDES EPA 0050 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6-18-92

Sample Location: Kiln #2 — Recovery Date: 6-18-92

Run No.: K2-M5-1 — Recovered by: C. PO

Filter Number(s): 270

MOISTURE

Impingers	1	2	3	4	5	Silica Gel	
Final Weight	176	120.1	102	102		798.8	g
Initial Weight (ml)	100	100	100	100		779.1	g
Net Weight	76	20.1	2	2		19.7	g

Description of impinger water: (20) — 30 % spent

Blue — Sil gel color

Total moisture = 119.8 g

RECOVERED SAMPLE

Filter container number(s): K2-M5-1-PF — Sealed: ✓

Description of particulate on filter: Very light

Probe rinse container no.	K2-M5-1-FHACE	Liquid level marked/sealed	✓
Acetone blank container no.	NA	Liquid level marked/sealed	NA
H2SO4 Impinger contents container no.	K2-M5-1-H2SO4 Imp 1-3	Liquid level marked/sealed	✓
H2SO4 blank container no.	NA	Liquid level marked/sealed	NA
NaOH Impinger contents container no.	K2-M5-1-NaOH Imp 4-5	Liquid level marked/sealed	✓
NaOH blank container no.	NA	Liquid level marked/sealed	NA

Samples stored and locked

Remarks

Relinquished by — Date

PARTICULATE / CHLORIDES EPA 0050 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 5-18-92

Sample Location: Kiln #2 — Recovery Date: 6-18-92

Run No.: K2-M5-2 — Recovered by:

Filter Number(s): Q308

MOISTURE

Impingers	1	2	3	4	5	Silica Gel	
Final Weight	160	118	104	105	X	754.9	g
Initial Weight	100	100	100	100	X	740.7	g
Net Weight	60	18	4	5	X	14.2	g

Description of impinger water: _____ 15 % spent

Blue Sil gel color

Total moisture = 101.2 g

RECOVERED SAMPLE

Filter container number(s): K2-M5-2-PF — Sealed: ✓

Description of particulate on filter: Very light

Probe rinse container no.	K2-M5-1-FHACG	Liquid level marked/sealed	✓
N/A container no.	Acetone blank	Liquid level marked/sealed	
H2SO4 Impinger contents container no.	K2-M5-1-H2SO4 IMP Imp 1-3	Liquid level marked/sealed	✓
N/A container no.	H2SO4 blank	Liquid level marked/sealed	
NaOH Impinger contents container no.	K2-M5-1-NaOH FMP Imp 4-5	Liquid level marked/sealed	✓
N/A container no.	NaOH blank	Liquid level marked/sealed	

Samples stored and locked

Remarks

Relinquished by — Date

PARTICULATE / CHLORIDES EPA 0050 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite | Sample Date: 6-18-92

Sample Location: Kiln # 2 Stack | Recovery Date: 6-18-92

Run No.: H2-MS-3 | Recovered by: WDB

Filter Number(s): Q307

MOISTURE

Impingers	1	2	3	4	5	Silica Gel	
Final Weight	171	116	103	100	X	808.0	g
Initial Weight	100	100	100	100	X	791.7	g
Net Weight	71	16	3	0	X	16.3	g

Description of impinger water: Clear | 20 % spent

Blue Sil gel color

Total moisture = 106.3 g

RECOVERED SAMPLE

Filter container number(s): H2-MS-3-PF | Sealed: ✓

Description of particulate on filter: Very light

Probe rinse container no. H2-MS-3-FHARE	Liquid level marked/sealed	✓
N/A container no. Acetone blank	Liquid level marked/sealed	
H2SO4 Impinger contents container no. H2-MS-3-H2SO4 Imp ~~1&2~~	Liquid level marked/sealed	✓
N/A container no. H2SO4 blank	Liquid level marked/sealed	
NaOH Impinger contents container no. H2-MS-3-NaOH Imp Imp ~~4-5~~	Liquid level marked/sealed	✓
N/A container no. NaOH blank	Liquid level marked/sealed	

Samples stored and locked

Remarks

Relinquished by | Date

MULTIPLE METALS EPA 0012 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6/18/92

Sample Location: Kiln 2 — Recovery Date: 6/18/92

Run No.: H2-MTL-1 — Recovered by: WDB

Filter Number(s): Q32

MOISTURE

Impingers	1	2	3	4	5	6	Silica Gel	
Final Weight	134	132	1	95	92	X	765.1	g
Initial Weight	100	100	0	100	100	X	752.6	g
Net Weight	34	32	1	-5	-8	X	12.5	g

Description of impinger water: clear — 10 % spent

Blue — Sil gel color

Total moisture = 66.5 g

RECOVERED SAMPLE

Filter container number(s): H2-MTL-1-PF — Sealed: ✓

Description of particulate on filter: very light

Probe rinse container no.	H2-MTL-1-FHAR / H2-MTL-1-FHACG	Liquid level marked/sealed	✓ / ✓
N/A container no.	Acetone blank?	Liquid level marked/sealed	
Impingers 1–3 contents container no.	H2-MTL-1-H2O2 IMP Imp 1–3	Liquid level marked/sealed	✓
N/A container no.	HNO3/H2O2 blank?	Liquid level marked/sealed	
Nitric rinse container no.	H2-MTL-1-BHAR 0.1N HNO3	Liquid level marked/sealed	✓
Impingers 4–5 contents container no.	H2-MTL-1-KMNO4 IMP Imp 4–5	Liquid level marked/sealed	✓
N/A container no.	KMnO4 blank?	Liquid level marked/sealed	
HCl rinse container no.	H2-MTL-1-HCL 8N HCl	Liquid level marked/sealed	✓

Samples stored and locked

Remarks

Relinquished by — Date

MULTIPLE METALS EPA 0012 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6/18/92

Sample Location: Kiln #2 stack — Recovery Date: 6/18/92

Run No.: K2-MtP-2 — Recovered by: WNB

Filter Number(s): 25

MOISTURE

Impingers	1	2	3	4	5	6	Silica Gel	
Final Weight	170	95	2	96	100		735.9	g
Initial Weight	100	100	0	100	100		723.9	g
Net Weight	70	-5	2	-4	0		12.0	g

Description of impinger water: Clear — 15 % spent

Blue — Sil gel color

Total moisture = 75 g

RECOVERED SAMPLE

Filter container number(s): K2-MTL-2-PF — Sealed: ✓

Description of particulate on filter: Very light

Probe rinse container no.	K2-MTL-2-FHACE K2-MTL-2-FHAR		Liquid level marked/sealed ✓ ✓
N/A container no.	Acetone blank?		Liquid level marked/sealed
Impingers 1–3 contents container no.	K2-MTL-2-H2O2 IMP	Imp 1–3	Liquid level marked/sealed ✓
N/A container no.	HNO3/H2O2 blank?		Liquid level marked/sealed
Nitric rinse container no.	K2-MTL-2-BHAR	0.1N HNO3	Liquid level marked/sealed ✓
Impingers 4–5 contents container no.	K2-MTL-2-KMNO4IMP	Imp 4–5	Liquid level marked/sealed ✓
N/A container no.	KMnO4 blank?		Liquid level marked/sealed
HCl rinse container no.	K2-MTL-2-HCL	8N HCl	Liquid level marked/sealed ✓

Samples stored and locked

Remarks

Relinquished by — Date

MULTIPLE METALS EPA 0012 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6-18-92

Sample Location: Kiln #2 Stack — Recovery Date: 6-18-92

Run No.: H2-MTL-3 — Recovered by: CO

Filter Number(s): 039

MOISTURE

Impingers	1	2	3	4	5	6	Silica Gel	
Final Weight	176	90	2	171	38		763.4	g
Initial Weight (ml)	100	100	0	100	100		753.5	g
Net Weight	76	-10	2	71	-62		9.9	g

Description of impinger water: Clear — 10 % spent

Silica gel color: Blue

Total moisture = 86.9 g

RECOVERED SAMPLE

Filter container number(s): H2-MTL-3-PF — Sealed: ✓

Description of particulate on filter: almost none

Probe rinse container no.	H2-MTL-3-FHAR H2-MTL-3-FHACG	Liquid level marked/sealed	✓ ✓
container no.	Acetone blank? NA	Liquid level marked/sealed	~~✓~~ NA
Impingers 1–3 contents container no.	H2-MTL-3-H2O2 IMP Imp 1–3	Liquid level marked/sealed	✓ ✓
container no.	HNO3/H2O2 blank? NA	Liquid level marked/sealed	 NA
Nitric rinse container no.	K2-MTL-3-BHAR 0.1N HNO3	Liquid level marked/sealed	✓ ✓
Impingers 4–5 contents container no.	K2-MTL-3-KMNO4 Imp 4–5	Liquid level marked/sealed	✓ ✓
container no.	KMnO4 blank? NA	Liquid level marked/sealed	✓ ✓
HCl rinse container no.	K2-MTL-3-HCL 8N HCl	Liquid level marked/sealed	✓ ✓

Samples stored and locked

Remarks

Relinquished by — Date

HEXAVALENT CHROMIUM EPA 0013 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Solite Virginia — Sample Date: 6-18-92

Sample Location: Kiln 2 — Recovery Date: 6-18-92

Run No.	KOH Solution Volume Initial	KOH Solution Volume Final	Increase	pH Measure	Filtered?
K2-CR6-1	400 ml	414 ml	14 ml	9.5	✓

N_2 purge for	Silica Gel weight Initial	Silica Gel weight Final	Silica Gel Increase	Total Moisture	Recovered By:
30 min	692.4	727.8	35.4	49.4 g	WDB

Run No.	KOH Solution Volume Initial	KOH Solution Volume Final	Increase	pH Measure	Filtered?
K2-CR6-2	400	452 ml	52	9.5	✓

N_2 purge for	Silica Gel weight Initial	Silica Gel weight Final	Silica Gel Increase	Total Moisture	Recovered By:
30 min	757.4	787.9	30.5	82.5	WDB

Run No.	KOH Solution Volume Initial	KOH Solution Volume Final	Increase	pH Measure	Filtered?
K2-CR6-3	400 ml	444	44	9.5	✓

N_2 purge for	Silica Gel weight Initial	Silica Gel weight Final	Silica Gel Increase	Total Moisture	Recovered By:
30 min	747.8	779.6	31.8	75.8	

Comments:

Relinquished By: _____ Date: _____

PARTICULATE / CHLORIDES EPA 0050 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant Virginia Solite Sample Date 6-16-92

Sample Location Rot-kiln #4 Exhaust Recovery Date 6-16-92

Run No. R4-M5-1 Recovered by SCS

Filter Number(s) Q261

MOISTURE

Train A

Impingers	1	2	3	4	5	Silica Gel	
Net ~~Final~~ Weight	136.8	30.2	7	2.9		19.2	g
Initial Weight	610.2	610.5	588.1	616.7		~~705.6~~	g SCS original broke
Final ~~Net~~ Weight	747.0	640.7	595.1	619.6		724.8	g

Description of impinger water _____ % spent

Sil gel color

Total moisture = 196.1 g

RECOVERED SAMPLE

Filter container number(s) N/A Sealed ✓

Description of particulate on filter light

Probe rinse container no.	1	Liquid level marked/sealed	✓
N/A container no.	Acetone blank	Liquid level marked/sealed	
H2SO4 Impinger contents container no.	1 Imp 1-3	Liquid level marked/sealed	Final Vol. 514.7 ✓
N/A container no.	H2SO4 blank	Liquid level marked/sealed	
NaOH Impinger contents container no.	1 Imp 4-5	Liquid level marked/sealed	Final Vol. 380.5 ✓
N/A container no.	NaOH blank	Liquid level marked/sealed	

Samples stored and locked _____

Remarks _____

Relinquished by _____ Date _____

PARTICULATE / CHLORIDES EPA 0050 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6/16/92

Sample Location: Kiln #4 Exhaust — Recovery Date: 6/16/92

Run No.: K4-MS-2 — Recovered by: SCS

Filter Number(s): 0264

MOISTURE

Impingers: Train B

	1	2	3	4	5	Silica Gel	
Final Weight	684.0	563.4	614.3	563.4	X	738.5	g
Initial Weight	534.3	536.2	608.1	561.5	X	717.2	g
Net Weight	149.7	27.2	6.2	1.9	X	21.3	g

Description of impinger water: — 4D % spent

Blue Sil gel color

Total moisture = 206.3 g

RECOVERED SAMPLE

Filter container number(s): N/A — Sealed: ✓

Description of particulate on filter: light

Probe rinse container no.	1	Liquid level marked/sealed	✓
1 container no.	Acetone blank 1	Liquid level marked/sealed	✓
H2SO4 Impinger contents container no.	1 Imp 1-3	Liquid level marked/sealed	517.4 ✓
1 container no.	H2SO4 blank 1	Liquid level marked/sealed	✓
NaOH Impinger contents container no.	1 Imp 4-5	Liquid level marked/sealed	333.0 ✓
1 container no.	NaOH blank 1	Liquid level marked/sealed	✓

Samples stored and locked

Remarks

Relinquished by — Date

PARTICULATE / CHLORIDES EPA 0050 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6-16-92

Sample Location: Kiln #4 — Recovery Date: 6-16-92

Run No.: K4 - M5-3 — Recovered by: SCS

Filter Number(s): Q263

MOISTURE

Impingers	1	2	3	4	5	Silica Gel	
Final Weight	759.7	642.4	597.5	616.9		791.7	g
Initial Weight	619.5	609.4	591.6	614.6		770.9	g
Net Weight	140.2	33	5.9	2.3		20.8	g

Description of impinger water: 40 % spent

Sil gel color: Blue

Total moisture = 202.2 g

RECOVERED SAMPLE

Filter container number(s): N/A — Sealed: ✓

Description of particulate on filter: light

Probe rinse container no.	1	Liquid level marked/sealed	✓
N/A container no.	Acetone blank	Liquid level marked/sealed	
H2SO4 Impinger contents container no.	1 Imp 1–3	Liquid level marked/sealed	Final Vol 798.1 ml ✓
N/A container no.	H2SO4 blank	Liquid level marked/sealed	
NaOH Impinger contents container no.	1 Imp 4–5	Liquid level marked/sealed	Final Vol 303.7 ✓
N/A container no.	NaOH blank	Liquid level marked/sealed	

Samples stored and locked

Remarks

Relinquished by — Date

MULTIPLE METALS EPA 0012 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6/16/92

Sample Location: Kiln #4 — Recovery Date: 6/16/92

Run No.: K4 - MTL - 1 — Recovered by: SCS

Filter Number(s): ~~Q47~~ ~~Q24~~ Q47

MOISTURE

Impingers	1	2	3	4	5	6	Silica Gel	
Final ~~Weight~~ V_0 l	191.2	100	0.5	546.9	543.4		713.6	g
Initial ~~Weight~~ V_0 l	100	100	0	546.2	542.7		702.8	g
Net Weight	91.2	0	0.5	0.7	1.1		10.8	g

Description of impinger water: 1-3 clear; 4-5 purple — 10 % spent

Blue — Sil gel color

Total moisture = 104.3 g

RECOVERED SAMPLE

Filter container number(s): N/A — Sealed: ✓

Description of particulate on filter: light

Probe rinse container no.	1		Liquid level marked/sealed	✓
N/A container no.	Acetone blank?		Liquid level marked/sealed	
Impingers 1–3 contents container no.	1	Imp 1–3	Liquid level marked/sealed	✓
N/A container no.	HNO3/H2O2 blank?		Liquid level marked/sealed	
Nitric rinse container no.	1	0.1N HNO3	Liquid level marked/sealed	✓
Impingers 4–5 contents container no.	1	Imp 4–5	Liquid level marked/sealed	✓
N/A container no.	KMnO4 blank?		Liquid level marked/sealed	✓
HCl rinse container no.	1	8N HCl	Liquid level marked/sealed	✓

Samples stored and locked

Remarks: white "spots" on glassware connecting Imp 1 and filter NH_4Cl?

Relinquished by: — Date:

MULTIPLE METALS EPA 0012 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite
Sample Location: Kiln #4
Run No.: K4-MTL-2
Filter Number(s): Q24 Tare 0.3463

Sample Date: 6/16/92
Recovery Date: 6/16/92
Recovered by: SCS

MOISTURE

Impingers	1	2	3	4	5	6	Silica Gel 1	SG 2
Final Weight	195.9	100	0.3	108.4	100		743.6 g	716.2 g
Initial Weight (ml)	100	100	0	100	100		740.6 g	713.6 g
Net Weight	95.9	0	0.3	8.4	0		3.0 g	2.6

Description of impinger water: 1-3 clear ; 4-5 Purple
25 % spent
Blue Sil gel color

Total moisture = 110.4 g

752.4 − 8.8

Broken during port change

RECOVERED SAMPLE

Filter container number(s): N/A
Sealed: ✓
Description of particulate on filter: light

Probe rinse container no.	1		Liquid level marked/sealed: ✓
N/A container no.	Acetone blank?		Liquid level marked/sealed:
Impingers 1–3 contents container no.	1	Imp 1–3	Liquid level marked/sealed: ✓
N/A container no.	HNO3/H2O2 blank?		Liquid level marked/sealed:
Nitric rinse container no.	1	0.1N HNO3	Liquid level marked/sealed: ✓
Impingers 4–5 contents container no.	1	Imp 4–5	Liquid level marked/sealed: ✓
N/A container no.	KMnO4 blank?		Liquid level marked/sealed:
HCl rinse container no.	1 ✓	8N HCl	Liquid level marked/sealed: ✓

Samples stored and locked:
Remarks:
Relinquished by: Date:

MULTIPLE METALS EPA 0012 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6/16/92

Sample Location: Kiln #4 exhaust — Recovery Date: 6/16/92

Run No.: K4 - MTL-3 — Recovered by: SCS

Filter Number(s): Q41 Tare 0.3254

MOISTURE

Impingers	1	2	3	4	5	6	Silica Gel	
Final Weight	195.6	100	1.4	125.1	100		742.9	g
Initial Weight	100	100	0 ~~SCS~~	100	100		~~743.6~~	~~SCS~~
Net Weight	95.6	0	1.4	25.1	0			g

Description of impinger water: _____ 30 % spent

Sil gel color: Blue

Total moisture = 122.1 g

RECOVERED SAMPLE

Filter container number(s): N/A — Sealed: ✓

Description of particulate on filter: light

Probe rinse container no.	1		Liquid level marked/sealed: ✓
~~✓~~ Acetone blank? container no.	1		Liquid level marked/sealed: ✓
Impingers 1–3 contents container no.	1	Imp 1–3	Liquid level marked/sealed: ✓
✓ HNO3/H2O2 blank? container no.	1		Liquid level marked/sealed: ✓
Nitric rinse container no.	1	0.1N HNO3	Liquid level marked/sealed: ✓
Impingers 4–5 contents container no.	1	Imp 4–5	Liquid level marked/sealed: ✓
✓ KMnO4 blank? container no.	1		Liquid level marked/sealed: ✓
HCl rinse container no.	1	8N HCl	Liquid level marked/sealed: ✓

Samples stored and locked: _____

Remarks: _____

Relinquished by: _____ Date: _____

HEXAVALENT CHROMIUM EPA 0013 SAMPLE RECOVERY AND INTEGRITY DATA SHEET

Plant: Virginia Solite — Sample Date: 6-16-92

Sample Location: Kiln #4 — Recovery Date: 6-16-92

Run No.	KOH Solution Volume Initial	KOH Solution Volume Final	Increase	pH Measure	Filtered?	Final Volume
~~CR6~~ H4-CR6-1	400 ml	458.9 (866.9 - 408)	58.9	<7.5	yes	983.0 ml

Silica Gel weight Initial	Silica Gel weight Final	Silica Gel Increase	Total Moisture	Recovered By:
731.2 (Sil.Gel 50% spent)	777.4	46.2	105.1	SCS

Run No.	KOH Solution Volume Initial	KOH Solution Volume Final	Increase	pH Measure	Filtered?	Final Volume
H4-CR6-2 (0.5N)	400 ml	471.2 (867.5 - 396.3)	71.2	9.5	yes	939.5 ml

Silica Gel weight Initial	Silica Gel weight Final	Silica Gel Increase	Total Moisture	Recovered By:
755.9 (50% spent)	800.3	44.5	115.7	SCS

Run No.	KOH Solution Volume Initial	KOH Solution Volume Final	Increase	pH Measure	Filtered?	Final Vol
Run 3	~~400~~ ~~756.1~~	~~420.2~~ ~~803.7~~	20.2	9.5	~~yes~~ ~~no~~ SCS	342.7

Silica Gel weight Initial	Silica Gel weight Final	Silica Gel Increase	Total Moisture	Recovered By:
756.1 (Run 1 53% spent Run 2 SCS)	803.7	47.6	67.8	SCS

4 3 2 1 Reagents:

[redacted]

y: Date:

LIQUID WASTE FEED SAMPLING DATA SHEET

Metals, Chlorine, and Physical Parameters

FACILITY: *Virginia Solite* SAMPLE TYPE: *Liquid Waste Feed*

LOCATION: *Cascade, VA*

DATE: *6/18/92* RUN NO.: K2-LBM-3

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: SAMPLE I.D. NO. K2-LBM-3

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/physicals sample.

Instructions
1. *Assemble bottles and labels for test run sampling; don protective gear.*
2. *At each 15-minute interval during the test run, collect enough sample from the waste feed tap to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/physicals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	~~3:45~~ 4:00	
2	4:15	
3	4:30	
4	5:00	
5	5:15	
6	5:30	
7	5:45	
8	6:00	
9	6:15	
10		
11		
12		

RAW FEED SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Raw Feed*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-RFEED-3

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K2-RFEED-3

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the feed belt conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1551	
2	1625	
3	1655	
4	1735	
5	1758	
6	1825	
7		
8		
9		
10		
11		
12		

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BAGHOUSE DUST SAMPLING DATA SHEET

Metals

FACILITY: *Virginia Solite* SAMPLE TYPE: *Baghouse Dust*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-DUST-3

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [illegible] SAMPLE I.D. NO. K2-DUST-3-MTL

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the dust conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottle from the composite container for metals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1552	
2	1627	
3	1656	
4	1727	
5	1759	
6	1827	
7		
8		
9		
10		
11		
12		

AGGREGATE PRODUCT SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Aggregate Product*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-PROD-3

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K2-PROD-3

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the product discharge pile to place about 200-mL onto the cooling pan.*
3. *Allow the sample to cool on the cooling pan during each test run.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the cooling pan for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1556	
2	1630	
3	1700	
4	1731	
5	1802	
6	1832	
7		
8		
9		
10		
11		
12		

feedds.wk1

RAW FEED SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Raw Feed*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-RFEED-2

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [illegible] SAMPLE I.D. NO. K2-RFEED-2

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the feed belt conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1255	
2	1328	
3	1358	
4	1431	
5	1458	
6		
7		
8		
9		
10		
11		
12		

feedds.wk1

BAGHOUSE DUST SAMPLING DATA SHEET

Metals

FACILITY: *Virginia Solite* SAMPLE TYPE: *Baghouse Dust*

LOCATION: *Cascade, VA*

DATE: ~~6/17/92~~ 6/18/92 RUN NO.: K2-DUST-2

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K2-DUST-2-MTL

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the dust conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottle from the composite container for metals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1257	
2	1329	
3	1359	
4	1432	
5	1500	
6		
7		
8		
9		
10		
11		
12		

AGGREGATE PRODUCT SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Aggregate Product*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-PROD-2

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K2-PROD-2

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the product discharge pile to place about 200-mL onto the cooling pan.*
3. *Allow the sample to cool on the cooling pan during each test run.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the cooling pan for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1300	
2	1332	
3	1402	
4	1435	
5	1505	
6		
7		
8		
9		
10		
11		
12		

feedds.wk1

EMISSION TESTING
FIELD PROJECT SUMMARY LOG

iea

CLIENT VIRGINIA SOLITE PROJECT NO. 1381-004

PLANT LEAKSVILLE CITY CASCADE STATE VA

DATE/TIME	ACTION TAKEN
6/18/92	
0730	IEA Crew arrives at plant; set-up for 1st
	run at kiln #2
	Kiln #2 has a hot spot; metals spikes have
	been on since 0600 hrs
~~0830~~ 0800	IEA ready to test, await start
0830	Run #1 started
0837	Run #1 halted → spike pump down/replaced
1005	Run #1 restarted
1220	Run #1 ends w/ Cr+6
1255	Run #2 STARTS
1521	Run #2 ends w/ Cr+6
1555	Run #3 starts w/ PM/Cl; plugged impinger tip
	in MMT, so fix MMT start 1614

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EMISSION TESTING
FIELD PROJECT SUMMARY LOG

CLIENT _____ PROJECT NO. _____

PLANT _____ CITY _____ STATE _____

DATE/TIME	ACTION TAKEN

Page ____ of __ SIGNATURE _____

projsum.wk1

EMISSION TESTING
FIELD PROJECT SUMMARY LOG

CLIENT VIRGINIA SOLITE PROJECT NO. 1381-004

PLANT LEAKSVILLE CITY CASCADE STATE VA

DATE/TIME	ACTION TAKEN
6/15/92	
1230	CEM Trailer arrives; start spotting & set-up
1330	JP arrives / DEECO arrives
1400	TH arrives at plant; Test meeting @ 1415 hrs
	Setup continues at Kiln #4
	Trains prepped for Run #1 & #2
1800	Crew leaves plant
1900	Train clean-up crew leaves plant

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projsum.wk1

EMISSION TESTING
FIELD PROJECT SUMMARY LOG

CLIENT VIRGINIA SOLITE PROJECT NO. 1381-004

PLANT LEAKSVILLE CITY CASCADE STATE VA

DATE/TIME	ACTION TAKEN
0730	IEA crew arrives at plant; plant has been
6/16/92	spiking metals since 0645
0900	Not lined out w/ metals yet
1000	Leak check & TC problems
1015	IEA ready; metals still fluctuating
1050	Official start-time for Test Run #1
1333	Run 1 ended w/ Cr+6
1455	Officials start-time for Test Run #2
1750	Run 2 ended w/ Cr+6
1920	Start-Time for Test Run #3
2155	~~Run~~ Run 3 ended w/ Cr+6
2245	IEA Testers left plant
0000	DEECO + C. Outlaw complete train clean-up
	& leave plant

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projsum.wk1

EMISSION TESTING
FIELD PROJECT SUMMARY LOG

iea

CLIENT VIRGINIA SOLITE PROJECT NO. 1381-004

PLANT LEAKSVILLE CITY CASCADE STATE VA

DATE/TIME	ACTION TAKEN
6/17/92	
0900	IEA arrives on-site; start to pack trailers for move to #2 Kiln
	Complete #4 kiln test by doing cyclonic flow check
	Completed move to #2 stack; trailers repositioned & power hooked up OK
1330	Met w/ plant & Solite HQ personnel about their CEMS design problems & RA failure
	G. Bright provided assistance to J. Purdy of plant to look at problems
1500	Most of IEA/DEECO left plant for day
	Trains are prepped for #1 & #2 runs & #1 is put up on stack; #2 stack had cyclonic flow check & preliminary velocity done

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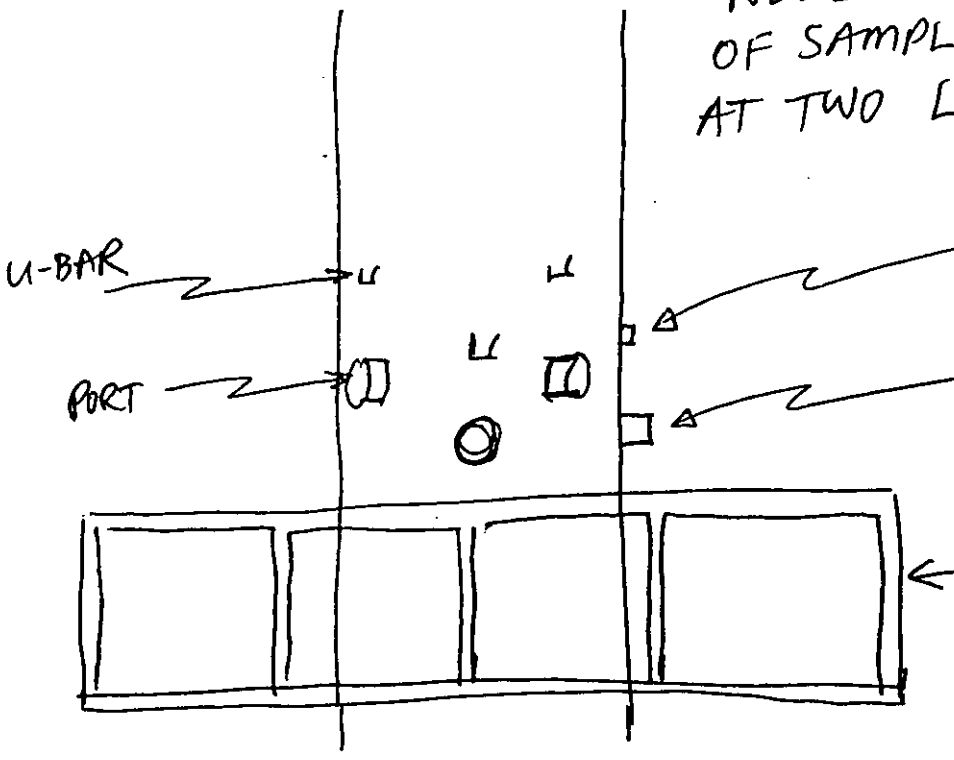
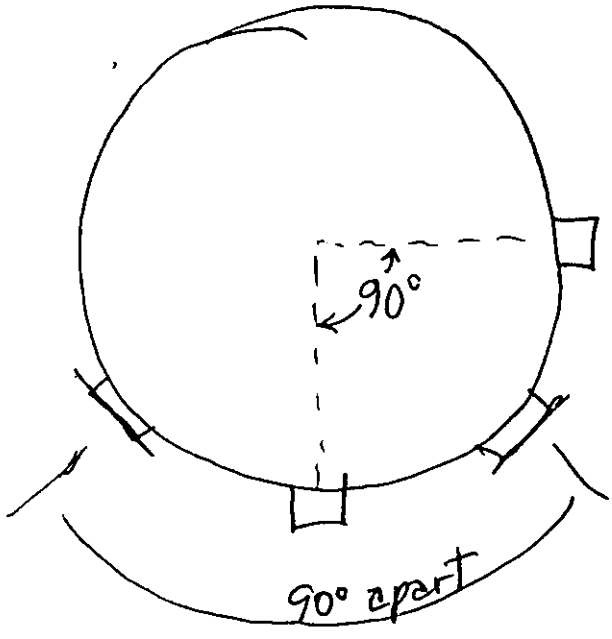
NEED 2 SETS OF SAMPLE PORT AT TWO LEVELS



TOP VIEW



ALL PORT SETS MUST BE 90° APART

RAW FEED SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Raw Feed*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-RFEED-1

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [illegible] SAMPLE I.D. NO. K2-RFEED-1

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the feed belt conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	0830	STOP 0637
2	1008	RE START 1005
3	1040	
4	1112	
5	1144	
6	1214	
7		
8		
9		
10		
11		
12		

feedds.wk1

BAGHOUSE DUST SAMPLING DATA SHEET

Metals

FACILITY: *Virginia Solite* SAMPLE TYPE: *Baghouse Dust*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-DUST-1

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [illegible] SAMPLE I.D. NO. K2-DUST-1-MTL

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the dust conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottle from the composite container for metals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	0832	STOP 0837
2	1007	RESTART 1005
3	1041	
4	1113	
5	1145	
6	1215	
7		
8		
9		
10		
11		
12		

AGGREGATE PRODUCT SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Aggregate Product*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-PROD-1

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K2-PROD-1

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the product discharge pile to place about 200-mL onto the cooling pan.*
3. *Allow the sample to cool on the cooling pan during each test run.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the cooling pan for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	0836	STOPPED AT 0837 DUE TO #1 SPIKE PUMP FAILURE
2	1011	RESTART 1005
3	1044	
4	1117	
5	1148	
6	1218	
7		
8		
9		
10		
11		
12		

feedds.wk1

LIQUID WASTE FEED SAMPLING DATA SHEET

Metals, Chlorine, and Physical Parameters

FACILITY: *Virginia Solite* SAMPLE TYPE: *Liquid Waste Feed*

LOCATION: *Cascade, VA*

DATE: *6/18/92* RUN NO.: *K2-LBM-1*

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

SAMPLER: SAMPLE I.D. NO. K2-LBM-1

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/physicals sample.

Instructions
1. *Assemble bottles and labels for test run sampling; don protective gear.*
2. *At each 15-minute interval during the test run, collect enough sample from the waste feed tap to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/physicals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	8:30A	11:45 A.M.
2	9:45	12:00 noon
3	9:00	12:05 P.M.
4	9:15	
5	9:30	
6	9:45	
7	10:00	
8	10:15	
9	10:30	
10	10:45	
11	11:00	
12	11:15	
	11:30 A.M.	

LIQUID WASTE FEED SAMPLING DATA SHEET

Metals, Chlorine, and Physical Parameters

FACILITY: *Virginia Solite* SAMPLE TYPE: *Liquid Waste Feed*

LOCATION: *Cascade, VA*

DATE: 6/18/92 RUN NO.: K2-LBM-2

TEST DESCRIPTION: *No. 2 Kiln BIF Compliance Test*

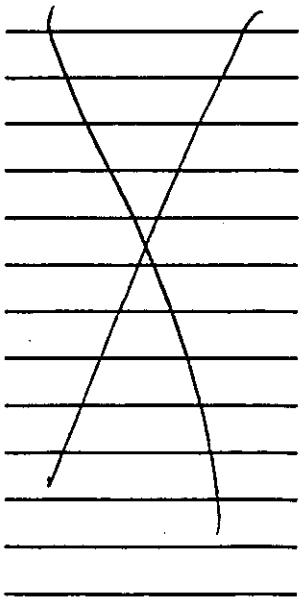
SAMPLER: SAMPLE I.D. NO. K2-LBM-2

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/physicals sample.

Instructions
1. *Assemble bottles and labels for test run sampling; don protective gear.*
2. *At each 15-minute interval during the test run, collect enough sample from the waste feed tap to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/physicals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time
1	12:45 pm
2	1:00
3	1:15
4	1:30
5	1:45
6	2:00
7	2:15
8	2:30
9	2:45
10	3:00
11	3:15
12	3:30

Composite Grab Time



RAW FEED SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Raw Feed*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-RFEED-1

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K4-RFEED-1

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the feed belt conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1050	
2	1116	
3	1145	
4	1215	
5	1248	
6	1315	
7		
8		
9		
10		
11		
12		

feedds.wk1

BAGHOUSE DUST SAMPLING DATA SHEET

Metals

FACILITY: *Virginia Solite* SAMPLE TYPE: *Baghouse Dust*

LOCATION: *Cascade, VA*

DATE: *6-16-92* RUN NO.: K4-DUST-1

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: JCPeters SAMPLE I.D. NO. K4-DUST-1-MTL

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the dust conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottle from the composite container for metals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1052	
2	1118	
3	1146	
4	1216	
5	1249	
6	1316	
7		
8		
9		
10		
11		
12		

AGGREGATE PRODUCT SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Aggregate Product*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-PROD-1

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K4-PROD-1

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the product discharge pile to place about 200-mL onto the cooling pan.*
3. *Allow the sample to cool on the cooling pan during each test run.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the cooling pan for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1055	
2	1121	
3	1150	
4	1218	
5	1252	
6	1319	
7		
8		
9		
10		
11		
12		

feedds.wk1

LIQUID WASTE FEED SAMPLING DATA SHEET

Metals, Chlorine, and Physical Parameters

FACILITY: *Virginia Solite* SAMPLE TYPE: *Liquid Waste Feed*

LOCATION: *Cascade, VA*

DATE: *6-16-92* RUN NO.: K4-LBM-1

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

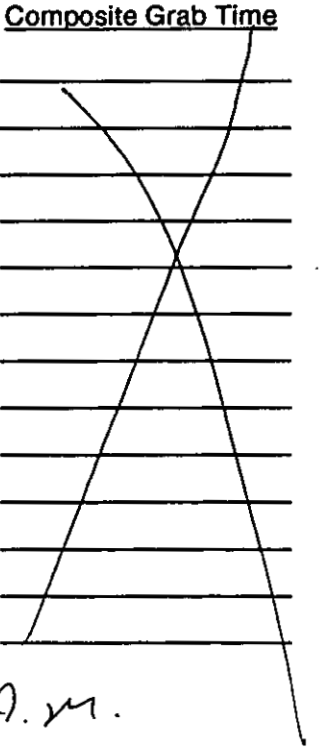
SAMPLER: SAMPLE I.D. NO. K4-LBM-1

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/physicals sample.

Instructions
1. *Assemble bottles and labels for test run sampling; don protective gear.*
2. *At each 15-minute interval during the test run, collect enough sample from the waste feed tap to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/physicals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time
1	10:53A
2	11:00A
3	11:15
4	11:30
5	11:45
6	12:00
7	12:15
8	12:30
9	12:45
10	1:00
11	1:15
12	1:30

Composite Grab Time



Started Test 10:49 A.M.

RAW FEED SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Raw Feed*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-RFEED-2

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

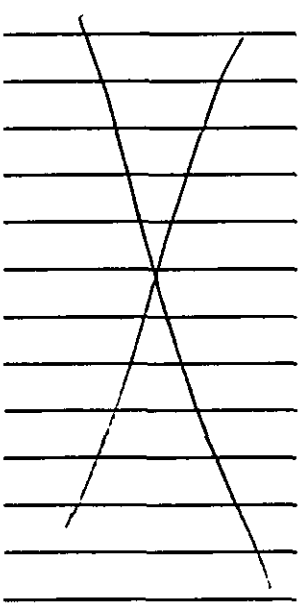
SAMPLER: J. Peters SAMPLE I.D. NO. K4-RFEED-2

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the feed belt conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time
1	1455
2	1525
3	1556
4	1629
5	1700
6	1738
7	
8	
9	
10	
11	
12	

Composite Grab Time



feedds.wk1

BAGHOUSE DUST SAMPLING DATA SHEET

Metals

FACILITY: *Virginia Solite* SAMPLE TYPE: *Baghouse Dust*

LOCATION: *Cascade, VA*

DATE: *6-16-92* RUN NO.: *K4-DUST-2*

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: *[signature]* SAMPLE I.D. NO. K4-DUST-2-MTL

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the dust conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottle from the composite container for metals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1457	
2	1527	
3	1557	
4	1630	
5	1701	
6	1739	
7		
8		
9		
10		
11		
12		

AGGREGATE PRODUCT SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Aggregate Product*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-PROD-2

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K4-PROD-2

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the product discharge pile to place about 200-mL onto the cooling pan.*
3. *Allow the sample to cool on the cooling pan during each test run.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the cooling pan for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1459	
2	1530	
3	1601	
4	1633	
5	1703	
6	1745	
7		
8		
9		
10		
11		
12		

LIQUID WASTE FEED SAMPLING DATA SHEET

Metals, Chlorine, and Physical Parameters

FACILITY: *Virginia Solite* SAMPLE TYPE: *Liquid Waste Feed*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-LBM-2

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: SAMPLE I.D. NO. K4-LBM-2

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/physicals sample.

Instructions
1. *Assemble bottles and labels for test run sampling; don protective gear.*
2. *At each 15-minute interval during the test run, collect enough sample from the waste feed tap to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/physicals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	2:55 pm	
2	3:15	
3	3:30	
4	3:45	
5	4:00	
6	4:15	
7	4:30	
8	4:45	
9	5:00	
10	5:15	
11	5:30	
12	5:45	

LIQUID WASTE FEED SAMPLING DATA SHEET

Metals, Chlorine, and Physical Parameters

FACILITY: *Virginia Solite* SAMPLE TYPE: *Liquid Waste Feed*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-LBM-3

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: [illegible] SAMPLE I.D. NO. K4-LBM-3

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/physicals sample.

Instructions
1. *Assemble bottles and labels for test run sampling; don protective gear.*
2. *At each 15-minute interval during the test run, collect enough sample from the waste feed tap to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/physicals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	7:00pm	
2	7:15	
3	7:30	
4	7:45	
5	8:00	
6	8:15	
7	8:30	
8	8:45	
9	9:00	
10	9:15	
11	9:30	
12	9:45	
	10:00	

RAW FEED SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Raw Feed*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-RFEED-3

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: [signature] SAMPLE I.D. NO. K4-RFEED-3

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the feed belt conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the composite container for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time		Composite Grab Time
1	1920		
2	1951		
3	2023		
4	2050		
5	2120		
6	2145		
7			
8			
9			
10			
11			
12			

feedds.wk1

BAGHOUSE DUST SAMPLING DATA SHEET

Metals

FACILITY: *Virginia Solite* SAMPLE TYPE: *Baghouse Dust*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-DUST-3

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

SAMPLER: [illegible] SAMPLE I.D. NO. K4-DUST-3-MTL

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the dust conveyor to place about 100-mL into the compositing jar.*
3. *Close the sample container after placing sample in bottle.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottle from the composite container for metals. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time	Composite Grab Time
1	1921	
2	1954	
3	2024	
4	2052	
5	2122	
6	2146	
7		
8		
9		
10		
11		
12		

AGGREGATE PRODUCT SAMPLING DATA SHEET

Metals, Chlorine, and Moisture

FACILITY: *Virginia Solite* SAMPLE TYPE: *Aggregate Product*

LOCATION: *Cascade, VA*

DATE: 6-16-92 RUN NO.: K4-PROD-3

TEST DESCRIPTION: *No. 4 Kiln BIF Compliance Test*

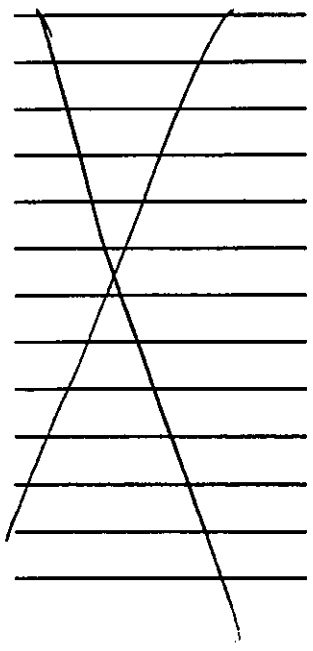
SAMPLER: [signature] SAMPLE I.D. NO. K4-PROD-3

Equipment: One 32-oz glass wide-mouth bottle for compositing.
One 500-mL amber glass bottle for metals sample.
One 500-mL amber glass bottle for chlorine/moisture sample.

Instructions
1. *Assemble bottles and labels for test run sampling.*
2. *At each 30-minute interval during the test run, collect enough sample from the product discharge pile to place about 200-mL onto the cooling pan.*
3. *Allow the sample to cool on the cooling pan during each test run.*
4. *Record sampling time on field data sheet.*
5. *At end of test run, fill to 3/4ths the 500-mL sample bottles from the cooling pan for metals and chlorine/moisture. Affix sample labels to these bottles.*
6. *Deliver the sample containers to the field sample custodian for packaging and shipment.*

Grab No.	Composite Grab Time
1	1925
2	1956
3	2027
4	2055
5	2124
6	2151
7	
8	
9	
10	
11	
12	

Composite Grab Time



feedds.wk1

iea

FIELD BALANCE CALBRATION DATA SHEET

Balance No.	Date	Calibrator	Mass determined for					
			100g	Error	500g	Error	1000g	Error
BL-2	6/15	SCS	98.2	-1.8%	502.5	+0.5	1005.9	+0.6%

Error must not exceed 0.5 grams at each point.

203.0
104.8
98.2

780
277.5
502.5

1283.4
277.5
1005.9

Appendix C

Continuous Emission Monitoring Field Data and Recorder Output

Kiln 2	Run 1	06/18/92			Corrected to 7% O2	
Time	Oxygen	CO2	CO	THC	CO	THC
08:41	17.3	3.4	15.8	1.6	61	6.2
08:42	17.3	3.3	15.4	1.5	59.4	5.8
08:43	17.3	3.3	14.6	1.5	56.8	5.8
08:44	17.3	3.3	14.5	1.5	56.2	5.8
08:45	17.2	3.4	12.9	1.5	49	5.7
08:46	17.2	3.4	11.4	1.5	43.1	5.7
08:47	17.3	3.4	11.7	1.5	44.9	5.7
08:48	17.3	3.4	13.2	1.4	51.5	5.5
08:49	17.2	3.4	13.8	1.4	52.3	5.3
08:50	17.3	3.4	14.4	1.4	54.8	5.5
08:51	17.2	3.4	14	1.4	53	5.3
08:52	17.3	3.4	12.9	1.4	49.7	5.6
08:53	17.3	3.4	10.8	1.4	41.2	5.4
08:54	17.4	3.3	9.8	1.4	38.5	5.7
08:55	17.2	3.5	9.8	1.5	36.5	5.6
08:56	17.3	3.3	9.3	1.5	36.4	5.9
08:57	17.3	3.4	9.9	1.5	38.2	5.8
08:58	17.3	3.4	11	1.4	42.6	5.6
08:59	17.3	3.4	11.8	1.4	45.4	5.4
09:00	17.3	3.4	12.2	1.3	47.6	5.2
09:01	17.2	3.4	12.8	1.3	48.6	5
09:02	17.3	3.3	12.8	1.4	49.8	5.4
09:03	17.3	3.4	13.1	1.4	50.8	5.4
09:04	17.3	3.4	12.8	1.4	49.8	5.4
09:05	17.4	3.4	12.8	1.4	50.2	5.5
09:06	17.3	3.4	12.1	1.4	46.9	5.4
09:07	17.4	3.4	12.6	1.4	49.7	5.5
09:08	17.4	3.4	12.2	1.3	48.1	5.1
09:09	17.3	3.4	11	1.3	42.7	5
09:10	17.2	3,5	10.8	1.3	40.9	4.9
09:12	17.2	3.5	10.8	1.4	40.2	5.2
09:13	17.2	3.5	13	1.4	49	5.4
09:14	17.1	3.6	14	1.4	51.8	5.2
09:15	17	3.7	14.1	1.4	50.5	4.9
09:16	17.1	3.7	14.2	1.3	51.9	4.8
09:17	17	3.7	14	1.3	50.5	4.7
09:18	17.1	3.7	12.9	1.3	47	4.9
09:19	17.1	3.7	13.7	1.4	49.8	5.1
09:20	17.2	3.6	15.2	1.5	56.6	5.5
09:21	17	3.8	19.5	1.5	69.5	5.4
09:22	17.1	3.7	18.6	1.5	67.3	5.3
09:23	17	3.8	17.1	1.5	61.4	5.3
09:24	17.1	3.7	15.9	1.3	58	4.9
09:25	17.1	3.7	15	1.3	54.9	4.8
09:26	17.1	3.7	14.8	1.3	53.8	4.7
09:27	17.1	3.7	14.8	1.3	54.1	4.8
09:28	17.1	3.7	14.4	1.3	52.5	4.8

Kiln 2	Run 1	06/18/92			Corrected to 7% O2			
Time	Oxygen	CO2	CO	THC	CO	THC		
09:29	17.1	3.7	16	1.4	58	5.1		
09:30	17.1	3.7	14.9	1.4	54.3	5.1		
09:31	17.1	3.7	14.8	1.4	54.1	5.1		
09:32	17.1	3.7	14.5	1.3	53.2	4.9		
09:33	17	3.8	15.1	1.3	53.4	4.6		
09:34	17	3.8	15	1.3	53.2	4.6		
09:35	17	3.8	15	1.3	53.3	4.7		
09:36	17	3.8	15.4	1.3	54.1	4.6		
09:37	17	3.8	15.2	1.4	54	5	Rolling Hour	
09:38	17	3.8	15.2	1.4	54.2	5	Average	
09:39	17	3.9	16.1	1.4	56.7	5	CO	THC
09:40	17	3.8	15.4	1.3	54.9	4.6		
09:41	17	3.8	14.7	1.3	51.9	4.6	51.0	5.23
09:42	16.9	3.9	12.3	1.2	42.9	4.3	50.7	5.20
09:43	16.9	3.9	10.8	1.3	37.7	4.5	50.33	5.18
09:44	16.9	3.9	10.8	1.4	37.1	4.7	50.00	5.16
09:45	16.9	3.9	10.4	1.4	35.8	4.8	49.66	5.14
09:46	16.9	3.9	10.3	1.4	35.9	4.9	49.45	5.13
09:47	17	3.9	11.5	1.4	40.6	4.8	49.40	5.11
09:48	17	3.8	13.7	1.3	48.2	4.6	49.46	5.09
09:49	17	3.8	14.5	1.3	51.2	4.6	49.45	5.08
09:50	16.9	3.8	17.8	1.4	62.4	5.1	49.62	5.08
09:51	16.9	3.9	20.9	1.4	72.8	4.8	49.92	5.06
09:52	16.9	3.9	18.8	1.4	65.7	4.9	50.13	5.06
09:53	16.9	3.9	17.5	1.5	61.2	5.1	50.33	5.05
09:54	16.9	3.9	22.5	1.6	78.8	5.5	50.95	5.05
09:55	17	3.9	22	1.4	77.7	5.1	51.61	5.04
09:56	17	3.9	17	1.3	60.1	4.6	52.00	5.02
09:57	17	3.9	16.8	1.3	59.3	4.6	52.38	5.00
09:58	17	3.9	15.8	1.2	55.7	4.3	52.67	4.98
09:59	16.9	3.9	12.8	1.2	44.9	4.2	52.71	4.95
10:00	16.9	3.9	13.2	1.2	45.5	4.2	52.71	4.93
10:01	16.9	3.9	13.5	1.3	47	4.5	52.70	4.92
10:02	17	3.8	13.4	1.2	47.8	4.3	52.69	4.91
10:03	17.1	3.8	11.4	1.3	41	4.5	52.54	4.90
10:04	17	3.8	12.6	1.3	44.8	4.6	52.44	4.88
10:05	17	3.8	13.8	1.3	49.5	4.7	52.44	4.87
10:06	17	3.8	14	1.3	49.8	4.5	52.43	4.85
10:07	17	3.8	14.9	1.4	53.7	4.9	52.54	4.85
10:08	16.9	3.9	20.2	1.3	70.6	4.6	52.89	4.83
10:09	16.9	3.9	18.3	1.3	64.4	4.6	53.16	4.82
10:10	16.9	3.9	18	1.4	63.3	4.9	53.51	4.82
10:11	16.9	3.9	20.4	1.3	70.9	4.5	54.01	4.81
10:13	17	3.9	15	1.3	52.9	4.6	54.22	4.80
10:14	16.9	3.9	15.1	1.2	52.5	4.3	54.28	4.79

Kiln 2 Run 1 06/18/92

Time	Oxygen	CO2	CO	THC	Corected to 7% O2 CO	Corected to 7% O2 THC	Rolling 1-Hour Averages CO	Rolling 1-Hour Averages THC
10:15	17	3.8	18	1.2	64	4.3	54.48	4.77
10:16	16.9	3.9	15.3	1.1	53.8	3.9	54.54	4.75
10:17	16.9	3.9	12	1.1	41.7	3.8	54.37	4.74
10:18	16.9	3.9	11.1	1.1	38.5	3.8	54.17	4.72
10:19	16.9	3.9	10.8	1.1	37.5	3.8	54.01	4.70
10:20	16.9	3.9	10.8	1.2	37.8	4.1	53.81	4.69
10:21	16.8	4.1	10.5	1.2	35.3	4	53.45	4.66
10:22	16.5	4.3	13.8	1.2	43.8	3.8	53.02	4.64
10:23	17.1	3.7	16.3	1.2	59.9	4.3	52.90	4.62
10:24	17.1	3.7	13.5	1.1	48.8	4	52.69	4.60
10:25	17.1	3.7	12.3	1.1	44.4	4.1	52.46	4.58
10:26	16.7	4.1	13.3	1.2	44.6	4.1	52.29	4.57
10:27	16.9	3.9	16.3	1.2	56.7	4.2	52.34	4.56
10:28	17.2	3.6	13	1.2	48.6	4.5	52.25	4.56
10:29	17.2	3.6	11.6	1.2	43.6	4.5	52.10	4.55
10:30	17	3.8	12	1.3	42.9	4.5	51.85	4.54
10:31	16.8	4	18	1.3	60.9	4.3	51.96	4.53
10:32	17.2	3.6	16.2	1.1	60.8	4	52.07	4.51
10:33	17.4	3.4	10.3	1.1	40.7	4.3	51.86	4.50
10:34	17.2	3.6	11.6	1.1	44	4.2	51.71	4.50
10:35	16.9	3.9	13.3	1.2	46.4	4.1	51.59	4.49
10:36	17.2	3.6	14.8	1.2	55	4.3	51.62	4.48
10:37	17.3	3.5	11	1.2	42.1	4.5	51.42	4.48
10:38	17.1	3.7	12.5	1.2	45.9	4.5	51.29	4.47
10:39	16.8	4	15.3	1.3	51.5	4.2	51.24	4.46
10:40	17.1	3.7	13.7	1.1	50.2	4.1	51.13	4.44
10:41	17.2	3.6	12	1.2	44.7	4.5	50.96	4.44
10:42	17.2	3.6	11.6	1.2	43.6	4.5	50.82	4.44
10:43	16.9	3.9	14.7	1.2	51.2	4.3	50.96	4.44
10:44	17.2	3.6	13.4	1.2	49.9	4.5	51.17	4.44
10:45	17.1	3.7	13.1	1.2	48.5	4.4	51.36	4.43
10:46	17.1	3.8	11.5	1.2	41.8	4.3	51.46	4.43
10:47	17	3.8	12.1	1.1	43	4	51.57	4.41
10:48	17	3.9	14.1	1.2	49.8	4.2	51.73	4.40
10:49	17	3.9	15.6	1.2	55.5	4.3	51.85	4.40
10:50	16.9	3.9	14.7	1.2	51.6	4.2	51.86	4.39
10:51	16.8	4	14	1.2	47.9	4.3	51.61	4.38
10:52	16.8	4	15.6	1.3	53.5	4.5	51.29	4.37
10:53	16.9	4	15	1.5	51.7	5	51.06	4.37
10:54	17	3.8	14.2	1.3	50.3	4.4	50.88	4.36
10:55	16.9	3.9	13.8	1.2	48.4	4.2	50.37	4.34
10:56	17	3.8	13.5	1.3	48.2	4.6	49.88	4.33
10:57	17	3.9	13.8	1.4	49	5	49.69	4.34
10:58	16.9	3.9	13.8	1.5	48.4	5.5	49.51	4.35
10:59	17	3.8	14.3	1.8	51.3	6.3	49.44	4.38

Kiln 2 RUN 1 06/18/92

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling 1-Hour Average CO	Rolling 1-Hour Average THC
11:00	17	3.9	13.8	2	48.8	6.9	49.50	4.43
11:01	17	3.9	13.2	1.5	46.8	5.4	49.53	4.45
11:02	17	3.8	13.2	1.2	47.3	4.4	49.53	4.45
11:03	17	3.9	14.5	1.2	51.3	4.2	49.59	4.44
11:04	17	3.9	12.9	1.5	45.5	5.4	49.66	4.46
11:05	17.1	3.8	13.1	1.5	47.4	5.5	49.71	4.47
11:06	16.9	3.9	13.8	1.4	48.5	5	49.69	4.48
11:07	16.9	3.9	15.9	1.6	55.4	5.7	49.78	4.50
11:08	16.9	4	15.4	1.6	53.2	5.6	49.78	4.51
11:09	16.8	4	15.8	1.6	53.9	5.4	49.50	4.52
11:10	17	3.9	15	1.5	52.9	5.4	49.31	4.54
11:11	16.9	4	14.6	1.4	50.5	4.9	49.09	4.54
11:12	17	3.9	15.1	1.3	53.8	4.6	48.81	4.54
11:14	16.9	3.9	13.4	1.2	46.8	4.4	48.71	4.54
11:15	17.1	3.8	13.7	1.5	49.6	5.5	48.66	4.56
11:16	17	3.8	13.8	1.5	49.4	5.5	48.41	4.58
11:17	16.9	3.9	14	1.4	49.1	4.9	48.34	4.59
11:18	17	3.9	15.5	1.4	54.7	5	48.55	4.61
11:19	16.9	3.9	15.1	1.3	52.9	4.6	48.79	4.63
11:20	17.1	3.8	15	1.4	54.6	5.2	49.08	4.65
11:21	16.7	4.1	18.5	1.2	60.8	4.1	49.46	4.65
11:22	17	3.8	15.3	1.5	54.3	5.3	49.78	4.67
11:23	16.9	3.9	19	1.4	66.4	4.8	50.15	4.69
11:24	16.8	4	16.1	1.3	55.1	4.5	50.07	4.69
11:25	16.8	4	14.6	1.3	49.8	4.6	50.09	4.70
11:26	16.9	4	16.3	1.3	56.7	4.5	50.30	4.71
11:27	16.9	3.9	16.9	1.3	58.8	4.6	50.53	4.72
11:28	16.7	4.1	17.1	1.2	57.5	4.1	50.55	4.71
11:29	16.7	4.1	14	1.4	45.7	4.6	50.50	4.72
11:30	16.9	4	21.9	1.5	76.8	5.1	51.05	4.73
11:31	16.9	4	16.8	1.3	58.8	4.5	51.32	4.73
11:32	16.9	3.9	12.4	1.2	43.3	4.3	51.02	4.73
11:33	16.9	3.9	12.2	1.1	42.3	4	50.71	4.73
11:34	16.9	3.9	10.8	1.1	37.9	3.9	50.67	4.72
11:35	16.9	3.9	11.4	1.1	39.5	3.8	50.59	4.71
11:36	16.9	3.9	11.2	1.1	39.2	3.8	50.47	4.71
11:37	16.9	3.9	10.8	1.1	37.6	4	50.18	4.70
11:38	16.9	3.9	12.1	1.2	42	4.2	50.18	4.70
11:39	17	3.9	12.7	1.2	45.2	4.3	50.17	4.69
11:40	17.1	3.8	11.9	1.2	43	4.5	50.03	4.70
11:41	17	3.8	12.8	1.2	45.8	4.4	49.95	4.70

Kiln 2	RUN 1	06/18/92			Corrected to 7%O2		Rolling 1-Hour Average	
Time	Oxygen	CO2	CO	THC	CO	THC	CO	THC
11:42	17	3.8	12.8	1.2	46.2	4.3	49.98	4.70
11:43	17	3.9	12.8	1.2	45.5	4.2	50.01	4.70
11:44	16.9	3.9	12.6	1.2	44.5	4.3	49.90	4.70
11:45	17	3.9	12.8	1.3	45.6	4.6	49.83	4.70
11:46	17	3.8	13.7	1.7	49	6.1	49.84	4.73
11:47	16.9	3.9	13.1	1.9	46.1	6.5	49.91	4.76
11:48	17	3.8	14.1	1.8	50.1	6.4	50.03	4.80
11:49	17	3.9	17.1	1.9	60.7	6.7	50.21	4.84
11:50	16.9	3.9	16.9	1.6	59.3	5.7	50.27	4.87
11:51	16.9	3.9	17.1	1.6	60	5.7	50.41	4.89
11:52	16.9	3.9	16.7	1.6	58.6	5.6	50.59	4.91
11:53	16.9	4	18.3	1.6	63.7	5.6	50.76	4.93
11:54	16.9	3.9	13.5	1.8	47.3	6.2	50.69	4.95
11:55	17	3.9	11.4	1.5	40.2	5.1	50.52	4.96
11:56	17	3.9	10.6	1.2	37.5	4.1	50.34	4.96
11:57	16.9	3.9	9.8	1.1	34.5	3.9	50.11	4.95
11:58	17	3.9	10	1.1	35.6	4	49.88	4.93
11:59	17	3.9	13	1.3	45.7	4.4	49.84	4.92
12:00	17	3.8	15.	1.3	56.5	4.8	49.93	4.89
12:01	17.1	3.8	16.9	1.4	61.3	5.1	50.13	4.86
12:02	16.9	3.9	17.9	1.4	62.6	4.9	50.40	4.86
12:03	16.9	3.9	17.6	1.3	61.3	4.7	50.63	4.86
12:04	16.8	4	14	1.3	47.8	4.4	50.57	4.86
12:05	16.8	4	13.2	1.3	44.9	4.4	50.56	4.85
12:06	16.8	4.1	16	1.6	53.5	5.2	50.66	4.84
12:07	16.9	4	17.4	1.4	59.8	4.8	50.85	4.84
12:08	16.9	4	14.6	1.4	50.5	4.9	50.77	4.83
12:09	16.9	4	13.1	1.3	45.3	4.5	50.64	4.81
12:10	16.9	4	12.3	1.2	42.3	4.1	50.45	4.79
12:11	16.8	4	11.8	1.3	39.8	4.3	50.23	4.77
12:12	16.9	4	12.9	1.3	44.6	4.6	50.13	4.76
12:13	16.9	4	15.2	1.3	52.4	4.4	50.11	4.76
Part. Run	17.0	3.9						
Hex Run	16.9	3.9						
Metals Run	17.0	3.8						
Run Total	17.0	3.8	14.1	1.3	50.5	4.8	50.92	4.71

Run 2

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	THC
12:56	16.9	4	16.3	1.4	56.6	4.7
12:57	17	3.9	14.5	1.3	51.1	4.6
12:58	16.9	3.9	14.7	1.3	51.7	4.6
12:59	17	3.9	14.4	1.3	50.7	4.6
13:00	17	3.9	15.3	1.5	53.9	5.2
13:01	17	3.9	15	1.5	53	5.2
13:02	16.9	3.9	14.6	1.3	50.7	4.7
13:03	17	3.9	13.9	1.3	49.2	4.6
13:04	16.9	3.9	15.4	1.2	53.5	4.3
13:05	17	3.8	14.9	1.3	52.9	4.5
13:06	16.9	3.9	15.2	1.2	52.9	4.3
13:07	17	3.9	13.4	1.2	47.6	4.4
13:08	17	3.9	13.6	1.3	48.2	4.5
13:09	17	3.9	14.7	1.3	52.1	4.5
13:10	16.9	3.9	15	1.2	52.4	4.2
13:11	17	3.8	14.5	1.2	51.3	4.3
13:12	17	3.8	15.2	1.2	54	4.2
13:13	16.9	3.9	14.8	1.2	52	4.2
13:14	17	3.8	15.2	1.2	54.3	4.4
13:15	17	3.9	15.8	1.3	56.1	4.5
13:16	17	3.8	15.1	1.2	53.6	4.4
13:17	17	3.8	14.2	1.3	50.8	4.6
13:18	17	3.8	15.6	1.3	55.9	4.6
13:19	17	3.8	15.5	1.4	55.4	4.9
13:20	17	3.8	15.1	1.3	53.9	4.7
13:21	17	3.8	14.9	1.5	52.7	5.1
13:22	17	3.8	15.6	1.6	56.3	5.8
13:23	17	3.8	14.6	1.5	51.6	5.5
13:24	17.1	3.8	14.5	1.6	52.8	5.8
13:25	16.9	3.9	14.2	1.6	49.9	5.6
13:26	17	3.9	15.8	1.4	56.1	5.1
13:27	16.9	4	16.8	1.4	58.1	4.7
13:28	16.9	3.9	15.3	1.4	53.3	4.8
13:29	16.9	4	14.8	1.5	50.8	5.2
13:30	17	3.9	15.8	2.1	55.7	7.4
13:31	16.8	4	14.8	1.8	50.7	6.3
13:32	16.9	3.9	14.7	1.6	51.4	5.6
13:33	16.9	4	14.7	1.4	50.6	5
13:34	17	3.9	15.3	1.6	53.9	5.6
13:35	16.9	4	15.6	1.5	54	5.3
13:36	16.9	3.9	14.9	1.4	52	4.9
13:37	17.2	3.6	12.5	1.7	47.6	6.3

Kiln 2	Run 2				Corrected to 7% O2			
Time	Oxygen	CO2	CO	THC	CO	THC		
13:38	17.4	3.5	14.1	1.8	56.3	7.1		
13:39	17.4	3.4	12.6	1.7	50.6	6.7		
13:40	17.4	3.4	11.5	1.5	46.1	6		
13:41	17.6	3.3	11.6	1.5	48.5	6.3		
13:42	17.6	3.3	10.8	1.5	45.7	6.3		
13:43	17.6	3.2	10.8	1.5	45.7	6.4		
13:44	17.6	3.2	10.1	1.5	42.4	6.2		
13:45	17.7	3.2	9.8	1.4	41.9	6.1		
13:46	17.6	3.3	11.6	1.5	49.3	6.4		
13:47	17.7	3.2	15.2	1.6	65.3	6.8		
13:48	17.5	3.3	16.6	1.5	68.1	6.2		
13:49	17.6	3.2	16.2	1.6	69.3	6.9		
13:50	17.5	3.4	17.2	1.6	69.6	6.7		
13:51	17.5	3.3	15.7	1.7	65.2	6.9		
13:52	17.3	3.6	16.1	2	61.9	7.8	Rolling Hour	
13:53	17.1	3.8	22	2	80.6	7.4	Averages	
13:54	16.9	4	23.3	1.9	82	6.6	CO	THC
13:55	17.1	3.8	20.8	1.8	76.4	6.5	54.60	5.45
13:57	17	3.9	21	1.7	75.9	6.2	54.93	5.48
13:58	16.9	3.9	20.6	1.5	72.5	5.2	55.28	5.49
13:59	17	3.9	18	1.7	65.1	6.1	55.51	5.51
14:00	17.1	3.8	21.3	1.7	78.1	6.4	55.96	5.54
14:01	17.1	3.8	22.3	1.9	81.4	6.8	56.42	5.57
14:02	16.7	4.1	19.4	1.4	63.4	4.6	56.59	5.56
14:03	16.7	4.1	15.1	1.5	50.5	4.9	56.59	5.56
14:04	16.8	4	15.8	1.6	54.1	5.5	56.67	5.58
14:05	16.8	4	16.5	1.5	56.7	5.3	56.73	5.59
14:06	16.8	4	15.3	1.5	52	4.9	56.71	5.60
14:07	16.9	3.9	12.3	1.4	43	4.9	56.55	5.61
14:08	16.9	4	11.1	1.5	38.3	5.2	56.39	5.62
14:09	16.8	4	11.6	1.4	39.9	4.9	56.25	5.63
14:10	17.4	3.3	13.9	1.4	62.5	6.1	56.43	5.66
14:11	17.9	3.1	12	1.2	69.9	6.8	56.72	5.70
14:12	17	3.9	12.8	1.2	45.6	4.4	56.62	5.70
14:13	17.2	3.7	16.7	1.3	61.9	4.7	56.75	5.71
14:14	17.1	3.7	17.5	1.2	64.9	4.4	56.97	5.71
14:15	17.1	3.8	14.7	1.1	53.4	4.1	56.95	5.71
14:16	17	3.8	14.6	1.1	52.3	3.8	56.89	5.70
14:17	16.9	3.9	12.8	1.1	44.7	3.8	56.74	5.69
14:18	17	3.8	14.5	1.1	51.4	3.9	56.75	5.67
14:19	16.9	3.9	14.3	1.1	49.5	3.8	56.65	5.66
14:20	17	3.8	13.7	1.1	48.2	3.8	56.53	5.64
14:21	16.9	3.9	11	1.1	38.5	3.9	56.27	5.63
14:22	16.8	4	11	1.1	37.3	3.6	56.01	5.60
14:23	17	3.8	23.6	1.6	86	5.5	56.51	5.60
14:24	17.3	3.6	26.3	1.1	102.4	4.3	57.35	5.58
14:25	17.1	3.7	12.8	1	47.4	3.9	57.26	5.55

Kiln 2	Run 2				Corrected to 7% O2		Rolling 1-Hour Averages	
Time	Oxygen	CO2	CO	THC	CO	THC	CO	THC
14:26	17.1	3.7	12	1	44.2	3.7	57.17	5.52
14:27	17.1	3.7	10.8	1.2	39.9	4.4	56.90	5.50
14:28	17.1	3.7	16.3	1.2	60.7	4.6	56.94	5.50
14:29	17.3	3.6	17.5	1.4	66.9	5.4	57.17	5.51
14:30	17	3.8	18.3	1.2	65	4.2	57.41	5.50
14:31	17.1	3.8	13.4	1	48.6	3.6	57.29	5.43
14:32	17	3.9	10.8	1	38.4	3.5	57.08	5.39
14:33	17.2	3.6	10.8	1	40.3	3.7	56.90	5.35
14:34	17.3	3.6	11.5	1.1	45.1	4.1	56.81	5.34
14:35	17.1	3.7	17.7	1.5	65.1	5.4	56.99	5.34
14:36	16.8	4	72.1	3.1	245.7	10.5	60.19	5.42
14:37	16.9	4	131.8	2.6	457.8	8.9	66.95	5.49
14:38	17.1	3.8	62.9	1.6	229.9	5.9	69.99	5.48
14:39	17.8	3.2	31.1	1.1	138	5.1	71.35	5.45
14:40	17.8	3.1	22.1	1.1	100.9	4.8	72.19	5.42
14:41	17.9	3	21.1	1.1	96.8	5.1	73.03	5.40
14:42	17.9	2.9	20.4	1.1	94.5	5.1	73.80	5.38
14:43	17.8	3	18.8	1.1	85.4	5	74.46	5.36
14:44	17.8	3	14.6	1.1	66.4	5	74.81	5.34
14:45	17.8	3	13.6	1.1	61.7	5	75.13	5.32
14:46	17.8	3	14.2	1.1	63.3	4.7	75.49	5.29
14:47	17.8	3	15.8	1	70.9	4.5	75.85	5.26
14:48	17.9	3	18.1	1	83.3	4.6	76.15	5.23
14:49	17.9	2.9	16.1	1	74.5	4.7	76.25	5.20
14:50	17.9	2.9	20.2	1.1	93.2	5.2	76.65	5.17
14:51	17.9	2.9	24.4	1.1	113.1	5.1	77.38	5.15
14:52	17.9	2.9	22.5	1.1	105.1	5.2	78.04	5.12
14:53	17.9	3	24	1.1	109.9	4.9	78.84	5.07
14:54	17.8	3	21	1	95.7	4.6	79.09	5.02
14:55	17.8	3	19.3	1	87.9	4.6	79.19	4.99
14:56	17.9	3	21.1	1	96.6	4.6	79.53	4.96
14:58	17.7	3.1	21.2	1	92	4.4	79.80	4.93
14:59	17.6	3.2	20.8	1.1	87.5	4.6	80.05	4.92
15:00	17.6	3.2	20.7	1.1	87.3	4.6	80.42	4.89
15:01	17.6	3.2	19.5	1	82	4.4	80.48	4.86
15:02	17.6	3.2	20.2	1	85	4.3	80.54	4.82
15:03	17.6	3.2	19.3	1	81.1	4.2	80.84	4.81
15:04	17.6	3.3	20	1	84.3	4.4	81.40	4.80
15:05	17.6	3.3	20.3	1	85.6	4.4	81.92	4.78
15:06	17.6	3.3	19.5	1.1	82	4.6	82.35	4.77
15:07	17.6	3.3	20.8	1.1	87.5	4.6	82.94	4.77
15:08	17.6	3.3	20.2	1	84.9	4.3	83.64	4.76
15:09	17.6	3.3	17.3	1	72.8	4.2	84.21	4.74
15:10	17.6	3.3	18.5	1	77.9	4.2	84.84	4.73
15:11	17.6	3.3	20	1	84	4.3	85.20	4.70
15:12	17.6	3.3	19.2	1	80.6	4.2	85.38	4.66
15:13	17.6	3.3	16.8	1	70.6	4.2	85.80	4.65

Kiln 2 Run 2

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling 1-Hour Averages CO	Rolling 1-Hour Averages THC
15:14	17.6	3.3	18	1	75.8	4.4	86.03	4.65
15:15	17.6	3.3	18.1	1	76.3	4.4	86.22	4.65
15:16	17.6	3.2	19.8	1	83.2	4.2	86.72	4.65
15:17	17.6	3.2	21.2	1	89.3	4.4	87.33	4.66
15:18	17.6	3.2	21.1	1	88.9	4.4	88.07	4.67
15:19	17.6	3.2	16	1.1	67.4	4.6	88.34	4.68
15:20	17.6	3.2	16.8	1.2	70.8	5.1	88.69	4.70
15:21	17.6	3.2	20.8	1.2	87.8	5.1	89.35	4.72
15:22	17.6	3.2	19.5	1.1	82.4	4.8	90.08	4.74
15:23	17.5	3.3	18.6	1.1	75.9	4.6	90.73	4.76
15:24	17.4	3.4	26.7	1.2	105.1	4.8	91.04	4.74
15:25	17.4	3.5	29.8	1.1	117.9	4.4	91.30	4.75
15:26	17.4	3.4	19.8	1.1	78.4	4.4	91.82	4.75
15:27	17.4	3.4	17.2	1.1	68.2	4.4	92.22	4.77
Part. Run	17.2	3.6						
Hex Run	17.5	3.4						
Metals Run	17.1	3.7						
Run Total	17.3	3.6	18.1	1.3	70.3	5.1	71.06	5.28

Run 3

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	THC
15:54	17.6	3.2	19.5	1.1	82	4.6
15:55	17.6	3.2	18.7	1.1	78.7	4.6
15:56	17.5	3.3	19.3	1.2	78.5	4.7
15:57	17.4	3.4	19.1	1.2	76	4.8
15:58	17.4	3.4	19.5	1.3	76.7	4.9
15:59	17.3	3.4	23.5	1.3	91.9	4.9
16:00	17.3	3.4	21.7	1.1	83.9	4.4
16:01	17.3	3.4	17.4	1.1	67.6	4.3
16:02	17.3	3.4	20.1	1.2	78.5	4.5
16:03	17.6	3.2	19.1	1.2	80.3	5
16:04	17.7	3	19.3	1.2	83.8	5.2
16:05	17.5	3.2	19.8	1.2	82.1	5.1
16:06	17.3	3.4	18.3	1.2	71.1	4.7
16:07	17.3	3.4	17.8	1.2	69.4	4.7
16:08	17.3	3.4	17.2	1.2	66.5	4.7
16:09	17.3	3.4	18.8	1.2	72.7	4.5
16:10	17.3	3.4	18.5	1.1	70.9	4.2
16:11	17.3	3.4	17.8	1.2	68.5	4.6
16:12	17.2	3.5	18.1	1.2	69	4.6
16:13	17.2	3.5	18.2	1.2	69	4.7
16:14	17.2	3.5	18.7	1.2	70.4	4.5
16:15	17.2	3.5	18.5	1.2	69.9	4.5
16:16	17.2	3.5	18.3	1.2	69.2	4.5
16:17	17.2	3.5	18.7	1.2	70.1	4.5
16:18	17.2	3.5	18.6	1.2	70	4.5
16:19	17.3	3.4	17.8	1.2	68	4.6
16:20	17.3	3.4	16.7	1.2	64.3	4.6
16:21	17.2	3.5	15.9	1.2	59.6	4.5
16:22	17.1	3.6	16.9	1.2	62	4.4
16:23	17.1	3.6	15.9	1.1	58.7	4.2
16:24	17.1	3.6	15.9	1.1	58.1	4
16:25	17.1	3.6	16.3	1.1	59.7	4.1
16:26	17.1	3.6	16.6	1.1	60.9	4.1
16:27	17.1	3.6	15.9	1.2	58.3	4.4
16:28	17.1	3.6	16.9	1.2	61.7	4.4
16:29	17.1	3.6	16.1	1.2	59	4.5
16:30	17.1	3.6	16.7	1.2	61	4.4
16:31	17.1	3.6	17	1.2	62.2	4.3
16:32	17.1	3.6	16.9	1.1	61.7	4
16:33	17.1	3.6	17.3	1.1	63.3	4
16:34	17.1	3.6	15.9	1.1	58.2	4.1
16:35	17.1	3.6	16.3	1.2	59.2	4.4
16:36	17.1	3.6	16.9	1.3	61.3	4.6
16:37	17.1	3.6	16.9	1.2	61.5	4.5
16:38	17.1	3.6	16.9	1.2	61.6	4.4

Kiln 2 Run 3

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
16:39	17.1	3.6	16.9	1.2	61.6	4.4		
16:40	17	3.6	17.2	1.1	62	4.1		
16:41	17.1	3.6	16.7	1.1	60.8	4		
16:42	17.1	3.6	16.9	1.1	61.8	4		
16:43	17.1	3.6	17.5	1.2	64.1	4.3		
16:44	17.1	3.6	17.4	1.2	63.6	4.4		
16:45	17.1	3.6	16.9	1.2	61.7	4.4		
16:46	17.1	3.6	16.9	1.2	61.1	4.3		
16:47	17.1	3.6	16.9	1.2	61.7	4.2		
16:48	17.1	3.6	17.1	1.1	62.6	4		
16:49	17.1	3.6	16.3	1.1	59.1	4		
16:50	17.1	3.6	16.7	1.1	61	4.1		
16:51	17.1	3.5	16.3	1.2	60.2	4.4		
16:52	17.2	3.4	16.1	1.2	61.1	4.5		
16:53	17.2	3.4	15.4	1.2	57.7	4.5	66.79	4.44
16:54	17.1	3.5	15.2	1.3	55.7	4.7	66.35	4.44
16:55	17.1	3.5	15.7	1.2	57.5	4.5	65.99	4.44
16:56	17.1	3.6	15.7	1.2	57.4	4.4	65.64	4.43
16:57	17.1	3.6	14.9	1.2	54.1	4.3	65.28	4.43
16:58	17	3.6	15.5	1.2	56.1	4.3	64.93	4.42
16:59	17.1	3.6	15.6	1.2	56.4	4.3	64.34	4.41
17:00	17	3.6	14.7	1.2	52.7	4.3	63.82	4.40
17:01	17.1	3.6	15.2	1.2	55	4.3	63.61	4.40
17:02	17.1	3.6	14.7	1.2	53.7	4.4	63.20	4.40
17:03	17.1	3.6	14.8	1.2	54	4.2	62.76	4.39
17:04	17.1	3.6	14.8	1.1	53.9	4	62.26	4.37
17:05	17.1	3.6	15.1	1.1	54.8	4	61.81	4.35
17:06	17.1	3.6	15.1	1.1	54.6	4	61.53	4.34
17:07	17.1	3.6	15.5	1.2	56.3	4.3	61.31	4.33
17:08	17.1	3.6	15.2	1.2	55.5	4.4	61.13	4.33
17:09	17	3.7	14.8	1.2	52.1	4.2	60.79	4.32
17:10	17.2	3.4	16.5	1.2	62.4	4.4	60.65	4.33
17:11	17.3	3.3	17	1.1	66.2	4.3	60.61	4.32
17:12	17.3	3.4	15.4	1.1	59.2	4	60.44	4.31
17:13	17.3	3.4	14.7	1	56.2	3.8	60.23	4.30
17:14	17.2	3.5	14.6	1.1	54.2	4	59.96	4.29
17:15	17.1	3.5	13.1	1.1	48.1	3.9	59.60	4.28
17:16	17.1	3.5	12.8	1.1	46.8	4	59.22	4.27
17:17	17.1	3.5	12.8	1.1	46.9	4.1	58.84	4.26
17:18	17.1	3.5	12.8	1.2	46.9	4.3	58.45	4.26
17:19	17.2	3.5	12.8	1.1	48.1	4.1	58.12	4.25
17:20	17.2	3.5	12.8	1.1	48	4.1	57.85	4.24
17:21	17.2	3.5	14.3	1.1	53.7	4.3	57.75	4.24
17:22	17.1	3.5	19.4	1.2	71.7	4.4	57.91	4.24
17:23	16.9	3.7	18.2	1.2	63.7	4.2	58.00	4.24
17:24	16.9	3.7	17.5	1.3	60.8	4.5	58.04	4.25

Kiln 2 Run 3

					Corrected to 7% O2		Rolling 1-Hour Averages	
Time	Oxygen	CO2	CO	THC	CO	THC	CO	THC
17:25	16.9	3.7	16	1.4	55.5	4.9	57.97	4.26
17:26	17	3.6	18.1	1.5	65.1	5.5	58.04	4.28
17:27	17.1	3.6	15.3	1.2	55.8	4.4	58.00	4.28
17:28	17.1	3.6	15.9	1.6	58.2	5.9	57.94	4.31
17:29	17.1	3.6	16.1	1.7	58.9	6	57.94	4.33
17:30	17.1	3.6	16.7	1.6	61	5.7	57.94	4.36
17:31	17.1	3.6	16.9	1.6	61.7	5.7	57.93	4.38
17:32	17.1	3.6	17.1	1.5	62.4	5.6	57.94	4.41
17:33	17.1	3.6	17	1.5	62.3	5.5	57.93	4.43
17:34	17.1	3.6	16.7	1.6	61	5.8	57.97	4.46
17:35	17.1	3.6	16	1.5	58.5	5.6	57.96	4.48
17:36	17.1	3.6	15.8	1.4	57.7	5.3	57.90	4.49
17:37	17.1	3.6	15.2	1.4	55.7	5.2	57.80	4.50
17:38	17.1	3.6	15.2	1.5	55.7	5.5	57.71	4.52
17:39	17.1	3.6	15.7	1.5	57.8	5.3	57.64	4.54
17:40	17.1	3.6	16.8	1.5	61.7	5.5	57.64	4.56
17:41	17.1	3.5	16.7	1.5	61	5.4	57.64	4.58
17:42	17.1	3.5	16	1.4	58.5	5.1	57.59	4.60
17:43	17.1	3.5	14.8	1.4	54.6	5.3	57.43	4.62
17:44	17.1	3.5	14	1.4	51.5	5.2	57.23	4.63
17:45	17.1	3.5	14.6	1.4	54.2	5.2	57.10	4.64
17:46	17.1	3.6	14.8	1.4	54	5.2	56.98	4.66
17:47	17.1	3.6	14.6	1.5	53.5	5.5	56.85	4.68
17:48	17.1	3.6	14.7	1.5	53.9	5.4	56.70	4.70
17:49	17.1	3.6	14.7	1.5	53.8	5.5	56.61	4.73
17:50	16.9	3.8	15.1	1.5	53	5.2	56.48	4.75
17:51	16.9	3.8	16.3	1.5	56.7	5.2	56.42	4.76
17:52	16.9	3.8	16.3	1.4	56.5	4.9	56.34	4.77
17:53	16.9	3.8	16.3	1.5	56.6	5.3	56.33	4.78
17:54	16.9	3.8	17	1.4	58.9	5	56.38	4.79
17:55	16.9	3.8	14.5	1.4	50.4	5	56.26	4.79
17:56	16.9	3.8	14.1	1.6	49.1	5.5	56.12	4.81
17:57	16.9	3.8	15.1	1.5	52.4	5.2	56.09	4.83
17:58	16.9	3.9	13.8	1.4	47.9	4.9	55.96	4.84
17:59	16.9	3.9	12.8	1.4	44	4.8	55.75	4.85
18:00	16.8	3.9	12.8	1.4	43.9	4.8	55.60	4.85
18:01	16.8	3.9	12.8	1.4	43.3	4.7	55.41	4.86
18:02	16.8	3.9	11.7	1.3	39.8	4.4	55.18	4.86
18:03	16.8	3.9	12.2	1.3	41.5	4.5	54.97	4.87
18:04	16.8	3.9	11.7	1.3	39.8	4.6	54.73	4.88
18:05	16.8	3.9	11.7	1.3	39.7	4.5	54.48	4.88
18:06	17.1	3.7	11.7	1.2	42.5	4.5	54.28	4.89
18:07	17.2	3.5	11.8	1.2	44.2	4.5	54.08	4.90
18:08	17.2	3.5	12.3	1.2	46.3	4.5	53.93	4.90
18:09	17	3.7	13.5	1.2	47.9	4.3	53.86	4.90

Kiln 2 Run 3					Corrected to 7% O2		Rolling 1-Hour Averages	
Time	Oxygen	CO2	CO	THC	CO	THC	CO	THC
18:10	16.9	3.7	13.8	1.2	48.4	4.2	53.62	4.90
18:11	17	3.7	13.8	1.2	48.8	4.2	53.33	4.89
18:12	16.9	3.7	13.8	1.2	48.3	4.2	53.15	4.90
18:13	16.9	3.8	13.8	1.2	48.2	4.2	53.02	4.90
18:14	16.9	3.7	13.8	1.2	48.3	4.3	52.92	4.91
18:15	17.1	3.6	14	1.2	50.8	4.4	52.96	4.92
18:16	17.1	3.6	14.7	1.1	53.8	4.1	53.08	4.92
18:17	17.1	3.6	14.7	1.1	53.8	4	53.20	4.92
18:18	17.1	3.6	15.2	1.1	55.7	4	53.34	4.91
18:19	17.2	3.5	16.5	1.2	61.4	4.4	53.56	4.92
18:20	17.2	3.5	18.8	1.2	70.4	4.5	53.94	4.92
18:21	17.2	3.5	19.6	1.2	73.7	4.5	54.27	4.93
18:22	17.2	3.5	20	1.2	74.9	4.5	54.32	4.93
18:23	17.2	3.4	17	1.2	64.4	4.6	54.34	4.94
18:24	17.2	3.4	16.7	1.2	62.9	4.5	54.37	4.94
18:25	17.1	3.6	16.5	1.2	59.8	4.3	54.44	4.93
18:26	16.8	3.8	15.5	1.2	52.8	4.1	54.24	4.90
18:27	16.8	3.8	14.7	1.3	49.9	4.3	54.14	4.90
18:28	16.8	3.8	14.6	1.3	49.4	4.4	53.99	4.88
18:29	16.8	3.8	14.6	1.3	49.4	4.4	53.83	4.85
18:30	16.8	3.8	14.7	1.3	49.9	4.4	53.65	4.83
18:31	16.8	3.9	14.7	1.3	49.9	4.4	53.45	4.81
18:32	16.8	3.9	14.7	1.3	49.7	4.4	53.24	4.79
18:33	16.8	3.9	14.4	1.3	48.9	4.3	53.02	4.77
18:34	16.8	3.9	13.9	1.3	47.1	4.3	52.79	4.74
Part. Run	17.2	3.5						
Hex Run	17.0	3.7						
Metals Run	17.2	3.5						
Run Total	17.1	3.6	16.0	1.3	58.9	4.6	57.98	4.65

Kiln 4	Run 1	06/16			Corrected to 7% O2	
Time	Oxygen	CO2	CO	THC	CO	THC
10:51	15.8	5.4	34.9	1.6	95	4.4
10:52	15.9	5.2	31.4	1.4	87.8	3.8
10:53	15.8	5.3	27.9	1.4	76.9	3.9
10:54	16	5.2	27.7	1.5	77.7	4.3
10:55	16	5.1	28.2	1.4	79.9	3.9
10:56	16.1	5	25.9	1.4	75.7	4.1
10:57	15.9	5.2	27.2	1.4	76.3	3.8
10:58	16	5.2	26.8	1.5	75.7	4.2
10:59	15.9	5.2	26	1.3	72.7	3.7
11:00	15.9	5.3	24.6	1.3	68.6	3.8
11:01	15.9	5.3	25.2	1.3	70.4	3.6
11:02	15.8	5.4	29.1	1.3	78.9	3.5
11:03	15.7	5.5	28.8	1.3	77.7	3.5
11:04	15.9	5.3	30.8	1.4	85.4	3.9
11:05	16	5.2	29.9	1.2	84.8	3.5
11:06	16.1	5	25	1.2	72.3	3.6
11:07	16.1	5.1	27	1.2	78.3	3.6
11:08	16.3	4.8	22.7	1.2	67.9	3.6
11:09	16.3	4.7	22.7	1.3	69.1	4
11:10	16.5	4.5	27.5	1.2	87.5	3.8
11:11	16.6	4.4	20.8	1.2	66.9	3.7
11:12	16.7	4.3	17	1.2	56.3	3.9
11:13	16.6	4.3	18.1	1.1	58.9	3.6
11:14	16.4	4.6	15.9	1.1	48.9	3.4
11:15	16.5	4.4	15.7	1.1	49.9	3.5
11:16	16.3	4.6	15.6	1.1	47.5	3.3
11:17	16.3	4.6	17.6	1.1	53.6	3.4
11:18	16.2	4.8	18.4	1.1	54.1	3.2
11:19	16.3	4.7	19.3	1.1	58.2	3.4
11:20	16.7	4.2	23.2	1.1	76.8	3.8
11:21	16.8	4.1	20.7	1.1	70.1	3.7
11:22	16.3	4.6	18.8	1.1	57.5	3.4
11:23	15.8	5.2	20.9	1.2	57.2	3.4
11:24	15.8	5.3	28.5	1.2	77.4	3.3
11:25	15.8	5.4	19.3	1.1	52.4	3.1
11:26	15.9	5.2	20.8	1.3	58	3.6
11:27	15.8	5.3	33.3	1.2	90.3	3.3
11:28	15.7	5.4	29.1	1.2	77.9	3.2
11:29	15.6	5.5	26.4	1.3	69.8	3.3
11:30	15.9	5.2	29.1	1.1	80.3	3.1
11:31	16.3	4.8	16.7	1.1	50.3	3.3
11:32	16.3	4.7	16	1.1	48.8	3.4
11:33	16.3	4.7	16.1	1.1	49.1	3.4
11:34	16.3	4.7	19.3	1.1	58.9	3.4
11:35	16.3	4.8	21.1	1.1	63.3	3.3
11:36	16.4	4.6	20.1	1.1	61.6	3.4
11:37	16.2	4.8	18.5	1.1	55	3.3

Kiln 4	Run 1	06/16			Corrected to 7% O2			
Time	Oxygen	CO2	CO	THC	CO	THC		
11:38	16.1	5	17.9	1.1	52	3.2		
11:39	16.2	4.9	18.1	1.1	53.7	3.4		
11:40	16.1	4.9	20	1.2	58.2	3.5		
11:41	16.3	4.8	21	1.2	62.9	3.6		
11:42	16.5	4.4	21	1.2	66.8	3.7		
11:43	16.5	4.5	19.8	1.1	62.8	3.6		
11:44	16.4	4.6	19.8	1.2	61.2	3.6		
11:45	16.2	4.8	20.2	1.2	60.2	3.4	Rolling Hour	
11:46	16.1	5	19.5	1.2	57	3.5	Averages	
11:47	16.3	4.8	19.2	1.2	57.5	3.5	CO	THC
11:48	16.1	5.1	19.6	1.2	56.5	3.4		
11:49	16	5.1	23.9	1.2	68.3	3.5		
11:50	16.1	4.9	26.7	1.3	77.9	3.7	66.7	3.6
11:52	16.2	4.8	24.5	1.2	72.7	3.6	66.3	3.6
11:53	16.3	4.7	23.6	1.2	70.7	3.5	66.1	3.6
11:54	16.3	4.7	18.6	1.2	56.7	3.6	65.7	3.5
11:55	16.3	4.6	16.8	1.2	50.5	3.6	65.3	3.5
11:56	16.2	4.7	15.4	1.2	46	3.6	64.7	3.5
11:57	16.4	4.6	15.1	1.3	46.8	3.9	64.2	3.5
11:58	16.4	4.5	16.4	1.3	50.5	3.9	63.8	3.5
11:59	16.1	5	15.9	1.3	45.9	3.8	63.3	3.5
12:00	16.1	5.1	16.4	1.4	47.6	4.1	62.9	3.5
12:01	15.9	5.3	16.8	1.4	46.9	3.9	62.5	3.5
12:02	15.5	5.8	26.6	1.5	68.3	3.8	62.5	3.5
12:03	15.5	5.8	26.4	2.4	68	6.3	62.3	3.6
12:04	15	6.3	107.2	2.5	252.1	6.1	65.2	3.6
12:05	15.1	6.3	170.7	4.8	398.9	11.7	70.4	3.8
12:06	15.3	6	155.6	3.4	381.2	8.6	75.4	3.8
12:07	15.4	6	154.4	2	387.2	5.1	80.6	3.9
12:08	15	6.3	149.4	8.6	339.8	20.5	85.0	4.1
12:09	15	6.4	250.6	3.3	585.7	7.9	93.6	4.2
12:10	14.9	6.5	161.6	4.1	371.5	9.4	98.6	4.3
12:11	15.1	6.3	116.2	4.2	276.1	9.9	101.8	4.4
12:12	15	6.3	149.8	2.4	353.5	5.8	106.6	4.4
12:13	15.3	6.1	70	3.2	172.4	7.8	108.5	4.5
12:14	15.1	6.2	80.6	2.1	192.1	5	110.7	4.5
12:15	14.9	6.4	140.9	9.2	318.1	21.1	115.2	4.8
12:16	14.6	6.7	562.1	9.5	1242.9	21	135.1	5.1
12:17	14.7	6.6	428.9	5.7	963.5	12.8	150.4	5.3
12:18	15.2	6.2	204.9	2.5	491.5	6.1	157.7	5.3
12:19	15.1	6.2	64.1	2.1	155.8	5	159.3	5.4
12:20	15.6	5.7	37.7	1.4	99.2	3.6	160.0	5.4
12:21	15.1	6.1	35.2	2	85	4.7	160.2	5.4
12:22	15.2	6	57.9	1.9	141.9	4.6	161.4	5.4
12:23	15.3	6	55.6	2.7	137.6	6.7	162.7	5.4
12:24	15.2	6	74.6	1.6	181.9	3.9	164.8	5.4
12:25	15.3	5.9	74.2	2.6	183.3	6.5	166.5	5.5

Kiln 4 Run 1 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
12:26	15.4	5.8	87.1	1.5	217	3.9	169.3	5.5
12:27	15.5	5.8	40.7	1.4	104.5	3.7	170.1	5.5
12:28	15.6	5.6	34.1	1.6	89.1	4.1	170.0	5.5
12:29	16.1	5.1	49.6	1.2	140.8	3.4	171.1	5.5
12:30	16.3	4.8	19.6	1.2	59.3	3.6	170.9	5.5
12:31	16.4	4.6	19	1.1	58.5	3.5	170.6	5.5
12:32	16	5.1	21.9	1.3	61.8	3.6	170.7	5.6
12:33	16.1	4.9	23.7	1.3	69.3	3.8	171.1	5.6
12:34	16	5.1	24.2	1.2	69.4	3.5	171.4	5.6
12:35	15.9	5.2	22.3	1.3	62.4	3.5	171.5	5.6
12:36	15.8	5.4	24.6	1.2	66.6	3.3	171.5	5.6
12:37	15.9	5.3	20.6	1.2	57.8	3.4	171.5	5.6
12:38	15.9	5.4	21.2	1.2	58.3	3.3	171.5	5.6
12:39	16	5.3	22.1	1.2	62.1	3.4	171.7	5.6
12:40	15.8	5.4	22.1	1.2	60.5	3.3	171.8	5.6
12:41	15.9	5.3	19.9	2.9	55.7	8.1	171.8	5.6
12:42	14.9	6.3	321.7	6.6	743.2	15.6	183.1	5.8
12:43	15.5	5.7	155.9	1.8	395.1	4.8	188.6	5.9
12:44	15.6	5.6	34.4	1.4	90.1	3.8	189.0	5.9
12:45	16.1	5.1	22.5	1.3	64.5	3.8	189.1	5.9
12:46	15.9	5.2	22.4	1.3	61.9	3.6	189.1	5.9
12:47	15.8	5.4	21.9	1.4	59.4	3.8	189.2	5.9
12:48	15.4	5.7	32.4	1.4	82.5	3.5	189.6	5.9
12:49	15.8	5.4	25.3	1.4	68.9	3.8	189.8	5.9
12:50	15.9	5.2	21.9	1.3	60.7	3.6	189.7	5.9
12:51	15.7	5.4	22.7	1.4	60.7	3.8	189.4	5.9
12:53	15.9	5.3	22.3	1.4	61.5	3.9	189.2	5.9
12:54	15.7	5.4	24	1.3	64.6	3.5	189.1	5.9
12:55	15.6	5.6	24.6	1.6	64.8	4.3	189.2	5.9
12:56	15.7	5.4	25.6	1.5	68.9	4.1	189.5	5.9
12:57	15.5	5.7	35.2	1.6	89.9	4.1	190.3	5.9
12:58	15.6	5.6	32.1	1.7	84.7	4.5	190.9	5.9
12:59	15.5	5.7	44.1	1.7	112.7	4.4	191.9	5.9
13:00	15.6	5.6	35.1	1.6	93	4.3	192.7	5.9
13:01	15.8	5.4	31.9	1.4	86	3.7	193.3	5.9
13:02	15.6	5.7	32.9	1.7	85.7	4.5	194.0	5.9
13:03	15.7	5.5	32.4	1.5	86.1	4	194.3	5.9
13:04	15.7	5.6	29	1.7	76.9	4.5	194.4	5.9
13:05	15.8	5.4	32.6	1.5	88.6	4	191.7	5.9
13:06	15.9	5.3	25.5	1.5	71.1	4.1	186.2	5.8
13:07	15.9	5.2	24.8	1.4	69.4	4	181.1	5.7
13:08	15.8	5.4	25.2	1.5	69.4	4.2	175.8	5.7
13:09	15.7	5.5	29.4	2	78.5	5.4	171.4	5.4
13:10	15.4	5.9	49.7	2.7	124.8	6.8	163.7	5.4
13:11	15.3	5.9	64.7	3.1	162.4	7.8	160.2	5.4

Kiln 4 Run 1 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling 1-Hour Averages CO	Rolling 1-Hour Averages THC
13:12	15.6	5.6	94	1.9	246.5	5	159.7	5.3
13:13	16	5.3	28	1.4	78.8	3.9	155.2	5.3
13:14	15.8	5.4	22.3	1.3	61.1	3.6	153.3	5.2
13:15	16	5.2	20.6	1.4	58.3	3.9	151.1	5.2
13:16	15.9	5.2	22.6	1.3	63.2	3.6	146.8	4.9
13:17	16	5.2	19.4	1.3	54.8	3.7	127.0	4.6
13:18	15.9	5.3	20.9	1.2	57.9	3.4	111.9	4.4
13:19	15.8	5.3	21.1	1.4	58	3.9	104.7	4.4
13:20	16.2	5	26.5	1.3	78.2	3.8	103.4	4.4
13:21	16.3	4.8	21	1.3	64	3.8	102.8	4.4
13:22	16	5.2	25.2	1.5	71.1	4.2	102.6	4.4
13:23	15.9	5.3	42	1.4	117.1	4	102.2	4.4
13:24	15.9	5.3	49.9	1.4	139	3.9	102.2	4.3
13:25	15.8	5.5	51.4	1.4	139.6	3.8	101.5	4.3
13:26	16.2	4.9	37	1.3	110	3.9	100.3	4.3
13:27	16.3	4.8	25.4	1.3	77	3.8	97.9	4.3
13:28	16.1	5	23.9	1.2	69.9	3.6	97.4	4.3
13:29	16.1	5	22.5	1.5	65.6	4.5	97.0	4.3
13:30	15.7	5.4	50.9	1.7	136.4	4.7	96.9	4.3
13:31	15.7	5.5	115.8	2.3	306.2	6.2	101.0	4.3
13:32	16	5.1	68.1	2	194.3	5.7	103.3	4.4
13:33	15.5	5.6	116.8	2.4	302.3	6.3	107.3	4.4
13:34	15.6	5.6	140.5	2.5	369.5	6.6	112.3	4.5
13:35	15.7	5.4	93.2	2.4	249.7	6.5	115.3	4.5
13:36	15.5	5.7	142.4	2	364.8	5.1	120.3	4.5
13:37	15.7	5.5	170.4	4.3	445.9	11.6	126.7	4.7
13:38	15.7	5.4	205	2.1	538.3	5.5	134.7	4.7
13:39	15.6	5.6	123.8	2	320.7	5.1	139.0	4.7
13:40	15.7	5.4	65	1.8	175	4.7	140.9	4.8
13:41	15.7	5.4	58.7	1.5	155.2	4.1	142.5	4.8
13:42	15.8	5.3	53.9	1.7	146.6	4.8	144.0	4.7
13:43	16.4	4.5	39.7	1.3	120.8	4.1	133.6	4.5
13:44	16.6	4.3	19	1.3	62	4.2	128.1	4.5
13:45	16.8	4.1	17.4	1.3	59.4	4.4	127.6	4.5
13:46	16.5	4.3	20.4	1.3	64.9	4.1	127.6	4.5
13:47	16.4	4.4	21.3	1.3	66.3	4.1	127.7	4.5
13:48	16.5	4.3	21.3	1.4	67.5	4.4	127.8	4.6
13:49	16.2	4.6	24.4	1.5	72.5	4.4	127.6	4.6
13:50	16.2	4.7	37.5	1.5	109.9	4.5	128.3	4.6
13:51	16.3	4.6	20.8	1.5	62	4.4	128.3	4.6
13:52	15.9	5	17	1.5	47.4	4.2	128.1	4.6
Part. Run	15.9	5.3						
Hex Run	15.8	5.4						
Metals Run	16.2	4.9						
Run Total	15.9	5.2	49.4	1.7	128.1	4.7	138.9	5.0

Kiln 4 Run 2 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	THC
14:59	15.9	5	26.9	1	74.9	2.9
15:00	15.9	5.1	29.5	1.1	81.5	2.9
15:01	16.1	4.9	24.6	1.2	70.6	3.4
15:02	15.8	5.2	36.5	1	98.7	2.8
15:03	15.8	5.2	32.3	1.1	87.3	3
15:04	15.9	5.1	28.8	1	80.2	2.8
15:05	15.8	5.2	24.3	1	66.1	2.8
15:06	16	5	25.4	1	71.7	2.8
15:07	16.5	4.5	19.9	1	63.1	3
15:08	16	5	23.5	1	66.2	3
15:09	15.9	5.1	31.8	1	87.7	2.9
15:10	15.8	5.2	28.4	1.1	77.4	2.9
15:11	16	5	26.6	1.1	74.7	3.1
15:12	15.8	5.2	35.7	1	96.8	2.8
15:13	15.9	5.1	24.3	1.1	67.9	3
15:14	15.9	5.1	23.4	1	64.7	2.9
15:15	15.6	5.4	28.2	1.1	74.3	2.8
15:16	15.8	5.2	28.5	1.1	77.9	3
15:17	15.8	5.2	32.2	1	86.5	2.7
15:18	15.8	5.2	25.2	1.1	68.5	2.9
15:19	16	5	23.8	1	67	2.9
15:20	15.8	5.2	27.3	1	74.3	2.8
15:21	15.8	5.2	33.4	1.2	90.4	3.4
15:22	15.9	5	39	1.1	108.2	3
15:23	15.6	5.4	34.9	1	90.4	2.7
15:24	15.7	5.3	41.5	1.3	110	3.6
15:25	15.6	5.3	49.9	1	130.2	2.7
15:26	15.7	5.4	27.2	1	72.5	2.7
15:27	16	5	20.1	1	57.1	2.8
15:28	15.8	5.1	22.2	1	61	2.8
15:29	15.7	5.2	35.5	1.1	95.4	2.9
15:30	15.8	5.3	36.1	1.3	97.2	3.4
15:31	15.9	5	33	1	91.9	2.9
15:32	15.7	5.3	29.3	1	78.3	2.8
15:33	15.8	5.2	27.7	1.1	75.7	3.1
15:34	15.7	5.2	41.6	1	110.8	2.7
15:35	15.7	5.2	27.1	1	72.8	2.8
15:36	15.9	5	21.8	1.2	60.7	3.3
15:37	15.6	5.3	49	1.2	129	3.2
15:38	15.5	5.4	73.5	1.9	187.6	4.8
15:39	15.7	5.2	70.4	1.3	188.2	3.5
15:40	15.5	5.4	69.2	1.4	177.5	3.6
15:41	15.8	5.2	47	1.2	126.8	3.3
15:42	15.6	5.3	44.9	1.2	116.8	3

Kiln 4 Run 2 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
15:43	15.6	5.4	52.5	1.5	136.2	3.9		
15:44	15.8	5	46.1	1.1	125.6	3.1		
15:45	15.6	5.3	30.9	1.1	80.9	3		
15:46	15.8	5.1	26.8	1.2	73.5	3.2		
15:47	15.6	5.3	34.7	1.1	91.1	2.9		
15:48	15.7	5.2	31.8	1.2	85.3	3.1		
15:49	16	4.8	24	1.1	68.3	3.2		
15:50	15.8	5	22	1.1	60.5	2.9		
15:51	15.8	5	25.2	1.2	68.7	3.2		
15:52	15.9	4.9	27.9	1	76.8	2.8		
15:53	16	4.9	18.7	1.1	52.7	3		
15:54	16	4.8	19.2	1.1	54.2	3.1		
15:55	15.9	5	18.7	1	52	2.8		
15:56	15.9	4.9	18.7	1.1	52.3	3		
15:57	16.1	4.6	20	1	58.3	3		
15:58	16	4.9	18.6	1.1	52.1	3.1	86.6	3.0
15:59	15.8	5.1	22.8	1.2	61.7	3.2	86.4	3.0
16:00	15.7	5.1	29.6	1.1	78.7	2.9	86.3	3.0
16:01	15.7	5.2	28.2	1.1	75.9	3	86.4	3.0
16:02	15.9	5	22.9	1	63.2	2.9	85.8	3.0
16:03	15.9	5	21.3	1	59	2.8	85.3	3.0
16:04	16	4.8	19.6	1.1	55.5	3	84.9	3.0
16:05	16.2	4.6	17.8	1	53	3.1	84.7	3.0
16:06	16.1	4.7	17.5	1.1	50.6	3.1	84.4	3.1
16:07	16.2	4.6	17.4	1.1	51.4	3.2	84.2	3.1
16:08	16.1	4.7	17.2	1.1	49.7	3.2	83.9	3.1
16:09	16	4.8	16.9	1.2	48.5	3.3	83.2	3.1
16:10	15.9	5	20.3	1.1	56.1	3.1	82.9	3.1
16:11	15.8	5.1	18.9	1.1	51.5	3.1	82.5	3.1
16:12	15.8	5	19.3	1.2	53.1	3.4	81.8	3.1
16:13	15.7	5.2	26.5	1.2	71	3.1	81.8	3.1
16:14	16.2	4.7	21.1	1.2	62.1	3.4	81.8	3.1
16:15	16.1	4.7	20.3	1.1	58.8	3.2	81.5	3.1
16:16	16	4.8	19.2	1.1	54.8	3.1	81.1	3.1
16:17	16.2	4.7	19.7	1.1	58.3	3.2	80.7	3.1
16:18	15.9	4.9	22.3	1.1	62.8	3	80.6	3.1
16:19	16	4.9	19.2	1.1	54.5	3.1	80.4	3.1
16:20	15.9	4.9	21.7	1.1	60.6	3.2	80.1	3.1
16:21	15.8	5.2	27.5	1.1	74.3	3	79.9	3.1
16:22	16.1	4.8	21.4	1.1	62.4	3.2	79.1	3.1
16:23	16.1	4.8	20.6	1.1	59.4	3.1	78.6	3.1
16:24	16	5	20.1	1.1	56.9	3.1	77.7	3.1
16:25	16.1	4.7	20.5	1.1	59	3.2	76.5	3.1
16:26	16	4.9	19	1.1	53.5	3.1	76.2	3.1
16:27	15.9	5	23.5	1.2	65	3.2	76.3	3.1

Kiln 4 Run 2 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
16:28	15.8	5.2	29.3	1.1	78.9	3	76.6	3.1
16:30	15.8	5.2	21	1.1	57.5	2.9	76.0	3.1
16:31	15.8	5.2	18.6	1.1	50.8	3	75.2	3.1
16:32	15.6	5.4	27.1	1.1	70.9	2.9	74.9	3.1
16:33	15.6	5.5	33.7	1.2	88.2	3.2	75.0	3.1
16:34	15.8	5.2	30.4	1.1	82.6	3.1	75.1	3.1
16:35	15.7	5.3	26.2	1.2	69.5	3.2	74.5	3.1
16:36	15.7	5.2	25.8	1.2	69.7	3.3	74.4	3.2
16:37	15.6	5.4	34.1	1.1	89.5	3	74.9	3.1
16:38	15.7	5.3	22.2	1.2	59.7	3.1	73.7	3.1
16:39	15.5	5.4	30.3	1.2	78.1	3.2	71.9	3.1
16:40	15.9	5	28.8	1.2	79.5	3.3	70.1	3.1
16:41	15.7	5.2	26.1	1.2	69.8	3.3	68.3	3.1
16:42	15.7	5.2	26.8	1.2	71.4	3.1	67.4	3.1
16:43	15.8	5.1	21.9	1.1	60.1	3.1	66.4	3.1
16:44	15.9	4.9	19.7	1.2	55	3.4	65.1	3.1
16:45	15.6	5.2	36.6	1.3	96.4	3.4	64.6	3.1
16:46	15.9	4.9	27.8	1.2	77.6	3.4	64.5	3.1
16:47	15.9	4.9	24.7	2.2	68.5	6.2	64.5	3.2
16:48	16	4.8	22.6	1.6	64.1	4.6	64.0	3.2
16:49	15.9	4.9	22.5	1.2	62.6	3.4	63.6	3.2
16:50	16	4.8	18.9	1.2	53.4	3.4	63.4	3.2
16:51	16	4.8	20.5	1.2	58.8	3.4	63.4	3.2
16:52	16.2	4.6	19	1.2	55.7	3.5	63.1	3.2
16:53	16.3	4.4	19.7	1.2	59.2	3.6	62.8	3.2
16:54	16.3	4.4	18.4	1.2	55.3	3.6	62.9	3.2
16:55	16	4.7	17.2	1.2	48.7	3.4	62.8	3.2
16:56	15.7	5	18.3	1.2	49.1	3.2	62.7	3.2
16:57	15.7	5.1	18.3	1.2	49.4	3.2	62.7	3.3
16:58	15.4	5.5	19.3	1.2	48.6	3.1	62.5	3.3
16:59	15	5.9	36.3	1.5	85.4	3.4	63.1	3.3
17:00	15	6	39.7	1.4	93.2	3.4	63.6	3.3
17:01	15.3	5.6	40.5	1.3	101.4	3.3	64.0	3.3
17:02	15.8	5.1	24	1.3	65.1	3.4	63.8	3.3
17:03	15.9	5	19.3	1.2	53.9	3.4	63.7	3.3
17:04	15.9	5	18.1	1.2	50.4	3.3	63.5	3.3
17:05	15.8	5.1	18.6	1.2	51.3	3.3	63.4	3.3
17:06	15.9	4.9	17.7	1.2	49.3	3.3	63.4	3.3
17:07	16	4.8	19.7	1.2	55.9	3.4	63.5	3.3
17:08	16.1	4.7	18.9	1.2	54.5	3.4	63.5	3.3
17:09	16.1	4.8	19.9	1.2	57.4	3.4	63.7	3.3
17:10	16	4.9	20	1.1	56.8	3.2	63.8	3.3
17:11	15.8	5.2	23.6	1.2	63.8	3.3	63.9	3.3
17:12	16	4.9	29.1	1.2	83.4	3.4	64.4	3.3
17:13	15.7	5.2	22	1.2	59.3	3.2	64.6	3.3

Kiln 4 Run 2 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
17:14	15.8	5.1	28.4	1.3	76.9	3.7	64.7	3.3
17:15	16	5	29.8	1.3	83.4	3.6	65.0	3.3
17:16	15.6	5.4	33.3	1.2	88	3.3	65.5	3.3
17:17	15.9	5.2	33.4	1.3	91.5	3.6	66.1	3.3
17:18	16.1	4.9	28.1	1.2	80.2	3.5	66.5	3.3
17:19	15.8	5.3	23.8	1.2	64.6	3.3	66.5	3.3
17:20	15.9	5.2	30.1	1.5	82.5	4	67.0	3.4
17:21	15.9	5.1	37.9	1.3	104.5	3.6	67.7	3.4
17:22	15.7	5.3	30.7	1.3	82.3	3.4	67.8	3.4
17:23	15.9	5.2	28.7	1.3	79.2	3.7	68.1	3.4
17:24	15.8	5.2	32.2	1.5	87.7	4.1	68.6	3.4
17:25	15.7	5.3	57.3	1.4	152.4	3.8	70.2	3.4
17:26	16.1	4.9	28	1.3	81.7	3.6	70.6	3.4
17:27	16.2	4.8	20.4	1.2	59.9	3.6	70.7	3.4
17:28	15.9	5.1	22.6	1.2	62.4	3.4	70.6	3.4
17:29	15.9	5	25.6	1.3	70.9	3.7	70.5	3.4
17:31	16.1	4.9	23.6	1.2	67.8	3.5	70.7	3.5
17:32	15.9	5	22.8	1.2	63	3.3	70.9	3.5
17:33	15.9	5	22.8	1.2	63.7	3.3	70.7	3.5
17:34	16.1	4.7	18.3	1.2	53.4	3.4	70.2	3.5
17:35	15.9	4.9	18.2	1.1	51.1	3.2	69.6	3.5
17:36	15.9	5.1	21	1.2	57.6	3.2	69.4	3.5
17:37	16	4.9	23.8	1.3	67.4	3.6	69.4	3.5
17:38	15.7	5.3	40.7	1.3	107.9	3.4	69.7	3.5
17:39	15.7	5.3	52.2	1.5	136.8	4.1	71.0	3.5
17:40	16.1	4.8	37.4	1.3	107.8	3.7	71.5	3.5
17:41	15.8	5.1	29.3	1.2	79.7	3.4	71.5	3.5
17:42	15.8	5.2	26.7	1.3	71.9	3.4	71.5	3.5
17:43	16	5	23.1	1.3	65.3	3.8	71.4	3.5
17:44	15.8	5.1	34.2	1.2	92.8	3.4	72.0	3.5
17:45	15.8	5.1	29.8	1.2	81.4	3.3	72.4	3.5
17:46	16.1	4.9	24.9	1.2	71.8	3.4	72.0	3.5
17:47	15.8	5.1	27.9	1.1	76.5	3.1	72.0	3.5
17:48	15.8	5.1	25	1.1	68.5	3	72.0	3.5
17:49	16	4.9	21	1.1	60	3.2	71.9	3.4
17:50	15.9	4.9	25.9	1	72.2	2.9	72.1	3.4
17:51	16.3	4.6	16.8	1	50.7	3	72.0	3.4
17:52	16.5	4.4	15.9	1	50.4	3.2	71.9	3.4
17:53	16.1	4.7	18.7	1	54.1	2.9	71.9	3.4
17:54	16	5	21.4	1	60.2	2.9	71.9	3.4
17:55	16.1	4.8	20.8	1.1	60.7	3.3	72.0	3.4
17:56	15.9	5	29.9	1.1	82.4	3	72.5	3.4
17:57	15.8	5.2	29	1.1	78.7	2.9	73.0	3.4
17:58	16	4.9	32	1.3	90.9	3.7	73.7	3.4
17:59	16.2	4.7	35.4	1.1	103.1	3.2	74.6	3.4

Kiln 4 Run 2 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
18:00	15.9	5	24.8	1	69.5	2.9	74.4	3.4
Part. Run	15.9	5.1						
Hex Run	15.9	5.0						
Metals Run	15.8	5.1						
Run Total	15.9	5.0	27.3	1.2	74.7	3.2	72.5	3.3

Kiln 4 Run 3 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	THC
19:20	16.8	4.1	17.6	0.9	59.5	3
19:21	16.6	4.2	17.2	0.9	55.7	2.9
19:22	16.4	4.4	15.1	0.9	46.9	2.8
19:23	16.6	4.3	15.7	0.9	50.4	2.9
19:24	16.3	4.5	15.5	0.9	47.1	2.9
19:25	15.9	4.7	28	0.9	78.1	2.6
19:26	16.3	4.4	15.2	0.9	46.3	2.7
19:27	16.3	4.4	15	0.9	45	2.7
19:28	16.1	4.6	13.6	0.9	39.7	2.6
19:29	16.3	4.4	12.9	0.9	39.1	2.7
19:30	16.1	4.5	13.8	0.9	40.5	2.6
19:31	15.9	4.8	14.4	0.9	40.5	2.5
19:32	16.1	4.7	15	1	42.9	2.9
19:33	15.7	5	19	1	51.2	2.7
19:34	15.5	5.3	37.4	1.3	95	3.4
19:35	15.7	5.1	33.8	1.5	89.4	4.1
19:36	15.5	5.3	58.1	1.3	148.2	3.3
19:37	15.4	5.4	60.5	1.7	151.5	4.4
19:38	15.7	5.1	48.7	1.5	129	4
19:39	15.3	5.4	73.4	1.4	182.4	3.5
19:40	15.5	5.2	47.3	1.3	122.1	3.3
19:41	15.8	4.8	25.4	1.2	69.3	3.2
19:42	15.5	5.1	34.6	1.1	88.9	2.8
19:43	15.7	5	22.3	1.2	59.1	3.2
19:44	15.9	4.7	21.1	1.1	57.9	3.2
19:45	15.7	5	24.9	1.1	66.1	3
19:46	15.9	4.8	18.1	1.2	50.4	3.2
19:47	16	4.6	17.9	1.1	51	3.1
19:48	15.8	4.9	18.9	1.1	51.1	2.9
19:49	15.9	4.8	17.9	1.1	49.7	3.2
19:51	16	4.7	19.1	1.1	53.7	3.2
19:52	16.3	4.4	20.6	1	62.1	3.1
19:53	16.5	4.2	18.4	0.9	58.8	3
19:54	16.9	4	14.6	0.9	50.4	3.1
19:55	17	3.8	15.4	0.9	54.7	3.2
19:56	16.8	3.9	15.6	0.9	53.5	3.1
19:57	17	3.9	15.5	0.8	54.6	3
19:58	16.9	3.9	16.1	0.8	56	2.8
19:59	16.7	4.1	18.1	0.7	60.1	2.4
20:00	16.9	4	18.9	0.7	65.3	2.3
20:01	16.8	4	19.7	0.5	67.1	1.7
20:02	16.8	4	18.2	0.4	62.4	1.3
20:03	16.9	4	20.9	0.3	73	1
20:04	16.8	4.1	20	0.2	67.1	0.7

Kiln 4 Run 3 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	THC	Hour Rolling Average CO	THC
20:05	16.7	4.2	20.4	0.2	68.1	0.7		
20:06	16.9	4.1	20.8	0.2	71.8	0.6		
20:07	16.7	4.2	19.3	0.1	64.5	0.3		
20:08	16.8	4.2	19.4	0.1	65.4	0.3		
20:09	16.9	4.1	23	0.1	79.9	0.2		
20:10	16.7	4.2	23.1	0	77.3	0		
20:11	16.8	4.3	20.9	0.1	70	0.3		
20:12	16.8	4.1	25	0.1	85.9	0.2		
20:13	16.9	4.1	19.3	0	66.2	0.1		
20:14	16.9	4.1	15.7	0	54.7	0		
20:15	17	4	17.7	0	62.7	0		
20:16	16.8	4.1	17.2	0	58.2	0		
20:17	16.9	4.1	15.8	0.4	55.2	1.2		
20:18	16.3	4.5	16.4	0.6	49.4	1.7		
20:19	16.2	4.6	15	0.5	44.6	1.5		
20:20	16.3	4.6	15.7	0.5	47.9	1.5	66.7	2.2
20:21	16	4.9	15.9	0.5	45	1.4	66.5	2.2
20:22	15.8	5	17.3	0.4	47.4	1.2	66.4	2.2
20:23	15.5	5.3	19.8	0.4	50.9	1.1	66.4	2.2
20:24	15.8	5.1	18.2	0.5	49.4	1.4	66.4	2.1
20:25	15.8	5	20.8	0.4	56.4	1.2	66.6	2.1
20:26	15.6	5.3	19.7	0.4	51.4	1.1	66.1	2.1
20:27	15.8	5.1	18.6	0.5	50.3	1.4	66.2	2.1
20:28	15.8	5	19.9	0.5	54.4	1.3	66.3	2.0
20:29	15.6	5.3	20.6	0.5	53.7	1.3	66.6	2.0
20:30	15.8	5	19.2	0.6	52.5	1.5	66.8	2.0
20:31	15.7	5	25.1	0.5	67.5	1.3	67.3	2.0
20:32	15.6	5.1	23.6	0.5	62.3	1.3	67.6	2.0
20:33	15.9	4.8	15.7	0.4	43.7	1.1	67.6	1.9
20:34	15.6	5.1	15.7	0.4	41.2	0.9	67.5	1.9
20:35	15.4	5.3	25.8	0.4	65.4	1.1	67.0	1.9
20:36	15.6	5.2	24.4	0.6	63.3	1.4	66.5	1.8
20:37	15.5	5.2	45.6	0.5	117.1	1.2	66.0	1.8
20:38	15.4	5.4	49.4	1.2	121.7	3	65.5	1.8
20:39	16	4.8	60.5	0.5	166.2	1.4	66.1	1.7
20:40	16.5	4.4	27.9	0.3	89.1	1	64.6	1.7
20:41	16.8	4.2	21.7	0.3	73.3	1	63.8	1.6
20:42	16.8	4.1	18.7	0.3	63.9	1	63.7	1.6
20:43	16.6	4.3	17.1	0.3	55.3	1	63.1	1.6
20:44	16.8	4.1	15.7	0.3	53.8	1	63.0	1.5
20:45	16.8	4	15.5	0.3	52.9	1	63.0	1.5
20:46	16.7	4.2	15.4	0.2	50.9	0.8	62.7	1.5
20:47	16.8	4.1	14.7	0.2	50.6	0.7	62.7	1.4
20:48	16.8	4.1	14.7	0.2	49.6	0.7	62.7	1.4
20:49	16.7	4.2	15.5	0.2	51.1	0.7	62.7	1.3

Kiln 4 Run 3 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
20:50	16.9	4	14.3	0.2	49.8	0.7	62.7	1.3
20:52	17	3.9	13.7	0.2	48.9	0.7	62.6	1.3
20:53	16.9	4	13.9	0.2	48.5	0.7	62.4	1.2
20:54	16.9	4	13.2	0.3	46.2	1.1	62.2	1.2
20:55	16.9	4	13.9	0.4	48.7	1.5	62.1	1.2
20:56	16.5	4.4	16.1	0.4	50.6	1.4	62.1	1.1
20:57	16.3	4.6	16.7	0.5	50.1	1.5	62.0	1.1
20:58	16.2	4.6	19.7	0.5	58.2	1.5	62.1	1.1
20:59	15.9	4.9	17.2	0.5	48	1.3	61.9	1.0
21:00	16	4.9	14.5	0.5	41	1.3	61.6	1.0
21:01	16	4.8	14.8	0.4	41.6	1.1	61.2	1.0
21:02	15.6	5.2	14.5	0.4	38.3	1.1	60.7	1.0
21:03	15.8	5.1	13.7	0.4	37.3	1.1	60.3	1.0
21:04	15.9	4.8	15.2	0.4	42.5	1.2	59.8	1.0
21:05	15.7	5.1	16.9	0.4	45.3	1.1	59.5	1.0
21:06	15.8	5.1	17.1	0.4	46.1	1.2	59.1	1.0
21:07	15.9	4.8	18	0.5	50.3	1.4	58.7	1.0
21:08	15.7	5.1	20.7	0.4	54.9	1.2	58.6	1.0
21:09	15.8	5.1	21	0.6	56.3	1.5	58.4	1.1
21:10	15.9	4.9	19.2	0.5	53	1.3	58.0	1.1
21:11	15.5	5.2	22.9	0.4	58.8	1.1	57.7	1.1
21:12	15.6	5.3	23.9	0.5	61.9	1.2	57.5	1.1
21:13	15.8	5	22.7	0.6	61.5	1.5	57.1	1.1
21:14	15.6	5.1	28.9	0.4	75.4	1.1	57.3	1.2
21:15	15.6	5.2	23.5	0.5	61.6	1.2	57.4	1.2
21:16	15.8	5	22.9	0.6	61.8	1.5	57.4	1.2
21:17	15.6	5.1	32.5	0.5	84.9	1.4	57.8	1.2
21:18	15.8	5	23.6	0.6	64.1	1.8	58.0	1.2
21:19	15.9	4.9	24	0.5	65.9	1.5	58.2	1.2
21:20	15.7	5.1	23.1	0.5	61.1	1.3	58.5	1.2
21:21	16	4.8	19.6	0.5	55.2	1.4	58.6	1.2
21:22	15.9	4.8	19.2	0.6	53.2	1.7	58.8	1.2
21:23	15.9	4.8	20.7	0.6	57.4	1.5	58.9	1.2
21:24	15.5	5.2	24.3	0.5	63.2	1.4	59.1	1.2
21:25	15.6	5.1	33.6	0.5	87.9	1.3	59.8	1.2
21:26	15.7	5.1	29.5	0.5	77.7	1.3	60.1	1.2
21:27	15.6	5.2	31.2	0.5	80.9	1.3	60.6	1.2
21:28	15.8	5	22	0.5	60	1.3	60.8	1.2
21:29	15.8	4.9	21.6	0.5	58.9	1.4	60.9	1.2
21:30	15.6	5.1	28.1	0.6	73.6	1.6	61.2	1.2
21:31	15.8	4.9	21.9	0.7	59.6	1.8	61.3	1.3
21:32	15.7	5	28.7	0.5	76.5	1.4	61.5	1.3
21:33	15.4	5.3	21.9	0.6	55.7	1.4	61.4	1.3
21:34	15.7	5.1	26.2	0.6	69.8	1.7	61.8	1.3
21:35	15.8	4.9	23.9	0.5	65	1.3	62.2	1.3

Kiln 4 Run 3 06/16

Time	Oxygen	CO2	CO	THC	Corrected to 7% O2 CO	Corrected to 7% O2 THC	Rolling Hour Averages CO	Rolling Hour Averages THC
21:36	15.6	5.1	23	0.5	59.9	1.3	62.1	1.3
21:37	15.7	5	21.6	0.3	57.1	0.8	62.0	1.3
21:38	15.6	5.1	16.8	0.3	44.1	0.8	60.8	1.3
21:39	15.6	5.1	14.2	0.3	37.2	0.9	59.4	1.2
21:40	15.7	5	14	0.4	37.6	1	57.2	1.2
21:41	15.5	5.1	16.3	0.4	42.3	1	56.4	1.2
21:42	15.6	5.1	15.8	0.5	41.4	1.2	55.9	1.2
21:43	15.7	4.9	16.7	0.4	44.9	1.2	55.6	1.2
21:44	15.6	5	16.2	0.4	42.7	1.1	55.4	1.2
21:45	15.7	4.9	13.5	0.4	36.5	1.1	55.1	1.2
21:46	16.1	4.6	14.4	0.3	41.4	0.9	54.9	1.2
21:47	16.4	4.3	12.9	0.3	39.9	0.9	54.7	1.2
21:48	16.8	4	12.9	0.3	43.5	1	54.6	1.2
21:49	16.7	4	13.4	0.3	44.7	1	54.5	1.2
21:50	16.6	4.1	13.5	0.3	43.7	1	54.4	1.2
21:51	16.8	4	12.4	0.3	41.8	1	54.3	1.2
Part. Run	16.2	4.6						
Hex Run	15.9	4.8						
Metals Run	16.3	4.5						
Total	16.1	4.7	21.3	0.6	61.1	1.6	61.9	1.4

CEM CALIBRATION DATA

6/16/92

Plant Name: Leahyville

Sampling Location: Unit 4

Project Number: 1381-004

6 pts

Rata 1-6 Rata 7-10 Rata 11-15

	CALIBRATION ERROR			RUN 1 SYSTEM BIAS CHECK Time 9:30 PRETEST		Time 17:57 POST TEST		RUN 2 SYSTEM BIAS CHECK Time 14:19 PRETEST		Time 18:07 POST TEST		RUN 3 SYSTEM BIAS CHECK Time 18:15 PRETEST		Time 22:05 POST TEST	
	Cylinder Value	Analyzer Calibration Response	Difference (% of Span)	System Response	System Bias (% of Span)	System Response	Drift (% of Span)	System Response	System Bias (% of Span)	System Response	Drift (% of Span)	System Response	System Bias (% of Span)	System Response	Drift (% of Span)
CO Zero	0	-0.2	0	0.9	0.1	0.8	0	-0.3	0	-0.3	0	-0.3	0	-0.1	-0.1
CO Low	297	299	0.2	299	0	297	-0.2	299	0	298	-0.1	298	-0.1	298	0
CO Mid	598	599	0.1	598	-0.1										
CO High															
CO2 Zero	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO2 Low	6.0	6.0	0	6.0	0										
CO2 Mid	10.0	10.0	0	10.0	0	10.0	0.5	10.0	0	10.0	0	10.0	0	10.0	0
CO2 High	17.0	16.8	-1.0	16.8	0										
O2 Zero	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O2 Low	7.5	7.7	0.8	7.7	0										
O2 Mid	12.99	13.5	2.2	13.5	0	13.5	0	13.4	0	13.5	0	13.4	0	13.4	-0.4
O2 High	21.6	21.4	-0.8	21.4	0										
THC Zero	0			0	0	0.4	0.4	0	0	0.1	0.1	0.1	0.1	-0.4	-0.5
THC Low	80.1			30.5	0.4	31.9	1.4	30.6	0.5	29.4	-1.2	30.4	0.3	26.7	-3.7
THC Mid	50.1			50.0	0.6										
THC High	85.3			85.7	0.2										
NOx Zero															
NOx Low															
NOx Mid															
NOx High															
SO2 Zero															
SO2 Low															
SO2 Mid															
SO2 High															

Span Value	
CO	1000
CO2	20%
O2	25%
THC	100
NOx	
SO2	

Calibration Correction Factors

	Run 1		Run 2		Run 3	
	Co	Cm	Co	Cm	Co	Cm
CO	0.45	298	-0.3	298.5		
CO2	0	10.05	0	10.0		
O2	0	13.5	0	13.5		
THC	0.2	31.2	0.05	30		
NOx						
SO2						

C-27

CEM CALIBRATION DATA

Plant Name: Leesville
Sampling Location: Kiln 2
Project Number: 1387-004

Runs 1-7 Runs 8-10

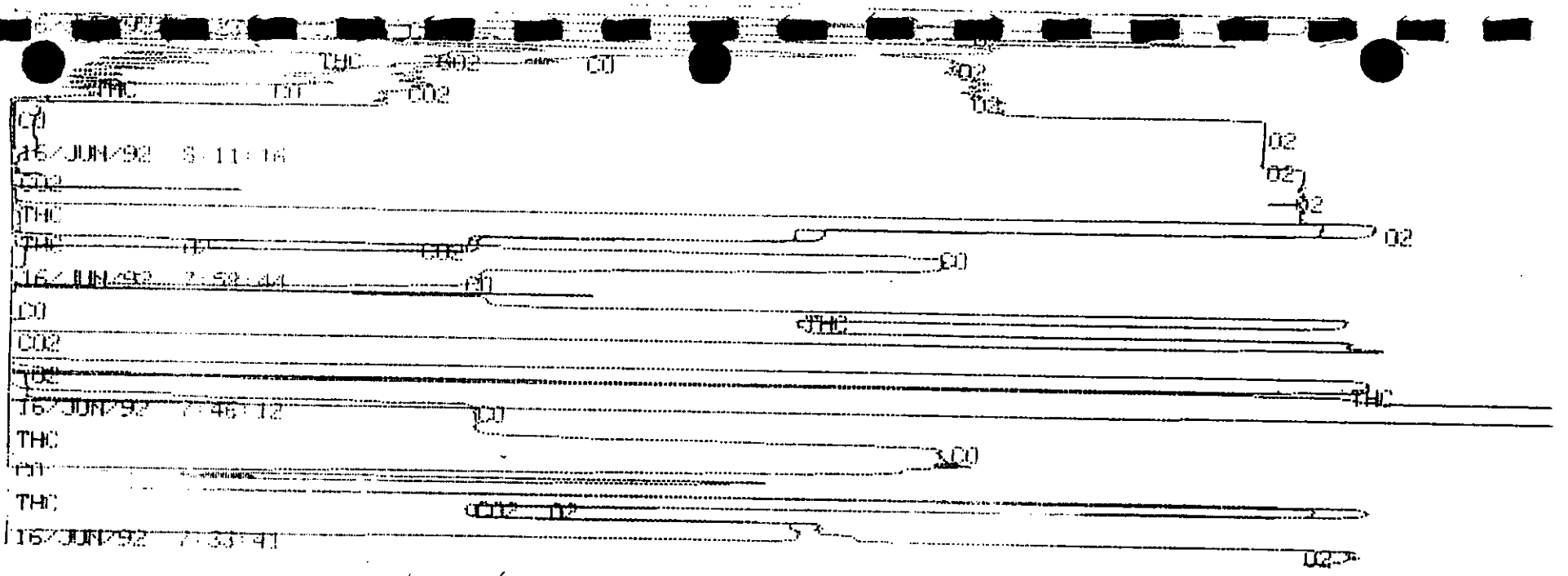
	CALIBRATION ERROR			RUN 1 SYSTEM BIAS CHECK Time 8:05 PRETEST		Time 12:14 POST TEST		RUN 2 SYSTEM BIAS CHECK Time 12:14 PRETEST		Time 14:27 POST TEST		RUN 3 SYSTEM BIAS CHECK Time 15:30 PRETEST		Time 18:35 POST TEST	
	Cylinder Value	Analyzer Calibration Response	Difference (% of Span)	System Response	System Bias (% of Span)	System Response	Drift (% of Span)	System Response	System Bias (% of Span)	System Response	Drift (% of Span)	System Response	System Bias (% of Span)	System Response	Drift (% of Span)
CO Zero	0	-0.1	0	2.0	0.2	1.9	-0.01	1.9	0.2	1.9	0	0.19	0.2	1.9	0
CO Low	299	300	-0.3	300	0	300	0	300	0	299	-0.1	299	-0.1	300	0.1
CO Mid	598	600	-0.2	600	0										
CO High															
CO2 Zero	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO2 Low	6.0	6.0	0	5.9	-0.5										
CO2 Mid	10.0	10.0	0	9.910	0	10.0	0	10.0	0	9.5	-0.5	10.0	0	9.9	-0.2
CO2 High	17.0	16.8	-1.0	16.8	-0.2										
O2 Zero	0	0	0	0	0	0.0	0.0	0	0	0	0	0	0	0	0
O2 Low	7.5	7.7	0.2	7.6	-0.2										
O2 Mid	12.95	13.5	2.0	13.4	-0.2	13.4	0	13.4	-0.2	13.4	0	13.4	-0.2	13.4	0
O2 High	21.6	21.4	-0.8	21.3	-0.2										
THC Zero	0			0	0	0	0	0	0	0	0	0	0	0.1	0.1
THC Low	30.1			29.7	-0.4	29.5	-0.2	29.5	-0.6	30.1	0.6	30.2	0.1	30.5	0.4
THC Mid	50.1			50.6	0.5										
THC High	99.7			99.6	0.1										
NOx Zero															
NOx Low															
NOx Mid															
NOx High															
SO2 Zero															
SO2 Low															
SO2 Mid															
SO2 High															

Span Value	
CO	1000 ppm
CO2	20.0%
O2	25%
THC	100 ppm
NOx	
SO2	

Calibration Correction Factors

	Run 1		Run 2		Run 3	
	Co	Cm	Co	Cm	Co	Cm
CO	2.0	300	1.9	299.5	1.9	299.5
CO2	0	10.0	0	9.95	0	9.95
O2	0	13.4	0	13.4	0	13.4
THC	0	29.6	0	29.8	0.05	30.35
NOx						
SO2						

C-28



6/16/92 Kiln 4 70/4c
Upgrade UA

CO SLOPE = 100.0 INTERCEPT IS 0.0

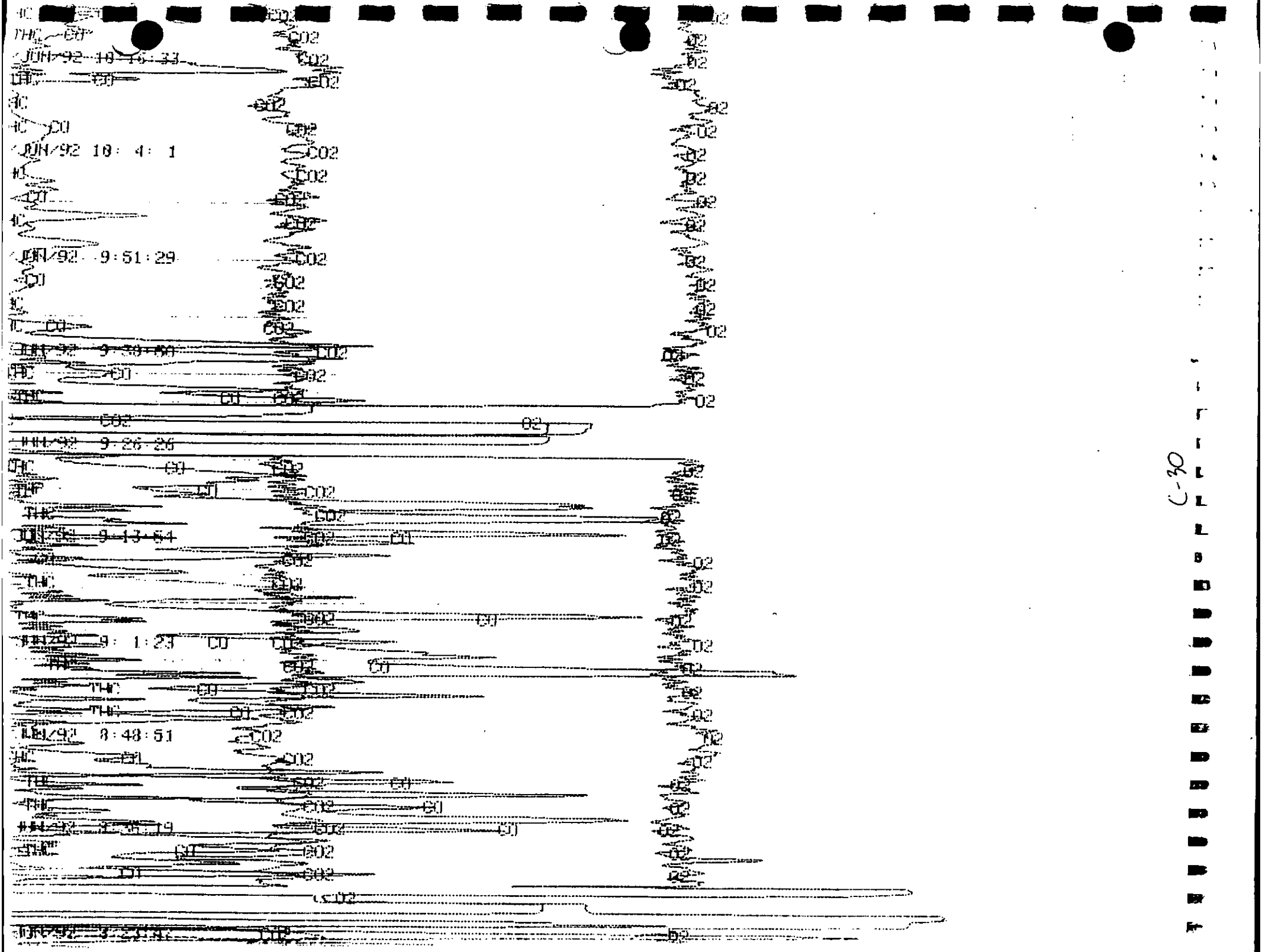
RECORDER/DATA LOGGER VRS 5H

RUN 1 ENDED

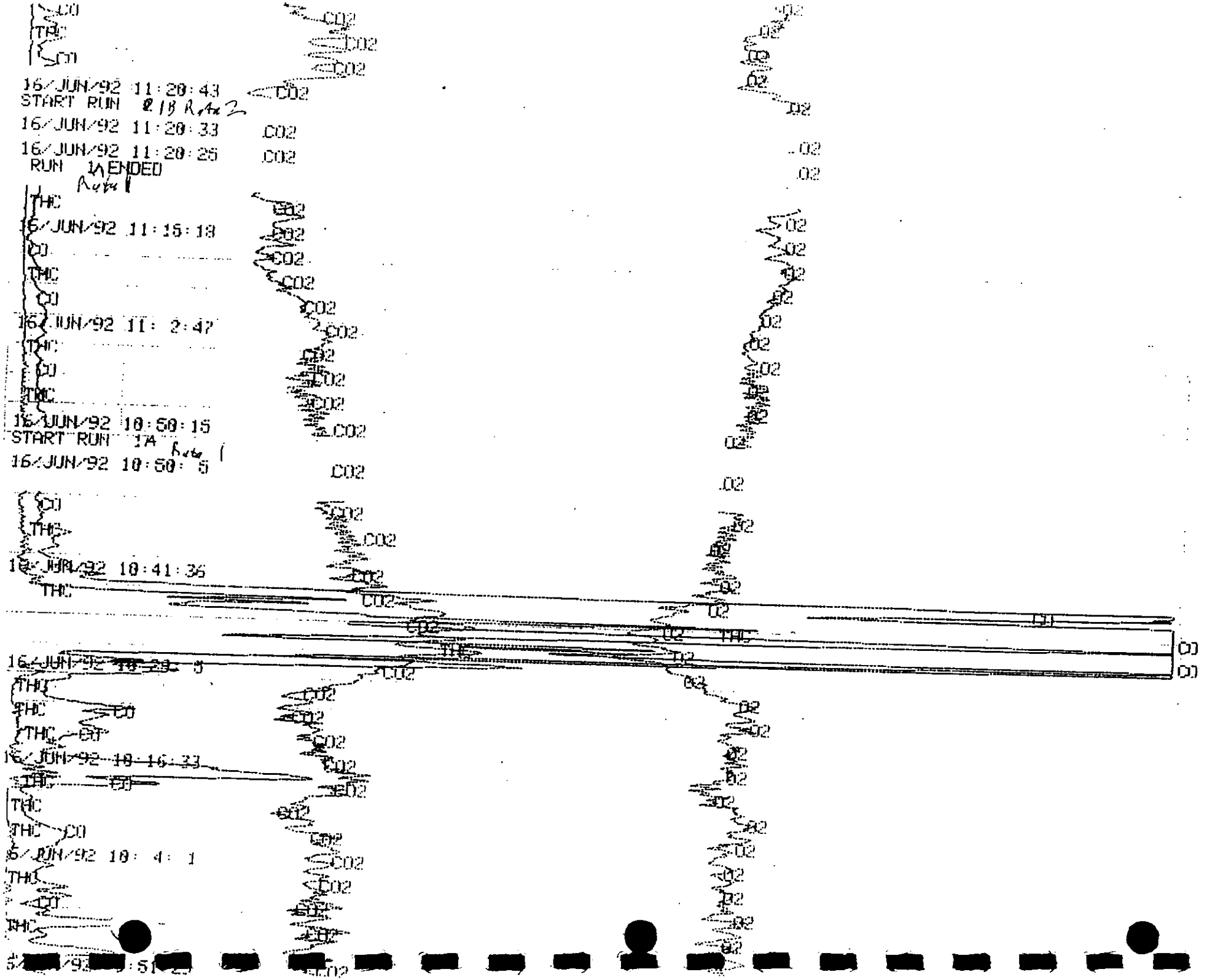
16/JUN/92 16:56:30
START RUN 1
16/JUN/92 16:56:30

RECORDER/DATA LOGGER VRS 5H

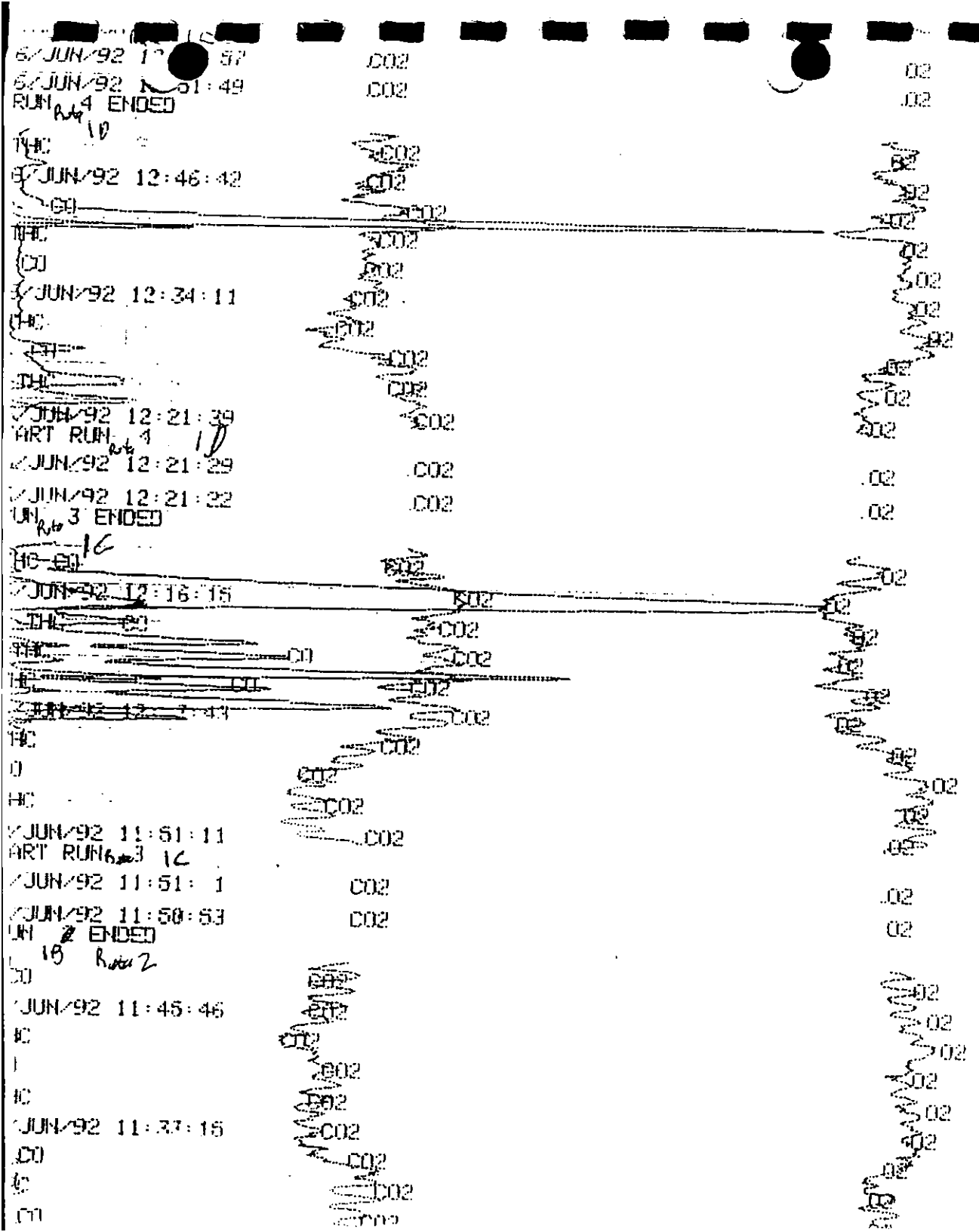
16/JUN/92 16:51:16
RUN -5 ABORTED
16/JUN/92 16:50:56
START RUN -5
16/JUN/92 16:50:44
16/JUN/92 16:50:34
RUN -6 ENDED



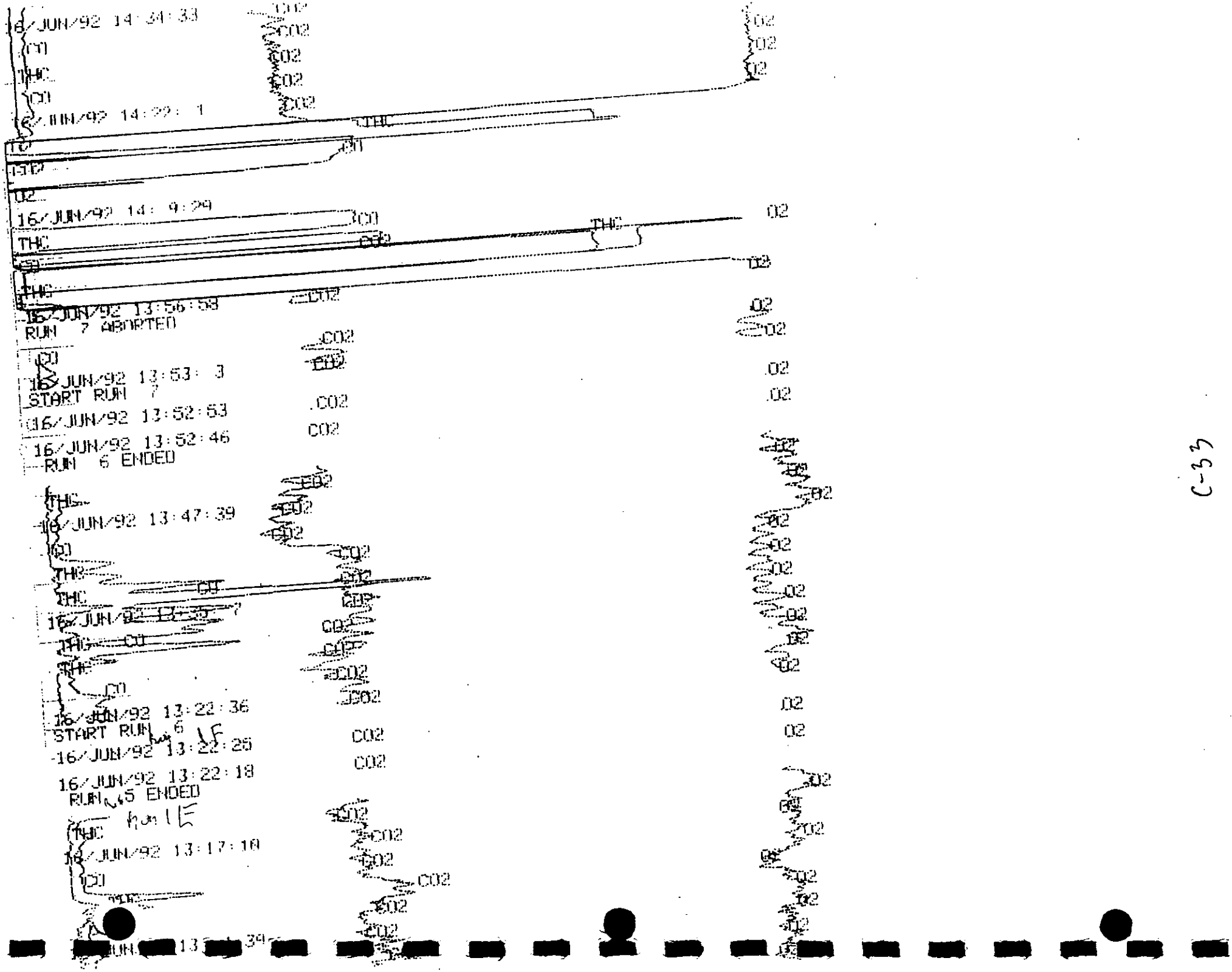
C-30


16/JUN/92 11:20:43
START RUN 2 1B Rate 2
16/JUN/92 11:20:33
16/JUN/92 11:20:25
RUN 1A ENDED
Rate 1
16/JUN/92 11:15:18
16/JUN/92 11: 2:47
16/JUN/92 10:50:15
START RUN 1A
16/JUN/92 10:50: 5
16/JUN/92 10:41:36
16/JUN/92 10:29: 5
16/JUN/92 10:16:33
6/JUN/92 10: 4: 1
CO
THC
CO2
O2

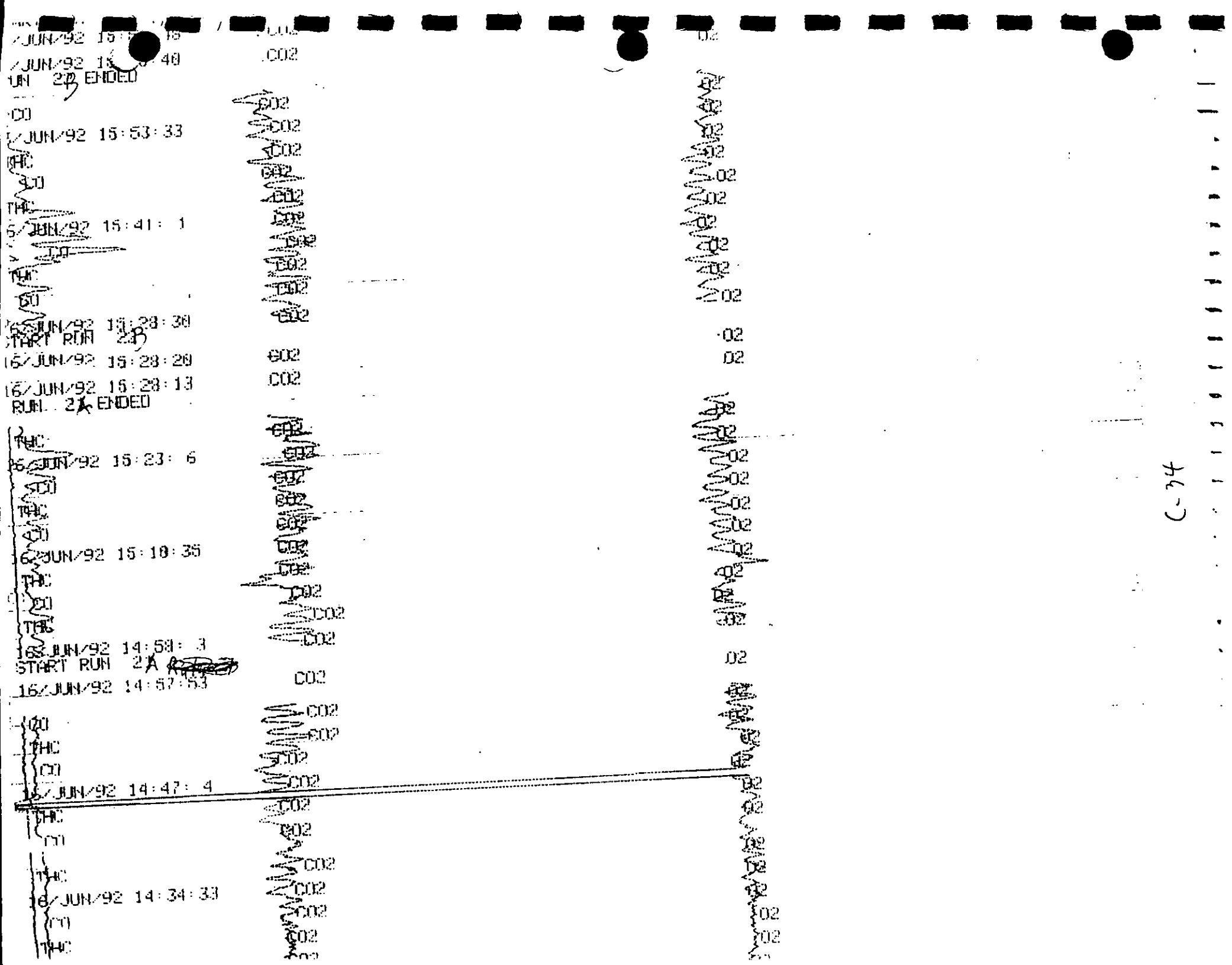
C-31

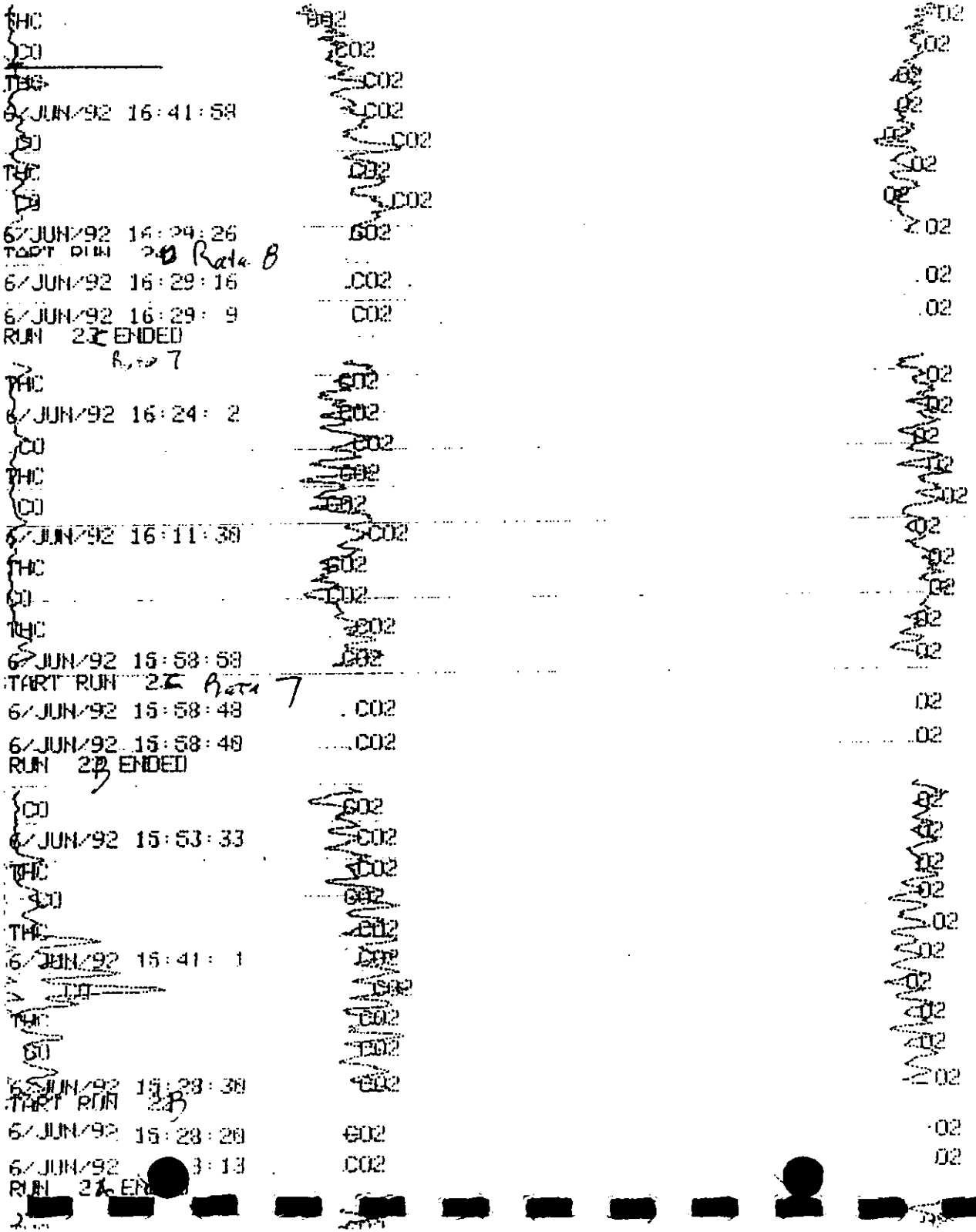

6/JUN/92 1
6/JUN/92 1 :49
RUN 4 ENDED
6/JUN/92 12:46:42
6/JUN/92 12:34:11
6/JUN/92 12:21:39
ART RUN 4
6/JUN/92 12:21:29
6/JUN/92 12:21:22
UN 3 ENDED
6/JUN/92 12:16:15
6/JUN/92 11:51:11
ART RUN 3
6/JUN/92 11:51: 1
6/JUN/92 11:50:53
UN 2 ENDED
6/JUN/92 11:45:46
6/JUN/92 11:37:15
CO2
O2

C-32

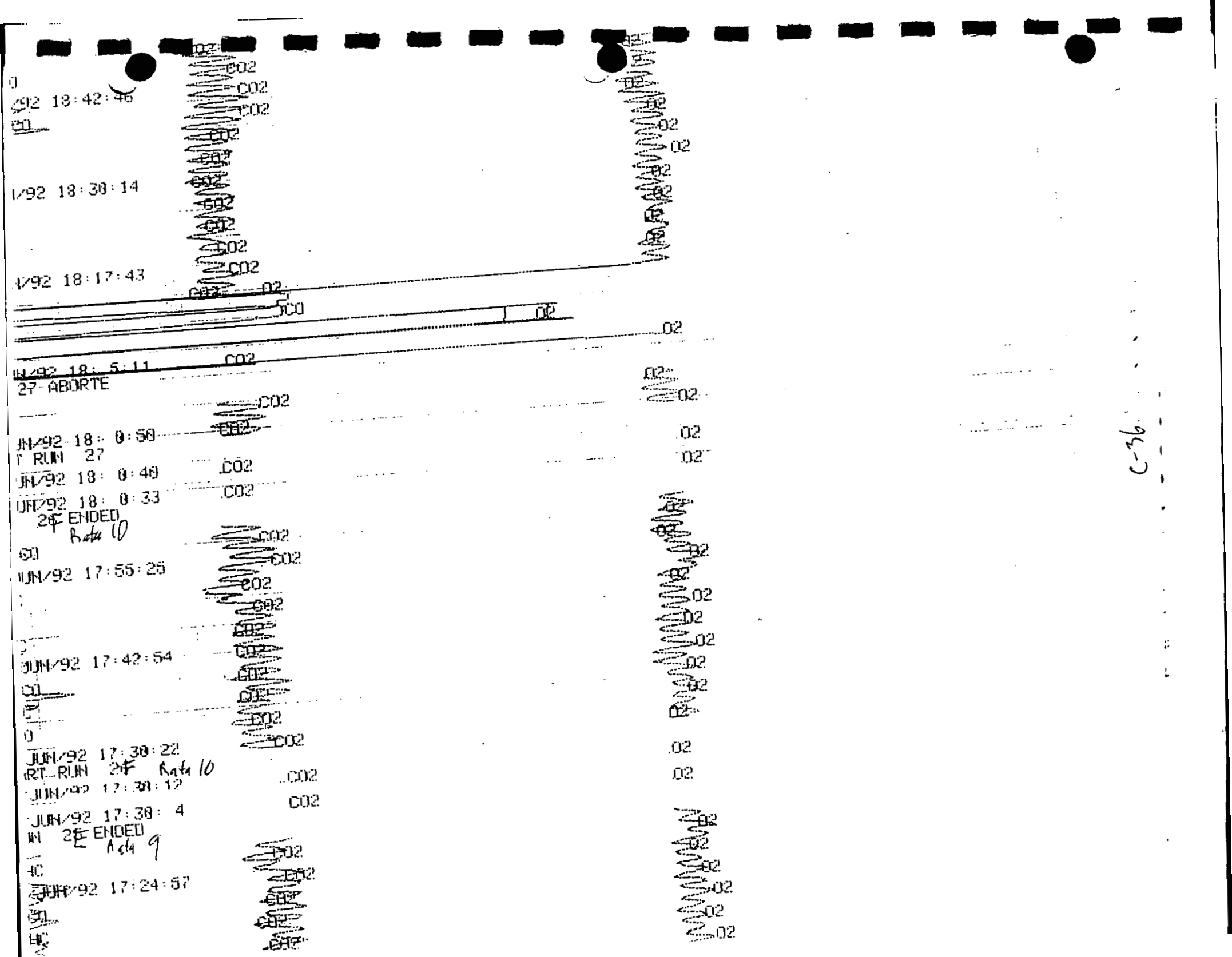

16/JUN/92 14:34:33
16/JUN/92 14:22: 1
16/JUN/92 14: 9:29
16/JUN/92 13:56:58
RUN 7 ABORTED
16/JUN/92 13:53: 3
START RUN 7
16/JUN/92 13:52:53
16/JUN/92 13:52:46
RUN 6 ENDED
16/JUN/92 13:47:39
16/JUN/92 13:22:36
START RUN 6
16/JUN/92 13:22:26
16/JUN/92 13:22:18
RUN 5 ENDED
16/JUN/92 13:17:16

C-33

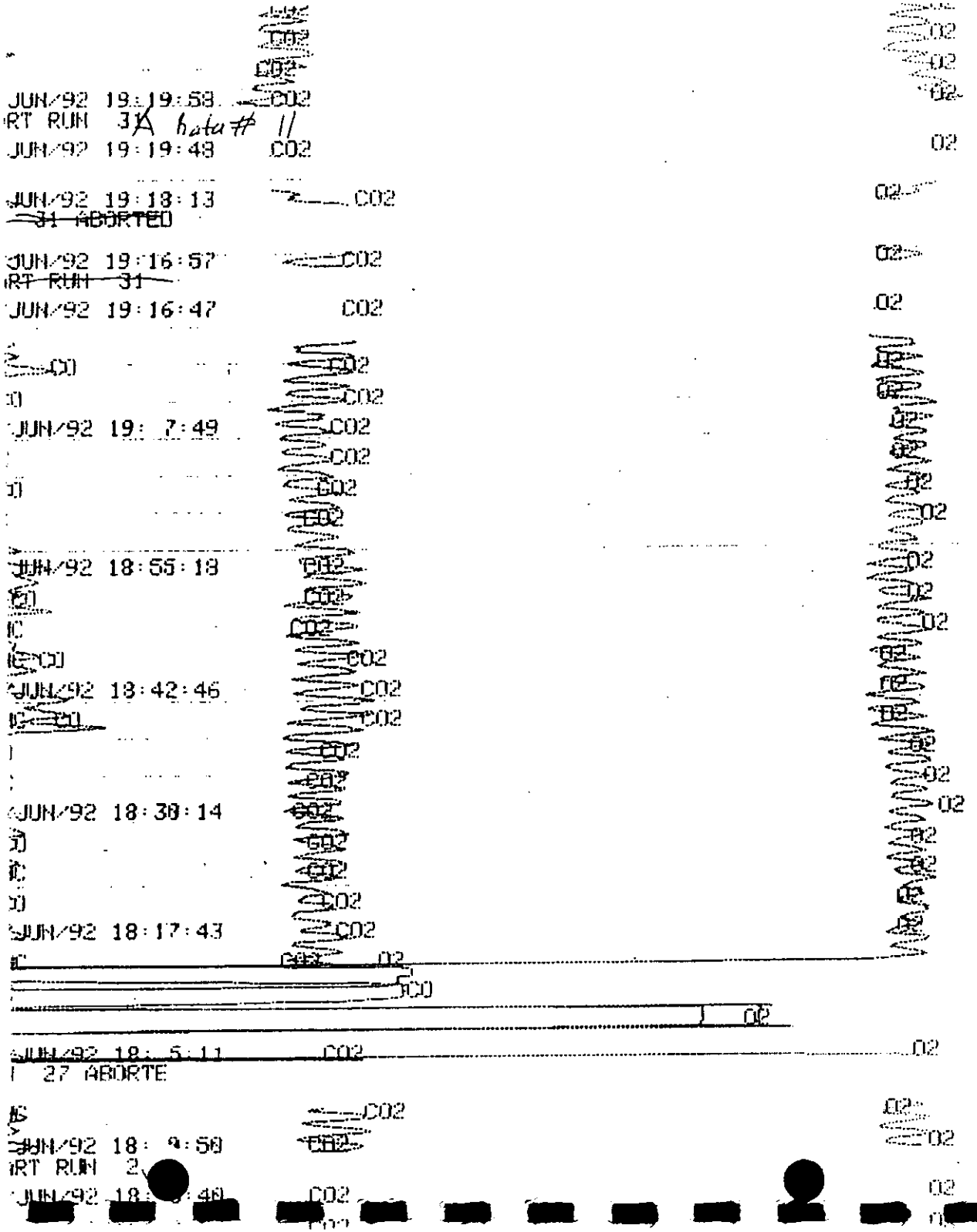

/JUN/92 15:
/JUN/92 15: 40
UN 2 ENDED
CO
/JUN/92 15:53:33
THC
CO
THC
6/JUN/92 15:41: 1
CO
THC
CO
6/JUN/92 15:28:38
START RUN 2
16/JUN/92 15:28:20
16/JUN/92 15:28:13
RUN 2 ENDED
THC
6/JUN/92 15:23: 6
CO
THC
CO
6/JUN/92 15:10:35
THC
CO
THC
16/JUN/92 14:58: 3
START RUN 2
16/JUN/92 14:57:53
CO
THC
CO
16/JUN/92 14:47: 4
THC
CO
THC
16/JUN/92 14:34:33
CO
THC
CO2
O2
C-24


THC
CO
6/JUN/92 16:41:58
CO
THC
CO
6/JUN/92 16:34:26
START RUN 24 Rate 8
6/JUN/92 16:29:16
6/JUN/92 16:29: 9
RUN 23 ENDED
Rate 7
THC
6/JUN/92 16:24: 2
CO
THC
CO
6/JUN/92 16:11:38
THC
CO
THC
6/JUN/92 15:58:58
START RUN 22 Rate 7
6/JUN/92 15:58:48
6/JUN/92 15:58:40
RUN 22 ENDED
CO
6/JUN/92 15:53:33
THC
CO
THC
6/JUN/92 15:41: 1
CO
THC
CO
6/JUN/92 15:28:38
START RUN 21
6/JUN/92 15:28:28
6/JUN/92 15:13
RUN 21 ENDED

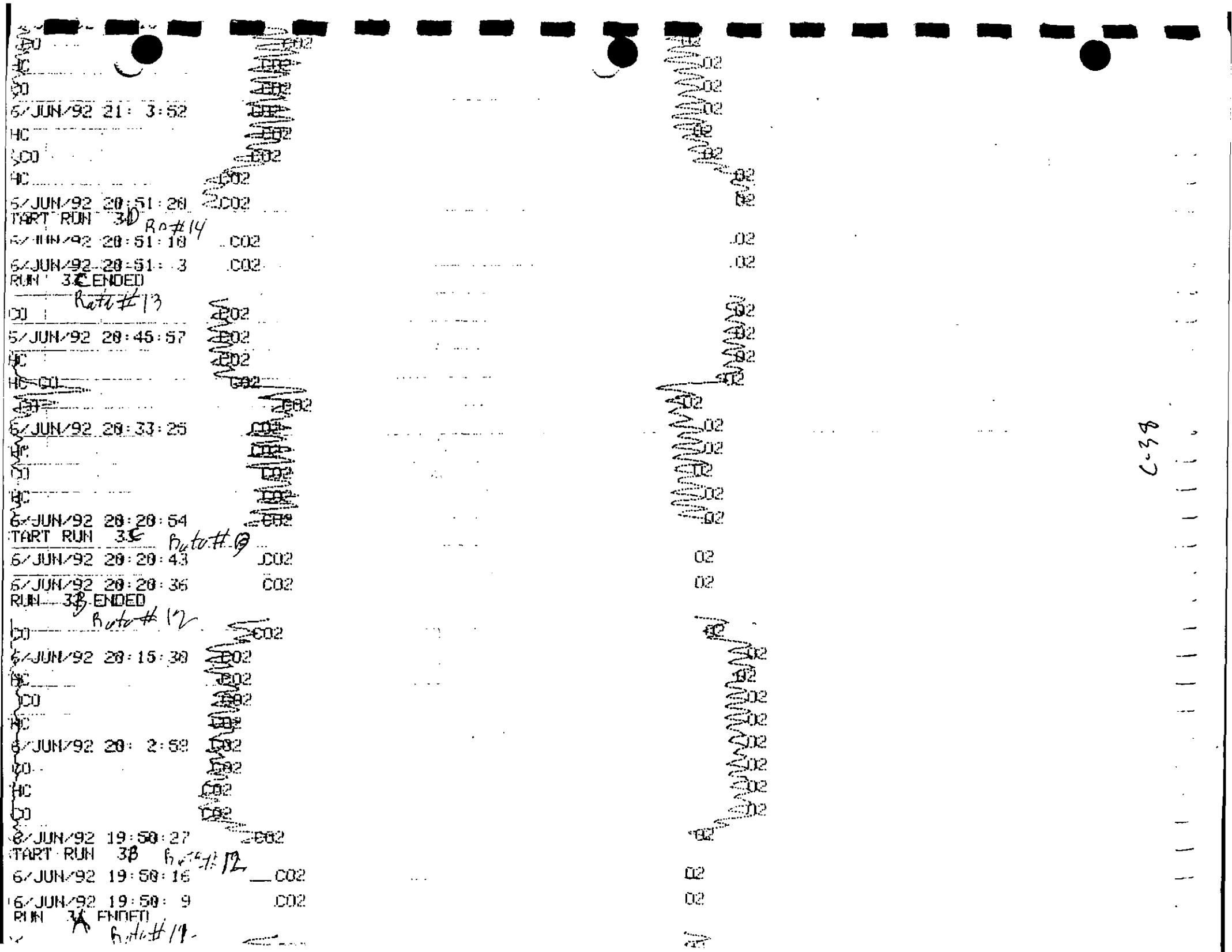
C-35


/92 18:42:46
/92 18:30:14
/92 18:17:43
/92 18: 5:11
27-ABORTE
JN/92 18: 0:58
RUN 27
JN/92 18: 0:46
UN/92 18: 0:33
2ª ENDED
Rota 10
UN/92 17:55:25
JUN/92 17:42:54
JUN/92 17:30:22
RT_RUN 2ª Rota 10
JUN/92 17:38: 4
N 2ª ENDED
Rota 9
/92 17:24:57
CO2
CO
02

C-36


JUN/92 19:19:53
RT RUN 31A
JUN/92 19:19:48
JUN/92 19:18:13
31 ABORTED
JUN/92 19:16:57
RT RUN 31
JUN/92 19:16:47
JUN/92 19: 7:49
JUN/92 18:55:18
JUN/92 18:42:46
JUN/92 18:30:14
JUN/92 18:17:43
JUN/92 18: 5:11
27 ABORTE
JUN/92 18: 9:58
RT RUN 2
JUN/92 18:
CO2
O2

C-37

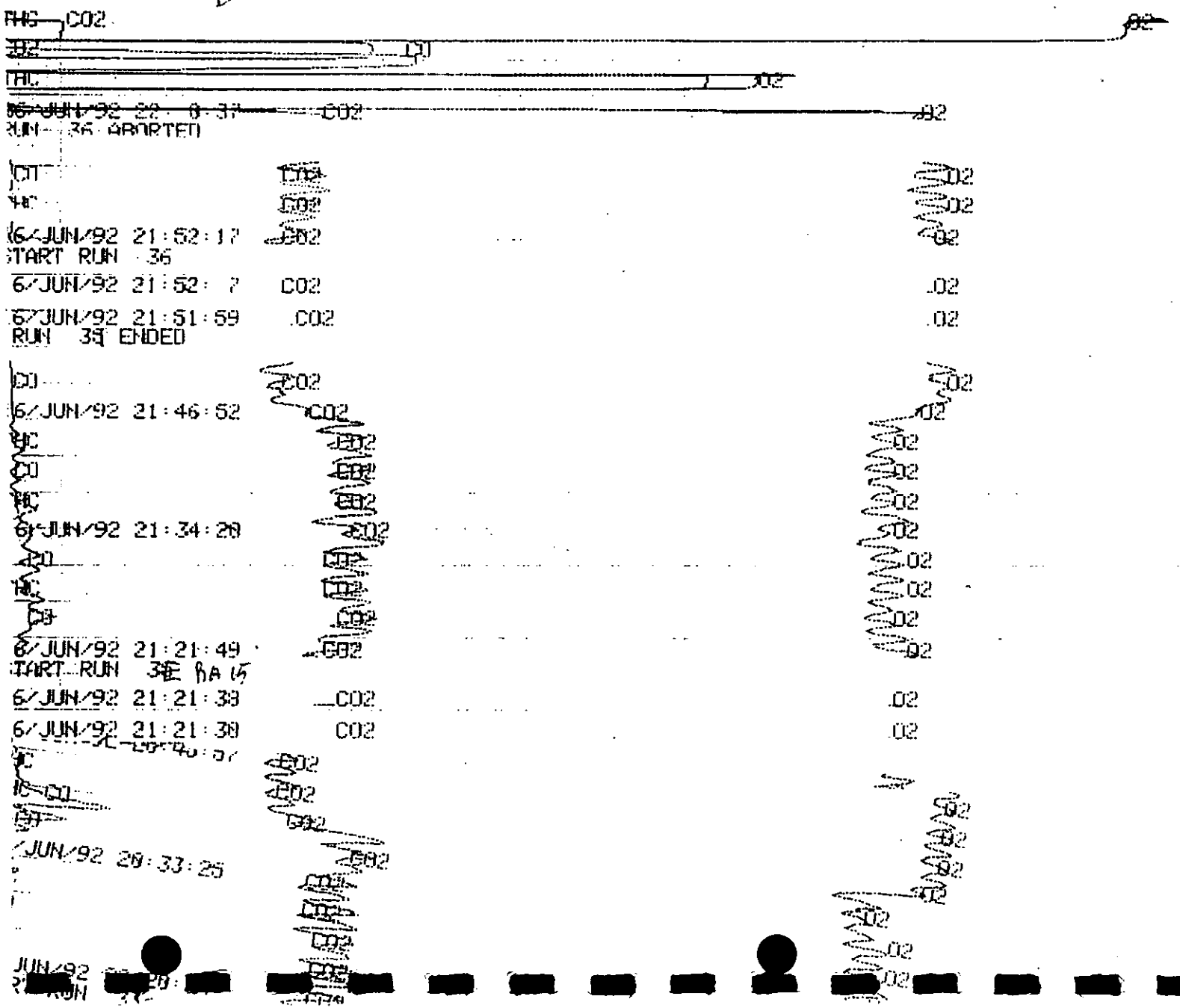

6/JUN/92 21: 3:52
6/JUN/92 20:51:28
TART RUN 3D
Run #14
6/JUN/92 20:51:10
6/JUN/92 20:51: 3
RUN 3E ENDED
Run #13
6/JUN/92 20:45:57
6/JUN/92 20:33:25
6/JUN/92 20:20:54
TART RUN 3E
Run #13
6/JUN/92 20:20:43
6/JUN/92 20:20:36
RUN 3B ENDED
Run #12
6/JUN/92 20:15:30
6/JUN/92 20: 2:58
6/JUN/92 19:50:27
TART RUN 3B
Run #12
6/JUN/92 19:50:16
6/JUN/92 19:50: 9
RUN 3A ENDED
Run #11

C-38

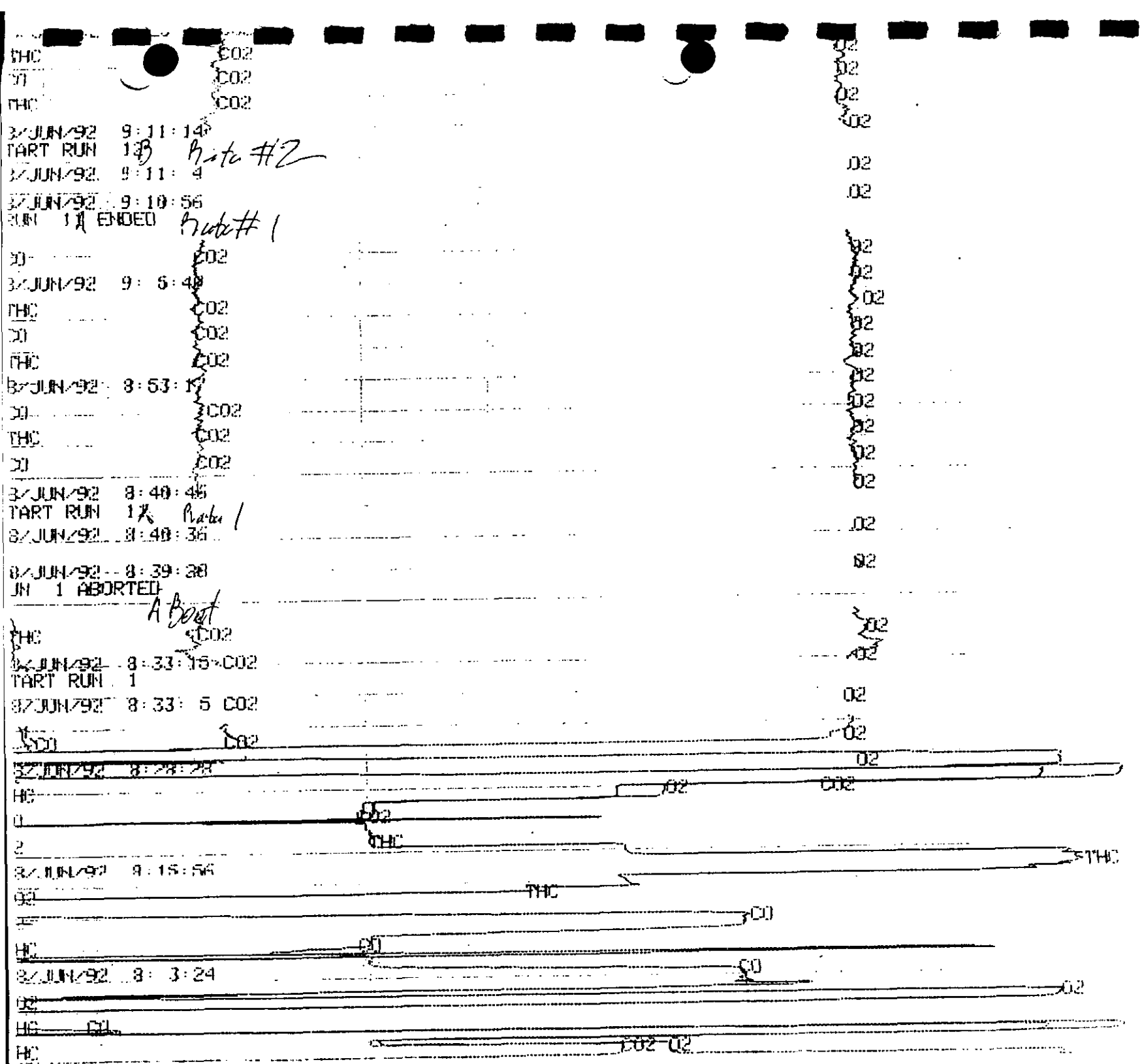
RECORDER/DATA LOGGER VRS SH

6/18/92 Kiln 2

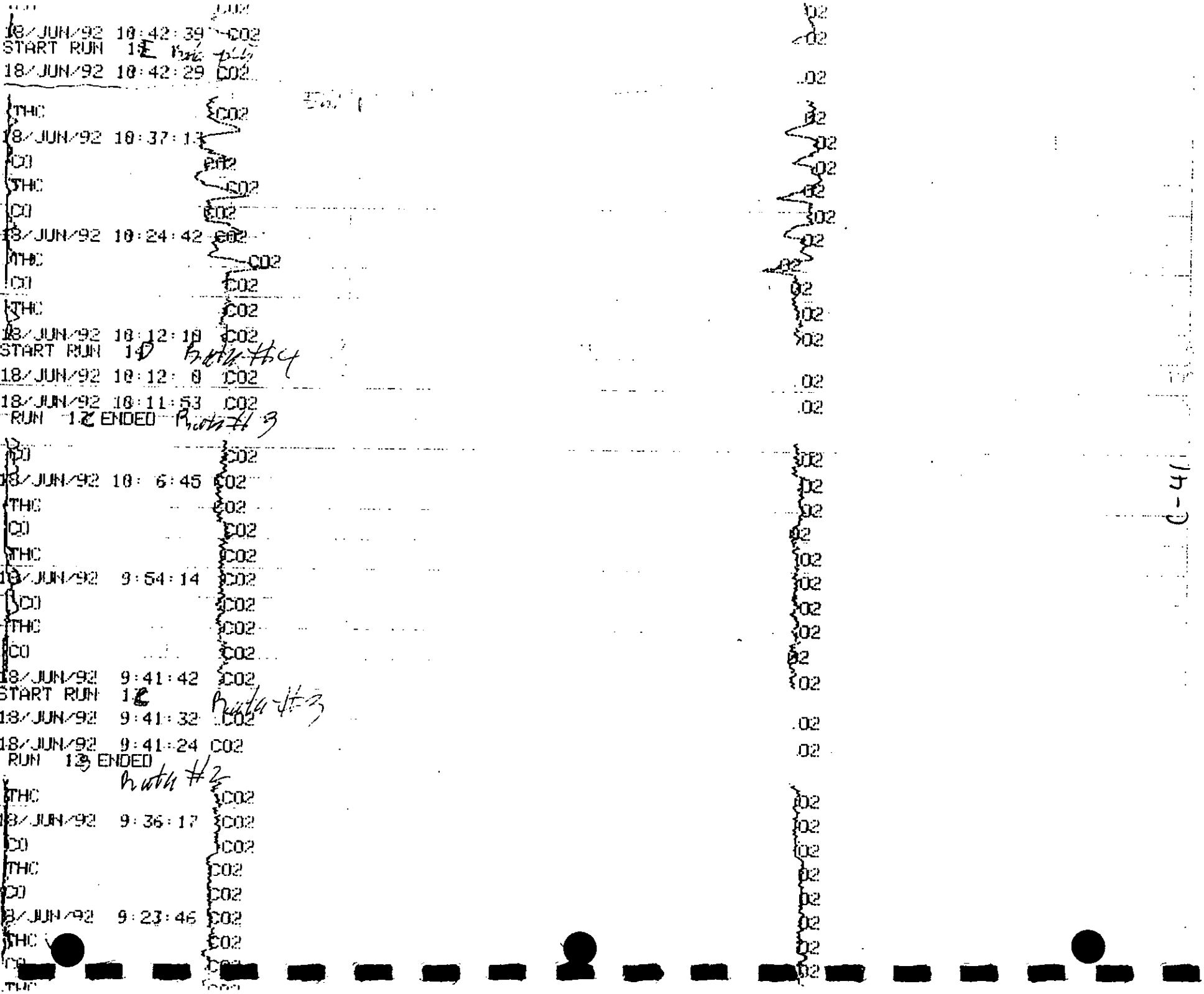
END 6/16/92

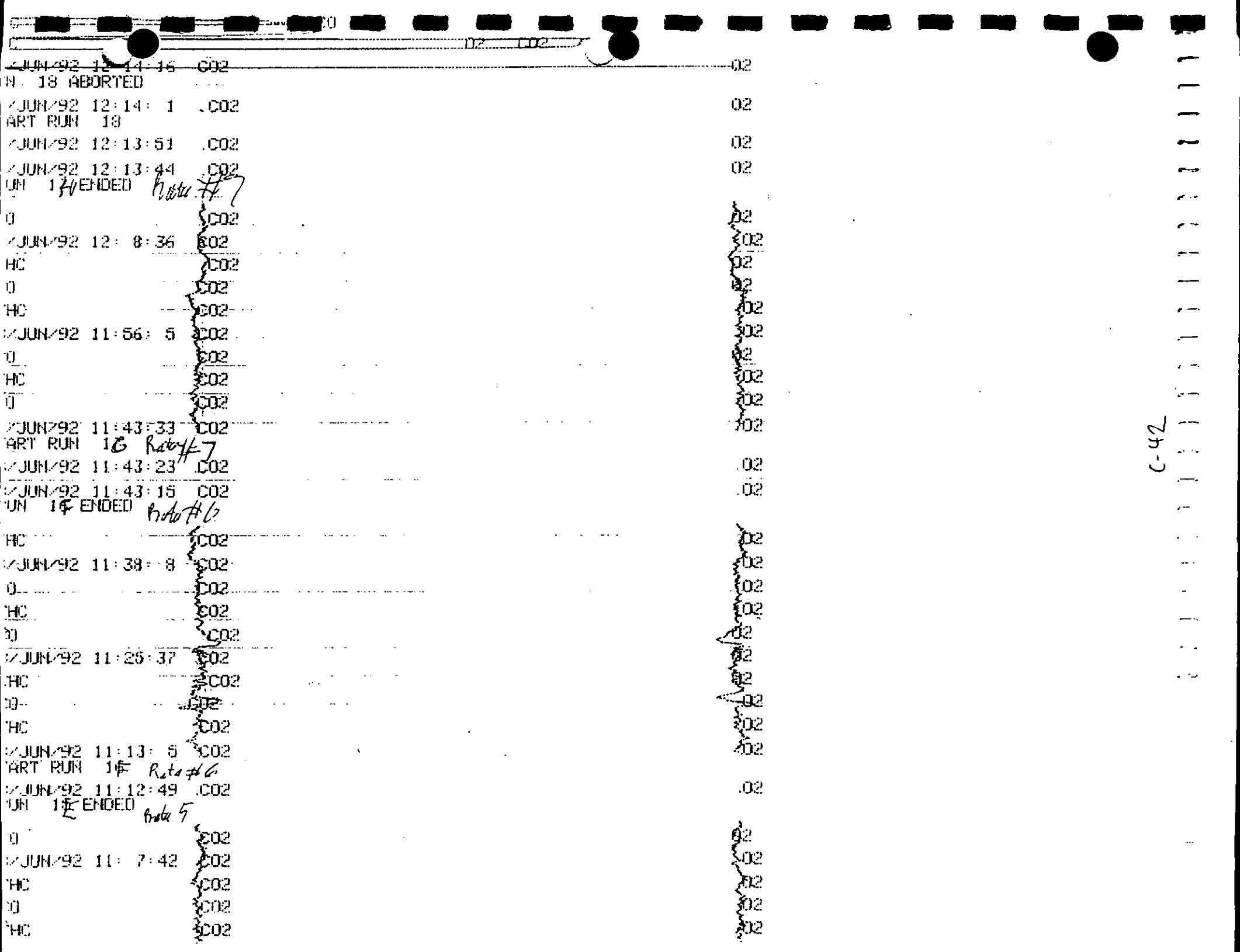


C-39


THC
CO2
O2
CO
HC
3/JUN/92 9:11:14
TART RUN 1B
Note #2
3/JUN/92 9:11: 4
3/JUN/92 9:10:56
UN 1A ENDED
Note #1
3/JUN/92 9: 5:48
3/JUN/92 8:53:1
3/JUN/92 8:40:46
TART RUN 1A
Note 1
3/JUN/92 8:40:36
3/JUN/92 8:39:38
JN 1 ABORTED
A Boost
3/JUN/92 8:33:15
TART RUN 1
3/JUN/92 8:33: 5
3/JUN/92 8:28:28
3/JUN/92 8:15:56
3/JUN/92 8: 3:24

C-40


18/JUN/92 10:42:39 CO2
START RUN 1E Run #4
18/JUN/92 10:42:29 CO2
THC CO2
18/JUN/92 10:37:13
CO CO2
THC CO2
CO CO2
18/JUN/92 10:24:42 CO2
THC CO2
CO CO2
THC CO2
18/JUN/92 10:12:10 CO2
START RUN 1D Run #4
18/JUN/92 10:12: 0 CO2
18/JUN/92 10:11:53 CO2
RUN 1E ENDED Run #3
CO CO2
18/JUN/92 10: 6:45 CO2
THC CO2
CO CO2
THC CO2
18/JUN/92 9:54:14 CO2
CO CO2
THC CO2
CO CO2
18/JUN/92 9:41:42 CO2
START RUN 1C Run #3
18/JUN/92 9:41:32 CO2
18/JUN/92 9:41:24 CO2
RUN 1B ENDED
Run #2
THC CO2
18/JUN/92 9:36:17 CO2
CO CO2
THC CO2
CO CO2
18/JUN/92 9:23:46 CO2
THC CO2
CO CO2
THC CO2


CO2 O2
/JUN/92 12:14:16 CO2
N 18 ABORTED
/JUN/92 12:14: 1 CO2
ART RUN 18
/JUN/92 12:13:51 CO2
/JUN/92 12:13:44 CO2
UN 17 ENDED Rate #7
0
/JUN/92 12: 8:36
HC
0
HC
/JUN/92 11:56: 5
0
HC
0
/JUN/92 11:43:33 CO2
ART RUN 16 Rate #7
/JUN/92 11:43:23 CO2
/JUN/92 11:43:15 CO2
UN 15 ENDED Rate #6
HC
/JUN/92 11:38: 8
0
HC
0
/JUN/92 11:26:37
HC
0
HC
/JUN/92 11:13: 5 CO2
ART RUN 14 Rate #6
/JUN/92 11:12:49 CO2
UN 13 ENDED Rate 5
0
/JUN/92 11: 7:42
HC
0
HC

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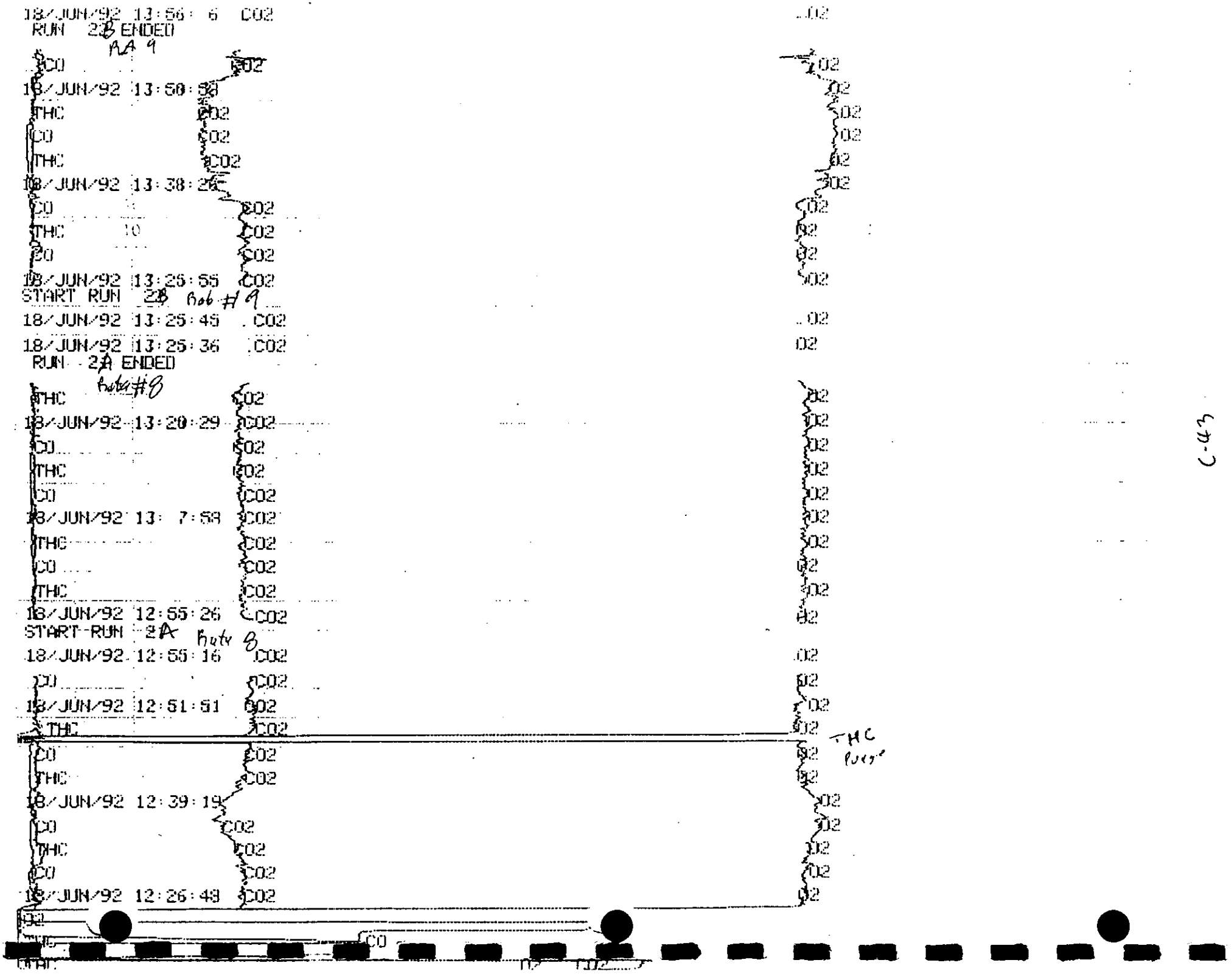
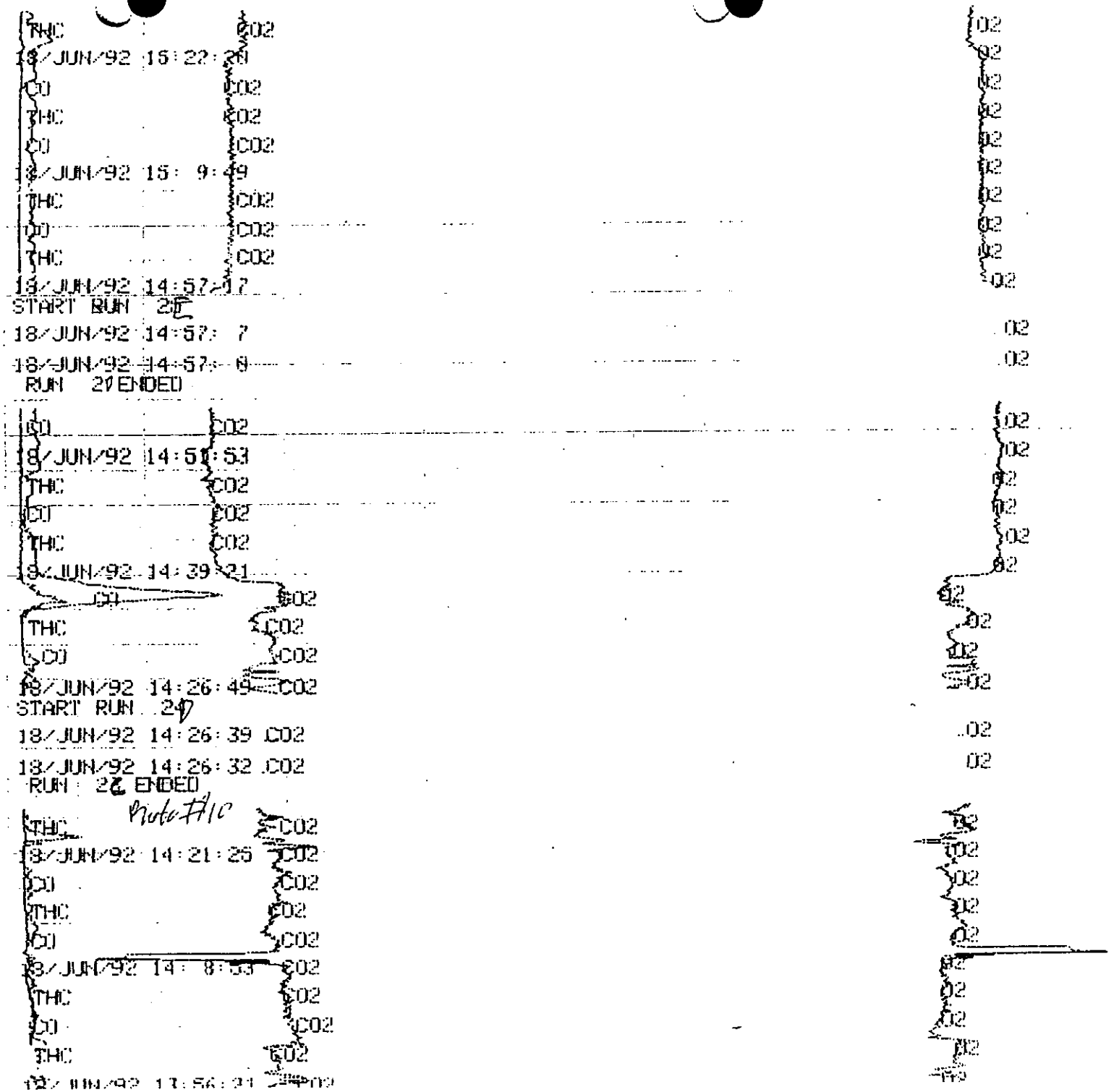
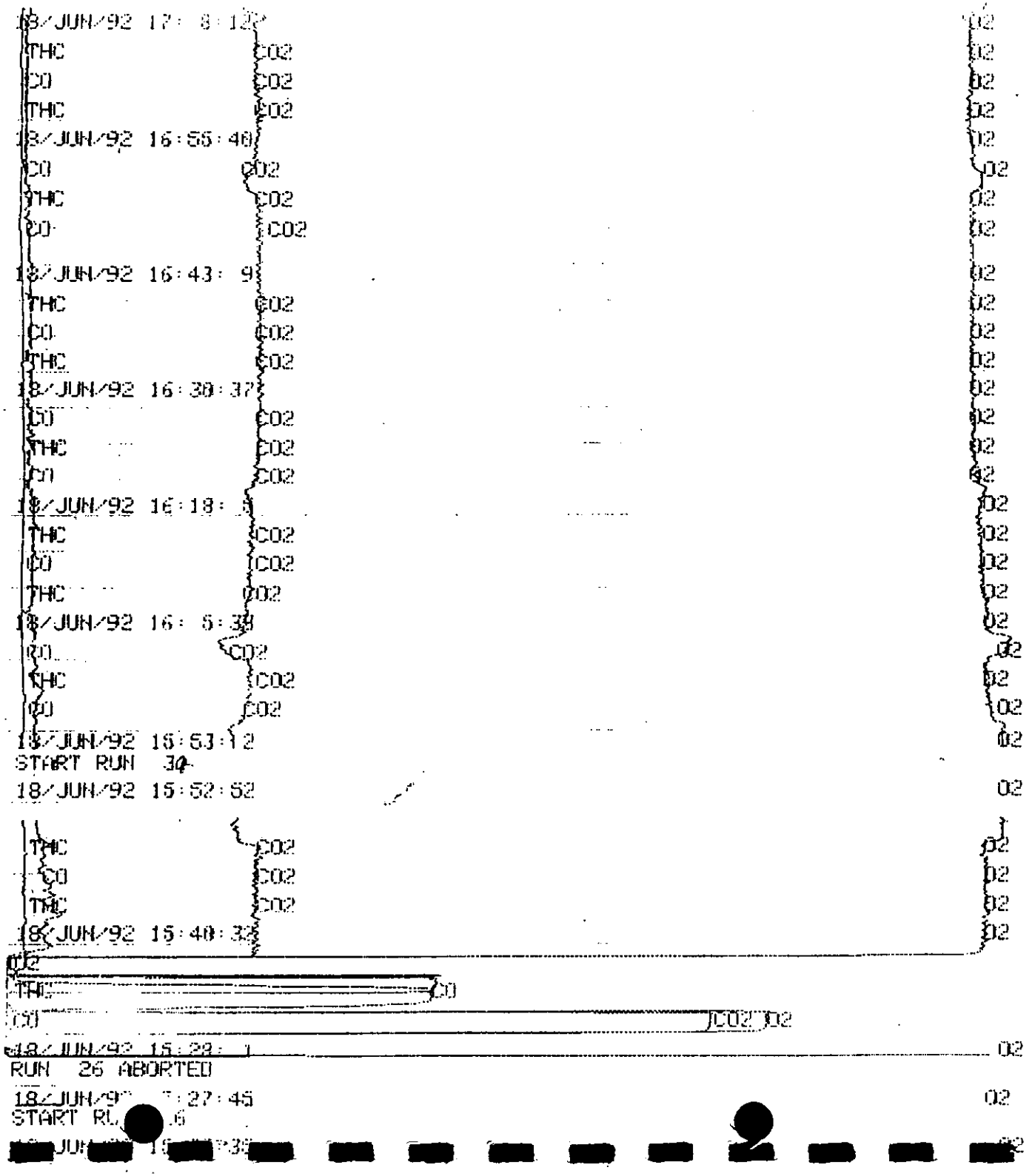
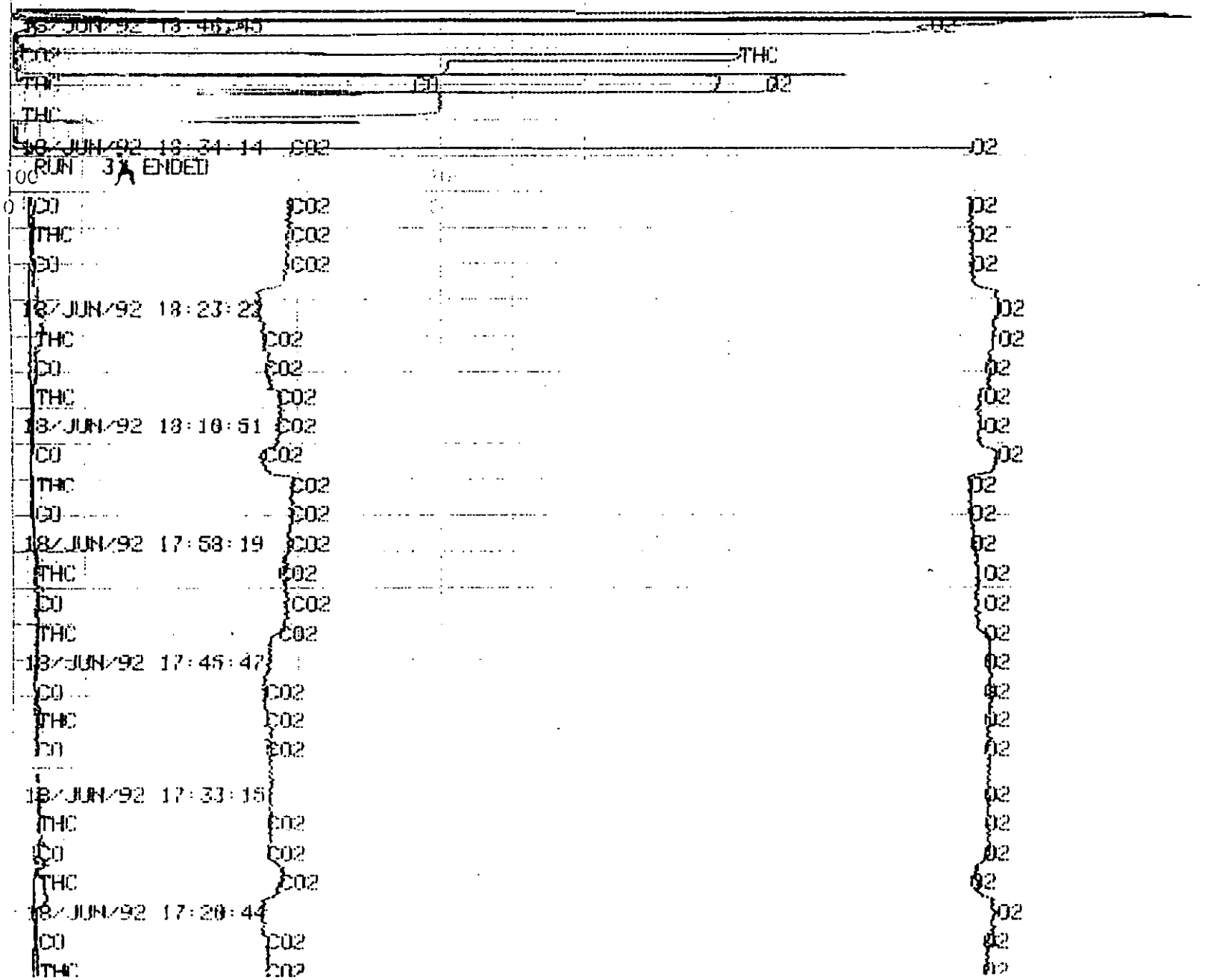

18/JUN/92 13:56: 6 CO2
RUN 2B ENDED
AA 9
CO
CO2
18/JUN/92 13:50:58
THC
CO2
CO
CO2
THC
CO2
18/JUN/92 13:38:26
CO
CO2
THC 10
CO2
CO
CO2
18/JUN/92 13:25:55 CO2
START RUN 2B Bob #9
18/JUN/92 13:25:45 CO2
18/JUN/92 13:25:36 CO2
RUN 2A ENDED
Bob #8
THC
CO2
18/JUN/92 13:20:29 CO2
CO
CO2
THC
CO2
CO
CO2
18/JUN/92 13: 7:58 CO2
THC
CO2
CO
CO2
THC
CO2
18/JUN/92 12:55:26 CO2
START RUN 2A Bob 8
18/JUN/92 12:55:16 CO2
CO
CO2
18/JUN/92 12:51:51 CO2
THC
CO2
CO
CO2
THC
CO2
18/JUN/92 12:39:19
CO
CO2
THC
CO2
CO
CO2
18/JUN/92 12:26:48 CO2
CO
CO2
THC PUMP
C-43


RUN 2ED
THC CO2
18/JUN/92 15:22:26
CO CO2
THC CO2
CO CO2
18/JUN/92 15: 9:49
THC CO2
CO CO2
THC CO2
18/JUN/92 14:57:17
START RUN 2E
18/JUN/92 14:57: 7
18/JUN/92 14:57: 6
RUN 2/ ENDED
CO CO2
18/JUN/92 14:51:53
THC CO2
CO CO2
THC CO2
18/JUN/92 14:39:21
CO CO2
THC CO2
CO CO2
18/JUN/92 14:26:49 CO2
START RUN 2D
18/JUN/92 14:26:39 CO2
18/JUN/92 14:26:32 CO2
RUN 2C ENDED
Note #10
THC CO2
18/JUN/92 14:21:25 CO2
CO CO2
THC CO2
CO CO2
18/JUN/92 14: 8:53 CO2
THC CO2
CO CO2
THC CO2
CO2
CO2


18/JUN/92 17: 8:12
THC
CO
THC
18/JUN/92 16:55:46
CO
THC
CO
18/JUN/92 16:43: 9
THC
CO
THC
18/JUN/92 16:30:37
CO
THC
CO
18/JUN/92 16:18: 5
THC
CO
THC
18/JUN/92 16: 5:33
CO
THC
CO
18/JUN/92 15:53:12
START RUN 30
18/JUN/92 15:52:52
THC
CO
THC
18/JUN/92 15:40:32
CO2
THC
CO
18/JUN/92 15:28: 1
RUN 26 ABORTED
18/JUN/92 15:27:45
START RUN 26

END 6/18/92 End Kiln 2 Solite Leakville



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Scott Specialty Gases a division of Scott Environmental Technology, Inc.
PLUMSTEADVILLE, PA. 18949 PHONE: (215) 766-8861 TWX: 510-665-9344

I E A
120 SOUTH CENTER COURT
SUITE 200
MORRISVILLE NC 27560

Date: MARCH 25, 1992
Our Project No.: 1201432
Your P.O. No.: 3476

Gentlemen:

Thank you for choosing Scott for your Specialty Gas needs. The analyses for the gases ordered, as reported by our laboratory, are listed below. Results are in volume percent, unless otherwise indicated.

ANALYTICAL REPORT

Cyl. No. ALM028446	Analytical Accuracy +/-1%
Component	Concentration
PPM (BY VOLUME) IN NITROGEN	
CARBON MONOXIDE	= 297
NIST TRACEABLE TO SRM1681	

Cyl. No. ALM026283	Analytical Accuracy +/-1%
Component	Concentration
PPM (BY VOLUME) IN NITROGEN	
CARBON MONOXIDE	= 598
NIST TRACEABLE TO CRM1680	

Cyl. No.	Analytical Accuracy
Component	Concentration

Cyl. No.	Analytical Accuracy
Component	Concentration

CERTIFIED

Analyst T. Sassaman
T. SASSAMAN

Approved By J. Ernst
J. ERNST

The only liability of this Company for gas which fails to comply with this analysis shall be replacement thereof by the Company without extra cost.

Scott Specialty Gases, Inc.

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Project No 37257

Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	IL-1420	Cylinder pressure 1900 psig.	Date of assay: 4-14-92
Component		Certified concentration	Expiration date: 10-14-93
PROPANE		30.1 PPM	
NITROGEN		Balance	

Standard		Analyzer	
Type	SRM16676	Make	: VARIAN
Concentration	47.3 PPM	Model	: VA3300
Cylinder #	FF27570	Serial number	: 7945
		Analytical principle	: FID
		Date of calibration	: 4-6-92

Raw data units: AREA		Concentration of Customer Cylinder
Analysis 4-14-92		
Z1=0.0000 R1=276504.0 T1=176102.0		30.1 PPM
R2=276218.0 Z2=0.0000 T2=176529.0		30.2 PPM
Z3=0.0000 T3=175806.0 R3=277484.0		30.0 PPM

Analyst Walter Schatz

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

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Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	ALM008152	Cylinder pressure 2000 psig.	Date of assay: 4-13-92
Component		Certified concentration	Expiration date: 10-13-93
PROPANE		50.5 PPM	
NITROGEN		Balance	

Standard		Analyzer	
Type	SRM2651	Make	: VARIAN
Concentration	98.1 PPM	Model	: VA3300
Cylinder #	CAL-4127	Serial number	: 7945
		Analytical principle	: FID
		Date of calibration	: 4-9-92

Raw data units: AREA			Concentration of Customer Cylinder
Analysis	4-13-92		
Z1=0.0000	R1=574086.0	T1=294275.0	50.3 PPM
R2=571200.0	Z2=0.0000	T2=294134.0	50.5 PPM
Z3=0.0000	T3=295045.0	R3=571272.0	50.7 PPM

Analyst Walter Salter

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

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Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	AAL19791	Cylinder pressure 2000 psig.	Date of assay: 4-13-92
Component		Certified concentration	Expiration date: 10-13-93
PROPANE		85.5 PPM	
NITROGEN		Balance	

Standard		Analyzer	
Type	SRM2651	Make	: VARIAN
Concentration	98.1 PPM	Model	: VA3300
Cylinder #	CAL-4127	Serial number	: 7945
		Analytical principle	: FID
		Date of calibration	: 4-9-92

Raw data units:	AREA	Concentration of Customer Cylinder
Analysis	4-13-92	
Z1=0.0000 R1=574086.0 T1=498474.0		85.2 PPM
R2=571200.0 Z2=0.0000 T2=498512.0		85.6 PPM
Z3=0.0000 T3=499624.0 R3=571272.0		85.8 PPM

Analyst Walter Salts

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

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Shipped to:
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JERRY HOWSER
121E SOUTH CENTER COURT
MORRISVILLE NC 27560
Project number 35429

Certified per E.P.A. Protocol #1 Procedure #G1 Section number 3.0.4
Certified accuracy +/- 1% NIST traceable

Cylinder number	Cylinder pressure	Date of assay
ALM028490	1950 p.s.i.g.	02-19-1992

Component	Certified concentration	Expiration date
Oxygen	21.6 %	8-19-1993
Nitrogen	Balance gas	

Standard		Analyzer	
Type	: CRM2659	Make	: BECKMAN O2
Concentration	: 20.67 %	Model	: 755
Cylinder number	: AAL18600	Serial number	: 2002452
		Analytical principle	: PARAMAGNETIC
		Date of calibration	: 02-12-1992

Raw data units : VOLT	Drift Compensation	Concentration of customer cylinder	Calibration curve equations
			X = T/10^XFACTOR
			Y = E*X^4+D*X^3+C*X^2+B*X
First analysis 02-19-1992			Conc = (Y*K+A)*10^YFACTOR
Z=0.00207 R=0.76877 T=0.80459	K=100927.797	21.6 %	A= -.0001807306
R=0.77254 Z=0.00323 T=0.80481	K=100434.797	21.5 %	B= 2.664007
Z=0.00311 T=0.80498 R=0.77190	K=100518.102	21.6 %	C= 0
			D= 0
Second Analysis Not Required			E= 0
			X FACTOR = 0
Z=0.00000 R=0.00000 T=0.00000	K= 0.000	0.0 %	Y FACTOR = 5
R=0.00000 Z=0.00000 T=0.00000	K= 0.000	0.0 %	
Z=0.00000 T=0.00000 R=0.00000	K= 0.000	0.0 %	

Analyst J Warren
Jay Warren 02-19-1992

Approved by Ted Neeme
Mark S. Sirinides / Ted Neeme

C-51

Scott Specialty Gases, Inc.

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Project No 37257

Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	ALM029161	Cylinder pressure 2000 psig.	Date of assay: 4-13-92
Component		Certified concentration	Expiration date: 10-13-93
CARBON DIOXIDE		6.02 %	
NITROGEN		Balance	

Standard		Analyzer	
Type	CRM1675	Make	: PERKIN-ELMER
Concentration	14.02 %	Model	: SIGMA 3B
Cylinder #	ALM001315	Serial number	: 002490700023
		Analytical principle	: TCD
		Date of calibration	: 1-21-92

Raw data units:	AREA	:	: Concentration of Customer Cylinder	:
Analysis	4-13-92	:	:	:
Z1=0.0000 R1=29010.0	T1=12449.0	:	: 6.02 %	:
R2=28976.0 Z2=0.0000	T2=12443.0	:	: 6.02 %	:
Z3=0.0000 T3=12422.0	R3=28940.0	:	: 6.02 %	:

Analyst Al Rojas

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

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Scott Specialty Gases, Inc.

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ATTN: DAVID P.
Project No 37257

Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	ALM029161	Cylinder pressure 2000 psig.	Date of assay: 4-15-92
Component		Certified concentration	Expiration date: 10-15-93
OXYGEN		7.49 %	
NITROGEN		Balance	

Standard		Analyzer	
Type	CRM2658	Make	: BECKMAN
Concentration	10.08 %	Model	: 755
Cylinder #	AAL18590	Serial number	: 2002571
		Analytical principle	: Paramagnetic
		Date of calibration	: 3-9-92

Raw data units: VOLT			:	Concentration of Customer Cylinder
Analysis 4-15-92			:	
Z1=0.0006	R1=0.37969	T1=0.28235	:	7.50 %
R2=0.37939	Z2=0.0008	T2=0.28196	:	7.49 %
Z3=0.0004	T3=0.28189	R3=0.37984	:	7.48 %

Analyst Al Rojas

Approved by Mark S. Sirinides/Ted Neeme

C-53

Scott Specialty Gases, Inc.

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Project No 37257

Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	ALM029165	Cylinder pressure 2000 psig.	Date of assay: 4-13-92
Component		Certified concentration	Expiration date: 10-13-93
CARBON DIOXIDE		16.98 %	
NITROGEN		Balance	

Standard		Analyzer	
Type	CRM1675	Make	: PERKIN-ELMER
Concentration	14.02 %	Model	: SIGMA 3B
Cylinder #	ALM001315	Serial number	: 002490700023
		Analytical principle	: TCD
		Date of calibration	: 1-21-92

Raw data units:		AREA		Concentration of Customer Cylinder
Analysis		4-13-92		
Z1=0.0000	R1=29010.0	T1=35140.0		16.90 %
R2=28976.0	Z2=0.0000	T2=35164.0		17.01 %
Z3=0.0000	T3=34986.0	R3=289240.0		16.95 %

Analyst Al Rojas

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

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MORRISVILLE, NC 27560
ATTN: DAVID P.
Project No 37257

Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	ALM029165	Cylinder pressure 2000 psig.	Date of assay: 4-15-92
Component		Certified concentration	Expiration date: 10-15-93
OXYGEN		21.0 %	
NITROGEN		Balance	

Standard		Analyzer	
Type	CRM2659	Make	: BECKMAN
Concentration	20.67 %	Model	: 755
Cylinder #	AAL18600	Serial number	: 2002571
		Analytical principle	: Paramagnetic
		Date of calibration	: 4-15-92

Raw data units:	VOLT		Concentration of Customer Cylinder
Analysis	4-15-92		
Z1=0.0004	R1=0.77744	T1=0.79279	21.1 %
R2=0.77631	Z2=0.0010	T2=0.78802	21.0 %
Z3=0.0008	T3=0.78794	R3=0.77464	21.0 %

Analyst Al Rojas

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

C-55

Scott Specialty Gases, Inc.

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SUITE 200
MORRISVILLE, NC 27560
Project No 37257

Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	ALM029168	Cylinder pressure 2000 psig.	Date of assay: 4-15-92
Component		Certified concentration	Expiration date: 10-15-93
OXYGEN		12.95 %	
NITROGEN		Balance	

Standard		Analyzer	
Type	CRM2658	Make	: BECKMAN
Concentration	10.08 %	Model	: 755
Cylinder #	AAL18590	Serial number	: 2002571
		Analytical principle	: Paramagnetic
		Date of calibration	: 4-15-92

Raw data units:	VOLT	:	: Concentration	:
		:	: of Customer	:
		:	: Cylinder	:
Analysis	4-15-92	:	:	:
		:	:	:
Z1=0.0009	R1=0.37879 T1=0.48797	:	: 12.99 %	:
R2=0.37942	Z2=0.0004 T2=0.48713	:	: 12.94 %	:
Z3=0.0003	T3=0.48695 R3=0.38010	:	: 12.91 %	:
		:	:	:
		:	:	:

Analyst Al Rojas

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

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Scott Specialty Gases, Inc.

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SUITE 200
MORRISVILLE, NC 27560
Project No 37257

Certified per E.P.A. Protocol # 1 Procedure #G1 Section # 3.0.4
Certified accuracy +/- 1 % NIST Traceable

Cylinder number	ALM029168	Cylinder pressure 2000 psig.	Date of assay: 4-13-92
Component		Certified concentration	Expiration date: 10-13-93
CARBON DIOXIDE		10.04 %	
NITROGEN		Balance	

Standard		Analyzer	
Type	CRM1675	Make	: PERKIN-ELMER
Concentration	14.02 %	Model	: SIGMA 3B
Cylinder #	ALM001315	Serial number	: 002490700023
		Analytical principle	: TCD
		Date of calibration	: 1-21-92

Raw data units:	AREA		: Concentration of Customer Cylinder
Analysis	4-13-92		
Z1=0.0000	R1=29010.0	T1=20796.0	: 10.05 %
R2=28976.0	Z2=0.0000	T2=20775.0	: 10.05 %
Z3=0.0000	T3=20713.0	R3=28940.0	: 10.03 %

Analyst Al Rojas

Approved by Ted Neeme
Mark S. Sirinides/Ted Neeme

C-57

Appendix D

Analytical Reports and Chain-of-Custody Records

Control No. 001422

METHOD 5

SAMPLE ANALYTICAL FORM

Plant Solite - Cascade Run number Run 1 K2

Sample Location K2

Sample type	Sample identifiable	Liquid level marked and/or container sealed
Acetone rinse	K2-M5-A-FHACE	—
filter(s)	K2-M5-1-PF	—

Acetone rinse beaker 311 rinse volume ($V_a w$) 100 ml

Acetone blank residue concentration (C_a) _____ g/ml

$W_a = C_a V_a w$ = ( ) ( ) = _____ g

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 111.3595 g

Date/time/RH of wt 6/25/92 - 14:35 - 40% RH Gross wt 111.3594 g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 111.3595 g

Tare wt 111.3543 g

Less acetone blank wt (W_a) _____ g

Weight of particulate in acetone rinse (m_a) _____ g

Filter(s) container number 0270

Date/time/RH of wt 6/22/92 - 1430 - 46% RH. Gross wt 0.3635 g

Date/time/RH of wt 7/1/92 - 1000 - 30% RH Gross wt 0.3620 g

Date/time/RH of wt 7/2/92 - 0715 - 30% RH Gross wt 0.3622 g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 0.3621 g

Tare wt 0.3609 g

Less filter blank wt (F_a) _____ g

Weight of particulate on filter(s) (m_f) _____ g

Weight of particulate in acetone rinse(m_a) _____ g

Total weight of particulate (m_n) _____ g

Note: In no case should a blank residue >0.01 mg/g or 0.001% of the weight of acetone used to subtracted from the sample weight.

Remarks _____

Signature of analyst: Ellen Gobrach

Signature of Reviewer: _____

c:\airdiv\form\s-analyt.frm

Control No. 001423

METHOD 5

SAMPLE ANALYTICAL FORM

Plant Solite Cascade Run number Run 2 K2

Sample Location K-2 Location

Sample type	Sample identifiable	Liquid level marked and/or container sealed
Acetone rinse	K2-MS-2-FHACE	✓
filter(s)	K2-MS-2-PF	✓

Acetone rinse beaker 165 rinse volume ($V_a w$) 150 ml

Acetone blank residue concentration (C_a) _____ g/ml

$W_a = C_a V_a w$ = ( ) ( ) = _____ g

Date/time/RH of wt 6/27/92 - 1430 - 46% RH Gross wt 107.5997 g

Date/time/RH of wt 6/26/92 - 14:35 - 40% RH Gross wt 107.6000 g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 107.5999 g

Tare wt 107.5916 g

Less acetone blank wt (W_a) _____ g

Weight of particulate in acetone rinse (m_a) _____ g

Filter(s) container number Q 308

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 0.3672 g

Date/time/RH of wt 7/1/92 - 1000 HRS - 30% RH Gross wt 0.3648 g

Date/time/RH of wt 7/2/92 - 0715 HRS - 30% RH Gross wt 0.3653 g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt .3658 g

Tare wt 0.3659 g

Less filter blank wt (F_a) _____ g

Weight of particulate on filter(s) (m_f) _____ g

Weight of particulate in acetone rinse(m_a) _____ g

Total weight of particulate (m_n) _____ g

Note: In no case should a blank residue > 0.01 mg/g or 0.001% of the weight of acetone used to subtracted from the sample weight.

Remarks _____

Signature of analyst: John W. Eshom

Signature of Reviewer: _____

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Control No. 001424

METHOD 5

SAMPLE ANALYTICAL FORM

Plant Solite Concorde Run number Run 3 K2

Sample Location K2

Sample type	Sample identifiable	Liquid level marked and/or container sealed
Acetone rinse	K2-MS-3-FHACE	✓
filter(s)	K2-MS-3-PF	✓

Acetone rinse beaker 308 rinse volume ($V_a w$) 130 ml

Acetone blank residue concentration (C_a) _____ g/ml

$W_a = C_a V_a w$ = ( ) ( ) = _____ g

Date/time/RH of wt 6/22/92 - 1430HRS - 46% RH Gross wt 108.0118 g

Date/time/RH of wt 6/25/92 - 14:35 - 40% RH Gross wt 108.0122 g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 108.0120 g

Tare wt 108.0054 g

Less acetone blank wt (W_a) _____ g

Weight of particulate in acetone rinse (m_a) _____ g

Filter(s) container number Q307

Date/time/RH of wt 6/22/92 - 1430 - 46% RH. Gross wt 0.3688 g

Date/time/RH of wt 7/1/92 - 1000 HRS - 30% RH Gross wt 0.3664 g

Date/time/RH of wt 7/2/92 - 0715 HRS - 30% RH Gross wt 0.3668 g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 0.3666 g

Tare wt 0.3667 g

Less filter blank wt (F_a) _____ g

Weight of particulate on filter(s) (m_f) _____ g

Weight of particulate in acetone rinse(m_a) _____ g

Total weight of particulate (m_n) _____ g

Note: In no case should a blank residue >0.01 mg/g or 0.001% of the weight of acetone used to subtracted from the sample weight.

Remarks _____

Signature of analyst: John Sokash

Signature of Reviewer: _____

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Control No. 001419

METHOD 5
SAMPLE ANALYTICAL FORM

Plant Solite Cascade VA Run number Run 1 K4

Sample Location K4 location

Sample type	Sample identifiable	Liquid level marked and/or container sealed
Acetone rinse	K4-M5-1-FHACE	—
filter(s)	K4-M5-1-PF	—

Acetone rinse beaker 232 rinse volume ($V_a w$) 175 ml

Acetone blank residue concentration (C_a) _____ g/ml

$W_a = C_a V_a w$ = ( ) ( ) = _____ g

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 119.3170 g

Date/time/RH of wt 6/25/92 - 14:44 - 40% RH Gross wt 119.3171 g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 119.3171 g

Tare wt 119.3034 g

Less acetone blank wt (W_a) _____ g

Weight of particulate in acetone rinse (m_a) _____ g

Filter(s) container number Q 261

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 0.3670 g

Date/time/RH of wt 7/1/92 - 1000 - 30% Gross wt 0.3640 g

Date/time/RH of wt 7/2/92 - 0715 - 30% Gross wt 0.3641 g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 0.3641 g

Tare wt 0.3641 g

Less filter blank wt (F_a) _____ g

Weight of particulate on filter(s) (m_f) _____ g

Weight of particulate in acetone rinse(m_a) _____ g

Total weight of particulate (m_n) _____ g

Note: In no case should a blank residue >0.01 mg/g or 0.001% of the weight of acetone used to subtracted from the sample weight.

Remarks _____

Signature of analyst: [signature] Signature of Reviewer: _____

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Control No. 001420

METHOD 5
SAMPLE ANALYTICAL FORM

Plant Solite Cascade VA Run number Run 2-K4

Sample Location K4

Sample type	Sample identifiable	Liquid level marked and/or container sealed
Acetone rinse	K4-MS-2-RINSE	✓
filter(s)	K4-MS-2-PF	✓

Acetone rinse beaker 319 rinse volume ($V_a w$) 180 ml

Acetone blank residue concentration (C_a) _____ g/ml

$W_a = C_a V_a w$ = ( ) ( ) = _____ g

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 109.5178 g

Date/time/RH of wt 6/25/92 - 1435 - 40% RH Gross wt 109.5177 g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 109.5178 g

Tare wt 109.5081 g

Less acetone blank wt (W_a) _____ g

Weight of particulate in acetone rinse (m_a) _____ g

Filter(s) container number Q264

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 0.3700 g

Date/time/RH of wt 7/1/92 - 1000 - 30% RH Gross wt 0.3677 g

Date/time/RH of wt 7/2/92 - 0715 - 30% RH Gross wt 0.3680 g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 0.3679 g

Tare wt 0.3678 g

Less filter blank wt (F_a) _____ g

Weight of particulate on filter(s) (m_f) _____ g

Weight of particulate in acetone rinse(m_a) _____ g

Total weight of particulate (m_n) _____ g

Note: In no case should a blank residue >0.01 mg/g or 0.001% of the weight of acetone used to subtracted from the sample weight.

Remarks _____

Signature of analyst: Ellen Schlash

Signature of Reviewer: _____

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Control No. 001421

METHOD 5
SAMPLE ANALYTICAL FORM

Plant Solite Cascade VA Run number Run 3 - K4

Sample Location K-4 Location

Sample type	Sample identifiable	Liquid level marked and/or container sealed
Acetone rinse	K4-MS-3-FHAce	—
filter(s)	K4-MS-3-PF	—

Acetone rinse beaker 166 rinse volume ($V_a w$) 155 ml

Acetone blank residue concentration (C_a) _____ g/ml

$W_a = C_a V_a w$ = ( ) ( ) = _____ g

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 105.7808 g

Date/time/RH of wt 6/26/92 - 14:35 - 40% RH Gross wt 105.7808 g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 105.7808 g

Tare wt 105.7741 g

Less acetone blank wt (W_a) _____ g

Weight of particulate in acetone rinse (m_a) _____ g

Filter(s) container number QR 263

Date/time/RH of wt 6/22/92 - 1430 - 46% RH Gross wt 0.3691 g

Date/time/RH of wt 7/1/92 - 1000 - 30% RH Gross wt 0.3667 g

Date/time/RH of wt 7/2/92 - 0715 - 30% RH Gross wt 0.3671 g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 0.3669 g

Tare wt 0.3658 g

Less filter blank wt (F_a) _____ g

Weight of particulate on filter(s) (m_f) _____ g

Weight of particulate in acetone rinse(m_a) _____ g

Total weight of particulate (m_n) _____ g

Note: In no case should a blank residue >0.01 mg/g or 0.001% of the weight of acetone used to subtracted from the sample weight.

Remarks _____

Signature of analyst: John Goliak

Signature of Reviewer: _____

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Control No. 000146

METHOD 5
BLANK ANALYTICAL FORM

Plant Solite Cascade Run number Fork 2 + K4

Sample Location Blank

Blank Identification # 154-MS-BLK-FHAcc Rinse Breaker # 162

Liquid level marked and container sealed ✓

Blank volume (V_a) 150 ml.

Date/time/RH of wt 6/22/92 — 1400 - 46% RH Gross wt 104.8691 g

Date/time/RH of wt 6/25/92 — 1444 - 40% RH Gross wt 104.8691 g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt 104.8691 g

Tare wt 104.8655 g

Weight of blank (m_a) 0.0036 g

$C_a = M_a/V_a$ = (0.0036) / (150) = 0.000024 g/ml

Note: In no case should a blank residue >0.001 mg/g of the blank weight be subtracted from the sample weight.

Filter(s) identification _____ Filter number _____

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Date/time/RH of wt _____ Gross wt _____ g

Average Gross wt _____ g

Tare wt _____ g

Difference _____ g

Note: Average difference must be less than ± 5 mg or 2% of total sample weight whichever is greater.

Remarks _____

Signature of analyst: Alan Sobard

Signature of Reviewer: _____

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RESEARCH TRIANGLE INSTITUTE

RTI

Center for Environmental Measurements and Quality Assurance

July 2, 1992

Mr. James A. Peters
IEA, Inc.
P.O. Box 12846
RTP, NC 27709

Dear James,

Enclosed are the Chromium (VI) analysis results as determined by ion chromatography, for the impinger samples received on June 19, 1992 for RTI Project No. 91C-4848-02J, IEA Inc., P.O. No. FS 1062.

If you have any questions, please call me at 919-541-6569 or Peter Grohse at 919-541-6897.

Sincerely,

Kate Luk

Kate K. Luk, Ph.D.

Ref: 91C-4848-02J
cc: W. Gutknecht
P. Grohse
C. Decker
N. Riggs

Post Office Box 12194 Research Triangle Park, North Carolina 27709-2194
Telephone 919 541-6914 Fax: 919 541-5929

RTI Project No. : 4848-02J

Samples : Impinger Samples
Company : IEA, Inc. (P.O. # FS 1062)
Analyte : Cr(VI)
Method of Analysis : Ion Chromatography / Post Column Reaction for Cr(VI)
Samples Received : 6-19-92
Report Date : 7-2-92

Sample	Total Volume mL	Cr(VI) ug/mL	Total Cr(VI) ug
K2-CR6-1-KOH	865	ND	ND
K2-CR6-2-KOH	664	ND	ND
K2-CR6-3-KOH	535	ND	ND
K4-CR6-1-KOH	983	ND	ND
K4-CR6-2-KOH	940	ND	ND
K4-CR6-3-KOH	843	ND	ND
K4-CR6-BLK-KOH	635	ND	ND
K4-CR6-BLK-H2O	195	ND	ND
Reag. Blk 0.5 N NaOH	99.0	ND	ND
Detection Limit		0.0015	

ND : Non-detectable; less than detection limit

Total Cr(VI), ug = Cr(VI), ug/mL • Total Volume, mL

RTI Project No. : 4848-02J

Samples : QC for Impinger Samples
Company : IEA, Inc. (P.O. # FS 1062)
Analyte : Cr(VI)
Method of Analysis : Ion Chromatography / Post Column Reaction for Cr(VI)
Samples Received : 6-19-92
Report Date : 7-2-92

Calibration Check Sample

Sample	Cr(VI) ug/mL Measured	Cr(VI) ug/mL Expected
QC	0.0103	0.0100
QC	0.0104	0.0100

Results of Blank, Duplicate, and Spike Analysis

Sample	Cr(VI) ug/mL Measured	Spike Cr(VI) ug/mL Measured	Spike Cr(VI) ug/mL Expected	Spike Cr(VI) % Recovery
RTI DIW Blk	ND	--	--	--
K2-CR6-1-KOH Dup	ND	--	--	--
K4-CR6-3-KOH Spk	--	0.0105	0.0100	105

JUly 2, 1992

IEA
3000 Weston Pkwy.
Cary, N.C. 27513
ATTN: JAMES PETERS

Report Date: 7/2/92
Lab/Project#: 26088
P.O. #: 1381-003

Sampling Date: Unknown
Sampler (s): Unknown
Sample Identification: 14 liquid samples identified as:

IEA 7-20

Methodology: Samples were analyzed in accordance with EPA BIF METHOD.
(Determination of HYDROGEN CHLORIDE /CHLORINE Emissions.....Ion Chromatographic Method).

Date (s) of analyses: 6/30/92 , 7/1/92

ENCLOSED ARE CHROMATOGRAMS AND QA/QC DOCUMENTATION .

CERTIFICATE OF ANALYSIS

CUSTOMER:	IEA	**DATE RECEIVED:**	6/19/92
SAMPLE TYPE:	LIQUIDS	**JOB/P.O. NUMBER:**	1381-003
PARAMETERS:	CL-	**DATE REPORTED:**	7/2/92
MARKS:	26088 07-20	**DETECTION LIMIT:**	0.05mg/L

LAB ID#	CLIENT SAMPLE ID	SAMPLE VOL.(ml)	CONC. Cl- (mg/L)	TOTAL Cl- (mg)
26088-07	K4-M5-BLK-H2SO4	275	<0.05	
26088-08	K4-M5-BLK-NaOH	255	<0.05	
26088-09	K4-M5-1-H2SO4 IMP	510	3245.77	1655
26088-10	K4-M5-2-H2SO4 IMP	520	3348.41	1741
26088-11	K4-M5-3-H2SO4 IMP	490	2843.41	1393
26088-12	K4-M5-1-NaOH IMP	380	86.71	33.0
26088-13	K4-M5-2-NaOH IMP	331	1.44	0.476
26088-14	K4-M5-3-NaOH IMP	300	69.44	20.8

SPIKE:	26088-12
%RECOVERY:	96
DUPLICATE:	26088-11
%DEVIATION:	0.01

Analyst: _____ **Reviewed by:** _____

Tarek Gharib
Analytical Chemist

CERTIFICATE OF ANALYSIS

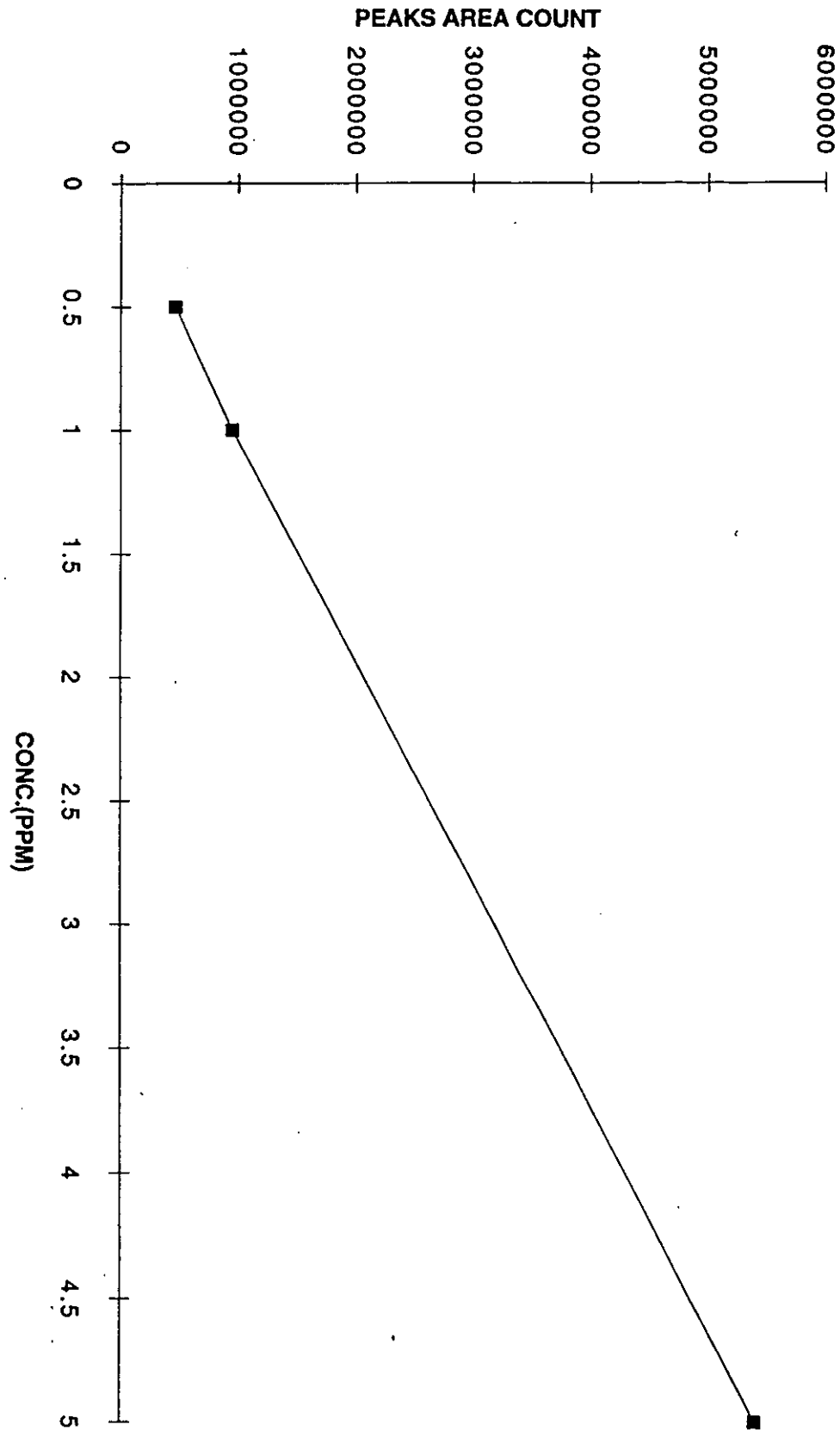
CUSTOMER:	IEA	**DATE RECEIVED:**	6/19/92
SAMPLE TYPE:	LIQUIDS	**JOB/P.O. NUMBER:**	1381-003
PARAMETERS:	CL-	**DATE REPORTED:**	7/2/92
MARKS:	26088 07-20	**DETECTION LIMIT:**	0.05mg/L

LAB ID#	CLIENT SAMPLE ID	SAMPLE VOL.(ml)	CONC. Cl- (mg/L)	TOTAL Cl- (mg)
26088-15	K2-M5-1-H2SO4 IMP	545	2449.97	1335
26088-16	K2-M5-2-H2SO4 IMP	291	3140.24	914
26088-17	K2-M5-3-H2SO4 IMP	377	2529.40	954
26088-18	K2-M5-1-NaOH IMP	415	75.36	31.3
26088-19	K2-M5-2-NaOH IMP	244	24.61	6.01
26088-20	K2-M5-3-NaOH IMP	233	47.96	11.2

SPIKE:	26088-18	
%RECOVERY:	95	
DUPLICATE:	26088-15	26088-16
%DEVIATION:	0.1	0.1

Analyst: T. Gharib
Tarek Gharib
Analytical Chemist

Reviewed by:



CHLORIDE CALIBRATION CURVE

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 READY
DATE " 6/30/92
TIME " 9:40
Memory Module / Replay Software 1.00  Installed.
AT= 1024
CS= .5
PT=10000
FI= 1.      FE= 1.      MN= 0.
PRESS 'ENTER' TO SKIP ENTRY
STORAGE MENU? (Y=YES, 'ENTER'=NO)

           FUNCTION NUMBER=

FILE NAME=" IEA
TIME       FUNCTION  VALUE
TT= .1     TF=" PM   TV= 1
TT= 15     TF=" ER   TV= 1
TT=

METHOD NUMBER:MN= 5
IF NV=0 THEN NO CALIB
IF NV=1 THEN NORMAL CALIB
IF NV>1 THEN MULTI-LEVEL CALIB
NUMBER OF LEVELS:NV=
COMPONENT TABLE...
RET TIME       RESP FACT       NAME
RT=
RRT REF PEAK:RP(I)=
SAMPLE TABLE...
ANALYST:AN=" TAREK
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU="
SAM IDX   NAME          SAM AMT     SCALE FACTOR
SI=
END OF DIALOG

CHANNEL A     INJECT  06/30/92 09:42:26  STORED TO BIN #   1
               PM 1

DATA SAVED TO BIN #   1


IEA                              06/30/92 09:42:26     CH= "A"  PS=  1.
FILE  1.     METHOD  5.     RUN   1     INDEX   1              BIN   1
ANALYST: TAREK

NAME                CONC      RT      AREA BC     RF

TOTALS              0.
```

(1)

I.E.A

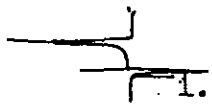
Project no

1381-003

26088 07 → 20

D.I.

CHANNEL A INJECT 06/30/92 09:46:22 STORED TO BIN # 2



.5 ppm

DATA SAVED TO BIN # 2

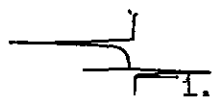
IEA 06/30/92 09:46:22 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 2 INDEX 2 BIN 2

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.62	463242	01	
TOTALS	0.		463242		

CHANNEL A INJECT 06/30/92 09:49:29 STORED TO BIN # 3



.5 ppm

TA SAVED TO BIN # 3

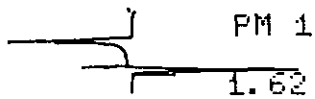
IEA 06/30/92 09:49:29 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 3 INDEX 3 BIN 3

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.62	465186	01	
TOTALS	0.		465186		

CHANNEL A INJECT 06/30/92 09:53:04 STORED TO BIN # 4



1 ppm

A SAVED TO BIN # 4

IEA 06/30/92 09:53:04 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 4 INDEX 4 BIN 4

NAME	CONC	RT	AREA BC	RF
1	0.	1.62	958083 01	
TOTALS	0.		958083	

CHANNEL A INJECT 06/30/92 09:55:53 STORED TO BIN # 5

PM 1

1.62

1 ppm

DATA SAVED TO BIN # 5

IEA 06/30/92 09:55:53 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 5 INDEX 5 BIN 5

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
1	0.	1.62	957307 01	
TOTALS	0.		957307	

CHANNEL A INJECT 06/30/92 09:59:17 STORED TO BIN # 6

PM 1

1.63

5 ppm

DATA SAVED TO BIN # 6

IEA 06/30/92 09:59:17 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 6 INDEX 6 BIN 6

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
1	0.	1.63	5423785 01	
TOTALS	0.		5423785	

CHANNEL A INJECT 06/30/92 10:02:22 STORED TO BIN # 7

PM 1

1.63

50 ppm

DATA SAVED TO BIN # 7

DATA SAVED TO BIN # 7

IEA 06/30/92 10:02:22 CH= "A" PS= 1.

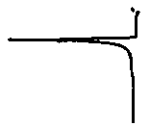
FILE 1. METHOD 5. RUN 7 INDEX 7 BIN 7

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
1	0.	1.63	5434046 01	
TOTALS	0.		5434046	

CHANNEL A INJECT 06/30/92 10:05:39 STORED TO BIN # 8

PM 1



DATA SAVED TO BIN # 8

IEA 06/30/92 10:05:39 CH= "A" PS= 1.

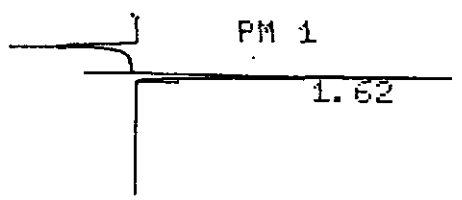
FILE 1. METHOD 5. RUN 8 INDEX 8 BIN 8

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
TOTALS	0.			

CHANNEL A INJECT 06/30/92 10:09:24 STORED TO BIN # 9

PM 1



DATA SAVED TO BIN # 9

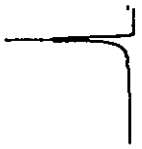
IEA 06/30/92 10:09:24 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 9 INDEX 9 BIN 9

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF

CHANNEL A INJECT 06/30/92 10:15:57 STORED TO BIN # 10



DATA SAVED TO BIN # 10

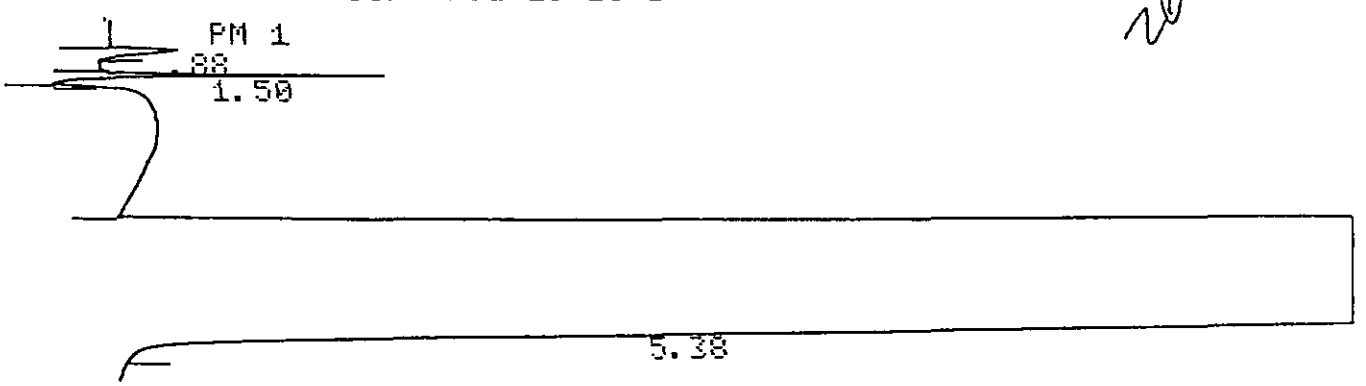
IEA 06/30/92 10:15:57 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 10 INDEX 10 BIN 10

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
TOTALS	0.			

CHANNEL A INJECT 06/30/92 10:26:37 STORED TO BIN # 11



DATA SAVED TO BIN # 11

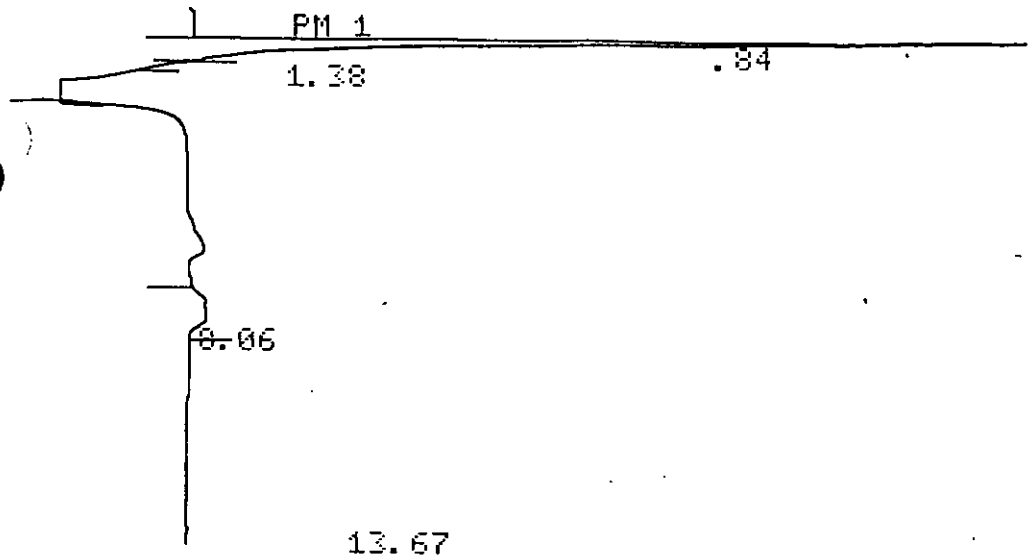
IEA 06/30/92 10:26:37 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 11 INDEX 11 BIN 11

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
1	0.	0.88	984763 01	
2	0.	1.5	1636484 03	
3	0.	5.38	324327902 01	
TOTALS	0.		326949149	

CHANNEL A INJECT 06/30/92 10:36:48 STORED TO BIN # 12



DATA SAVED TO BIN # 12

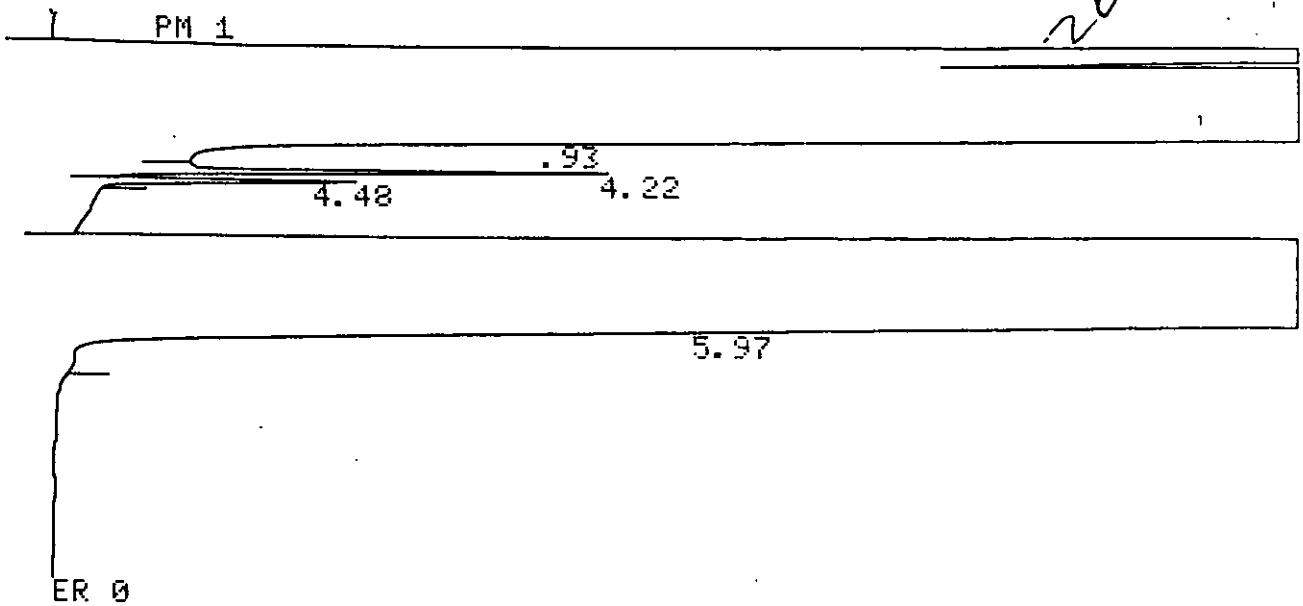
IEA 06/30/92 10:36:48 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 12 INDEX 12 BIN 12

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.84	11786122	08	
2	0.	1.38	8372	05	
3	0.	8.06	1227261	01	
TOTALS	0.		13021755		

CHANNEL A INJECT 06/30/92 10:51:34 STORED TO BIN # 13



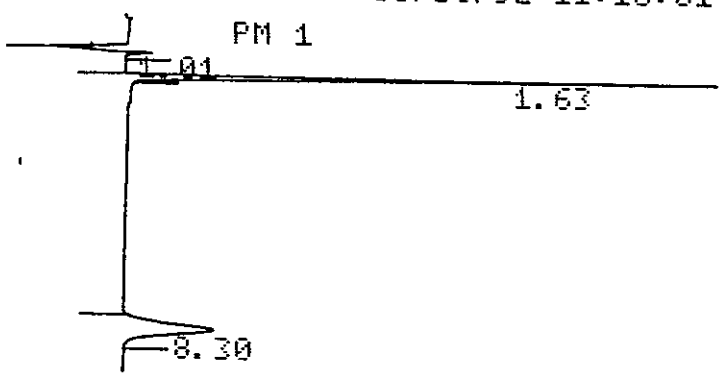
DATA SAVED TO BIN # 13

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.93272271899		02	
2	0.	4.22	6145597	02	
3	0.	4.48	2422865	03	
4	0.	5.97266629113		01	
TOTALS	0.		547469474		

2600-09
1:1000

CHANNEL A INJECT 06/30/92 11:10:01 STORED TO BIN # 14



DATA SAVED TO BIN # 14

EA 06/30/92 11:10:01 CH= "A" PS= 1.

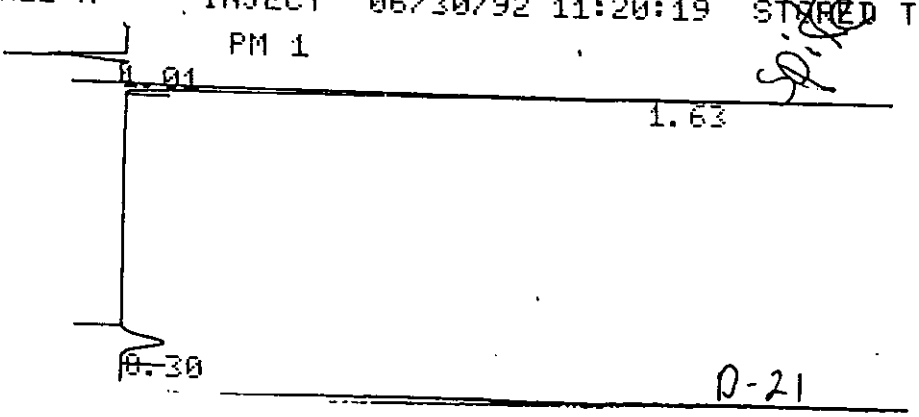
ILE 1. METHOD 5. RUN 14 INDEX 14 BIN 14

NALYST: TAREK

AME	CONC	RT	AREA	BC	RF
1	0.	1.01	691992	01	
2	0.	1.63	3191626	01	
3	0.	8.3	2387890	01	
OTALS	0.		6271508		

2600-09
1:1000
5ppm

HANNEL A INJECT 06/30/92 11:20:19 STORED TO BIN # 15



DATA SAVED TO BIN # 15

IEA 06/30/92 11:20:19 CH= "A" PS= 1.

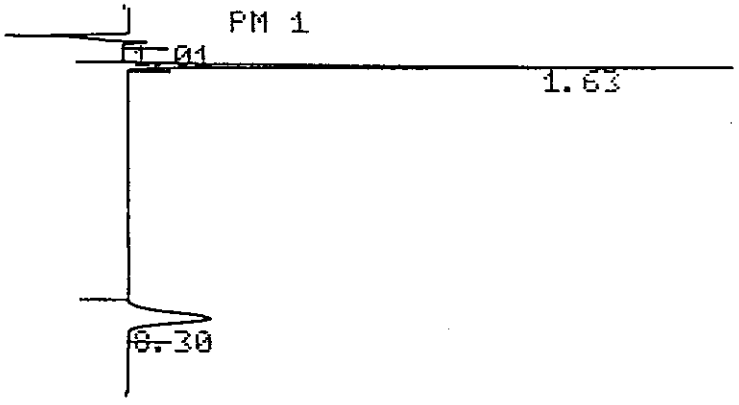
FILE 1. METHOD 5. RUN 15 INDEX 15 BIN 15

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.01	2236728	02	
2	0.	1.63	4507981	03	
3	0.	8.3	1210052	01	
TOTALS	0.		7954761		

260 88-10
1:1000

CHANNEL A INJECT 06/30/92 11:42:17 STORED TO BIN # 16



DATA SAVED TO BIN # 16

IEA 06/30/92 11:42:17 CH= "A" PS= 1.

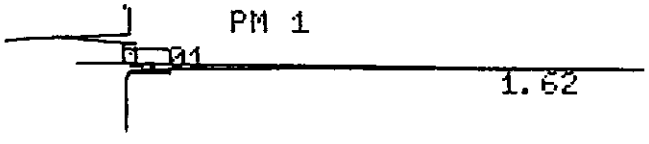
FILE 1. METHOD 5. RUN 16 INDEX 16 BIN 16

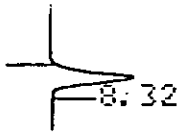
ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.01	630218	01	
2	0.	1.63	3292551	01	
3	0.	8.3	2302344	01	
TOTALS	0.		6225113		

260 88-11
1:1000

ANNEL A INJECT 06/30/92 12:40:59 STORED TO BIN # 17





DATA SAVED TO BIN # 17

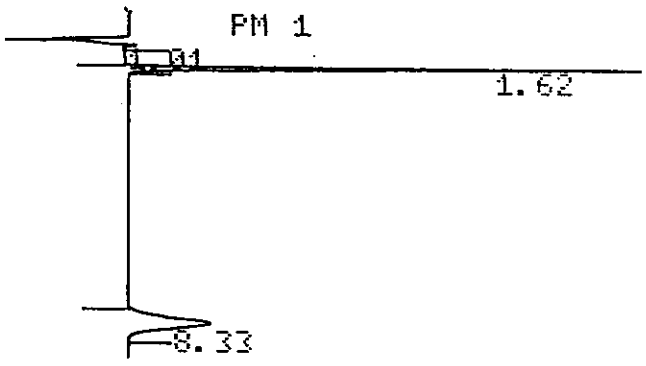
IEA 06/30/92 12:40:59 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 17 INDEX 17 BIN 17

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.01	516517	01	
2	0.	1.62	2796115	01	
3	0.	8.32	2171039	01	
TOTALS	0.		5483671		

CHANNEL A INJECT 06/30/92 12:54:39 STORED TO BIN # 18



260888-11
1:1000
Dup

DATA SAVED TO BIN # 18

IEA 06/30/92 12:54:39 CH= "A" PS= 1.

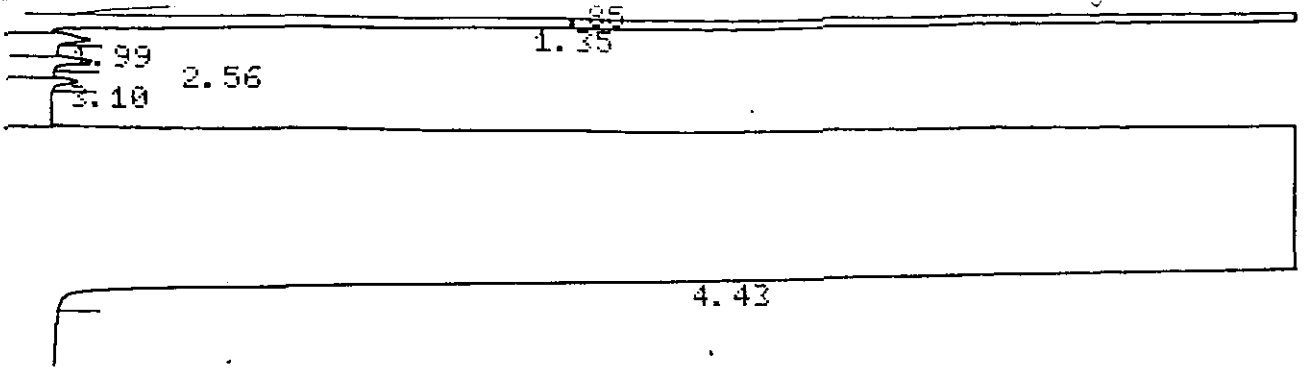
FILE 1. METHOD 5. RUN 18 INDEX 18 BIN 18

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.01	487486	01	
2	0.	1.62	2795830	01	
3	0.	8.33	2164984	01	
TOTALS	0.		5448300		

CHANNEL A INJECT 06/30/92 13:07:12 STORED TO BIN # 19

260888-12



DATA SAVED TO BIN # 19

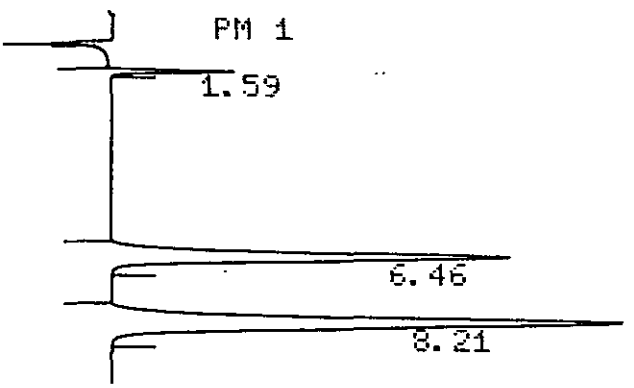
IEA 06/30/92 13:07:12 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 19 INDEX 19 BIN 19

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.85	10532753	02	
2	0.	1.35	27368000	02	
3	0.	1.99	560839	03	
4	0.	2.56	503024	01	
5	0.	3.1	339427	01	
6	0.	4.43	427176704	01	
TOTALS	0.		466480747		

CHANNEL A INJECT 06/30/92 13:21:59 STORED TO BIN # 20



DATA SAVED TO BIN # 20

IEA 06/30/92 13:21:59 CH= "A" PS= 1.

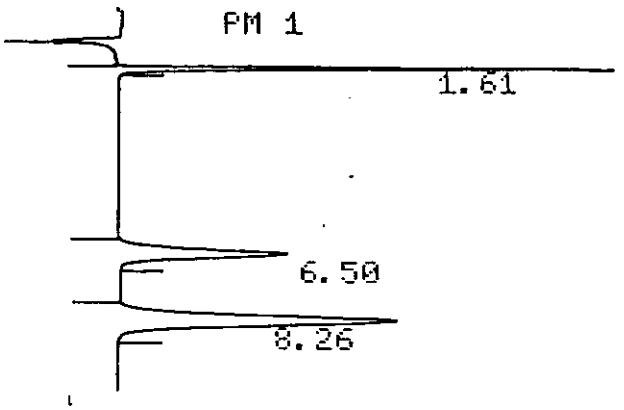
FILE 1. METHOD 5. RUN 20 INDEX 20 BIN 20

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0	1.59	952694	01	

CHANNEL A INJECT 06/30/92 13:32:21 STORED TO BIN # 21

PM 1



spike 1:1

260 88-12 2 ml x 5 ppm

DATA SAVED TO BIN # 21

IEA 06/30/92 13:32:21 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 21 INDEX 21 BIN 21

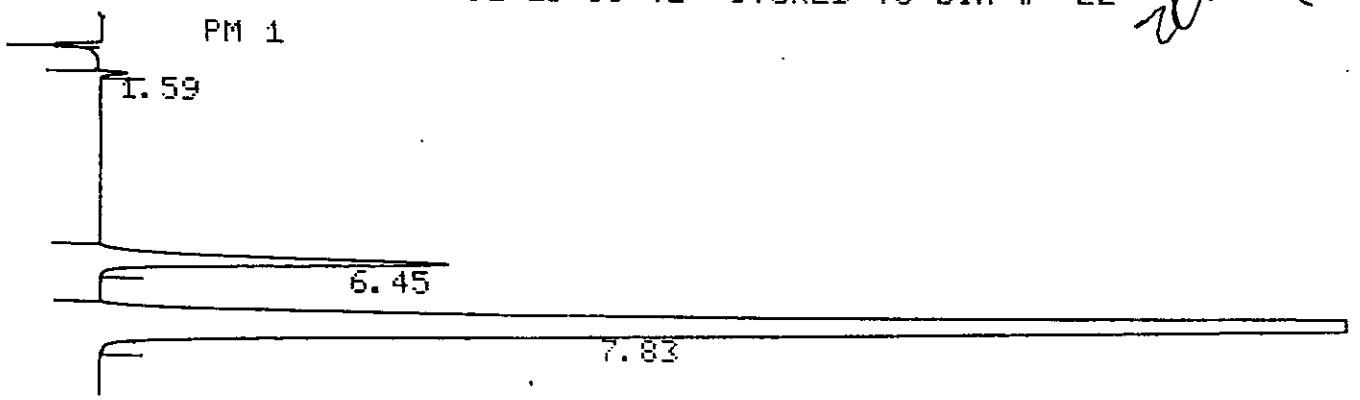
ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.61	3012303	01	
2	0.	6.5	3585668	01	
3	0.	8.26	7269218	01	
TOTALS	0.		13867189		

260 88-13 1:50

CHANNEL A INJECT 06/30/92 13:50:42 STORED TO BIN # 22

PM 1



DATA SAVED TO BIN # 22

IEA 06/30/92 13:50:42 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 22 INDEX 22 BIN 22

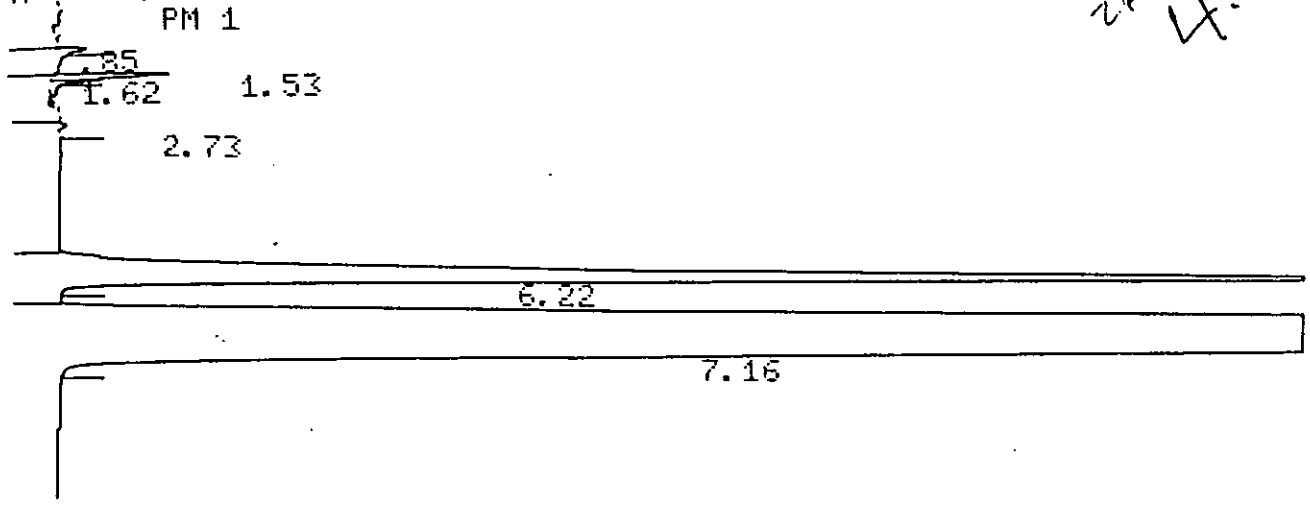
ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.59	234484	01	
2	0.	6.45	7173042	01	
3	0.	7.83	58319492	01	
TOTALS	0.		65727018		

OUT OF PAPER

CHANNEL A INJECT 06/30/92 14:09:40 STORED TO BIN # 23

PM 1



DATA SAVED TO BIN # 23

IEA 06/30/92 14:09:40 CH= "A" PS= 1.

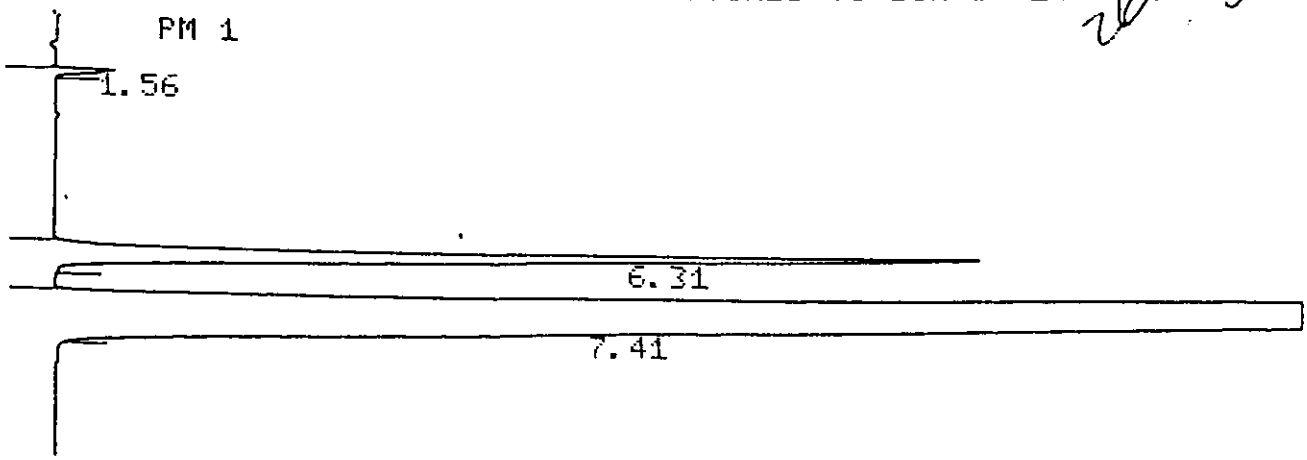
FILE 1. METHOD 5. RUN 23 INDEX 23 BIN 23

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.85	194756	01	
2	0.	1.53	678873	02	
3	0.	1.62	222140	03	
4	0.	2.73	66271	01	
5	0.	6.22	30336829	01	
6	0.	7.16	127149000	01	
TOTALS	0.		158647869		

CHANNEL A INJECT 06/30/92 14:24:38 STORED TO BIN # 24

PM 1



DATA SAVED TO BIN # 24

IEA 06/30/92 14:24:38 CH= "A" PS= 1.

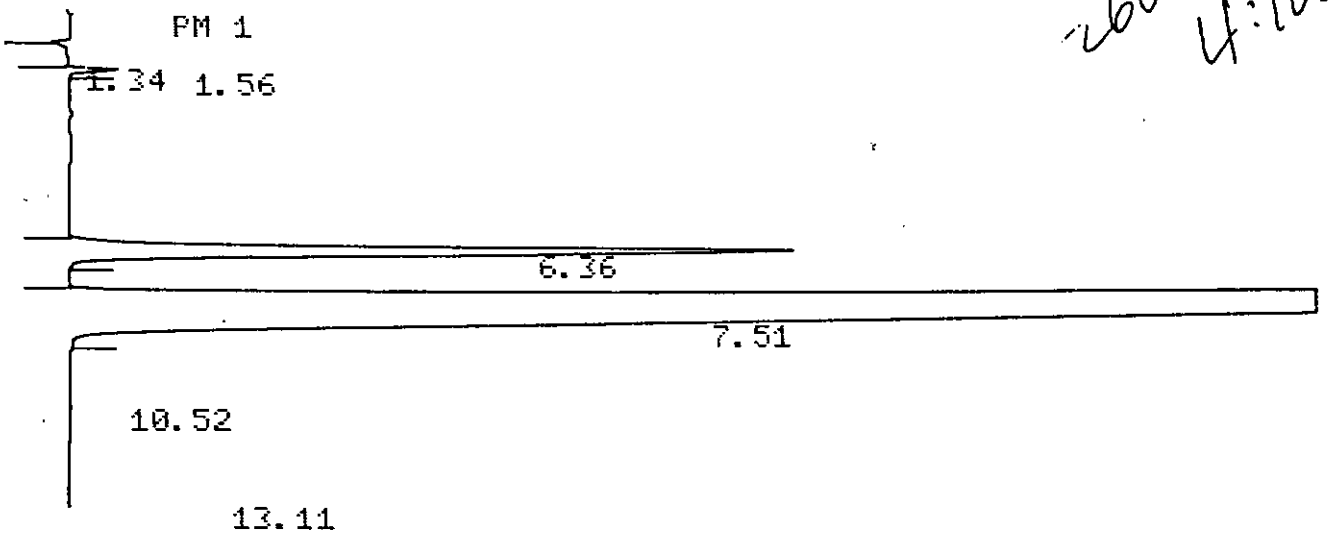
FILE 1. METHOD 5. RUN 24 INDEX 24 BIN 24

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.56	555110	01	
2	0.	6.31	18670975	01	
3	0.	7.41	98823974	01	
TOTALS	0.		118050059		

CHANNEL A INJECT 06/30/92 14:40:45 STORED TO BIN # 25

260888-13
4:100



DATA SAVED TO BIN # 25

IEA 06/30/92 14:40:45 CH= "A" PS= 1.

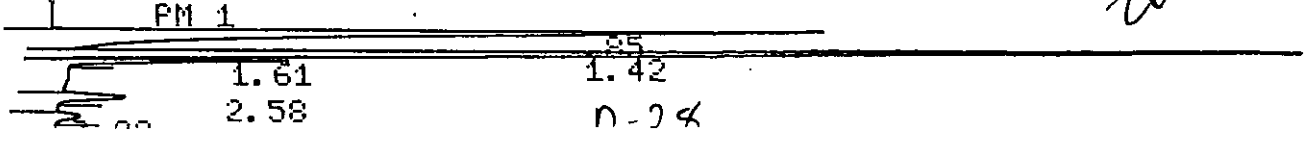
FILE 1. METHOD 5. RUN 25 INDEX 25 BIN 25

ANALYST: TAREK

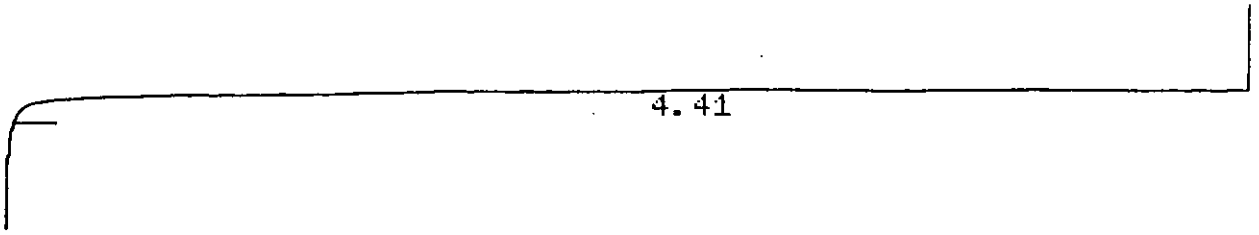
NAME	CONC	RT	AREA	BC	RF
1	0.	1.34	468081	02	
2	0.	1.56	478247	03	
3	0.	6.36	14624336	01	
4	0.	7.51	87768231	01	
TOTALS	0.		103338895		

260888-13

ANNEL A INJECT 06/30/92 14:54:42 STORED TO BIN # 26



D-24



DATA SAVED TO BIN # 26

IEA 06/30/92 14:54:42 CH= "A" PS= 1.

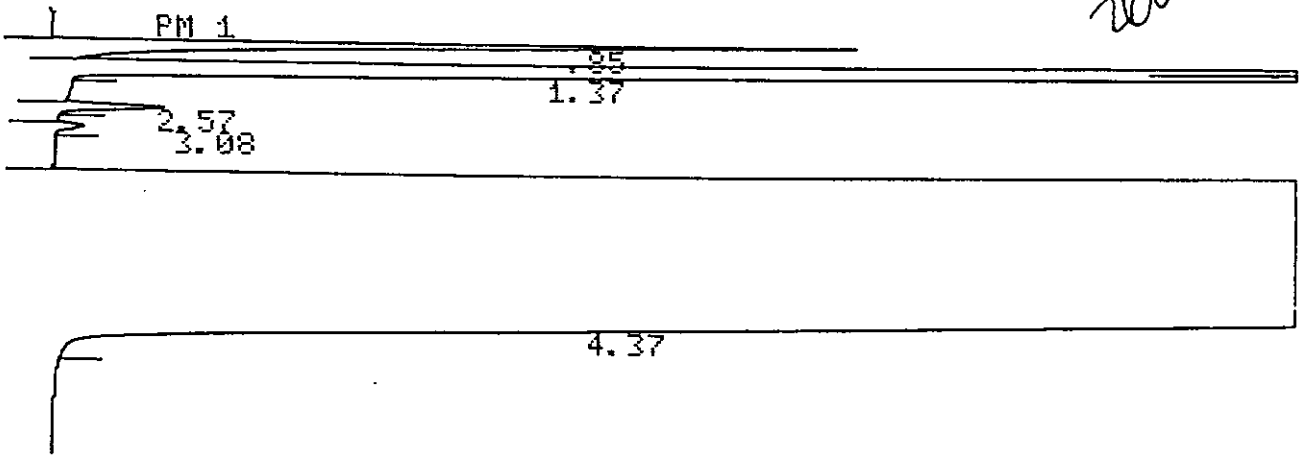
FILE 1. METHOD 5. RUN 26 INDEX 26 BIN 26

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.85	10053650	02	
2	0.	1.42	12724774	02	
3	0.	1.61	1415271	03	
4	0.	2.58	806747	01	
5	0.	3.09	329331	01	
6	0.	4.41	432087638	01	
TOTALS	0.		457417411		

26088-14

CHANNEL A INJECT 06/30/92 15:12:02 STORED TO BIN # 27



DATA SAVED TO BIN # 27

IEA 08/30/92 15:12:02 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 27 INDEX 27 BIN 27

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.85	10356507	02	
2	0.	1.37	36293114	03	

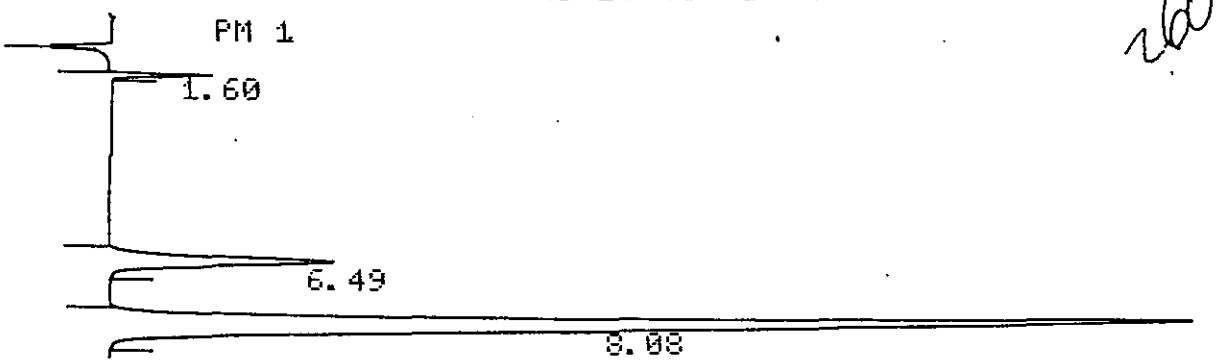
n-29

3	0.	2.57	1194411 01
4	0.	3.08	355800 01
5	0.	4.37436143585	01
TOTALS	0.		484343417

)

CHANNEL A INJECT 06/30/92 15:24:40 STORED TO BIN # 28

26088-14
1:100



DATA SAVED TO BIN # 28

IEA 06/30/92 15:24:40 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 28 INDEX 28 BIN 28

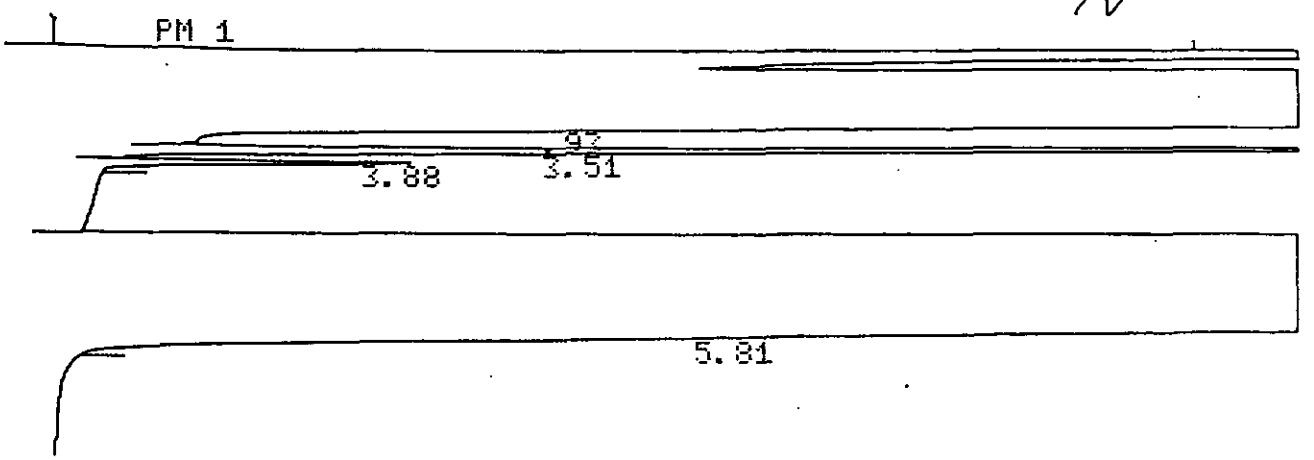
ANALYST: TAREK

)

NAME	CONC	RT	AREA BC	RF
1	0.	1.6	682796 01	
2	0.	6.49	4743970 01	
3	0.	8.08	29510487 01	
TOTALS	0.		34937253	

26088-15

CHANNEL A INJECT 06/30/92 15:34:32 STORED TO BIN # 29



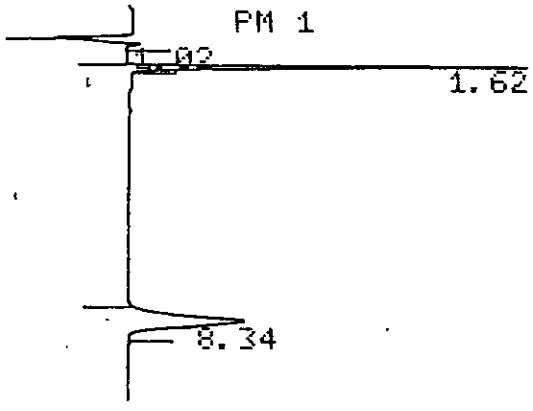
)

DATA SAVED TO BIN # 29

IEA n.20 06/30/92 15:34:32 CH= "A" PS= 1.

NAME	CONC	RT	AREA	BC	RF
1	0.	0.93217208043		02	
2	0.	3.51	16707009	02	
3	0.	3.88	3158010	03	
4	0.	5.81285717281		01	
TOTALS	0.		522790343		

CHANNEL A INJECT 06/30/92 15:46:45 STORED TO BIN # 30



26088-15
1:1000

VOID
Probably improper mixing of sample with D.I.

DATA SAVED TO BIN # 30

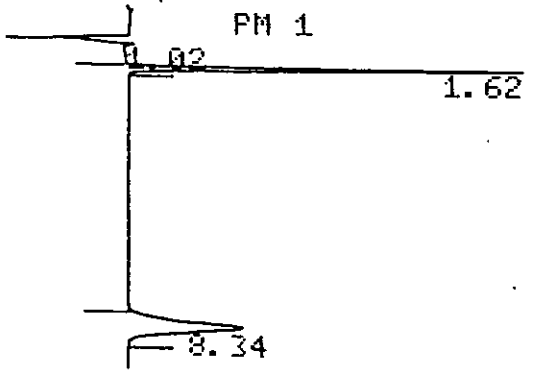
IEA 06/30/92 15:46:45 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 30 INDEX 30 BIN 30

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.02	620267	01	
2	0.	1.62	2175936	01	
3	0.	8.34	2971541	01	
TOTALS	0.		5767744		

CHANNEL A INJECT 06/30/92 15:57:46 STORED TO BIN # 31



26088-15
1:1000
Dup

DATA SAVED TO BIN # 31

IEA 06/30/92 15:57:46 CH= "A" PS= 1.

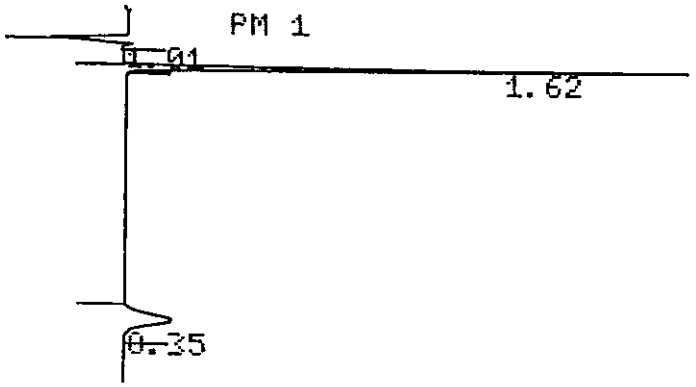
FILE 1. METHOD 5. RUN 31 INDEX 31 BIN 31

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.02	2214041	02	
2	0.	1.62	2410640	03	
3	0.	8.34	2968215	01	
TOTALS	0.		7592896		

CHANNEL A INJECT 06/30/92 16:11:46 STORED TO BIN # 32

PM 1



DATA SAVED TO BIN # 32

IEA 06/30/92 16:11:46 CH= "A" PS= 1.

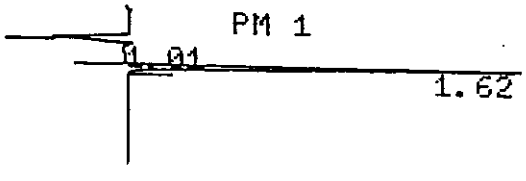
FILE 1. METHOD 5. RUN 32 INDEX 32 BIN 32

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.01	490811	01	
2	0.	1.62	3085563	01	
3	0.	8.35	1350225	01	
TOTALS	0.		4926599		

CHANNEL A INJECT 06/30/92 16:24:36 STORED TO BIN # 33

PM 1



8.32

DATA SAVED TO BIN # 33

IEA 06/30/92 16:24:36 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 33 INDEX 33 BIN 33

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.01	2193994	02	
2	0.	1.62	2407562	03	
3	0.	8.32	2931783	01	
TOTALS	0.		7533339		

CHANNEL A INJECT 06/30/92 16:34:26 STORED TO BIN # 34
PM 1

DATA SAVED TO BIN # 34

IEA 06/30/92 16:34:26 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 34 INDEX 34 BIN 34

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
TOTALS	0.				

CHANNEL A INJECT 07/01/92 09:50:39 STORED TO BIN # 35
PM 1

DATA SAVED TO BIN # 35

IEA 07/01/92 09:50:39 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 35 INDEX 35 BIN 35

ANALYST: TAREK

AME	CONC	RT	AREA BC	RF
TOTALS	0.			

CHANNEL A INJECT 07/01/92 09:55:40 STORED TO BIN # 36

PM 1

1.60

.5 PPM check STD

DATA SAVED TO BIN # 36

IEA 07/01/92 09:55:40 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 36 INDEX 36 BIN 36

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
)1	0.	1.6	460695 01	
TOTALS	0.		460695	

CHANNEL A INJECT 07/01/92 10:00:18 STORED TO BIN # 37

PM 1

1.60

1 PPM check STD

DATA SAVED TO BIN # 37

IEA 07/01/92 10:00:18 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 37 INDEX 37 BIN 37

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
)1	0.	1.6	952462 01	
OTALS	0.		952462	

CHANNEL A INJECT 07/01/92 10:

DATA SAVED TO BIN # 38

SPK Check

IEA 07/01/92 10:04:48 CH= "A" PS= 1.

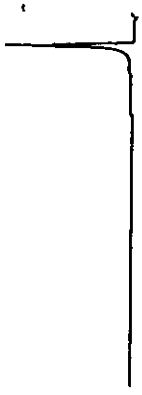
FILE 1. METHOD 5. RUN 38 INDEX 38 BIN 38

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
1	0.	1.61	5358417 01	
TOTALS	0.		5358417	

CHANNEL A INJECT 07/01/92 10:08:13 STORED TO BIN # 39

PM 1



D.I.

DATA SAVED TO BIN # 39

IEA 07/01/92 10:08:13 CH= "A" PS= 1.

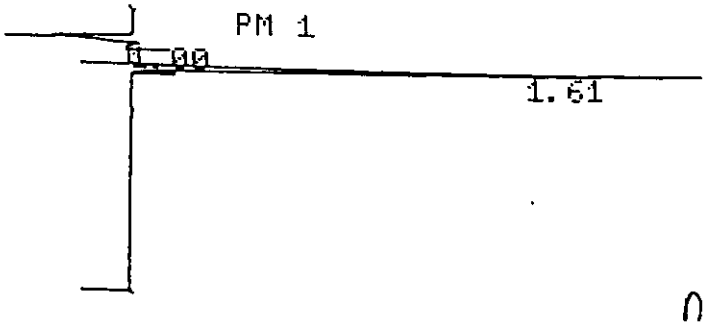
FILE 1. METHOD 5. RUN 39 INDEX 39 BIN 39

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
TOTALS	0.			

CHANNEL A INJECT 07/01/92 10:22:45 STORED TO BIN # 40

PM 1



260885-26
1:1000
Dwg

~~7.95~~ 7.95

DATA SAVED TO BIN # 40

A 07/01/92 10:22:45 CH= "A" PS= 1.

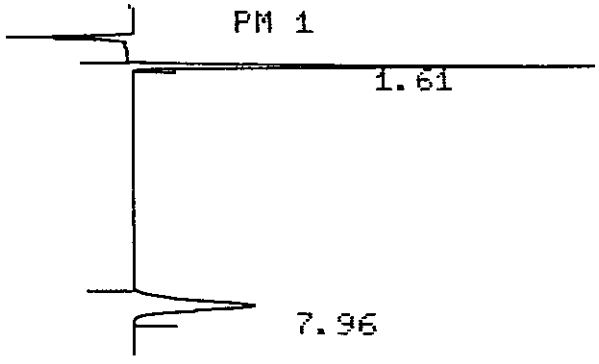
FILE 1. METHOD 5. RUN 40 INDEX 40 BIN 40

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.	532092	01	
2	0.	1.61	3090141	01	
3	0.	7.95	1315914	01	
TOTALS	0.		4938147		

CHANNEL A INJECT 07/01/92 10:41:50 STORED TO BIN # 41

260-88-17 1:1000



DATA SAVED TO BIN # 41

IEA 07/01/92 10:41:50 CH= "A" PS= 1.

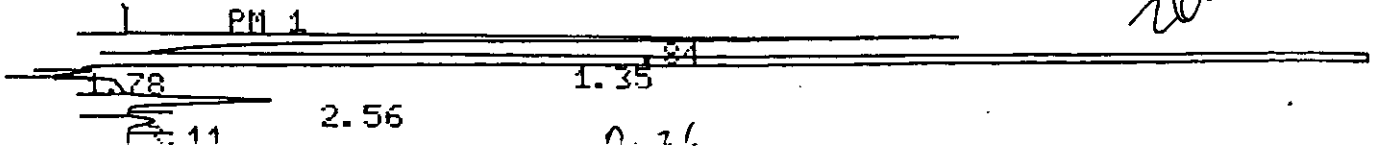
FILE 1. METHOD 5. RUN 41 INDEX 41 BIN 41

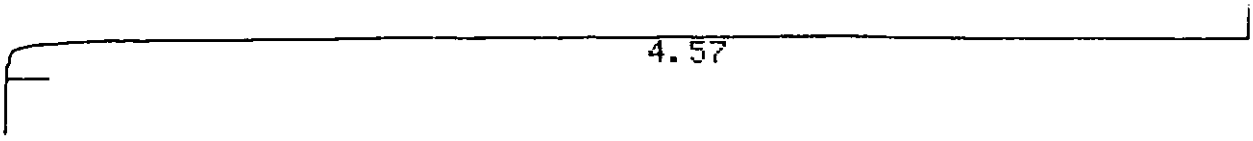
ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.61	2487206	01	
2	0.	7.96	3080236	01	
TOTALS	0.		5567442		

260-88-18

HANNEL A INJECT 07/01/92 10:52:00 STORED TO BIN # 42





DATA SAVED TO BIN # 42

IEA 07/01/92 10:52:00 CH= "A" PS= 1.

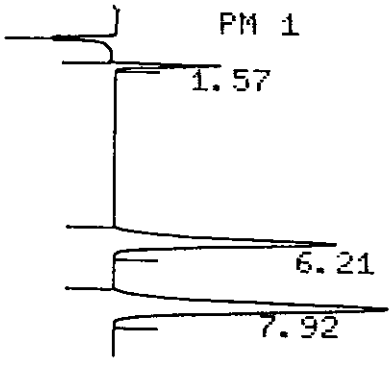
FILE 1. METHOD 5. RUN 42 INDEX 42 BIN 42

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.84	11512435	02	
2	0.	1.35	28041354	02	
3	0.	1.78	290808	03	
4	0.	2.56	1916911	01	
5	0.	3.11	431615	01	
6	0.	4.57	365479998	01	
TOTALS	0.		407673121		

260885-18
1:100

CHANNEL A INJECT 07/01/92 11:04:34 STORED TO BIN # 43



DATA SAVED TO BIN # 43

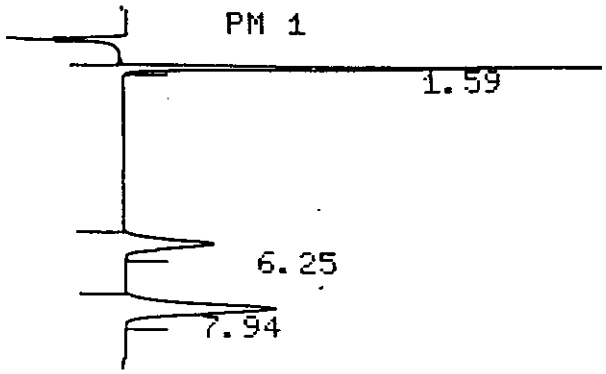
IEA 07/01/92 11:04:34 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 43 INDEX 43 BIN 43

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.57	741024	01	
2	0.	6.21	4539403	01	
3	0.	7.92	6946532	01	
TOTALS	0.		12226959		

CHANNEL A INJECT 07/01/92 11:14:45 STORED TO BIN # 44



spike 1:1

260 ppb 1:200 + 5 ppm

DATA SAVED TO BIN # 44

IEA 07/01/92 11:14:45 CH= "A" PS= 1.

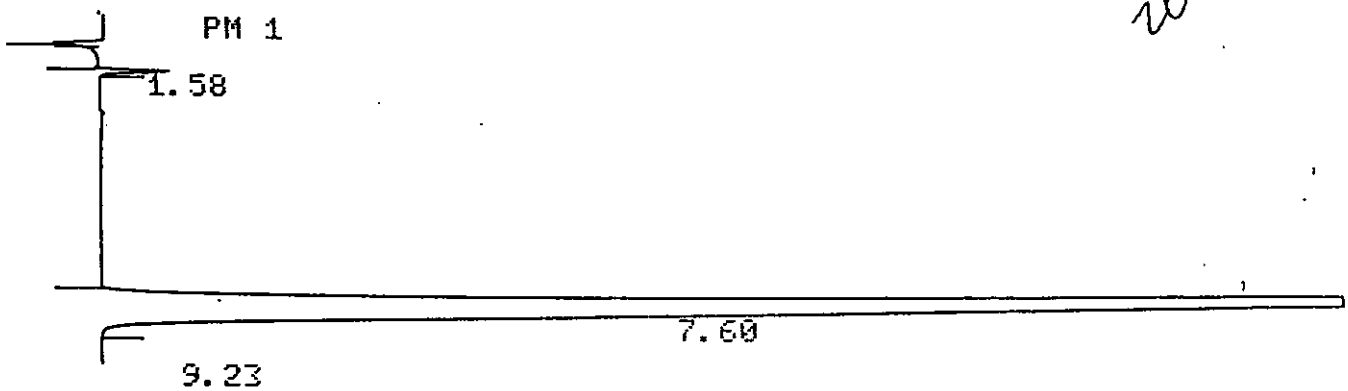
FILE 1. METHOD 5. RUN 44 INDEX 44 BIN 44

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.59	2931056	01	
2	0.	6.25	1898233	01	
3	0.	7.94	3850567	01	
ALS	0.		8679856		

CHANNEL A INJECT 07/01/92 12:49:16 STORED TO BIN # 45

260 ppb 1:50



DATA SAVED TO BIN # 45

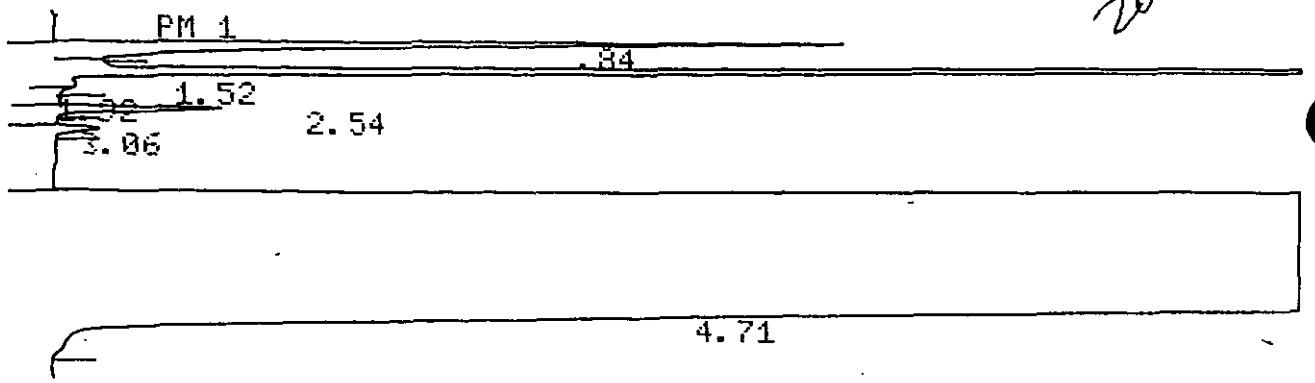
IEA 07/01/92 12:49:16 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 45 INDEX 45 BIN 45

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.58	484061	01	
2	0.	7.6	51554053	01	n.d

CHANNEL A INJECT 07/01/92 12:58:59 STORED TO BIN # 46



DATA SAVED TO BIN # 46

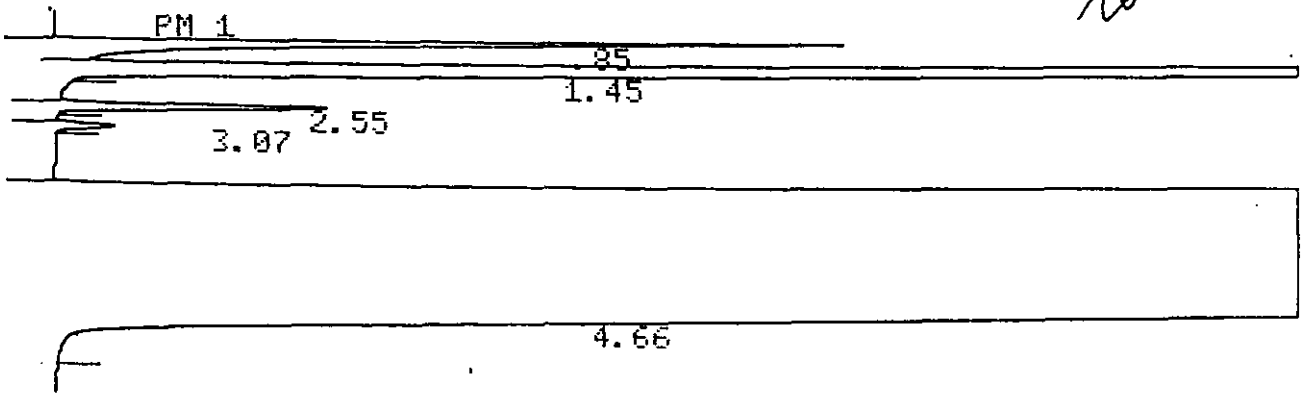
IEA 07/01/92 12:58:59 CH= "A" PS= 1.

FILE' 1. METHOD 5. RUN 46 INDEX 46 BIN 46

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.84	9244381	01	
2	0.	1.52	16710261	02	
3	0.	1.92	70207	03	
4	0.	2.54	1791751	01	
5	0.	3.06	534424	01	
6	0.	4.71	363223289	01	
TOTALS	0.		391574313		

CHANNEL A INJECT 07/01/92 13:09:11 STORED TO BIN # 47



DATA SAVED TO BIN # 47

IEA 07/01/92 13:09:11 CH= "A" PS= 1.

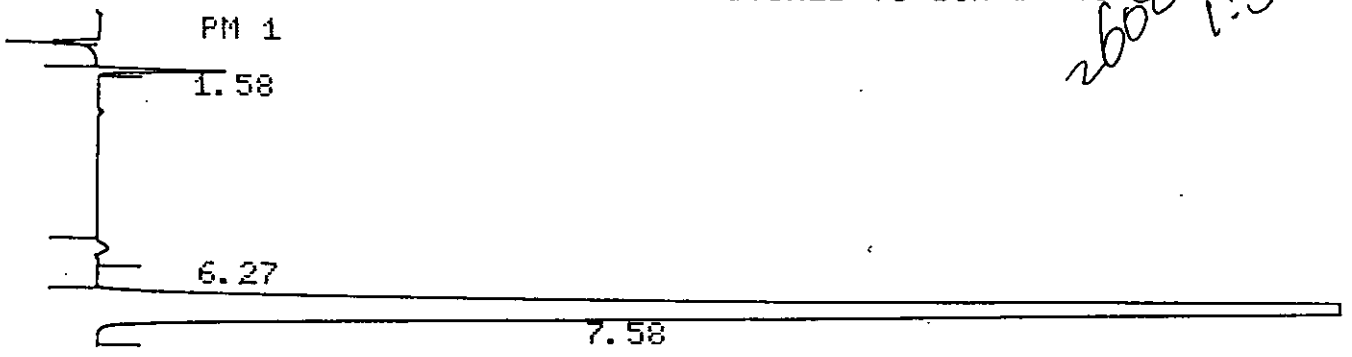
FILE 1. METHOD 5. RUN 47 INDEX 47 BIN 47

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	0.85	10892135	08	
2	0.	1.45	31549005	05	
3	0.	2.55	3122823	01	
4	0.	3.07	690348	01	
5	0.	4.66	375491815	01	
TOTALS	0.		421746126		

CHANNEL A INJECT 07/01/92 13:20:24 STORED TO BIN # 48

PM 1



DATA SAVED TO BIN # 48

)A 07/01/92 13:20:24 CH= "A" PS= 1.

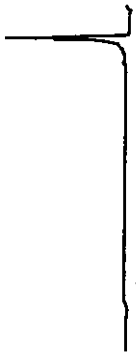
FILE 1. METHOD 5. RUN 48 INDEX 48 BIN 48

ANALYST: TAREK

NAME	CONC	RT	AREA	BC	RF
1	0.	1.58	943132	01	
2	0.	6.27	252760	01	
3	0.	7.58	55283860	01	
TOTALS	0.		56479752		

CHANNEL A INJECT 07/01/92 13:29:57 STORED TO BIN # 49

PM 1



DATA SAVED TO BIN # 49

FILE 1. METHOD 5. RUN 49 INDEX 49 BIN 49

ANALYST: TAREK

NAME	CONC	RT	AREA BC	RF
TOTALS	0.			

TRIANGLE LABORATORIES of RTP, INC.
PO BOX 13485
RTP, NC 27709

ANALYSIS REPORT

MULTI METALS TRAINS

PREPARED FOR:

IEA, Inc.
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Patricia Chagaris
Patricia Chagaris
Inorganic Report Generation

W H Wadlin
Dr. William H. Wadlin
Inorganic Laboratory Manager

Diane Willyard
Quality Assurance

July 13, 1992

TRIANGLE LABORATORIES of RTP, INC.

PO BOX 13485
RTP, NC 27709

Project: 21216
IEA
Client Project# 1381-004

Date in: 20-Jun-92
Date out: 13-Jul-92

CASE NARRATIVE

Overview

This project involves the analysis of 13 Multi-Metals Trains, one of which was a Train Blank for Ag, As, Ba, Be, Cd, Cr, Hg, Pb, Sb, and Tl. The Multi-Metal analysis was conducted according to the protocol described in sections 5-7 of the EPA Draft Document *"Methodology for the Determination of Metals Emissions in Exhaust Gases from Hazardous Waste Incineration and Similar Combustion Processes."*

Preparation

MMTL samples were prepared by microwave and hotplate digestion, as required by the contract.

Analysis

Ag, Ba, Be, Cd, Cr, and samples with high concentrations of As and PB were determined by Inductively Coupled Plasma (ICP) Emission Spectroscopy. Some reanalysis with dilutions was required for Be, Cd, and Pb on the ICP. Sb, Tl and samples with low concentrations of As and Pb were determined by Method of Standard Additions on the Graphite Furnace AA (GFAA). Hg was determined by Cold Vapor AA (CVAA).

Results

%RPD:

All of the applicable %RPD were within control limits of 25%.

Hg:

All of the %RPD were within control limits of 25% except 4-1IN FH, 4-2IN BH, 4-3IN FH, and 2-2MTL 5B. However, in these cases, the %RPD is not considered a valid QC parameter because the sample concentration is less than four times the instrument detection limit. The spike %REC was within control limits of 75-125%.

TRIANGLE LABORATORIES of RTP, INC.
INORGANICS ANALYSIS REPORT

TLI PROJECT #: 21216
CLIENT: IEA
DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92

RESULTS REPORTED IN TOTAL ug

CLIENT SAMPLE ID	Ag	As	Ba	Be	Cd	Cr	Pb	Sb	Tl
2-1IN FH	4.20	5,450	5,870	709	5,180	2,030	38,500	178	25.3
2-1IN BH	< 1.02	195	138	42.0	591	57.8	4,370	8.25	2.39
2-2IN FH	4.80	7,830	7,190	450	4,580	2,410	30,200	185	21.5
2-2IN BH	< 1.01	45.8	26.4	4.87	136	5.98	1,010	3.75	.619
2-3IN FH	3.59	4,010	4,890	422	4,480	2,340	26,300	230	12.8
2-3IN BH	< .993	2.72	3.79	< .284	13.1	< 1.70	60.1	2.03	< .284
4-1IN FH	2.01	4,200	2,240	223	9,990	1,270	41,800	305	33.4
4-1IN BH	< 1.03	2.73	< 2.93	< .293	11.6	3.61	29.1	2.01	< .293
4-2IN FH	2.71	7,780	2,910	421	7,410	2,120	39,100	124	23.2
4-2IN BH	< 1.03	286	17.2	20.0	701	43.8	3180	5.33	3.03
4-3IN FH	3.43	8,460	2,550	461	8,240	1,660	35,000	129	23.1
4-3IN BH	< .973	8.51	3.75	.477	51.0	515	278	2.38	< .278
2-1MTL FH	.718	2.58	31.4	.394	16.9	20.4	82.2	< .500	[illegible]
2-1MTL BH	< .971	.583	< 2.78	< .278	2.05	< 1.67	.957	1.21	< [illegible]
2-2MTL FH	36.4	4.14	25.2	.763	67.0	23.1	138	.790	.960
2-2MTL BH	< 1.02	1.40	< 2.91	< .291	1.44	< 1.75	< .291	1.70	< .291
2-3MTL FH	.752	6.50	20.9	2.16	191	22.5	246	1.49	< .200
2-3MTL BH	< .949	1.00	< 2.71	< .271	1.55	< 1.63	.786	.841	< .271
4-1MTL FH	1.21	1.18	14.3	< .200	22.2	20.2	54.6	.970	< .200
4-1MTL BH	< .915	1.35	< 2.62	< .262	16.1	2.54	1.75	.850	< .262
4-2MTL FH	1.89	3.32	24.5	.835	46.6	27.5	252	1.78	< .200
4-2MTL BH	< .913	2.00	< 2.61	< .261	3.43	< 1.57	8.25	1.44	.365
4-3MTL FH	1.05	1.40	10.1	< .200	3.27	14.6	191	1.27	< .200
4-3MTL BH	< .905	1.21	< 2.58	< .258	1.46	< 1.55	5.14	1.45	.633
4-BLK FH	4.14	5.04	27.1	1.69	116	34.5	1,020	1.46	< .200
4-BLK BH	< 1.01	.635	< 2.88	< .288	< .577	< 1.73	2.60	< .721	.736

%RPD QC Summary

CLIENT SAMPLE ID	Ag	As	Ba	Be	Cd	Cr	Pb	Sb	[illegible]
2-2IN FH(D)	13.6%	9.13%	1.35%	.28%	.48%	21.1%	.85%	N/A	N.
2-2IN BH(D)	N/A	1.36%	10.1%	19.9%	3.99%	12.0%	6.58%	N/A	N/A

Hg RESULTS

	2-1IN FH	2-1IN BH	2-2IN FH	2-2IN BH	2-3IN FH	2-3IN BH
AVG TOTAL ug	1.50	5.48	.800	5.90	1.00	6.10
%RPD	13.3%	11.8%	.00%	.00%	.00%	.00%

	4-1IN FH	4-1IN BH	4-2IN FH	4-2IN BH	4-3IN FH	4-3IN BH
AVG TOTAL ug	.700	3.15	.600	2.19	.700	3.21
%RPD	28.6%	.00%	.00%	85.7%	28.6%	22.2%

	2-1MTL FH	2-1MTL BH	2-1MTL 5A	2-1MTL 5B	2-1MTL 5C
AVG TOTAL ug	<.400	6.44	.408	1.50	<.960
%RPD	N/A	.00%	.00%	.00%	N/A

	2-2MTL FH	2-2MTL BH	2-2MTL 5A	2-2MTL 5B	2-2MTL 5C
AVG TOTAL ug	<.400	9.60	.360	3.19	<.920
%RPD	N/A	.00%	.00%	54.5%	N/A

	2-3MTL FH	2-3MTL BH	2-3MTL 5A	2-3MTL 5B	2-3MTL 5C
AVG TOTAL ug	<.400	8.38	.377	1.50	<.880
%RPD	N/A	.00%	15.4%	.00%	N/A

	4-1MTL FH	4-1MTL BH	4-1MTL 5A	4-1MTL 5B	4-1MTL 5C
AVG TOTAL ug	<.400	5.95	<.384	<1.24	<.880
%RPD	N/A	.00%	N/A	N/A	N/A

	4-2MTL FH	4-2MTL BH	4-2MTL 5A	4-2MTL 5B	4-2MTL 5C
AVG TOTAL ug	<.400	5.14	<.384	<1.24	<.880
%RPD	N/A	.00%	N/A	N/A	N/A

	4-3MTL FH	4-3MTL BH	4-3MTL 5A	4-3MTL 5B	4-3MTL 5C
AVG TOTAL ug	<.400	5.30	<.292	<1.36	<.880
%RPD	N/A	.00%	N/A	N/A	N/A

	4-BLK FH	4-BLK BH	4-BLK 5A	4-BLK 5B	4-BLK 5C
AVG TOTAL ug	<.400	1.96	<.360	<1.16	<.880
%RPD	N/A	.00%	N/A	N/A	N/A

	%REC
1IN BH(S)	78.0%

DESCRIPTION OF ABBREVIATIONS

nitial Calibration Verification
nitial Calibration Blank
ontinuing Calibration Verification
ontinuing Calibration Blank
reparation Blank Water
reparation Blank Soil
aboratory Control Spike
Interference Check Sample(Solution A) I=Initial F=Final
=Interference Check Sample(Solution AB) I=Initial F=Final
Solution A contains common interferents, while Solution AB
contains the interferents plus the analyte in question.
Contract Required Detection Limit (for CLP)
nstrument Detection Limit
RDL Standard for ICP I=Initial F=Final
RDL Standard for AA I=Initial F=Final
Relative Percent Difference
% Recovery
pike
mount
lank
ethod of Standard Additions

CALCULATIONS

MMTL TRAINS:

ICP & GFAA

$$\text{FH \& BH TOTAL ug} = \frac{[\text{ug/L}] * (\text{mL TV/mL USED}) * (\text{mL FV} * \text{DF})}{1000}$$

FV=FINAL VOLUME DF=DILUTION FACTOR
WT=WEIGHT TV=TOTAL VOLUME
BV=BEGINNING VOLUME

Hg

MMTL Trains:

FH TOTAL ug = [ug/L] * (ml FV/ml aliquot) * MPV * (DF)

BH TOTAL ug = [ug/L] * (ml TV/ml aliquot) * MPV * (DF)

MMTL Impingers:

TOTAL ug = [ug/L] * (ml TV/ml aliquot) * MPV * (DF)

MPV = Mercury Preparation Volume, which is always 0.1L

$$\%\text{RPD} = \frac{|\text{SR} - \text{DR}|}{(\text{SR} + \text{DR})/2} * 100$$

$$\%\text{REC} = \frac{\text{SSR} - \text{SR}}{\text{SA}} * 100$$

SR=SAMPLE RESULT DR=DUPLICATE RESULT
SSR=SPIKE SAMPLE RESULT SA=SPIKE ADDED

ICP MMTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Ag

ug/L IDL: 7

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR	TOTAL ug RESULT	%RPD
2-1IN FH	57.113.1/1F	Ag	.86900	41.9810	172	172	100	1	4.20	
2-1IN FH(L)	57.113.1/1F L	Ag	.21490	10.0670	172	172	100	5	5.03	
2-1IN BH	57.113.3/1B	Ag	.11080	4.9860	322	222	100	1 <	1.02	
2-1IN BH(L)	57.113.3/1B L	Ag	.04390	1.7190	322	222	100	5 <	5.08	
2-2IN FH	57.113.5/2F	Ag	.99320	48.0410	208	208	100	1	4.80	
2-2IN FH(D)	57.113.5/2F D	Ag	.86750	41.9100	208	208	100	1	4.19	13.6%
2-2IN BH	57.113.7/2B	Ag	.04840	1.9390	328	228	100	1 <	1.01	
2-2IN BH(D)	57.113.7/2B D	Ag	.05140	2.0880	328	228	100	1 <	1.01	N/A
2-3IN FH	57.113.9/3F	Ag	.74420	35.8930	241	241	100	1	3.59	
2-3IN BH	57.113.11/3B	Ag	.02370	.7370	339	239	100	1 <	.993	
4-1IN FH	57.113.13/4F	Ag	.42080	20.1100	204	204	100	1	2.01	
4-1IN BH	57.113.15/4B	Ag	.05080	2.0570	315	215	100	1 <	1.03	
4-2IN FH	57.113.17/5F	Ag	.56410	27.1050	155	155	100	1	2.71	
4-2IN BH	57.113.19/5B	Ag	.03650	1.3600	312	212	100	1 <	1.03	
4-3IN FH	57.113.21/6F	Ag	.71060	34.2530	176	176	100	1	3.43	
4-3IN BH	57.113.23/6B	Ag	.02230	.6680	356	256	100	1 <	.973	
2-1MTL FH	57.113.25/7F	Ag	.15570	7.1760	166	166	100	1	.718	
2-1MTL BH	57.113.29/7B	Ag	.02830	.9590	358	258	100	1 <	.971	
2-2MTL FH	57.113.32/8F	Ag	7.47240	364.1900	187	187	100	1	36.4	
2-2MTL BH	57.113.36/8B	Ag	.05930	2.4750	320	220	100	1 <	1.02	
2-3MTL FH	57.113.39/9F	Ag	.16270	7.5160	190	190	100	1	.752	
2-3MTL BH	57.113.43/9B	Ag	.03680	1.3730	381	281	100	1 <	.949	
4-1MTL FH	57.113.46/10F	Ag	.25720	12.1290	159	159	100	1	1.21	
4-1MTL BH	57.113.50/10B	Ag	.05490	2.2610	425	325	100	1 <	.915	
4-2MTL FH	57.113.53/11F	Ag	.39630	18.9140	179	179	100	1	1.89	
4-2MTL BH	57.113.57/11B	Ag	.04740	1.8940	428	328	100	1 <	.913	
4-3MTL FH	57.113.60/12F	Ag	.22430	10.5230	125	125	100	1	1.05	
4-3MTL BH	57.113.64/12B	Ag	.03240	1.1600	442	342	100	1 <	.905	
4-BLK MTL FH	57.113.67/13F	Ag	.85780	41.4370	209	209	100	1	4.14	
4-BLK MTL BH	57.113.71/13B	Ag	.03670	1.3700	326	226	100	1 <	1.01	
	STD BLK	Ag	.03920	0.0000						
	STD 1=25ug/L	Ag	.55430	25.0000						
	STD 2=100ug/L	Ag	2.05310	100.0000						
	STD 3=250ug/L	Ag	5.01560	250.0000						
	STD 4=500ug/L	Ag	10.31340	500.0000						
	CHECK HS	Ag	10.20400	497.4750						
	ICV=250ug/L	Ag	5.04390	245.6930						
	ICB	Ag	.07440	3.2090						
	ICSAI	Ag	.03270	1.1740						
	ICSABI	Ag	16.98280	828.2370						
	CCV1	Ag	5.12540	249.6680						
	CCB1	Ag	.05570	2.2970						
	CCV2	Ag	5.12460	249.6310						
	CCB2	Ag	.05230	2.1300						
	CCV3	Ag	5.13430	250.1010						
	CCB3	Ag	.04440	1.7480						
	ICSAF	Ag	.05120	2.0800						
	ICSABF	Ag	17.32470	844.9190						

ICP MMTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: As

ug/L IDL: 150

DATE RECEIVED: 06/20/92

DATE REPORTED: 07/13/92

TLI PROJECT #: 21216

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR		TOTAL ug RESULT	%RPD	
2-1IN FH	57.113.1/1F	As	16.06740	54505.6210	172	172	100	1		5451		
2-1IN FH(L)	57.113.1/1F L	As	2.84380	9611.1040	172	172	100	5		4806		
2-1IN BH	57.113.3/1B	As	.40970	1347.1840	322	222	100	1		195		
2-1IN BH(L)	57.113.3/1B L	As	.09070	264.1550	322	222	100	5		192		
2-2IN FH	57.113.5/2F	As	23.07360	78292.0630	208	208	100	1		7829		
2-2IN FH(D)	57.113.5/2F D	As	21.05960	71454.5310	208	208	100	1		7145	9.13%	
2-2IN BH	57.113.7/2B	As	.10670	318.3750	328	228	100	1		45.8		
2-2IN BH(D)	57.113.7/2B D	As	.10800	322.7330	328	228	100	1		46.4	1.36%	
2-3IN FH	57.113.9/3F	As	11.81200	40058.5120	241	241	100	1		4006		
2-3IN BH	57.113.11/3B	As	.03950	90.1690	339	239	100	1	<	21.3		•
4-1IN FH	57.113.13/4F	As	12.37370	41965.3440	204	204	100	1		4197		
4-1IN BH	57.113.15/4B	As	.02820	51.9680	315	215	100	1	<	22.0		•
4-2IN FH	57.113.17/5F	As	22.94130	77842.9300	155	155	100	1		7784		
4-2IN BH	57.113.19/5B	As	.58580	1944.9220	312	212	100	1		286		
4-3IN FH	57.113.21/6F	As	24.94000	84628.4920	176	176	100	1		8463		
4-3IN BH	57.113.23/6B	As	.04280	101.6210	356	256	100	1	<	20.9		*
	STD BLK	As	.01570	0.0000								
	STD 1=250ug/L	As	.07420	250.0000								
	STD 2=1000ug/L	As	.31020	1000.0000								
	STD 3=2500ug/L	As	.76260	2500.0000								
	STD 4=5000ug/L	As	1.47900	5000.0000								
	CHECK HS	As	1.50260	5057.6400								
	ICV=2500ug/L	As	.81240	2714.3000								
	ICB	As	.01620	11.1960								
	ICSAI	As	.01590	10.3530								
	ICSABI	As	.34820	1138.4940								
	CCV1	As	.79760	2664.2030								
	CCB1	As	.02050	25.9720								
	CCV2	As	.82570	2759.3500								
	CCV2	As	.82840	2768.5280								
	CCV2	As	.80990	2705.8000								
	CCB2	As	.01860	19.3970								
	ICSAF	As	.02690	47.6610								
	ICSABF	As	.28030	907.7790								

*REANALYZED BY MSA

GFAA MATL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: As

ug/L IDL: 2

DATE RECEIVED: 06/20/92

DATE REPORTED: 07/13/92

TLI PROJECT #: 21216

MSA RESULTS

CLIENT #	SAMPID	EL	MEANABS	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR	TOTAL ug RESULT
2-3IN BH	57.113.11/3B	As	.06357676	19.2000	339	239	100	1	2.72
4-1IN BH	57.113.15/4B	As	.04644527	18.6000	315	215	100	1	2.73
4-3IN BH	57.113.23/6B	As	.09200000	61.2000	356	256	100	1	8.51
2-1MTL FH	57.113..25/7F	As	.03812532	25.8000	166	166	100	1	2.58
2-1MTL BH	57.113.29/7B	As	.00889178	4.2000	358	258	100	1	.583
2-2MTL FH	57.113.32/8F	As	.06164725	41.4000	187	187	100	1	4.14
2-2MTL BH	57.113.36/8B	As	.01796755	9.6000	320	220	100	1	1.40
2-3MTL FH	57.113.39/9F	As	.11108879	65.0000	190	190	100	1	6.50
2-3MTL BH	57.3113.43/9B	As	.01353664	7.4000	381	281	100	1	1.00
4-1MTL FH	57.113.46/10F	As	.02105403	11.8000	159	159	100	1	1.18
4-1MTL BH	57.113.50/10B	As	.01857276	10.3000	425	325	100	1	1.35
4-2MTL FH	57.113.53/11F	As	.05664792	33.2000	179	179	100	1	3.32
4-2MTL BH	57.113.57/11B	As	.02673889	15.3000	428	328	100	1	2.00
4-3MTL FH	57.113.60/12F	As	.02380617	14.0000	125	125	100	1	1.40
4-3MTL BH	57.113.64/12B	As	.01638910	9.4000	442	342	100	1	1.21
4-BLK MTL FH	57.113.67/13F	As	.09012504	50.4000	209	209	100	1	5.04
4-BLK MTL BH	57.113.71/13B	As	.00850722	4.4000	326	226	100	1	.635

ICP MMTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Ba

ug/L IDL: 20

DATE RECEIVED: 06/20/92

DATE REPORTED: 07/13/92

TLI PROJECT #: 21216

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR		TOTAL ug RESULT	%RPD
2-1IN FH	57.113.1/1F	Ba	842.39010	58695.2810	172	172	100	1		5870	
2-1IN FH(L)	57.113.1/1F L	Ba	173.80100	12106.6560	172	172	100	5		6053	
2-1IN BH	57.113.3/1B	Ba	13.69040	949.8220	322	222	100	1		138	
2-1IN BH(L)	57.113.3/1B L	Ba	2.67230	182.0630	322	222	100	5		132	
2-2IN FH	57.113.5/2F	Ba	1031.54190	71875.7580	208	208	100	1		7188	
2-2IN FH(D)	57.113.5/2F D	Ba	1017.73330	70913.5470	208	208	100	1		7091	1.35%
2-2IN BH	57.113.7/2B	Ba	2.68890	183.2160	328	228	100	1		26.4	
2-2IN BH(D)	57.113.7/2B D	Ba	2.43650	165.6300	328	228	100	1		23.8	10.1%
2-3IN FH	57.113.9/3F	Ba	701.79080	48898.0390	241	241	100	1		4890	
2-3IN BH	57.113.11/3B	Ba	.44330	26.7410	339	239	100	1		3.79	
4-1IN FH	57.113.13/4F	Ba	321.54750	22401.9280	204	204	100	1		2240	
4-1IN BH	57.113.15/4B	Ba	.26910	14.6060	315	215	100	1	<	2.93	
4-2IN FH	57.113.17/5F	Ba	417.96440	29120.4450	155	155	100	1		2912	
4-2IN BH	57.113.19/5B	Ba	1.74160	117.2110	312	212	100	1		17.2	
4-3IN FH	57.113.21/6F	Ba	366.30010	25520.3810	176	176	100	1		2552	
4-3IN BH	57.113.23/6B	Ba	.44690	26.9910	356	256	100	1		3.75	
TL FH	57.113.25/7F	Ba	4.56870	314.2060	166	166	100	1		31.4	
TL BH	57.113.29/7B	Ba	.08000	1.4280	358	258	100	1	<	2.78	
2-2MTL FH	57.113.32/8F	Ba	3.67760	252.1160	187	187	100	1		25.2	
2-2MTL BH	57.113.36/8B	Ba	.08040	1.4550	320	220	100	1	<	2.91	
2-3MTL FH	57.113.39/9F	Ba	3.06290	209.2820	190	190	100	1		20.9	
2-3MTL BH	57.113.43/9B	Ba	.04620	-.9280	381	281	100	1	<	2.71	
4-1MTL FH	57.113.46/10F	Ba	2.11770	143.4140	159	159	100	1		14.3	
4-1MTL BH	57.113.50/10B	Ba	.11950	4.1770	425	325	100	1	<	2.62	
4-2MTL FH	57.113.53/11F	Ba	3.57830	245.1920	179	179	100	1		24.5	
4-2MTL BH	57.113.57/11B	Ba	.09770	2.6570	428	328	100	1	<	2.61	
4-3MTL FH	57.113.60/12F	Ba	1.50620	100.8040	125	125	100	1		10.1	
4-3MTL BH	57.113.64/12B	Ba	.05670	-.1950	442	342	100	1	<	2.58	
4-BLK MTL FH	57.113.67/13F	Ba	3.95220	271.2450	209	209	100	1		27.1	
4-BLK MTL BH	57.113.71/13B	Ba	.02430	-2.4560	326	226	100	1	<	2.88	
	STD BLK	Ba	.00780	0.0000							
	STD 1=50ug/L	Ba	.74740	50.0000							
	STD 2=200ug/L	Ba	2.97120	200.0000							
	STD 3=500ug/L	Ba	7.32840	500.0000							
	STD 4=1000ug/L	Ba	14.35690	1000.0000							
	CHECK HS	Ba	14.38190	998.0080							
	ICV=500ug/L	Ba	7.31840	505.8140							
	ICB	Ba	.00630	-3.7060							
	ICSAI	Ba	.21510	10.8420							
	ICSABI	Ba	7.27270	502.6300							
	CCV1	Ba	7.38590	510.5180							
	CCB1	Ba	.04110	-1.2860							
	CCV2	Ba	7.25410	501.3330							
	CCB2	Ba	.00760	-3.6160							
	CCV3	Ba	7.26390	502.0160							
	CCB3	Ba	.00660	-3.6860							
	ICSAF	Ba	.24990	13.2650							
	ICSABF	Ba	7.23840	500.2370							

ICP MMTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Be
ug/L IDL: 2

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR		TOTAL ug RESULT	%RPD
2-1IN FH(L)	57.113.1/1F L	Be	46.14030	1515.2650	172	172	100	5		758	
2-1IN BH	57.113.3/1B	Be	8.88240	289.6530	322	222	100	1		42.0	
2-1IN BH(L)	57.113.3/1B L	Be	1.80910	56.9770	322	222	100	5		41.3	
2-2IN BH	57.113.7/2B	Be	1.10530	33.8240	328	228	100	1		4.87	
2-2IN BH(D)	57.113.7/2B D	Be	.91960	27.7160	328	228	100	1		3.99	19.9%
2-3IN BH	57.113.11/3B	Be	.11560	1.2680	339	239	100	1	<	.284	
4-1IN BH	57.113.15/4B	Be	.05290	-.7930	315	215	100	1	<	.293	
4-2IN BH	57.113.19/5B	Be	4.21360	136.0740	312	212	100	1		20.0	
4-3IN BH	57.113.23/6B	Be	.18120	3.4280	356	256	100	1		.477	
2-1MTL FH	57.113.25/7F	Be	.19690	3.9420	166	166	100	1		.394	
2-1MTL BH	57.113.29/7B	Be	.01180	-2.1450	358	258	100	1	<	.278	
2-2MTL FH	57.113.32/8F	Be	.30900	7.6290	187	187	100	1		.763	
2-2MTL BH	57.113.36/8B	Be	.00270	-2.4470	320	220	100	1	<	.291	
2-3MTL FH	57.113.39/9F	Be	.73330	21.5870	190	190	100	1		2.16	
2-3MTL BH	57.113.43/9B	Be	-.00120	-2.5740	381	281	100	1	<	.271	
4-1MTL FH	57.113.46/10F	Be	.05310	-.7880	159	159	100	1	<	.200	
4-1MTL BH	57.113.50/10B	Be	.00860	-2.2530	425	325	100	1	<	.262	
4-2MTL FH	57.113.53/11F	Be	.33090	8.3510	179	179	100	1		.835	
4-2MTL BH	57.113.57/11B	Be	.00850	-2.2530	428	328	100	1	<	.261	
4-3MTL FH	57.113.60/12F	Be	.02480	-1.7180	125	125	100	1	<	.200	
4-3MTL BH	57.113.64/12B	Be	.00190	-2.4710	442	342	100	1	<	.258	
4-BLK MTL FH	57.113.67/13F	Be	.59230	16.9490	209	209	100	1		1.69	
4-BLK MTL BH	57.113.71/13B	Be	.00310	-2.4320	326	226	100	1	<	.288	
	STD BLK	Be	.00340	0.0000							
	STD 1=25ug/L	Be	.78570	25.0000							
	STD 2=100ug/L	Be	3.13320	100.0000							
	STD 3=250ug/L	Be	7.89570	250.0000							
	STD 4=500ug/L	Be	15.16670	500.0000							
	CHECK HS	Be	15.13190	495.2350							
	ICV=250ug/L	Be	7.88350	256.7970							
	ICB	Be	.00650	-2.3210							
	ICSAI	Be	-1.12830	-39.6510							
	ICSABI	Be	13.14160	429.7620							
	CCV1	Be	7.87090	256.3800							
	CCB1	Be	.01050	-2.1880							
	CCV2	Be	7.59260	247.2250							
	CCB2	Be	.00980	-2.2100							
	CCV3	Be	7.82550	254.8890							
	CCB3	Be	.00910	-2.2360							
	ICSAF	Be	-1.74440	-59.9170							
	ICSABF	Be	12.57780	411.2170							

T	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR	TOTAL ug RESULT	%RPD
H	57.113.1	Be	16.13260	709.2070	172	172	100	10	709	
FH	57.113.5	Be	10.25150	449.7000	208	208	100	10	450	
H(D)	57.113.5D	Be	10.22310	448.4490	208	208	100	10	448	.28%
H	57.113.9	Be	9.61490	421.6100	241	241	100	10	422	
FH	57.113.13	Be	5.11990	223.2640	204	204	100	10	223	
FH	57.113.17	Be	9.59450	420.7110	155	155	100	10	421	
FH	57.113.21	Be	10.50580	460.9210	176	176	100	10	461	

STD BLK	Be	.00720	0.0000
STD 1=25ug/L	Be	.58470	25.0000
STD 2=100ug/L	Be	2.33390	100.0000
STD 3=250ug/L	Be	5.89920	250.0000
STD 4=500ug/L	Be	11.30530	500.0000
CHECK HS	Be	11.25070	493.7900
ICV=250ug/L	Be	5.88170	256.8790
ICB	Be	.00900	-2.2550
ICSAI	Be	-.75310	-35.8850
ICSABI	Be	9.35900	410.3180
CCV1	Be	5.45990	238.2700
CCB1	Be	.01140	-2.1470
ICSAF	Be	-.43930	-22.0360
ICSABF	Be	9.04150	396.3070

ICP MMTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Cd
ug/L IDL: 4

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR	TOTAL ug RESULT	%RPD
2-1IN FH(L)	57.113.1/1F L	Cd	96.73360	10810.5080	172	172	100	5	5405	
2-1IN BH	57.113.3/1B	Cd	36.54750	4077.2650	322	222	100	1	591	
2-1IN BH(L)	57.113.3/1B L	Cd	7.32240	807.7550	322	222	100	5	586	
2-2IN BH	57.113.7/2B	Cd	8.53100	942.9640	328	228	100	1	136	
2-2IN BH(D)	57.113.7/2B D	Cd	8.20120	906.0640	328	228	100	1	130	3.99%
2-3IN BH	57.113.11/3B	Cd	.93080	92.6970	339	239	100	1	13.1	
4-1IN BH	57.113.15/4B	Cd	.80900	79.0810	315	215	100	1	11.6	
4-2IN BH	57.113.19/5B	Cd	42.66480	4761.6320	312	212	100	1	701	
4-3IN BH	57.113.23/6B	Cd	3.38200	366.9290	356	256	100	1	51.0	
2-1MTL FH	57.113.25/7F	Cd	1.61050	168.7440	166	166	100	1	16.9	
2-1MTL BH	57.113.29/7B	Cd	.23430	14.7860	358	258	100	1	2.05	
2-2MTL FH	57.113.32/8F	Cd	6.08670	669.5170	187	187	100	1	67.0	
2-2MTL BH	57.113.36/8B	Cd	.19070	9.9100	320	220	100	1	1.44	
2-3MTL FH	57.113.39/9F	Cd	17.13080	1905.0590	190	190	100	1	191	
2-3MTL BH	57.113.43/9B	Cd	.20460	11.4580	381	281	100	1	1.55	
4-1MTL FH	57.113.46/10F	Cd	2.08470	221.7950	159	159	100	1	22.2	
4-1MTL BH	57.113.50/10B	Cd	1.20010	122.8280	425	325	100	1	16.1	
4-2MTL FH	57.113.53/11F	Cd	4.27020	466.2960	179	179	100	1	46.6	
4-2MTL BH	57.113.57/11B	Cd	.33730	26.3090	428	328	100	1	3.43	
4-3MTL FH	57.113.60/12F	Cd	.39430	32.6820	125	125	100	1	3.27	
4-3MTL BH	57.113.64/12B	Cd	.20300	11.2860	442	342	100	1	1.46	
4-BLK MTL FH	57.113.67/13F	Cd	10.49080	1162.2090	209	209	100	1	116	
4-BLK MTL BH	57.113.71/13B	Cd	.13740	3.9400	326	226	100	1 <	.577	
	STD BLK	Cd	.02730	0.0000						
	STD 1=75ug/L	Cd	.68060	75.0000						
	STD 2=300ug/L	Cd	2.82530	300.0000						
	STD 3=750ug/L	Cd	7.06430	750.0000						
	STD 4=1500ug/L	Cd	13.37740	1500.0000						
	CHECK HS	Cd	13.50990	1499.9760						
	ICV=750ug/L	Cd	7.13280	786.5470						
	ICB	Cd	.05050	-5.7750						
	ICSAI	Cd	.23460	14.8140						
	ICSABI	Cd	7.94150	877.0120						
	CCV1	Cd	7.14710	788.1390						
	CCB1	Cd	.05610	-5.1560						
	CCV2	Cd	7.00460	772.2000						
	CCB2	Cd	.03680	-7.3080						
	CCV3	Cd	6.69070	737.0810						
	CCB3	Cd	.02930	-8.1550						
	ICSAF	Cd	.21900	13.0720						
	ICSABF	Cd	7.31240	806.6320						

ENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR	TOTAL ug RESULT	%RPD
2-1IN FH	57.113.1	Cd	32.41190	5181.4150	172	172	100	10	5181	
2-2IN FH	57.113.5	Cd	28.64500	4577.6880	208	208	100	10	4578	
2-2IN FH(D)	57.113.5D	Cd	28.78140	4599.5420	208	208	100	10	4600	.48%
2-3IN FH	57.113.9	Cd	28.01410	4476.5660	241	241	100	10	4477	
4-1IN FH	57.113.13	Cd	62.44010	9994.0930	204	204	100	10	9994	
4-2IN FH	57.113.17	Cd	46.29710	7406.8210	155	155	100	10	7407	
4-3IN FH	57.113.21	Cd	51.48030	8237.5390	176	176	100	10	8238	
	STD BLK	Cd	.03350	0.0000						
	STD 1=75ug/L	Cd	.52140	75.0000						
	STD 2=300ug/L	Cd	1.95860	300.0000						
	STD 3=750ug/L	Cd	4.91190	750.0000						
	STD 4=1500ug/L	Cd	9.36820	1500.0000						
	CHECK HS	Cd	9.38490	1490.8290						
	ICV=750ug/L	Cd	4.90880	773.4370						
	ICB	Cd	.03180	-8.2190						
	ICSAI	Cd	.19200	17.4630						
	ICSABI	Cd	5.16560	814.5930						
	CCV1	Cd	4.71490	742.3540						
	CCB1	Cd	.07740	-.9050						
	ICSAF	Cd	.17540	14.8010						
	ICSABF	Cd	5.12270	807.7210						

ICP MNTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Cr
ug/L IDL: 12

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR		TOTAL ug RESULT	%RPD
2-1IN FH	57.113.1/1F	Cr	182.62060	20325.5390	172	172	100	1		2033	
2-1IN FH(L)	57.113.1/1F L	Cr	36.36150	4008.6060	172	172	100	5		2004	
2-1IN BH	57.113.3/1B	Cr	4.00010	398.3070	322	222	100	1		57.8	
2-1IN BH(L)	57.113.3/1B L	Cr	.78590	39.7230	322	222	100	5		28.8	
2-2IN FH	57.113.5/2F	Cr	216.80980	24139.7540	208	208	100	1		2414	
2-2IN FH(D)	57.113.5/2F D	Cr	267.72140	29819.5410	208	208	100	1		2982	21.1%
2-2IN BH	57.113.7/2B	Cr	.80260	41.5900	328	228	100	1		5.98	
2-2IN BH(D)	57.113.7/2B D	Cr	.76060	36.8930	328	228	100	1		5.31	12.0%
2-3IN FH	57.113.9/3F	Cr	210.22880	23405.5640	241	241	100	1		2341	
2-3IN BH	57.113.11/3B	Cr	.29460	-15.0930	339	239	100	1	<	1.70	
4-1IN FH	57.113.13/4F	Cr	114.54490	12730.8930	204	204	100	1		1273	
4-1IN BH	57.113.15/4B	Cr	.65060	24.6300	315	215	100	1		3.81	
4-2IN FH	57.113.17/5F	Cr	190.21040	21172.2770	155	155	100	1		2117	
4-2IN BH	57.113.19/5B	Cr	3.09720	297.5760	312	212	100	1		43.8	
4-3IN FH	57.113.21/6F	Cr	148.97800	16572.3050	176	176	100	1		1657	
4-3IN BH	57.113.23/6B	Cr	33.62200	3702.9810	356	256	100	1		515	
2-1MTL FH	57.113.25/7F	Cr	2.25430	203.5340	166	166	100	1		20.4	
2-1MTL BH	57.113.29/7B	Cr	.20650	-24.9180	358	258	100	1	<	1.67	
2-2MTL FH	57.113.32/8F	Cr	2.50070	231.0320	187	187	100	1		23.1	
2-2MTL BH	57.113.36/8B	Cr	.20330	-25.2700	320	220	100	1	<	1.75	
2-3MTL FH	57.113.39/9F	Cr	2.44680	225.0180	190	190	100	1		22.5	
2-3MTL BH	57.113.43/9B	Cr	.21840	-23.5850	381	281	100	1	<	1.63	
4-1MTL FH	57.113.46/10F	Cr	2.23770	201.6820	159	159	100	1		20.2	
4-1MTL BH	57.113.50/10B	Cr	.60410	19.4400	425	325	100	1		2.54	
4-2MTL FH	57.113.53/11F	Cr	2.89910	275.4760	179	179	100	1		27.5	
4-2MTL BH	57.113.57/11B	Cr	.32590	-11.5920	428	328	100	1	<	1.57	
4-3MTL FH	57.113.60/12F	Cr	1.74270	146.4670	125	125	100	1		14.6	
4-3MTL BH	57.113.64/12B	Cr	.23250	-22.0140	442	342	100	1	<	1.55	
4-BLK MTL FH	57.113.67/13F	Cr	3.52550	345.3510	209	209	100	1		34.5	
4-BLK MTL BH	57.113.71/13B	Cr	.21310	-24.1820	326	226	100	1	<	1.73	
	STD BLK	Cr	.65600	0.0000							
	STD 1=40ug/L	Cr	.77180	40.0000							
	STD 2=200ug/L	Cr	2.01640	200.0000							
	STD 3=400ug/L	Cr	3.90380	400.0000							
	STD 4=800ug/L	Cr	7.70890	800.0000							
	CHECK HS	Cr	7.69210	810.1930							
	ICV=400ug/L	Cr	3.91430	388.7290							
	ICB	Cr	.61810	20.9970							
	ICSAI	Cr	.09760	-37.0620							
	ICSABI	Cr	3.93330	390.8520							
	CCV1	Cr	3.97380	395.3710							
	CCB1	Cr	.64740	24.2690							
	CCV2	Cr	4.07740	406.9270							
	CCB2	Cr	.67000	26.7940							
	CCV3	Cr	4.03000	401.6430							
	CCB3	Cr	.63940	23.3730							
	ICSAF	Cr	.09600	-37.2420							
	ICSABF	Cr	4.30290	432.0800							

ICP MMTL ANALYTE SUMMARY REPORT

ANALYTE: Pb
ug/L IDL: 150

SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR		TOTAL ug RESULT	%RPD	
1[illegible].1/1F L	Pb	45.19310	82404.5940	172	172	100	5		41202		
113.3/1B	Pb	16.54700	30130.7210	322	222	100	1		4370		
1[illegible].3/1B L	Pb	3.30880	5973.3660	322	222	100	5		4332		
.1[illegible].7/2B	Pb	3.89460	7042.2500	328	228	100	1		1013		
.113.7/2B D	Pb	3.64880	6593.7410	328	228	100	1		949	6.58%	
.1[illegible].11/3B	Pb	.26770	423.9030	339	239	100	1		60.1		
.1[illegible].15/4B	Pb	.16640	239.1210	315	215	100	1		35.0		*
.1[illegible].19/5B	Pb	11.87570	21606.4490	312	212	100	1		3180		
.113.23/6B	Pb	1.13030	1997.9350	356	256	100	1		278		
.1[illegible].25/7F	Pb	.48560	821.6120	166	166	100	1		82.2		
.1[illegible].29/7B	Pb	.04950	25.6930	358	258	100	1	<	20.8		*
.113.32/8F	Pb	.79220	1381.0440	187	187	100	1		138		
.1[illegible].36/8B	Pb	.03190	-6.2950	320	220	100	1	<	21.8		*
.1[illegible].39/9F	Pb	1.38400	2460.9990	190	190	100	1		246		
.113.43/9B	Pb	.02300	-22.5520	381	281	100	1	<	20.3		*
.113.46/10F	Pb	.33480	546.3430	159	159	100	1		54.6		
.[illegible] 10B	Pb	.03010	-9.7480	425	325	100	1	<	19.6		*
.113.[illegible]/11F	Pb	1.41740	2521.9280	179	179	100	1		252		
.113.57/11B	Pb	.03420	-2.2090	428	328	100	1	<	19.6		*
.1[illegible].60/12F	Pb	1.07940	1905.1940	125	125	100	1		191		
.1[illegible].64/12B	Pb	.03930	7.1520	442	342	100	1	<	19.4		*
.113.67/13F	Pb	5.64480	10236.1820	209	209	100	1		1024		
.1[illegible].71/13B	Pb	.02570	-17.6630	326	226	100	1	<	21.6		*
[illegible]D BLK	Pb	.02550	0.0000								
[illegible]D 1=250ug/L	Pb	.15670	250.0000								
[illegible]D 2=1000ug/L	Pb	.59550	1000.0000								
[illegible]D 3=2500ug/L	Pb	1.43570	2500.0000								
TD 4=5000ug/L	Pb	2.75860	5000.0000								
[illegible]K HS	Pb	2.75010	4953.8270								
[illegible]2500ug/L	Pb	1.46380	2606.5040								
CB	Pb	.02760	-14.1430								
[illegible]I	Pb	-.03400	-126.6960								
[illegible]BI	Pb	.60850	1045.8730								
CV1	Pb	1.47480	2626.5910								
CB[illegible]	Pb	.02940	-10.9080								
[illegible]	Pb	1.45360	2588.0260								
[illegible]	Pb	.01990	-28.2070								
CV3	Pb	1.42650	2538.5130								
[illegible]	Pb	.03780	4.3230								
[illegible]F	Pb	-.00340	-70.7860								
ICSA	Pb	.57390	982.6160								

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR	TOTAL ug RESULT	%RPD
2-1IN FH	57.113.1	Pb	14.75910	38543.6050	172	172	100	10	38544	
2-2IN FH	57.113.5	Pb	11.56720	30191.6500	208	208	100	10	30192	
2-2IN FH(D)	57.113.5D	Pb	11.66610	30450.4300	208	208	100	10	30450	31.9%
2-3IN FH	57.113.9	Pb	10.08530	26314.0430	241	241	100	10	26314	
4-1IN FH	57.113.13	Pb	16.00190	41795.4100	204	204	100	10	41795	
4-2IN FH	57.113.17	Pb	14.96620	39085.4840	155	155	100	10	39085	
4-3IN FH	57.113.21	Pb	13.40290	34994.8590	176	176	100	10	34995	
	STD BLK	Pb	.02150	0.0000						
	STD 1=250ug/L	Pb	.10890	250.0000						
	STD 2=1000ug/L	Pb	.41590	1000.0000						
	STD 3=2500ug/L	Pb	1.01980	2500.0000						
	STD 4=5000ug/L	Pb	1.92150	5000.0000						
	CHECK HS	Pb	1.88960	4869.2900						
	ICV=2500ug/L	Pb	.98400	2499.6370						
	ICB	Pb	.02040	-21.8410						
	ICSAI	Pb	-.00520	-88.7310						
	ICSABI	Pb	.39530	959.2910						
	CCV1	Pb	.95470	2423.0130						
	CCB1	Pb	.02930	1.4200						
	ICSAF	Pb	-.02380	-137.3950						
	ICSABF	Pb	.35730	859.7460						

REPORT

Y[redacted] Pb

ID[redacted] 2

MSA RESULTS

ug/L CENTRATION	ml TV	ml USED	ml FV	DIL FACTOR		TOTAL ug RESULT
[redacted].5000	315	215	100	1		29.1
6.9000	358	258	100	1		.957
[redacted].8000	320	220	100	1	<	.291
[redacted].8000	381	281	100	1		.786
13.4000	425	325	100	1		1.75
[redacted]3.2000	428	328	100	1		8.25
[redacted].8000	442	342	100	1		5.14
[redacted]8.0000	326	226	100	1		2.60

GFAA MATL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Sb
ug/L IDL: 5

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

MSA RESULTS

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR	TOTAL ug RESULT
2-1IN FH	57.113.1/1F	Sb	.13381818	177.8000	172	172	100	10	178
2-1IN BH	57.113.3/1B	Sb	.04356272	56.9000	322	222	100	1	8.25
2-2IN FH	57.113.5/2F	Sb	.11211206	184.9000	208	208	100	10	185
2-2IN BH	57.113.7/2B	Sb	.02245852	26.1000	328	228	100	1	3.75
2-3IN FH	57.113.9/3F	Sb	.13450036	230.1000	241	241	100	10	230
2-3IN BH	57.113.11/3B	Sb	.01271401	14.3000	339	239	100	1	2.03
4-1IN FH	57.113.13/4F	Sb	.15331055	305.0000	204	204	100	10	305
4-1IN BH	57.113.15/4B	Sb	.01323902	13.7000	315	215	100	1	2.01
4-2IN FH	57.113.17/5F	Sb	.08118644	124.3000	155	155	100	10	124
4-2IN BH	57.113.19/5B	Sb	.03108947	36.2000	312	212	100	1	5.33
4-3IN FH	57.113.21/6F	Sb	.08577111	129.1000	176	176	100	10	129
4-3IN BH	57.113.23/6B	Sb	.01550628	17.1000	356	256	100	1	2.38
2-1MTL FH	57.113..25/7F	Sb	.00326377	1.5000	166	166	100	1	< .500
2-1MTL BH	57.113.29/7B	Sb	.00986824	8.7000	358	258	100	1	1.21
2-2MTL FH	57.3113.32/8F	Sb	.00717629	7.9000	187	187	100	1	.790
2-2MTL BH	57.113.36/8B	Sb	.01170411	11.7000	320	220	100	1	1.70
2-3MTL FH	57.113.39/9F	Sb	.01052367	14.9000	190	190	100	1	1.49
2-3MTL BH	57.3113.43/9B	Sb	.00774143	6.2000	381	281	100	1	.841
4-1MTL FH	57.113.46/10F	Sb	.00868111	9.7000	159	159	100	1	.970
4-1MTL BH	57.113.50/10B	Sb	.00799223	6.5000	425	325	100	1	.850
4-2MTL FH	57.113.53/11F	Sb	.01422551	17.8000	179	179	100	1	1.78
4-2MTL BH	57.113.57/11B	Sb	.00930310	11.0000	428	328	100	1	1.44
4-3MTL FH	57.113.60/12F	Sb	.01258694	12.7000	125	125	100	1	1.27
4-3MTL BH	57.113.64/12B	Sb	.01264044	11.2000	442	342	100	1	1.45
4-BLK MTL FH	57.113.67/13F	Sb	.01334269	14.6000	209	209	100	1	1.46
4-BLK MTL BH	57.113.71/13B	Sb	.00670478	4.1000	326	226	100	1	< .721

GFAA MATL ANALYTE SUMMARY REPORT

[redacted]NT: IEA

ANALYTE: Tl

ug/L IDL: 2

DATE RECEIVED: 06/20/92

DATE REPORTED: 07/13/92

TLI PROJECT #: 21216

MSA RESULTS

CLIENT #	SAMPID	EL	PEAKINT	ug/L CONCENTRATION	ml TV	ml USED	ml FV	DIL FACTOR		TOTAL ug RESULT
2-1IN FH	57.113.1/1F	Tl	.01665328	25.3000	172	172	100	10		25.3
2-1IN BH	57.113.3/1B	Tl	.03100000	16.5000	322	222	100	1		2.39
2-2IN FH	57.113.5/2F	Tl	.02509362	21.5000	208	208	100	10		21.5
2-2IN BH	57.113.7/2B	Tl	.01072097	4.3000	328	228	100	1		.819
2-3IN FH	57.113.9/3F	Tl	.01233279	12.8000	241	241	100	10		12.8
2-3IN BH	57.113.11/3B	Tl	.00107009	.4000	339	239	100	1	<	.284
4-1IN FH	57.113.13/4F	Tl	.03144728	33.4000	204	204	100	10		33.4
4-1IN BH	57.113.15/4B	Tl	.00131420	.5000	315	215	100	1	<	.293
4-2IN FH	57.113.17/5F	Tl	.02964820	23.2000	155	155	100	10		23.2
4-2IN BH	57.113.19/5B	Tl	.03742307	20.6000	312	212	100	1		3.03
4-3IN FH	57.113.21/6F	Tl	.03149745	23.1000	176	176	100	10		23.1
4-3IN BH	57.113.23/6B	Tl	.00497926	1.9000	356	256	100	1	<	.278
2-1MTL FH	57.113.25/7F	Tl	.00754413	3.2000	166	166	100	1		.320
2-1MTL BH	57.113.29/7B	Tl	.00146803	.6000	358	258	100	1	<	.278
2-2MTL FH	57.113.32/8F	Tl	.01935192	9.6000	187	187	100	1		.960
2-2MTL BH	57.113.36/8B	Tl	.00178571	.7000	320	220	100	1	<	.291
[redacted]TL FH	57.113.39/9F	Tl	.00016385	.1000	190	190	100	1	<	.200
[redacted]TL BH	57.3113.43/9B	Tl	.00239432	.9000	381	281	100	1	<	.271
4-1MTL FH	57.113.46/10F	Tl	.00060192	.2000	159	159	100	1	<	.200
4-1MTL BH	57.113.50/10B	Tl	.00279226	1.1000	425	325	100	1	<	.262
4-2MTL FH	57.113.53/11F	Tl	.00137439	.5000	179	179	100	1	<	.200
4-2MTL BH	57.113.57/11B	Tl	.00580858	2.8000	428	328	100	1		.365
4-3MTL FH	57.113.60/12F	Tl	.00233747	.8000	125	125	100	1	<	.200
4-3MTL BH	57.113.64/12B	Tl	.00986824	4.9000	442	342	100	1		.633
4-BLK MTL FH	57.113.67/13F	Tl	-.00700000	-3.3000	209	209	100	1	<	.200
4-BLK MTL BH	57.113.71/13B	Tl	.01177099	5.1000	326	226	100	1		.736

CVAA MNTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Hg
ug/L IDL: .2

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

FH SAMPLES

CLIENT #	SAMPID	EL	MEAN ABS	(in bottle) ug/L CONCENTRATION	ml TV	ml FV	ml ALIQUOT	POST DIG DIL FACTOR		TOTAL ug RESULT	%RPD
2-1IN FH	57.113.1 FH	Hg	.03200239	.8000	N/A	100	5	1		1.60	
2-1IN FH(D)	57.113.1 FH D	Hg	.03099918	.7000	N/A	100	5	1		1.40	13.3%
2-2IN FH	57.113.5 FH	Hg	.01665328	.4000	N/A	100	5	1		.800	
2-2IN FH(D)	57.113.5 FH D	Hg	.01625200	.4000	N/A	100	5	1		.800	.00%
2-3IN FH	57.113.9 FH	Hg	.02006420	.5000	N/A	100	5	1		1.00	
2-3IN FH(D)	57.113.9 FH D	Hg	.01896066	.5000	N/A	100	5	1		1.00	.00%
4-1IN FH	57.113.13 FH	Hg	.01444622	.4000	N/A	100	5	1		.800	
4-1IN FH(D)	57.113.13 FH D	Hg	.01424558	.3000	N/A	100	5	1		.600	28.6%
4-2IN FH	57.113.17 FH	Hg	.01233948	.3000	N/A	100	5	1		.600	
4-2IN FH(D)	57.113.17 FH D	Hg	.01183787	.3000	N/A	100	5	1		.600	.00%
4-3IN FH	57.113.21 FH	Hg	.01404494	.3000	N/A	100	5	1		.600	
4-3IN FH(D)	57.113.21 FH D	Hg	.01514847	.4000	N/A	100	5	1		.800	28.6%
2-1MTL FH	57.113.25 FH	Hg	.00752407	.2000	N/A	100	5	1	<	.400	
2-1MTL FH(D)	57.113.25 FH D	Hg	.00802568	.2000	N/A	100	5	1	<	.400	N/A
2-2MTL FH	57.113.32 FH	Hg	.00973113	.2000	N/A	100	5	1	<	.400	
2-2MTL FH(D)	57.113.32 FH D	Hg	.00792535	.2000	N/A	100	5	1	<	.400	N/A
2-3MTL FH	57.113.39 FH	Hg	.00642054	.2000	N/A	100	5	1	<	.400	
2-3MTL FH(D)	57.113.39 FH D	Hg	.00983145	.2000	N/A	100	5	1	<	.400	N/A
4-1MTL FH	57.113.46 FH	Hg	.00802568	.2000	N/A	100	5	1	<	.400	
4-1MTL FH(D)	57.113.46 FH D	Hg	.00672150	.2000	N/A	100	5	1	<	.400	N/A
4-2MTL FH	57.113.53 FH	Hg	.00722311	.2000	N/A	100	5	1	<	.400	
4-2MTL FH(D)	57.113.53 FH D	Hg	.00792535	.2000	N/A	100	5	1	<	.400	N/A
4-3MTL FH	57.113.60 FH	Hg	.00652086	.2000	N/A	100	5	1	<	.400	
4-3MTL FH(D)	57.113.60 FH D	Hg	.00621990	.2000	N/A	100	5	1	<	.400	N/A
4-BLK MTL FH	57.113.67 FH	Hg	.00662118	.2000	N/A	100	5	1	<	.400	
4-BLK MTL FH(D)	57.113.67 FH D	Hg	.00561797	.1000	N/A	100	5	1	<	.400	N/A
	STD BLK	Hg	-.00782500	-.1000							
	STD 1=0.50ug/L	Hg	.01936195	.9000							
	STD 2=1.00ug/L	Hg	.04173353	4.2000							
	STD 3=2.00ug/L	Hg	.08657702	1.8000							
	STD 4=5.00ug/L	Hg	.22341487	5.0000							
	STD 5=10.0ug/L	Hg	.43840277	9.7000							
	ICV=5ug/L	Hg	.21167731	4.9000							
	ICB	Hg	.00692214	.2000							
	CCV1	Hg	.21498790	5.0000							
	CCB1	Hg	.00973113	.2000							
	CCB2	Hg	.01063466	.3000							
	CCV2	Hg	.21328245	5.0000							
	CCV3	Hg	.20194617	4.7000							
	CCB3	Hg	.00601926	.1000							
	CCV4	Hg	.21749593	5.1000							
	CCB4	Hg	.00742375	.2000							
	CCV5	Hg	.21699432	5.0000							
	CCB5	Hg	.00822632	.2000							

CVAA MNTL ANALYTE SUMMARY REPORT

NT: IEA

ANALYTE: Hg
ug/L IDL: .2
PREDIGESTION SPK AMT: 5 ug/L

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

BH SAMPLES

CLIENT #	SAMPID	EL	MEAN ABS	(in bottle) ug/L CONCENTRATION	ml TV	ml FV	ml ALIQUOT	POST DIG DIL FACTOR	TOTAL ug RESULT	%RPD	%REC
2-1IN BH	57.113.3 BH	Hg	.04614766	.8000	322	N/A	5	1	5.80		
2-1IN BH(D)	57.113.3 BH D	Hg	.04474316	.8000	322	N/A	5	1	5.15	11.8%	
2-1IN BH(S)	57.113.3 SPK	Hg	.25070218	4.8000	322	N/A	5	1	30.9		78.0%
2-2IN BH	57.113.7 BH	Hg	.05056178	.9000	328	N/A	5	1	5.90		
2-2IN BH(D)	57.113.7 BH D	Hg	.05086274	.9000	328	N/A	5	1	5.90	.00%	
2-3IN BH	57.113.11 BH	Hg	.04815408	.9000	339	N/A	5	1	6.10		
2-3IN BH(D)	57.113.11 BH D	Hg	.04634830	.9000	339	N/A	5	1	6.10	.00%	
4-1IN BH	57.113.15 BH	Hg	.02718699	.5000	315	N/A	5	1	3.15		
4-1IN BH(D)	57.113.15 BH D	Hg	.02528089	.5000	315	N/A	5	1	3.15	.00%	
4-2IN BH	57.113.19 BH	Hg	.00993177	.2000	312	N/A	5	1	1.25		
4-2IN BH(D)	57.113.19 BH D	Hg	.02487960	.5000	312	N/A	5	1	3.12	85.7%	
4-3IN BH	57.113.23 BH	Hg	.02477928	.5000	356	N/A	5	1	3.56		
4-3IN BH(D)	57.113.23 BH D	Hg	.02327447	.4000	356	N/A	5	1	2.85	22.2%	
2-1MTL BH	57.113.29 BH	Hg	.04855536	.9000	358	N/A	5	1	6.44		
2-1MTL BH(D)	57.113.29 BH D	Hg	.04775279	.9000	358	N/A	5	1	6.44	.00%	
2-2MTL BH	57.113.36 BH	Hg	.07925359	1.5000	320	N/A	5	1	9.60		
[illegible]TL BH(D)	57.113.36 BH D	Hg	.07995583	1.5000	320	N/A	5	1	9.60	.00%	
[illegible]MTL BH	57.113.43 BH	Hg	.06159709	1.1000	381	N/A	5	1	8.38		
2-3MTL BH(D)	57.113.43 BH D	Hg	.06029292	1.1000	381	N/A	5	1	8.38	.00%	
4-1MTL BH	57.113.50 BH D	Hg	.03701844	.7000	425	N/A	5	1	5.95		
4-1MTL BH(D)	57.113.50.BH	Hg	.03762037	.7000	425	N/A	5	1	5.95	.00%	
4-2MTL BH	57.113.57 BH	Hg	.03170143	.6000	428	N/A	5	1	5.14		
4-2MTL BH(D)	57.113.57 BH D	Hg	.03310593	.6000	428	N/A	5	1	5.14	.00%	
4-3MTL BH	57.113.64 BH	Hg	.03210272	.6000	442	N/A	5	1	5.30		
4-3MTL BH(D)	57.113.67 BH D	Hg	.03119983	.6000	442	N/A	5	1	5.30	.00%	
4-BLK MTL BH	57.113.71 BH	Hg	.01374397	.3000	326	N/A	5	1	1.98		
4-BLK MTL BH(D)	57.113.71 BH D	Hg	.01404494	.3000	326	N/A	5	1	1.98	.00%	
	TRUE SPK	Hg		*5.0000*	322	N/A	5	1	32.2		
	STD BLK	Hg	.00772471	.2000							
	STD 1=0.50ug/L	Hg	.02658506	.7000							
	STD 2=1.00ug/L	Hg	.05477526	1.0000							
	STD 3=2.00ug/L	Hg	.10774475	1.9000							
	STD 4=5.00ug/L	Hg	.25521662	4.6000							
	STD 5=10.0ug/L	Hg	.46348302	9.5000							
	ICV=5ug/L	Hg	.24538517	4.7000							
	ICB	Hg	.00732343	.1000							
	CCV1	Hg	.21789721	4.2000							
	CCB1	Hg	.02036516	.4000							
	CCV2	Hg	.22702642	4.4000							
	CCB2	Hg	.01494782	.3000							
	CCB3	Hg	.01605136	.3000							
	CCV3	Hg	.22481936	4.3000							

CVAA MMTL ANALYTE SUMMARY REPORT

CLIENT: IEA

ANALYTE: Hg
ug/L IDL: .2

DATE RECEIVED: 06/20/92
DATE REPORTED: 07/13/92
TLI PROJECT #: 21216

CLIENT #	SAMPID	EL	MEAN ABS	(in bottle) ug/L CONCENTRATION	ml TV	ml FV	ml ALIQUOT	POST DIG DIL FACTOR		TOTAL ug RESULT	%RPD
2-1MTL 5A	57.113.28	Hg	.02688602	.6000	34	N/A	5	1		.408	
2-1MTL 5A(D)	57.113.28 D	Hg	.02648474	.6000	34	N/A	5	1		.408	.00%
2-1MTL 5B	57.113.30	Hg	.01153691	.3000	250	N/A	5	1		1.50	
2-1MTL 5B(D)	57.113.30 D	Hg	.01073434	.3000	250	N/A	5	1		1.50	.00%
2-1MTL 5C	57.113.31	Hg	.00531701	.1000	240	N/A	5	1	<	.960	
2-1MTL 5C(D)	57.113.31 D	Hg	.00632022	.2000	240	N/A	5	1	<	.960	N/A
2-2MTL 5A	57.113.35	Hg	.02457864	.6000	30	N/A	5	1		.360	
2-2MTL 5A(D)	57.113.35 D	Hg	.02427768	.6000	30	N/A	5	1		.360	.00%
2-2MTL 5B	57.113.37	Hg	.02798955	.7000	290	N/A	5	1		4.06	
2-2MTL 5B(D)	57.113.37 D	Hg	.01615168	.4000	290	N/A	5	1		2.32	54.5%
2-2MTL 5C	57.113.38	Hg	AUTO ZEROED	N/A	230	N/A	5	1		~~.920~~	7/13/92 PLC NA
2-2MTL 5C(D)	57.113.38 D	Hg	.00892856	.2000	230	N/A	5	1	<	.920	N/A
2-3MTL 5A	57.113.42	Hg	.02726731	.7000	29	N/A	5	1		.406	
2-3MTL 5A(D)	57.113.42 D	Hg	.02447832	.6000	29	N/A	5	1		.348	15.4%
2-3MTL 5B	57.113.44	Hg	.01274076	.3000	250	N/A	5	1		1.50	
2-3MTL 5B(D)	57.113.44 D	Hg	.01254012	.3000	250	N/A	5	1		1.50	.00%
2-3MTL 5C	57.113.45	Hg	.00441412	.1000	220	N/A	5	1	<	.880	
2-3MTL 5C(D)	57.113.45 D	Hg	.00642054	.2000	220	N/A	5	1	<	.880	N/A
4-1MTL 5A	57.113.49	Hg	.00832664	.2000	96	N/A	5	1	<	.384	
4-1MTL 5A(D)	57.113.49 D	Hg	.00862760	.2000	96	N/A	5	1	<	.384	N/A
4-1MTL 5B	57.113.51	Hg	.00963081	.2000	310	N/A	5	1	<	1.24	
4-1MTL 5B(D)	57.113.51 D	Hg	.00862760	.2000	310	N/A	5	1	<	1.24	N/A
4-1MTL 5C	57.113.52	Hg	.00581861	.1000	220	N/A	5	1	<	.880	
4-1MTL 5C(D)	57.113.52 D	Hg	.00411316	.1000	220	N/A	5	1	<	.880	N/A
4-2MTL 5A	57.113.56	Hg	.01003210	.2000	96	N/A	5	1	<	.384	
4-2MTL 5A(D)	57.113.56 D	Hg	.00862760	.2000	96	N/A	5	1	<	.384	N/A
4-2MTL 5B	57.113.58	Hg	.00802568	.2000	310	N/A	5	1	<	1.24	
4-2MTL 5B(D)	57.113.58 D	Hg	.00872792	.2000	310	N/A	5	1	<	1.24	N/A
4-2MTL 5C	57.113.59	Hg	.00662118	.2000	220	N/A	5	1	<	.880	
4-2MTL 5C(D)	57.113.59 D	Hg	.00742375	.2000	220	N/A	5	1	<	.880	N/A
4-3MTL 5A	57.113.63	Hg	.00832664	.2000	73	N/A	5	1	<	.292	
4-3MTL 5A(D)	57.113.63 D	Hg	.01013242	.2000	73	N/A	5	1	<	.292	N/A
4-3MTL 5B	57.113.65	Hg	.00912921	.2000	340	N/A	5	1	<	1.36	
4-3MTL 5B(D)	57.113.65 D	Hg	.00732343	.2000	340	N/A	5	1	<	1.36	N/A
4-3MTL 5C	57.113.66	Hg	.00772471	.2000	220	N/A	5	1	<	.880	
4-3MTL 5C(D)	57.113.66 D	Hg	.00722311	.2000	220	N/A	5	1	<	.880	N/A
4-BLK 5A	57.113.70	Hg	.00832664	.2000	90	N/A	5	1	<	.360	
4-BLK 5A(D)	57.113.70 D	Hg	.00802568	.2000	90	N/A	5	1	<	.360	N/A
4-BLK 5B	57.113.72	Hg	.00702247	.2000	290	N/A	5	1	<	1.16	
4-BLK 5B(D)	57.113.72 D	Hg	.00782503	.2000	290	N/A	5	1	<	1.16	N/A
4-BLK 5C	57.113.73	Hg	.00932985	.2000	220	N/A	5	1	<	.880	
4-BLK 5C(D)	57.113.73 D	Hg	.00872792	.2000	220	N/A	5	1	<	.880	N/A

STD BLK	Hg	-.00782500	-.1000
STD 1=0.50ug/L	Hg	.01936195	.9000
STD 2=1.00ug/L	Hg	.04173353	4.2000
STD 3=2.00ug/L	Hg	.08657702	1.8000
STD 4=5.00ug/L	Hg	.22341487	5.0000
STD 5=10.0ug/L	Hg	.43840277	9.7000
ICV=5ug/L	Hg	.21167731	4.9000
ICB	Hg	.00692214	.2000
CCV1	Hg	.21498790	5.0000
CCB1	Hg	.00973113	.2000
CCB2	Hg	.01083466	.3000
CCV2	Hg	.21328245	5.0000
CCV3	Hg	.20194617	4.7000
CCB3	Hg	.00601926	.1000
CCV4	Hg	.21749593	5.1000
CCB4	Hg	.00742375	.2000
CCV5	Hg	.21699432	5.0000
CCB5	Hg	.00822632	.2000

Project # : 21316

Client : DEA, Inc.

Date : June 29, 1992

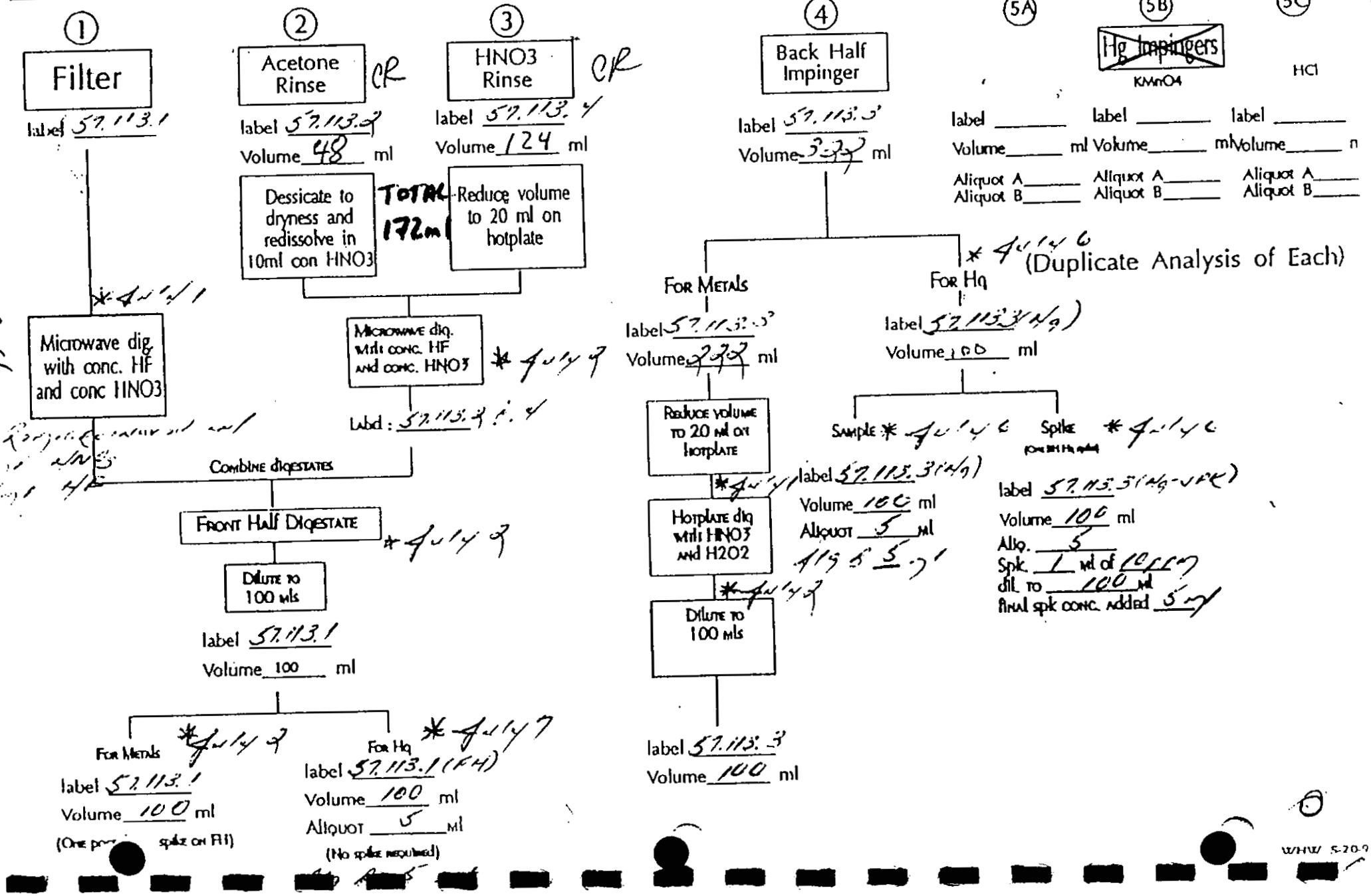
TRIANGLE LABS of RTP

(919) 544-5729

2-1 IN

Run # : 1

Analytes			
ICP	GFAA	FLAA	CVAA
(Pb) Ba, Ba, Cd, Cr Ag	As, Sb, Tl		Hg



WHW 5-20-9

Project # [redacted] 2116

Client [redacted] GFA, Inc.

Date: June 29, 1990

TRIANGLE LAB ORD

(919 [redacted] 4-5729

2-2 IN

Run #: 2

ANALYTES			
ICP	GFAA	FLAA	[redacted] VAA

(1) Filter

label 57.113.5

Microwave dig. with conc. HF and conc HNO3

(2) Acetone Rinse CR

label 57.113.6

Volume 40 ml

Dessicate to dryness and redissolve in 10ml con HNO3

(3) HNO3 Rinse CR

label 57.113.8

Volume 168 ml

Reduce volume to 20 ml on hotplate

TOTAL 208 ml

Microwave dig. with conc. HF and conc. HNO3

Label: _____

Combine digestates

Front Half Digestate

Dilute to 100 mls

label _____

Volume 100 ml

For Metals *July 2

label 57.113.5

Volume 100 ml

(One post digest spike on FH)

For Hg *July 7

label 57.113.5(FH)

Volume 100 ml

Aliquot 5 ml

(No spike required)

Alq & 5 ml

(4) Back Half Impinger

label 57.113.7

Volume 328 ml

For Metals

label 57.113.7

Volume 328 ml

Reduce volume to 20 ml on hotplate

*July 6

Hotplate dig with HNO3 and H2O2

*July 7

Dilute to 100 mls

label 57.113.7

Volume 100 ml

For Hg *July 6 (Duplicate Analysis of Each)

label 57.113.7(Hg)

Volume 100 ml

Sample *July 6

label 57.113.7(Hg)

Volume 100 ml

Aliquot 5 ml

Alq & 5 ml

Spike

label _____

Volume _____ ml

Aliq. _____

Spk. _____ ml of _____

dil. to _____ ml

fixed spk conc. added _____

(5A)

label _____

Volume _____ ml

Aliquot A _____

Aliquot B _____

(5B) ~~Hg Impingers~~ KMnO4

label _____

Volume _____ ml

Aliquot A _____

Aliquot B _____

(5C) HCl

label _____

Volume _____ ml

Aliquot A _____

Aliquot B _____

(Duplicate Analysis of Each)

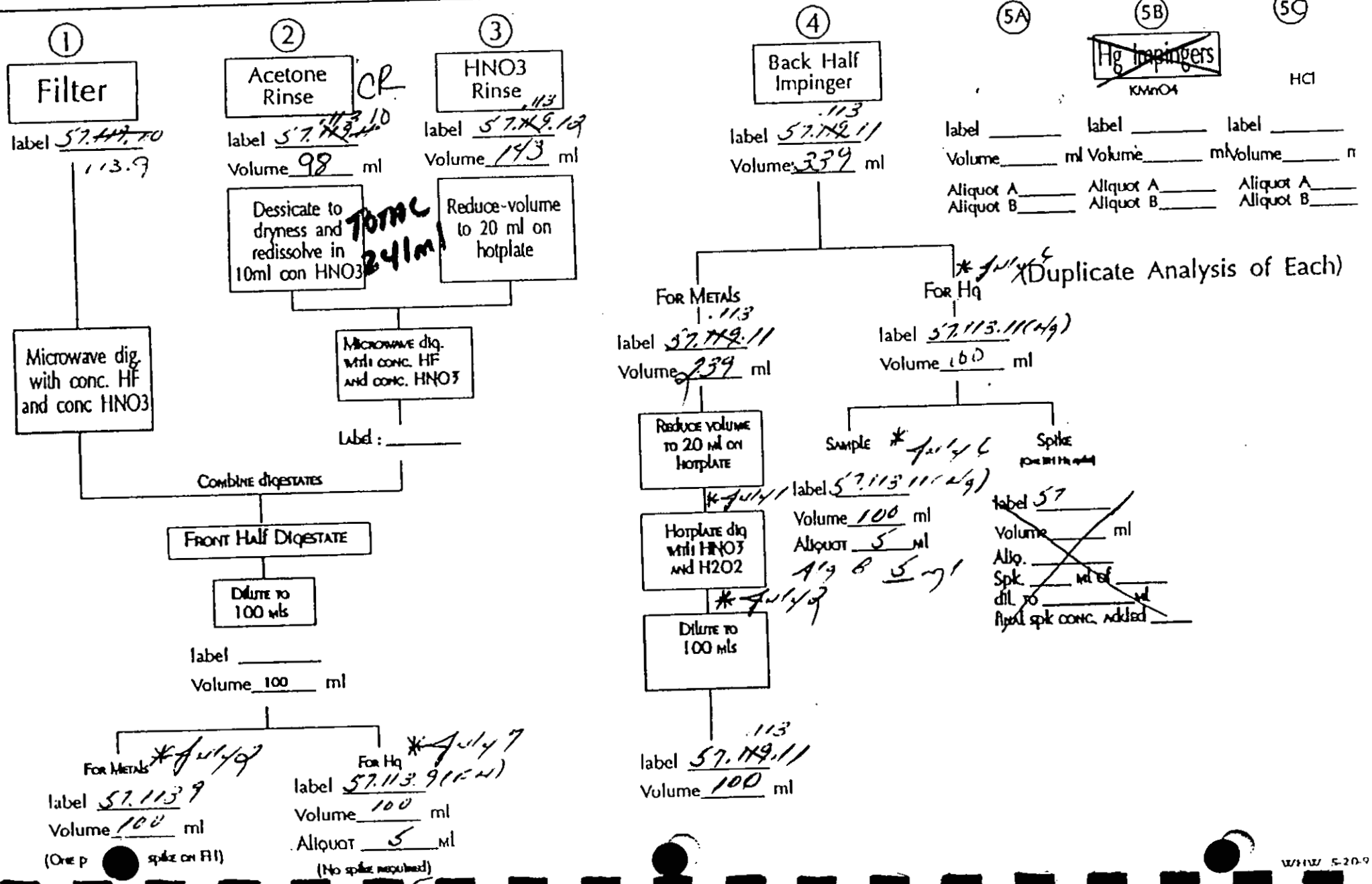
WHW 5-20-9

Project # : 21916
Client : EPA, Inc.
Date : June 29, 1992

TRIANGLE LABS of RTP
(919) 544-5729
2-3 IN

Run # : 3

Analytes			
ICP	GFAA	FLAA	CVAA



99-01

WHW 5-20-9

Project # [redacted]

Client [redacted] GP4, Inc.

Date: June 29, 1992

[redacted] TRANSPLEAS CORP.

(919) [redacted]14-5729

4-CLIN

Run #: 4

ANALYTES

ICP	GFAA	FLAA	CVAA

(1) Filter

label 57.113.13

Microwave dig. with conc. HF and conc HNO3

(2) Acetone Rinse CR

label 57.113.14

Volume 79 ml

Dessicate to dryness and redissolve in 10ml con HNO3

Total 20ml

Reduce volume to 20 ml on hotplate

Microwave dig. with conc. HF and conc. HNO3

Label: _____

(3) HNO3 Rinse

label 57.113.16

Volume 125 ml

Combine digestates

Front Half Digestate

Dilute to 100 mls

label _____

Volume 100 ml

For Metals * Aliq

label 57.113.13

Volume 100 ml

(One post digest spike on FH)

For Hg * Aliq 7

label 57.113.13(FH)

Volume 100 ml

Aliquot 5 ml

(No spike required)

Aliq B 5 ml

(4) Back Half Impinger

label 57.113.15

Volume 315 ml

For Metals

label 57.113.15

Volume 315 ml

Reduce volume to 20 ml on hotplate

* Aliq

Hotplate dig with HNO3 and H2O2

* Aliq 7

Dilute to 100 mls

label 57.113.15

Volume 100 ml

For Hg * Aliq 6 (Duplicate Analysis of Each)

label 57.113.15(Hg)

Volume 100 ml

Sample * Aliq C

label 57.113.15(Hg)

Volume 100 ml

Aliquot 5 ml

Aliq B 5 ml

Spike

label _____

Volume _____ ml

Aliq. _____

Spk. _____ ml of _____

dil. to _____ ml

final spk conc. added _____

(5A) label _____ Volume _____ ml Aliquot A _____ Aliquot B _____

(5B) Hg Impingers KMnO4 label _____ Volume _____ ml Aliquot A _____ Aliquot B _____

(5C) HCl label _____ Volume _____ ml Aliquot A _____ Aliquot B _____

U-69

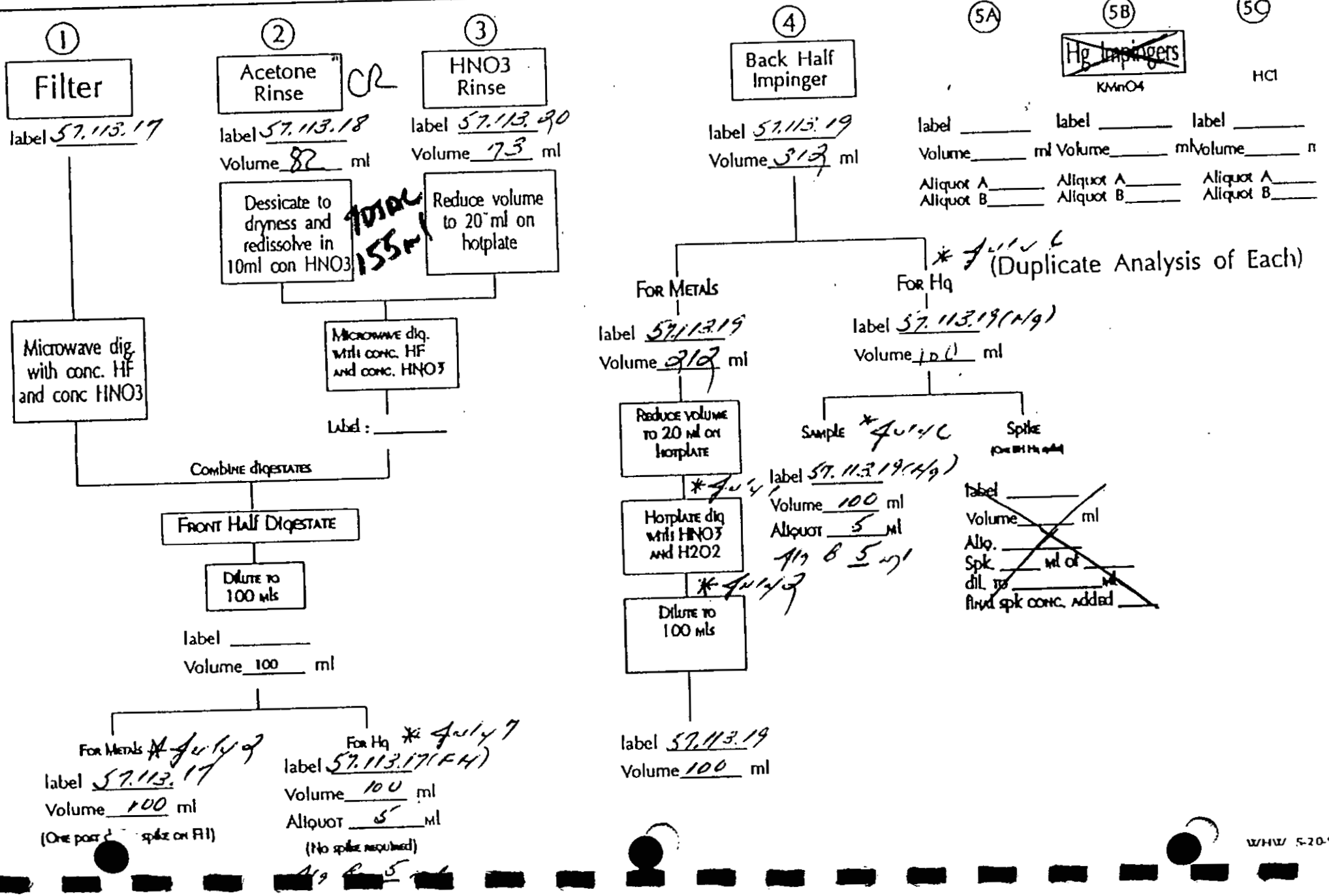
WHW 5-20-9

Project # : 21216
Client : SAI, Inc.
Date : June 29, 1993

TRIANGLE LABS OF RTP
(919) 544-5729
4-2 IN

Run # : 5

ANALYTES			
ICP	GFAA	FLAA	CVAA



02-0

W/HW 5-20-9

Project [redacted]

Client [redacted] UCA, Unc.

DATE : June 29 1992

TRIANGLE LABS of RTP

(919) [redacted]14-5729

4-3 EN

RUN # : 6

ANALYTES

ICP	GFAA	FLAA	CVAA

17-0

① Filter

label 57.113.91

Microwave dig. with conc. HF and conc HNO3

② Acetone Rinse* CR

label 57.113.92

Volume 99 ml

Dessicate to dryness and redissolve in 10ml con HNO3

TOTAL 174 ml

③ HNO3 Rinse

label 57.113.94

Volume 77 ml

Reduce volume to 20 ml on hotplate

Microwave dig. with conc. HF and conc. HNO3

Label : _____

Combine digestates

FRONT HALF DIGESTATE

Dilute to 100 mls

label _____

Volume 100 ml

For Metals * Jul 1 92

label 57.113.91

Volume 100 ml

(One post digest spike on FH)

For Hg * Jul 1 92

label 57.113.91(FH)

Volume 100 ml

Aliquot 5 ml

(No spike required)

Aliq B 5 ml

④ Back Half Impinger

label 57.113.93

Volume 356 ml

5A label _____ Volume _____ ml Aliquot A _____ Aliquot B _____

5B ~~Hg Impingers~~ KMnO4 label _____ Volume _____ ml Aliquot A _____ Aliquot B _____

5C HCl label _____ Volume _____ ml Aliquot A _____ Aliquot B _____

* Jul 1 92 (Duplicate Analysis of Each)

FOR METALS

label 57.113.93

Volume 356 ml

Reduce volume to 20 ml on hotplate

Hotplate dig with HNO3 and H2O2

* Jul 1 92

Dilute to 100 mls

label 57.113.93

Volume 100 ml

FOR Hg

label 57.113.93(Hg)

Volume 101 ml

Sample * Jul 1 92

label 57.113.93(Hg)

Volume 100 ml

Aliquot 5 ml

Spike (FOR BOTH Hg and Metals)

label _____

Volume _____ ml

Aliq. _____

Spk. _____ ml of _____

dil. to _____ ml

final spk conc. added _____

WHW 5-20-9

D-72

PROJECT # : 2816

CLIENT : EPA, ORD.

DATE : June 29, 1998

TRIANGLE LABS of RTP

(919) 544-5729

2-1. MTL

RUN # : 7

ANALYTES			
ICP	GFAA	FLAA	CVAA

PROJECT #: 2192

CLIENT: EPA, OAQPS

DATE: June 29, 1992

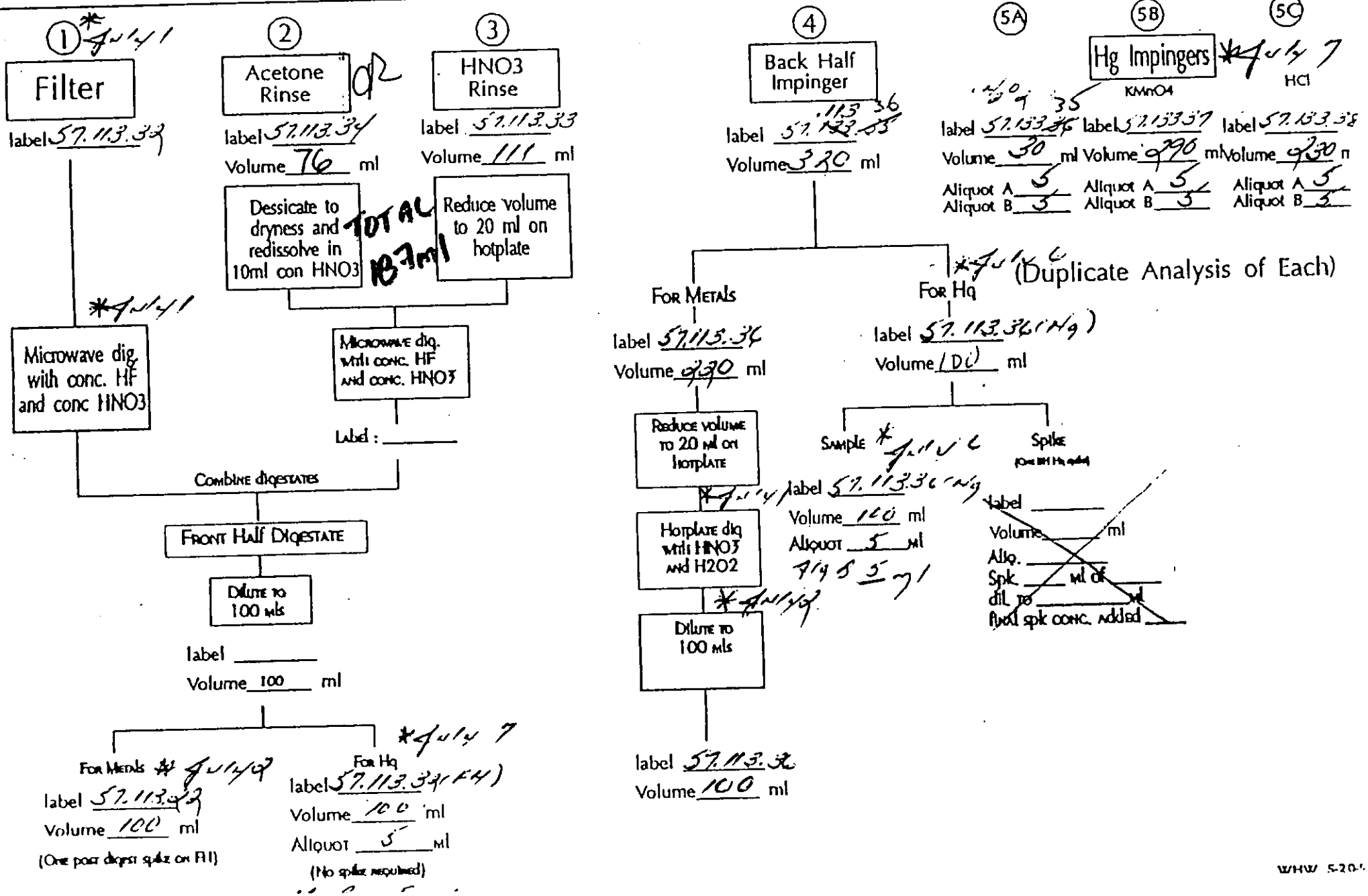
TRIANGLE LABS of RTP

(919) 544-5729

2-2 MTL

RUN #: 8

ANALYTES			
ICP	GFAA	FLAA	/AA



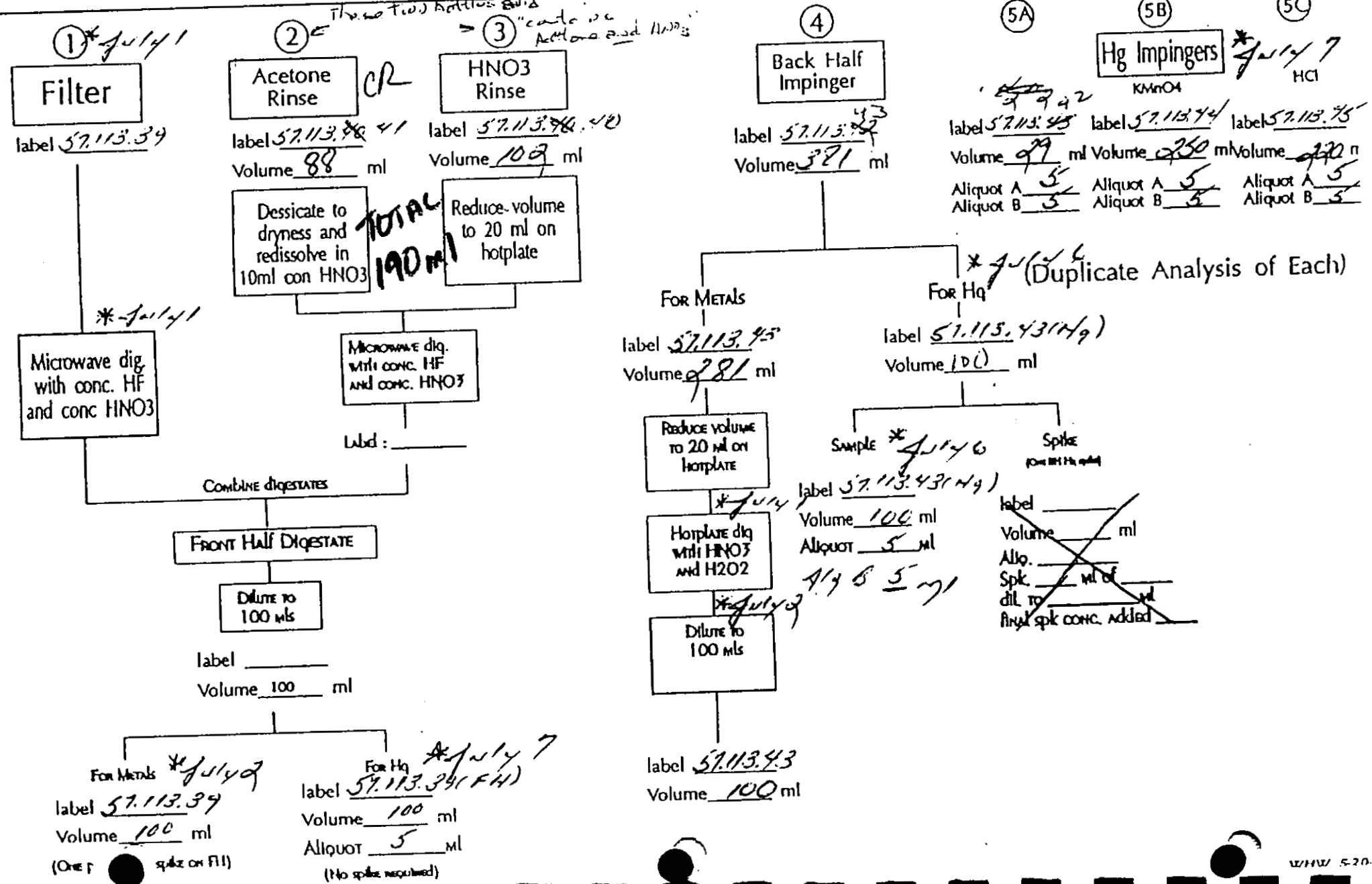
WHW 5-20-

Project # : 91216
Client : U.S.A. Corps
Date : January 29, 1992

TRIANGLE LABS of RTP
(919) 544-5729

2-3 MTL
Run # : 9

Analytes			
ICP	GFAA	FLAA	CVAA



WHW 5-20-9

PROJECT #: 2916

CLIENT: IPA, Inc.

DATE: June 29, 1992

TRIANGLE LABS of RTP

(919) 544-5729

41 MTL

RUN #: 10

ANALYTES			
ICP	GFAA	FLAA	CVAA

(1) *4w1y1

Filter

label 57.113.46

*4w1y1

Microwave dig with conc. HF and conc HNO3

(2)

Acetone Rinse CR

label 57.113.48

Volume 81 ml

Dessicate to dryness and redissolve in 10ml con HNO3

TOTAL 157ml

(3)

HNO3 Rinse

label 57.113.47

Volume 78 ml

Reduce volume to 20 ml on hotplate

Microwave dig. with conc. HF and conc. HNO3

Label: _____

Combine digestates

Front Half Digestate

Dilute to 100 mls

label _____

Volume 100 ml

For Metals *4w1y9

label 57.113.46

Volume 100 ml

(One post digest spike on FH)

For Hg *4w1y7

label 57.113.46(FH)

Volume 100 ml

Aliquot 5 ml

(No spike required)

(4)

Back Half Impinger

label 57.113.49

Volume 435 ml

*4w1y6 (Duplicate Analysis of Each)

For Metals

label 57.113.50

Volume 335 ml

Reduce volume to 20 ml on hotplate

*4w1y8

Hotplate dig with HNO3 and H2O2

*4w1y9

Dilute to 100 mls

label 57.113.50

Volume 100 ml

For Hg

label 57.113.50(4/9)

Volume 10 ml

Sample *4w1y6

label 57.113.50(4/9)

Volume 100 ml

Aliquot 5 ml

4/9 5 5 ml

Spike

label _____

Volume _____ ml

Aliq. _____

Spk. _____ ml of _____

dil. to _____ ml

final spk conc. added _____

(5A)

~~94~~ 49

Hg Impingers

label 57.113.50

Volume 90 ml

Aliquot A 5

Aliquot B 5

(5B)

Hg Impingers

KMnO4

label 57.113.51

Volume 310 ml

Aliquot A 5

Aliquot B 5

(5C)

*4w1y7

HCl

label 57.113.52

Volume 220 ml

Aliquot A 5

Aliquot B 5

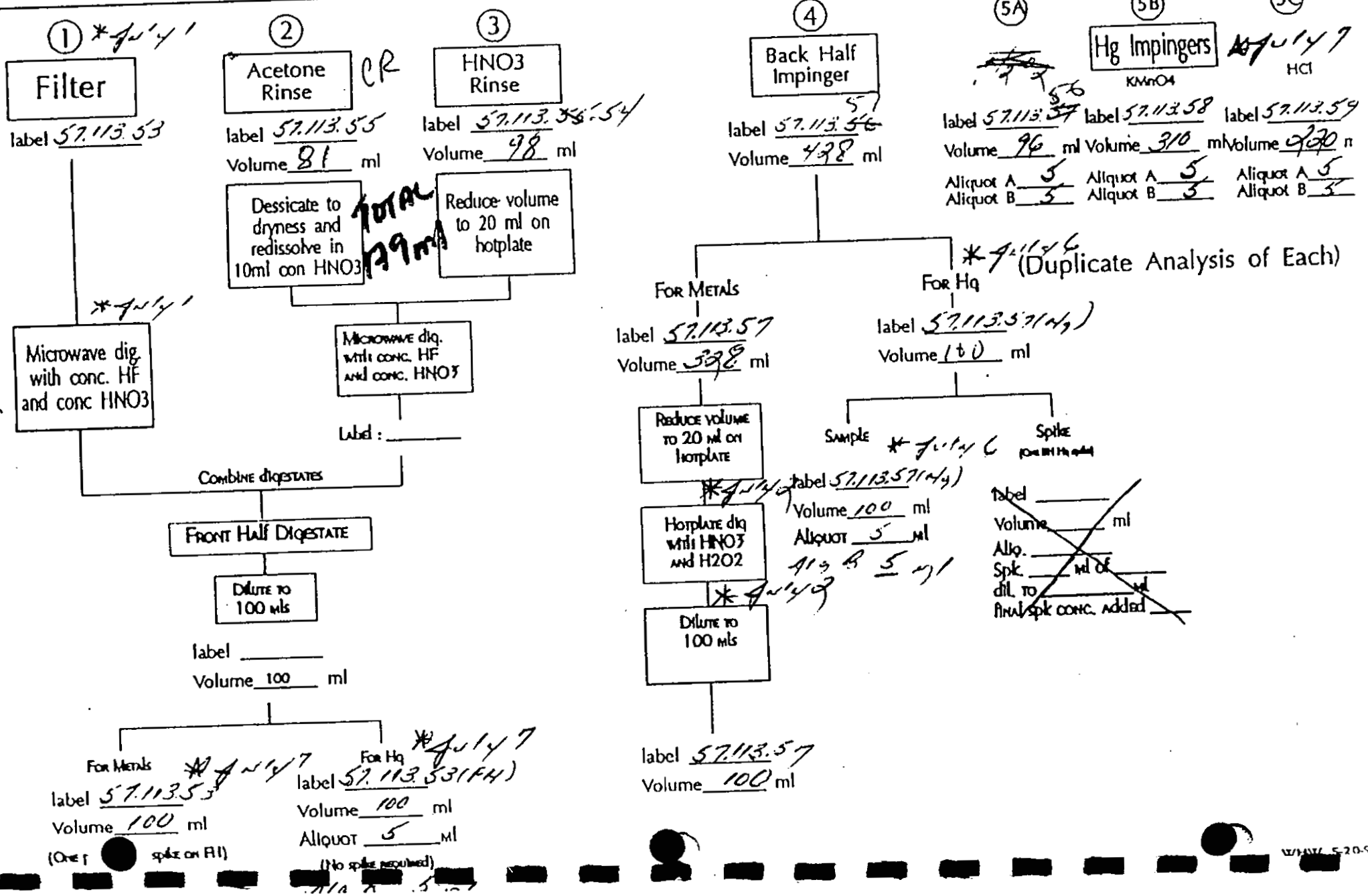
WHW 5-20-9

Project # : 92316
Client : EPA, ORD
Date : June 29, 1992

TRIANGLE LABS of RTP
(919) 544-5729
4-2 MTL

Run # : 11

Analytes			
ICP	GFAA	FLAA	CVAA



WHW 5-20-9

Project # [redacted]

Client [redacted] USA, Inc.

Date: June 29, 1992

[redacted] TRIANGLE LABORATORIES [redacted] (919) [redacted] 4-5729

4-3 MTL

Run #: 19

ANALYTES

ICP	GFAA	FLAA	CVAA

(1) *July 1

Filter

label 57.113.C0

(2)

Acetone Rinse CR

label 57.113.C02

Volume 59 ml

(3)

HNO3 Rinse

label 57.113.C1

Volume 60 ml

(4)

Back Half Impinger CH

label 57.113.C3

Volume 443 ml

(5A)

~~label 57.113.C4~~ 63

Volume 73 ml

Aliquot A 5

Aliquot B 5

(5B)

Hg Impingers

KMnO4

label 57.113.C5

Volume 340 ml

Aliquot A 5

Aliquot B 5

(5C) *July 7

HCl

label 57.113.C6

Volume 220 ml

Aliquot A 5

Aliquot B 5

Microwave dig. with conc. HF and conc HNO3

Dessicate to dryness and redissolve in 10ml con HNO3

TOTAL 125ml

Reduce volume to 20 ml on hotplate

Microwave dig. with conc. HF and conc. HNO3

Label: _____

Combine digestates

Front Half Digestate

Dilute to 100 mls

label _____

Volume 100 ml

For Metals *July 7

label 57.113.C0

Volume 100 ml

(One post digest spike on FH)

For Hg *July 7

label 57.113.C01 (FH)

Volume 100 ml

Aliquot 5 ml

(No spike required)

Alq B 5 ml

For Metals

label 57.113.C4

Volume 340 ml

Reduce volume to 20 ml on hotplate

Hotplate dig with HNO3 and H2O2

Dilute to 100 mls

label 57.113.C4

Volume 100 ml

For Hg *July 7 (Duplicate Analysis of Each)

label 57.113.C4(Hg)

Volume 100 ml

Sample *July 7

label 57.113.C4(Hg)

Volume 100 ml

Aliquot 5 ml

Alq B 5 ml

Spike (for HR Hg only)

label _____

Volume _____ ml

Alq. _____

Spk. _____ ml of _____

dil. to _____ ml

Final spk conc. added _____

C-77

WHW 5-20-9

Project # : 21916
Client : SPA, Inc.
Date : June 29, 1992

TRIANGLE LABS of RTP
(919) 544-5729

Run # : 15 BLANK RUN

Analytes			
ICP	GFAA	FLAA	CVAA

(1) *Jul 1
Filter
label 57.113.67

(2)
Acetone Rinse CR
label 57.113.69
Volume 90 ml

(3)
HNO3 Rinse 113
label 57.113.68
Volume 119 ml

(4)
Back Half Impinger
label 57.113.70
Volume 326 ml

(5A)
label 57.113.71
Volume 90 ml
Aliquot A 5
Aliquot B 5

(5B)
Hg Impingers
KMnO4
label 57.113.72
Volume 290 ml
Aliquot A 5
Aliquot B 5

(5C) *Jul 7
HCl
label 57.113.73
Volume 220 ml
Aliquot A 5
Aliquot B 5

*Jul 1
Microwave dig with conc. HF and conc HNO3

Dessicate to dryness and redissolve in 10ml con HNO3

Reduce volume to 20 ml on hotplate

Microwave dig. with conc. HF and conc. HNO3

Label : _____

Combine digestates

Front Half Digestate

Dilute to 100 mls

label _____
Volume 100 ml

*Jul 2
For Metals
label 57.113.67
Volume 100 ml
(One per spike on FH)

*Jul 7
For Hg
label 57.113.67
Volume 100 ml
Aliquot 5 ml
(No spike required)

*Jul 6 (Duplicate Analysis of Each)
For Metals
label 57.113.71
Volume 326 ml

Reduce volume to 20 ml on hotplate

*Jul 9
Hotplate dig with HNO3 and H2O2

*Jul 9
Dilute to 100 mls

label 57.113.71
Volume 100 ml

For Hg
label 57.113.71 (Hg)
Volume 100 ml

*Jul 6
Sample
label 57.113.71 (Hg)
Volume 100 ml
Aliquot 5 ml
Aliq 5 ml

Spike
(one per Hg spike)
label _____
Volume _____ ml
Aliq. _____
Spk. _____ ml of _____
dil. to _____ ml
Final spk conc. added _____

CHAIN OF CUSTODY RECORD

iea
an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

NO: 32209

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

Page 1 of 1

PROJECT #: 1381-004
PROJECT NAME: VIRGINIA SOLITE BIF TEST
SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLE ID / STATION LOCATION	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	REQUESTED PARAMETERS: METALS - BIF excluding Hg
	6/16		X		4-1-INLET-PF	1			X
			X		4-1-INLET-FHACE	1			X
			X		4-1-INLET-H2O2	1			X
			X		4-1-INLET-HNO3	1			X
			X		4-2-INLET-PF	1			X
			X		4-2-INLET-FHACE	1			X
			X		4-2-INLET-H2O2	1			X
			X		4-2-INLET-HNO3	1			X
			X		4-3-INLET-PF	1			X
			X		4-3-INLET-FHACE	1			X
			X		4-3-INLET-H2O2	1			X
			X		4-3-INLET-HNO3	1			X

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Peter Peters	6/19/92	0:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[redacted]	6/19/92	0446

IEA QUOTE NO.:
IEA RUSH NO.:
PROJECT MANAGER (PLEASE PRINT): JAMES PETERS
P.O. NO.:

REMARKS ON SAMPLE RECEIPT
☑ BOTTLE INTACT ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS: BAGHOUSE INLET SAMPLE! [redacted] 103 [redacted] back half rinse

FIELD REMARKS: PF = filter H2O2 = H2O2 wger
[redacted] = rinse

A-70

CHAIN OF CUSTODY RECORD

NO: 32208

iea environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

Page 1 of 1

PROJECT #	PROJECT NAME
1381-004	VIRGINIA SOLITE BIF TEST

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLE I.D / STATION LOCATION	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	REQUESTED PARAMETERS: METALS-BIF exclude Hg
	6/18		X		2-1-INLET-PF	1			X
	↓		X		2-1-INLET-FHACE	1			X
			X		2-1-INLET-H2O2	1			X
			X		2-2-INLET-PF	1			X
			X		2-2-INLET-FHACE	1			X
			X		2-2-INLET-H2O2	1			X
			X		2-3-INLET-PF	1			X
			X		2-3-INLET-FHACE	1			X
	↓		X		2-3-INLET-H2O2	1			X

Sample # 2-1 INLET HNO3
2-2 " HNO3
2-3 " HNO3
WERE not listed on COC #32208
but Samples ARRIVED W/ Shipment

RECEIVED JUN 20 1992 R.H

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
	6/19	2:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
				6/19/92	1451

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	P.O. NO.

REMARKS ON SAMPLE RECEIPT

☑ BOTTLE INTACT ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ CHILLED ☑ SEE REMARKS

IEA REMARKS: STACK GAS INLET SAMPLES!

FIELD REMARKS: PF = filter; FHACE = front half acetone rinse; H2O2 = acid H_2O_2 impingers + rinse

08-0

CHAIN OF CUSTODY RECORD

NO: 32187

iea
an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

PROJECT #: 1381-003
PROJECT NAME: Virgina Solile BIF Test
SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	REQUESTED PARAMETERS: METALS
	6/18		X		H2-MTL-1-PF	1			
			X		H2-MTL-1-FHAR	1			
			X		H2-MTL-1-FHACE	1			
			X		H2-MTL-1-BHAR	1			
			X		H2-MTL-1-H2O2IMP	1			
			X		H2-MTL-1-HNO3IMP	1			
			X		H2-MTL-1-HCL	1			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
P. [illegible]	6/19/92	2:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[illegible]	6/19/92	1426

IEA QUOTE NO.:
IEA RUSH NO.:
PROJECT MANAGER (PLEASE PRINT): JAMES PETERS
P.O. NO.:

REMARKS ON SAMPLE RECEIPT
☑ BOTTLE INTA ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS:

FIELD REMARKS:

iea environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 32188

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

Page 2 of 3

PROJECT #	PROJECT NAME
1391-003	Virginia Solite BIF Test

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	REQUESTED PARAMETERS: METALS
	6/14		X		H2-MTL-2-PF	1			
	↓		Y		H2-MTL-2-FHAR	1			
			X		H2-MTL-2-FHACE	1			
			X		H2-MTL-2-BHAR	1			
			X		H2-MTL-2-H2O2MP	1			
			X		H2-MTL-2-HNO3MP	1			
	↓		Y		H2-MTL-2-HCL	1			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	6/19/92	2:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	6/19/92	1428

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	P.O. NO.
JAMES PETERS	

REMARKS ON SAMPLE RECEIPT

☑ BOTTLE INTACT ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS

FIELD REMARKS

0-92

CHAIN OF CUSTODY RECORD

iea — an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

NO: 32189

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

Page 3 of 3

PROJECT #	PROJECT NAME
1381-003	Virgina Solite BIF Test

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	REQUESTED PARAMETERS: METALS
	6/18		X		H2-MTL-3-PF	1			
			X		H2-MTL-3-FHAR	1			
			X		H2-MTL-3-FHACE	1			
			X		H2-MTL-3-BHAR	1			
			X		H2-MTL-3-H2O2TMP	1			
			X		H2-MTL-3-HNO4TMP	1			
	↓		X		H2-MTL-3-HCL	1			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
	6/19/92	2:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
				6/19/92	1428

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	P.O. NO.
JAMES PETERS	

REMARKS ON SAMPLE RECEIPT
☑ BOTTLE INTAC ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ [illegible]LED ☐ [illegible]E REM

IEA REMARKS: BIF METALS = Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Tl

FIELD REMARKS

D-83

CHAIN OF CUSTODY RECORD

NO: 32182

iea
an environmental
testing company
3000 WESTON PKWY.
CARY, N.C. 27513

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

PROJECT #: 1341-004 | PROJECT NAME: Virginia Solile BIF Test

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	REQUESTED PARAMETERS: METALS
	6/16		X		H4-MTL-1-PF	1			
			X		H4-MTL-1-FHAR	1			
			X		H4-MTL-1-FHACE	1			
			X		H4-MTL-1-BHAR	1			
			X		H4-MTL-1-H2O2IMP	1			
			X		H4-MTL-1-HMNO4IMP	1			
	↓		X		H4-MTL-1-HCL	1			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	6/19/92	2:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	6-19-92	1425

IEA QUOTE NO.:

IEA RUSH NO.:

PROJECT MANAGER (PLEASE PRINT): JAMES PETERS

P.O. NO.:

REMARKS ON SAMPLE RECEIPT

☑ BOTTLE INT[illegible] ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
[illegible]

IEA REMARKS

FIELD REMARKS

CHAIN OF CUSTODY RECORD

NO: 32184

iea environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

PROJECT # 1381-004 | PROJECT NAME: Virginia Solite BIF Test

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	REQUESTED PARAMETERS: METALS
	6/16		X		H4-MTL-2-PF	1			
			X		H4-MTL-2-FHAR	1			
			X		H4-MTL-2-FHACE	1			
			X		H4-MTL-2-BHAR	1			
			X		H4-MTL-2-H2O2IHP	1			
			X		H4-MTL-2-HNO4IHP	1			
	↓		Y		H4-MTL-2-HCL	1			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
	6/19/92	2:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			Robert Hall	6/19/92	1429

IEA QUOTE NO.: | IEA RUSH NO.:

PROJECT MANAGER (PLEASE PRINT): JAMES PETERS | P.O. NO.:

REMARKS ON SAMPLE RECEIPT

☑ BOTTLE INTACT ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS:

FIELD REMARKS:

0.45

CHAIN OF CUSTODY RECORD

NO: 32185

iea
an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

Page 3 of 4

PROJECT #	PROJECT NAME
1381-004	Virginia Solile BIF Test

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	REQUESTED PARAMETERS: METALS
	6/16		X		H4-MTL-3-PF	1			
			X		H4-MTL-3-FHAR	1			
			X		H4-MTL-3-FHACE	1			
			X		H4-MTL-3-BHAR	1			
			X		H4-MTL-3-H2O2IMP	1			
			X		H4-MTL-3-HNO4IMP	1			
	↓		X		H4-MTL-3-HCL	1			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
	6/19/92	0:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
				6/19/92	1450

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	P.O. NO.
JAMES PETERS	

REMARKS ON SAMPLE RECEIPT

☑ BOTTLE INT ☑ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS

FIELD REMARKS

iea environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 32186

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: TRIANGLE LABS

PROJECT #	PROJECT NAME
1381-004	VIRGINIA SOUTE BIF TEST

SAMPLERS: (SIGNATURE)

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	MATRIX SOIL	MATRIX WATER	REQUESTED PARAMETERS: METALS
	6/16		X		H4-MTL-BLK-PF	1			
			X		H4-MTL-BLK-THAR	1			
			X		H4-MTL-BLK-FHACE	1			
			X		H4-MTL-BLK-BHAR	1			
			X		H4-MTL-BLK-H2O2IMP	1			
			X		H4-MTL-BLK-HNO4IMP	1			
	↓		X		H4-MTL-BLK-HCL	1			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	6/19/92	9:45			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	6/19/92	1450

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	P.O. NO.
JAMES PETERS	

REMARKS ON SAMPLE RECEIPT

☑ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☑ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS

FIELD REMARKS

LAB-U

Custody Seal (Present) / Absent // (Intact) / Not Intact ; TLI Project Number ; 21216 ; Book

Chain of Custody (Present) / Absent ; Client: IEA/1 ; IEA, INC. ; 57

Sample Tags (Present) Absent ; Client: IEA/1 ; IEA, INC. ; 57

Sample Tag Numbers (Listed) / Not Listed on Chain of Custody

SHO Forms Present / (Absent) ; Date Received ; 06/20/92 ; By: Robert Hall ; Page

Ice Chest/Styro Cooler (Cardboard Box) Dry Ice Ice Ambient ; Carrier and Number ; HAND CARRIED ; 115

Sample ID TLI	Sample ID Client	Matrix	Storage Location	To Lab Date/Initial	To Storage Date/Initial	To Lab Date/Initial
57-113-1	2-1-INLET	PF	METALS LAB.			
57-113-2		FHACE	METALS LAB.			
57-113-3		H2O2	METALS LAB.			
57-113-4		HNO3	METALS LAB.			
57-113-5	2-2-INLET	PF	METALS LAB.			
57-113-6		FHACE	METALS LAB.			
57-113-7		H2O2	METALS LAB.			
57-113-8		HNO3	METALS LAB.			
57-113-9	2-3-INLET	PF	METALS LAB.			
57-113-10		FHACE	METALS LAB.			
57-113-11		H2O2	METALS LAB.			
57-113-12		HNO3	METALS LAB.			
57-113-13	4-1-INLET	PF	METALS LAB.			
57-113-14		FHACE	METALS LAB.			
57-113-15		H2O2	METALS LAB.			
57-113-16		HNO3	METALS LAB.			
57-113-17	4-2-INLET	PF	METALS LAB.			

Receiving Remarks: SAMPLE NO's 2-1-INLET-HNO3,2-2-INLET-HNO 3 AND 2-3-INLET-HNO3 WERE NOT LISTED ON C.O.C. BUT THEY ARRIVED WITH SHIPMENT.

Archive Remarks:

n ad

Custody Seal	Present / Absent / Intact / Not Intact	TLI Project Number	21216
Chain of Custody	Present / Absent		
Sample Tags	Present / Absent	Client: IEA01	IEA, INC.
Sample Tag Numbers	Listed / Not Listed on Chain of Custody		
SHO Forms	Present / Absent	Date Received	06/20/92

Ice Chest/Styro Cooler/Cardboard Box | Dry Ice | Ice / Ambient | Carrier and Number | HAND CARRIED

Sample ID TLI	Sample ID Client	Matrix	Storage Location	To Lab Date/Initial	To Storage Date/Initial	To Lab Date/Initial
57-113-18		FHACE	METALS LAB.			
57-113-19		H202	METALS LAB.			
57-113-20		HNO3	METALS LAB.			
57-113-21	4-3-INLET	PF	METALS LAB.			
57-113-22		FHACE	METALS LAB.			
57-113-23		H202	METALS LAB.			
57-113-24		HNO3	METALS LAB.			
57-113-25	K2-MTL-1	PF	METALS LAB.			
57-113-26		FHAR	METALS LAB.			
57-113-27		FHACE	METALS LAB.			
57-113-28		BHAR	METALS LAB.			
57-113-29		H202-IMP	METALS LAB.			
57-113-30		KMNO4-IMP	METALS LAB.			
57-113-31		HCL	METALS LAB.			
57-113-32	K2-MTL-2	PF	METALS LAB.			
57-113-33		FHAR	METALS LAB.			
57-113-34		FHACE	METALS LAB.			

Receiving Remarks: SAMPLE NO's 2-1-INLET-HNO3, 2-2-INLET-HNO 3 AND 2-3-INLET-HNO3 WERE NOT LISTED ON C.O.C. BUT THEY ARRIVED WITH SHIPMENT.

Archive Remarks:

Custody Seal	Present / Absent // Intact / Not Intact	TLI Project Number : 21216	Book
Chain of Custody	Present / Absent		
Sample Tags	Present / Absent	Client: IEA: IEA, INC.	57
Sample Tag Numbers	Listed / Not Listed on Chain of Custody		
SHO Forms	Present / Absent	Date Received 06-20-92 By: [signature]	Page
Ice Chest/Styro Cooler/Cardboard Box	Dry Ice Ice Ambient	Carrier and Number : HAND CARRIED	113

Sample ID TLI	Sample ID Client	Matrix	Storage Location	To Lab Date/Initial	To Storage Date/Initial	To Lab Date/Initial
57-113-35		BHAR	METALS LAB.			
57-113-36		H2O2-IMP	METALS LAB.			
57-113-37		KMNO4-IMP	METALS LAB.			
57-113-38		HCL	METALS LAB.			
57-113-39	K2-MTL-3	PF	METALS LAB.			
57-113-40		FHAR	METALS LAB.			
57-113-41		FHACE	METALS LAB.			
57-113-42		BHAR	METALS LAB.			
57-113-43		H2O2-IMP	METALS LAB.			
57-113-44		KMNO4-IMP	METALS LAB.			
57-113-45		HCL	METALS LAB.			
57-113-46	K4-MTL-1	PF	METALS LAB.			
57-113-47		FHAR	METALS LAB.			
57-113-48		FHACE	METALS LAB.			
57-113-49		BHAR	METALS LAB.			
57-113-50		H2O2-IMP	METALS LAB.			
57-113-51		KMNO4-IMP	METALS LAB.			

Receiving Remarks: SAMPLE NO's 2-1-INLET-HNO3,2-2-INLET-HNO 3 AND 2-3-INLET-HNO3 WERE NOT LISTED ON C.O.C. BUT THEY ARRIVED WITH SHIPMENT.

Archive Remarks:

Custody Seal	Present / Absent // Intact Not Intact	TLI Project Number	21216
Chain of Custody	Present / Absent		
Sample Tags	Present / Absent	Client (IEA01)	IEA, INC.
Sample Tag Numbers	Listed / Not Listed on Chain of Custody		
SMO Forms	Present / Absent	Date Received	06/20/92

Ice Chest/Styro Cooler/Cardboard Box Dry Ice Ice Ambient Carrier and Number: HAND CARRIED

Sample ID TLI	Client	Matrix	Storage Location	To Lab Date/Initial	To Storage Date/Initial	To Lab Date/Initial
57-113-52		HCL	METALS LAB.			
57-113-53	K4-HTL-2	PF	METALS LAB.			
57-113-54		FHAR	METALS LAB.			
57-113-55		FHACE	METALS LAB.			
57-113-56		BHAR	METALS LAB.			
57-113-57		H2O2-IMP	METALS LAB.			
57-113-58		KMNO4-IMP	METALS LAB.			
57-113-59		HCL	METALS LAB.			
57-113-60	K4-HTL-3	PF	METALS LAB.			
57-113-61		FHAR	METALS LAB.			
57-113-62		FHACE	METALS LAB.			
57-113-63		BHAR	METALS LAB.			
57-113-64		H2O2-IMP	METALS LAB.			
57-113-65		KMNO4-IMP	METALS LAB.			
57-113-66		HCL	METALS LAB.			
57-113-67	K4-HTL-BLK	PF	METALS LAB.			
57-113-68		FHAR	METALS LAB.			

Receiving Remarks: SAMPLE NO's 2-1-INLET-HNO3,2-2-INLET-HNO 3 AND 2-3-INLET-HNO3 WERE NOT LISTED ON C.O.C. BUT THEY ARRIVED WITH SHIPMENT.

Archive Remarks:

Custody Seal	Present / Absent / Intact / Not Intact	TLI Project Number : 21216	Book
Chain of Custody	Present / Absent		
Sample Tags	Present / Absent	Client: IEA01 : IEA, INC.	57
Sample Tag Numbers	Listed / Not Listed on Chain of Custody		
SHO Forms	Present / Absent	Date Received : 06/20/92 By: Robert Hall	Page
Ice Chest/Styro Cooler/Cardboard Box	Dry Ice Ice Ambient	Carrier and Number : HAND CARRIED	113

Sample ID TLI	Sample ID Client	Matrix	Storage Location	To Lab Date/Initial	To Storage Date/Initial	To Lab Date/Initial
57-113-69		FHACE	METALS LAB.			
57-113-70		BHAR	METALS LAB.			
57-113-71		H202-IMP	METALS LAB.			
57-113-72		KMNO4-IMP	METALS LAB.			
57-113-73		HCL	METALS LAB.			

Receiving Remarks: SAMPLE NO's 2-1-INLET-HNO3,2-2-INLET-HNO 3 AND 2-3-INLET-HNO3 WERE NOT LISTED ON C.O.C. BUT THEY ARRIVED WITH SHIPMENT.

Archive Remarks:

DATA FILE: 212161S1

```
07/08/92 10:57
wcal standard   rep   1   Cd_      em       8604.1 conc  75.00
                rep   1   Pb_      em       1480.3 conc 250.00
                rep   1   Be_      em       6238.5 conc  25.00
                rep   2   Cd_      em       8001.3 conc  75.00
                rep   2   Pb_      em       1424.9 conc 250.00
                rep   2   Be_      em       5952.3 conc  25.00
                rep   3   Cd_      em       7834.3 conc  75.00
                rep   3   Pb_      em       1437.9 conc 250.00
                rep   3   Be_      em       5833.5 conc  25.00
wcal standard
07/08/92 10:59
    Cd_         av   8146.56          sd    404.968 %cv   4.97 conc   75.00
    Pb_         av   1447.71          sd     28.989 %cv   2.00 conc  250.00
    Be_         av   6008.11          sd    208.157 %cv   3.46 conc   25.00

07/08/92 11:00
sc blank        rep   1   Cd_      em       1216.8
                rep   1   Pb_      em        923.0
                rep   1   Be_      em        387.3
07/08/92 11:01
blank           rep   1   Cd_      ratio    0.0200                 window edge
                rep   1   Pb_      ratio    0.0263
                rep   1   Be_      ratio    0.0006
                rep   2   Cd_      ratio    0.0269
                rep   2   Pb_      ratio    0.0268                 window edge
                rep   2   Be_      ratio    0.0051                 window edge
                rep   3   Cd_      ratio    0.0349
                rep   3   Pb_      ratio    0.0233
                rep   3   Be_      ratio    0.0046
blank
07/08/92 11:03
    Cd_         av   0.0273           sd   0.00747 %cv  27.40
    Pb_         av   0.0255           sd   0.00192 %cv   7.53
    Be_         av   0.0034           sd   0.00247 %cv  72.74

07/08/92 11:04
#1 standard     rep   1   Cd_      ratio    0.6923 conc  75.00
                rep   1   Pb_      ratio    0.1556 conc 250.00
                rep   1   Be_      ratio    0.7901 conc  25.00
                rep   2   Cd_      ratio    0.6701 conc  75.00
                rep   2   Pb_      ratio    0.1578 conc 250.00
                rep   2   Be_      ratio    0.7900 conc  25.00
                rep   3   Cd_      ratio    0.6793 conc  75.00
                rep   3   Pb_      ratio    0.1566 conc 250.00
                rep   3   Be_      ratio    0.7771 conc  25.00
#1 standard
07/08/92 11:05
    Cd_         av   0.6806           sd   0.01118 %cv   1.64 conc   75.00
    Pb_         av   0.1567           sd   0.00109 %cv   0.69 conc  250.00
    Be_         av   0.7857           sd   0.00750 %cv   0.95 conc   25.00

07/08/92 11:07
#2 standard     rep   1   Cd_      ratio    2.7658 conc 300.00
                rep   1   Pb_      ratio    0.6046 conc 1000.00
                rep   1   Be_      ratio    3.1005 conc 100.00
                rep   2   Cd_      ratio    2.8363 conc 300.00
                rep   2   Pb_      ratio    0.5868 conc 1000.00
```

	rep	2	Be_	ratio	3.1545	conc	100.00			
	rep	3	Cd_	ratio	2.8737	conc	300.00			
	rep	3	Pb_	ratio	0.5952	conc	1000.00			
	rep	3	Be_	ratio	3.1445	conc	100.00			
tandard										
8/92 11:08										
Cd_	av	2.8253		sd	0.05482	%cv	1.94	conc	300.00	
Pb_	av	0.5955		sd	0.00889	%cv	1.49	conc	1000.0	
Be_	av	3.1332		sd	0.02873	%cv	0.92	conc	100.00	
7/08/92 11:09										
#3 standard	rep	1	Cd_	ratio	7.1862	conc	750.00			
	rep	1	Pb_	ratio	1.4323	conc	2500.00			
	rep	1	Be_	ratio	7.8759	conc	250.00			
	rep	2	Cd_	ratio	7.0530	conc	750.00			
	rep	2	Pb_	ratio	1.4664	conc	2500.00			
	rep	2	Be_	ratio	7.8716	conc	250.00			
	rep	3	Cd_	ratio	6.9537	conc	750.00			
	rep	3	Pb_	ratio	1.4084	conc	2500.00			
	rep	3	Be_	ratio	7.9397	conc	250.00			
#3 standard										
07/08/92 11:11										
Cd_	av	7.0643		sd	0.11671	%cv	1.65	conc	750.00	
Pb_	av	1.4357		sd	0.02914	%cv	2.03	conc	2500.0	
Be_	av	7.8957		sd	0.03816	%cv	0.48	conc	250.00	
07/08/92 11:12										
#4 standard	rep	1	Cd_	ratio	13.3544	conc	1500.00			
	rep	1	Pb_	ratio	2.7482	conc	5000.00			
	rep	1	Be_	ratio	15.1703	conc	500.00			
	rep	2	Cd_	ratio	13.3764	conc	1500.00			
	rep	2	Pb_	ratio	2.7510	conc	5000.00			
	rep	2	Be_	ratio	15.2166	conc	500.00			
	rep	3	Cd_	ratio	13.4014	conc	1500.00			
	rep	3	Pb_	ratio	2.7766	conc	5000.00			
	rep	3	Be_	ratio	15.1132	conc	500.00			
#4 standard										
07/08/92 11:13										
Cd_	av	13.3774		sd	0.02350	%cv	0.18	conc	1500.0	
Pb_	av	2.7586		sd	0.01566	%cv	0.57	conc	5000.0	
Be_	av	15.1667		sd	0.05177	%cv	0.34	conc	500.00	
07/08/92 11:14										
CHECK HS	rep	1	Cd_	conc	1494.07	ug/L				
	rep	1	Pb_	conc	4918.38	ug/L				
	rep	1	Be_	conc	493.83	ug/L				
	rep	2	Cd_	conc	1495.55	ug/L				
	rep	2	Pb_	conc	5036.62	ug/L				
	rep	2	Be_	conc	496.20	ug/L				
	rep	3	Cd_	conc	1510.31	ug/L				
	rep	3	Pb_	conc	4906.47	ug/L				
	rep	3	Be_	conc	495.67	ug/L				
CHECK HS										
07/08/92 11:16										
Cd_	av	1499.98	ug/L	sd	8.976	%cv	0.60			
Pb_	av	4953.83	ug/L	sd	71.951	%cv	1.45			
Be_	av	495.24	ug/L	sd	1.244	%cv	0.25			
07/08/92 11:17										
ICV	rep	1	Cd_	conc	780.86	ug/L				

	rep	1	Pb_	conc	2658.91	ug/L		
	rep	1	Be_	conc	258.37	ug/L		
	rep	2	Cd_	conc	790.47	ug/L		
	rep	2	Pb_	conc	2527.54	ug/L		
	rep	2	Be_	conc	256.40	ug/L		
	rep	3	Cd_	conc	788.31	ug/L		
	rep	3	Pb_	conc	2633.07	ug/L		
	rep	3	Be_	conc	255.62	ug/L		
ICV								
07/08/92 11:18								
Cd_	av	786.55	ug/L	sd	5.038	%cv	0.64	
Pb_	av	2606.50	ug/L	sd	69.597	%cv	2.67	
Be_	av	256.80	ug/L	sd	1.414	%cv	0.55	
07/08/92 11:20								
ICB	rep	1	Cd_	conc	-7.76	ug/L		
	rep	1	Pb_	conc	1.23	ug/L		
	rep	1	Be_	conc	-2.31	ug/L		
	rep	2	Cd_	conc	-3.45	ug/L		
	rep	2	Pb_	conc	-21.74	ug/L		
	rep	2	Be_	conc	-2.31	ug/L		
	rep	3	Cd_	conc	-6.12	ug/L		
	rep	3	Pb_	conc	-21.92	ug/L		
	rep	3	Be_	conc	-2.34	ug/L		
ICB								
07/08/92 11:21								
Cd_	av	-5.78	ug/L	sd	2.177	%cv	37.70	
Pb_	av	-14.14	ug/L	sd	13.317	%cv	94.16	
Be_	av	-2.32	ug/L	sd	0.017	%cv	0.74	
07/08/92 11:22								
ICSAI	rep	1	Cd_	conc	16.97	ug/L		
	rep	1	Pb_	conc	-134.20	ug/L		window edge
	rep	1	Be_	conc	-41.70	ug/L		window edge
	rep	2	Cd_	conc	14.79	ug/L		
	rep	2	Pb_	conc	-180.77	ug/L		window edge
	rep	2	Be_	conc	-40.47	ug/L		window edge
	rep	3	Cd_	conc	12.68	ug/L		
	rep	3	Pb_	conc	-65.11	ug/L		
	rep	3	Be_	conc	-36.78	ug/L		window edge
ICSAI								
07/08/92 11:24								
Cd_	av	14.81	ug/L	sd	2.143	%cv	14.47	
Pb_	av	-126.70	ug/L	sd	58.192	%cv	45.93	
Be_	av	-39.65	ug/L	sd	2.564	%cv	6.47	
07/08/92 11:25								
ICSABI	rep	1	Cd_	conc	276.54	ug/L		
	rep	1	Pb_	conc	248.56	ug/L		
	rep	1	Be_	conc	118.19	ug/L		
	rep	2	Cd_	conc	280.13	ug/L		
	rep	2	Pb_	conc	310.47	ug/L		
	rep	2	Be_	conc	117.72	ug/L		
	rep	3	Cd_	conc	277.37	ug/L		
	rep	3	Pb_	conc	331.52	ug/L		
	rep	3	Be_	conc	115.66	ug/L		
ICSABI								
07/08/92 11:26								
Cd_	av	278.01	ug/L	sd	1.882	%cv	0.68	
Pb_	av	296.85	ug/L	sd	43.125	%cv	14.53	

7/9/92

Be_	av	117.19	ug/L		sd	1.347	%cv	1.15
07/08/92 11:29								
CSABI	rep	1	Cd_	conc	879.30	ug/L		
	rep	1	Pb_	conc	1067.60	ug/L		
	rep	1	Be_	conc	432.38	ug/L		
	rep	2	Cd_	conc	870.63	ug/L		
	rep	2	Pb_	conc	1050.59	ug/L		
	rep	2	Be_	conc	426.36	ug/L		
	rep	3	Cd_	conc	881.10	ug/L		
	rep	3	Pb_	conc	1019.43	ug/L		
	rep	3	Be_	conc	430.55	ug/L		
ICSABI								
07/08/92 11:30								
Cd_	av	877.01	ug/L		sd	5.597	%cv	0.64
Pb_	av	1045.87	ug/L		sd	24.428	%cv	2.34
Be_	av	429.76	ug/L		sd	3.087	%cv	0.72
07/08/92 11:31								
57.113.1/1F	rep	1	Cd_	conc	73276.87	ug/L		
	rep	1	Pb_	conc	507602.72	ug/L		
	rep	1	Be_	conc	8322.95	ug/L		over range
	rep	2	Cd_	conc	74038.99	ug/L		
	rep	2	Pb_	conc	442930.31	ug/L		
	rep	2	Be_	conc	8756.20	ug/L		over range
	rep	3	Cd_	conc	72968.06	ug/L		
	rep	3	Pb_	conc	488551.97	ug/L		
	rep	3	Be_	conc	8628.61	ug/L		over range
57.113.1/1F								
07/08/92 11:33								
Cd_	av	73427.98	ug/L		sd	551.224	%cv	0.75
Pb_	av	479694.9	ug/L		sd	33233.48	%cv	6.93
Be_	over range							
07/08/92 11:34								
57.113.3/1B	rep	1	Cd_	conc	4166.43	ug/L		
	rep	1	Pb_	conc	30728.36	ug/L		
	rep	1	Be_	conc	292.81	ug/L		
	rep	2	Cd_	conc	4025.74	ug/L		
	rep	2	Pb_	conc	30060.07	ug/L		
	rep	2	Be_	conc	288.06	ug/L		
	rep	3	Cd_	conc	4039.62	ug/L		
	rep	3	Pb_	conc	29603.74	ug/L		
	rep	3	Be_	conc	288.09	ug/L		
57.113.3/1B								
07/08/92 11:35								
Cd_	av	4077.26	ug/L		sd	77.533	%cv	1.90
Pb_	av	30130.72	ug/L		sd	565.630	%cv	1.88
Be_	av	289.65	ug/L		sd	2.733	%cv	0.94
07/08/92 11:43								
57.113.1/1F L	rep	1	Cd_	conc	10765.41	ug/L		
	rep	1	Pb_	conc	82764.24	ug/L		
	rep	1	Be_	conc	1539.66	ug/L		
	rep	2	Cd_	conc	10751.93	ug/L		
	rep	2	Pb_	conc	82532.48	ug/L		
	rep	2	Be_	conc	1521.75	ug/L		
	rep	3	Cd_	conc	10914.18	ug/L		
	rep	3	Pb_	conc	81917.06	ug/L		
	rep	3	Be_	conc	1484.38	ug/L		

57.113.1/1F L
07/08/92 11:45

Cd_	av	10810.51	ug/L	sd	90.038	%cv 0.83
Pb_	av	82404.59	ug/L	sd	437.830	%cv 0.53
Be_	av	1515.27	ug/L	sd	28.205	%cv 1.86

07/08/92 11:46

57.113.3/1B L	rep	1	Cd_	conc	807.73 ug/L
	rep	1	Pb_	conc	5968.41 ug/L
	rep	1	Be_	conc	58.61 ug/L
	rep	2	Cd_	conc	815.01 ug/L
	rep	2	Pb_	conc	5951.12 ug/L
	rep	2	Be_	conc	56.12 ug/L
	rep	3	Cd_	conc	800.53 ug/L
	rep	3	Pb_	conc	6000.57 ug/L
	rep	3	Be_	conc	56.21 ug/L

57.113.3/1B L
07/08/92 11:47

Cd_	av	807.75	ug/L	sd	7.242	%cv 0.90
Pb_	av	5973.37	ug/L	sd	25.096	%cv 0.42
Be_	av	56.98	ug/L	sd	1.411	%cv 2.48

07/08/92 11:49 ✓
57.113.5/2F

rep	1	Cd_	conc	90821.76 ug/L	
rep	1	Pb_	conc	536457.50 ug/L	
rep	1	Be_	conc	7764.57 ug/L	
rep	2	Cd_	conc	115285.09 ug/L	
rep	2	Pb_	conc	597093.00 ug/L	
rep	2	Be_	conc	9132.38 ug/L	
rep	3	Cd_	conc	143396.61 ug/L	
rep	3	Pb_	conc	865834.19 ug/L	
rep	3	Be_	conc	11778.21 ug/L	

57.113.5/2F
07/08/92 11:50 ✓

Cd_	av	116501.1	ug/L	sd	26308.51	%cv 22.58
Pb_	av	666461.5	ug/L	sd	175303.2	%cv 26.30
Be_	av	9558.39	ug/L	sd	2040.449	%cv 21.35

07/08/92 11:51
57.113.7/2B

rep	1	Cd_	conc	951.92 ug/L	
rep	1	Pb_	conc	7141.33 ug/L	
rep	1	Be_	conc	36.37 ug/L	
rep	2	Cd_	conc	945.56 ug/L	
rep	2	Pb_	conc	6992.25 ug/L	
rep	2	Be_	conc	32.29 ug/L	
rep	3	Cd_	conc	931.41 ug/L	
rep	3	Pb_	conc	6993.18 ug/L	
rep	3	Be_	conc	32.81 ug/L	

57.113.7/2B
07/08/92 11:53

Cd_	av	942.96	ug/L	sd	10.500	%cv 1.11
Pb_	av	7042.25	ug/L	sd	85.806	%cv 1.22
Be_	av	33.82	ug/L	sd	2.225	%cv 6.58

07/08/92 11:55 OUT
57.113.5/2F

rep	1	Cd_	conc	92742.87 ug/L	
rep	1	Pb_	conc	554117.00 ug/L	
rep	1	Be_	conc	7668.58 ug/L	over range
rep	2	Cd_	conc	98010.45 ug/L	
rep	2	Pb_	conc	717721.94 ug/L	

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                rep   2  Be_          conc  11807.11 ug/L          over range
                rep   3  Cd_          conc 430563.84 ug/L
                rep   3  Pb_          conc 950878.94 ug/L
                rep   3  Be_          conc   8234.58 ug/L          over range
13.5/2F
3/92 11:56
Cd_             av  207105.7 ug/L     sd  166838.8 %cv   80.56   OUT
Pb_             av  740906.0 ug/L     sd  130804.4 %cv   17.81
Be_             over range

7/08/92 11:59
57.113.5/2F D   rep   1  Cd_          conc  85745.74 ug/L
                rep   1  Pb_          conc 516511.78 ug/L
                rep   1  Be_          conc   7508.28 ug/L          over range
                rep   2  Cd_          conc 142622.02 ug/L          over range
                rep   2  Pb_          conc 483140.38 ug/L
                rep   2  Be_          conc   7059.77 ug/L          over range
                rep   3  Cd_          conc  81380.12 ug/L
                rep   3  Pb_          conc 449386.94 ug/L
                rep   3  Be_          conc   6963.18 ug/L          over range
57.113.5/2F D
07/08/92 12:00
   Cd_          av  103249.3 ug/L     sd  34167.57 %cv  33.09
   Pb_          av  483013.0 ug/L     sd  33562.59 %cv   6.95
   Be_          over range

7/08/92 12:02
7.113.7/2B D    rep   1  Cd_          conc    930.50 ug/L
                rep   1  Pb_          conc   6867.20 ug/L
                rep   1  Be_          conc     28.35 ug/L
                rep   2  Cd_          conc    892.15 ug/L
                rep   2  Pb_          conc   6499.20 ug/L
                rep   2  Be_          conc     27.03 ug/L
                rep   3  Cd_          conc    895.54 ug/L
                rep   3  Pb_          conc   6414.82 ug/L
                rep   3  Be_          conc     27.77 ug/L
57.113.7/2B D
7/08/92 12:03
   Cd_          av    906.06 ug/L     sd    21.232 %cv   2.34
   Pb_          av   6593.74 ug/L     sd   240.549 %cv   3.65
   Be_          av     27.72 ug/L     sd     0.661 %cv   2.38

07/08/92 12:06
57.113.9/3F     rep   1  Cd_          conc  65942.09 ug/L
                rep   1  Pb_          conc 368385.28 ug/L
                rep   1  Be_          conc   5493.90 ug/L
                rep   2  Cd_          conc  66523.17 ug/L
                rep   2  Pb_          conc 363528.63 ug/L
                rep   2  Be_          conc   5620.86 ug/L          over range
                rep   3  Cd_          conc  64418.04 ug/L
                rep   3  Pb_          conc 379425.53 ug/L
                rep   3  Be_          conc   6171.67 ug/L          over range
57.113.9/3F
7/08/92 12:07
   Cd_          av  65627.77 ug/L     sd  1087.197 %cv   1.66
   Pb_          av  370446.4 ug/L     sd  8146.434 %cv   2.20
   Be_          over range

07/08/92 12:09
57.113.11/3B    rep   1  Cd_          conc     90.58 ug/L
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                rep   1  Pb_          conc     468.72 ug/L
                rep   1  Be_          conc       2.19 ug/L
                rep   2  Cd_          conc      77.65 ug/L
                rep   2  Pb_          conc     403.27 ug/L
                rep   2  Be_          conc       0.46 ug/L
                rep   3  Cd_          conc     109.87 ug/L
                rep   3  Pb_          conc     399.72 ug/L
                rep   3  Be_          conc       1.15 ug/L
57.113.11/3B
07/08/92 12:11
    Cd_         av      92.70 ug/L        sd     16.213 %cv   17.49
    Pb_         av     423.90 ug/L        sd     38.855 %cv    9.17
    Be_         av       1.27 ug/L        sd      0.871 %cv   68.73

07/08/92 12:13
CCV1            rep   1  Cd_          conc     788.12 ug/L
                rep   1  Pb_          conc    2721.35 ug/L
                rep   1  Be_          conc     256.88 ug/L
                rep   2  Cd_          conc     785.91 ug/L
                rep   2  Pb_          conc    2602.42 ug/L
                rep   2  Be_          conc     255.36 ug/L
                rep   3  Cd_          conc     790.40 ug/L
                rep   3  Pb_          conc    2556.01 ug/L
                rep   3  Be_          conc     256.90 ug/L
CCV1
07/08/92 12:14
    Cd_         av     788.14 ug/L        sd      2.247 %cv    0.29
    Pb_         av    2626.59 ug/L        sd     85.279 %cv    3.25
    Be_         av     256.38 ug/L        sd      0.886 %cv    0.35

07/08/92 12:16
CCB1            rep   1  Cd_          conc      -6.13 ug/L
                rep   1  Pb_          conc       9.11 ug/L
                rep   1  Be_          conc      -1.98 ug/L
                rep   2  Cd_          conc      -6.34 ug/L
                rep   2  Pb_          conc     -35.30 ug/L          window edge
                rep   2  Be_          conc      -2.38 ug/L
                rep   3  Cd_          conc      -2.99 ug/L
                rep   3  Pb_          conc      -6.53 ug/L
                rep   3  Be_          conc      -2.21 ug/L
CCB1
07/08/92 12:17
    Cd_         av      -5.16 ug/L        sd      1.879 %cv   36.45
    Pb_         av     -10.91 ug/L        sd     22.525 %cv   206.5
    Be_         av      -2.19 ug/L        sd      0.201 %cv    9.21

07/08/92 12:19
57.113.13/4F    rep   1  Cd_          conc   79430.66 ug/L          over range
                rep   1  Pb_          conc 430234.13 ug/L
                rep   1  Be_          conc    2086.72 ug/L          over range
                rep   2  Cd_          conc   93057.11 ug/L          over range
                rep   2  Pb_          conc 431425.53 ug/L
                rep   2  Be_          conc    1857.72 ug/L          over range
                rep   3  Cd_          conc   73496.05 ug/L          over range
                rep   3  Pb_          conc 455906.81 ug/L
                rep   3  Be_          conc    2044.12 ug/L          over range
57.113.13/4F
07/08/92 12:21
    Cd_         over range
    Pb_         av  439188.8 ug/L        sd   14490.45 %cv    3.30
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  Be_         over range

07/08/92 12:23
57.113.15/4B    rep   1  Cd_          conc     106.59 ug/L
                rep   1  Pb_          conc     309.47 ug/L
                rep   1  Be_          conc      -1.84 ug/L
                rep   2  Cd_          conc      70.50 ug/L
                rep   2  Pb_          conc     219.64 ug/L
                rep   2  Be_          conc      -2.24 ug/L
                rep   3  Cd_          conc      60.16 ug/L
                rep   3  Pb_          conc     188.25 ug/L
                rep   3  Be_          conc       1.70 ug/L
57.113.15/4B
07/08/92 12:24
    Cd_         av      79.08 ug/L          sd     24.379 %cv   30.83
    Pb_         av     239.12 ug/L          sd     62.912 %cv   26.31
    Be_         av      -0.79 ug/L          sd      2.170 %cv   273.5

07/08/92 12:26
57.113.17/5F    rep   1  Cd_          conc 132344.19 ug/L          over range
                rep   1  Pb_          conc 684361.63 ug/L
                rep   1  Be_          conc   6982.62 ug/L          over range
                rep   2  Cd_          conc 145700.81 ug/L          over range
                rep   2  Pb_          conc 768701.69 ug/L
                rep   2  Be_          conc   7237.52 ug/L
                rep   3  Cd_          conc 149673.30 ug/L          over range
                rep   3  Pb_          conc 1026422.6 ug/L
                rep   3  Be_          conc   8585.28 ug/L
57.113.17/5F
07/08/92 12:28
    Cd_         over range
    Pb_         av  826495.3 ug/L          sd  178203.6 %cv   21.56
    Be_         av   7601.81 ug/L          sd   861.198 %cv   11.33

07/08/92 12:30
57.113.19/5B    rep   1  Cd_          conc    4907.02 ug/L
                rep   1  Pb_          conc   21599.35 ug/L
                rep   1  Be_          conc     136.48 ug/L
                rep   2  Cd_          conc    4730.03 ug/L
                rep   2  Pb_          conc   21576.06 ug/L
                rep   2  Be_          conc     136.66 ug/L
                rep   3  Cd_          conc    4647.84 ug/L
                rep   3  Pb_          conc   21643.94 ug/L
                rep   3  Be_          conc     135.08 ug/L
57.113.19/5B
07/08/92 12:31
    Cd_         av   4761.63 ug/L          sd   132.447 %cv    2.78
    Pb_         av  21606.45 ug/L          sd    34.490 %cv    0.16
    Be_         av    136.07 ug/L          sd     0.868 %cv    0.64

07/08/92 12:34
57.113.21/6F    rep   1  Cd_          conc 113308.45 ug/L          over range
                rep   1  Pb_          conc 513148.59 ug/L
                rep   1  Be_          conc   6251.98 ug/L
                rep   2  Cd_          conc 100552.20 ug/L          over range
                rep   2  Pb_          conc 525564.50 ug/L
                rep   2  Be_          conc   6384.13 ug/L
                rep   3  Cd_          conc 122164.51 ug/L          over range
                rep   3  Pb_          conc 526598.69 ug/L
                rep   3  Be_          conc   6277.02 ug/L          over range
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57.113.21/6F
07/08/92 12:35

Cd_	over range						
Pb_	av	521770.5	ug/L		sd	7484.761	%cv 1.43
Be_	over range						

07/08/92 12:37

57.113.23/6B	rep	1	Cd_	conc	377.31	ug/L
	rep	1	Pb_	conc	1960.88	ug/L
	rep	1	Be_	conc	3.92	ug/L
	rep	2	Cd_	conc	363.64	ug/L
	rep	2	Pb_	conc	2056.99	ug/L
	rep	2	Be_	conc	3.23	ug/L
	rep	3	Cd_	conc	359.84	ug/L
	rep	3	Pb_	conc	1975.93	ug/L
	rep	3	Be_	conc	3.14	ug/L

57.113.23/6B
07/08/92 12:39

Cd_	av	366.93	ug/L	sd	9.189	%cv	2.50
Pb_	av	1997.94	ug/L	sd	51.697	%cv	2.59
Be_	av	3.43	ug/L	sd	0.426	%cv	12.41

07/08/92 12:41

57.113.25/7F	rep	1	Cd_	conc	160.44	ug/L
	rep	1	Pb_	conc	771.78	ug/L
	rep	1	Be_	conc	3.68	ug/L
	rep	2	Cd_	conc	180.83	ug/L
	rep	2	Pb_	conc	841.61	ug/L
	rep	2	Be_	conc	3.98	ug/L
	rep	3	Cd_	conc	164.96	ug/L
	rep	3	Pb_	conc	851.45	ug/L
	rep	3	Be_	conc	4.17	ug/L

57.113.25/7F
07/08/92 12:42

Cd_	av	168.74	ug/L	sd	10.707	%cv	6.34
Pb_	av	821.61	ug/L	sd	43.438	%cv	5.29
Be_	av	3.94	ug/L	sd	0.248	%cv	6.30

07/08/92 12:44

57.113.29/7B	rep	1	Cd_	conc	13.29	ug/L
	rep	1	Pb_	conc	58.94	ug/L
	rep	1	Be_	conc	-1.94	ug/L
	rep	2	Cd_	conc	17.91	ug/L
	rep	2	Pb_	conc	17.29	ug/L
	rep	2	Be_	conc	-2.07	ug/L
	rep	3	Cd_	conc	13.16	ug/L
	rep	3	Pb_	conc	0.85	ug/L
	rep	3	Be_	conc	-2.42	ug/L window edge

57.113.29/7B
07/08/92 12:46

Cd_	av	14.79	ug/L	sd	2.711	%cv	18.33
Pb_	av	25.69	ug/L	sd	29.944	%cv	116.5
Be_	av	-2.14	ug/L	sd	0.251	%cv	11.72

07/08/92 12:48

57.113.32/8F	rep	1	Cd_	conc	642.10	ug/L
	rep	1	Pb_	conc	1453.55	ug/L
	rep	1	Be_	conc	8.00	ug/L
	rep	2	Cd_	conc	676.02	ug/L
	rep	2	Pb_	conc	1141.95	ug/L

	rep	2	Be_	conc	6.84	ug/L				
	rep	3	Cd_	conc	690.42	ug/L				
	rep	3	Pb_	conc	1547.63	ug/L				
	rep	3	Be_	conc	8.05	ug/L				
13.32/8F										
8/92 12:49										
Cd_	av	669.52	ug/L	sd	24.809	%cv	3.71			
Pb_	av	1381.04	ug/L	sd	212.338	%cv	15.38			
Be_	av	7.63	ug/L	sd	0.682	%cv	8.94			
07/08/92 12:51										
57.113.36/8B	rep	1	Cd_	conc	10.54	ug/L				
	rep	1	Pb_	conc	-6.05	ug/L				
	rep	1	Be_	conc	-2.34	ug/L				
	rep	2	Cd_	conc	8.97	ug/L				
	rep	2	Pb_	conc	-14.67	ug/L				
	rep	2	Be_	conc	-2.19	ug/L				
	rep	3	Cd_	conc	10.22	ug/L				
	rep	3	Pb_	conc	1.83	ug/L				
	rep	3	Be_	conc	-2.81	ug/L				window edge
57.113.36/8B										
07/08/92 12:53										
Cd_	av	9.91	ug/L	sd	0.829	%cv	8.36			
Pb_	av	-6.30	ug/L	sd	8.253	%cv	131.1			
Be_	av	-2.45	ug/L	sd	0.327	%cv	13.36			
07/08/92 12:55										
CCV2	rep	1	Cd_	conc	770.14	ug/L				
	rep	1	Pb_	conc	2587.11	ug/L				
	rep	1	Be_	conc	249.85	ug/L				
	rep	2	Cd_	conc	774.39	ug/L				
	rep	2	Pb_	conc	2643.96	ug/L				
	rep	2	Be_	conc	246.85	ug/L				
	rep	3	Cd_	conc	772.07	ug/L				
	rep	3	Pb_	conc	2533.01	ug/L				
	rep	3	Be_	conc	244.97	ug/L				
CCV2										
07/08/92 12:56										
Cd_	av	772.20	ug/L	sd	2.132	%cv	0.28			
Pb_	av	2588.03	ug/L	sd	55.480	%cv	2.14			
Be_	av	247.23	ug/L	sd	2.460	%cv	1.00			
07/08/92 12:58										
CCB2	rep	1	Cd_	conc	-6.66	ug/L				
	rep	1	Pb_	conc	-18.34	ug/L				
	rep	1	Be_	conc	-2.02	ug/L				
	rep	2	Cd_	conc	-7.90	ug/L				
	rep	2	Pb_	conc	-2.45	ug/L				
	rep	2	Be_	conc	-2.21	ug/L				
	rep	3	Cd_	conc	-7.36	ug/L				
	rep	3	Pb_	conc	-63.83	ug/L				window edge
	rep	3	Be_	conc	-2.39	ug/L				window edge
CCB2										
07/08/92 13:00										
Cd_	av	-7.31	ug/L	sd	0.626	%cv	8.56			
Pb_	av	-28.21	ug/L	sd	31.860	%cv	112.9			
Be_	av	-2.21	ug/L	sd	0.186	%cv	8.41			
07/08/92 13:02										
57.113.39/9F	rep	1	Cd_	conc	1912.54	ug/L				

	rep	1	Pb_	conc	2417.01	ug/L		
	rep	1	Be_	conc	21.73	ug/L		
	rep	2	Cd_	conc	1888.54	ug/L		
	rep	2	Pb_	conc	2401.83	ug/L		
	rep	2	Be_	conc	21.59	ug/L		
	rep	3	Cd_	conc	1914.10	ug/L		
	rep	3	Pb_	conc	2564.15	ug/L		
	rep	3	Be_	conc	21.44	ug/L		
57.113.39/9F								
07/08/92 13:03								
Cd_	av	1905.06	ug/L	sd	14.328	%cv	0.75	
Pb_	av	2461.00	ug/L	sd	89.657	%cv	3.64	
Be_	av	21.59	ug/L	sd	0.147	%cv	0.68	
07/08/92 13:05								
57.113.43/9B	rep	1	Cd_	conc	11.39	ug/L		
	rep	1	Pb_	conc	26.40	ug/L		
	rep	1	Be_	conc	-2.08	ug/L		
	rep	2	Cd_	conc	9.84	ug/L		
	rep	2	Pb_	conc	-29.06	ug/L		
	rep	2	Be_	conc	-2.78	ug/L		window edge
	rep	3	Cd_	conc	13.15	ug/L		
	rep	3	Pb_	conc	-65.00	ug/L		window edge
	rep	3	Be_	conc	-2.86	ug/L		window edge
57.113.43/9B								
07/08/92 13:06								
Cd_	av	11.46	ug/L	sd	1.658	%cv	14.47	
Pb_	av	-22.55	ug/L	sd	46.042	%cv	204.1	
Be_	av	-2.57	ug/L	sd	0.425	%cv	16.52	
07/08/92 13:08								
57.113.46/10F	rep	1	Cd_	conc	219.49	ug/L		
	rep	1	Pb_	conc	484.73	ug/L		
	rep	1	Be_	conc	-0.71	ug/L		
	rep	2	Cd_	conc	223.62	ug/L		
	rep	2	Pb_	conc	609.82	ug/L		
	rep	2	Be_	conc	-1.07	ug/L		
	rep	3	Cd_	conc	222.27	ug/L		
	rep	3	Pb_	conc	544.47	ug/L		
	rep	3	Be_	conc	-0.59	ug/L		
57.113.46/10F								
07/08/92 13:10								
Cd_	av	221.79	ug/L	sd	2.105	%cv	0.95	
Pb_	av	546.34	ug/L	sd	62.566	%cv	11.45	
Be_	av	-0.79	ug/L	sd	0.251	%cv	31.80	
07/08/92 13:12								
57.113.50/10B	rep	1	Cd_	conc	124.78	ug/L		
	rep	1	Pb_	conc	-18.16	ug/L		
	rep	1	Be_	conc	-2.31	ug/L		
	rep	2	Cd_	conc	124.06	ug/L		
	rep	2	Pb_	conc	4.09	ug/L		
	rep	2	Be_	conc	-2.34	ug/L		
	rep	3	Cd_	conc	119.65	ug/L		
	rep	3	Pb_	conc	-15.17	ug/L		
	rep	3	Be_	conc	-2.10	ug/L		
57.113.50/10B								
07/08/92 13:13								
Cd_	av	122.83	ug/L	sd	2.779	%cv	2.26	
Pb_	av	-9.75	ug/L	sd	12.076	%cv	123.8	

	Be_	av	-2.25	ug/L		sd	0.131	%cv	5.83
07/08/92 13:15									
57.113.53/11F	rep	1	Cd_		conc	465.73	ug/L		
	rep	1	Pb_		conc	2630.11	ug/L		
	rep	1	Be_		conc	7.99	ug/L		
	rep	2	Cd_		conc	491.05	ug/L		
	rep	2	Pb_		conc	2312.16	ug/L		
	rep	2	Be_		conc	6.76	ug/L		
	rep	3	Cd_		conc	442.11	ug/L		
	rep	3	Pb_		conc	2623.52	ug/L		
	rep	3	Be_		conc	10.30	ug/L		
57.113.53/11F									
07/08/92 13:17									
Cd_	av	466.30	ug/L		sd	24.476	%cv	5.25	
Pb_	av	2521.93	ug/L		sd	181.699	%cv	7.20	
Be_	av	8.35	ug/L		sd	1.800	%cv	21.56	
07/08/92 13:19									
57.113.57/11B	rep	1	Cd_		conc	26.31	ug/L		
	rep	1	Pb_		conc	-24.38	ug/L		
	rep	1	Be_		conc	-2.21	ug/L		
	rep	2	Cd_		conc	26.27	ug/L		
	rep	2	Pb_		conc	21.58	ug/L		
	rep	2	Be_		conc	-2.39	ug/L		
	rep	3	Cd_		conc	26.34	ug/L		
	rep	3	Pb_		conc	-3.83	ug/L		
	rep	3	Be_		conc	-2.17	ug/L		
57.113.57/11B									
07/08/92 13:20									
Cd_	av	26.31	ug/L		sd	0.035	%cv	0.13	
Pb_	av	-2.21	ug/L		sd	23.018	%cv	1041.	
Be_	av	-2.25	ug/L		sd	0.117	%cv	5.19	
07/08/92 13:22									
57.113.60/12F	rep	1	Cd_		conc	19.98	ug/L		
	rep	1	Pb_		conc	1871.75	ug/L		
	rep	1	Be_		conc	-3.39	ug/L		window edge
	rep	2	Cd_		conc	33.81	ug/L		
	rep	2	Pb_		conc	1937.50	ug/L		
	rep	2	Be_		conc	-1.49	ug/L		
	rep	3	Cd_		conc	44.26	ug/L		
	rep	3	Pb_		conc	1906.34	ug/L		
	rep	3	Be_		conc	-0.27	ug/L		
57.113.60/12F									
07/08/92 13:24									
Cd_	av	32.68	ug/L		sd	12.178	%cv	37.26	
Pb_	av	1905.19	ug/L		sd	32.889	%cv	1.73	
Be_	av	-1.72	ug/L		sd	1.576	%cv	91.72	
07/08/92 13:26									
57.113.64/12B	rep	1	Cd_		conc	11.32	ug/L		
	rep	1	Pb_		conc	36.45	ug/L		
	rep	1	Be_		conc	-2.47	ug/L		
	rep	2	Cd_		conc	10.47	ug/L		
	rep	2	Pb_		conc	-30.47	ug/L		
	rep	2	Be_		conc	-2.34	ug/L		
	rep	3	Cd_		conc	12.07	ug/L		
	rep	3	Pb_		conc	15.48	ug/L		
	rep	3	Be_		conc	-2.60	ug/L		

57.113.64/12B
07/08/92 13:27

Cd_	av	11.29 ug/L	sd	0.803 %cv	7.11	
Pb_	av	7.15 ug/L	sd	34.231 %cv	478.6	
Be_	av	-2.47 ug/L	sd	0.130 %cv	5.27	

07/08/92 13:29

57.113.67/13F	rep 1	Cd_	conc	1123.61 ug/L	
	rep 1	Pb_	conc	10074.84 ug/L	
	rep 1	Be_	conc	13.03 ug/L	
	rep 2	Cd_	conc	1172.84 ug/L	
	rep 2	Pb_	conc	10170.76 ug/L	
	rep 2	Be_	conc	21.18 ug/L	
	rep 3	Cd_	conc	1190.18 ug/L	
	rep 3	Pb_	conc	10462.94 ug/L	
	rep 3	Be_	conc	16.64 ug/L	

57.113.67/13F
07/08/92 13:30

Cd_	av	1162.21 ug/L	sd	34.537 %cv	2.97	
Pb_	av	10236.18 ug/L	sd	202.152 %cv	1.97	
Be_	av	16.95 ug/L	sd	4.083 %cv	24.09	

07/08/92 13:32

57.113.71/13B	rep 1	Cd_	conc	4.65 ug/L	
	rep 1	Pb_	conc	-5.79 ug/L	
	rep 1	Be_	conc	-2.29 ug/L	
	rep 2	Cd_	conc	3.39 ug/L	
	rep 2	Pb_	conc	-38.39 ug/L	
	rep 2	Be_	conc	-3.10 ug/L	window edge
	rep 3	Cd_	conc	3.78 ug/L	
	rep 3	Pb_	conc	-8.81 ug/L	
	rep 3	Be_	conc	-1.91 ug/L	

57.113.71/13B
07/08/92 13:34

Cd_	av	3.94 ug/L	sd	0.647 %cv	16.43	
Pb_	av	-17.66 ug/L	sd	18.013 %cv	101.9	
Be_	av	-2.43 ug/L	sd	0.604 %cv	24.84	

07/08/92 13:36

CCV3	rep 1	Cd_	conc	733.14 ug/L	
	rep 1	Pb_	conc	2537.41 ug/L	
	rep 1	Be_	conc	252.67 ug/L	
	rep 2	Cd_	conc	741.32 ug/L	
	rep 2	Pb_	conc	2555.63 ug/L	
	rep 2	Be_	conc	256.31 ug/L	
	rep 3	Cd_	conc	736.79 ug/L	
	rep 3	Pb_	conc	2522.51 ug/L	
	rep 3	Be_	conc	255.69 ug/L	

CCV3
07/08/92 13:37

Cd_	av	737.08 ug/L	sd	4.096 %cv	0.56	
Pb_	av	2538.51 ug/L	sd	16.588 %cv	0.65	
Be_	av	254.89 ug/L	sd	1.948 %cv	0.76	

07/08/92 13:39

CCB3	rep 1	Cd_	conc	-11.13 ug/L	window edge
	rep 1	Pb_	conc	-13.71 ug/L	
	rep 1	Be_	conc	-2.36 ug/L	
	rep 2	Cd_	conc	-5.74 ug/L	
	rep 2	Pb_	conc	31.01 ug/L	

	rep	2	Be_	conc	-2.29	ug/L			window edge
	rep	3	Cd_	conc	-7.60	ug/L			
	rep	3	Pb_	conc	-4.33	ug/L			
	rep	3	Be_	conc	-2.06	ug/L			
03/92 13:40									
Cd_	av		-8.15	ug/L	sd	2.739	%cv	33.58	
Pb_	av		4.32	ug/L	sd	23.585	%cv	545.5	
Be_	av		-2.24	ug/L	sd	0.156	%cv	6.97	
7/08/92 13:42									
6.216.27 PE#1	rep	1	Cd_	conc	30.69	ug/L			
	rep	1	Pb_	conc	-18.35	ug/L			
	rep	1	Be_	conc	-2.05	ug/L			
	rep	2	Cd_	conc	31.83	ug/L			
	rep	2	Pb_	conc	0.36	ug/L			
	rep	2	Be_	conc	-1.86	ug/L			
	rep	3	Cd_	conc	29.27	ug/L			
	rep	3	Pb_	conc	1.27	ug/L			
	rep	3	Be_	conc	-2.11	ug/L			
6.216.27 PE#1									
7/08/92 13:44									
Cd_	av		30.60	ug/L	sd	1.283	%cv	4.19	
Pb_	av		-5.57	ug/L	sd	11.076	%cv	198.7	
Be_	av		-2.01	ug/L	sd	0.132	%cv	6.58	
07/08/92 13:46									
6.216.28 PE#2	rep	1	Cd_	conc	-10.32	ug/L			window edge
	rep	1	Pb_	conc	-8.19	ug/L			
	rep	1	Be_	conc	6.08	ug/L			
	rep	2	Cd_	conc	-7.22	ug/L			
	rep	2	Pb_	conc	-13.49	ug/L			
	rep	2	Be_	conc	5.97	ug/L			
	rep	3	Cd_	conc	-7.29	ug/L			
	rep	3	Pb_	conc	-23.11	ug/L			
	rep	3	Be_	conc	6.03	ug/L			
56.216.28 PE#2									
7/08/92 13:47									
Cd_	av		-8.28	ug/L	sd	1.769	%cv	21.37	
Pb_	av		-14.93	ug/L	sd	7.563	%cv	50.66	
Be_	av		6.03	ug/L	sd	0.052	%cv	0.87	
07/08/92 13:49									
ICSAF	rep	1	Cd_	conc	17.24	ug/L			
	rep	1	Pb_	conc	-131.36	ug/L			window edge
	rep	1	Be_	conc	-61.73	ug/L			window edge
	rep	2	Cd_	conc	11.11	ug/L			
	rep	2	Pb_	conc	-36.36	ug/L			
	rep	2	Be_	conc	-57.39	ug/L			window edge
	rep	3	Cd_	conc	10.87	ug/L			
	rep	3	Pb_	conc	-44.64	ug/L			
	rep	3	Be_	conc	-60.63	ug/L			window edge
ICSAF									
07/08/92 13:50									
Cd_	av		13.07	ug/L	sd	3.608	%cv	27.60	
Pb_	av		-70.79	ug/L	sd	52.625	%cv	74.34	
Be_	av		-59.92	ug/L	sd	2.259	%cv	3.77	
7/08/92 13:52									
ICSABF	rep	1	Cd_	conc	806.30	ug/L			

	rep	1	Pb_	conc	975.81	ug/L
	rep	1	Be_	conc	414.72	ug/L
	rep	2	Cd_	conc	808.95	ug/L
	rep	2	Pb_	conc	1049.19	ug/L
	rep	2	Be_	conc	410.00	ug/L
	rep	3	Cd_	conc	804.65	ug/L
	rep	3	Pb_	conc	922.85	ug/L
	rep	3	Be_	conc	408.94	ug/L

ICSABF
07/08/92 13:54

Cd_	av	806.63	ug/L	sd	2.170	%cv	0.27
Pb_	av	982.62	ug/L	sd	63.440	%cv	6.46
Be_	av	411.22	ug/L	sd	3.079	%cv	0.75

2121GSIB

Cd, Be, Pb
RERUNS

07/13/92 09:38

wcal standard	rep	1	Cd_	em	5357.3	conc	75.00			
	rep	1	Pb_	em	1027.4	conc	250.00			
	rep	1	Be_	em	4238.7	conc	25.00			
	rep	2	Cd_	em	5202.1	conc	75.00			
	rep	2	Pb_	em	891.7	conc	250.00			
	rep	2	Be_	em	4033.3	conc	25.00			
	rep	3	Cd_	em	5224.4	conc	75.00			
	rep	3	Pb_	em	932.8	conc	250.00			
	rep	3	Be_	em	4086.3	conc	25.00			

wcal standard
07/13/92 09:40

Cd_	av	5261.26	sd	83.945	%cv	1.60	conc 75.00
Pb_	av	950.65	sd	69.599	%cv	7.32	conc 250.00
Be_	av	4119.42	sd	106.643	%cv	2.59	conc 25.00

07/13/92 09:41

sc blank	rep	1	Cd_	em	1070.9
	rep	1	Pb_	em	783.4
	rep	1	Be_	em	331.3

07/13/92 09:42

blank	rep	1	Cd_	ratio	0.0171
	rep	1	Pb_	ratio	0.0251
	rep	1	Be_	ratio	0.0063
	rep	2	Cd_	ratio	0.0377
	rep	2	Pb_	ratio	0.0198
	rep	2	Be_	ratio	0.0081
	rep	3	Cd_	ratio	0.0457
	rep	3	Pb_	ratio	0.0196
	rep	3	Be_	ratio	0.0073

.k
07/13/92 09:44

Cd_	av	0.0335	sd	0.01478	%cv	44.10
Pb_	av	0.0215	sd	0.00309	%cv	14.39
Be_	av	0.0072	sd	0.00092	%cv	12.74

07/13/92 09:45

#1 standard	rep	1	Cd_	ratio	0.5560	conc	75.00
	rep	1	Pb_	ratio	0.1022	conc	250.00
	rep	1	Be_	ratio	0.5819	conc	25.00
	rep	2	Cd_	ratio	0.5039	conc	75.00
	rep	2	Pb_	ratio	0.1114	conc	250.00
	rep	2	Be_	ratio	0.5815	conc	25.00
	rep	3	Cd_	ratio	0.5043	conc	75.00
	rep	3	Pb_	ratio	0.1132	conc	250.00
	rep	3	Be_	ratio	0.5907	conc	25.00

#1 standard
07/13/92 09:46

Cd_	av	0.5214	sd	0.02996	%cv	5.75	conc 75.00
Pb_	av	0.1089	sd	0.00588	%cv	5.40	conc 250.00
Be_	av	0.5847	sd	0.00519	%cv	0.89	conc 25.00

07/13/92 09:48

#2 standard	rep	1	Cd_	ratio	1.9701	conc	300.00
	rep	1	Pb_	ratio	0.4169	conc	1000.00
	rep	1	Be_	ratio	2.3115	conc	100.00
	rep	2	Cd_	ratio	1.9466	conc	300.00
	rep	2	Pb_	ratio	0.4169	conc	1000.00
	rep	2	Be_	ratio	2.3535	conc	100.00
	rep	3	Cd_	ratio	1.9590	conc	300.00

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                rep   3  Pb_          ratio    0.4138 conc 1000.00
                rep   3  Be_          ratio    2.3367 conc 100.00
#2 standard
07/13/92 09:49
    Cd_         av    1.9586              sd   0.01175 %cv   0.60 conc  300.00
    Pb_         av    0.4159              sd   0.00180 %cv   0.43 conc  1000.0
    Be_         av    2.3339              sd   0.02116 %cv   0.91 conc  100.00

07/13/92 09:50
#3 standard     rep   1  Cd_          ratio    4.8897 conc 750.00
                rep   1  Pb_          ratio    1.0071 conc 2500.00
                rep   1  Be_          ratio    5.8571 conc 250.00
                rep   2  Cd_          ratio    4.9719 conc 750.00
                rep   2  Pb_          ratio    0.9935 conc 2500.00
                rep   2  Be_          ratio    5.9248 conc 250.00
                rep   3  Cd_          ratio    4.8742 conc 750.00
                rep   3  Pb_          ratio    1.0589 conc 2500.00
                rep   3  Be_          ratio    5.9157 conc 250.00
#3 standard
07/13/92 09:52
    Cd_         av    4.9119              sd   0.05254 %cv   1.07 conc  750.00
    Pb_         av    1.0198              sd   0.03449 %cv   3.38 conc  2500.0
    Be_         av    5.8992              sd   0.03672 %cv   0.62 conc  250.00

07/13/92 09:53
#4 standard     rep   1  Cd_          ratio    9.3187 conc 1500.00
                rep   1  Pb_          ratio    1.9283 conc 5000.00
                rep   1  Be_          ratio   11.2564 conc 500.00
                rep   2  Cd_          ratio    9.4282 conc 1500.00
                rep   2  Pb_          ratio    1.9226 conc 5000.00
                rep   2  Be_          ratio   11.3510 conc 500.00
                rep   3  Cd_          ratio    9.3577 conc 1500.00
                rep   3  Pb_          ratio    1.9137 conc 5000.00
                rep   3  Be_          ratio   11.3085 conc 500.00
#4 standard
07/13/92 09:54
    Cd_         av    9.3682              sd   0.05547 %cv   0.59 conc  1500.0
    Pb_         av    1.9215              sd   0.00739 %cv   0.38 conc  5000.0
    Be_         av   11.3053              sd   0.04736 %cv   0.42 conc  500.00

07/13/92 09:55
CHECK HS        rep   1  Cd_          conc   1469.06 ug/L
                rep   1  Pb_          conc   4906.34 ug/L
                rep   1  Be_          conc    494.95 ug/L
                rep   2  Cd_          conc   1498.86 ug/L
                rep   2  Pb_          conc   4762.38 ug/L
                rep   2  Be_          conc    492.37 ug/L
                rep   3  Cd_          conc   1504.56 ug/L
                rep   3  Pb_          conc   4939.15 ug/L
                rep   3  Be_          conc    494.06 ug/L
CHECK HS
07/13/92 09:57
    Cd_         av   1490.83 ug/L          sd    19.064 %cv   1.28
    Pb_         av   4869.29 ug/L          sd    94.029 %cv   1.93
    Be_         av    493.79 ug/L          sd     1.310 %cv   0.27

07/13/92 09:58
ICV             rep   1  Cd_          conc    785.81 ug/L
                rep   1  Pb_          conc   2493.18 ug/L
                rep   1  Be_          conc    255.84 ug/L
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	rep	2	Cd_	conc	768.29	ug/L			
	rep	2	Pb_	conc	2459.02	ug/L			
	rep	2	Be_	conc	257.22	ug/L			
	rep	3	Cd_	conc	766.21	ug/L			
	rep	3	Pb_	conc	2546.71	ug/L			
	rep	3	Be_	conc	257.58	ug/L			
CV									
07/13/92 09:59									
Cd_	av	773.44	ug/L	sd	10.766	%cv	1.39		
Pb_	av	2499.64	ug/L	sd	44.200	%cv	1.77		
Be_	av	256.88	ug/L	sd	0.920	%cv	0.36		
7/13/92 10:01									
CB	rep	1	Cd_	conc	-9.43	ug/L			
	rep	1	Pb_	conc	-7.52	ug/L			
	rep	1	Be_	conc	-2.36	ug/L			
	rep	2	Cd_	conc	-11.06	ug/L		window edge	
	rep	2	Pb_	conc	-15.80	ug/L			
	rep	2	Be_	conc	-2.32	ug/L		window edge	
	rep	3	Cd_	conc	-4.17	ug/L			
	rep	3	Pb_	conc	-42.20	ug/L			
	rep	3	Be_	conc	-2.09	ug/L			
CB									
7/13/92 10:02									
Cd_	av	-8.22	ug/L	sd	3.597	%cv	43.76		
Pb_	av	-21.84	ug/L	sd	18.114	%cv	82.94		
Be_	av	-2.25	ug/L	sd	0.144	%cv	6.38		
07/13/92 10:03									
I	rep	1	Cd_	conc	17.51	ug/L			
	rep	1	Pb_	conc	-145.25	ug/L		window edge	
	rep	1	Be_	conc	-34.72	ug/L		window edge	
	rep	2	Cd_	conc	17.48	ug/L			
	rep	2	Pb_	conc	-53.75	ug/L			
	rep	2	Be_	conc	-37.14	ug/L		window edge	
	rep	3	Cd_	conc	17.40	ug/L			
	rep	3	Pb_	conc	-67.19	ug/L			
	rep	3	Be_	conc	-35.79	ug/L		window edge	
ICSAI									
7/13/92 10:05									
Cd_	av	17.46	ug/L	sd	0.059	%cv	0.34		
Pb_	av	-88.73	ug/L	sd	49.409	%cv	55.68		
Be_	av	-35.88	ug/L	sd	1.214	%cv	3.38		
07/13/92 10:06									
ICSABI	rep	1	Cd_	conc	434.30	ug/L			
	rep	1	Pb_	conc	506.16	ug/L			
	rep	1	Be_	conc	207.87	ug/L			
	rep	2	Cd_	conc	440.27	ug/L			
	rep	2	Pb_	conc	559.17	ug/L			
	rep	2	Be_	conc	200.94	ug/L			
	rep	3	Cd_	conc	440.80	ug/L			
	rep	3	Pb_	conc	533.33	ug/L			
	rep	3	Be_	conc	202.33	ug/L			
ICSABI									
7/13/92 10:07									
Cd_	av	438.46	ug/L	sd	3.609	%cv	0.82		
Pb_	av	532.89	ug/L	sd	26.508	%cv	4.97		
Be_	av	203.71	ug/L	sd	3.666	%cv	1.80		

WRONG SAMPLE

07/13/92 10:09

57.113.1 X10	rep	1	Cd_	conc	5276.23	ug/L
	rep	1	Pb_	conc	39416.34	ug/L
	rep	1	Be_	conc	722.00	ug/L
	rep	2	Cd_	conc	5299.31	ug/L
	rep	2	Pb_	conc	38897.40	ug/L
	rep	2	Be_	conc	710.96	ug/L
	rep	3	Cd_	conc	5278.15	ug/L
	rep	3	Pb_	conc	39315.21	ug/L
	rep	3	Be_	conc	712.35	ug/L

57.113.1 X10
07/13/92 10:10

Cd_	av	5284.56	ug/L	sd	12.806	%cv	0.24
Pb_	av	39209.65	ug/L	sd	275.104	%cv	0.70
Be_	av	715.11	ug/L	sd	6.013	%cv	0.84

07/13/92 10:12

ICSABI	rep	1	Cd_	conc	817.35	ug/L
	rep	1	Pb_	conc	957.52	ug/L
	rep	1	Be_	conc	410.99	ug/L
	rep	2	Cd_	conc	810.44	ug/L
	rep	2	Pb_	conc	935.70	ug/L
	rep	2	Be_	conc	409.42	ug/L
	rep	3	Cd_	conc	815.99	ug/L
	rep	3	Pb_	conc	984.66	ug/L
	rep	3	Be_	conc	410.55	ug/L

ICSABI
07/13/92 10:13

Cd_	av	814.59	ug/L	sd	3.663	%cv 0.45
Pb_	av	959.29	ug/L	sd	24.532	%cv 2.56
Be_	av	410.32	ug/L	sd	0.809	%cv 0.20

7/13/92 10:14

57.113.1 X10	rep	1	Cd_	conc	5144.80	ug/L
	rep	1	Pb_	conc	38500.22	ug/L
	rep	1	Be_	conc	710.22	ug/L
	rep	2	Cd_	conc	5184.99	ug/L
	rep	2	Pb_	conc	38523.29	ug/L
	rep	2	Be_	conc	706.53	ug/L
	rep	3	Cd_	conc	5214.46	ug/L
	rep	3	Pb_	conc	38607.31	ug/L
	rep	3	Be_	conc	710.87	ug/L

7.113.1 X10
07/13/92 10:16

Cd_	av	5181.42	ug/L	sd	34.964	%cv 0.67
Pb_	av	38543.61	ug/L	sd	56.362	%cv 0.15
Be_	av	709.21	ug/L	sd	2.339	%cv 0.33

7/13/92 10:17

7.113.5 X10	rep	1	Cd_	conc	4535.71	ug/L
	rep	1	Pb_	conc	30164.75	ug/L
	rep	1	Be_	conc	449.09	ug/L
	rep	2	Cd_	conc	4611.15	ug/L
	rep	2	Pb_	conc	30310.22	ug/L
	rep	2	Be_	conc	452.62	ug/L
	rep	3	Cd_	conc	4586.21	ug/L
	rep	3	Pb_	conc	30099.98	ug/L
	rep	3	Be_	conc	447.39	ug/L

7.113.5 X10
7/13/92 10:19

Cd_	av	4577.69	ug/L	sd	38.436	%cv 0.84
Pb_	av	30191.65	ug/L	sd	107.670	%cv 0.36
Be_	av	449.70	ug/L	sd	2.667	%cv 0.59

07/13/92 10:20

7.113.5D X10	rep	1	Cd_	conc	4617.10	ug/L
	rep	1	Pb_	conc	30320.37	ug/L
	rep	1	Be_	conc	447.06	ug/L
	rep	2	Cd_	conc	4579.57	ug/L
	rep	2	Pb_	conc	30368.17	ug/L
	rep	2	Be_	conc	449.43	ug/L
	rep	3	Cd_	conc	4601.96	ug/L
	rep	3	Pb_	conc	30662.74	ug/L
	rep	3	Be_	conc	448.86	ug/L

57.113.5D X10
7/13/92 10:21

Cd_	av	4599.54	ug/L	sd	18.885 %cv	0.41
Pb_	av	30450.43	ug/L	sd	185.414 %cv	0.61
Be_	av	448.45	ug/L	sd	1.238 %cv	0.28

07/13/92 10:22

57.113.9 X10	rep	1	Cd_	conc	4527.60 ug/L
	rep	1	Pb_	conc	26272.64 ug/L
	rep	1	Be_	conc	418.91 ug/L
	rep	2	Cd_	conc	4442.05 ug/L
	rep	2	Pb_	conc	26291.48 ug/L
	rep	2	Be_	conc	421.00 ug/L
	rep	3	Cd_	conc	4460.05 ug/L
	rep	3	Pb_	conc	26378.01 ug/L
	rep	3	Be_	conc	424.91 ug/L

57.113.9 X10
07/13/92 10:24

Cd_	av	4476.57	ug/L	sd	45.103 %cv	1.01
Pb_	av	26314.04	ug/L	sd	56.192 %cv	0.21
Be_	av	421.61	ug/L	sd	3.047 %cv	0.72

07/13/92 10:25

57.113.13 X10	rep	1	Cd_	conc	9977.18 ug/L
	rep	1	Pb_	conc	41452.46 ug/L
	rep	1	Be_	conc	222.10 ug/L
	rep	2	Cd_	conc	10003.95 ug/L
	rep	2	Pb_	conc	42054.93 ug/L
	rep	2	Be_	conc	224.84 ug/L
	rep	3	Cd_	conc	10001.15 ug/L
	rep	3	Pb_	conc	41878.84 ug/L
	rep	3	Be_	conc	222.85 ug/L

57.113.13 X10
07/13/92 10:26

Cd_	av	9994.09	ug/L	sd	14.715 %cv	0.15
Pb_	av	41795.41	ug/L	sd	309.774 %cv	0.74
Be_	av	223.26	ug/L	sd	1.418 %cv	0.64

07/13/92 10:28

57.113.17 X10	rep	1	Cd_	conc	7321.21 ug/L
	rep	1	Pb_	conc	39010.57 ug/L
	rep	1	Be_	conc	421.90 ug/L
	rep	2	Cd_	conc	7441.15 ug/L
	rep	2	Pb_	conc	39112.88 ug/L
	rep	2	Be_	conc	422.15 ug/L
	rep	3	Cd_	conc	7458.10 ug/L
	rep	3	Pb_	conc	39133.00 ug/L
	rep	3	Be_	conc	418.08 ug/L

57.113.17 X10
07/13/92 10:29

Cd_	av	7406.82	ug/L	sd	74.623 %cv	1.01
Pb_	av	39085.48	ug/L	sd	65.651 %cv	0.17
Be_	av	420.71	ug/L	sd	2.279 %cv	0.54

07/13/92 10:30

57.113.21 X10	rep	1	Cd_	conc	8288.05 ug/L
	rep	1	Pb_	conc	35277.04 ug/L
	rep	1	Be_	conc	459.76 ug/L
	rep	2	Cd_	conc	8200.92 ug/L
	rep	2	Pb_	conc	34906.98 ug/L
	rep	2	Be_	conc	459.81 ug/L
	rep	3	Cd_	conc	8223.65 ug/L

	rep	3	Pb_	conc	34800.57	ug/L			
	rep	3	Be_	conc	463.19	ug/L			
7.113.21 X10									
7/13/92 10:32									
Cd_	av	8237.54	ug/L	sd	45.195	%cv	0.55		
Pb_	av	34994.86	ug/L	sd	250.096	%cv	0.71		
Be_	av	460.92	ug/L	sd	1.968	%cv	0.43		
07/13/92 10:33									
CV1	rep	1	Cd_	conc	749.52	ug/L			
	rep	1	Pb_	conc	2525.63	ug/L			
	rep	1	Be_	conc	236.15	ug/L			
	rep	2	Cd_	conc	741.16	ug/L			
	rep	2	Pb_	conc	2411.18	ug/L			
	rep	2	Be_	conc	237.92	ug/L			
	rep	3	Cd_	conc	736.38	ug/L			
	rep	3	Pb_	conc	2332.23	ug/L			
	rep	3	Be_	conc	240.74	ug/L			
CCV1									
7/13/92 10:34									
Cd_	av	742.35	ug/L	sd	6.648	%cv	0.90		
Pb_	av	2423.01	ug/L	sd	97.244	%cv	4.01		
Be_	av	238.27	ug/L	sd	2.317	%cv	0.97		
07/13/92 10:36									
CB1	rep	1	Cd_	conc	1.27	ug/L			
	rep	1	Pb_	conc	50.20	ug/L			
	rep	1	Be_	conc	-1.93	ug/L			
	rep	2	Cd_	conc	1.33	ug/L			
	rep	2	Pb_	conc	-17.26	ug/L		window edge	
	rep	2	Be_	conc	-2.23	ug/L			
	rep	3	Cd_	conc	-5.32	ug/L			
	rep	3	Pb_	conc	-28.68	ug/L			
	rep	3	Be_	conc	-2.29	ug/L			
CCB1									
7/13/92 10:37									
Cd_	av	-0.91	ug/L	sd	3.823	%cv	422.2		
Pb_	av	1.42	ug/L	sd	42.630	%cv	3002.		
Be_	av	-2.15	ug/L	sd	0.193	%cv	8.99		
07/13/92 10:38									
ICSAF	rep	1	Cd_	conc	15.29	ug/L			
	rep	1	Pb_	conc	-203.42	ug/L		window edge	
	rep	1	Be_	conc	-20.57	ug/L		window edge	
	rep	2	Cd_	conc	16.73	ug/L			
	rep	2	Pb_	conc	-162.07	ug/L		window edge	
	rep	2	Be_	conc	-22.53	ug/L		window edge	
	rep	3	Cd_	conc	12.38	ug/L			
	rep	3	Pb_	conc	-46.69	ug/L			
	rep	3	Be_	conc	-23.00	ug/L		window edge	
ICSAF									
07/13/92 10:40									
Cd_	av	14.80	ug/L	sd	2.221	%cv	15.00		
Pb_	av	-137.39	ug/L	sd	81.226	%cv	59.12		
Be_	av	-22.04	ug/L	sd	1.289	%cv	5.85		
7/13/92 10:41									
ICSABF	rep	1	Cd_	conc	822.80	ug/L			
	rep	1	Pb_	conc	829.40	ug/L			
	rep	1	Be_	conc	397.42	ug/L			

	rep	2	Cd_	conc	800.42	ug/L
	rep	2	Pb_	conc	850.77	ug/L
	rep	2	Be_	conc	395.84	ug/L
	rep	3	Cd_	conc	799.94	ug/L
	rep	3	Pb_	conc	899.07	ug/L
	rep	3	Be_	conc	395.66	ug/L

ICSABF
07/13/92 10:42

Cd_	av	807.72	ug/L	sd	13.062	%cv	1.62
Pb_	av	859.75	ug/L	sd	35.690	%cv	4.15
Be_	av	396.31	ug/L	sd	0.971	%cv	0.25

Pb MSA's (BH)

Pb ID: 57.113.15/4B Seq. No.: 00027 A/S Pos.: 11 Date: 07/09/92

[illegible] dispensed: 20 from 0, 5 from 38, 5 from 11
[illegible]eplicate 1 Time: 11:22
Peak Area (A-s): 0.286 Peak Height (A): 0.464
[illegible]ackground Pk Area (A-s): 0.547 Background Pk Height (A): 0.174
[illegible]lank Corrected Pk Area (A-s): 0.178

Pb ID: Standard 1 Seq. No.: 00028 A/S Pos.: 11 Date: 07/09/92

[illegible] dispensed: 10 from 0, 5 from 38, 10 from 3, 5 from 11
Replicate 1 Time: 11:26
[illegible]eak Area (A-s): 0.329 Peak Height (A): 0.534
[illegible]ackground Pk Area (A-s): 0.629 Background Pk Height (A): 0.505
Blank Corrected Pk Area (A-s): 0.222

[illegible] ID: Standard 2 Seq. No.: 00029 A/S Pos.: 11 Date: 07/09/92

[illegible] dispensed: 10 from 0, 5 from 38, 10 from 4, 5 from 11
[illegible]eplicate 1 Time: 11:30
[illegible]eak Area (A-s): 0.381 Peak Height (A): 0.621
Background Pk Area (A-s): 0.659 Background Pk Height (A): 0.528
[illegible]lank Corrected Pk Area (A-s): 0.274

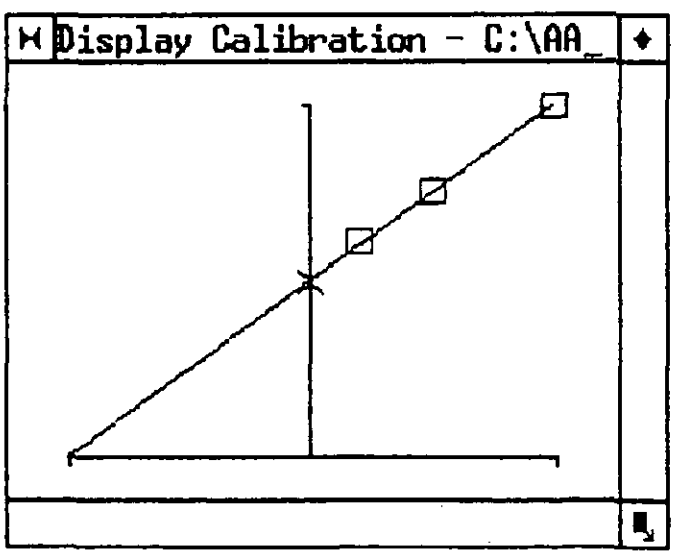
Pb ID: Standard 3 Seq. No.: 00030 A/S Pos.: 11 Date: 07/09/92

[illegible]spensed: 10 from 0, 5 from 38, 10 from 5, 5 from 11
Rep[illegible]icate 1 Time: 11:33
Peak Area (A-s): 0.471 Peak Height (A): 0.722
[illegible]ackground Pk Area (A-s): 0.699 Background Pk Height (A): 0.582
[illegible]lank Corrected Pk Area (A-s): 0.364

[illegible] ID: 57.113.15/4B Seq. No.: 00027 A/S Pos.: 11 Date: 07/09/92

Concentration (ug/L): 198.5

[illegible]orrelation coefficient: 0.99930 Slope: 0.0009 Int: 0.182



Pb ID: 57.113.29/7B Seq. No.: 00034 A/S Pos.: 12 Date: 07/09/92

uL dispensed: 20 from 0, 5 from 38, 10 from 12
Replicate 1 Time: 11:46
Peak Area (A-s): 0.123 Peak Height (A): 0.216
Background Pk Area (A-s): 0.707 Background Pk Height (A): 0.687
Blank Corrected Pk Area (A-s): 0.015

Pb ID: Standard 1 Seq. No.: 00035 A/S Pos.: 12 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 12
Replicate 1 Time: 11:50
Peak Area (A-s): 0.160 Peak Height (A): 0.276
Background Pk Area (A-s): 0.697 Background Pk Height (A): 0.699
Blank Corrected Pk Area (A-s): 0.053

Pb ID: Standard 2 Seq. No.: 00036 A/S Pos.: 12 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 12
Replicate 1 Time: 11:54
Peak Area (A-s): 0.222 Peak Height (A): 0.367
Background Pk Area (A-s): 0.706 Background Pk Height (A): 0.719
Blank Corrected Pk Area (A-s): 0.115

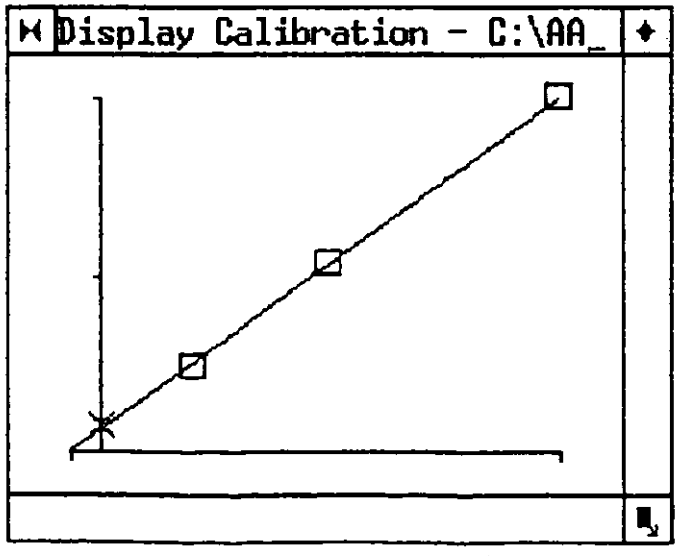
Pb ID: Standard 3 Seq. No.: 00037 A/S Pos.: 12 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 5, 10 from 12
Replicate 1 Time: 11:58
Peak Area (A-s): 0.324 Peak Height (A): 0.505
Background Pk Area (A-s): 0.729 Background Pk Height (A): 0.718
Blank Corrected Pk Area (A-s): 0.217

Pb ID: 57.113.29/7B Seq. No.: 00034 A/S Pos.: 12 Date: 07/09/92

Concentration (ug/L): 6.9

Correlation coefficient: 0.99989 Slope: 0.0020 Int: 0.014



Pb ID: 57.113.36/8B Seq. No.: 00038 A/S Pos.: 13 Date: 07/09/92

[illegible] dispensed: 20 from 0, 5 from 38, 10 from 13
[illegible]plicate 1 Time: 12:02
[illegible]eak Area (A-s): 0.102 Peak Height (A): 0.153
[illegible]ckground Pk Area (A-s): 0.698 Background Pk Height (A): 0.686
[illegible]ank Corrected Pk Area (A-s): -0.005

Pb ID: Standard 1 Seq. No.: 00039 A/S Pos.: 13 Date: 07/09/92

[illegible] dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 13
Replicate 1 Time: 12:06
[illegible]ak Area (A-s): 0.108 Peak Height (A): 0.179
[illegible]ckground Pk Area (A-s): 0.687 Background Pk Height (A): 0.714
Blank Corrected Pk Area (A-s): 0.000

[illegible] ID: Standard 2 Seq. No.: 00040 A/S Pos.: 13 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 13
[illegible]plicate 1 Time: 12:10
[illegible]ak Area (A-s): 0.163 Peak Height (A): 0.276
Background Pk Area (A-s): 0.697 Background Pk Height (A): 0.710
[illegible]ank Corrected Pk Area (A-s): 0.056

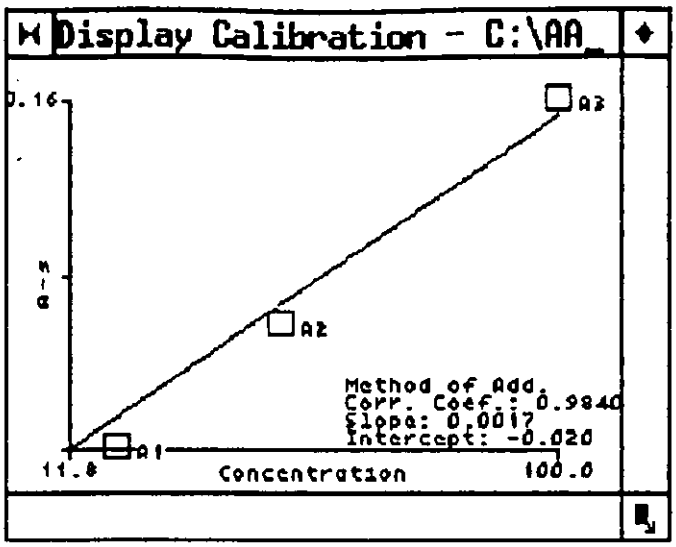
Pb ID: Standard 3 Seq. No.: 00041 A/S Pos.: 13 Date: 07/09/92

[illegible]spensed: 10 from 0, 5 from 38, 10 from 5, 10 from 13
[illegible]plicate 1 Time: 12:13
Peak Area (A-s): 0.264 Peak Height (A): 0.403
[illegible]ckground Pk Area (A-s): 0.713 Background Pk Height (A): 0.685
[illegible]ank Corrected Pk Area (A-s): 0.156

[illegible]e standard additions calibration curve may not be linear.
[illegible] ID: 57.113.36/8B Seq. No.: 00038 A/S Pos.: 13 Date: 07/09/92

Concentration (ug/L): -11.8

Correlation coefficient: 0.98403 Slope: 0.0017 Int: -0.020



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Pb ID: ~~57.113.43/9B~~ PERON Seq. No.: 00042 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 20 from 0, 5 from 38, 10 from 14
Replicate 1 Time: 12:18
Peak Area (A-s): 0.074 Peak Height (A): 0.106
Background Pk Area (A-s): 0.680 Background Pk Height (A): 0.620
Blank Corrected Pk Area (A-s): -0.034

Pb ID: Standard 1 Seq. No.: 00043 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 14
Replicate 1 Time: 12:21
Peak Area (A-s): 0.083 Peak Height (A): 0.128
Background Pk Area (A-s): 0.656 Background Pk Height (A): 0.627
Blank Corrected Pk Area (A-s): -0.025

Pb ID: Standard 2 Seq. No.: 00044 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 14
Replicate 1 Time: 12:25
Peak Area (A-s): 0.145 Peak Height (A): 0.221
Background Pk Area (A-s): 0.666 Background Pk Height (A): 0.630
Blank Corrected Pk Area (A-s): 0.037

Pb ID: Standard 3 Seq. No.: 00045 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 5, 10 from 14
Replicate 1 Time: 12:29
Peak Area (A-s): 0.244 Peak Height (A): 0.356
Background Pk Area (A-s): 0.710 Background Pk Height (A): 0.670
Blank Corrected Pk Area (A-s): 0.136

Standard abs. & conc. values are not in the same order.
Pb ID: 57.113.43/9B Seq. No.: 00042 A/S Pos.: 14 Date: 07/09/92

Concentration (ug/L): --------
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ID: 57.113.50/10B Seq. No.: 00046 A/S Pos.: 15 Date: 07/09/92

uL dispensed: 20 from 0, 5 from 38, 10 from 15
Replicate 1 Time: 12:33
Peak Area (A-s): 0.142 Peak Height (A): 0.206
Background Pk Area (A-s): 0.687 Background Pk Height (A): 0.632
Blank Corrected Pk Area (A-s): 0.035

Pb ID: Standard 1 Seq. No.: 00047 A/S Pos.: 15 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 15
Replicate 1 Time: 12:36
Peak Area (A-s): 0.158 Peak Height (A): 0.239
Background Pk Area (A-s): 0.632 Background Pk Height (A): 0.596
Blank Corrected Pk Area (A-s): 0.051

Pb ID: Standard 2 Seq. No.: 00048 A/S Pos.: 15 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 15
Replicate 1 Time: 12:40
Peak Area (A-s): 0.207 Peak Height (A): 0.321
Background Pk Area (A-s): 0.700 Background Pk Height (A): 0.626
Blank Corrected Pk Area (A-s): 0.099

Pb ID: Standard 3 Seq. No.: 00049 A/S Pos.: 15 Date: 07/09/92.

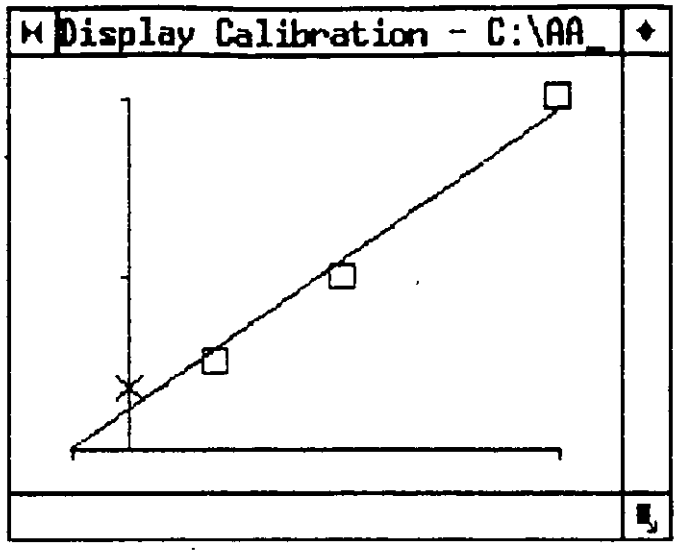
uL dispensed: 10 from 0, 5 from 38, 10 from 5, 10 from 15
Replicate 1 Time: 12:44
Peak Area (A-s): 0.311 Peak Height (A): 0.455
Background Pk Area (A-s): 0.707 Background Pk Height (A): 0.649
Blank Corrected Pk Area (A-s): 0.203

The standard additions calibration curve may not be linear.
Pb ID: 57.113.50/10B Seq. No.: 00046 A/S Pos.: 15 Date: 07/09/92

Concentration (ug/L): 13.4

Correlation coefficient: 0.99000 Slope: 0.0017 Int: 0.023

10B



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Pb ID: Blank Seq. No.: 00053 A/S Pos.: 0 Date: 07/09/92

uL dispensed: 15 from 0, 5 from 38, 10 from 0
Replicate 1 Time: 12:57
Peak Area (A-s): 0.017 Peak Height (A): 0.028
Background Pk Area (A-s): 0.532 Background Pk Height (A): 0.420
Blank Corrected Pk Area (A-s): -0.042

Auto-zero performed.

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Pb ID: 57.113.43/9B Seq. No.: 00054 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 20 from 0, 5 from 38, 10 from 14
Replicate 1 Time: 13:01
Peak Area (A-s): 0.027 Peak Height (A): 0.045
Background Pk Area (A-s): 0.624 Background Pk Height (A): 0.507
Blank Corrected Pk Area (A-s): 0.010

Pb ID: Standard 1 Seq. No.: 00055 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 14
Replicate 1 Time: 13:05
Peak Area (A-s): 0.074 Peak Height (A): 0.111
Background Pk Area (A-s): 0.620 Background Pk Height (A): 0.572
Blank Corrected Pk Area (A-s): 0.057

Pb ID: Standard 2 Seq. No.: 00056 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 14
Replicate 1 Time: 13:08
Peak Area (A-s): 0.134 Peak Height (A): 0.208
Background Pk Area (A-s): 0.692 Background Pk Height (A): 0.610
Blank Corrected Pk Area (A-s): 0.117

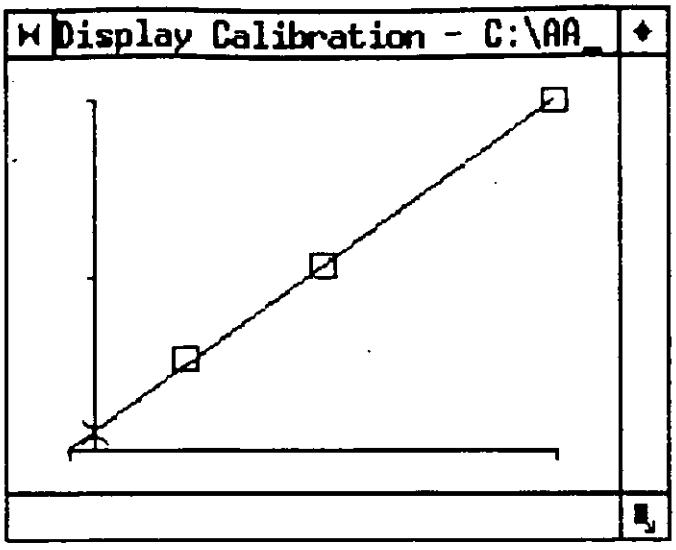
Pb ID: Standard 3 Seq. No.: 00057 A/S Pos.: 14 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 5, 10 from 14
Replicate 1 Time: 13:12
Peak Area (A-s): 0.239 Peak Height (A): 0.354
Background Pk Area (A-s): 0.719 Background Pk Height (A): 0.695
Blank Corrected Pk Area (A-s): 0.222

The standard additions calibration curve may not be linear.
Pb ID: 57.113.43/9B Seq. No.: 00054 A/S Pos.: 14 Date: 07/09/92

Concentration (ug/L): 5.8

Correlation coefficient: 0.99969 Slope: 0.0021 Int: 0.012



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Pb ID: 57.113.57/11B Seq. No.: 00058 A/S Pos.: 16 Date: 07/09/92

uL dispensed: 20 from 0, 5 from 38, 10 from 16
Replicate 1 Time: 13:16
Peak Area (A-s): 0.139 Peak Height (A): 0.207
Background Pk Area (A-s): 0.734 Background Pk Height (A): 0.715
Blank Corrected Pk Area (A-s): 0.122

Pb ID: Standard 1 Seq. No.: 00059 A/S Pos.: 16 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 16
Replicate 1 Time: 13:20
Peak Area (A-s): 0.162 Peak Height (A): 0.239
Background Pk Area (A-s): 0.719 Background Pk Height (A): 0.770
Blank Corrected Pk Area (A-s): 0.145

Pb ID: Standard 2 Seq. No.: 00060 A/S Pos.: 16 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 16
Replicate 1 Time: 13:24
Peak Area (A-s): 0.219 Peak Height (A): 0.323
Background Pk Area (A-s): 0.756 Background Pk Height (A): 0.793
Blank Corrected Pk Area (A-s): 0.202

Pb ID: Standard 3 Seq. No.: 00061 A/S Pos.: 16 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 5, 10 from 16
Replicate 1 Time: 13:28
Peak Area (A-s): 0.317 Peak Height (A): 0.434
Background Pk Area (A-s): 0.784 Background Pk Height (A): 0.866
Blank Corrected Pk Area (A-s): 0.300

The standard additions calibration curve may not be linear.
Pb ID: 57.113.57/11B Seq. No.: 00058 A/S Pos.: 16 Date: 07/09/92

Concentration (ug/L): 63.2
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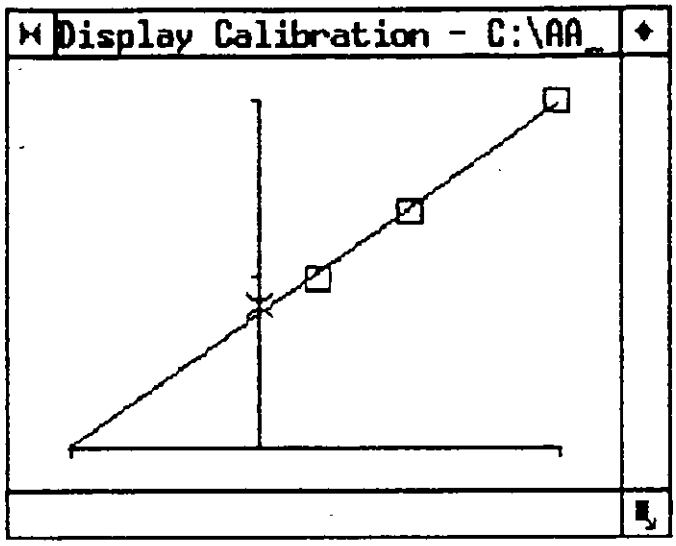


Pb ID: 57.113.64/12B Seq. No.: 00062 A/S Pos.: 17 Date: 07/09/92

uL dispensed: 20 from 0, 5 from 38, 10 from 17
Replicate 1 Time: 13:32
Peak Area (A-s): 0.100 Peak Height (A): 0.140
Background Pk Area (A-s): 0.720 Background Pk Height (A): 0.764
Blank Corrected Pk Area (A-s): 0.083

Pb ID: Standard 1 Seq. No.: 00063 A/S Pos.: 17 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 17
Replicate 1 Time: 13:36
Peak Area (A-s): 0.107 Peak Height (A): 0.166
Background Pk Area (A-s): 0.717 Background Pk Height (A): 0.753
Blank Corrected Pk Area (A-s): 0.090

Pb ID: Standard 2 Seq. No.: 00064 A/S Pos.: 17 Date: 07/09/92

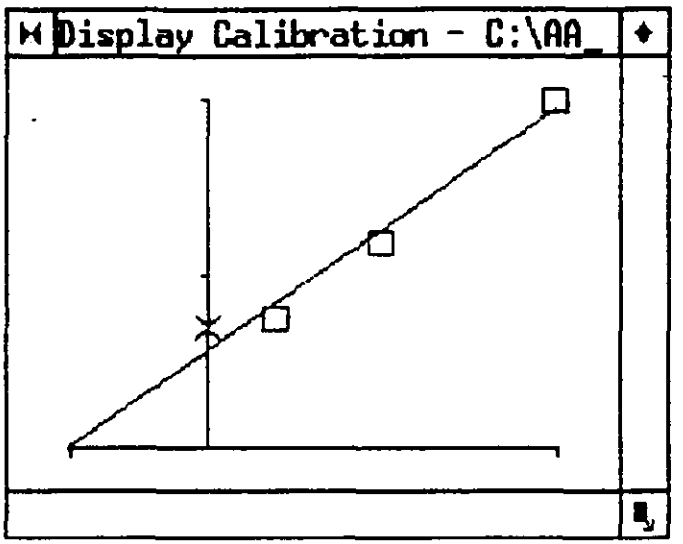
uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 17
Replicate 1 Time: 13:40
Peak Area (A-s): 0.161 Peak Height (A): 0.242
Background Pk Area (A-s): 0.729 Background Pk Height (A): 0.750
Blank Corrected Pk Area (A-s): 0.143

Pb ID: Standard 3 Seq. No.: 00065 A/S Pos.: 17 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 5, 10 from 17
Replicate 1 Time: 13:44
Peak Area (A-s): 0.263 Peak Height (A): 0.378
Background Pk Area (A-s): 0.747 Background Pk Height (A): 0.745
Blank Corrected Pk Area (A-s): 0.246

The standard additions calibration curve may not be linear.
Pb ID: 57.113.64/12B Seq. No.: 00062 A/S Pos.: 17 Date: 07/09/92

Concentration (ug/L): 39.8



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Pb ID: 57.113.71/13B Seq. No.: 00066 A/S Pos.: 18 Date: 07/09/92

uL dispensed: 20 from 0, 5 from 38, 10 from 18
Replicate 1 Time: 13:48
Peak Area (A-s): 0.071 Peak Height (A): 0.085
Background Pk Area (A-s): 0.626 Background Pk Height (A): 0.596
Blank Corrected Pk Area (A-s): 0.054

Pb ID: Standard 1 Seq. No.: 00067 A/S Pos.: 18 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 3, 10 from 18
Replicate 1 Time: 13:52
Peak Area (A-s): 0.098 Peak Height (A): 0.134
Background Pk Area (A-s): 0.625 Background Pk Height (A): 0.578
Blank Corrected Pk Area (A-s): 0.081

Pb ID: Standard 2 Seq. No.: 00068 A/S Pos.: 18 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 4, 10 from 18
Replicate 1 Time: 13:56
Peak Area (A-s): 0.172 Peak Height (A): 0.228
Background Pk Area (A-s): 0.646 Background Pk Height (A): 0.580
Blank Corrected Pk Area (A-s): 0.155

Pb ID: Standard 3 Seq. No.: 00069 A/S Pos.: 18 Date: 07/09/92

uL dispensed: 10 from 0, 5 from 38, 10 from 5, 10 from 18
Replicate 1 Time: 13:59
Peak Area (A-s): 0.303 Peak Height (A): 0.377
Background Pk Area (A-s): 0.647 Background Pk Height (A): 0.584
Blank Corrected Pk Area (A-s): 0.286

The standard additions calibration curve may not be linear.
Pb ID: 57.113.71/13B Seq. No.: 00066 A/S Pos.: 18 Date: 07/09/92

Concentration (ug/L): 18.0
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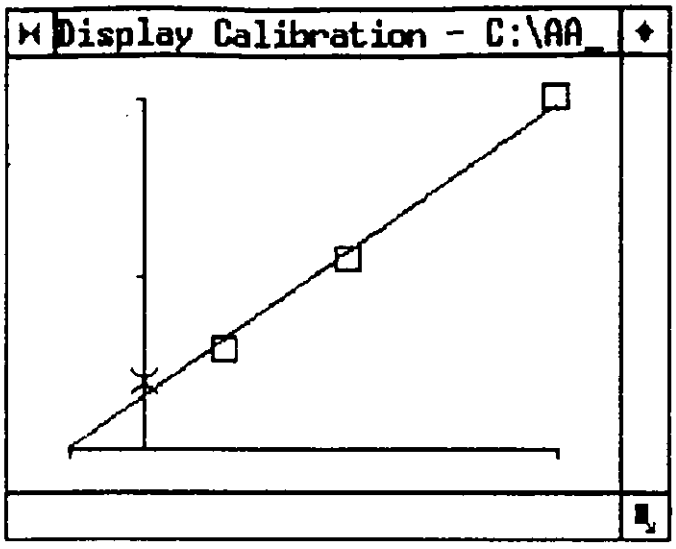
Display Calibration - C:\AA_

21216Ag

07/08/92 15:40
wcal standard rep 1 Ag_ em 1418.1 conc 25.00
rep 2 Ag_ em 1351.9 conc 25.00
rep 3 Ag_ em 1310.7 conc 25.00
wc standard
07/08/92 15:41
Ag_ av 1360.23 sd 54.199 %cv 3.98 conc 25.00

07/08/92 15:43
c blank rep 1 Ag_ em 1548.8
7/08/92 15:45
blank rep 1 Ag_ ratio 0.0276
rep 2 Ag_ ratio 0.0226
rep 3 Ag_ ratio 0.0674
blank
07/08/92 15:45
Ag_ av 0.0392 sd 0.02455 %cv 62.61

07/08/92 15:47
1 standard rep 1 Ag_ ratio 0.5262 conc 25.00
rep 2 Ag_ ratio 0.5634 conc 25.00
rep 3 Ag_ ratio 0.5733 conc 25.00
1 standard
7/08/92 15:48
Ag_ av 0.5543 sd 0.02482 %cv 4.48 conc 25.00

7/08/92 15:50
2 standard rep 1 Ag_ ratio 2.0149 conc 100.00
rep 2 Ag_ ratio 2.0357 conc 100.00
rep 3 Ag_ ratio 2.1087 conc 100.00
tandard
07/08/92 15:50
Ag_ av 2.0531 sd 0.04927 %cv 2.40 conc 100.00

07/08/92 15:52
#3 standard rep 1 Ag_ ratio 4.9425 conc 250.00
rep 2 Ag_ ratio 5.0146 conc 250.00
rep 3 Ag_ ratio 5.0896 conc 250.00
#3 standard
7/08/92 15:53
Ag_ av 5.0156 sd 0.07358 %cv 1.47 conc 250.00

07/08/92 15:55
4 standard rep 1 Ag_ ratio 10.2699 conc 500.00
rep 2 Ag_ ratio 10.3130 conc 500.00
rep 3 Ag_ ratio 10.3574 conc 500.00
4 standard
7/08/92 15:56
Ag_ av 10.3134 sd 0.04376 %cv 0.42 conc 500.00

7/08/92 15:58
CHECK HS rep 1 Ag_ conc 497.00 ug/L
rep 2 Ag_ conc 498.45 ug/L
rep 3 Ag_ conc 496.97 ug/L
CHECK HS
8/92 15:58
Ag_ av 497.48 ug/L sd 0.846 %cv 0.17

07/08/92 16:00
ICV rep 1 Ag_ conc 245.13 ug/L

```
                rep   2  Ag_          conc     244.90 ug/L
                rep   3  Ag_          conc     247.04 ug/L
ICV
07/08/92 16:01
    Ag_         av     245.69 ug/L          sd      1.174 %cv   0.48

07/08/92 16:03
ICB             rep   1  Ag_          conc       4.12 ug/L
                rep   2  Ag_          conc       3.04 ug/L
                rep   3  Ag_          conc       2.47 ug/L
ICB
07/08/92 16:04
    Ag_         av       3.21 ug/L          sd      0.836 %cv  26.07

07/08/92 16:06
ICSAI           rep   1  Ag_          conc       1.46 ug/L
                rep   2  Ag_          conc       0.58 ug/L
                rep   3  Ag_          conc       1.49 ug/L
ICSAI
07/08/92 16:06
    Ag_         av       1.17 ug/L          sd      0.518 %cv  44.14

07/08/92 16:09
ICSABI          rep   1  Ag_          conc     818.76 ug/L
                rep   2  Ag_          conc     831.91 ug/L
                rep   3  Ag_          conc     834.04 ug/L
ICSABI
07/08/92 16:09
    Ag_         av     828.24 ug/L          sd      8.274 %cv   1.00

07/08/92 16:11
57.113.1/1F     rep   1  Ag_          conc      39.21 ug/L
                rep   2  Ag_          conc      44.81 ug/L
                rep   3  Ag_          conc      41.93 ug/L
57.113.1/1F
07/08/92 16:12
    Ag_         av      41.98 ug/L          sd      2.802 %cv   6.68

07/08/92 16:14
57.113.3/1B     rep   1  Ag_          conc       6.86 ug/L
                rep   2  Ag_          conc       2.51 ug/L
                rep   3  Ag_          conc       5.59 ug/L
57.113.3/1B
07/08/92 16:15
    Ag_         av       4.99 ug/L          sd      2.234 %cv  44.80

07/08/92 16:17
57.113.1/1F L   rep   1  Ag_          conc      13.19 ug/L
                rep   2  Ag_          conc       8.03 ug/L
                rep   3  Ag_          conc       8.98 ug/L
57.113.1/1F L
07/08/92 16:18
    Ag_         av      10.07 ug/L          sd      2.747 %cv  27.29

07/08/92 16:20
57.113.3/1B L   rep   1  Ag_          conc       1.56 ug/L
                rep   2  Ag_          conc       2.56 ug/L
                rep   3  Ag_          conc       1.04 ug/L
57.113.3/1B L
07/08/92 16:20
```

Ag_	av	1.72	ug/L	sd	0.771	%cv	44.81	
07/08/92 16:23								
57.113.5/2F	rep	1	Ag_	conc	47.13	ug/L		
	rep	2	Ag_	conc	47.63	ug/L		
	rep	3	Ag_	conc	49.36	ug/L		
57.113.5/2F								
07/08/92 16:23								
Ag_	av	48.04	ug/L	sd	1.170	%cv	2.44	
07/08/92 16:25								
57.113.7/2B	rep	1	Ag_	conc	1.19	ug/L		window edge
	rep	2	Ag_	conc	2.97	ug/L		
	rep	3	Ag_	conc	1.66	ug/L		
57.113.7/2B								
07/08/92 16:26								
Ag_	av	1.94	ug/L	sd	0.921	%cv	47.52	
07/08/92 16:28								
57.113.5/2F D	rep	1	Ag_	conc	41.32	ug/L		
	rep	2	Ag_	conc	38.47	ug/L		
	rep	3	Ag_	conc	45.94	ug/L		
57.113.5/2F D								
07/08/92 16:29								
Ag_	av	41.91	ug/L	sd	3.768	%cv	8.99	
07/08/92 16:31								
57.113.7/2B D	rep	1	Ag_	conc	2.47	ug/L		
	rep	2	Ag_	conc	1.62	ug/L		
	rep	3	Ag_	conc	2.17	ug/L		
13.7/2B D								
07/08/92 16:32								
Ag_	av	2.09	ug/L	sd	0.431	%cv	20.65	
07/08/92 16:34								
57.113.9/3F	rep	1	Ag_	conc	36.60	ug/L		
	rep	2	Ag_	conc	35.10	ug/L		
	rep	3	Ag_	conc	35.98	ug/L		
57.113.9/3F								
07/08/92 16:35								
Ag_	av	35.89	ug/L	sd	0.753	%cv	2.10	
07/08/92 16:37								
57.113.11/3B	rep	1	Ag_	conc	-0.06	ug/L		window edge
	rep	2	Ag_	conc	0.82	ug/L		
	rep	3	Ag_	conc	1.45	ug/L		
57.113.11/3B								
07/08/92 16:38								
Ag_	av	0.74	ug/L	sd	0.762	%cv	103.3	
07/08/92 16:40								
CCV1	rep	1	Ag_	conc	248.37	ug/L		
	rep	2	Ag_	conc	247.96	ug/L		
	rep	3	Ag_	conc	252.67	ug/L		
CCV1								
8/92 16:40								
Ag_	av	249.67	ug/L	sd	2.607	%cv	1.04	
07/08/92 16:42								
CCB1	rep	1	Ag_	conc	2.59	ug/L		

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                rep   2  Ag_          conc       3.29 ug/L
                rep   3  Ag_          conc       1.02 ug/L
CCB1
07/08/92 16:43
    Ag_         av       2.30 ug/L          sd      1.163 %cv  50.63

07/08/92 16:45
57.113.13/4F    rep   1  Ag_          conc      19.70 ug/L
                rep   2  Ag_          conc      20.98 ug/L
                rep   3  Ag_          conc      19.65 ug/L
57.113.13/4F
07/08/92 16:46
    Ag_         av      20.11 ug/L          sd      0.757 %cv   3.77

07/08/92 16:48
57.113.15/4B    rep   1  Ag_          conc       1.96 ug/L
                rep   2  Ag_          conc       1.74 ug/L
                rep   3  Ag_          conc       2.47 ug/L
57.113.15/4B
07/08/92 16:49
    Ag_         av       2.06 ug/L          sd      0.374 %cv  18.18

07/08/92 16:51
57.113.17/5F    rep   1  Ag_          conc      26.20 ug/L
                rep   2  Ag_          conc      26.07 ug/L
                rep   3  Ag_          conc      29.04 ug/L
57.113.17/5F
07/08/92 16:52
    Ag_         av      27.10 ug/L          sd      1.681 %cv   6.20

07/08/92 16:54
57.113.19/5B    rep   1  Ag_          conc       1.14 ug/L
                rep   2  Ag_          conc       0.72 ug/L
                rep   3  Ag_          conc       2.21 ug/L
57.113.19/5B
07/08/92 16:55
    Ag_         av       1.36 ug/L          sd      0.769 %cv  56.54

07/08/92 16:57
57.113.21/6F    rep   1  Ag_          conc      35.03 ug/L
                rep   2  Ag_          conc      38.15 ug/L
                rep   3  Ag_          conc      29.58 ug/L
57.113.21/6F
07/08/92 16:58
    Ag_         av      34.25 ug/L          sd      4.341 %cv  12.67

07/08/92 17:00
57.113.23/6B    rep   1  Ag_          conc       0.52 ug/L
                rep   2  Ag_          conc       1.54 ug/L
                rep   3  Ag_          conc      -0.06 ug/L          window edge
57.113.23/6B
07/08/92 17:01
    Ag_         av       0.67 ug/L          sd      0.813 %cv  121.7

07/08/92 17:03
57.113.25/7F    rep   1  Ag_          conc      11.04 ug/L
                rep   2  Ag_          conc       4.31 ug/L
                rep   3  Ag_          conc       6.18 ug/L
57.113.25/7F
07/08/92 17:04
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Ag_	av		7.18 ug/L		sd	3.476 %cv	48.44	
07/08/92 17:06								
57.113.29/7B	rep	1	Ag_	conc		1.79 ug/L		
	rep	2	Ag_	conc		1.38 ug/L		
	rep	3	Ag_	conc		-0.29 ug/L		window edge
57.113.29/7B								
07/08/92 17:07								
Ag_	av		0.96 ug/L		sd	1.103 %cv	115.0	
07/08/92 17:09								
57.113.32/8F	rep	1	Ag_	conc		373.19 ug/L		
	rep	2	Ag_	conc		345.27 ug/L		
	rep	3	Ag_	conc		374.12 ug/L		
57.113.32/8F								
07/08/92 17:09								
Ag_	av		364.19 ug/L		sd	16.395 %cv	4.50	
07/08/92 17:12								
57.113.36/8B	rep	1	Ag_	conc		1.77 ug/L		
	rep	2	Ag_	conc		2.69 ug/L		
	rep	3	Ag_	conc		2.96 ug/L		
57.113.36/8B								
07/08/92 17:12								
Ag_	av		2.48 ug/L		sd	0.625 %cv	25.24	
07/08/92 17:15								
CV2	rep	1	Ag_	conc		251.49 ug/L		
	rep	2	Ag_	conc		251.65 ug/L		
	rep	3	Ag_	conc		245.75 ug/L		
07/08/92 17:15								
Ag_	av		249.63 ug/L		sd	3.362 %cv	1.35	
07/08/92 17:17								
CCB2	rep	1	Ag_	conc		2.12 ug/L		
	rep	2	Ag_	conc		2.27 ug/L		
	rep	3	Ag_	conc		2.00 ug/L		
CCB2								
07/08/92 17:18								
Ag_	av		2.13 ug/L		sd	0.134 %cv	6.29	
07/08/92 17:20								
57.113.39/9F	rep	1	Ag_	conc		6.04 ug/L		
	rep	2	Ag_	conc		12.90 ug/L		
	rep	3	Ag_	conc		3.61 ug/L		window edge
57.113.39/9F								
07/08/92 17:21								
Ag_	av		7.52 ug/L		sd	4.820 %cv	64.13	
07/08/92 17:23								
57.113.43/9B	rep	1	Ag_	conc		1.50 ug/L		
	rep	2	Ag_	conc		0.96 ug/L		
	rep	3	Ag_	conc		1.66 ug/L		
57.113.43/9B								
07/08/92 17:23								
Ag_	av		1.37 ug/L		sd	0.368 %cv	26.81	
07/08/92 17:26								
57.113.46/10F	rep	1	Ag_	conc		16.19 ug/L		

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                rep   2  Ag_          conc       9.06 ug/L
                rep   3  Ag_          conc      11.14 ug/L
57.113.46/10F
07/08/92 17:26
    Ag_         av      12.13 ug/L          sd      3.665 %cv  30.22

07/08/92 17:29
57.113.50/10B   rep   1  Ag_          conc       2.48 ug/L
                rep   2  Ag_          conc       2.87 ug/L
                rep   3  Ag_          conc       1.44 ug/L
57.113.50/10B
07/08/92 17:29
    Ag_         av       2.26 ug/L          sd      0.738 %cv  32.65

07/08/92 17:31
57.113.53/11F   rep   1  Ag_          conc      12.67 ug/L
                rep   2  Ag_          conc      26.32 ug/L
                rep   3  Ag_          conc      17.75 ug/L
57.113.53/11F
07/08/92 17:32
    Ag_         av      18.91 ug/L          sd      6.899 %cv  36.48

07/08/92 17:34
57.113.57/11B   rep   1  Ag_          conc       1.76 ug/L
                rep   2  Ag_          conc       3.11 ug/L
                rep   3  Ag_          conc       0.81 ug/L
57.113.57/11B
07/08/92 17:35
    Ag_         av       1.89 ug/L          sd      1.155 %cv  60.99

07/08/92 17:37
57.113.60/12F   rep   1  Ag_          conc      10.95 ug/L
                rep   2  Ag_          conc       7.03 ug/L
                rep   3  Ag_          conc      13.59 ug/L
57.113.60/12F
07/08/92 17:38
    Ag_         av      10.52 ug/L          sd      3.299 %cv  31.35

07/08/92 17:40
57.113.64/12B   rep   1  Ag_          conc       0.30 ug/L          window edge
                rep   2  Ag_          conc       2.01 ug/L
                rep   3  Ag_          conc       1.17 ug/L
57.113.64/12B
07/08/92 17:40
    Ag_         av       1.16 ug/L          sd      0.855 %cv  73.67

07/08/92 17:42
57.113.67/13F   rep   1  Ag_          conc      47.47 ug/L
                rep   2  Ag_          conc      34.20 ug/L
                rep   3  Ag_          conc      42.63 ug/L
57.113.67/13F
07/08/92 17:43
    Ag_         av      41.44 ug/L          sd      6.715 %cv  16.21

07/08/92 17:45
57.113.71/13B   rep   1  Ag_          conc       0.69 ug/L
                rep   2  Ag_          conc       2.04 ug/L
                rep   3  Ag_          conc       1.37 ug/L
57.113.71/13B
07/08/92 17:46
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   Ag_          av       1.37 ug/L          sd       0.677 %cv   49.39

07/08/92 17:48
CV3             rep   1  Ag_          conc     252.99 ug/L
                rep   2  Ag_          conc     248.68 ug/L
                rep   3  Ag_          conc     248.63 ug/L
CV3
07/08/92 17:48
   Ag_          av     250.10 ug/L          sd       2.501 %cv    1.00

07/08/92 17:51
CCB3            rep   1  Ag_          conc       1.25 ug/L
                rep   2  Ag_          conc       2.54 ug/L
                rep   3  Ag_          conc       1.45 ug/L
CCB3
07/08/92 17:51
   Ag_          av       1.75 ug/L          sd       0.696 %cv   39.83

07/08/92 17:53
56.216.27 PE#1  rep   1  Ag_          conc      89.48 ug/L
                rep   2  Ag_          conc      87.57 ug/L
                rep   3  Ag_          conc      88.25 ug/L
56.216.27 PE#1
07/08/92 17:54
   Ag_          av      88.43 ug/L          sd       0.969 %cv    1.10

07/08/92 17:56
CSAF            rep   1  Ag_          conc       1.26 ug/L
                rep   2  Ag_          conc       2.82 ug/L
                rep   3  Ag_          conc       2.16 ug/L
F
07/08/92 17:57
   Ag_          av       2.08 ug/L          sd       0.782 %cv   37.62

07/08/92 17:59
ICSABF          rep   1  Ag_          conc     845.08 ug/L
                rep   2  Ag_          conc     841.42 ug/L
                rep   3  Ag_          conc     848.26 ug/L
ICSABF
07/08/92 17:59
   Ag_          av     844.92 ug/L          sd       3.422 %cv    0.40
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21216BA

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07/08/92 18:03
wcal standard   rep   1  Ba_        em       3841.5 conc 50.00
                rep   2  Ba_        em       3995.5 conc 50.00
                rep   3  Ba_        em       4003.9 conc 50.00
wcal standard
07/08/92 18:04
    Ba_         av   3946.95             sd    91.398 %cv   2.32 conc   50.00

07/08/92 18:05
sc blank        rep   1  Ba_        em        196.8
07/08/92 18:07
blank           rep   1  Ba_        ratio    0.0116
                rep   2  Ba_        ratio    0.0040
                rep   3  Ba_        ratio    0.0079
blank
07/08/92 18:08
    Ba_         av    0.0078             sd   0.00381 %cv  48.61

07/08/92 18:10
#1 standard     rep   1  Ba_        ratio    0.7447 conc 50.00
                rep   2  Ba_        ratio    0.7495 conc 50.00
                rep   3  Ba_        ratio    0.7480 conc 50.00
#1 standard
07/08/92 18:10
    Ba_         av    0.7474             sd   0.00245 %cv   0.33 conc   50.00

07/08/92 18:12
#2 standard     rep   1  Ba_        ratio    2.9622 conc 200.00
                rep   2  Ba_        ratio    2.9816 conc 200.00
                rep   3  Ba_        ratio    2.9697 conc 200.00
#2 standard
07/08/92 18:12
    Ba_         av    2.9712             sd   0.00980 %cv   0.33 conc  200.00

07/08/92 18:14
#3 standard     rep   1  Ba_        ratio    7.3399 conc 500.00
                rep   2  Ba_        ratio    7.3281 conc 500.00
                rep   3  Ba_        ratio    7.3172 conc 500.00
#3 standard
07/08/92 18:14
    Ba_         av    7.3284             sd   0.01137 %cv   0.16 conc  500.00

07/08/92 18:16
#4 standard     rep   1  Ba_        ratio   14.3852 conc 1000.00
                rep   2  Ba_        ratio   14.3660 conc 1000.00
                rep   3  Ba_        ratio   14.3196 conc 1000.00
#4 standard
07/08/92 18:17
    Ba_         av   14.3569             sd   0.03371 %cv   0.23 conc  1000.0

07/08/92 18:19
CHECK HS        rep   1  Ba_        conc     999.71 ug/L
                rep   2  Ba_        conc     998.56 ug/L
                rep   3  Ba_        conc     995.75 ug/L
CHECK HS
07/08/92 18:19
    Ba_         av    998.01 ug/L        sd     2.035 %cv   0.20

07/08/92 18:21
ICV             rep   1  Ba_        conc     505.75 ug/L
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                rep   2  Ba_          conc     506.40 ug/L
                rep   3  Ba_          conc     505.30 ug/L
CV
07/08/92 18:21
   Ba_          av     505.81 ug/L          sd      0.554 %cv    0.11

07/08/92 18:23
CB              rep   1  Ba_          conc      -3.63 ug/L
                rep   2  Ba_          conc      -3.74 ug/L
                rep   3  Ba_          conc      -3.74 ug/L
CB
07/08/92 18:23
   Ba_          av      -3.71 ug/L          sd      0.062 %cv    1.69

07/08/92 18:25
ICSAI           rep   1  Ba_          conc      10.96 ug/L
                rep   2  Ba_          conc      10.71 ug/L
                rep   3  Ba_          conc      10.86 ug/L
ICSAI
07/08/92 18:26
   Ba_          av      10.84 ug/L          sd      0.126 %cv    1.17

07/08/92 18:28
ICSABI          rep   1  Ba_          conc     502.03 ug/L
                rep   2  Ba_          conc     502.61 ug/L
                rep   3  Ba_          conc     503.25 ug/L
ICSABI
07/08/92 18:28
   Ba_          av     502.63 ug/L          sd      0.609 %cv    0.12

  8/92 18:30
57.113.1/1F     rep   1  Ba_          conc   59062.55 ug/L
                rep   2  Ba_          conc   58301.61 ug/L
                rep   3  Ba_          conc   58721.69 ug/L
57.113.1/1F
07/08/92 18:30
   Ba_          av   58695.28 ug/L          sd    381.160 %cv    0.65

07/08/92 18:32
57.113.3/1B     rep   1  Ba_          conc     939.72 ug/L
                rep   2  Ba_          conc     977.61 ug/L
                rep   3  Ba_          conc     932.13 ug/L
57.113.3/1B
07/08/92 18:33
   Ba_          av     949.82 ug/L          sd     24.364 %cv    2.57

07/08/92 18:35
57.113.1/1F L   rep   1  Ba_          conc   12159.52 ug/L
                rep   2  Ba_          conc   12043.05 ug/L
                rep   3  Ba_          conc   12117.40 ug/L
57.113.1/1F L
07/08/92 18:35
   Ba_          av   12106.66 ug/L          sd     58.976 %cv    0.49

07/08/92 18:37
  13.3/1B L     rep   1  Ba_          conc     178.61 ug/L
                rep   2  Ba_          conc     179.80 ug/L
                rep   3  Ba_          conc     187.78 ug/L
57.113.3/1B L
07/08/92 18:38
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    Ba_          av     182.06 ug/L          sd      4.986 %cv    2.74

07/08/92 18:40
57.113.5/2F      rep    1   Ba_          conc   72515.16 ug/L
                 rep    2   Ba_          conc   71809.24 ug/L
                 rep    3   Ba_          conc   71302.87 ug/L
57.113.5/2F
07/08/92 18:40
    Ba_          av   71875.76 ug/L          sd    608.880 %cv    0.85

07/08/92 18:42
57.113.7/2B      rep    1   Ba_          conc     168.93 ug/L
                 rep    2   Ba_          conc     214.11 ug/L
                 rep    3   Ba_          conc     166.61 ug/L
57.113.7/2B
07/08/92 18:43
    Ba_          av     183.22 ug/L          sd     26.777 %cv   14.61

07/08/92 18:45
57.113.5/2F D    rep    1   Ba_          conc   71927.06 ug/L
                 rep    2   Ba_          conc   70311.45 ug/L
                 rep    3   Ba_          conc   70502.13 ug/L
57.113.5/2F D
07/08/92 18:45
    Ba_          av   70913.55 ug/L          sd    882.889 %cv    1.25

07/08/92 18:47
57.113.7/2B D    rep    1   Ba_          conc     167.41 ug/L
                 rep    2   Ba_          conc     165.44 ug/L
                 rep    3   Ba_          conc     164.04 ug/L
57.113.7/2B D
07/08/92 18:48
    Ba_          av     165.63 ug/L          sd      1.696 %cv    1.02

07/08/92 18:50
57.113.9/3F      rep    1   Ba_          conc   49523.15 ug/L
                 rep    2   Ba_          conc   48398.14 ug/L
                 rep    3   Ba_          conc   48772.84 ug/L
57.113.9/3F
07/08/92 18:50
    Ba_          av   48898.04 ug/L          sd    572.864 %cv    1.17

07/08/92 18:53
57.113.11/3B     rep    1   Ba_          conc      47.27 ug/L
                 rep    2   Ba_          conc      18.57 ug/L
                 rep    3   Ba_          conc      14.38 ug/L
57.113.11/3B
07/08/92 18:53
    Ba_          av      26.74 ug/L          sd     17.898 %cv   66.93

07/08/92 18:55
CCV1             rep    1   Ba_          conc     518.50 ug/L
                 rep    2   Ba_          conc     508.02 ug/L
                 rep    3   Ba_          conc     505.04 ug/L
CCV1
07/08/92 18:55
    Ba_          av     510.52 ug/L          sd      7.070 %cv    1.38

07/08/92 18:57
CCB1             rep    1   Ba_          conc       0.14 ug/L
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                rep   2  Ba_          conc      -3.40 ug/L
                rep   3  Ba_          conc      -0.60 ug/L
CB1
7/08/92 18:58
   Ba_          av     -1.29 ug/L          sd     1.870 %cv   145.4

7/08/92 19:00
57.113.13/4F    rep   1  Ba_          conc   22887.23 ug/L
                rep   2  Ba_          conc   22220.56 ug/L
                rep   3  Ba_          conc   22097.99 ug/L
7.113.13/4F
07/08/92 19:00
   Ba_          av  22401.93 ug/L          sd   424.732 %cv    1.90

07/08/92 19:02
57.113.15/4B    rep   1  Ba_          conc      21.55 ug/L
                rep   2  Ba_          conc       7.17 ug/L
                rep   3  Ba_          conc      15.10 ug/L
57.113.15/4B
7/08/92 19:03
   Ba_          av      14.61 ug/L          sd     7.203 %cv   49.32

07/08/92 19:05
7.113.17/5F     rep   1  Ba_          conc   29174.37 ug/L
                rep   2  Ba_          conc   29050.99 ug/L
                rep   3  Ba_          conc   29135.98 ug/L
7.113.17/5F
7/08/92 19:05
   Ba_          av  29120.45 ug/L          sd    63.135 %cv    0.22

 8/92 19:08
57.113.19/5B    rep   1  Ba_          conc     111.09 ug/L
                rep   2  Ba_          conc     105.15 ug/L
                rep   3  Ba_          conc     135.39 ug/L
57.113.19/5B
07/08/92 19:08
   Ba_          av     117.21 ug/L          sd    16.019 %cv   13.67

07/08/92 19:10
7.113.21/6F     rep   1  Ba_          conc   25655.78 ug/L
                rep   2  Ba_          conc   25291.33 ug/L
                rep   3  Ba_          conc   25614.03 ug/L
57.113.21/6F
7/08/92 19:11
   Ba_          av  25520.38 ug/L          sd   199.458 %cv    0.78

7/08/92 19:13
7.113.23/6B     rep   1  Ba_          conc      27.17 ug/L
                rep   2  Ba_          conc      26.66 ug/L
                rep   3  Ba_          conc      27.14 ug/L
7.113.23/6B
07/08/92 19:13
   Ba_          av      26.99 ug/L          sd     0.285 %cv    1.06

7/08/92 19:15
 13.25/7F       rep   1  Ba_          conc     319.08 ug/L
                rep   2  Ba_          conc     312.38 ug/L
                rep   3  Ba_          conc     311.15 ug/L
57.113.25/7F
07/08/92 19:16
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    Ba_          av     314.21 ug/L          sd       4.269 %cv    1.36

07/08/92 19:18
57.113.29/7B     rep    1   Ba_          conc        1.34 ug/L
                 rep    2   Ba_          conc        1.63 ug/L
                 rep    3   Ba_          conc        1.31 ug/L
57.113.29/7B
07/08/92 19:18
    Ba_          av       1.43 ug/L          sd       0.172 %cv   12.05

07/08/92 19:21
57.113.32/8F     rep    1   Ba_          conc      257.29 ug/L
                 rep    2   Ba_          conc      252.54 ug/L
                 rep    3   Ba_          conc      246.52 ug/L
57.113.32/8F
07/08/92 19:21
    Ba_          av     252.12 ug/L          sd       5.396 %cv    2.14

07/08/92 19:23
57.113.36/8B     rep    1   Ba_          conc        1.01 ug/L
                 rep    2   Ba_          conc        0.46 ug/L
                 rep    3   Ba_          conc        2.90 ug/L
57.113.36/8B
07/08/92 19:24
    Ba_          av       1.46 ug/L          sd       1.280 %cv   87.93

07/08/92 19:26
CCV2             rep    1   Ba_          conc      501.66 ug/L
                 rep    2   Ba_          conc      501.85 ug/L
                 rep    3   Ba_          conc      500.50 ug/L
CCV2
07/08/92 19:26
    Ba_          av     501.33 ug/L          sd       0.732 %cv    0.15

07/08/92 19:28
CCB2             rep    1   Ba_          conc       -3.71 ug/L
                 rep    2   Ba_          conc       -3.75 ug/L
                 rep    3   Ba_          conc       -3.39 ug/L
CCB2
07/08/92 19:28
    Ba_          av      -3.62 ug/L          sd       0.201 %cv    5.55

07/08/92 19:30
57.113.39/9F     rep    1   Ba_          conc      213.07 ug/L
                 rep    2   Ba_          conc      206.12 ug/L
                 rep    3   Ba_          conc      208.66 ug/L
57.113.39/9F
07/08/92 19:31
    Ba_          av     209.28 ug/L          sd       3.517 %cv    1.68

07/08/92 19:33
57.113.43/9B     rep    1   Ba_          conc       -1.06 ug/L
                 rep    2   Ba_          conc       -0.94 ug/L
                 rep    3   Ba_          conc       -0.78 ug/L
57.113.43/9B
07/08/92 19:33
    Ba_          av      -0.93 ug/L          sd       0.143 %cv   15.40

07/08/92 19:35
57.113.46/10F    rep    1   Ba_          conc      144.17 ug/L
```

	rep	2	Ba_	conc	140.50	ug/L		
	rep	3	Ba_	conc	145.58	ug/L		
57.113.46/10F								
07/08/92 19:36								
Ba_	av	143.41	ug/L	sd	2.625	%cv	1.83	
07/08/92 19:38								
57.113.50/10B	rep	1	Ba_	conc	4.31	ug/L		
	rep	2	Ba_	conc	4.39	ug/L		
	rep	3	Ba_	conc	3.84	ug/L		
57.113.50/10B								
07/08/92 19:38								
Ba_	av	4.18	ug/L	sd	0.298	%cv	7.13	
07/08/92 19:40								
57.113.53/11F	rep	1	Ba_	conc	246.23	ug/L		
	rep	2	Ba_	conc	243.69	ug/L		
	rep	3	Ba_	conc	245.65	ug/L		
57.113.53/11F								
07/08/92 19:41								
Ba_	av	245.19	ug/L	sd	1.331	%cv	0.54	
07/08/92 19:43								
57.113.57/11B	rep	1	Ba_	conc	2.43	ug/L		
	rep	2	Ba_	conc	2.82	ug/L		
	rep	3	Ba_	conc	2.72	ug/L		
57.113.57/11B								
07/08/92 19:43								
Ba_	av	2.66	ug/L	sd	0.203	%cv	7.63	
07/08/92 19:45								
57.113.60/12F	rep	1	Ba_	conc	102.21	ug/L		
	rep	2	Ba_	conc	99.49	ug/L		
	rep	3	Ba_	conc	100.71	ug/L		
57.113.60/12F								
07/08/92 19:46								
Ba_	av	100.80	ug/L	sd	1.365	%cv	1.35	
07/08/92 19:48								
57.113.64/12B	rep	1	Ba_	conc	-0.33	ug/L		
	rep	2	Ba_	conc	0.02	ug/L		
	rep	3	Ba_	conc	-0.27	ug/L		
57.113.64/12B								
07/08/92 19:48								
Ba_	av	-0.19	ug/L	sd	0.187	%cv	95.90	
07/08/92 19:50								
57.113.67/13F	rep	1	Ba_	conc	269.48	ug/L		
	rep	2	Ba_	conc	271.58	ug/L		
	rep	3	Ba_	conc	272.67	ug/L		
57.113.67/13F								
07/08/92 19:50								
Ba_	av	271.25	ug/L	sd	1.620	%cv	0.60	
07/08/92 19:52								
57.113.71/13B	rep	1	Ba_	conc	-2.57	ug/L		
	rep	2	Ba_	conc	-2.29	ug/L		
	rep	3	Ba_	conc	-2.51	ug/L		
57.113.71/13B								
07/08/92 19:53								

Ba_	av	-2.46	ug/L		sd	0.146	%cv	5.92
07/08/92 19:55								
CCV3	rep	1	Ba_	conc	503.44	ug/L		
	rep	2	Ba_	conc	501.53	ug/L		
	rep	3	Ba_	conc	501.07	ug/L		
CCV3								
07/08/92 19:55								
Ba_	av	502.02	ug/L		sd	1.258	%cv	0.25
07/08/92 19:57								
CCB3	rep	1	Ba_	conc	-3.50	ug/L		
	rep	2	Ba_	conc	-3.91	ug/L		
	rep	3	Ba_	conc	-3.64	ug/L		
CCB3								
07/08/92 19:57								
Ba_	av	-3.69	ug/L		sd	0.209	%cv	5.67
07/08/92 19:59								
56.216.27 PE#1	rep	1	Ba_	conc	908.41	ug/L		
	rep	2	Ba_	conc	906.46	ug/L		
	rep	3	Ba_	conc	906.64	ug/L		
56.216.27 PE#1								
07/08/92 20:00								
Ba_	av	907.17	ug/L		sd	1.076	%cv	0.12
07/08/92 20:02								
ICSAF	rep	1	Ba_	conc	16.06	ug/L		
	rep	2	Ba_	conc	12.58	ug/L		
	rep	3	Ba_	conc	11.15	ug/L		
ICSAF								
07/08/92 20:02								
Ba_	av	13.27	ug/L		sd	2.524	%cv	19.03
07/08/92 20:04								
ICSABF	rep	1	Ba_	conc	499.46	ug/L		
	rep	2	Ba_	conc	500.80	ug/L		
	rep	3	Ba_	conc	500.46	ug/L		
ICSABF								
07/08/92 20:04								
Ba_	av	500.24	ug/L		sd	0.698	%cv	0.14

07/08/92 20:08
wcal standard rep 1 Cr_ em 3300.8 conc 40.00
rep 2 Cr_ em 3286.9 conc 40.00
rep 3 Cr_ em 3338.1 conc 40.00
w standard
07/08/92 20:09
Cr_ av 3308.63 sd 26.486 %cv 0.80 conc 40.00

07/08/92 20:11
c blank rep 1 Cr_ em 1395.0
07/08/92 20:13
blank rep 1 Cr_ ratio 0.6500
rep 2 Cr_ ratio 0.6642
rep 3 Cr_ ratio 0.6536
blank
07/08/92 20:13
Cr_ av 0.6560 sd 0.00739 %cv 1.13

07/08/92 20:15
#1 standard rep 1 Cr_ ratio 0.7754 conc 40.00
rep 2 Cr_ ratio 0.7839 conc 40.00
rep 3 Cr_ ratio 0.7562 conc 40.00
#1 standard
07/08/92 20:16
Cr_ av 0.7718 sd 0.01420 %cv 1.84 conc 40.00

07/08/92 20:18
#2 standard rep 1 Cr_ ratio 2.0307 conc 200.00
rep 2 Cr_ ratio 2.0227 conc 200.00
rep 3 Cr_ ratio 1.9958 conc 200.00
tandard
07/08/92 20:19
Cr_ av 2.0164 sd 0.01831 %cv 0.91 conc 200.00

07/08/92 20:21
#3 standard rep 1 Cr_ ratio 3.8679 conc 400.00
rep 2 Cr_ ratio 3.9148 conc 400.00
rep 3 Cr_ ratio 3.9288 conc 400.00
#3 standard
07/08/92 20:21
Cr_ av 3.9038 sd 0.03192 %cv 0.82 conc 400.00

07/08/92 20:23
#4 standard rep 1 Cr_ ratio 7.7471 conc 800.00
rep 2 Cr_ ratio 7.6804 conc 800.00
rep 3 Cr_ ratio 7.6992 conc 800.00
#4 standard
07/08/92 20:24
Cr_ av 7.7089 sd 0.03437 %cv 0.45 conc 800.00

07/08/92 20:26
CHECK HS rep 1 Cr_ conc 808.31 ug/L
rep 2 Cr_ conc 805.97 ug/L
rep 3 Cr_ conc 816.30 ug/L
CHECK HS
8/92 20:26
Cr_ av 810.19 ug/L sd 5.416 %cv 0.67

07/08/92 20:28
ICV rep 1 Cr_ conc 389.73 ug/L

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                rep   2  Cr_          conc     388.94 ug/L
                rep   3  Cr_          conc     387.51 ug/L
ICV
07/08/92 20:29
    Cr_         av     388.73 ug/L          sd      1.125 %cv    0.29

07/08/92 20:31
ICB             rep   1  Cr_          conc      22.07 ug/L
                rep   2  Cr_          conc      19.06 ug/L
                rep   3  Cr_          conc      21.86 ug/L
ICB
07/08/92 20:32
    Cr_         av      21.00 ug/L          sd      1.679 %cv    8.00

07/08/92 20:34
ICSAI           rep   1  Cr_          conc     -34.80 ug/L
                rep   2  Cr_          conc     -39.01 ug/L
                rep   3  Cr_          conc     -37.38 ug/L
ICSAI
07/08/92 20:34
    Cr_         av     -37.06 ug/L          sd      2.126 %cv    5.74

07/08/92 20:36
ICSABI          rep   1  Cr_          conc     391.17 ug/L
                rep   2  Cr_          conc     390.43 ug/L
                rep   3  Cr_          conc     390.95 ug/L
ICSABI
07/08/92 20:37
    Cr_         av     390.85 ug/L          sd      0.380 %cv    0.10

07/08/92 20:39
57.113.1/1F     rep   1  Cr_          conc   18391.76 ug/L
                rep   2  Cr_          conc   21710.74 ug/L
                rep   3  Cr_          conc   20874.12 ug/L
57.113.1/1F
07/08/92 20:40
    Cr_         av   20325.54 ug/L          sd   1726.158 %cv    8.49

07/08/92 20:42
57.113.3/1B     rep   1  Cr_          conc     400.20 ug/L
                rep   2  Cr_          conc     399.01 ug/L
                rep   3  Cr_          conc     395.71 ug/L
57.113.3/1B
07/08/92 20:42
    Cr_         av     398.31 ug/L          sd      2.324 %cv    0.58

07/08/92 20:45
57.113.1/1F L   rep   1  Cr_          conc    4041.19 ug/L
                rep   2  Cr_          conc    3969.64 ug/L
                rep   3  Cr_          conc    4014.99 ug/L
57.113.1/1F L
07/08/92 20:45
    Cr_         av    4008.61 ug/L          sd     36.198 %cv    0.90

07/08/92 20:47
57.113.3/1B L   rep   1  Cr_          conc      37.78 ug/L
                rep   2  Cr_          conc      42.92 ug/L
                rep   3  Cr_          conc      38.46 ug/L
57.113.3/1B L
07/08/92 20:48
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   Cr_          av     39.72 ug/L          sd      2.791 %cv    7.03

07/08/92 20:50
57.113.5/2F     rep   1  Cr_          conc  22690.49 ug/L
                rep   2  Cr_          conc  24377.52 ug/L
                rep   3  Cr_          conc  25351.26 ug/L
57.113.5/2F
07/08/92 20:51
   Cr_          av  24139.75 ug/L          sd   1346.225 %cv    5.58

07/08/92 20:53
57.113.7/2B     rep   1  Cr_          conc     45.11 ug/L
                rep   2  Cr_          conc     41.30 ug/L
                rep   3  Cr_          conc     38.36 ug/L
57.113.7/2B
07/08/92 20:54
   Cr_          av     41.59 ug/L          sd      3.386 %cv    8.14

07/08/92 20:56
57.113.5/2F D   rep   1  Cr_          conc  23518.48 ug/L
                rep   2  Cr_          conc  24748.08 ug/L
                rep   3  Cr_          conc  41192.07 ug/L
57.113.5/2F D
07/08/92 20:56
   Cr_          av  29819.54 ug/L          sd   9868.068 %cv   33.09

07/08/92 20:59
57.113.7/2B D   rep   1  Cr_          conc     40.18 ug/L
                rep   2  Cr_          conc     34.79 ug/L
                rep   3  Cr_          conc     35.72 ug/L
13.7/2B D
07/08/92 20:59
   Cr_          av     36.89 ug/L          sd      2.882 %cv    7.81

07/08/92 21:02
57.113.9/3F     rep   1  Cr_          conc  20140.51 ug/L
                rep   2  Cr_          conc  20726.60 ug/L
                rep   3  Cr_          conc  29349.58 ug/L
57.113.9/3F
07/08/92 21:02
   Cr_          av  23405.56 ug/L          sd   5156.004 %cv   22.03

07/08/92 21:04
57.113.11/3B    rep   1  Cr_          conc    -17.09 ug/L
                rep   2  Cr_          conc    -13.92 ug/L
                rep   3  Cr_          conc    -14.27 ug/L
57.113.11/3B
07/08/92 21:05
   Cr_          av    -15.09 ug/L          sd      1.736 %cv   11.51

07/08/92 21:07
CCV1            rep   1  Cr_          conc    390.73 ug/L
                rep   2  Cr_          conc    395.75 ug/L
                rep   3  Cr_          conc    399.63 ug/L
CCV1
08/92 21:08
   Cr_          av    395.37 ug/L          sd      4.462 %cv    1.13

07/08/92 21:10
CCB1            rep   1  Cr_          conc     23.58 ug/L
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                rep   2  Cr_          conc      25.79 ug/L
                rep   3  Cr_          conc      23.43 ug/L
CCB1
07/08/92 21:10
    Cr_         av     24.27 ug/L          sd      1.320 %cv    5.44

07/08/92 21:13
57.113.13/4F    rep   1  Cr_          conc   13108.30 ug/L
                rep   2  Cr_          conc   12304.33 ug/L
                rep   3  Cr_          conc   12780.04 ug/L
57.113.13/4F
07/08/92 21:13
    Cr_         av  12730.89 ug/L          sd    404.231 %cv    3.18

07/08/92 21:16
57.113.15/4B    rep   1  Cr_          conc      23.19 ug/L
                rep   2  Cr_          conc      25.22 ug/L
                rep   3  Cr_          conc      25.47 ug/L
57.113.15/4B
07/08/92 21:16
    Cr_         av     24.63 ug/L          sd      1.251 %cv    5.08

07/08/92 21:18
57.113.17/5F    rep   1  Cr_          conc   21400.87 ug/L
                rep   2  Cr_          conc   21368.37 ug/L
                rep   3  Cr_          conc   20747.60 ug/L
57.113.17/5F
07/08/92 21:19
    Cr_         av  21172.28 ug/L          sd    368.141 %cv    1.74

07/08/92 21:21
57.113.19/5B    rep   1  Cr_          conc     300.57 ug/L
                rep   2  Cr_          conc     302.55 ug/L
                rep   3  Cr_          conc     289.62 ug/L
57.113.19/5B
07/08/92 21:22
    Cr_         av    297.58 ug/L          sd      6.964 %cv    2.34

07/08/92 21:24
57.113.21/6F    rep   1  Cr_          conc   16486.19 ug/L
                rep   2  Cr_          conc   16722.58 ug/L
                rep   3  Cr_          conc   16508.15 ug/L
57.113.21/6F
07/08/92 21:25
    Cr_         av  16572.30 ug/L          sd    130.605 %cv    0.79

07/08/92 21:27
57.113.23/6B    rep   1  Cr_          conc    3710.36 ug/L
                rep   2  Cr_          conc    3710.95 ug/L
                rep   3  Cr_          conc    3687.63 ug/L
57.113.23/6B
07/08/92 21:28
    Cr_         av   3702.98 ug/L          sd     13.297 %cv    0.36

07/08/92 21:30
57.113.25/7F    rep   1  Cr_          conc     205.65 ug/L
                rep   2  Cr_          conc     195.56 ug/L
                rep   3  Cr_          conc     209.39 ug/L
57.113.25/7F
07/08/92 21:31
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   Cr_          av     203.53 ug/L          sd       7.152 %cv    3.51

7/08/92 21:33
7.113.29/7B     rep    1  Cr_          conc      -24.88 ug/L
                rep    2  Cr_          conc      -26.39 ug/L
                rep    3  Cr_          conc      -23.49 ug/L
7.113.29/7B
07/08/92 21:34
   Cr_          av     -24.92 ug/L          sd       1.448 %cv    5.81

7/08/92 21:36
57.113.32/8F    rep    1  Cr_          conc      226.97 ug/L
                rep    2  Cr_          conc      221.41 ug/L
                rep    3  Cr_          conc      244.72 ug/L
57.113.32/8F
07/08/92 21:37
   Cr_          av     231.03 ug/L          sd      12.173 %cv    5.27

07/08/92 21:39
7.113.36/8B     rep    1  Cr_          conc      -24.49 ug/L
                rep    2  Cr_          conc      -25.59 ug/L
                rep    3  Cr_          conc      -25.73 ug/L
7.113.36/8B
7/08/92 21:40
   Cr_          av     -25.27 ug/L          sd       0.678 %cv    2.68

7/08/92 21:42
CCV2            rep    1  Cr_          conc      408.41 ug/L
                rep    2  Cr_          conc      407.80 ug/L
                rep    3  Cr_          conc      404.57 ug/L

07/08/92 21:42
   Cr_          av     406.93 ug/L          sd       2.059 %cv    0.51

07/08/92 21:44
CCB2            rep    1  Cr_          conc       27.50 ug/L
                rep    2  Cr_          conc       27.91 ug/L
                rep    3  Cr_          conc       24.98 ug/L
CCB2
7/08/92 21:45
   Cr_          av      26.79 ug/L          sd       1.585 %cv    5.91

07/08/92 21:47
7.113.39/9F     rep    1  Cr_          conc      224.63 ug/L
                rep    2  Cr_          conc      232.90 ug/L
                rep    3  Cr_          conc      217.52 ug/L
7.113.39/9F
07/08/92 21:48
   Cr_          av     225.02 ug/L          sd       7.701 %cv    3.42

7/08/92 21:50
57.113.43/9B    rep    1  Cr_          conc      -24.67 ug/L
                rep    2  Cr_          conc      -21.65 ug/L
                rep    3  Cr_          conc      -24.44 ug/L
57.113.43/9B
 8/92 21:51
   Cr_          av     -23.59 ug/L          sd       1.683 %cv    7.14

07/08/92 21:53
7.113.46/10F    rep    1  Cr_          conc      192.42 ug/L
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                rep   2  Cr_          conc     191.80 ug/L
                rep   3  Cr_          conc     220.82 ug/L
57.113.46/10F
07/08/92 21:53
    Cr_         av     201.68 ug/L          sd     16.580 %cv    8.22

07/08/92 21:56
57.113.50/10B   rep   1  Cr_          conc      18.13 ug/L
                rep   2  Cr_          conc      18.39 ug/L
                rep   3  Cr_          conc      21.80 ug/L
57.113.50/10B
07/08/92 21:56
    Cr_         av      19.44 ug/L          sd      2.050 %cv   10.55

07/08/92 21:58
57.113.53/11F   rep   1  Cr_          conc     286.47 ug/L
                rep   2  Cr_          conc     261.02 ug/L
                rep   3  Cr_          conc     278.94 ug/L
57.113.53/11F
07/08/92 21:59
    Cr_         av     275.48 ug/L          sd     13.070 %cv    4.74

07/08/92 22:01
57.113.57/11B   rep   1  Cr_          conc      -9.18 ug/L
                rep   2  Cr_          conc     -14.33 ug/L
                rep   3  Cr_          conc     -11.27 ug/L
57.113.57/11B
07/08/92 22:02
    Cr_         av     -11.59 ug/L          sd      2.588 %cv   22.32

07/08/92 22:04
57.113.60/12F   rep   1  Cr_          conc     154.37 ug/L
                rep   2  Cr_          conc     150.36 ug/L
                rep   3  Cr_          conc     134.68 ug/L
57.113.60/12F
07/08/92 22:04
    Cr_         av     146.47 ug/L          sd     10.404 %cv    7.10

07/08/92 22:07
57.113.64/12B   rep   1  Cr_          conc     -23.19 ug/L
                rep   2  Cr_          conc     -20.44 ug/L
                rep   3  Cr_          conc     -22.40 ug/L
57.113.64/12B
07/08/92 22:07
    Cr_         av     -22.01 ug/L          sd      1.417 %cv    6.44

07/08/92 22:09
57.113.67/13F   rep   1  Cr_          conc     345.62 ug/L
                rep   2  Cr_          conc     337.78 ug/L
                rep   3  Cr_          conc     352.65 ug/L
57.113.67/13F
07/08/92 22:10
    Cr_         av     345.35 ug/L          sd      7.435 %cv    2.15

07/08/92 22:12
57.113.71/13B   rep   1  Cr_          conc     -24.70 ug/L
                rep   2  Cr_          conc     -22.82 ug/L
                rep   3  Cr_          conc     -25.03 ug/L
57.113.71/13B
07/08/92 22:13
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   Cr_          av     -24.18 ug/L          sd       1.192 %cv    4.93

/08/92 22:15
V3              rep    1  Cr_          conc      408.60 ug/L
                rep    2  Cr_          conc      394.12 ug/L
                rep    3  Cr_          conc      402.21 ug/L
V3
/08/92 22:15
   Cr_          av     401.64 ug/L          sd       7.257 %cv    1.81

/08/92 22:17
CCB3            rep    1  Cr_          conc       22.99 ug/L
                rep    2  Cr_          conc       24.47 ug/L
                rep    3  Cr_          conc       22.66 ug/L
CCB3
/08/92 22:18
   Cr_          av      23.37 ug/L          sd       0.967 %cv    4.14

07/08/92 22:20
.216.27 PE#1    rep    1  Cr_          conc      177.64 ug/L
                rep    2  Cr_          conc      177.30 ug/L
                rep    3  Cr_          conc      180.19 ug/L
.216.27 PE#1
/08/92 22:21
   Cr_          av     178.38 ug/L          sd       1.579 %cv    0.89

/08/92 22:23
CSAF            rep    1  Cr_          conc      -36.42 ug/L
                rep    2  Cr_          conc      -38.00 ug/L
                rep    3  Cr_          conc      -37.31 ug/L

07/08/92 22:23
   Cr_          av     -37.24 ug/L          sd       0.793 %cv    2.13

07/08/92 22:25
ICSABF          rep    1  Cr_          conc      437.20 ug/L
                rep    2  Cr_          conc      432.28 ug/L
                rep    3  Cr_          conc      426.76 ug/L
ICSABF
/08/92 22:26
   Cr_          av     432.08 ug/L          sd       5.226 %cv    1.21
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21216 HS

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07/08/92 14:02
wcal standard   rep   1  As_        em        571.2 conc 250.00
                rep   2  As_        em        535.7 conc 250.00
                rep   3  As_        em        537.1 conc 250.00
wcal standard
07/08/92 14:03
    As_         av    547.98              sd    20.122 %cv   3.67 conc  250.00

07/08/92 14:04
sc blank        rep   1  As_        em        594.3
07/08/92 14:05
blank           rep   1  As_        ratio   0.0152
                rep   2  As_        ratio   0.0158
                rep   3  As_        ratio   0.0162
blank
07/08/92 14:06
    As_         av    0.0157              sd   0.00047 %cv   2.97

07/08/92 14:07
#1 standard     rep   1  As_        ratio   0.0729 conc 250.00
                rep   2  As_        ratio   0.0730 conc 250.00
                rep   3  As_        ratio   0.0768 conc 250.00
#1 standard
07/08/92 14:07
    As_         av    0.0742              sd   0.00222 %cv   2.99 conc  250.00

07/08/92 14:08
#2 standard     rep   1  As_        ratio   0.3140 conc 1000.00
                rep   2  As_        ratio   0.3056 conc 1000.00
                rep   3  As_        ratio   0.3108 conc 1000.00
#2 standard
07/08/92 14:09
    As_         av    0.3102              sd   0.00424 %cv   1.37 conc  1000.0

07/08/92 14:10
#3 standard     rep   1  As_        ratio   0.7631 conc 2500.00
                rep   2  As_        ratio   0.7694 conc 2500.00
                rep   3  As_        ratio   0.7552 conc 2500.00
#3 standard
07/08/92 14:11
    As_         av    0.7626              sd   0.00711 %cv   0.93 conc  2500.0

07/08/92 14:11
#4 standard     rep   1  As_        ratio   1.4625 conc 5000.00
                rep   2  As_        ratio   1.4976 conc 5000.00
                rep   3  As_        ratio   1.4770 conc 5000.00
#4 standard
07/08/92 14:12
    As_         av    1.4790              sd   0.01765 %cv   1.19 conc  5000.0

07/08/92 14:13
CHECK HS        rep   1  As_        conc   4972.88 ug/L
                rep   2  As_        conc   5138.08 ug/L
                rep   3  As_        conc   5061.96 ug/L
CHECK HS
07/08/92 14:14
    As_         av   5057.64 ug/L         sd    82.688 %cv   1.63

07/08/92 14:15
ICV             rep   1  As_        conc   2779.83 ug/L
```

```
                rep   2  As_          conc    2681.04 ug/L
                rep   3  As_          conc    2682.04 ug/L
ICV
07/08/92 14:15
   As_          av   2714.30 ug/L          sd     56.750 %cv    2.09

07/08/92 14:16
ICB             rep   1  As_          conc      32.61 ug/L
                rep   2  As_          conc       4.61 ug/L
                rep   3  As_          conc      -3.63 ug/L
ICB
07/08/92 14:17
   As_          av     11.20 ug/L          sd     18.994 %cv  169.6

07/08/92 14:18
ICSAI           rep   1  As_          conc     -13.04 ug/L
                rep   2  As_          conc      48.10 ug/L
                rep   3  As_          conc      -4.00 ug/L          window edge
ICSAI
07/08/92 14:19
   As_          av     10.35 ug/L          sd     33.001 %cv  318.7

07/08/92 14:20
ICSABI          rep   1  As_          conc    1519.65 ug/L
                rep   2  As_          conc    1527.38 ug/L
                rep   3  As_          conc    1511.70 ug/L
ICSABI
07/08/92 14:20
   As_          av   1519.58 ug/L          sd      7.839 %cv   0.52

   8/92 14:23
57.113.1/1F     rep   1  As_          conc   55047.81 ug/L
                rep   2  As_          conc   54519.30 ug/L
                rep   3  As_          conc   53949.75 ug/L
57.113.1/1F
07/08/92 14:24
   As_          av  54505.62 ug/L ✓        sd    549.159 %cv   1.01

07/08/92 14:25
ICSABI          rep   1  As_          conc    1484.90 ug/L
                rep   2  As_          conc    1027.28 ug/L
                rep   3  As_          conc     903.29 ug/L
ICSABI
07/08/92 14:26
   As_          av   1138.49 ug/L          sd    306.339 %cv  26.91

07/08/92 14:27
57.113.3/1B     rep   1  As_          conc    1349.32 ug/L
                rep   2  As_          conc    1351.24 ug/L
                rep   3  As_          conc    1340.99 ug/L
57.113.3/1B
07/08/92 14:28
   As_          av   1347.18 ug/L ✓        sd      5.453 %cv   0.40

07/08/92 14:29
   13.1/1F L    rep   1  As_          conc    9427.71 ug/L
                rep   2  As_          conc    9575.51 ug/L
                rep   3  As_          conc    9830.09 ug/L
57.113.1/1F L
07/08/92 14:30
```

n 1160

	As_	av	9611.10	ug/L		sd	203.538	%cv 2.12
07/08/92 14:30								
57.113.3/1B L	rep	1	As_		conc	230.76	ug/L	
	rep	2	As_		conc	303.37	ug/L	
	rep	3	As_		conc	258.33	ug/L	
57.113.3/1B L								
07/08/92 14:31								
	As_	av	264.16	ug/L		sd	36.650	%cv 13.87
07/08/92 14:32								
57.113.5/2F	rep	1	As_		conc	77529.17	ug/L	
	rep	2	As_		conc	78920.33	ug/L	
	rep	3	As_		conc	78426.69	ug/L	
57.113.5/2F								
07/08/92 14:33								
	As_	av	78292.06	ug/L		sd	705.279	%cv 0.90
07/08/92 14:34								
57.113.7/2B	rep	1	As_		conc	342.55	ug/L	
	rep	2	As_		conc	310.74	ug/L	
	rep	3	As_		conc	301.83	ug/L	
57.113.7/2B								
07/08/92 14:34								
	As_	av	318.38	ug/L		sd	21.403	%cv 6.72
07/08/92 14:35								
57.113.5/2F D	rep	1	As_		conc	69060.50	ug/L	
	rep	2	As_		conc	72510.55	ug/L	
	rep	3	As_		conc	72792.53	ug/L	
57.113.5/2F D								
07/08/92 14:36								
	As_	av	71454.53	ug/L		sd	2078.078	%cv 2.91
07/08/92 14:37								
57.113.7/2B D	rep	1	As_		conc	306.79	ug/L	
	rep	2	As_		conc	321.36	ug/L	
	rep	3	As_		conc	340.05	ug/L	
57.113.7/2B D								
07/08/92 14:38								
	As_	av	322.73	ug/L		sd	16.673	%cv 5.17
07/08/92 14:39								
57.113.9/3F	rep	1	As_		conc	38076.47	ug/L	
	rep	2	As_		conc	39609.75	ug/L	
	rep	3	As_		conc	42489.31	ug/L	
57.113.9/3F								
07/08/92 14:39								
	As_	av	40058.51	ug/L		sd	2240.382	%cv 5.59
07/08/92 14:40								
57.113.11/3B	rep	1	As_		conc	124.21	ug/L	
	rep	2	As_		conc	78.48	ug/L	
	rep	3	As_		conc	67.82	ug/L	
57.113.11/3B								
07/08/92 14:41								
	As_	av	90.17	ug/L		sd	29.955	%cv 33.22
07/08/92 14:42								
CCV1	rep	1	As_		conc	2662.77	ug/L	

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                rep   2  As_          conc    2667.04 ug/L
                rep   3  As_          conc    2662.80 ug/L
CCV1
07/08/92 14:43
   As_          av   2664.20 ug/L          sd      2.454 %cv    0.09

07/08/92 14:44
CB1             rep   1  As_          conc     -18.72 ug/L
                rep   2  As_          conc      30.54 ug/L
                rep   3  As_          conc      66.10 ug/L
CB1
07/08/92 14:45
   As_          av    25.97 ug/L          sd     42.593 %cv  163.9

07/08/92 14:46
57.113.13/4F    rep   1  As_          conc   41088.02 ug/L
                rep   2  As_          conc   42897.77 ug/L
                rep   3  As_          conc   41910.24 ug/L
57.113.13/4F
07/08/92 14:46
   As_          av  41965.34 ug/L          sd    906.137 %cv   2.16

07/08/92 14:47
57.113.15/4B    rep   1  As_          conc      71.60 ug/L
                rep   2  As_          conc      36.17 ug/L
                rep   3  As_          conc      48.14 ug/L
57.113.15/4B
07/08/92 14:48
   As_          av     51.97 ug/L          sd     18.022 %cv  34.68

07/08/92 14:49
57.113.17/5F    rep   1  As_          conc   77768.22 ug/L
                rep   2  As_          conc   78598.38 ug/L
                rep   3  As_          conc   77162.20 ug/L
57.113.17/5F
07/08/92 14:50
   As_          av  77842.93 ug/L          sd    721.001 %cv   0.93

07/08/92 14:50
57.113.19/5B    rep   1  As_          conc    1932.53 ug/L
                rep   2  As_          conc    1982.98 ug/L
                rep   3  As_          conc    1919.25 ug/L
57.113.19/5B
07/08/92 14:51
   As_          av   1944.92 ug/L          sd     33.622 %cv   1.73

07/08/92 14:52
57.113.21/6F    rep   1  As_          conc   85087.82 ug/L
                rep   2  As_          conc   84061.72 ug/L
                rep   3  As_          conc   84735.93 ug/L
57.113.21/6F
07/08/92 14:53
   As_          av  84628.49 ug/L          sd    521.419 %cv   0.62

07/08/92 14:54
57.113.23/6B    rep   1  As_          conc     162.27 ug/L
                rep   2  As_          conc     356.34 ug/L
                rep   3  As_          conc     229.01 ug/L
57.113.23/6B
07/08/92 14:54
```

```
07/08/92 15:08
57.113.23/6B    rep   1  As_        conc      97.36 ug/L
                rep   2  As_        conc      95.58 ug/L
                rep   3  As_        conc     111.92 ug/L
57.113.23/6B
07/08/92 15:09
    As_         av    101.62 ug/L        sd      8.964 %cv    8.82

07/08/92 15:11
CCV2            rep   1  As_        conc    2698.98 ug/L
                rep   2  As_        conc    2653.38 ug/L
                rep   3  As_        conc    2765.04 ug/L
CCV2
07/08/92 15:11
    As_         av   2705.80 ug/L        sd     56.140 %cv    2.07

07/08/92 15:13
CCB2            rep   1  As_        conc      36.24 ug/L
                rep   2  As_        conc      28.50 ug/L
                rep   3  As_        conc      -6.55 ug/L          window edge
CCB2
07/08/92 15:14
    As_         av     19.40 ug/L        sd     22.806 %cv  117.5

07/08/92 15:15
ICSAF           rep   1  As_        conc      60.21 ug/L
                rep   2  As_        conc      41.98 ug/L
                rep   3  As_        conc      40.80 ug/L
ICSAF
07/08/92 15:16
    As_         av     47.66 ug/L        sd     10.880 %cv  22.83

07/08/92 15:18
ICSABF          rep   1  As_        conc     891.74 ug/L
                rep   2  As_        conc     932.09 ug/L
                rep   3  As_        conc     899.51 ug/L
ICSABF
07/08/92 15:19
    As_         av    907.78 ug/L        sd     21.408 %cv    2.36
```

AS MSA's

Element File: AS_MSA_L.GEL Element: As Wavelength: 193.7
Date: 07/03/92 Time: 18:07 Slit: 0.70 L
Data File: 070392.DAT ID/Wt File: 070392.IDW Lamp Current: 0
Technique: HGA Calib. Type: Method of Add. Energy: 62

Blank ID: Blank Seq. No.: 00030 A/S Pos.: 0 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 0
Replicate 1 Time: 18:10
Peak Area (A-s): 0.011 Peak Height (A): 0.012
Background Pk Area (A-s): 0.398 Background Pk Height (A): 0.596
Blank Corrected Pk Area (A-s): 0.011

Auto-zero performed.

As ID: 57.113..35/7F Seq. No.: 00031 A/S Pos.: 11 Date: 07/03/92

uL dispensed: 10 from 0, 5 from 39, 10 from 11
Replicate 1 Time: 18:14
Peak Area (A-s): 0.049 Peak Height (A): 0.057
Background Pk Area (A-s): 0.535 Background Pk Height (A): 0.865
Blank Corrected Pk Area (A-s): 0.038

As ID: Standard 1 Seq. No.: 00032 A/S Pos.: 1. Date: 07/03/92

uL dispensed: 5 from 39, 10 from 1, 10 from 11
Replicate 1 Time: 18:18
Peak Area (A-s): 0.086 Peak Height (A): 0.096
Background Pk Area (A-s): 0.441 Background Pk Height (A): 0.706
Blank Corrected Pk Area (A-s): 0.075

As ID: Standard 2 Seq. No.: 00033 A/S Pos.: 11 Date: 07/03/92

uL dispensed: 5 from 39, 10 ,from 2, 10 from 11
Replicate 1 Time: 18:22
Peak Area (A-s): 0.102 Peak Height (A): 0.128
Background Pk Area (A-s): 0.502 Background Pk Height (A): 0.813
Blank Corrected Pk Area (A-s): 0.091

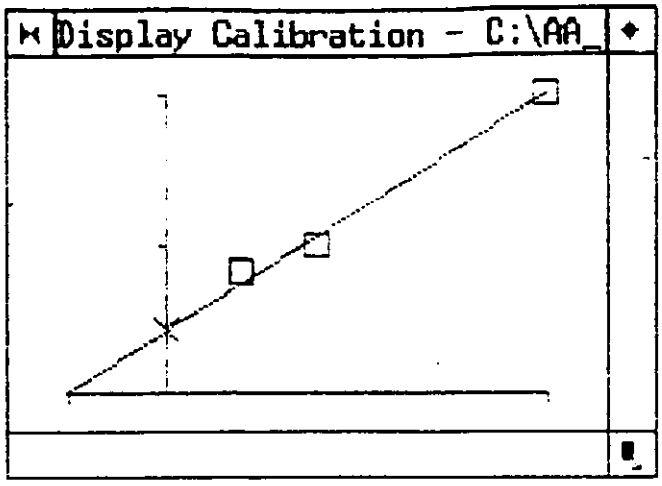
As ID: Standard 3 Seq. No.: 00034 A/S Pos.: 11 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 3, 10 from 11
Replicate 1 Time: 18:25
Peak Area (A-s): 0.198 Peak Height (A): 0.238
Background Pk Area (A-s): 0.488 Background Pk Height (A): 0.793
Blank Corrected Pk Area (A-s): 0.187

The standard additions calibration curve may not be linear.
As ID: 57.113..25/7F Seq. No.: 00031 A/S Pos.: 11 Date: 07/03/92

Concentration (ug/L): 25.8

Correlation coefficient: 0.99379 Slope: 0.0018



As ID: 57.3113.32/8F Seq. No.: 00035 A/S Pos.: 12 Date: 07/03/92

uL dispensed: 10 from 0, 5 from 39, 10 from 12
Replicate 1 Time: 18:30
Peak Area (A-s): 0.075 Peak Height (A): 0.085
Background Pk Area (A-s): 0.524 Background Pk Height (A): 0.853
Blank Corrected Pk Area (A-s): 0.062

As ID: Standard 1 Seq. No.: 00036 A/S Pos.: 12 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 1, 10 from 12
Replicate 1 Time: 18:33
Peak Area (A-s): 0.096 Peak Height (A): 0.115
Background Pk Area (A-s): 0.461 Background Pk Height (A): 0.766
Blank Corrected Pk Area (A-s): 0.085

As ID: Standard 2 Seq. No.: 00037 A/S Pos.: 12 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 2, 10 from 12
Replicate 1 Time: 18:37
Peak Area (A-s): 0.127 Peak Height (A): 0.150
Background Pk Area (A-s): 0.396 Background Pk Height (A): 0.649
Blank Corrected Pk Area (A-s): 0.116

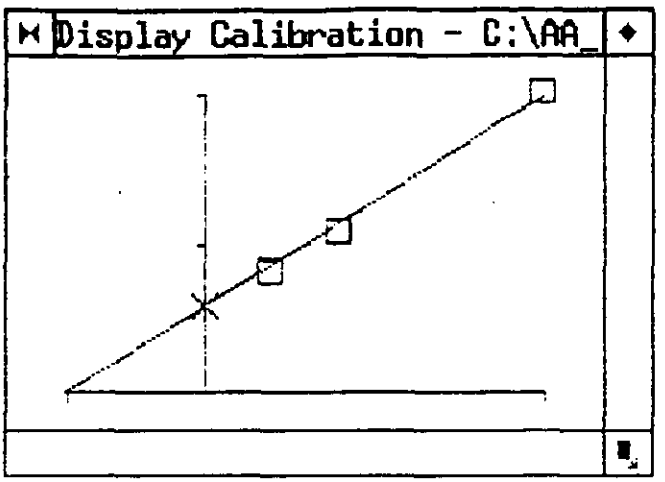
As ID: Standard 3 Seq. No.: 00038 A/S Pos.: 12 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 3, 10 from 12
Replicate 1 Time: 18:41
Peak Area (A-s): 0.225 Peak Height (A): 0.250
Background Pk Area (A-s): 0.374 Background Pk Height (A): 0.614
Blank Corrected Pk Area (A-s): 0.213

The standard additions calibration curve may not be linear.
As ID: 57.3113.32/8F Seq. No.: 00035 A/S Pos.: 12 Date: 07/03/92

Concentration (ug/L): 41.4

Correlation coefficient: 0.99527 Slope: 0.0015



57.113.39

As ID: ~~EMPTY~~ 9F Seq. No.: 00039 A/S Pos.: 13 Date: 07/03/92

uL dispensed: 10 from 0, 5 from 39, 10 from 13
Replicate 1 Time: 18:45
Peak Area (A-s): 0.122 Peak Height (A): 0.139
Background Pk Area (A-s): 0.485 Background Pk Height (A): 0.773
Blank Corrected Pk Area (A-s): 0.111

As ID: Standard 1 Seq. No.: 00040 A/S Pos.: 13 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 1, 10 from 13
Replicate 1 Time: 18:49
Peak Area (A-s): 0.137 Peak Height (A): 0.186
Background Pk Area (A-s): 0.394 Background Pk Height (A): 0.638
Blank Corrected Pk Area (A-s): 0.146

As ID: Standard 2 Seq. No.: 00041 A/S Pos.: 13 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 2, 10 from 13
Replicate 1 Time: 18:53
Peak Area (A-s): 0.196 Peak Height (A): 0.215
Background Pk Area (A-s): 0.370 Background Pk Height (A): 0.610
Blank Corrected Pk Area (A-s): 0.184

As ID: Standard 3 Seq. No.: 00042 A/S Pos.: 13 Date: 07/03/92

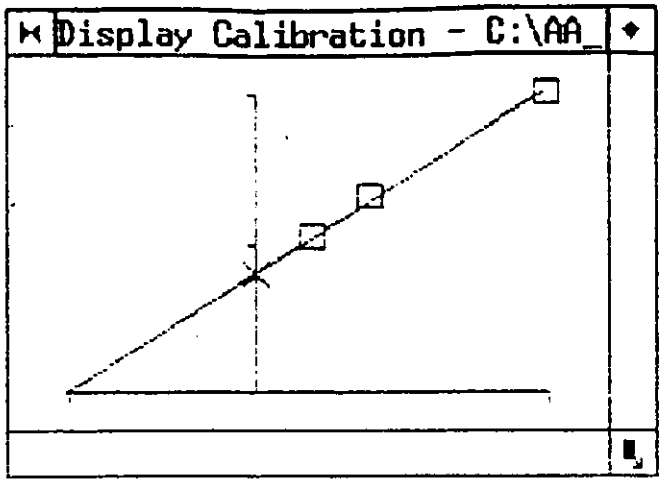
uL dispensed: 5 from 39, 10 from 3, 10 from 13
Replicate 1 Time: 18:57
Peak Area (A-s): 0.291 Peak Height (A): 0.313
Background Pk Area (A-s): 0.354 Background Pk Height (A): 0.583
Blank Corrected Pk Area (A-s): 0.280

As ID: ~~EMPTY~~ 9F Seq. No.: 00039 A/S Pos.: 13 Date: 07/03/92

57.113.39

Concentration (ug/L): 65.0

Correlation coefficient: 0.99847 Slope: 0.0017



9F

As ID: 57.113.39/9F Seq. No.: 00043 A/S Pos.: 14 Date: 07/03/92

uL dispensed: 10 from 0, 5 from 39, 10 from 14
Replicate 1 Time: 19:01
Peak Area (A-s): 0.140 Peak Height (A): 0.143
Background Pk Area (A-s): 0.395 Background Pk Height (A): 0.622
Blank Corrected Pk Area (A-s): 0.129

As ID: Standard 1 Seq. No.: 00044 A/S Pos.: 14 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 1, 10 from 14
Replicate 1 Time: 19:05
Peak Area (A-s): 0.169 Peak Height (A): 0.173
Background Pk Area (A-s): 0.351 Background Pk Height (A): 0.588
Blank Corrected Pk Area (A-s): 0.158

As ID: Standard 2 Seq. No.: 00045 A/S Pos.: 14 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 2, 10 from 14
Replicate 1 Time: 19:09
Peak Area (A-s): 0.182 Peak Height (A): 0.198
Background Pk Area (A-s): 0.411 Background Pk Height (A): 0.713
Blank Corrected Pk Area (A-s): 0.171

As ID: Standard 3 Seq. No.: 00046 A/S Pos.: 14 Date: 07/03/92

uL dispensed: 5 from 39, 10 from 3, 10 from 14
Replicate 1 Time: 19:13
Peak Area (A-s): 0.310 Peak Height (A): 0.320
Background Pk Area (A-s): 0.370 Background Pk Height (A): 0.605
Blank Corrected Pk Area (A-s): 0.298

As ID: 57.113.39/9F Seq. No.: 00043 A/S Pos.: 14 Date: 07/03/92

Concentration (ug/L): 78.9

Correlation coefficient: 0.96779 Slope: 0.0016

Element File: AS_MSA_L.GEL Element: As Wavelength: 193.7
Date: 07/04/92 Time: 20:40 Slit: 0.70 L
Data File: 070492.DAT ID/Wt File: 070392.IDW Lamp Current: 0
Technique: HGA Calib. Type: Method of Add. Energy: 62

As ID: Blank Seq. No.: 00096 A/S Pos.: 0 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 0
Replicate 1 Time: 20:43
Peak Area (A-s): 0.020 Peak Height (A): 0.025
Background Pk Area (A-s): 0.242 Background Pk Height (A): 0.334
Blank Corrected Pk Area (A-s): 0.009

Auto-zero performed.

As ID: 57.113.46/10F Seq. No.: 00097 A/S Pos.: 15 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 15
Replicate 1 Time: 20:47
Peak Area (A-s): 0.041 Peak Height (A): 0.035
Background Pk Area (A-s): 0.396 Background Pk Height (A): 0.595
Blank Corrected Pk Area (A-s): 0.021

As ID: Standard 1 Seq. No.: 00098 A/S Pos.: 15 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 1, 10 from 15
Replicate 1 Time: 20:51
Peak Area (A-s): 0.073 Peak Height (A): 0.065
Background Pk Area (A-s): 0.365 Background Pk Height (A): 0.565
Blank Corrected Pk Area (A-s): 0.054

As ID: Standard 2 Seq. No.: 00099 A/S Pos.: 15 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 2, 10 from 15
Replicate 1 Time: 20:54
Peak Area (A-s): 0.108 Peak Height (A): 0.097
Background Pk Area (A-s): 0.360 Background Pk Height (A): 0.556
Blank Corrected Pk Area (A-s): 0.089

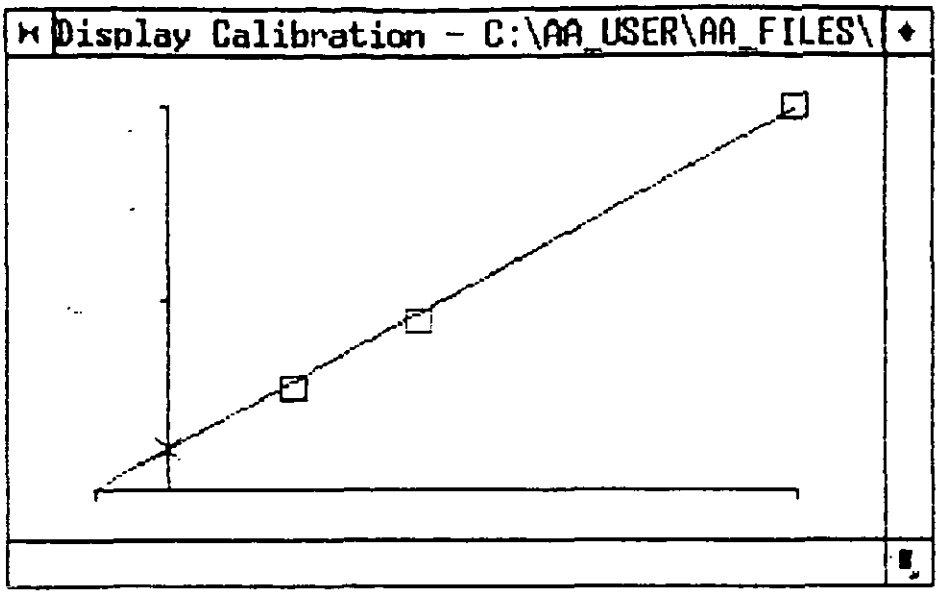
As ID: Standard 3 Seq. No.: 00100 A/S Pos.: 15 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 3, 10 from 15
Replicate 1 Time: 20:58
Peak Area (A-s): 0.222 Peak Height (A): 0.199
Background Pk Area (A-s): 0.349 Background Pk Height (A): 0.553
Blank Corrected Pk Area (A-s): 0.202

As ID: 57.113.46/10F Seq. No.: 00097 A/S Pos.: 15 Date: 07/04/92

Concentration (ug/L): 11.8

Correlation coefficient: 0.99859 Slope: 0.0018



As ID: 57.113.53/11F Seq. No.: 00101 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 16
Replicate 1 Time: 21:03
Peak Area (A-s): 0.076 Peak Height (A): 0.062
Background Pk Area (A-s): 0.356 Background Pk Height (A): 0.585
Blank Corrected Pk Area (A-s): 0.057

As ID: Standard 1 Seq. No.: 00102 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 1, 10 from 16
Replicate 1 Time: 21:07
Peak Area (A-s): 0.108 Peak Height (A): 0.097
Background Pk Area (A-s): 0.328 Background Pk Height (A): 0.546
Blank Corrected Pk Area (A-s): 0.088

As ID: Standard 2 Seq. No.: 00103 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 2, 10 from 16
Replicate 1 Time: 21:10
Peak Area (A-s): 0.140 Peak Height (A): 0.126
Background Pk Area (A-s): 0.321 Background Pk Height (A): 0.538
Blank Corrected Pk Area (A-s): 0.120

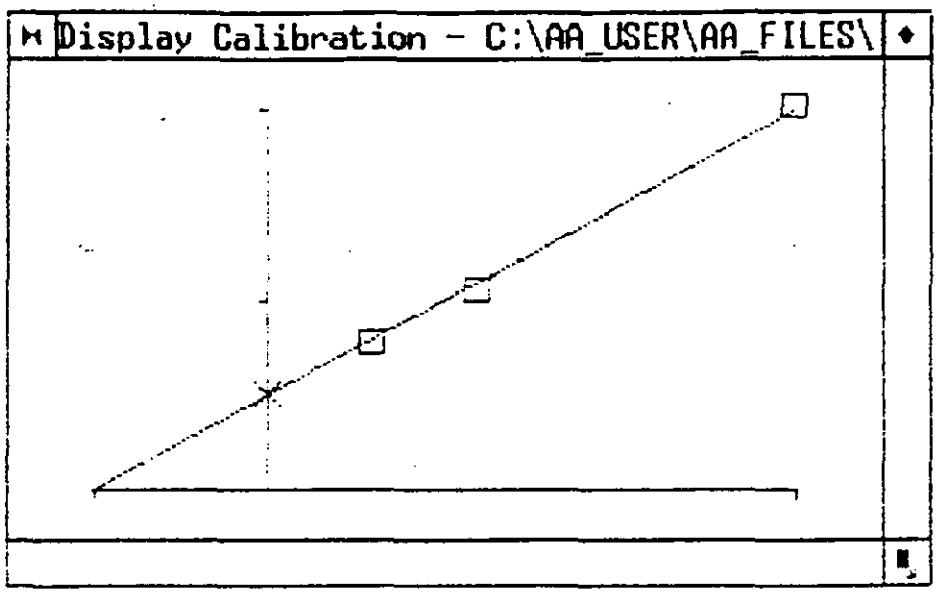
As ID: Standard 3 Seq. No.: 00104 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 3, 10 from 16
Replicate 1 Time: 21:14
Peak Area (A-s): 0.249 Peak Height (A): 0.220
Background Pk Area (A-s): 0.325 Background Pk Height (A): 0.546
Blank Corrected Pk Area (A-s): 0.229

As ID: 57.113.53/11F Seq. No.: 00101 A/S Pos.: 16 Date: 07/04/

Concentration (ug/L): 33.2

Correlation coefficient: 0.99827 Slope: 0.0017



ID: 57.113.60/12F Seq. No.: 00105 A/S Pos.: 17 Date: 07/04/92

dispensed: 10 from 0. 5 from 39. 10 from 17
cate 1 Time: 21:19
Peak Area (A-s): 0.043 Peak Height (A): 0.035
Background Pk Area (A-s): 0.333 Background Pk Height (A): 0.567
Blank Corrected Pk Area (A-s): 0.024

As ID: Standard 1 Seq. No.: 00106 A/S Pos.: 17 Date: 07/04/92

dispensed: 5 from 39. 10 from 1. 10 from 17
Replicate 1 Time: 21:23
Peak Area (A-s): 0.070 Peak Height (A): 0.062
Background Pk Area (A-s): 0.307 Background Pk Height (A): 0.535
Blank Corrected Pk Area (A-s): 0.051

ID: Standard 2 Seq. No.: 00107 A/S Pos.: 17 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 2. 10 from 17
Replicate 1 Time: 21:26
Peak Area (A-s): 0.104 Peak Height (A): 0.088
Background Pk Area (A-s): 0.288 Background Pk Height (A): 0.516
Blank Corrected Pk Area (A-s): 0.084

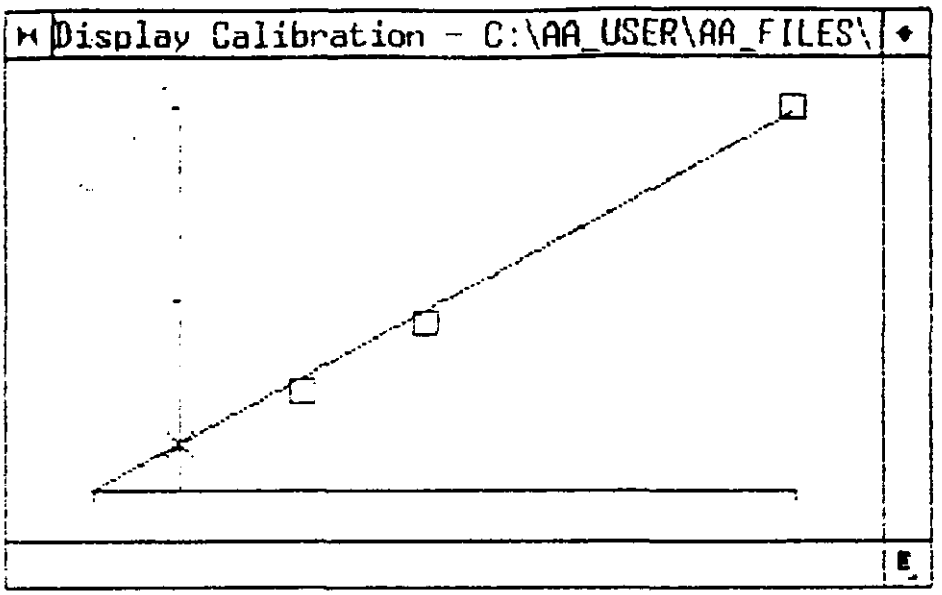
As ID: Standard 3 Seq. No.: 00108 A/S Pos.: 17 Date: 07/04/92

dispensed: 5 from 39. 10 from 3. 10 from 17
Replicate 1 Time: 21:30
Peak Area (A-s): 0.217 Peak Height (A): 0.178
Background Pk Area (A-s): 0.295 Background Pk Height (A): 0.518
Blank Corrected Pk Area (A-s): 0.197

The standard additions calibration curve may not be linear.
ID: 57.113.60/12F Seq. No.: 00105 A/S Pos.: 17 Date: 07/04/92

Concentration (ug/L): 14.0

Correlation coefficient: 0.99425 Slope: 0.0017



As ID: 57.113.67/13F Seq. No.: 00109 A/S Pos.: 18 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 18
Replicate 1 Time: 21:35
Peak Area (A-s): 0.110 Peak Height (A): 0.090
Background Pk Area (A-s): 0.311 Background Pk Height (A): 0.565
Blank Corrected Pk Area (A-s): 0.090

As ID: Standard 1 Seq. No.: 00110 A/S Pos.: 18 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 1, 10 from 18
Replicate 1 Time: 21:38
Peak Area (A-s): 0.144 Peak Height (A): 0.120
Background Pk Area (A-s): 0.274 Background Pk Height (A): 0.520
Blank Corrected Pk Area (A-s): 0.124

As ID: Standard 2 Seq. No.: 00111 A/S Pos.: 18 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 2, 10 from 18
Replicate 1 Time: 21:42
Peak Area (A-s): 0.180 Peak Height (A): 0.150
Background Pk Area (A-s): 0.269 Background Pk Height (A): 0.516
Blank Corrected Pk Area (A-s): 0.160

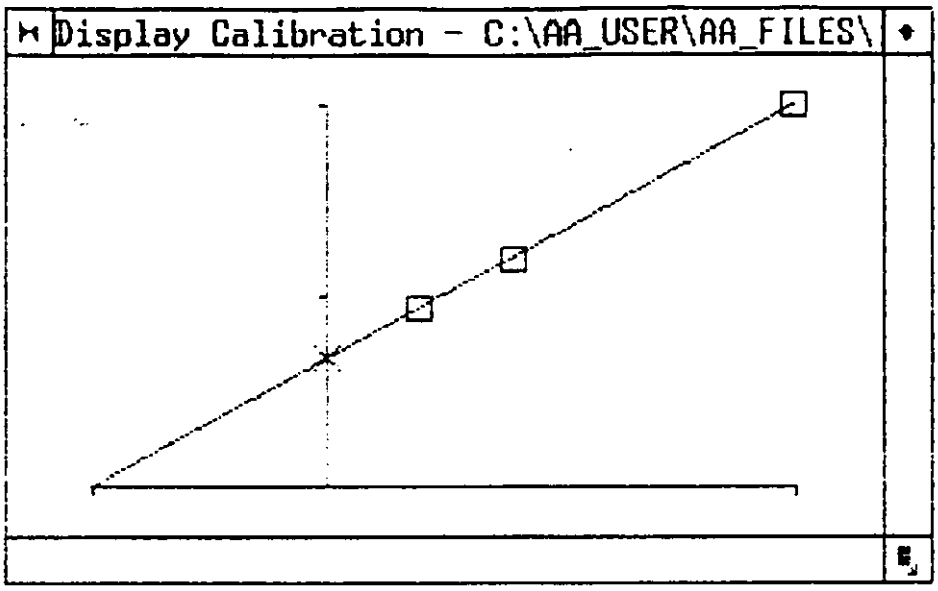
As ID: Standard 3 Seq. No.: 00112 A/S Pos.: 18 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 3, 10 from 18
Replicate 1 Time: 21:46
Peak Area (A-s): 0.290 Peak Height (A): 0.235
Background Pk Area (A-s): 0.203 Background Pk Height (A): 0.509
Blank Corrected Pk Area (A-s): 0.270

As ID: 57.113.67/13F Seq. No.: 00109 A/S Pos.: 18 Date: 07/04/92

Concentration (ug/L): 50.4

Correlation coefficient: 0.99971 Slope: 0.0018



Element File: AS_MSA_H.GEL Element: As Wavelength: 193.7
Date: 07/09/92 Time: 09:56 Slit: 0.70 L
Data File: 21216.DAT ID/Wt File: 21296A.IDW Lamp Current: 0
Technique: HGA Calib. Type: Method of Add. Energy: 53

As ID: Blank Seq. No.: 00006 A/S Pos.: 0 Date: 07/09/92

uL dispensed: 15 from 0, 5 from 39, 15 from 0
Replicate 1 Time: 09:59
Peak Area (A-s): 0.018 Peak Height (A): 0.045
Background Pk Area (A-s): 0.308 Background Pk Height (A): 0.160
Blank Corrected Pk Area (A-s): 0.018

Auto-zero performed.

As ID: 57.113.11/3B Seq. No.: 00007 A/S Pos.: 10 Date: 07/09/92

uL dispensed: 15 from 0, 5 from 39, 15 from 10
Replicate 1 Time: 10:03
Peak Area (A-s): 0.081 Peak Height (A): 0.055
Background Pk Area (A-s): 0.334 Background Pk Height (A): 0.141
Blank Corrected Pk Area (A-s): 0.064

As ID: Standard 1 Seq. No.: 00008 A/S Pos.: 10 Date: 07/09/92

uL dispensed: 5 from 39, 15 from 2, 15 from 10
Replicate 1 Time: 10:07
Peak Area (A-s): 0.149 Peak Height (A): 0.099
Background Pk Area (A-s): 0.291 Background Pk Height (A): 0.133
Blank Corrected Pk Area (A-s): 0.132

As ID: Standard 2 Seq. No.: 00009 A/S Pos.: 10 Date: 07/09/92

uL dispensed: 5 from 39, 15 from 3, 15 from 10
Replicate 1 Time: 10:11
Peak Area (A-s): 0.223 Peak Height (A): 0.126
Background Pk Area (A-s): 0.326 Background Pk Height (A): 0.106
Blank Corrected Pk Area (A-s): 0.206

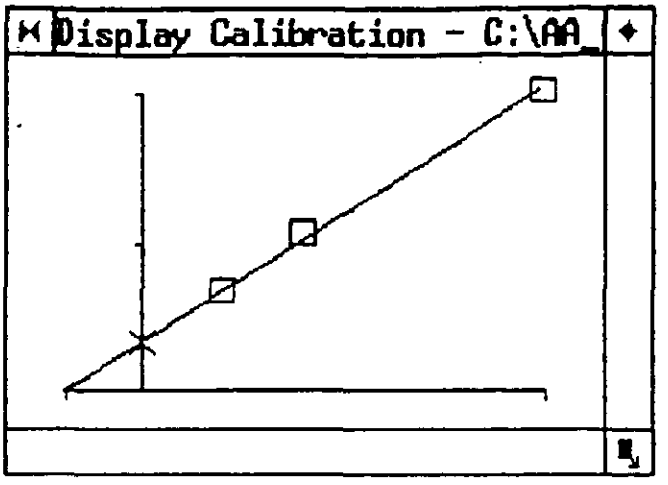
As ID: Standard 3 Seq. No.: 00010 A/S Pos.: 10 Date: 07/09/92

uL dispensed: 5 from 39, 15 from 4, 15 from 10
Replicate 1 Time: 10:14
Peak Area (A-s): 0.408 Peak Height (A): 0.231
Background Pk Area (A-s): 0.349 Background Pk Height (A): 0.116
Blank Corrected Pk Area (A-s): 0.391

As ID: 57.113.11/3B Seq. No.: 00007 A/S Pos.: 10 Date: 07/09/92

Concentration (ug/L): 19.2

Correlation coefficient: 0.99851 Slope: 0.0033



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As ID: 57.113.15/4B Seq. No.: 00011 A/S Pos.: 11 Date: 07/09/92

uL dispensed: 15 from 0, 5 from 39, 15 from 11
Replicate 1 Time: 10:19
Peak Area (A-s): 0.064 Peak Height (A): 0.054
Background Pk Area (A-s): 0.293 Background Pk Height (A): 0.105
Corrected Pk Area (A-s): 0.046

As ID: Standard 1 Seq. No.: 00012 A/S Pos.: 11 Date: 07/09/92

uL dispensed: 5 from 39, 15 from 2, 15 from 11
Replicate 1 Time: 10:22
Peak Area (A-s): 0.108 Peak Height (A): 0.071
Background Pk Area (A-s): 0.264 Background Pk Height (A): 0.357
Blank Corrected Pk Area (A-s): 0.090

As ID: Standard 2 Seq. No.: 00013 A/S Pos.: 11 Date: 07/09/92

uL dispensed: 5 from 39, 15 from 3, 15 from 11
Replicate 1 Time: 10:26
Peak Area (A-s): 0.168 Peak Height (A): 0.095
Background Pk Area (A-s): 0.234 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.150

As ID: Standard 3 Seq. No.: 00014 A/S Pos.: 11 Date: 07/09/92

uL dispensed: 5 from 39, 15 from 4, 15 from 11
Replicate 1 Time: 10:30
Peak Area (A-s): 0.313 Peak Height (A): 0.176
Background Pk Area (A-s): 0.265 Background Pk Height (A): 0.328
Blank Corrected Pk Area (A-s): 0.295

The standard additions calibration curve may not be linear.
As ID: 57.113.15/4B Seq. No.: 00011 A/S Pos.: 11 Date: 07/09/92

Concentration (ug/L): 18.6

Correlation coefficient: 0.99871 Slope: 0.0025
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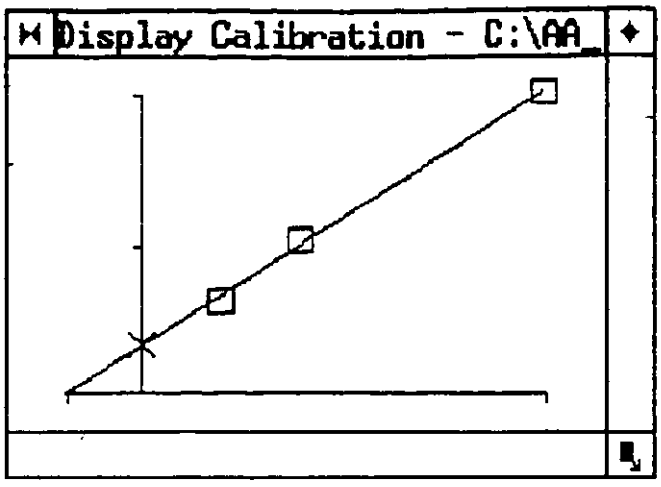

Display Calibration - C:\AA_

Element File: AS_MSA_H.GEL Element: As Wavelength: 193.7
[redacted]: 07/11/92 Time: 12:37 Slit: 0.70 L
Da[redacted] File: 071092B.DAT ID/Wt File: 21295.IDW Lamp Current: 0
Technique: HGA Calib. Type: Method of Add. Energy: 62

As ID: Standard 2 Seq. No.: 00218 A/S Pos.: 31 Date: 07/11/92

Replicate 1 Time: 12:37
Peak Area (A-s): 0.216 Peak Height (A): 0.173
Background Pk Area (A-s): 0.677 Background Pk Height (A): 0.267
Blank Corrected Pk Area (A-s): 0.162

As ID: Standard 3 Seq. No.: 00219 A/S Pos.: 31 Date: 07/11/92

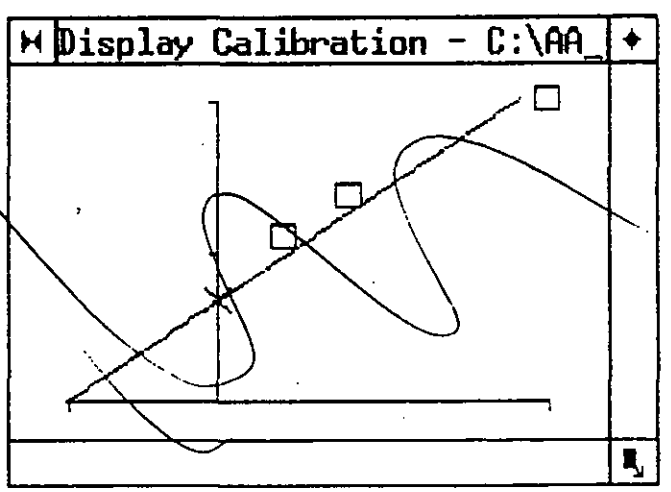
uL dispensed: 5 from 39, 15 from 3, 15 from 31
Replicate 1 Time: 12:41
Peak Area (A-s): 0.290 Peak Height (A): 0.226
Background Pk Area (A-s): 0.577 Background Pk Height (A): 0.219
Blank Corrected Pk Area (A-s): 0.235

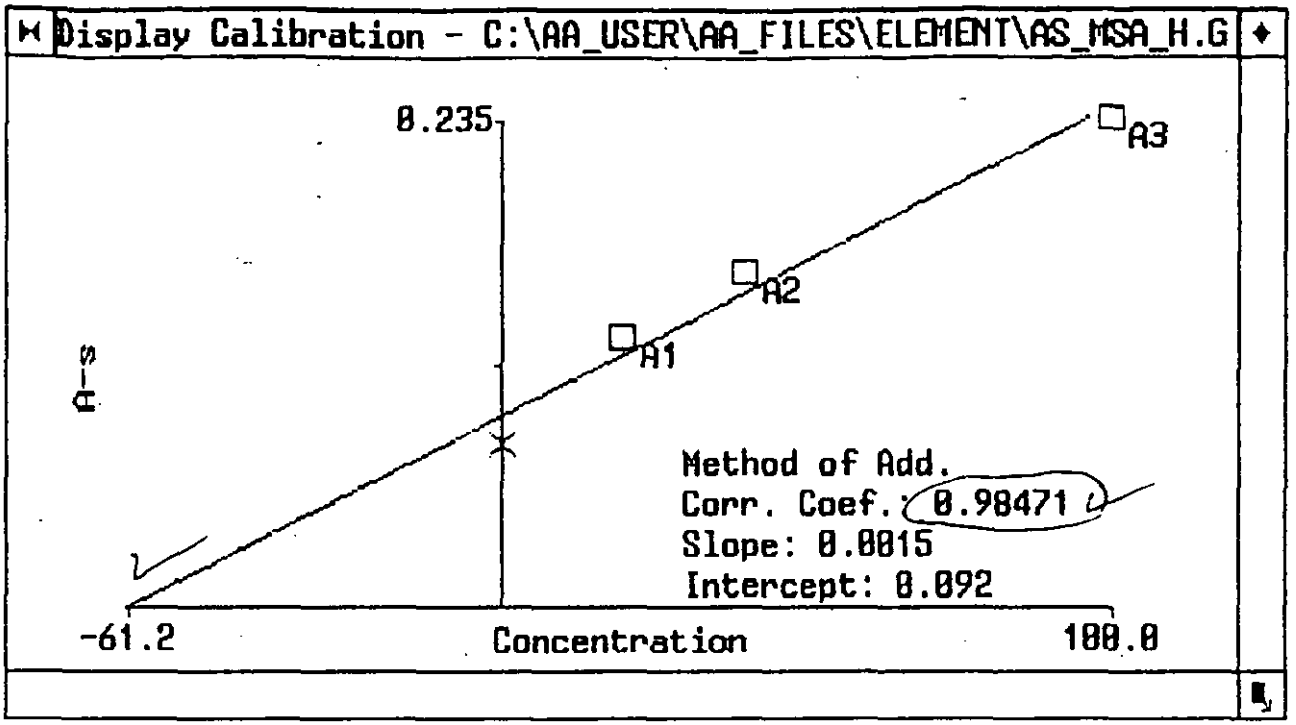
The standard additions calibration curve may not be linear.
As ID: 57.113.23 6-4 Seq. No.: 00216 A/S Pos.: 31 Date: 07/11/92

Concentration (ug/L): ~~45.9~~

Correlation coefficient: ~~0.96309~~ Slope: 0.0017

See Re slope on next page




Display Calibration - C:\AA_USER\AA_FILES\ELEMENT\AS_MSA_H.G
0.235
A3
A2
A1
Abs
Method of Add.
Corr. Coef.: 0.98471
Slope: 0.0015
Intercept: 0.092
-61.2
Concentration
100.0

ug/L CONC = 61.2

Multi. File: 070492.HMU Analyst:
Date: 07/04/92 Time: 14:33
Data File: 070492.DAT ID/Wt File: 070392.IDW

Element File: AS_MSA_L.GEL Element: As Wavelength: 193.7
Date: 07/04/92 Time: 14:34 Slit: 0.70
Data File: 070492.DAT ID/Wt File: 070392.IDW Lamp Current: 8
Technique: HGA Calib. Type: Method of Add. Energy: 62

As ID: Blank Seq. No.: 00001 A/S Pos.: 0 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 0
Replicate 1 Time: 14:37
Peak Area (A-s): 0.010 Peak Height (A): 0.021
Background Pk Area (A-s): 0.154 Background Pk Height (A): 0.136
Blank Corrected Pk Area (A-s): 0.005

Auto-zero performed.

As ID: 57.113.29/78 Seq. No.: 00002 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 10 from 0. 5 from 39. 10 from 25
Replicate 1 Time: 14:41
Peak Area (A-s): 0.025 Peak Height (A): 0.020
Background Pk Area (A-s): 0.051 Background Pk Height (A): 0.169
Blank Corrected Pk Area (A-s): 0.009

As ID: Standard 1 Seq. No.: 00003 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 1. 10 from 25
Replicate 1 Time: 14:45
Peak Area (A-s): 0.067 Peak Height (A): 0.054
Background Pk Area (A-s): 0.019 Background Pk Height (A): 0.108
Blank Corrected Pk Area (A-s): 0.051

As ID: Standard 2 Seq. No.: 00004 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 2. 10 from 25
Replicate 1 Time: 14:49
Peak Area (A-s): 0.112 Peak Height (A): 0.089
Background Pk Area (A-s): -0.024 Background Pk Height (A): 0.089
Blank Corrected Pk Area (A-s): 0.097

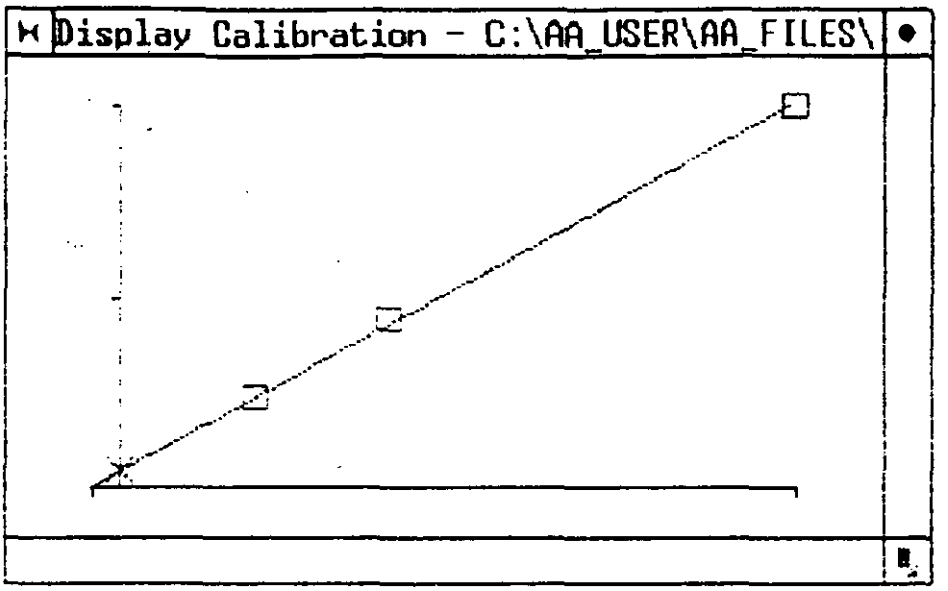
As ID: Standard 3 Seq. No.: 00005 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 3. 10 from 25
Replicate 1 Time: 14:53
Peak Area (A-s): 0.235 Peak Height (A): 0.180
Background Pk Area (A-s): -0.075 Background Pk Height (A): 0.057
Blank Corrected Pk Area (A-s): 0.219

As ID: 57.113.29/78 Seq. No.: 00002 A/S Pos.: 25 Date: 07/04/92

Concentration (ug/L): 4.2

Correlation coefficient: 0.99962 Slope: 0.0021



Ss ID: 57.113.3b/BB Seq. No.: 00006 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 26
Replicate 1 Time: 14:58
Peak Area (A-s): 0.034 Peak Height (A): 0.042
Background Pk Area (A-s): 0.085 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.018

As ID: Standard 1 Seq. No.: 00007 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 1, 10 from 26
Replicate 1 Time: 15:01
Peak Area (A-s): 0.055 Peak Height (A): 0.043
Background Pk Area (A-s): 0.022 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.039

As ID: Standard 2 Seq. No.: 00008 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 2, 10 from 26
Replicate 1 Time: 15:05
Peak Area (A-s): 0.097 Peak Height (A): 0.072
Background Pk Area (A-s): 0.139 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.081

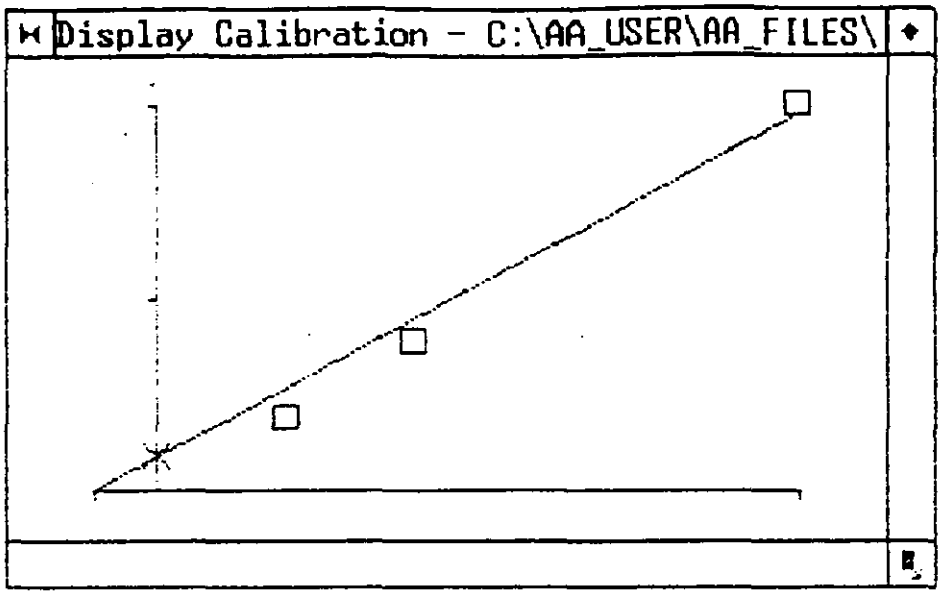
As ID: Standard 3 Seq. No.: 00009 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 3, 10 from 26
Replicate 1 Time: 15:09
Peak Area (A-s): 0.226 Peak Height (A): 0.166
Background Pk Area (A-s): 0.205 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.212

The standard additions calibration curve may not be linear.
Ss ID: 57.113.3b/BB Seq. No.: 00006 A/S Pos.: 26 Date: 07/04/92

Concentration (ug/L): 9.6

Correlation coefficient: 0.98204 Slope: 0.0019



As ID: 57.3113.43/98 Seq. No.: 00010 A/S Pos.: 27 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 27
Replicate 1 Time: 15:14
Peak Area (A-s): 0.029 Peak Height (A): 0.040
Background Pk Area (A-s): 0.247 Background Pk Height (A): 0.119
Blank Corrected Pk Area (A-s): 0.014

As ID: Standard 1 Seq. No.: 00011 A/S Pos.: 27 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 1, 10 from 27
Replicate 1 Time: 15:18
Peak Area (A-s): 0.051 Peak Height (A): 0.038
Background Pk Area (A-s): 0.189 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.035

As ID: Standard 2 Seq. No.: 00012 A/S Pos.: 27 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 2, 10 from 27
Replicate 1 Time: 15:21
Peak Area (A-s): 0.093 Peak Height (A): 0.064
Background Pk Area (A-s): 0.185 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.077

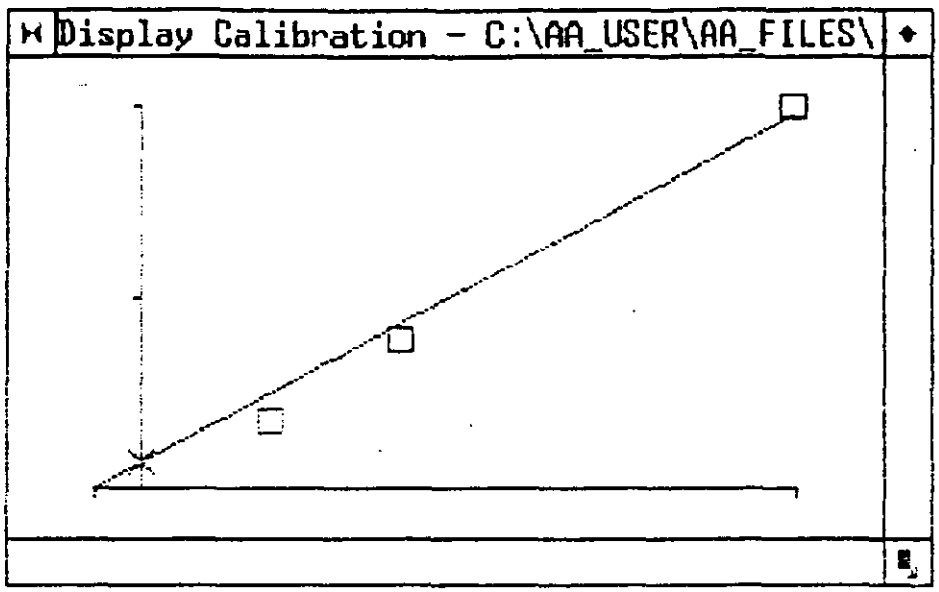
As ID: Standard 3 Seq. No.: 00013 A/S Pos.: 27 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 3, 10 from 27
Replicate 1 Time: 15:25
Peak Area (A-s): 0.216 Peak Height (A): 0.148
Background Pk Area (A-s): 0.194 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.208

The standard additions calibration curve may not be linear.
As ID: 57.3113.43/9B Seq. No.: 00010 A/S Pos.: 27 Date: 07/04/92

Concentration (ug/L): 7.4

Correlation coefficient: 0.98501 Slope: 0.0018



As ID: 57.113.50/10B Seq. No.: 00014 A/S Pos.: 28 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 28
Replicate 1 Time: 15:30
Peak Area (A-s): 0.034 Peak Height (A): 0.042
Background Pk Area (A-s): 0.235 Background Pk Height (A): 0.111
Blank Corrected Pk Area (A-s): 0.019

As ID: Standard 1 Seq. No.: 00015 A/S Pos.: 28 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 1, 10 from 28
Replicate 1 Time: 15:34
Peak Area (A-s): 0.054 Peak Height (A): 0.040
Background Pk Area (A-s): 0.195 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): 0.039

As ID: Standard 2 Seq. No.: 00016 A/S Pos.: 28 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 2, 10 from 28
Replicate 1 Time: 15:37
Peak Area (A-s): 0.098 Peak Height (A): 0.067
Background Pk Area (A-s): 0.191 Background Pk Height (A): 0.077
Blank Corrected Pk Area (A-s): 0.082

As ID: Standard 3 Seq. No.: 00017 A/S Pos.: 28 Date: 07/04/92

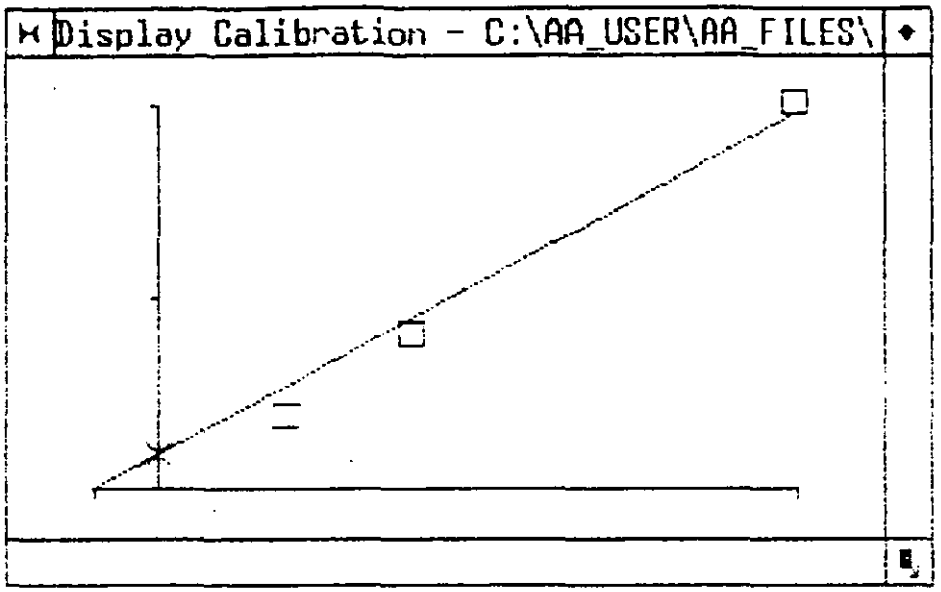
uL dispensed: 5 from 39, 10 from 3, 10 from 28
Replicate 1 Time: 15:41
Peak Area (A-s): 0.219 Peak Height (A): 0.152

Background Pk Area (A-s): 0.201 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.204

The standard additions calibration curve may not be linear.
As ID: 57.113.50/10B Seq. No.: 00014 A/S Pos.: 28 Date: 07/04/9

Concentration (ug/L): [illegible]

Correlation coefficient: [illegible] Slope: [illegible]



As ID: 57.113.57/11B Seq. No.: 00018 A/S Pos.: 29 Date: 07/04/92

uL dispensed: 10 from 0. 5 from 39. 10 from 29
Replicate 1 Time: 15:46
Peak Area (A-s): 0.043 Peak Height (A): 0.054
Background Pk Area (A-s): 0.240 Background Pk Height (A): 0.110
Blank Corrected Pk Area (A-s): 0.027

As ID: Standard 1 Seq. No.: 00019 A/S Pos.: 29 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 1. 10 from 29
Replicate 1 Time: 15:50
Peak Area (A-s): 0.064 Peak Height (A): 0.046
Background Pk Area (A-s): 0.214 Background Pk Height (A): 0.092
Blank Corrected Pk Area (A-s): 0.048

As ID: Standard 2 Seq. No.: 00020 A/S Pos.: 29 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 2. [illegible] from 29
Replicate 1 Time: 15:54
Peak Area (A-s): 0.103 Peak Height (A): 0.073
Background Pk Area (A-s): 0.225 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.087

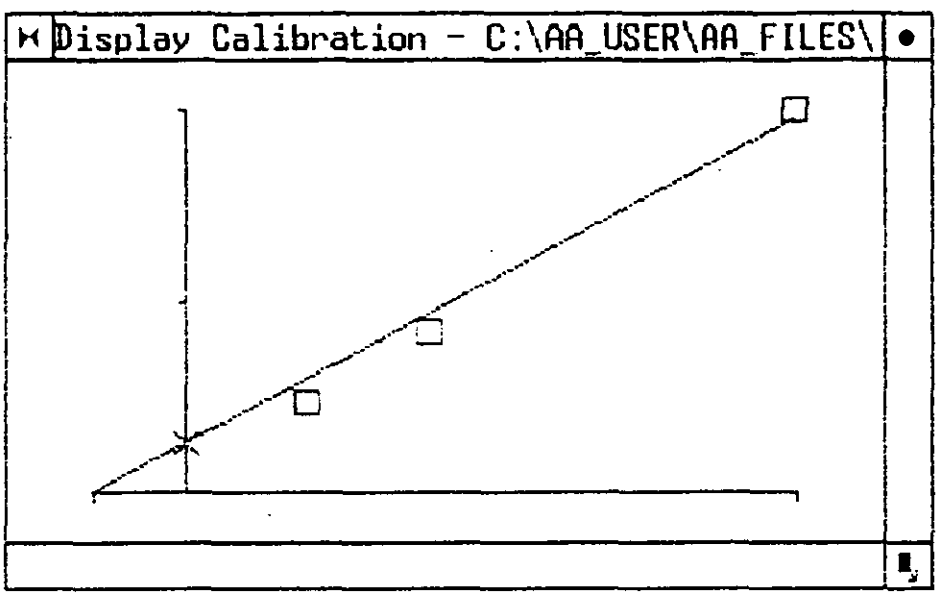
As ID: Standard 3 Seq. No.: [illegible] A/S Pos.: 29 Date: [illegible]

uL dispensed: 5 from 39. 10 from 3. 10 from 29
Replicate 1 Time: 15:57
Peak Area (A-s): 0.223 Peak Height (A): 0.157
Background Pk Area (A-s): 0.240 Background Pk Height (A): 0.122
Blank Corrected Pk Area (A-s): 0.207

The standard additions calibration curve may not be linear.
As ID: 57.113.57/118 Seq. No.: 00018 A/S Pos.: 29 Date: 07/04/92

Concentration (ug/L): 15.3

Correlation coefficient: 0.98518 Slope: 0.0018



As ID: 57.113.64/128 Seq. No.: 00022 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 10 from 0. 5 from 39. 10 from 30
Replicate 1 Time: 16:02
Peak Area (A-s): 0.032 Peak Height (A): 0.054
Background Pk Area (A-s): 0.259 Background Pk Height (A): 0.128
Blank Corrected Pk Area (A-s): 0.016

As ID: Standard 1 Seq. No.: 00023 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 1. 10 from 30
Replicate 1 Time: 16:06
Peak Area (A-s): 0.053 Peak Height (A): 0.041
Background Pk Area (A-s): 0.228 Background Pk Height (A): 0.118
Blank Corrected Pk Area (A-s): 0.037

As ID: Standard 2 Seq. No.: 00024 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 2. 10 from 30
Replicate 1 Time: 16:10
Peak Area (A-s): 0.089 Peak Height (A): 0.066
Background Pk Area (A-s): 0.217 Background Pk Height (A): 0.104
Blank Corrected Pk Area (A-s): 0.073

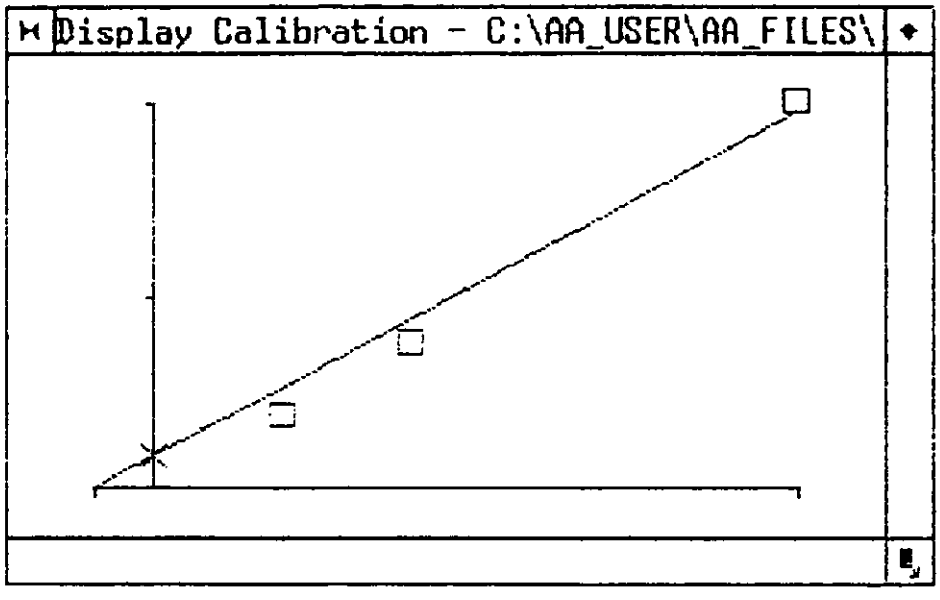
As ID: Standard 3 Seq. No.: 00025 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 3. 10 from 30
Replicate 1 Time: 16:13
Peak Area (A-s): 0.212 Peak Height (A): 0.153
Background Pk Area (A-s): 0.218 Background Pk Height (A): 0.124
Blank Corrected Pk Area (A-s): 0.196

The standard additions calibration curve may not be linear.
As ID: 57.113.64/12B Seq. No.: 00022 A/S Pos.: 30 Date: 07/04/92

Concentration (ug/L -): 9.4

Correlation coefficient: 0.98088 Slope: 0.0017



As ID: 57.113.71/13B Seq. No.: 00026 A/S Pos.: 31 Date: 07/04/92

uL dispensed: 10 from 0. 5 from 39. 10 from 31
Replicate 1 Time: 16:18
Peak Area (A-s): 0.024 Peak Height (A): 0.047
Background Pk Area (A-s): 0.243 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.009

As ID: Standard 1 Seq. No.: 00027 A/S Pos.: 31 Date: 07/04/92

uL dispensed: 5 from 39. 10 from 1. 10 from 31
Replicate 1 Time: 16:22
Peak Area (A-s): 0.049 Peak Height (A): 0.038
Background Pk Area (A-s): 0.197 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.033

As ID: Standard 2 Seq. No.: 00028 A/S Pos.: 31 Date: 07/04/

uL dispensed: 5 from 39. 10 from 2. 10 from 31
Replicate 1 Time: 16:26
Peak Area (A-s): 0.090 Peak Height (A): 0.064

Background Pk Area (A-s): 0.192 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.075

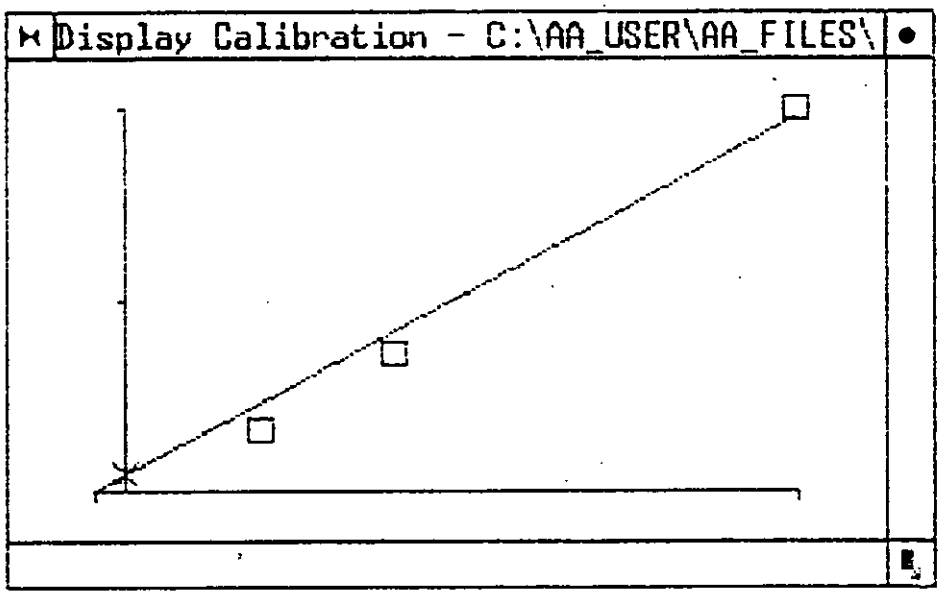
As[redacted] ID: Standard 3 Seq. No.: 00029 A/S Pos.: 31 Date: 07/04/92

[redacted] dispensed: 5 from 39, 10 from 3, 10 from 31
[redacted]plicate 1 Time: 16:29
Peak Area (A-s): 0.224 Peak Height (A): 0.152
Background Pk Area (A-s): 0.197 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.206

The standard additions calibration curve may not be linear.
A[redacted] ID: 57.113.71/135 Seq. No.: 00026 A/S Pos.: 31 Date: 07/04/92

Concentration (ug/L): 4.4

Correlation coefficient: 0.9[redacted] Slope: 0.0015



USA's (FH)

Element File: SB_MSA.GEL Element: Sb Wavelength: 217.6
Date: 07/08/92 Time: 08:15 Slit: 0.70 L
Data File: 070792.DAT ID/Wt File: 070392.IDW Lamp Current: 20
Technique: HGA Calib. Type: Method of Add. Energy: 62

Sb ID: Blank Seq. No.: 00051 A/S Pos.: 0 Date: 07/08/92

uL dispensed: 10 from 0, 5 from 39, 10 from 0
Replicate 1 Time: 08:18
Peak Area (A-s): 0.008 Peak Height (A): 0.015
Background Pk Area (A-s): 0.307 Background Pk Height (A): 0.319
Blank Corrected Pk Area (A-s): 0.008

Auto-zero performed.

Sb ID: 57.113.1/1F X10 Seq. No.: 00052 A/S Pos.: 32 Date: 07/08/92

uL dispensed: 10 from 0, 5 from 39, 10 from 32
Replicate 1 Time: 08:22
Peak Area (A-s): 0.142 Peak Height (A): 0.134
Background Pk Area (A-s): 0.487 Background Pk Height (A): 0.467
Blank Corrected Pk Area (A-s): 0.134

Sb ID: Standard 1 Seq. No.: 00053 A/S Pos.: 32 Date: 07/08/92

uL dispensed: 5 from 39, 10 from 7, 10 from 32
Replicate 1 Time: 08:26
Peak Area (A-s): 0.167 Peak Height (A): 0.156
Background Pk Area (A-s): 0.423 Background Pk Height (A): 0.390
Blank Corrected Pk Area (A-s): 0.158

Sb ID: Standard 2 Seq. No.: 00054 A/S Pos.: 32 Date: 07/08/92

uL dispensed: 5 from 39, 10 from 8, 10 from 32
Replicate 1 Time: 08:30
Peak Area (A-s): 0.190 Peak Height (A): 0.181
Background Pk Area (A-s): 0.414 Background Pk Height (A): 0.364
Blank Corrected Pk Area (A-s): 0.182

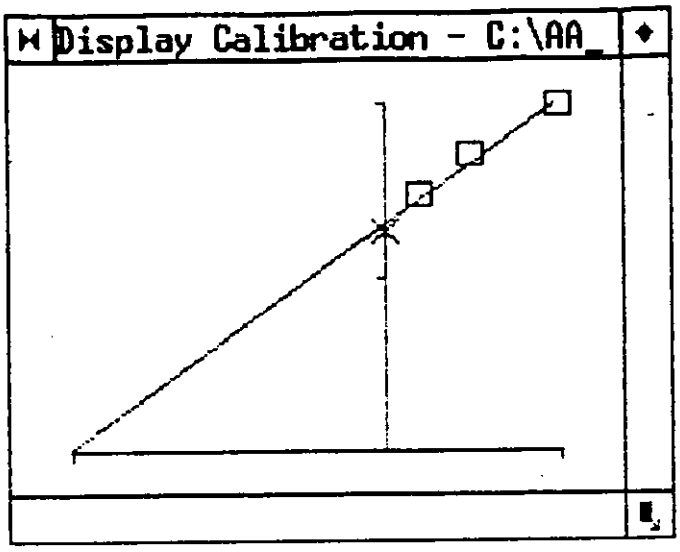
Sb ID: Standard 3 Seq. No.: 00055 A/S Pos.: 32 Date: 07/08/92

uL dispensed: 5 from 39, 10 from 9, 10 from 32
Replicate 1 Time: 08:34
Peak Area (A-s): 0.222 Peak Height (A): 0.201
Background Pk Area (A-s): 0.414 Background Pk Height (A): 0.370
Blank Corrected Pk Area (A-s): 0.214

The standard additions calibration curve may not be linear.
Sb ID: 57.113.1/1F X10 Seq. No.: 00052 A/S Pos.: 32 Date: 07/08/92

Concentration (ug/L): 177.8

Correlation coefficient: 0.99100 Slope: 0.0008 Int: 0.139


Display Calibration - C:\AA_

Sb ID: 57.113.5/2F X10 Seq. No.: 00006 A/S Pos.: 33 Date: 07/07/92

uL dispensed: 10 from 0, 5 from 39, 10 from 33
Replicate 1 Time: 16:57
Peak Area (A-s): 0.111 Peak Height (A): 0.116
Background Pk Area (A-s): 0.452 Background Pk Height (A): 0.363
Blank Corrected Pk Area (A-s): 0.112

Sb ID: Standard 1 Seq. No.: 00007 A/S Pos.: 33 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 7, 10 from 33
Replicate 1 Time: 17:01
Peak Area (A-s): 0.120 Peak Height (A): 0.148
Background Pk Area (A-s): 0.351 Background Pk Height (A): 0.305
Blank Corrected Pk Area (A-s): 0.122

Sb ID: Standard 2 Seq. No.: 00008 A/S Pos.: 33 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 8, 10 from 33
Replicate 1 Time: 17:05
Peak Area (A-s): 0.140 Peak Height (A): 0.164
Background Pk Area (A-s): 0.350 Background Pk Height (A): 0.310
Blank Corrected Pk Area (A-s): 0.142

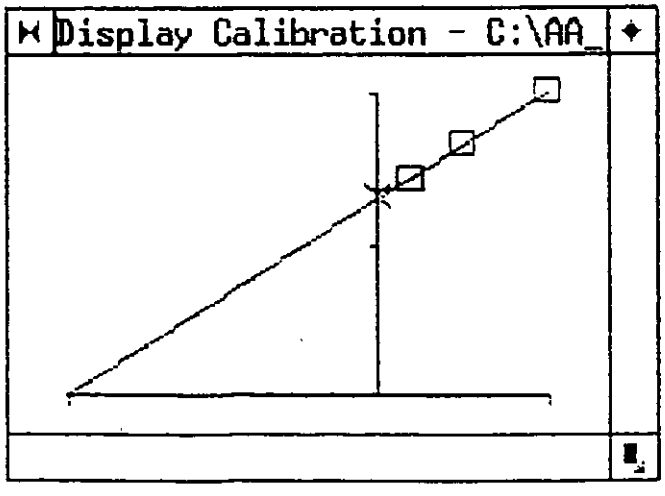
Sb ID: Standard 3 Seq. No.: 00009 A/S Pos.: 33 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 9, 10 from 33
Replicate 1 Time: 17:09
Peak Area (A-s): 0.170 Peak Height (A): 0.179
Background Pk Area (A-s): 0.367 Background Pk Height (A): 0.308
Blank Corrected Pk Area (A-s): 0.171

Sb ID: 57.113.5/2F X10 Seq. No.: 00006 A/S Pos.: 33 Date: 07/07/92

Concentration (ug/L): 184.9

Correlation coefficient: 0.99906 Slope: 0.0006 Int: 0.111



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Sb ID: S7.113.9/3F X10 Seq. No.: 00010 A/S Pos.: 34 Date: 07/07/92

uL dispensed: 10 from 0, 5 from 39, 10 from 34
Replicate 1 Time: 17:13
Peak Area (A-s): 0.133 Peak Height (A): 0.122
Background Pk Area (A-s): 0.410 Background Pk Height (A): 0.308
Blank Corrected Pk Area (A-s): 0.135

Sb ID: Standard 1 Seq. No.: 00011 A/S Pos.: 34 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 7, 10 from 34
Replicate 1 Time: 17:17
Peak Area (A-s): 0.139 Peak Height (A): 0.139
Background Pk Area (A-s): 0.361 Background Pk Height (A): 0.324
Blank Corrected Pk Area (A-s): 0.140

Sb ID: Standard 2 Seq. No.: 00012 A/S Pos.: 34 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 8, 10 from 34
Replicate 1 Time: 17:21
Peak Area (A-s): 0.156 Peak Height (A): 0.157
Background Pk Area (A-s): 0.350 Background Pk Height (A): 0.308
Blank Corrected Pk Area (A-s): 0.157

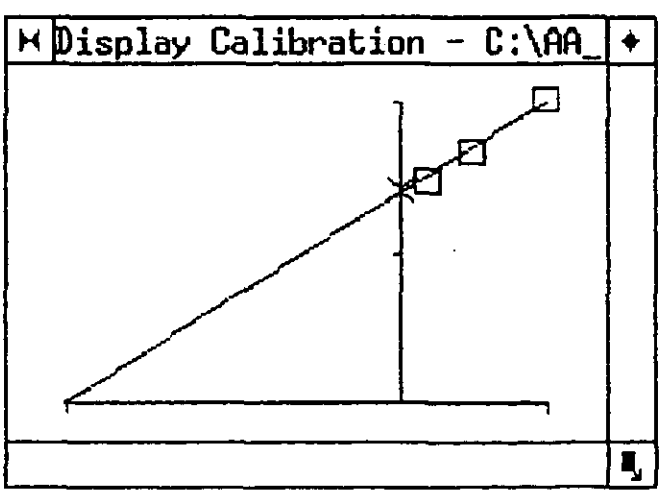
Sb ID: Standard 3 Seq. No.: 00013 A/S Pos.: 34 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 9, 10 from 34
Replicate 1 Time: 17:25
Peak Area (A-s): 0.189 Peak Height (A): 0.179
Background Pk Area (A-s): 0.351 Background Pk Height (A): 0.310
Blank Corrected Pk Area (A-s): 0.190

The standard additions calibration curve may not be linear.
Sb ID: S7.113.9/3F X10 Seq. No.: 00010 A/S Pos.: 34 Date: 07/07/92

Concentration (ug/L): 230.1

Correlation coefficient: 0.99304 Slope: 0.0006 Int: 0.131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Sb ID: 57.113.13/4FX10 Seq. No.: 00014 A/S Pos.: 35 Date: 07/07/92

uL dispensed: 10 from 0, 5 from 39, 10 from 35
Replicate 1 Time: 17:29
Peak Area (A-s): 0.152 Peak Height (A): 0.144
Background Pk Area (A-s): 0.426 Background Pk Height (A): 0.325
Blank Corrected Pk Area (A-s): 0.153

Sb ID: Standard 1 Seq. No.: 00015 A/S Pos.: 35 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 7, 10 from 35
Replicate 1 Time: 17:33
Peak Area (A-s): 0.159 Peak Height (A): 0.163
Background Pk Area (A-s): 0.382 Background Pk Height (A): 0.309
Blank Corrected Pk Area (A-s): 0.160

Sb ID: Standard 2 Seq. No.: 00016 A/S Pos.: 35 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 8, 10 from 35
Replicate 1 Time: 17:37
Peak Area (A-s): 0.175 Peak Height (A): 0.179
Background Pk Area (A-s): 0.375 Background Pk Height (A): 0.306
Blank Corrected Pk Area (A-s): 0.177

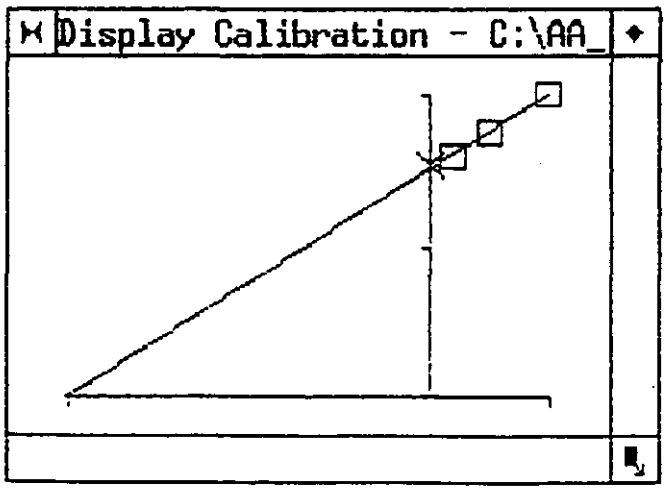
Sb ID: Standard 3 Seq. No.: 00017 A/S Pos.: 35 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 9, 10 from 35
Replicate 1 Time: 17:41
Peak Area (A-s): 0.201 Peak Height (A): 0.204
Background Pk Area (A-s): 0.350 Background Pk Height (A): 0.314
Blank Corrected Pk Area (A-s): 0.202

Sb ID: 57.113.13/4FX10 Seq. No.: 00014 A/S Pos.: 35 Date: 07/07/92

Concentration (ug/L): 305.0

Correlation coefficient: 0.99833 Slope: 0.0005 Int: 0.152



Sa ID: 57.113.17/5FX10 Seq. No.: 00018 A/S Pos.: 36 Date: 07/07/92

uL spensed: 10 from 0, 5 from 39, 10 from 36
Replicate 1 Time: 17:45
Peak Area (A-s): 0.080 Peak Height (A): 0.067
Background Pk Area (A-s): 0.380 Background Pk Height (A): 0.317
Blank Corrected Pk Area (A-s): 0.081

Sb ID: Standard 1 Seq. No.: 00019 A/S Pos.: 36 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 7, 10 from 36
Replicate 1 Time: 17:49
Peak Area (A-s): 0.084 Peak Height (A): 0.088
Background Pk Area (A-s): 0.307 Background Pk Height (A): 0.321
Blank Corrected Pk Area (A-s): 0.085

Sb ID: Standard 2 Seq. No.: 00020 A/S Pos.: 36 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 8, 10 from 36
Replicate 1 Time: 17:53
Peak Area (A-s): 0.104 Peak Height (A): 0.107
Background Pk Area (A-s): 0.317 Background Pk Height (A): 0.312
Blank Corrected Pk Area (A-s): 0.105

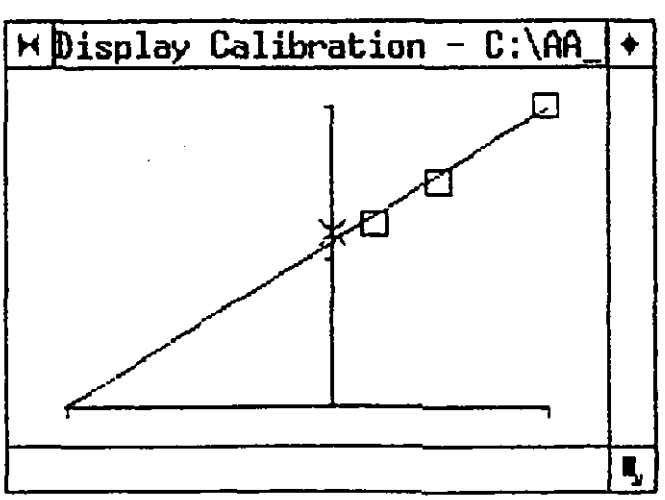
Sb ID: Standard 3 Seq. No.: 00021 A/S Pos.: 36 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 9, 10 from 36
Replicate 1 Time: 17:57
Peak Area (A-s): 0.140 Peak Height (A): 0.137
Background Pk Area (A-s): 0.307 Background Pk Height (A): 0.318
Blank Corrected Pk Area (A-s): 0.141

The standard additions calibration curve may not be linear.
Sb ID: 57.113.17/5FX10 Seq. No.: 00018 A/S Pos.: 36 Date: 07/07/92

Concentration (ug/L): 124.3

Correlation coefficient: 0.98936 Slope: 0.0006 Int: 0.077



Sb ID: 57.113.21/6FX10 Seq. No.: 00022 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 10 from 0, 5 from 39, 10 from 37
Replicate 1 Time: 18:01
Peak Area (A-s): 0.085 Peak Height (A): 0.095
Background Pk Area (A-s): 0.359 Background Pk Height (A): 0.290
Blank Corrected Pk Area (A-s): 0.086

Sb ID: Standard 1 Seq. No.: 00023 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 7, 10 from 37
Replicate 1 Time: 18:05
Peak Area (A-s): 0.091 Peak Height (A): 0.126
Background Pk Area (A-s): 0.320 Background Pk Height (A): 0.260
Blank Corrected Pk Area (A-s): 0.093

Sb ID: Standard 2 Seq. No.: 00024 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 8, 10 from 37
Replicate 1 Time: 18:09
Peak Area (A-s): 0.112 Peak Height (A): 0.140
Background Pk Area (A-s): 0.323 Background Pk Height (A): 0.258
Blank Corrected Pk Area (A-s): 0.113

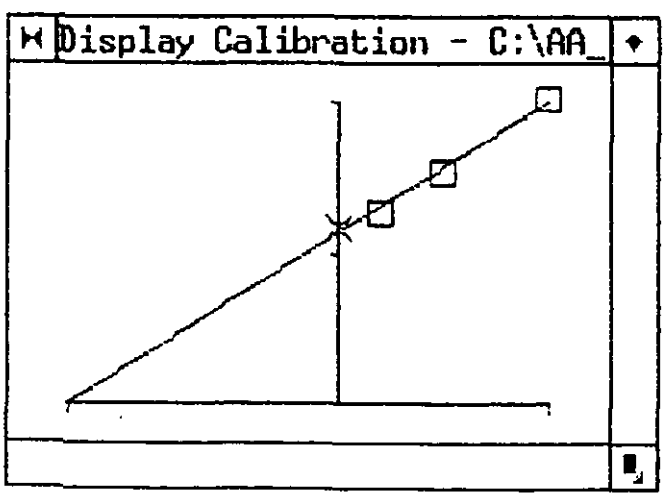
Sb ID: Standard 3 Seq. No.: 00025 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 5 from 39, 10 from 9, 10 from 37
Replicate 1 Time: 18:13
Peak Area (A-s): 0.147 Peak Height (A): 0.181
Background Pk Area (A-s): 0.331 Background Pk Height (A): 0.254
Blank Corrected Pk Area (A-s): 0.148

The standard additions calibration curve may not be linear.
Sb ID: 57.113.21/6FX10 Seq. No.: 00022 A/S Pos.: 37 Date: 07/07/92

Concentration (ug/L): 129.1

Correlation coefficient: 0.99532 Slope: 0.0006 Int: 0.083



Element File: SB_MSA.GEL Element: Sb Wavelength: 217.6
Date: 07/04/92 Time: 21:49 Slit: 0.70 L
Data File: 070492.DAT ID/Wt File: 070392.IDW Lamp Current: 20
Technique: HGA Calib. Type: Method of Add. Energy: 61

Sb ID: Blank Seq. No.: 00113 A/S Pos.: 0 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 0
Replicate 1 Time: 21:52
Peak Area (A-s): 0.000 Peak Height (A): 0.007
Background Pk Area (A-s): 0.064 Background Pk Height (A): 0.123
Blank Corrected Pk Area (A-s): 0.000

Auto-zero performed.

Sb ID: 57.113..25/7F Seq. No.: 00114 A/S Pos.: 11 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 11
Replicate 1 Time: 21:55
Peak Area (A-s): 0.003 Peak Height (A): 0.007
Background Pk Area (A-s): 0.104 Background Pk Height (A): 0.214
Blank Corrected Pk Area (A-s): 0.003

Sb ID: Standard 1 Seq. No.: 00115 A/S Pos.: 11 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 11
Replicate 1 Time: 21:59
Peak Area (A-s): 0.015 Peak Height (A): 0.019
Background Pk Area (A-s): 0.083 Background Pk Height (A): 0.188
Blank Corrected Pk Area (A-s): 0.014

Sb ID: Standard 2 Seq. No.: 00116 A/S Pos.: 11 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 11
Replicate 1 Time: 22:02
Peak Area (A-s): 0.035 Peak Height (A): 0.044
Background Pk Area (A-s): 0.085 Background Pk Height (A): 0.177
Blank Corrected Pk Area (A-s): 0.035

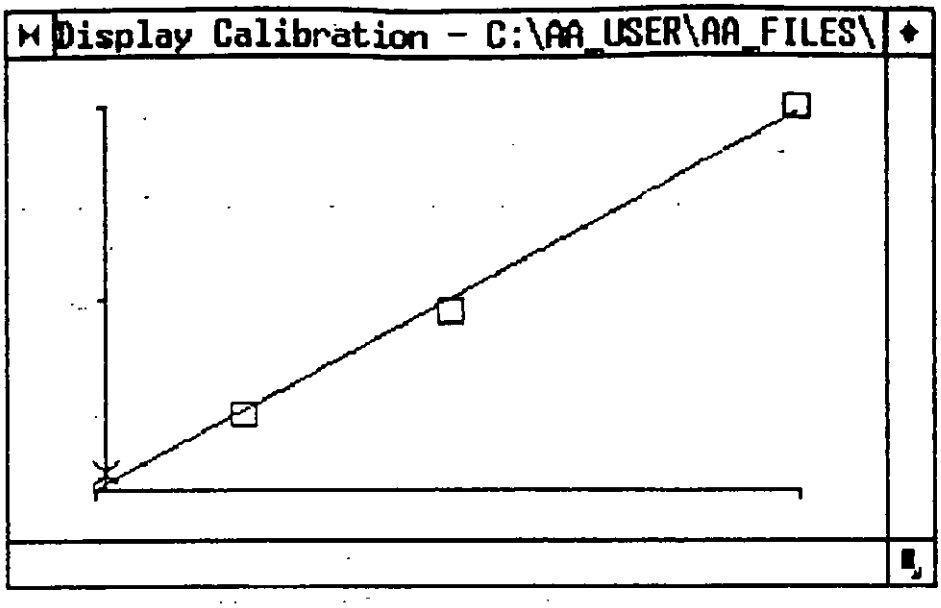
Sb ID: Standard 3 Seq. No.: 00117 A/S Pos.: 11 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 11
Replicate 1 Time: 22:06
Peak Area (A-s): 0.075 Peak Height (A): 0.082
Background Pk Area (A-s): 0.085 Background Pk Height (A): 0.173
Blank Corrected Pk Area (A-s): 0.075

The standard additions calibration curve may not be linear.
Sb ID: 57.113..25/7F Seq. No.: 00114 A/S Pos.: 11 Date: 07/04/92

Concentration (ug/L): 1.5

Correlation coefficient: 0.99746 Slope: 0.0007 Int: 0.001



Sb ID: 57.3113.32/8F Seq. No.: 00118 A/S Pos.: 12 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 12
Replicate 1 Time: 22:10
Peak Area (A-s): 0.007 Peak Height (A): 0.010
Background Pk Area (A-s): 0.109 Background Pk Height (A): 0.199
Blank Corrected Pk Area (A-s): 0.007

Sb ID: Standard 1 Seq. No.: 00119 A/S Pos.: 12 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 12
Replicate 1 Time: 22:13
Peak Area (A-s): 0.020 Peak Height (A): 0.021
Background Pk Area (A-s): 0.087 Background Pk Height (A): 0.161
Blank Corrected Pk Area (A-s): 0.020

Sb ID: Standard 2 Seq. No.: 00120 A/S Pos.: 12 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 12
Replicate 1 Time: 22:17
Peak Area (A-s): 0.037 Peak Height (A): 0.047
Background Pk Area (A-s): 0.087 Background Pk Height (A): 0.139
Blank Corrected Pk Area (A-s): 0.037

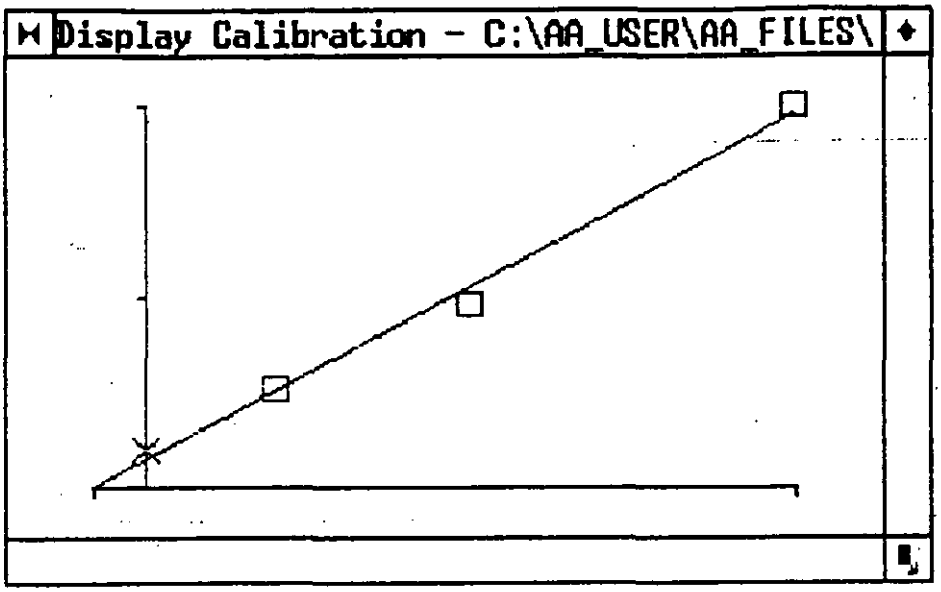
Sb ID: Standard 3 Seq. No.: 00121 A/S Pos.: 12 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 12
Replicate 1 Time: 22:20
Peak Area (A-s): 0.077 Peak Height (A): 0.089
Background Pk Area (A-s): 0.092 Background Pk Height (A): 0.136
Blank Corrected Pk Area (A-s): 0.077

The standard additions calibration curve may not be linear.
Sb ID: 57.3113.32/8F Seq. No.: 00118 A/S Pos.: 12 Date: 07/04/92

Concentration (ug/L): 7.9

Correlation coefficient: 0.99638 Slope: 0.0007 Int: 0.006



Sb ID: EMPTY Seq. No.: 00122 A/S Pos.: 13 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 13
Replicate 1 Time: 22:24
Peak Area (A-s): 0.008 Peak Height (A): 0.011
Background Pk Area (A-s): 0.104 Background Pk Height (A): 0.142
Blank Corrected Pk Area (A-s): 0.008

Sb ID: Standard 1 Seq. No.: 00123 A/S Pos.: 13 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 13
Replicate 1 Time: 22:28
Peak Area (A-s): 0.021 Peak Height (A): 0.024
Background Pk Area (A-s): 0.085 Background Pk Height (A): 0.099
Blank Corrected Pk Area (A-s): 0.020

Sb ID: Standard 2 Seq. No.: 00124 A/S Pos.: 13 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 13
Replicate 1 Time: 22:31
Peak Area (A-s): 0.033 Peak Height (A): 0.044
Background Pk Area (A-s): 0.086 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.033

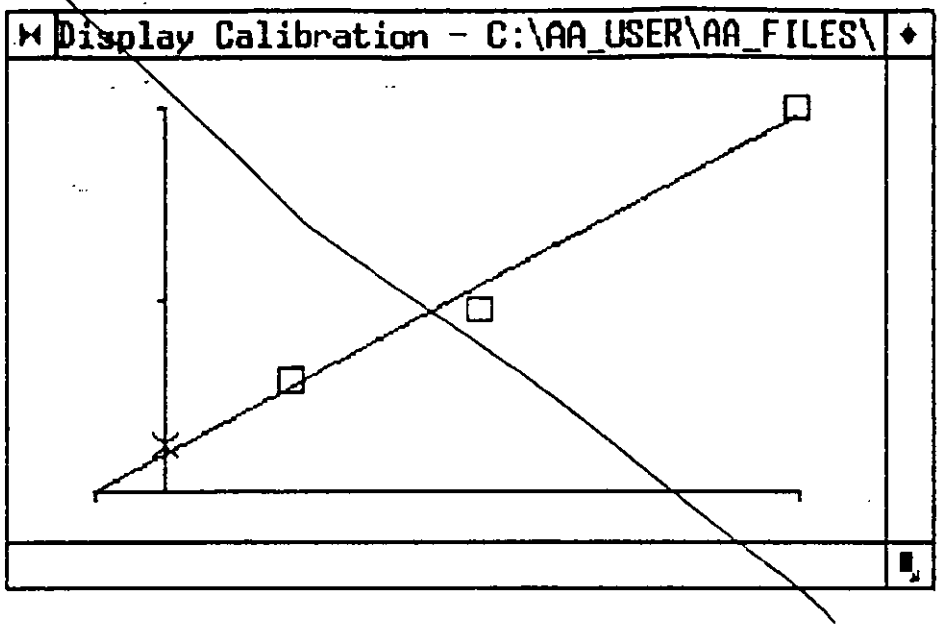
Sb ID: Standard 3 Seq. No.: 00125 A/S Pos.: 13 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 13
Replicate 1 Time: 22:34
Peak Area (A-s): 0.071 Peak Height (A): 0.084
Background Pk Area (A-s): 0.084 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.071

Sb ID: EMPTY Seq. No.: 00122 A/S Pos.: 13 Date: 07/04/92

Concentration (ug/L): 11.1

Correlation coefficient: 0.99365 Slope: 0.0006 Int: 0.007



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Sb ID: 57.113.39/9F Seq. No.: 00126 A/S Pos.: 14 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 14
Replicate 1 Time: 22:38
Peak Area (A-s): 0.011 Peak Height (A): 0.012
Background Pk Area (A-s): 0.094 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.011

Sb ID: Standard 1 Seq. No.: 00127 A/S Pos.: 14 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 14
Replicate 1 Time: 22:42
Peak Area (A-s): 0.020 Peak Height (A): 0.026
Background Pk Area (A-s): 0.080 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.020

Sb ID: Standard 2 Seq. No.: 00128 A/S Pos.: 14 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 14
Replicate 1 Time: 22:45
Peak Area (A-s): 0.038 Peak Height (A): 0.046
Background Pk Area (A-s): 0.080 Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.037

Sb ID: Standard 3 Seq. No.: 00129 A/S Pos.: 14 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 14
Replicate 1 Time: 22:49
Peak Area (A-s): 0.070 Peak Height (A): 0.084
Background Pk Area (A-s): 0.081 Background Pk Height (A): 0.077
Blank Corrected Pk Area (A-s): 0.070
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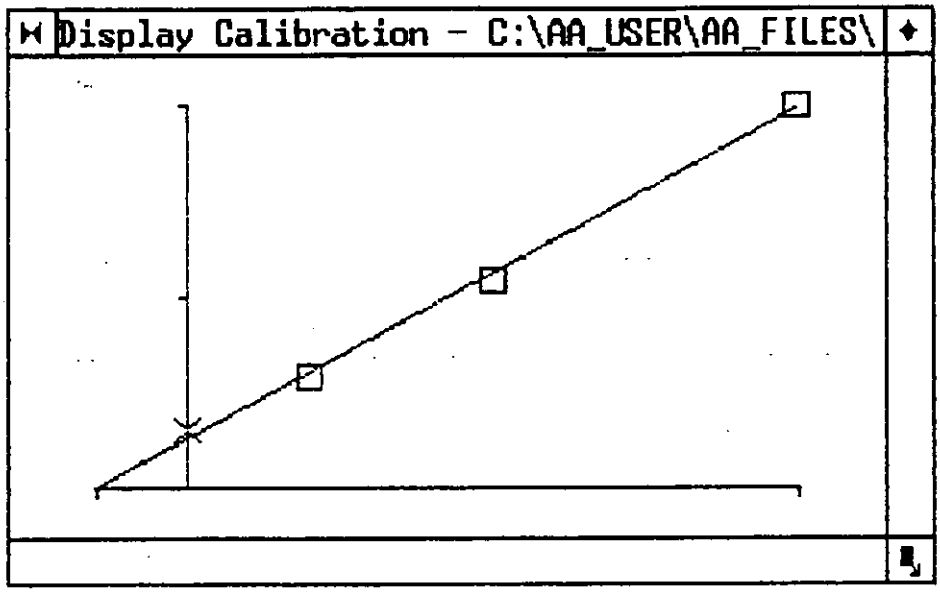
The standard additions calibration curve may not be linear.
Sb ID: 57.113.39/9F Seq. No.: 00126 A/S Pos.: 14 Date: 07/04/92

Concentration (ug/L): 14.9

Correlation coefficient: 0.99837 Slope: 0.0006 Int: 0.009



Sb ID: 57.113.46/10F Seq. No.: 00130 A/S Pos.: 15 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 15
Replicate 1 Time: 22:53
Peak Area (A-s): 0.009 Peak Height (A): 0.010
Background Pk Area (A-s): 0.156 Background Pk Height (A): 0.184
Blank Corrected Pk Area (A-s): 0.009

Sb ID: Standard 1 Seq. No.: 00131 A/S Pos.: 15 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 15
Replicate 1 Time: 22:57
Peak Area (A-s): 0.019 Peak Height (A): 0.022
Background Pk Area (A-s): 0.122 Background Pk Height (A): 0.120
Blank Corrected Pk Area (A-s): 0.018

Sb ID: Standard 2 Seq. No.: 00132 A/S Pos.: 15 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 15
Replicate 1 Time: 23:00
Peak Area (A-s): 0.042 Peak Height (A): 0.037
Background Pk Area (A-s): 0.099 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.042

Sb ID: Standard 3 Seq. No.: 00133 A/S Pos.: 15 Date: 07/04/92

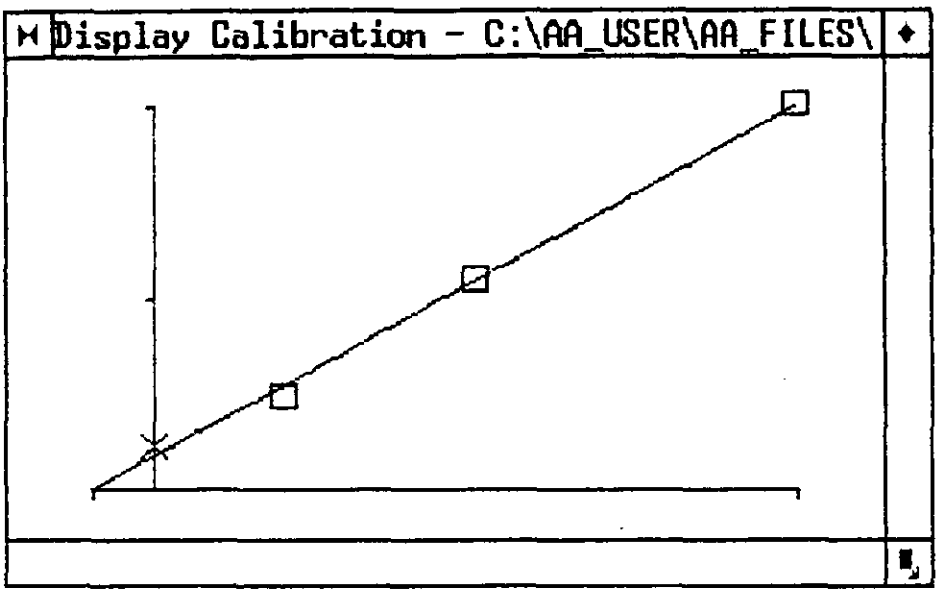
uL dispensed: 5 from 39, 10 from 8, 10 from 15
Replicate 1 Time: 23:04
Peak Area (A-s): 0.077 Peak Height (A): 0.070

Background Pk Area (A-s): 0.090 Background Pk Height (A): 0.100
Blank Corrected Pk Area (A-s): 0.077

The standard additions calibration curve may not be linear.
Sb ID: 57.113.46/10F Seq. No.: 00130 A/S Pos.: 15 Date: 07/04/

Concentration (ug/L): 9.7

Correlation coefficient: 0.99822 Slope: 0.0007 Int: 0.007



Sb ID: 57.113.53/11F Seq. No.: 00134 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 16
Replicate 1 Time: 23:08
Peak Area (A-s): 0.014 Peak Height (A): 0.016
Background Pk Area (A-s): 0.083 Background Pk Height (A): 0.105
Blank Corrected Pk Area (A-s): 0.014

Sb ID: Standard 1 Seq. No.: 00135 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 16
Replicate 1 Time: 23:11
Peak Area (A-s): 0.023 Peak Height (A): 0.021
Background Pk Area (A-s): 0.071 Background Pk Height (A): 0.095
Blank Corrected Pk Area (A-s): 0.023

Sb ID: Standard 2 Seq. No.: 00136 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 16
Replicate 1 Time: 23:15
Peak Area (A-s): 0.037 Peak Height (A): 0.041
Background Pk Area (A-s): 0.085 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.037

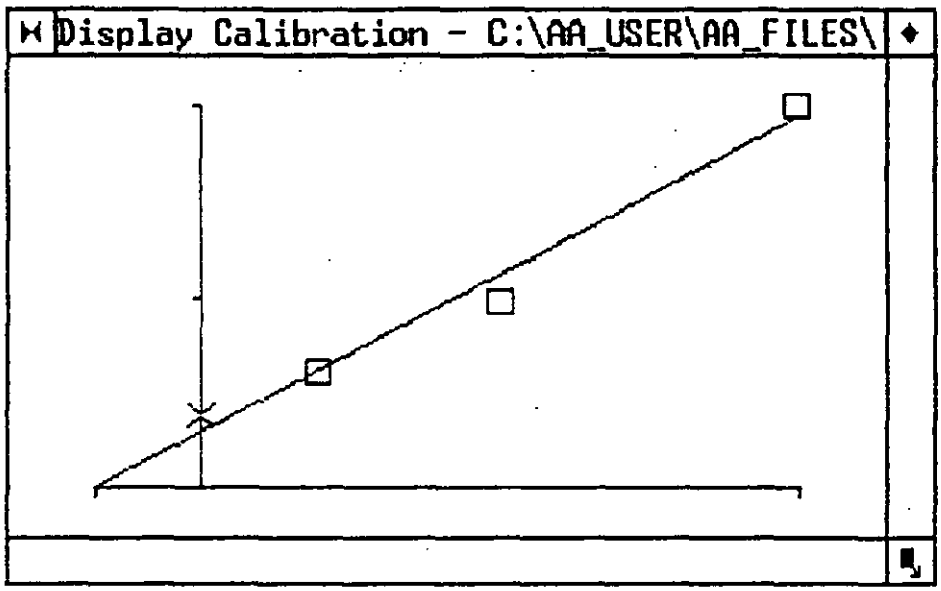
Sb ID: Standard 3 Seq. No.: 00137 A/S Pos.: 16 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 16
Replicate 1 Time: 23:18
Peak Area (A-s): 0.077 Peak Height (A): 0.073
Background Pk Area (A-s): 0.070 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.077

The standard additions calibration curve may not be linear.
Sb ID: 57.113.53/11F Seq. No.: 00134 A/S Pos.: 16 Date: 07/04/92

Concentration (ug/L): 17.8

Correlation coefficient: 0.98998 Slope: 0.0006 Int: 0.011

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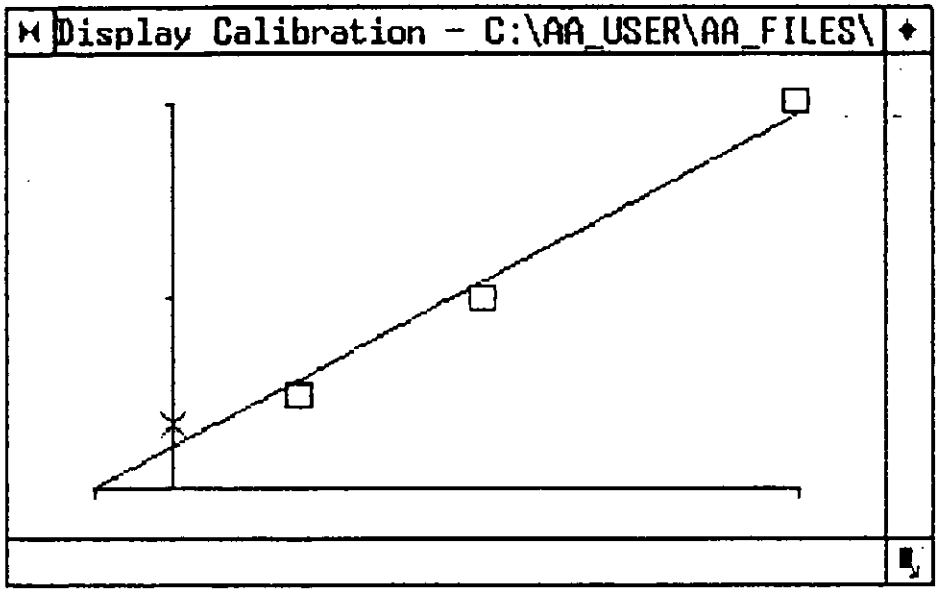
Sb ID: Standard 3 Seq. No.: 00141 A/S Pos.: 17 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 17
Replicate 1 Time: 23:33
Peak Area (A-s): 0.078 Peak Height (A): 0.075
Background Pk Area (A-s): 0.076 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.078

The standard additions calibration curve may not be linear.
Sb ID: 57.113.60/12F Seq. No.: 00138 A/S Pos.: 17 Date: 07/04/92

Concentration (ug/L): 12.7

Correlation coefficient: 0.99122 Slope: 0.0007 Int: 0.008



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Sb ID: 57.113.67/13F Seq. No.: 00142 A/S Pos.: 18 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 18
Replicate 1 Time: 23:37
Peak Area (A-s): 0.014 Peak Height (A): 0.014
Background Pk Area (A-s): 0.074 Background Pk Height (A): 0.125
Blank Corrected Pk Area (A-s): 0.013

Sb ID: Standard 1 Seq. No.: 00143 A/S Pos.: 18 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 18
Replicate 1 Time: 23:41
Peak Area (A-s): 0.019 Peak Height (A): 0.021
Background Pk Area (A-s): 0.067 Background Pk Height (A): 0.112
Blank Corrected Pk Area (A-s): 0.019

Sb ID: Standard 2 Seq. No.: 00144 A/S Pos.: 18 Date: 07/04/

uL dispensed: 5 from 39, 10 from 6, 10 from 18
Replicate 1 Time: 23:44
Peak Area (A-s): 0.040 Peak Height (A): 0.041
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Background Pk Area (A-s): 0.061 Background Pk Height (A): 0.103
Blank Corrected Pk Area (A-s): 0.040

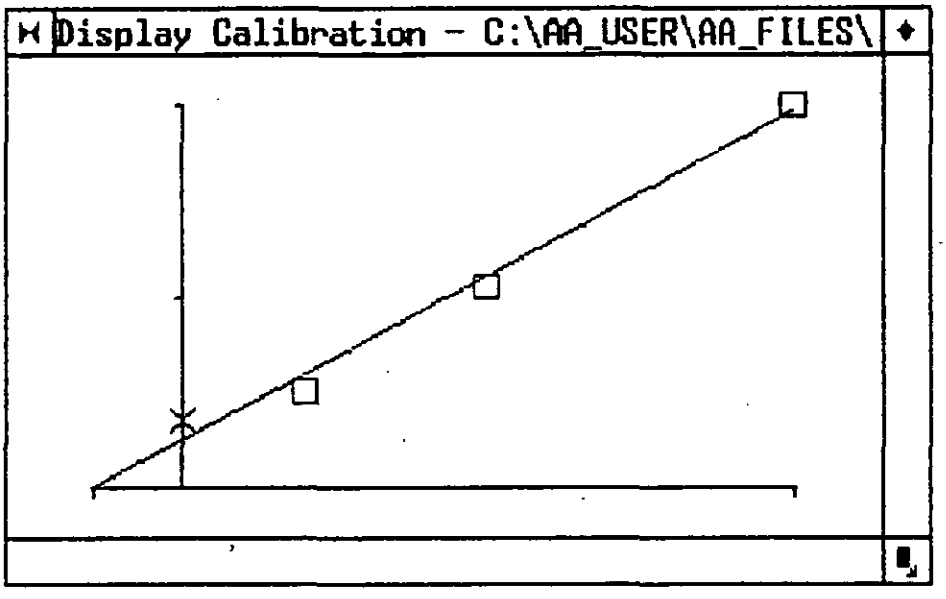
St[redacted] ID: Standard 3 Seq. No.: 00145 A/S Pos.: 18 Date: 07/04/92

L dispensed: 5 from 39, 10 from 8, 10 from 18
Replicate 1 Time: 23:48
Peak Area (A-s): 0.077 Peak Height (A): 0.076
Background Pk Area (A-s): 0.069 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.076

The standard additions calibration curve may not be linear.
[redacted] ID: 57.113.67/13F Seq. No.: 00142 A/S Pos.: 18 Date: 07/04/92

Concentration (ug/L): 14.6

Correlation coefficient: 0.99305 Slope: 0.0007 Int: 0.010



MSA (BH)

Element File: SB_MSA.GEL | Element: Sb | Wavelength: 217.6
Date: 07/04/92 | Time: 16:32 | Slit: 0.70 L
Data File: 070492.DAT | ID/Wt File: 070392.IDW | Lamp Current: 20
Technique: HGA | Calib. Type: Method of Add. | Energy: 61

Sb ID: Blank Seq. No.: 00030 A/S Pos.: 0 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 0
Replicate 1 Time: 16:35
Peak Area (A-s): 0.002 Peak Height (A): 0.006
Background Pk Area (A-s): 0.150 Background Pk Height (A): 0.117
Blank Corrected Pk Area (A-s): 0.002

Auto-zero performed.

Sb ID: 57.113.3/1B Seq. No.: 00031 A/S Pos.: 19 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 19
Replicate 1 Time: 16:38
Peak Area (A-s): 0.046 Peak Height (A): 0.033
Background Pk Area (A-s): 0.344 Background Pk Height (A): 0.167
Blank Corrected Pk Area (A-s): 0.044

Sb ID: Standard 1 Seq. No.: 00032 A/S Pos.: 19 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 19
Replicate 1 Time: 16:42
Peak Area (A-s): 0.069 Peak Height (A): 0.057
Background Pk Area (A-s): 0.293 Background Pk Height (A): 0.156
Blank Corrected Pk Area (A-s): 0.066

Sb ID: Standard 2 Seq. No.: 00033 A/S Pos.: 19 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 19
Replicate 1 Time: 16:45
Peak Area (A-s): 0.091 Peak Height (A): 0.079
Background Pk Area (A-s): 0.282 Background Pk Height (A): 0.153
Blank Corrected Pk Area (A-s): 0.089

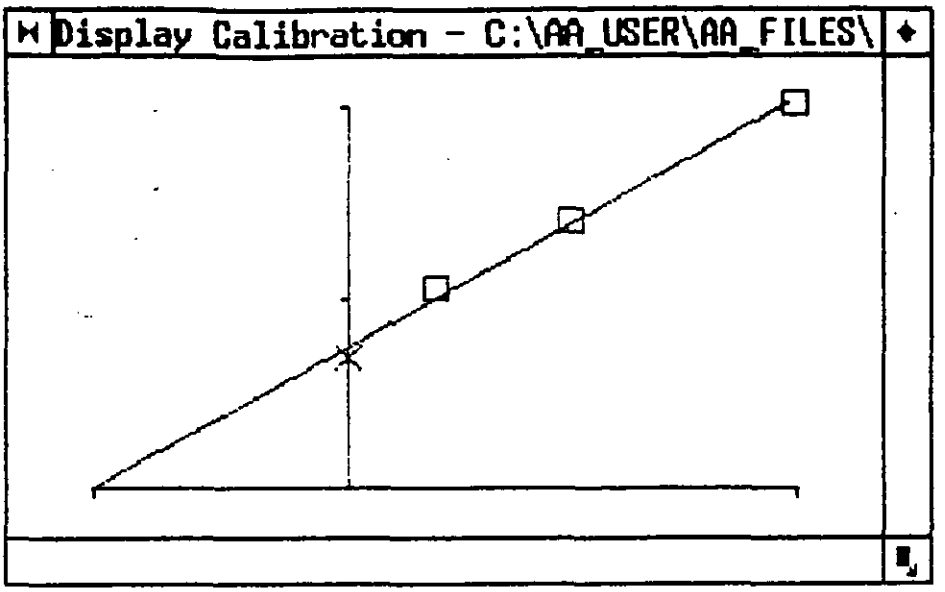
Sb ID: Standard 3 Seq. No.: 00034 A/S Pos.: 19 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 19
Replicate 1 Time: 16:49
Peak Area (A-s): 0.130 Peak Height (A): 0.109
Background Pk Area (A-s): 0.288 Background Pk Height (A): 0.155
Blank Corrected Pk Area (A-s): 0.128

The standard additions calibration curve may not be linear.
Sb ID: 57.113.3/1B Seq. No.: 00031 A/S Pos.: 19 Date: 07/04/92

Concentration (ug/L): 56.9

Correlation coefficient: 0.99696 Slope: 0.0008 Int: 0.047



Sb ID: 57.113.7/2B Seq. No.: 00035 A/S Pos.: 20 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 20
Replicate 1 Time: 16:53
Peak Area (A-s): 0.025 Peak Height (A): 0.018
Background Pk Area (A-s): 0.258 Background Pk Height (A): 0.133
Blank Corrected Pk Area (A-s): 0.022

Sb ID: Standard 1 Seq. No.: 00036 A/S Pos.: 20 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 20
Replicate 1 Time: 16:57
Peak Area (A-s): 0.031 Peak Height (A): 0.024
Background Pk Area (A-s): 0.196 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.028

Sb ID: Standard 2 Seq. No.: 00037 A/S Pos.: 20 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 20
Replicate 1 Time: 17:00
Peak Area (A-s): 0.052 Peak Height (A): 0.039
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): 0.049

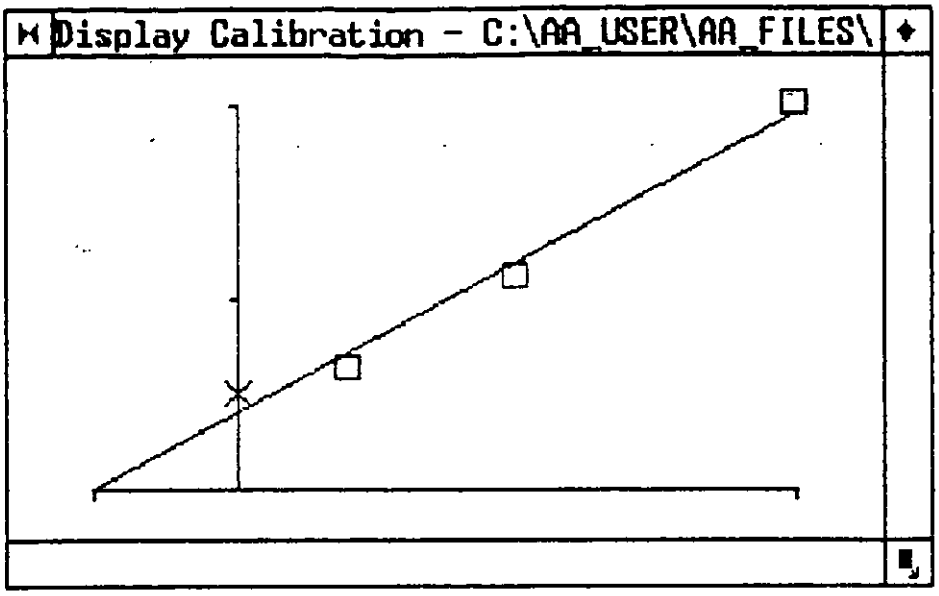
Sb ID: Standard 3 Seq. No.: 00038 A/S Pos.: 20 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 20
Replicate 1 Time: 17:04
Peak Area (A-s): 0.092 Peak Height (A): 0.068
Background Pk Area (A-s): 0.206 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.089

The standard additions calibration curve may not be linear.
Sb ID: 57.113.7/2B Seq. No.: 00035 A/S Pos.: 20 Date: 07/04/92

Concentration (ug/L): 26.1

Correlation coefficient: 0.99108 Slope: 0.0007 Int: 0.018



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Sb ID: 57.113.11/3B Seq. No.: 00039 A/S Pos.: 21 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 21
Replicate 1 Time: 17:08
Peak Area (A-s): 0.015 Peak Height (A): 0.015
Background Pk Area (A-s): 0.223 Background Pk Height (A): 0.116
Blank Corrected Pk Area (A-s): 0.013

Sb ID: Standard 1 Seq. No.: 00040 A/S Pos.: 21 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 21
Replicate 1 Time: 17:11
Peak Area (A-s): 0.020 Peak Height (A): 0.020
Background Pk Area (A-s): 0.187 Background Pk Height (A): 0.099
Blank Corrected Pk Area (A-s): 0.018

Sb ID: Standard 2 Seq. No.: 00041 A/S Pos.: 21 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 21
Replicate 1 Time: 17:15
Peak Area (A-s): 0.043 Peak Height (A): 0.032
Background Pk Area (A-s): 0.164 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.041

Sb ID: Standard 3 Seq. No.: 00042 A/S Pos.: 21 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 21
Replicate 1 Time: 17:19
Peak Area (A-s): 0.077 Peak Height (A): 0.056
Background Pk Area (A-s): 0.170 Background Pk Height (A): 0.109
Blank Corrected Pk Area (A-s): 0.074

The standard additions calibration curve may not be linear.
Sb ID: 57.113.11/3B Seq. No.: 00039 A/S Pos.: 21 Date: 07/04/92
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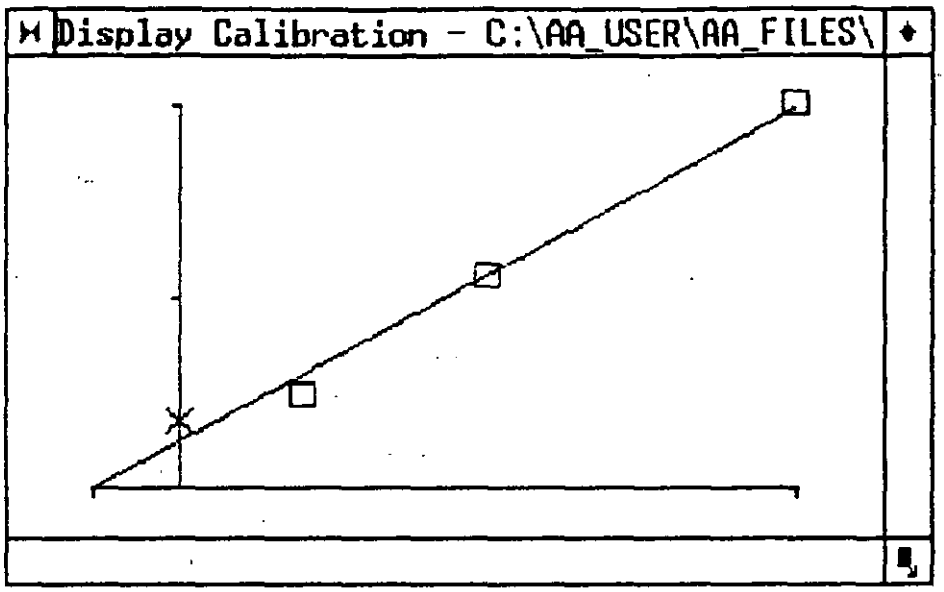
Concentration (ug/L): 14.3

Correlation coefficient: 0.99335 Slope: 0.0006 Int: 0.009



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Sb ID: S7.113.15/4B Seq. No.: 00043 A/S Pos.: 22 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 22
Replicate 1 Time: 17:23
Peak Area (A-s): 0.016 Peak Height (A): 0.016
Background Pk Area (A-s): 0.216 Background Pk Height (A): 0.125
Blank Corrected Pk Area (A-s): 0.013

Sb ID: Standard 1 Seq. No.: 00044 A/S Pos.: 22 Date: 07/04/92

L dispensed: 5 from 39, 10 from 4, 10 from 22
eplicate 1 Time: 17:26
Peak Area (A-s): 0.024 Peak Height (A): 0.020
ackground Pk Area (A-s): 0.161 Background Pk Height (A): 0.098
lank Corrected Pk Area (A-s): 0.021

Sb ID: Standard 2 Seq. No.: 00045 A/S Pos.: 22 Date: 07/04/92

L dispensed: 5 from 39, 10 from 6, 10 from 22
Replicate 1 Time: 17:30
eak Area (A-s): 0.045 Peak Height (A): 0.034
ackground Pk Area (A-s): 0.162 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.043

b ID: Standard 3 Seq. No.: 00046 A/S Pos.: 22 Date: 07/04/92

u spensed: 5 from 39, 10 from 8, 10 from 22
e, icate 1 Time: 17:33
eak Area (A-s): 0.085 Peak Height (A): 0.064
Background Pk Area (A-s): 0.162 Background Pk Height (A): 0.088
lank Corrected Pk Area (A-s): 0.083
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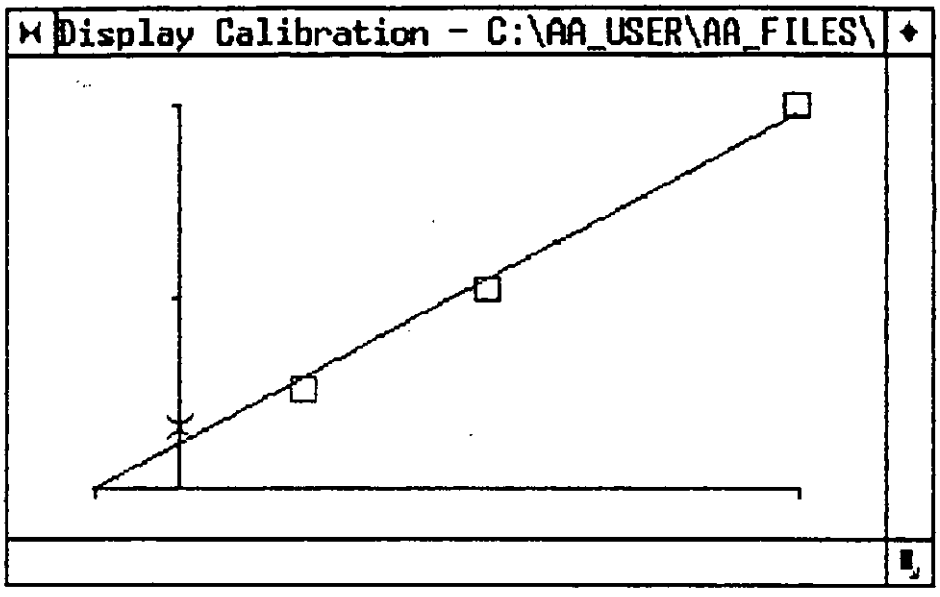
The standard additions calibration curve may not be linear.
Sb ID: 57.113.15/4B Seq. No.: 00043 A/S Pos.: 22 Date: 07/04/92

Concentration (ug/L): 13.7

Correlation coefficient: 0.99475 Slope: 0.0007 Int: 0.010



Sb ID: 57.113.19/5B Seq. No.: 00047 A/S Pos.: 23 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 23
Replicate 1 Time: 17:38
Peak Area (A-s): 0.033 Peak Height (A): 0.022
Background Pk Area (A-s): 0.302 Background Pk Height (A): 0.152
Blank Corrected Pk Area (A-s): 0.031

Sb ID: Standard 1 Seq. No.: 00048 A/S Pos.: 23 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 23
Replicate 1 Time: 17:41
Peak Area (A-s): 0.044 Peak Height (A): 0.039
Background Pk Area (A-s): 0.255 Background Pk Height (A): 0.132
Blank Corrected Pk Area (A-s): 0.042

Sb ID: Standard 2 Seq. No.: 00049 A/S Pos.: 23 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 23
Replicate 1 Time: 17:45
Peak Area (A-s): 0.065 Peak Height (A): 0.057
Background Pk Area (A-s): 0.254 Background Pk Height (A): 0.133
Blank Corrected Pk Area (A-s): 0.063

Sb ID: Standard 3 Seq. No.: 00050 A/S Pos.: 23 Date: 07/04/

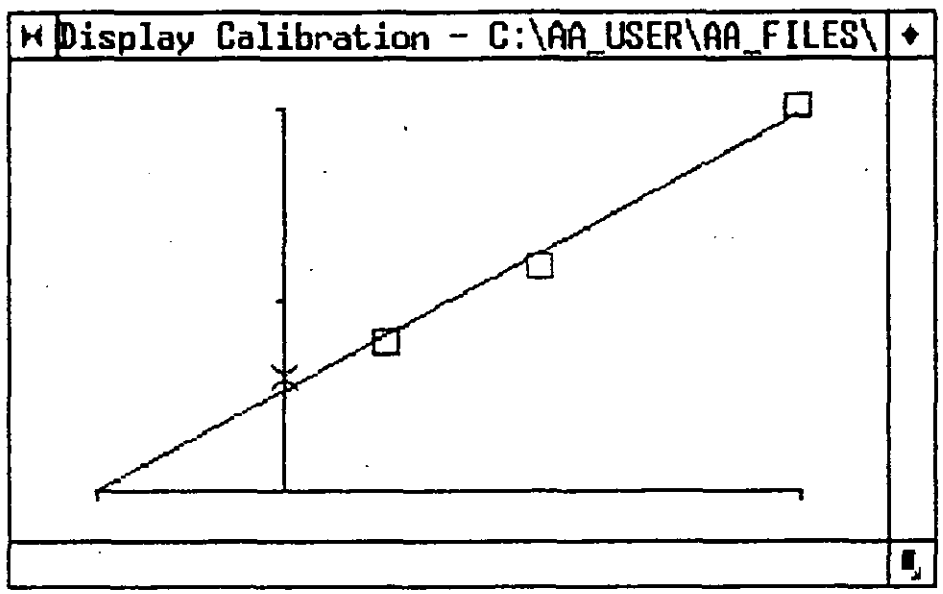
uL dispensed: 5 from 39, 10 from 8, 10 from 23
Replicate 1 Time: 17:48
Peak Area (A-s): 0.110 Peak Height (A): 0.087

Background Pk Area (A-s): 0.255 Background Pk Height (A): 0.132
Blank Corrected Pk Area (A-s): 0.107

The standard additions calibration curve may not be linear.
Sb ID: 57.113.19/5B Seq. No.: 00047 A/S Pos.: 23 Date: 07/04/92

Concentration (ug/L): 36.2

Correlation coefficient: 0.99554 Slope: 0.0008 Int: 0.028



Sb ID: 57.113.23/6B Seq. No.: 00051 A/S Pos.: 24 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 24
Replicate 1 Time: 17:53
Peak Area (A-s): 0.018 Peak Height (A): 0.014
Background Pk Area (A-s): 0.238 Background Pk Height (A): 0.147
Blank Corrected Pk Area (A-s): 0.016

Sb ID: Standard 1 Seq. No.: 00052 A/S Pos.: 24 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 24
Replicate 1 Time: 17:56
Peak Area (A-s): 0.026 Peak Height (A): 0.021
Background Pk Area (A-s): 0.178 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.023

Sb ID: Standard 2 Seq. No.: 00053 A/S Pos.: 24 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 24
Replicate 1 Time: 18:00
Peak Area (A-s): 0.046 Peak Height (A): 0.036
Background Pk Area (A-s): 0.175 Background Pk Height (A): 0.110
Blank Corrected Pk Area (A-s): 0.043

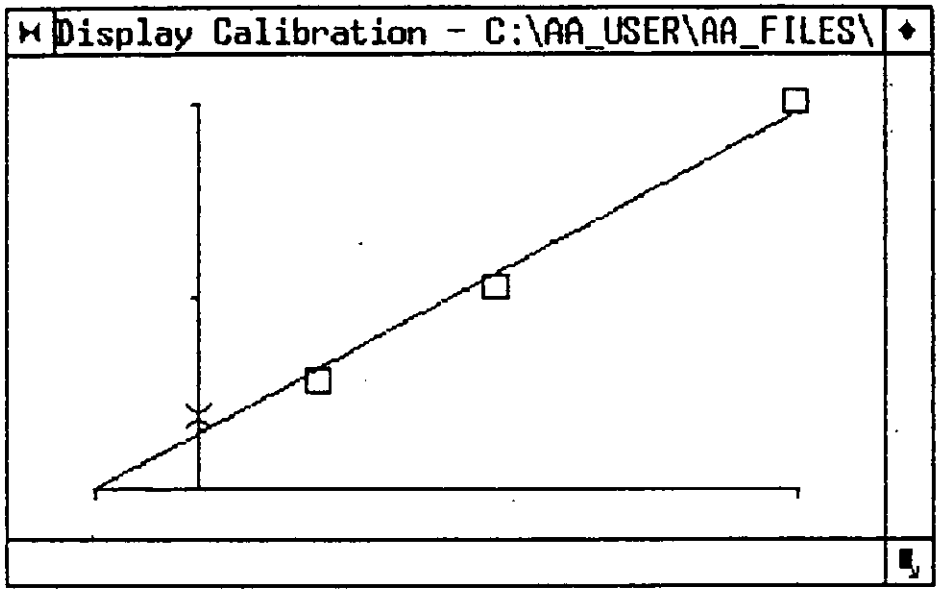
Sb ID: Standard 3 Seq. No.: 00054 A/S Pos.: 24 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 24
Replicate 1 Time: 18:03
Peak Area (A-s): 0.086 Peak Height (A): 0.066
Background Pk Area (A-s): 0.178 Background Pk Height (A): 0.123
Blank Corrected Pk Area (A-s): 0.083

The standard additions calibration curve may not be linear.
Sb ID: 57.113.23/6B Seq. No.: 00051 A/S Pos.: 24 Date: 07/04/92

Concentration (ug/L): 17.1

Correlation coefficient: 0.99369 Slope: 0.0007 Int: 0.012



Sb ID: 57.113.29/7B Seq. No.: 00055 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 25
Replicate 1 Time: 18:07
Peak Area (A-s): 0.012 Peak Height (A): 0.013
Background Pk Area (A-s): 0.206 Background Pk Height (A): 0.151
Blank Corrected Pk Area (A-s): 0.010

Sb ID: Standard 1 Seq. No.: 00056 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 25
Replicate 1 Time: 18:11
Peak Area (A-s): 0.020 Peak Height (A): 0.017
Background Pk Area (A-s): 0.150 Background Pk Height (A): 0.089
Blank Corrected Pk Area (A-s): 0.018

Sb ID: Standard 2 Seq. No.: 00057 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 25
Replicate 1 Time: 18:14
Peak Area (A-s): 0.042 Peak Height (A): 0.034
Background Pk Area (A-s): 0.149 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.039

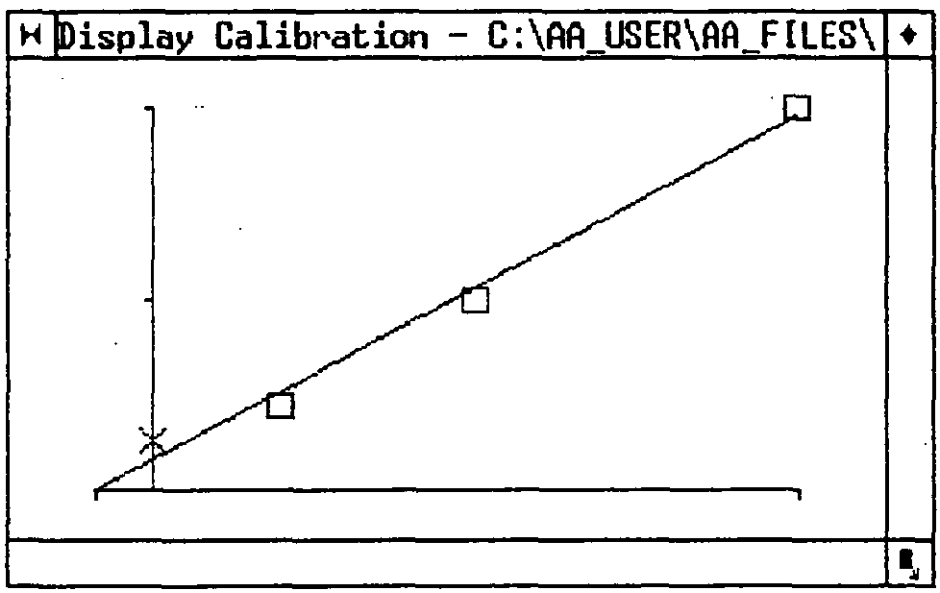
Sb ID: Standard 3 Seq. No.: 00058 A/S Pos.: 25 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 25
Replicate 1 Time: 18:18
Peak Area (A-s): 0.082 Peak Height (A): 0.063
Background Pk Area (A-s): 0.152 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): 0.080

The standard additions calibration curve may not be linear.
Sb ID: 57.113.29/7B Seq. No.: 00055 A/S Pos.: 25 Date: 07/04/92

Concentration (ug/L): 8.7

Correlation coefficient: 0.99453 Slope: 0.0007 Int: 0.006



Sb ID: 57.113.36/8B Seq. No.: 00059 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 26
Replicate 1 Time: 18:22
Peak Area (A-s): 0.014 Peak Height (A): 0.016
Background Pk Area (A-s): 0.197 Background Pk Height (A): 0.112
Blank Corrected Pk Area (A-s): 0.012

Sb ID: Standard 1 Seq. No.: 00060 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 26
Replicate 1 Time: 18:25
Peak Area (A-s): 0.023 Peak Height (A): 0.019
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.020

Sb ID: Standard 2 Seq. No.: 00061 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 26
Replicate 1 Time: 18:29
Peak Area (A-s): 0.042 Peak Height (A): 0.034

Background Pk Area (A-s): 0.147 Background Pk Height (A): 0.069
Blank Corrected Pk Area (A-s): 0.039

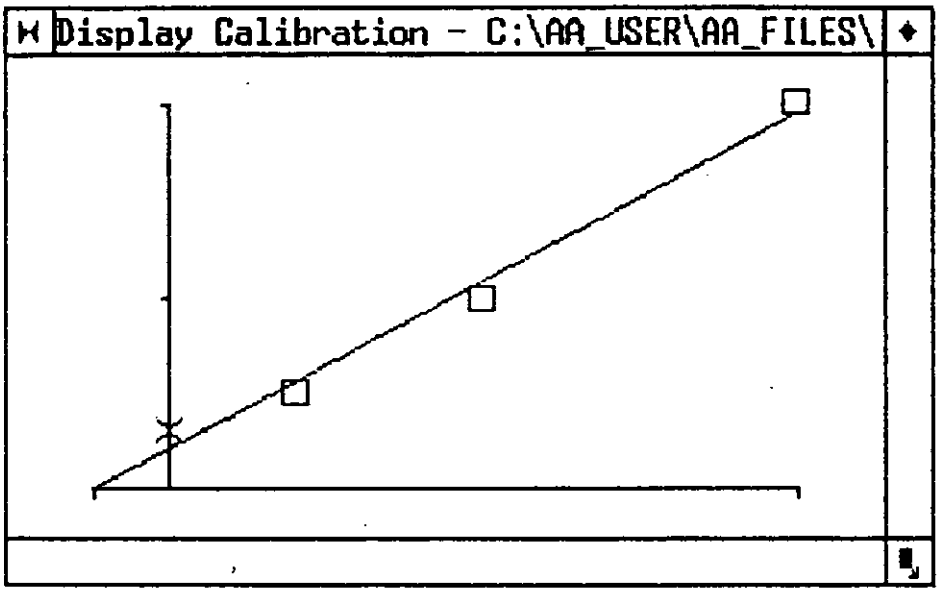
Sb ID: Standard 3 Seq. No.: 00062 A/S Pos.: 26 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 26
Replicate 1 Time: 18:32
Peak Area (A-s): 0.083 Peak Height (A): 0.062
Background Pk Area (A-s): 0.144 Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.080

The standard additions calibration curve may not be linear.
Sb ID: 57.113.36/8B Seq. No.: 00059 A/S Pos.: 26 Date: 07/04/92

Concentration (ug/L): 11.7

Correlation coefficient: 0.99361 Slope: 0.0007 Int: 0.008

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uL dispensed: 5 from 39, 10 from 6, 10 from 27
Replicate 1 Time: 18:43
Peak Area (A-s): 0.035 Peak Height (A): 0.031
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): 0.033

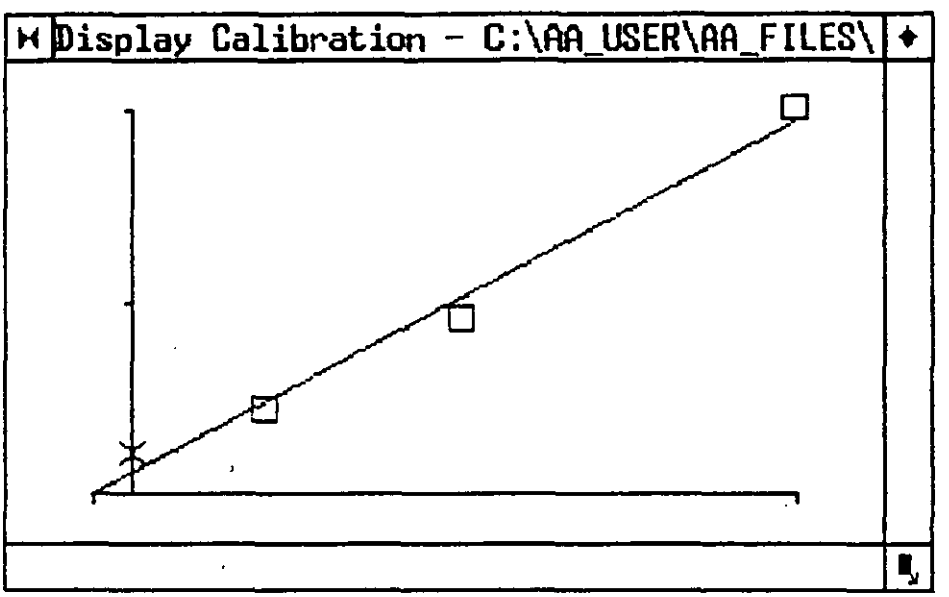
Sample ID: Standard 3 Seq. No.: 00066 A/S Pos.: 27 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 27
Replicate 1 Time: 18:47
Peak Area (A-s): 0.076 Peak Height (A): 0.056
Background Pk Area (A-s): 0.146 Background Pk Height (A): 0.068
Blank Corrected Pk Area (A-s): 0.073

The standard additions calibration curve may not be linear.
Sample ID: 57.3113.43/9B Seq. No.: 00063 A/S Pos.: 27 Date: 07/04/92

Concentration (ug/L): 6.2

Correlation coefficient: 0.99176 Slope: 0.0007 Int: 0.004



Sample ID: 57.113.50/10B Seq. No.: 00067 A/S Pos.: 28 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 28
Replicate 1 Time: 18:51
Peak Area (A-s): 0.010 Peak Height (A): 0.012
Background Pk Area (A-s): 0.187 Background Pk Height (A): 0.102
Blank Corrected Pk Area (A-s): 0.008

Sample ID: Standard 1 Seq. No.: 00068 A/S Pos.: 28 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 28
Replicate 1 Time: 18:54
Peak Area (A-s): 0.018 Peak Height (A): 0.018
Background Pk Area (A-s): 0.144 Background Pk Height (A): 0.069
Blank Corrected Pk Area (A-s): 0.016

Sb ID: Standard 2 Seq. No.: 00069 A/S Pos.: 28 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 28
Replicate 1 Time: 18:58
Peak Area (A-s): 0.041 Peak Height (A): 0.034
Background Pk Area (A-s): 0.143 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): 0.039

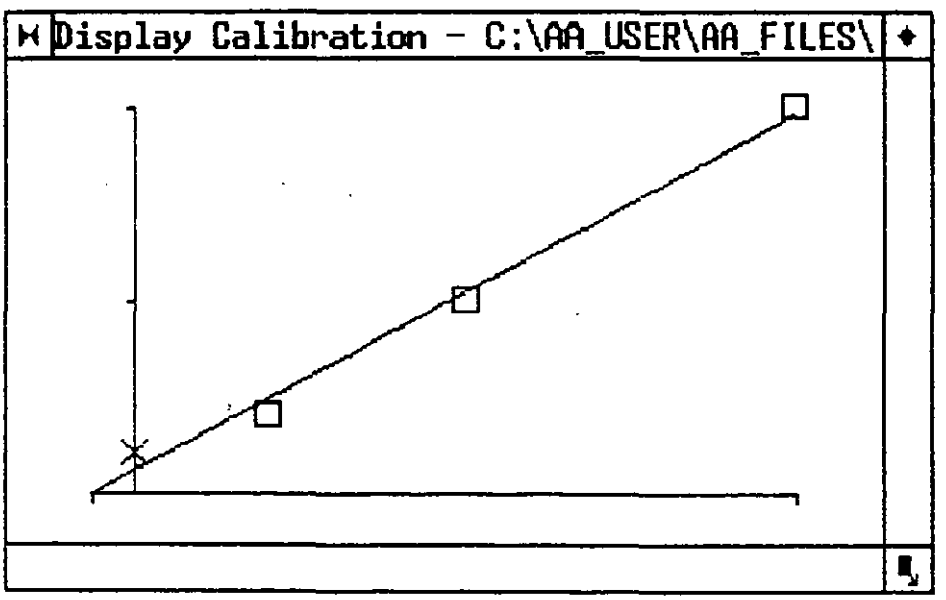
Sb ID: Standard 3 Seq. No.: 00070 A/S Pos.: 28 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 28
Replicate 1 Time: 19:01
Peak Area (A-s): 0.080 Peak Height (A): 0.060
Background Pk Area (A-s): 0.144 Background Pk Height (A): 0.067
Blank Corrected Pk Area (A-s): 0.078

The standard additions calibration curve may not be linear.
Sb ID: 57.113.50/10B Seq. No.: 00067 A/S Pos.: 28 Date: 07/04/92

Concentration (ug/L): 6.5

Correlation coefficient: 0.99556 Slope: 0.0007 Int: 0.005



Sb ID: 57.113.57/11B Seq. No.: 00071 A/S Pos.: 29 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 29
Replicate 1 Time: 19:05
Peak Area (A-s): 0.012 Peak Height (A): 0.014
Background Pk Area (A-s): 0.185 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): 0.009

Sb ID: Standard 1 Seq. No.: 00072 A/S Pos.: 29 Date: 07/04/

uL dispensed: 5 from 39, 10 from 4, 10 from 29
Replicate 1 Time: 19:09
Peak Area (A-s): 0.024 Peak Height (A): 0.020

Background Pk Area (A-s): 0.140 Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): 0.021

Sb ID: Standard 2 Seq. No.: 00073 A/S Pos.: 29 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 29
Replicate 1 Time: 19:12
Peak Area (A-s): 0.047 Peak Height (A): 0.037
Background Pk Area (A-s): 0.140 Background Pk Height (A): 0.069
Blank Corrected Pk Area (A-s): 0.045

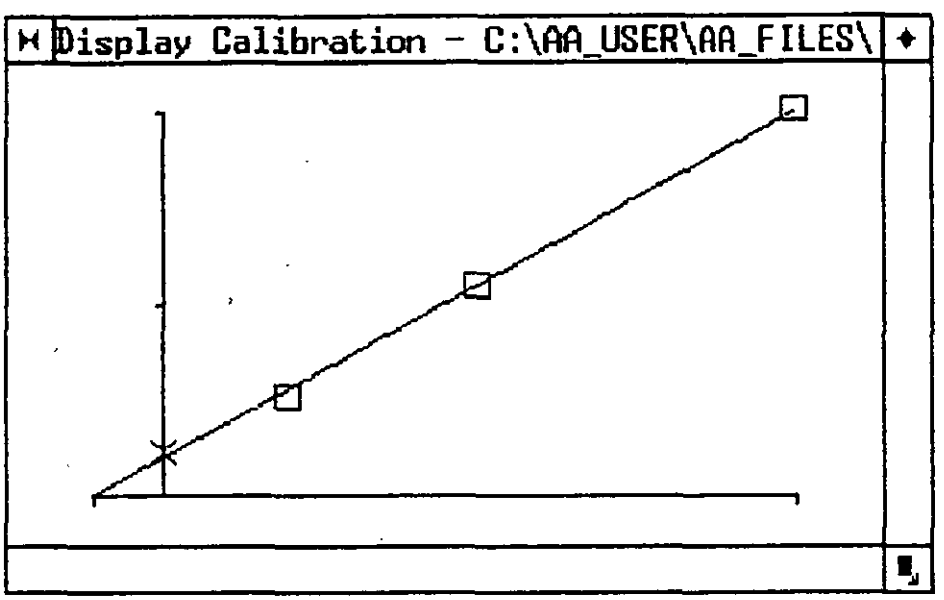
Sb ID: Standard 3 Seq. No.: 00074 A/S Pos.: 29 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 29
Replicate 1 Time: 19:16
Peak Area (A-s): 0.084 Peak Height (A): 0.062
Background Pk Area (A-s): 0.144 Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.082

The standard additions calibration curve may not be linear.
Sb ID: 57.113.57/11B Seq. No.: 00071 A/S Pos.: 29 Date: 07/04/92

Concentration (ug/L): 11.0

Correlation coefficient: 0.99935 Slope: 0.0007 Int: 0.008



Sb ID: 57.113.64/12B Seq. No.: 00075 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 30
Replicate 1 Time: 19:20
Peak Area (A-s): 0.015 Peak Height (A): 0.015
Background Pk Area (A-s): 0.180 Background Pk Height (A): 0.093
Blank Corrected Pk Area (A-s): 0.013

Sb ID: Standard 1 Seq. No.: 00076 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 4, 10 from 30
Replicate 1 Time: 19:23
Peak Area (A-s): 0.019 Peak Height (A): 0.018
Background Pk Area (A-s): 0.141 Background Pk Height (A): 0.067
Blank Corrected Pk Area (A-s): 0.017

Sb ID: Standard 2 Seq. No.: 00077 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 30
Replicate 1 Time: 19:27
Peak Area (A-s): 0.040 Peak Height (A): 0.032
Background Pk Area (A-s): 0.140 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.038

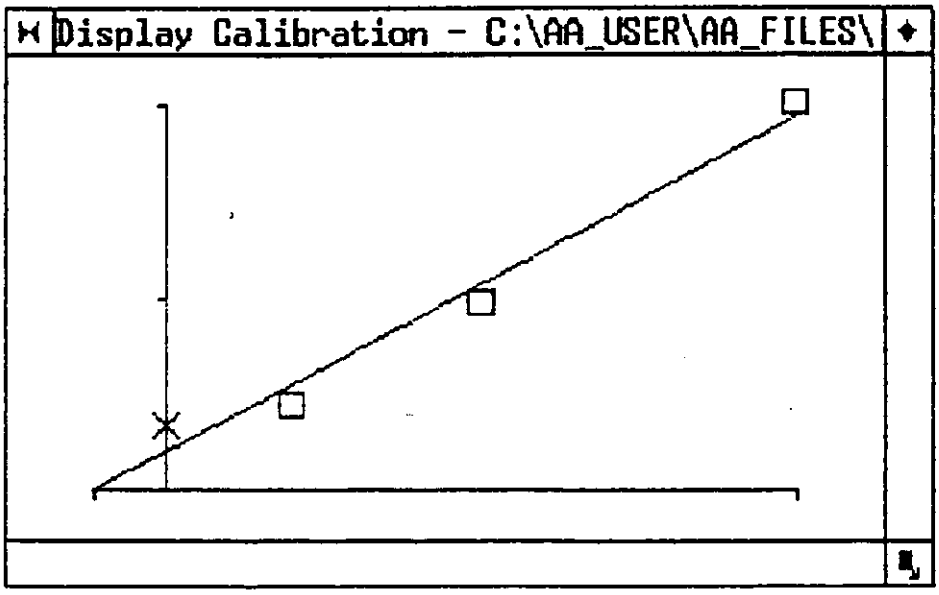
Sb ID: Standard 3 Seq. No.: 00078 A/S Pos.: 30 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 8, 10 from 30
Replicate 1 Time: 19:30
Peak Area (A-s): 0.079 Peak Height (A): 0.058
Background Pk Area (A-s): 0.140 Background Pk Height (A): 0.065
Blank Corrected Pk Area (A-s): 0.077

The standard additions calibration curve may not be linear.
Sb ID: 57.113.64/12B Seq. No.: 00075 A/S Pos.: 30 Date: 07/04/92

Concentration (ug/L): 11.2

Correlation coefficient: 0.98791 Slope: 0.0007 Int: 0.008



Sb ID: 57.113.71/13B Seq. No.: 00079 A/S Pos.: 31 Date: 07/04/92

uL dispensed: 10 from 0, 5 from 39, 10 from 31
Replicate 1 Time: 19:35
Peak Area (A-s): 0.009 Peak Height (A): 0.016
Background Pk Area (A-s): 0.159 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.007

Sb ID: Standard 1 Seq. No.: 00080 A/S Pos.: 31 Date: 07/04/92

L dispensed: 5 from 39, 10 from 4, 10 from 31
Replicate 1 Time: 19:38
Peak Area (A-s): 0.015 Peak Height (A): 0.016
Background Pk Area (A-s): 0.127 Background Pk Height (A): 0.052
Blank Corrected Pk Area (A-s): 0.013

Sb ID: Standard 2 Seq. No.: 00081 A/S Pos.: 31 Date: 07/04/92

uL dispensed: 5 from 39, 10 from 6, 10 from 31
Replicate 1 Time: 19:42
Peak Area (A-s): 0.038 Peak Height (A): 0.031
Background Pk Area (A-s): 0.121 Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.036

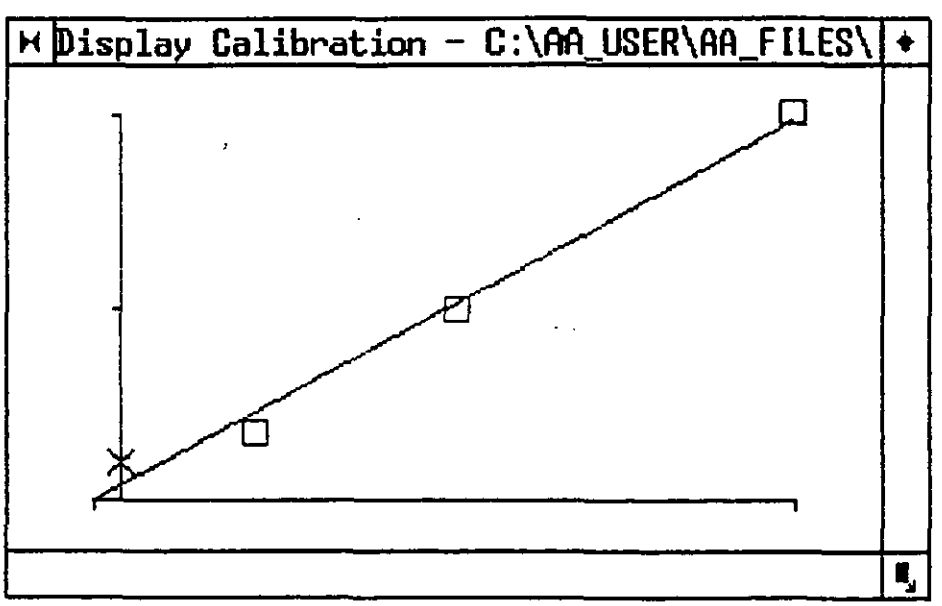
Sb ID: Standard 3 Seq. No.: 00082 A/S Pos.: 31 Date: 07/04/92

L dispensed: 5 from 39, 10 from 8, 10 from 31
Replicate 1 Time: 19:45
Peak Area (A-s): 0.075 Peak Height (A): 0.057
Background Pk Area (A-s): 0.121 Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.073

The standard additions calibration curve may not be linear.
Sb ID: 57.113.71/13B Seq. No.: 00079 A/S Pos.: 31 Date: 07/04/92

Concentration (ug/L): 4.1

elation coefficient: 0.99346 Slope: 0.0007 Int: 0.003



BH MSAJ

Element File: TL_MSA.GEL | Element: Tl | Wavelenoth: 276.8
Date: 07/06/92 | Time: 09:08 | Slit: 0.70 L
Data File: | ID/Wt File: 070392.IDW | Lamp Current: 0
Technique: HGA | Calib. Type: Method of Add. | Energy: 71

Tl ID: Blank Seq. No.: 00001 A/S Pos.: 0 Date: 07/06/92

uL dispensed: 5 from 39, 30 from 0
Replicate 1 Time: 09:11
Peak Area (A-s): 0.001 Peak Height (A): 0.003
Background Pk Area (A-s): 0.069 Background Pk Height (A): 0.055
Blank Corrected Pk Area (A-s): 0.001

Auto-zero performed.

Tl ID: 57.113.3/1B Seq. No.: 00002 A/S Pos.: 19 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 19
Replicate 1 Time: 09:14
Peak Area (A-s): 0.032 Peak Height (A): 0.073
Background Pk Area (A-s): 0.236 Background Pk Height (A): 0.149
Blank Corrected Pk Area (A-s): 0.031

Tl ID: Standard 1 Seq. No.: 00003 A/S Pos.: 19 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 19
Replicate 1 Time: 09:18
Peak Area (A-s): 0.054 Peak Height (A): 0.122
Background Pk Area (A-s): 0.518 Background Pk Height (A): 0.160
Blank Corrected Pk Area (A-s): 0.053

Tl ID: Standard 2 Seq. No.: 00004 A/S Pos.: 19 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 19
Replicate 1 Time: 09:21
Peak Area (A-s): 0.073 Peak Height (A): 0.162
Background Pk Area (A-s): 0.310 Background Pk Height (A): 0.111
Blank Corrected Pk Area (A-s): 0.072

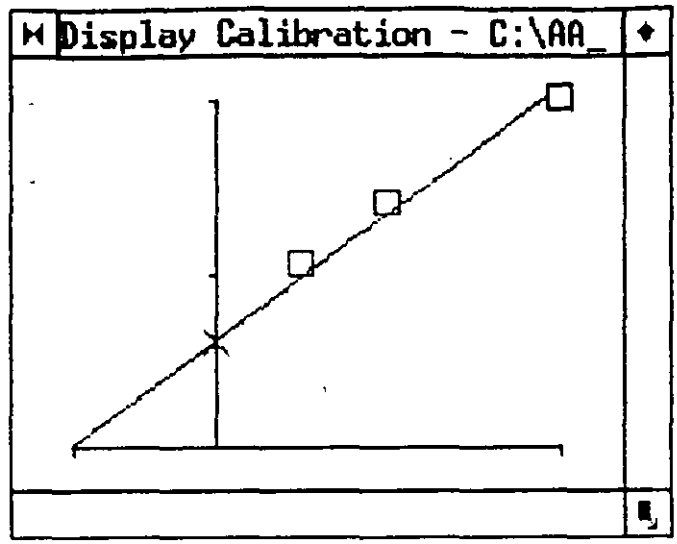
Tl ID: Standard 3 Seq. No.: 00005 A/S Pos.: 19 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 19
Replicate 1 Time: 09:25
Peak Area (A-s): 0.103 Peak Height (A): 0.235
Background Pk Area (A-s): 0.462 Background Pk Height (A): 0.144
Blank Corrected Pk Area (A-s): 0.103

The standard additions calibration curve may not be linear.
Tl ID: 57.113.3/1B Seq. No.: 00002 A/S Pos.: 19 Date: 07/06/92

Concentration (ug/L): 16.5

Correlation coefficient: 0.98751 Slope: 0.0019



1B

T1 ID: 57.113.7/2B Seq. No.: 00006 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 20
Replicate 1 Time: 09:29
Peak Area (A-s): 0.027 Peak Height (A): 0.051
Background Pk Area (A-s): 0.210 Background Pk Height (A): 0.116
Corrected Pk Area (A-s): 0.026

T1 ID: Standard 1 Seq. No.: 00007 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 20
Replicate 1 Time: 09:32
Peak Area (A-s): 0.034 Peak Height (A): 0.079
Background Pk Area (A-s): 0.181 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.033

T1 ID: Standard 2 Seq. No.: 00008 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 20
Replicate 1 Time: 09:36
Peak Area (A-s): 0.053 Peak Height (A): 0.122
Background Pk Area (A-s): 0.334 Background Pk Height (A): 0.104
Blank Corrected Pk Area (A-s): 0.052

T1 ID: Standard 3 Seq. No.: 00009 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 20
Replicate 1 Time: 09:39
Peak Area (A-s): 0.097 Peak Height (A): 0.205
Background Pk Area (A-s): 0.332 Background Pk Height (A): 0.144
Blank Corrected Pk Area (A-s): 0.096

Standard additions calibration curve may not be linear.
T1 ID: 57.113.7/2B Seq. No.: 00006 A/S Pos.: 20 Date: 07/06/92

Concentration (ug/L): 15.9

Correlation coefficient: 0.93588 Slope: 0.0017

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ID: Blank Seq. No.: 00001 A/S Pos.: 0 Date: 07/06/92

uL dispensed: 5 from 39, 30 from 0
Replicate 1 Time: 10:09
Peak Area (A-s): 0.001 Peak Height (A): 0.003
Background Pk Area (A-s): 0.058 Background Pk Height (A): 0.030
Blank Corrected Pk Area (A-s): 0.000

Auto-zero performed.

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ID: 57.113.7/2B Seq. No.: 00002 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 20
Replicate 1 Time: 10:13
Peak Area (A-s): 0.012 Peak Height (A): 0.029
Background Pk Area (A-s): 0.232 Background Pk Height (A): 0.125
Blank Corrected Pk Area (A-s): 0.011

ID: Standard 1 Seq. No.: 00003 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 20
Replicate 1 Time: 10:16
Peak Area (A-s): 0.038 Peak Height (A): 0.098
Background Pk Area (A-s): 0.154 Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.037

ID: Standard 2 Seq. No.: 00004 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 20
Replicate 1 Time: 10:20
Peak Area (A-s): 0.064 Peak Height (A): 0.151
Background Pk Area (A-s): 0.165 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.063

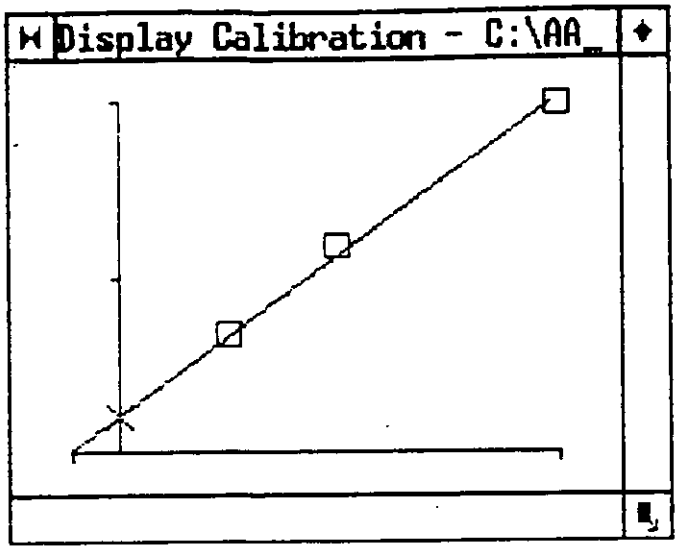
ID: Standard 3 Seq. No.: 00005 A/S Pos.: 20 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 20
Replicate 1 Time: 10:24
Peak Area (A-s): 0.110 Peak Height (A): 0.250
Background Pk Area (A-s): 0.195 Background Pk Height (A): 0.148
Blank Corrected Pk Area (A-s): 0.109

ID: 57.113.7/2B Seq. No.: 00002 A/S Pos.: 20 Date: 07/06/92

Concentration (ug/L): 4.3

Correlation coefficient: 0.99797 Slope: 0.0025



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T1 ID: 57.113.11/3B Seq. No.: 00006 A/S Pos.: 21 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 21
Replicate 1 Time: 10:28
Peak Area (A-s): 0.002 Peak Height (A): 0.004
Background Pk Area (A-s): 0.218 Background Pk Height (A): 0.119
Blank Corrected Pk Area (A-s): 0.001

T1 ID: Standard 1 Seq. No.: 00007 A/S Pos.: 21 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 21
Replicate 1 Time: 10:31
Peak Area (A-s): 0.032 Peak Height (A): 0.079
Background Pk Area (A-s): 0.169 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.031

T1 ID: Standard 2 Seq. No.: 00008 A/S Pos.: 21 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 21
Replicate 1 Time: 10:35
Peak Area (A-s): 0.059 Peak Height (A): 0.144
Background Pk Area (A-s): 0.188 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.058

T1 ID: Standard 3 Seq. No.: 00009 A/S Pos.: 21 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 21
Replicate 1 Time: 10:38
Peak Area (A-s): 0.113 Peak Height (A): 0.254
Background Pk Area (A-s): 0.225 Background Pk Height (A): 0.150
Blank Corrected Pk Area (A-s): 0.112

T1 ID: 57.113.11/3B Seq. No.: 00006 A/S Pos.: 21 Date: 07/06/92

Concentration (ug/L): 0.4
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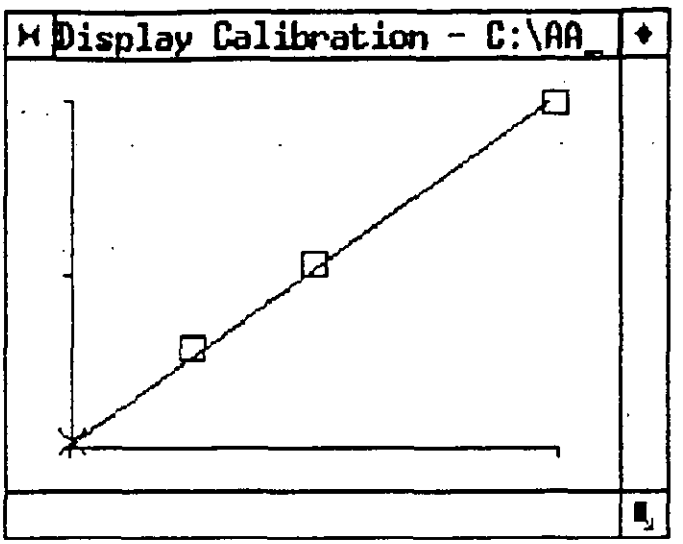
Correlation coefficient: 0.99878 Slope: 0.0028

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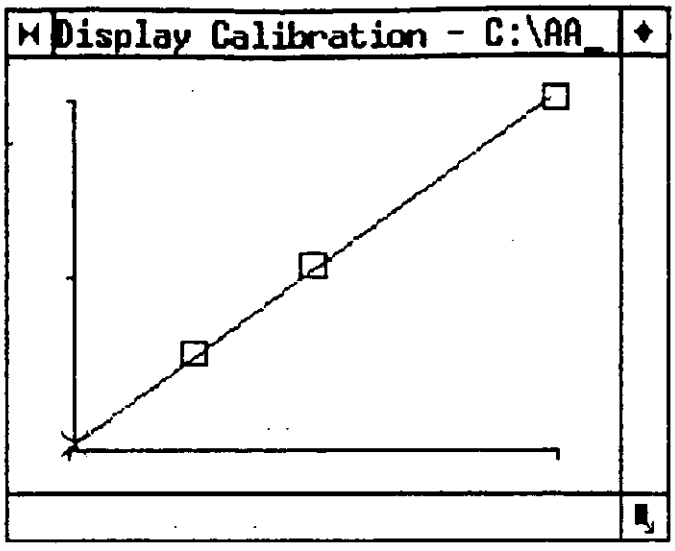
Correlation coefficient: 0.99909 Slope: 0.0029



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T1 ID: 57.113.19/5B Seq. No.: 00014 A/S Pos.: 23 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 23
Replicate 1 Time: 10:57
Peak Area (A-s): 0.038 Peak Height (A): 0.104
Background Pk Area (A-s): 0.227 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.037

T1 ID: Standard 1 Seq. No.: 00015 A/S Pos.: 23 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 23
Replicate 1 Time: 11:01
Peak Area (A-s): 0.055 Peak Height (A): 0.139
Background Pk Area (A-s): 0.159 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.054

T1 ID: Standard 2 Seq. No.: 00016 A/S Pos.: 23 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 23
Replicate 1 Time: 11:04
Peak Area (A-s): 0.074 Peak Height (A): 0.178
Background Pk Area (A-s): 0.166 Background Pk Height (A): 0.100
Blank Corrected Pk Area (A-s): 0.073

T1 ID: Standard 3 Seq. No.: 00017 A/S Pos.: 23 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 23
Replicate 1 Time: 11:08
Peak Area (A-s): 0.112 Peak Height (A): 0.257
Background Pk Area (A-s): 0.180 Background Pk Height (A): 0.152
Blank Corrected Pk Area (A-s): 0.111

T1 ID: 57.113.19/5B Seq. No.: 00014 A/S Pos.: 23 Date: 07/06/92

Concentration (ug/L): 20.6
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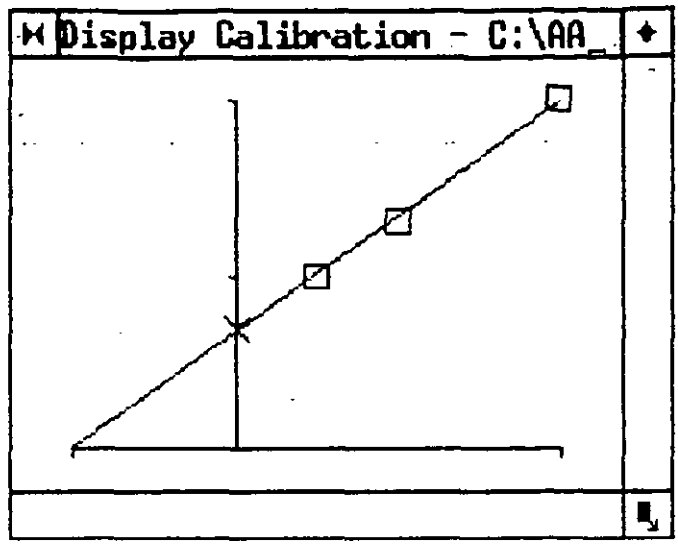
Correlation coefficient: 0.99881 Slope: 0.0018



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T1 ID: 57.113.23/6B Seq. No.: 00018 A/S Pos.: 24 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 24
Replicate 1 Time: 11:12
Peak Area (A-s): 0.006 Peak Height (A): 0.013
Background Pk Area (A-s): 0.142 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.005

T1 ID: Standard 1 Seq. No.: 00019 A/S Pos.: 24 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 24
Replicate 1 Time: 11:16
Peak Area (A-s): 0.033 Peak Height (A): 0.080
Background Pk Area (A-s): 0.119 Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): 0.032

T1 ID: Standard 2 Seq. No.: 00020 A/S Pos.: 24 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 24
Replicate 1 Time: 11:19
Peak Area (A-s): 0.059 Peak Height (A): 0.143
Background Pk Area (A-s): 0.137 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.058

T1 ID: Standard 3 Seq. No.: 00021 A/S Pos.: 24 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 24
Replicate 1 Time: 11:23
Peak Area (A-s): 0.111 Peak Height (A): 0.265
Background Pk Area (A-s): 0.161 Background Pk Height (A): 0.152
Blank Corrected Pk Area (A-s): 0.110

T1 ID: 57.113.23/6B Seq. No.: 00018 A/S Pos.: 24 Date: 07/06/92

Concentration (ug/L): 1.9
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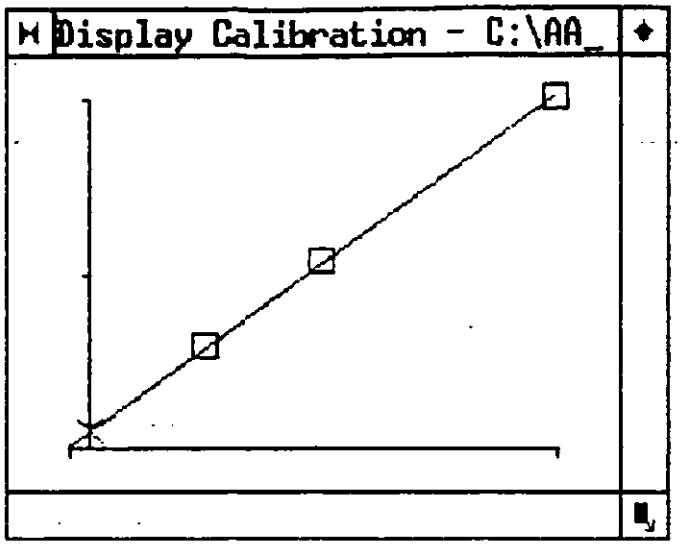
Correlation coefficient: 0.99991 Slope: 0.0026



T1 ID: 57.113.29/7B Seq. No.: 00022 A/S Pos.: 25 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 25
Replicate 1 Time: 11:27
Peak Area (A-s): 0.002 Peak Height (A): 0.005
Background Pk Area (A-s): 0.112 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.001

T1 ID: Standard 1 Seq. No.: 00023 A/S Pos.: 25 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 25
Replicate 1 Time: 11:30
Peak Area (A-s): 0.030 Peak Height (A): 0.076
Background Pk Area (A-s): 0.109 Background Pk Height (A): 0.063
Blank Corrected Pk Area (A-s): 0.029

T1 ID: Standard 2 Seq. No.: 00024 A/S Pos.: 25 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 25
Replicate 1 Time: 11:34
Peak Area (A-s): 0.057 Peak Height (A): 0.140
Background Pk Area (A-s): 0.124 Background Pk Height (A): 0.076
Blank Corrected Pk Area (A-s): 0.056

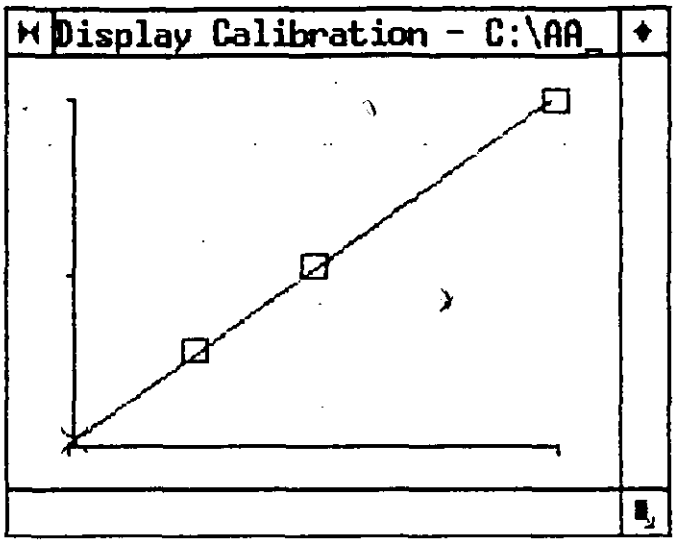
T1 ID: Standard 3 Seq. No.: 00025 A/S Pos.: 25 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 25
Replicate 1 Time: 11:38
Peak Area (A-s): 0.108 Peak Height (A): 0.247
Background Pk Area (A-s): 0.153 Background Pk Height (A): 0.149
Blank Corrected Pk Area (A-s): 0.107

T1 ID: 57.113.29/7B Seq. No.: 00022 A/S Pos.: 25 Date: 07/06/92

Concentration (ug/L): 0.6

Correlation coefficient: 0.99950 Slope: 0.0027



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T1 ID: 57.113.36/8B Seq. No.: 00026 A/S Pos.: 26 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 26
Replicate 1 Time: 11:42
Peak Area (A-s): 0.003 Peak Height (A): 0.005
Background Pk Area (A-s): 0.117 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.002

T1 ID: Standard 1 Seq. No.: 00027 A/S Pos.: 26 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 26
Replicate 1 Time: 11:45
Peak Area (A-s): 0.030 Peak Height (A): 0.075
Background Pk Area (A-s): 0.102 Background Pk Height (A): 0.058
Blank Corrected Pk Area (A-s): 0.029

T1 ID: Standard 2 Seq. No.: 00028 A/S Pos.: 26 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 26
Replicate 1 Time: 11:49
Peak Area (A-s): 0.057 Peak Height (A): 0.141
Background Pk Area (A-s): 0.116 Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.056

T1 ID: Standard 3 Seq. No.: 00029 A/S Pos.: 26 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 26
Replicate 1 Time: 11:52
Peak Area (A-s): 0.106 Peak Height (A): 0.249
Background Pk Area (A-s): 0.147 Background Pk Height (A): 0.145
Blank Corrected Pk Area (A-s): 0.105

T1 ID: 57.113.36/8B Seq. No.: 00026 A/S Pos.: 26 Date: 07/06/92

Concentration (ug/L): 0.7
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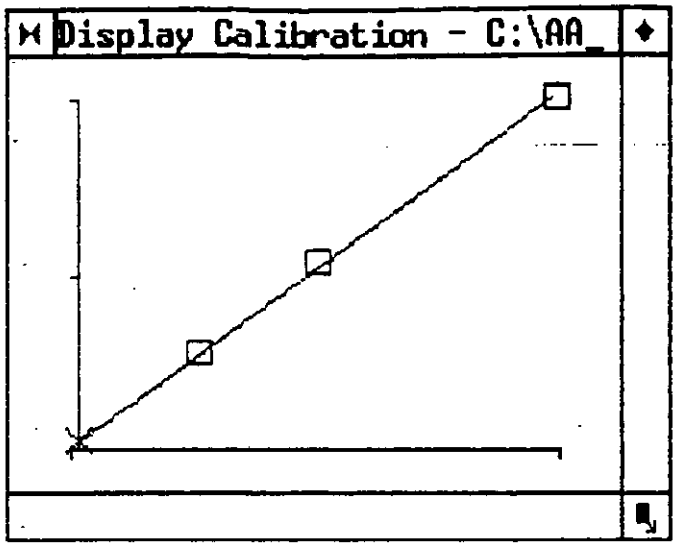
Correlation coefficient: 0.99899 Slope: 0.0026



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T1 ID: 57.3113.43/9B Seq. No.: 00030 A/S Pos.: 27 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 27
Replicate 1 Time: 11:56
Peak Area (A-s): 0.003 Peak Height (A): 0.006
Background Pk Area (A-s): 0.109 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.002

T1 ID: Standard 1 Seq. No.: 00031 A/S Pos.: 27 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 27
Replicate 1 Time: 12:00
Peak Area (A-s): 0.030 Peak Height (A): 0.067
Background Pk Area (A-s): 0.096 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.029

T1 ID: Standard 2 Seq. No.: 00032 A/S Pos.: 27 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 27
Replicate 1 Time: 12:04
Peak Area (A-s): 0.055 Peak Height (A): 0.128
Background Pk Area (A-s): 0.110 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): 0.054

T1 ID: Standard 3 Seq. No.: 00033 A/S Pos.: 27 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 27
Replicate 1 Time: 12:07
Peak Area (A-s): 0.106 Peak Height (A): 0.234
Background Pk Area (A-s): 0.143 Background Pk Height (A): 0.137
Blank Corrected Pk Area (A-s): 0.105

T1 ID: 57.3113.43/9B Seq. No.: 00030 A/S Pos.: 27 Date: 07/06/92

Concentration (ug/L): 0.9
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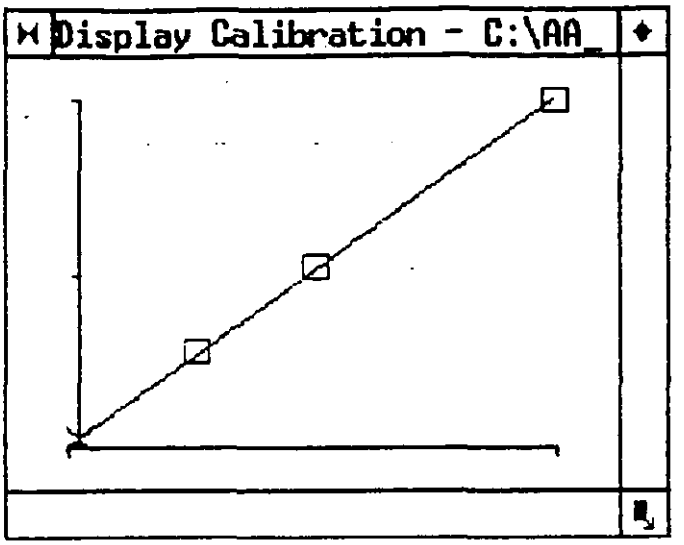
Correlation coefficient: 0.99995 Slope: 0.0026



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ID: 57.113.50/10B Seq. No.: 00034 A/S Pos.: 28 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 28
Replicate 1 Time: 12:11
Peak Area (A-s): 0.004 Peak Height (A): 0.008
Background Pk Area (A-s): 0.107 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.003

T1 ID: Standard 1 Seq. No.: 00035 A/S Pos.: 28 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 28
Replicate 1 Time: 12:15
Peak Area (A-s): 0.028 Peak Height (A): 0.066
Background Pk Area (A-s): 0.095 Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.027

T1 ID: Standard 2 Seq. No.: 00036 A/S Pos.: 28 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 28
Replicate 1 Time: 12:18
Peak Area (A-s): 0.055 Peak Height (A): 0.133
Background Pk Area (A-s): 0.107 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.054

T1 ID: Standard 3 Seq. No.: 00037 A/S Pos.: 28 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 28
Replicate 1 Time: 12:22
Peak Area (A-s): 0.105 Peak Height (A): 0.241
Background Pk Area (A-s): 0.137 Background Pk Height (A): 0.141
Blank Corrected Pk Area (A-s): 0.104

T1 ID: 57.113.50/10B Seq. No.: 00034 A/S Pos.: 28 Date: 07/06/92

Concentration (ug/L): 1.1
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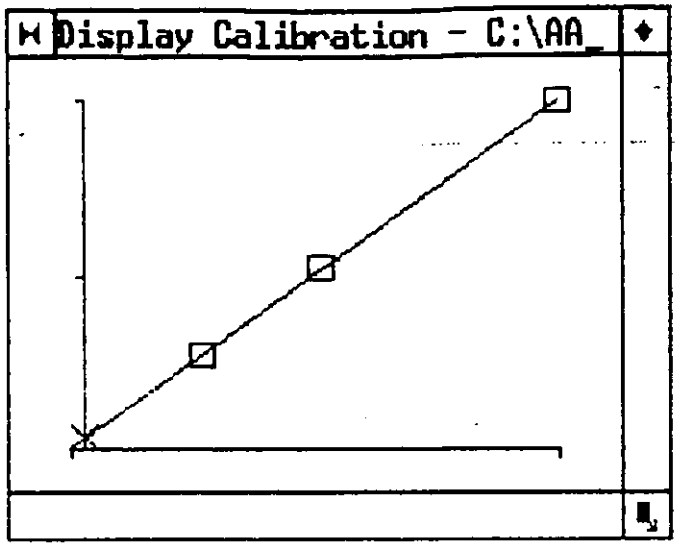
Correlation coefficient: 0.99988 Slope: 0.0025



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T1 ID: 57.113.57/11B Seq. No.: 00038 A/S Pos.: 29 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 29
Replicate 1 Time: 12:26
Peak Area (A-s): 0.007 Peak Height (A): 0.008
Background Pk Area (A-s): 0.106 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.006

T1 ID: Standard 1 Seq. No.: 00039 A/S Pos.: 29 Date: 07/06/92

uL dispensed: 5 from 3 15 from 1, 15 from 29
Replicate 1 Time: 12:29
Peak Area (A-s): 0.025 Peak Height (A): 0.047
Background Pk Area (A-s): 0.083 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.024

T1 ID: Standard 2 Seq. No.: 00040 A/S Pos.: 29 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 29
Replicate 1 Time: 12:33
Peak Area (A-s): 0.048 Peak Height (A): 0.090
Background Pk Area (A-s): 0.090 Background Pk Height (A): 0.049
Blank Corrected Pk Area (A-s): 0.047

T1 ID: Standard 3 Seq. No.: 00041 A/S Pos.: 29 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 29
Replicate 1 Time: 12:37
Peak Area (A-s): 0.090 Peak Height (A): 0.178
Background Pk Area (A-s): 0.117 Background Pk Height (A): 0.100
Blank Corrected Pk Area (A-s): 0.089

The standard additions calibration curve may not be linear.
T1 ID: 57.113.57/11B Seq. No.: 00038 A/S Pos.: 29 Date: 07/06/92

Concentration (ug/L): 2.8
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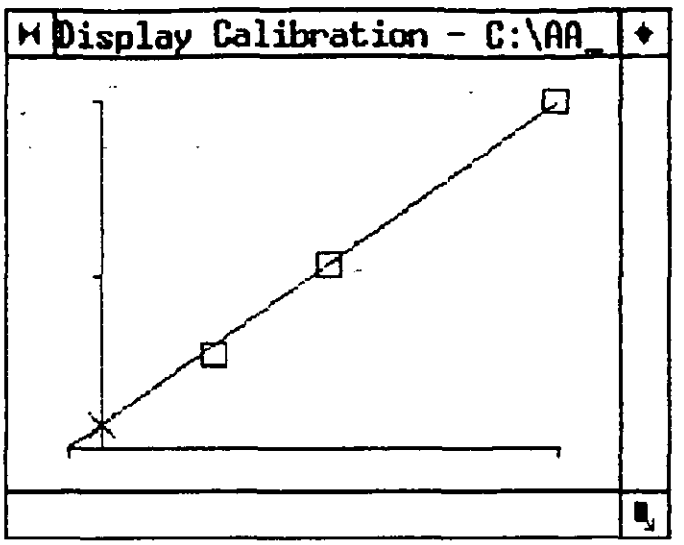
Correlation coefficient: 0.99794 Slope: 0.0021



ID: 57.113.64/12B Seq. No.: 00042 A/S Pos.: 30 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 30
Replicate 1 Time: 12:40
Peak Area (A-s): 0.011 Peak Height (A): 0.012
Background Pk Area (A-s): 0.109 Background Pk Height (A): 0.052
Blank Corrected Pk Area (A-s): 0.010

ID: Standard 1 Seq. No.: 00043 A/S Pos.: 30 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 30
Replicate 1 Time: 12:44
Peak Area (A-s): 0.025 Peak Height (A): 0.056
Background Pk Area (A-s): 0.077 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.024

ID: Standard 2 Seq. No.: 00044 A/S Pos.: 30 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 30
Replicate 1 Time: 12:48
Peak Area (A-s): 0.049 Peak Height (A): 0.107
Background Pk Area (A-s): 0.091 Background Pk Height (A): 0.058
Blank Corrected Pk Area (A-s): 0.048

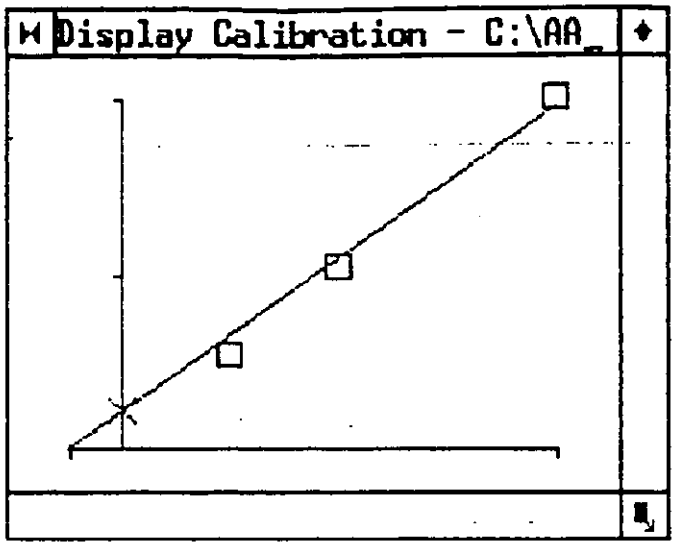
ID: Standard 3 Seq. No.: 00045 A/S Pos.: 30 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 30
Replicate 1 Time: 12:51
Peak Area (A-s): 0.094 Peak Height (A): 0.202
Background Pk Area (A-s): 0.115 Background Pk Height (A): 0.116
Blank Corrected Pk Area (A-s): 0.093

The standard additions calibration curve may not be linear.
ID: 57.113.64/12B Seq. No.: 00042 A/S Pos.: 30 Date: 07/06/92

Concentration (ug/L): 4.9

Correlation coefficient: 0.98859 Slope: 0.0020



T1 ID: 57.113.71/13B Seq. No.: 00046 A/S Pos.: 31 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 31
Replicate 1 Time: 12:55
Peak Area (A-s): 0.013 Peak Height (A): 0.014
Background Pk Area (A-s): 0.082 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.012

T1 ID: Standard 1 Seq. No.: 00047 A/S Pos.: 31 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 31
Replicate 1 Time: 12:59
Peak Area (A-s): 0.031 Peak Height (A): 0.065
Background Pk Area (A-s): 0.073 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.030

T1 ID: Standard 2 Seq. No.: 00048 A/S Pos.: 31 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 31
Replicate 1 Time: 13:02
Peak Area (A-s): 0.056 Peak Height (A): 0.116
Background Pk Area (A-s): 0.091 Background Pk Height (A): 0.065
Blank Corrected Pk Area (A-s): 0.055

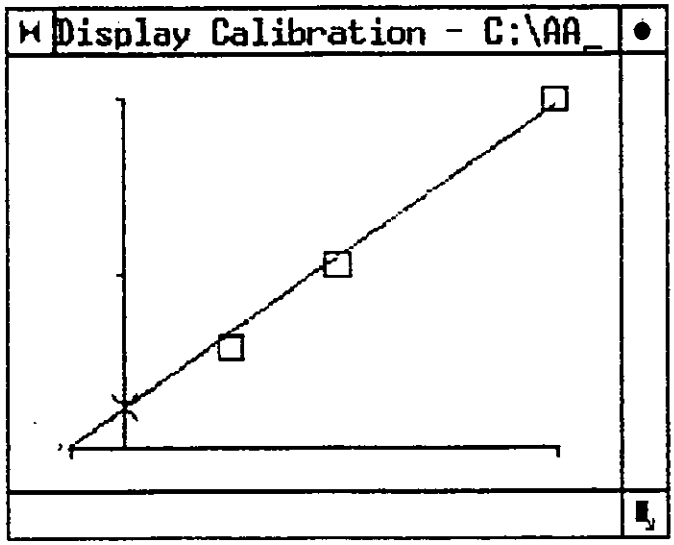
T1 ID: Standard 3 Seq. No.: 00049 A/S Pos.: 31 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 31
Replicate 1 Time: 13:06
Peak Area (A-s): 0.108 Peak Height (A): 0.218
Background Pk Area (A-s): 0.121 Background Pk Height (A): 0.125
Blank Corrected Pk Area (A-s): 0.107

The standard additions calibration curve may not be linear.
T1 ID: 57.113.71/13B Seq. No.: 00046 A/S Pos.: 31 Date: 07/06/92

Concentration (ug/L): 5.1

Correlation coefficient: 0.99210 Slope: 0.0023



13B

FH MSA's

T1 ID: Blank Seq. No.: 00128 A/S Pos.: 0 Date: 07/07/92

uL dispensed: 5 from 39, 30 from 0
Replicate 1 Time: 10:07
Peak Area (A-s): 0.001 Peak Height (A): 0.003
Background Pk Area (A-s): 0.106 Background Pk Height (A): 0.055
Blank Corrected Pk Area (A-s): -0.001

Auto-zero performed.

T1 ID: 57.113.1/1F X10 Seq. No.: 00129 A/S Pos.: 32 Date: 07/07/92

uL dispensed: 15 from 0, 5 from 39, 15 from 32
Replicate 1 Time: 10:10
Peak Area (A-s): 0.012 Peak Height (A): 0.026
Background Pk Area (A-s): 0.119 Background Pk Height (A): 0.055
Blank Corrected Pk Area (A-s): 0.012

T1 ID: Standard 1 Seq. No.: 00130 A/S Pos.: 32 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 1, 15 from 32
Replicate 1 Time: 10:14
Peak Area (A-s): 0.012 Peak Height (A): 0.030
Background Pk Area (A-s): 0.110 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.012

T1 ID: Standard 2 Seq. No.: 00131 A/S Pos.: 32 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 2, 15 from 32

T1 ID: 57.113.1/1F X10 Seq. No.: 00132 A/S Pos.: 32 Date: 07/07/92

uL dispensed: 20 from 0, 5 from 39, 10 from 32
Replicate 1 Time: 10:19
Peak Area (A-s): 0.017 Peak Height (A): 0.036
Background Pk Area (A-s): 0.136 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): 0.017

T1 ID: Standard 1 Seq. No.: 00133 A/S Pos.: 32 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 1, 10 from 32
Replicate 1 Time: 10:22
Peak Area (A-s): 0.029 Peak Height (A): 0.067
Background Pk Area (A-s): 0.123 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.029

T1 ID: Standard 2 Seq. No.: 00134 A/S Pos.: 32 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 2, 10 from 32
Replicate 1 Time: 10:26
Peak Area (A-s): 0.046 Peak Height (A): 0.102
Background Pk Area (A-s): 0.132 Background Pk Height (A): 0.092
Blank Corrected Pk Area (A-s): 0.046

T1 ID: Standard 3 Seq. No.: 00135 A/S Pos.: 32 Date: 07/07/92

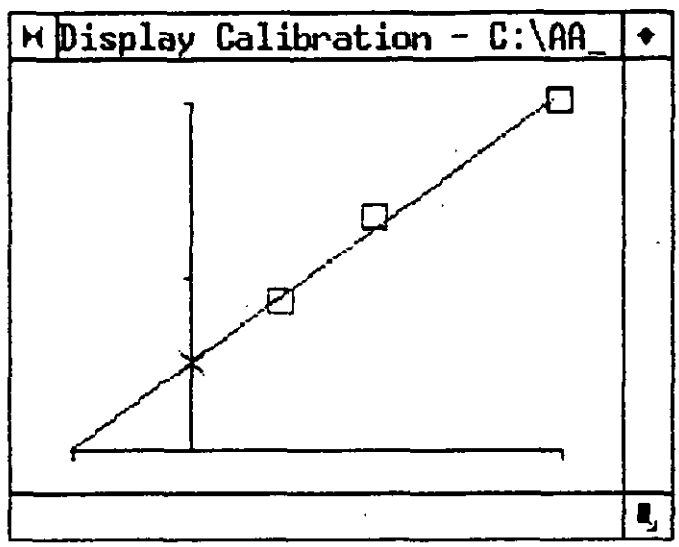
uL dispensed: 5 from 39, 20 from 3, 10 from 32

Replicate 1 Time: 10:29
Peak Area (A-s): 0.068 Peak Height (A): 0.155
Background Pk Area (A-s): 0.147 Background Pk Height (A): 0.122
Blank Corrected Pk Area (A-s): 0.068

ID: 57.113.1/1F X10 Seq. No.: 00132 A/S Pos.: 32 Date: 07/07/92

Concentration (ug/L): 25.3

Correlation coefficient: 0.99396 Slope: 0.0007



ID: 57.113.5/2F X10 Seq. No.: 00136 A/S Pos.: 33 Date: 07/07/92

uL dispensed: 20 from 0, 5 from 39, 10 from 33
Replicate 1 Time: 10:33
Peak Area (A-s): 0.026 Peak Height (A): 0.052
Background Pk Area (A-s): 0.130 Background Pk Height (A): 0.052
Blank Corrected Pk Area (A-s): 0.025

ID: Standard 1 Seq. No.: 00137 A/S Pos.: 33 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 1, 10 from 33
Replicate 1 Time: 10:37
Peak Area (A-s): 0.049 Peak Height (A): 0.109
Background Pk Area (A-s): 0.121 Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.049

ID: Standard 2 Seq. No.: 00138 A/S Pos.: 33 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 2, 10 from 33
Replicate 1 Time: 10:40
Peak Area (A-s): 0.071 Peak Height (A): 0.149
Background Pk Area (A-s): 0.131 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.070

ID: Standard 3 Seq. No.: 00139 A/S Pos.: 33 Date: 07/07/92

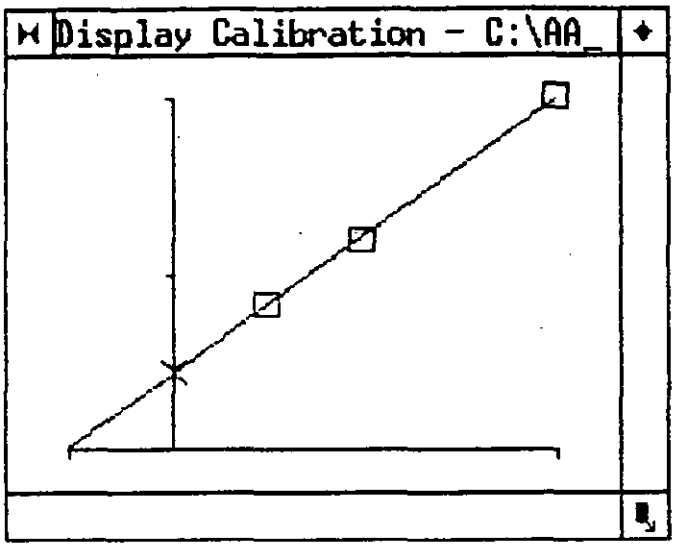
uL dispensed: 5 from 39, 20 from 3, 10 from 33

Replicate 1 Time: 10:44
Peak Area (A-s): 0.119 Peak Height (A): 0.257
Background Pk Area (A-s): 0.162 Background Pk Height (A): 0.173
Blank Corrected Pk Area (A-s): 0.119

T1 ID: 57.113.5/2F X10 Seq. No.: 00136 A/S Pos.: 33 Date: 07/07/92

Concentration (ug/L): 21.5

Correlation coefficient: 0.99959 Slope: 0.0012



T1 ID: 57.113.9/3F X10 Seq. No.: 00140 A/S Pos.: 34 Date: 07/07/92

uL dispensed: 20 from 0, 5 from 39, 10 from 34
Replicate 1 Time: 10:48
Peak Area (A-s): 0.013 Peak Height (A): 0.029
Background Pk Area (A-s): 0.120 Background Pk Height (A): 0.044
Blank Corrected Pk Area (A-s): 0.012

T1 ID: Standard 1 Seq. No.: 00141 A/S Pos.: 34 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 1, 10 from 34
Replicate 1 Time: 10:52
Peak Area (A-s): 0.030 Peak Height (A): 0.062
Background Pk Area (A-s): 0.116 Background Pk Height (A): 0.054
Blank Corrected Pk Area (A-s): 0.029

T1 ID: Standard 2 Seq. No.: 00142 A/S Pos.: 34 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 2, 10 from 34
Replicate 1 Time: 10:55
Peak Area (A-s): 0.054 Peak Height (A): 0.119
Background Pk Area (A-s): 0.126 Background Pk Height (A): 0.085
Blank Corrected Pk Area (A-s): 0.053

T1 ID: Standard 3 Seq. No.: 00143 A/S Pos.: 34 Date: 07/07/92

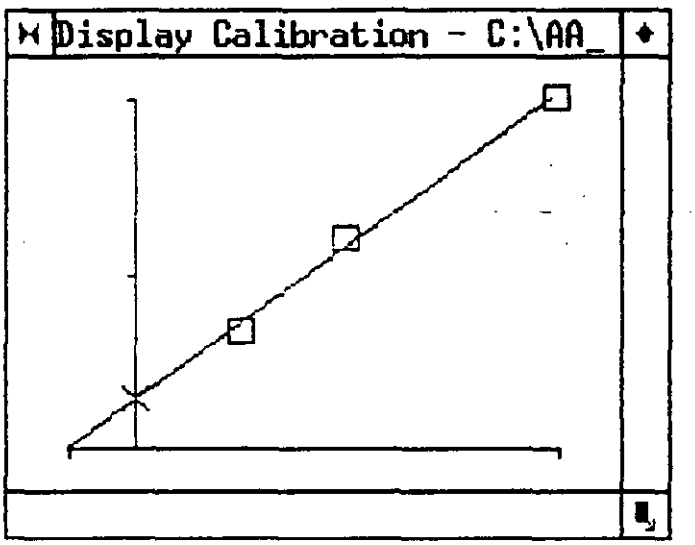
uL dispensed: 5 from 39, 20 from 3, 10 from 34

Replicate 1 Time: 10:59
eak Area (A-s): 0.089 Peak Height (A): 0.189
ackground Pk Area (A-s): 0.144 Background Pk Height (A): 0.127
B Corrected Pk Area (A-s): 0.089

he standard additions calibration curve may not be linear.
T1 ID: 57.113.9/3F X10 Seq. No.: 00140 A/S Pos.: 34 Date: 07/07/92

oncentration (ug/L): 12.8

Correlation coefficient: 0.99644 Slope: 0.0010

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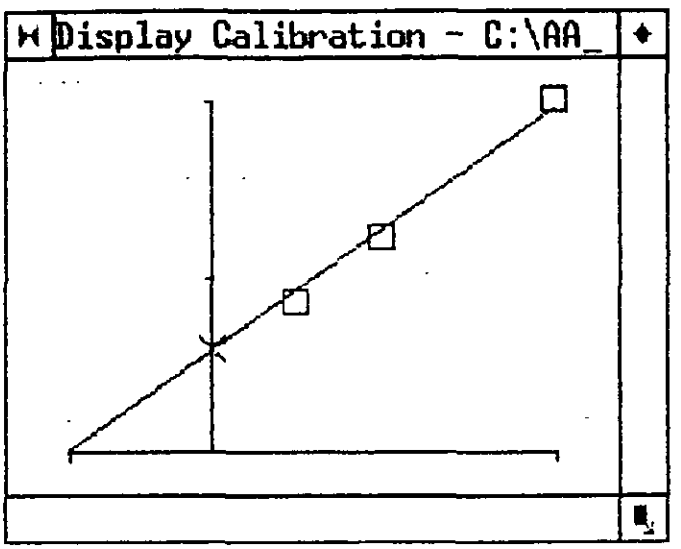
uL dispensed: 5 from 39, 20 from 3, 10 from 35
Replicate 1 Time: 11:13
Peak Area (A-s): 0.109 Peak Height (A): 0.221
Background Pk Area (A-s): 0.146 Background Pk Height (A): 0.149
Blank Corrected Pk Area (A-s): 0.109

The standard additions calibration curve may not be linear.
T1 ID: 57.113.13/4F XO Seq. No.: 00144 A/S Pos.: 35 Date: 07/07/92

Concentration (ug/L): 33.4

Correlation coefficient: 0.99113 Slope: 0.0009

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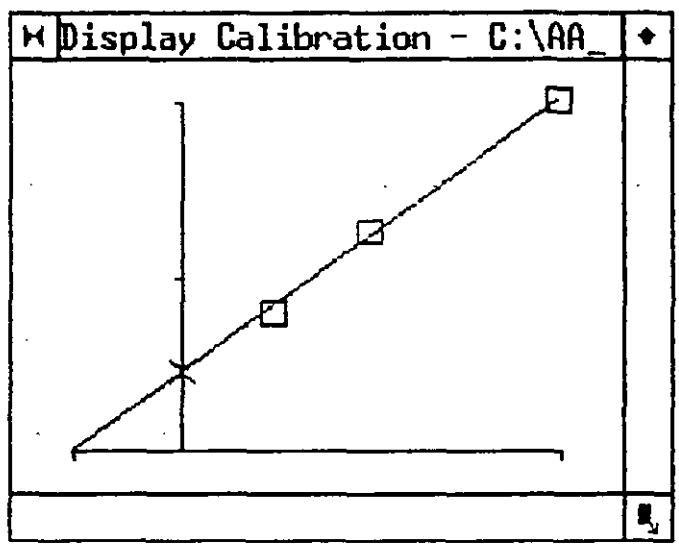
uL dispensed: 5 from 39, 20 from 3, 10 from 36
Replicate 1 Time: 11:28
Peak Area (A-s): 0.132 Peak Height (A): 0.288
Background Pk Area (A-s): 0.163 Background Pk Height (A): 0.191
Blank Corrected Pk Area (A-s): 0.132

The standard additions calibration curve may not be linear.
Tl ID: 57.113.17/5F XO Seq. No.: 00148 A/S Pos.: 36 Date: 07/07/92

Concentration (ug/L): 23.2

Correlation coefficient: 0.99737 Slope: 0.0013



Tl ID: 57.113.21/6F XO Seq. No.: 00152 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 20 from 0, 5 from 39, 10 from 37
Replicate 1 Time: 11:32
Peak Area (A-s): 0.032 Peak Height (A): 0.068
Background Pk Area (A-s): 0.118 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.031

Tl ID: Standard 1 Seq. No.: 00153 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 1, 10 from 37
Replicate 1 Time: 11:36
Peak Area (A-s): 0.058 Peak Height (A): 0.124
Background Pk Area (A-s): 0.097 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.057

Tl ID: Standard 2 Seq. No.: 00154 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 2, 10 from 37
Replicate 1 Time: 11:40
Peak Area (A-s): 0.089 Peak Height (A): 0.193
Background Pk Area (A-s): 0.118 Background Pk Height (A): 0.121
Blank Corrected Pk Area (A-s): 0.088

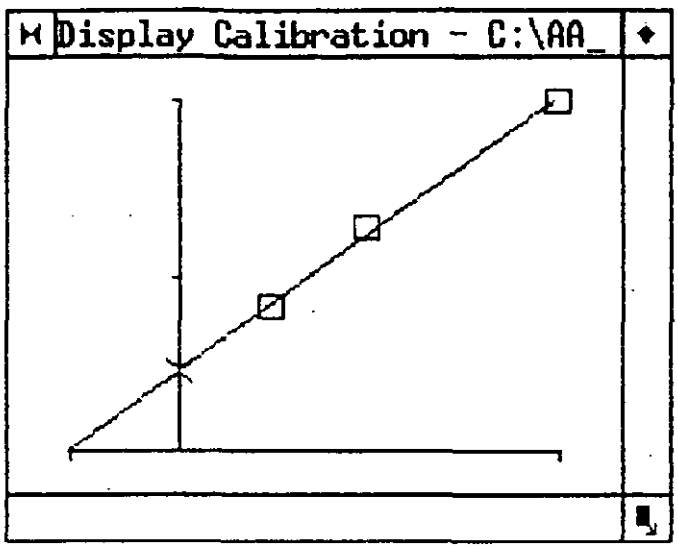
Tl ID: Standard 3 Seq. No.: 00155 A/S Pos.: 37 Date: 07/07/92

uL dispensed: 5 from 39, 20 from 3, 10 from 37
Replicate 1 Time: 11:43
Peak Area (A-s): 0.140 Peak Height (A): 0.297
Background Pk Area (A-s): 0.149 Background Pk Height (A): 0.199
Blank Corrected Pk Area (A-s): 0.140

T1 ID: 57.113.21/6F XO Seq. No.: 00152 A/S Pos.: 37 Date: 07/07/92

Concentration (ug/L): 23.1

Correlation coefficient: 0.99882 Slope: 0.0014



T[redacted] ID: 57.113.25/7F Seq. No.: 00050 A/S Pos.: 11 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 11
[redacted]plicate 1 Time: 13:10
[redacted] Area (A-s): 0.009 Peak Height (A): 0.011
Ba[redacted]ound Pk Area (A-s): 0.093 Background Pk Height (A): 0.066
[redacted]ank Corrected Pk Area (A-s): 0.008

T[redacted] ID: Standard 1 Seq. No.: 00051 A/S Pos.: 11 Date: 07/06/92

[redacted] dispensed: 5 from 39, 15 from 1, 15 from 11
[redacted]eplicate 1 Time: 13:14
Peak Area (A-s): 0.031 Peak Height (A): 0.078
[redacted]ckground Pk Area (A-s): 0.093 Background Pk Height (A): 0.059
[redacted]lank Corrected Pk Area (A-s): 0.030

T[redacted] ID: Standard 2 Seq. No.: 00052 A/S Pos.: 11 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 11
Replicate 1 Time: 13:17
[redacted]eak Area (A-s): 0.056 Peak Height (A): 0.141
[redacted]ackground Pk Area (A-s): 0.098 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.055

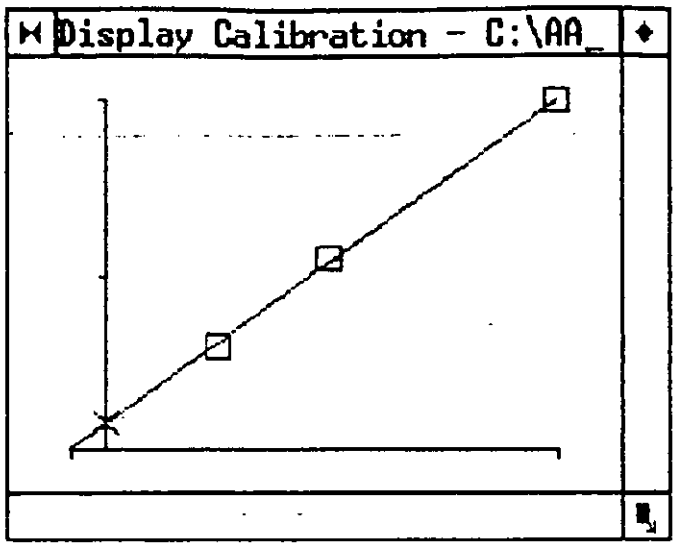
[redacted] ID: Standard 3 Seq. No.: 00053 A/S Pos.: 11 Date: 07/06/92

[redacted] dispensed: 5 from 39, 15 from 3, 15 from 11
[redacted]eplicate 1 Time: 13:21
Peak Area (A-s): 0.103 Peak Height (A): 0.246
Background Pk Area (A-s): 0.125 Background Pk Height (A): 0.151
[redacted] Corrected Pk Area (A-s): 0.102

T1 ID: 57.113.25/7F Seq. No.: 00050 A/S Pos.: 11 Date: 07/06/92

[redacted]ncentration (ug/L): 3.2

Correlation coefficient: 0.99956 Slope: 0.0024



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T1 ID: 57.113.32/8F Seq. No.: 00054 A/S Pos.: 12 Date: 07/06/92

uL dispensed: 15 from 0, 5 from 39, 15 from 12
Replicate 1 Time: 13:25
Peak Area (A-s): 0.020 Peak Height (A): 0.024
Background Pk Area (A-s): 0.086 Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): 0.019

T1 ID: Standard 1 Seq. No.: 00055 A/S Pos.: 12 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 12
Replicate 1 Time: 13:28
Peak Area (A-s): 0.032 Peak Height (A): 0.077
Background Pk Area (A-s): 0.081 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.031

T1 ID: Standard 2 Seq. No.: 00056 A/S Pos.: 12 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 2, 15 from 12
Replicate 1 Time: 13:32
Peak Area (A-s): 0.056 Peak Height (A): 0.138
Background Pk Area (A-s): 0.082 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.055

T1 ID: Standard 3 Seq. No.: 00057 A/S Pos.: 12 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 3, 15 from 12
Replicate 1 Time: 13:35
Peak Area (A-s): 0.104 Peak Height (A): 0.245
Background Pk Area (A-s): 0.105 Background Pk Height (A): 0.149
Blank Corrected Pk Area (A-s): 0.103

The standard additions calibration curve may not be linear.
T1 ID: 57.113.32/8F Seq. No.: 00054 A/S Pos.: 12 Date: 07/06/92

Concentration (ug/L): 9.6
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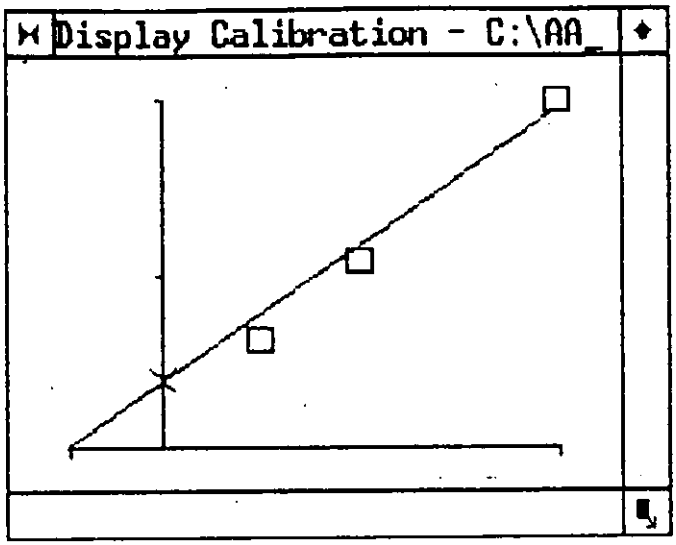
Correlation coefficient: 0.97364 Slope: 0.0020



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T1 ID: Blank Seq. No.: 00108 A/S Pos.: 0 Date: 07/07/92

uL dispensed: 5 from 39, 30 from 0
Replicate 1 Time: 08:55
Peak Area (A-s): 0.002 Peak Height (A): 0.004
Background Pk Area (A-s): 0.101 Background Pk Height (A): 0.058
Blank Corrected Pk Area (A-s): -0.127

Auto-zero performed.

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T1 ID: 57.113.39/9F Seq. No.: 00109 A/S Pos.: 14 Date: 07/07/92

uL dispensed: 15 from 0, 5 from 39, 15 from 14
Replicate 1 Time: 08:58
Peak Area (A-s): 0.002 Peak Height (A): 0.005
Background Pk Area (A-s): 0.159 Background Pk Height (A): 0.064
Blank Corrected Pk Area (A-s): 0.000

T1 ID: Standard 1 Seq. No.: 00110 A/S Pos.: 14 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 1, 15 from 14
Replicate 1 Time: 09:02
Peak Area (A-s): 0.035 Peak Height (A): 0.089
Background Pk Area (A-s): 0.140 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.033

T1 ID: Standard 2 Seq. No.: 00111 A/S Pos.: 14 Date: 07/07

uL dispensed: 5 from 39, 15 from 2, 15 from 14
Replicate 1 Time: 09:06
Peak Area (A-s): 0.064 Peak Height (A): 0.157
Background Pk Area (A-s): 0.150 Background Pk Height (A): 0.103
Blank Corrected Pk Area (A-s): 0.062

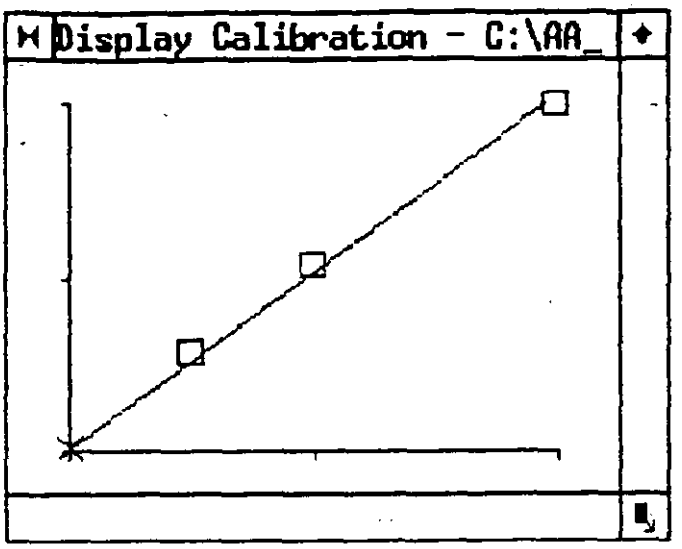
T1 ID: Standard 3 Seq. No.: 00112 A/S Pos.: 14 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 3, 15 from 14
Replicate 1 Time: 09:09
Peak Area (A-s): 0.119 Peak Height (A): 0.271
Background Pk Area (A-s): 0.187 Background Pk Height (A): 0.180
Blank Corrected Pk Area (A-s): 0.117

The standard additions calibration curve may not be linear.
T1 ID: 57.113.39/9F Seq. No.: 00109 A/S Pos.: 14 Date: 07/07/92

Concentration (ug/L): 0.1

Correlation coefficient: 0.99725 Slope: 0.0030



T1 ID: 57.113.46/10F Seq. No.: 00113 A/S Pos.: 15 Date: 07/07/92

uL dispensed: 15 from 0. 5 from 39, 15 from 15
Replicate 1 Time: 09:13
Area (A-s): 0.002 Peak Height (A): 0.004
ground Pk Area (A-s): 0.130 Background Pk Height (A): 0.052
Blank Corrected Pk Area (A-s): 0.001

T1 ID: Standard 1 Seq. No.: 00114 A/S Pos.: 15 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 1, 15 from 15
Replicate 1 Time: 09:17
Peak Area (A-s): 0.035 Peak Height (A): 0.085
Background Pk Area (A-s): 0.128 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.034

T1 ID: Standard 2 Seq. No.: 00115 A/S Pos.: 15 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 2. 15 from 15
Replicate 1 Time: 09:20
Peak Area (A-s): 0.065 Peak Height (A): 0.163
Background Pk Area (A-s): 0.140 Background Pk Height (A): 0.097
Blank Corrected Pk Area (A-s): 0.063

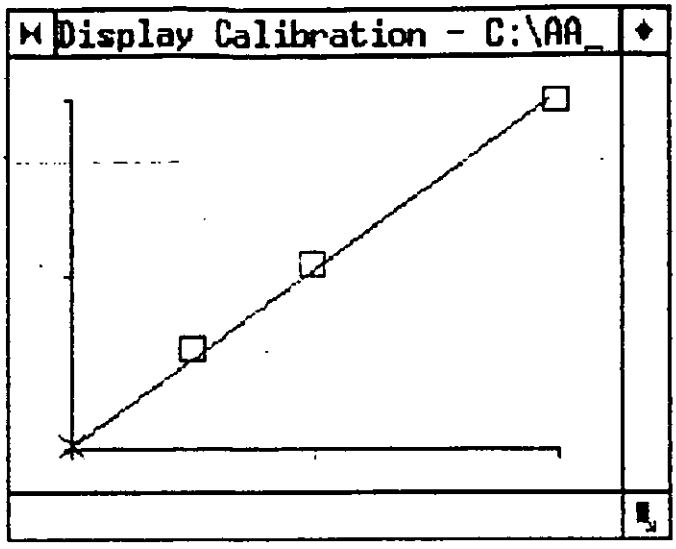
T1 ID: Standard 3 Seq. No.: 00116 A/S Pos.: 15 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 3. 15 from 15
Replicate 1 Time: 09:24
Peak Area (A-s): 0.123 Peak Height (A): 0.284
ground Pk Area (A-s): 0.171 Background Pk Height (A): 0.183
k Corrected Pk Area (A-s): 0.121

T1 ID: 57.113.46/10F Seq. No.: 00113 A/S Pos.: 15 Date: 07/07/92

Concentration (ug/L): 0.2

Correlation coefficient: 0.99875 Slope: 0.0030



T1 ID: 57.113.53/11F Seq. No.: 00117 A/S Pos.: 16 Date: 07/07/92

uL dispensed: 15 from 0, 5 from 39, 15 from 16
Replicate 1 Time: 09:28
Peak Area (A-s): 0.003 Peak Height (A): 0.009
Background Pk Area (A-s): 0.107 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.001

T1 ID: Standard 1 Seq. No.: 00118 A/S Pos.: 16 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 1, 15 from 16
Replicate 1 Time: 09:31
Peak Area (A-s): 0.036 Peak Height (A): 0.088
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.057
Blank Corrected Pk Area (A-s): 0.034

T1 ID: Standard 2 Seq. No.: 00119 A/S Pos.: 16 Date: 07/07/92

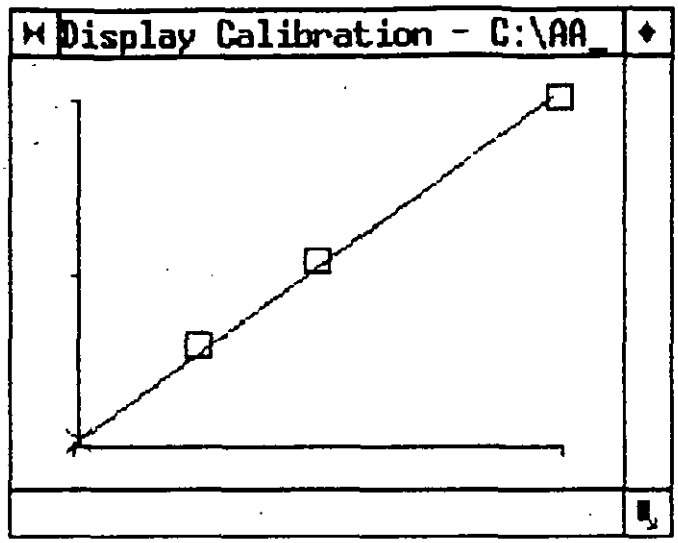
uL dispensed: 5 from 39, 15 from 2, 15 from 16
Replicate 1 Time: 09:35
Peak Area (A-s): 0.064 Peak Height (A): 0.150
Background Pk Area (A-s): 0.128 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): 0.063

T1 ID: Standard 3 Seq. No.: 00120 A/S Pos.: 16 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 3, 15 from 16
Replicate 1 Time: 09:38
Peak Area (A-s): 0.120 Peak Height (A): 0.271
Background Pk Area (A-s): 0.160 Background Pk Height (A): 0.175
Blank Corrected Pk Area (A-s): 0.118

The standard additions calibration curve may not be linear.
T1 ID: 57.113.53/11F Seq. No.: 00117 A/S Pos.: 16 Date: 07/07/92

Concentration (ug/L): 0.5



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T[redacted] ID: 57.113.60/12F Seq. No.: 00121 A/S Pos.: 17 Date: 07/07/92

uL dispensed: 15 from 0, 5 from 39, 15 from 17
Replicate 1 Time: 09:42
[redacted] Area (A-s): 0.004 Peak Height (A): 0.009
Background Pk Area (A-s): 0.102 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.002

T[redacted] ID: Standard 1 Seq. No.: 00122 A/S Pos.: 17 Date: 07/07/92

[redacted] dispensed: 5 from 39, 15 from 1, 15 from 17
[redacted]plicate 1 Time: 09:46
Peak Area (A-s): 0.037 Peak Height (A): 0.090
Background Pk Area (A-s): 0.111 Background Pk Height (A): 0.055
[redacted]lank Corrected Pk Area (A-s): 0.035

T1 ID: Standard 2 Seq. No.: 00123 A/S Pos.: 17 Date: 07/07/92

[redacted] dispensed: 5 from 39, 15 from 2, 15 from 17
Replicate 1 Time: 09:49
[redacted]eak Area (A-s): 0.064 Peak Height (A): 0.151
[redacted]ckground Pk Area (A-s): 0.116 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.062

T[redacted] ID: Standard 3 Seq. No.: 00124 A/S Pos.: 17 Date: 07/07/92

uL dispensed: 5 from 39, 15 from 3, 15 from 17
[redacted]olicate 1 Time: 09:53
[redacted]eak Area (A-s): 0.123 Peak Height (A): 0.281
Ba[redacted]round Pk Area (A-s): 0.161 Background Pk Height (A): 0.179
[redacted] Corrected Pk Area (A-s): 0.121

T1 ID: 57.113.60/12F Seq. No.: 00121 A/S Pos.: 17 Date: 07/07/92

[redacted]oncentration (ug/L): 0.8
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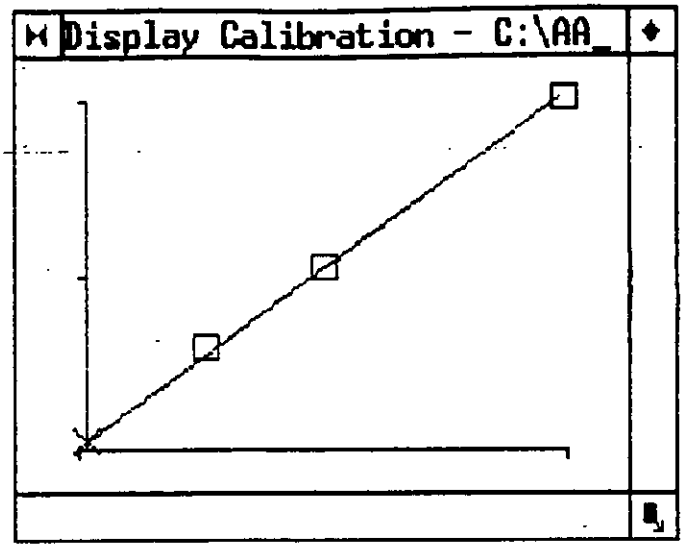
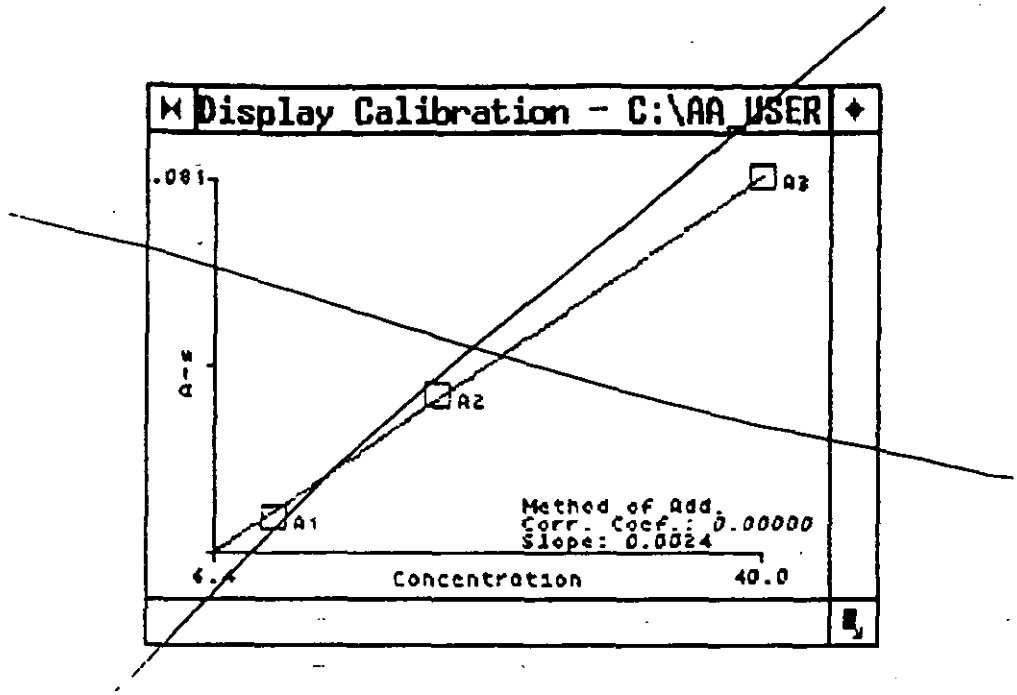
Correlation coefficient: 0.99909 Slope: 0.0030





T1 ID: 57.113.67/13F Seq. No.: 00085 A/S Pos.: 18 Date: 07/06/92

L dispensed: 15 from 0, 5 from 39, 15 from 18
Replicate 1 Time: 00:02
Peak Area (A-s): 0.013 Peak Height (A): 0.026
round Pk Area (A-s): 0.225 Background Pk Height (A): 0.206
Corrected Pk Area (A-s): -0.007

ID: Standard 1 Seq. No.: 00086 A/S Pos.: 18 Date: 07/06/92

uL dispensed: 5 from 39, 15 from 1, 15 from 18
Replicate 1 Time: 00:06
eak Area (A-s): 0.030 Peak Height (A): 0.081
Background Pk Area (A-s): 0.185 Background Pk Height (A): 0.168
Blank Corrected Pk Area (A-s): 0.010

ID: Standard 2 Seq. No.: 00087 A/S Pos.: 18 Date: 07/06/92

L dispensed: 5 from 39, 15 from 2, 15 from 18
eplicate 1 Time: 00:09
Peak Area (A-s): 0.057 Peak Height (A): 0.135
Background Pk Area (A-s): 0.178 Background Pk Height (A): 0.160
lank Corrected Pk Area (A-s): 0.037

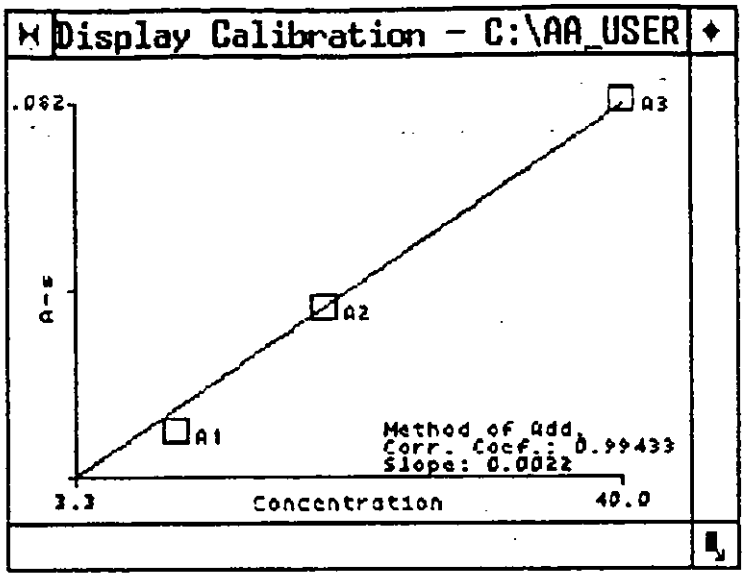
T1 ID: Standard 3 Seq. No.: 00088 A/S Pos.: 18 Date: 07/06/92

L dispensed: 5 from 39, 15 from 3, 15 from 18
Replicate 1 Time: 00:12
eak Area (A-s): 0.102 Peak Height (A): 0.234
ackground Pk Area (A-s): 0.204 Background Pk Height (A): 0.166
Bl k Corrected Pk Area (A-s): 0.082

h tandard additions calibration curve may not be linear.
T1 ID: 57.113.67/13F Seq. No.: 00085 A/S Pos.: 18 Date: 07/06/92

oncentration (ug/L): -3.3

Correlation coefficient: 0.99433 Slope: 0.0022



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Hg2 ID: Seq. 00001 Seq. No.: 00001 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 14:58
Peak Area (A-s): -0.161 Peak Height (A): -0.008
Blank Corrected Pk Height (A): -0.008
Concentration (ug/L): -0.1

Auto-zero performed.

Hg2 ID: Seq. 00002 Seq. No.: 00002 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:00
Peak Area (A-s): -0.003 Peak Height (A): 0.005
Blank Corrected Pk Height (A): 0.005
Concentration (ug/L): 0.1

Standard number 1 applied. [0.5]
Correlation coefficient: 1.00000 Slope: 0.0098

Hg2 ID: Seq. 00003 Seq. No.: 00003 A/S Pos.: -- Date: 07/07/92

Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 15:02
Peak Area (A-s): 0.540 Peak Height (A): 0.042
Blank Corrected Pk Height (A): 0.042
Concentration (ug/L): 4.2

Standard number 2 applied. [1.0]
Correlation coefficient: 1.00000 Slope: 0.0056

Hg2 ID: STANDARD 1 Seq. No.: 00004 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:03
Peak Area (A-s): 0.372 Peak Height (A): 0.019
Blank Corrected Pk Height (A): 0.019
Concentration (ug/L): 0.9

Standard number 1 applied. [0.5]
Correlation coefficient: 1.00000 Slope: 0.0361

Hg2 ID: Seq. 00005 Seq. No.: 00005 A/S Pos.: -- Date: 07/07/92

Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 15:05
Peak Area (A-s): 1.053 Peak Height (A): 0.087
Blank Corrected Pk Height (A): 0.087
Concentration (ug/L): 1.8

Standard number 3 applied. [2.0]
Correlation coefficient: 1.00000 Slope: 0.0088

Hg2 ID: Seq. 00006 Seq. No.: 00006 A/S Pos.: -- Date: 07/07/92

Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 15:06
Peak Area (A-s): 2.936 Peak Height (A): 0.223
Blank Corrected Pk Height (A): 0.223
Concentration (ug/L): 5.0

Standard number 4 applied. [5.0]
Correlation coefficient: 1.00000 Slope: 0.0313

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Hg2 ID: ICV Seq. No.: 00008 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:09
Peak Area (A-s): 2.743 Peak Height (A): 0.212
Blank Corrected Pk Height (A): 0.212
Concentration (ug/L): 4.9

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Hg2 ID: ICB Seq. No.: 00009 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:10
Peak Area (A-s): 0.137 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.1 FH Seq. No.: 00010 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:11
Peak Area (A-s): 0.407 Peak Height (A): 0.032
Blank Corrected Pk Height (A): 0.032
Concentration (ug/L): 0.8

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Hg2 ID: 57.113.1 FH D Seq. No.: 00011 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:12
Peak Area (A-s): 0.411 Peak Height (A): 0.031
Blank Corrected Pk Height (A): 0.031
Concentration (ug/L): 0.7

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Hg2 ID: 57.113.5 FH Seq. No.: 00012 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:12
Peak Area (A-s): 0.241 Peak Height (A): 0.017
Blank Corrected Pk Height (A): 0.017
Concentration (ug/L): 0.4

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Hg2 ID: 57.113.5 FH D Seq. No.: 00013 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:13
Peak Area (A-s): 0.227 Peak Height (A): 0.016
Blank Corrected Pk Height (A): 0.016
Concentration (ug/L): 0.4

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Hg2 ID: 57.113.9 FH Seq. No.: 00014 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:14
Peak Area (A-s): 0.294 Peak Height (A): 0.020
Blank Corrected Pk Height (A): 0.020
Concentration (ug/L): 0.5

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Hg2 ID: 57.113.9 FH D Seq. No.: 00015 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:15
Peak Area (A-s): 0.277 Peak Height (A): 0.019
Blank Corrected Pk Height (A): 0.019
Concentration (ug/L): 0.5

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Hg2 ID: 57.113.13 FH Seq. No.: 00016 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:15
Peak Area (A-s): 0.223 Peak Height (A): 0.014
Blank Corrected Pk Height (A): 0.014
Concentration (ug/L): 0.4

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Hg2 ID: 57.113.13 FH D Seq. No.: 00017 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:16
Peak Area (A-s): 0.224 Peak Height (A): 0.014
Blank Corrected Pk Height (A): 0.014
Concentration (ug/L): 0.3

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Hg2 ID: 57.113.17 FH Seq. No.: 00018 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:17
Peak Area (A-s): 0.185 Peak Height (A): 0.012
Blank Corrected Pk Height (A): 0.012
Concentration (ug/L): 0.3

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Hg2 ID: 57.113.17 FH D Seq. No.: 00019 A/S Pos.: -- Date: 07/07/9

Replicate 1 Time: 15:18
Peak Area (A-s): 0.197 Peak Height (A): 0.012
Blank Corrected Pk Height (A): 0.012
Concentration (ug/L): 0.3

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Hg2 ID: 57.113.21 FH Seq. No.: 00020 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:18
Peak Area (A-s): 0.221 Peak Height (A): 0.014
Blank Corrected Pk Height (A): 0.014
Concentration (ug/L): 0.3

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Hg2 ID: 57.113.21 FH D Seq. No.: 00021 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:19
Peak Area (A-s): 0.234 Peak Height (A): 0.015
Blank Corrected Pk Height (A): 0.015
Concentration (ug/L): 0.4

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Hg2 ID: 57.113.25 FH Seq. No.: 00022 A/S Pos.: -- Date: 07/07/

Replicate 1 Time: 15:20
Peak Area (A-s): 0.127 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
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Concentration (ug/L): 0.2

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Hg ID: 57.113.25 FH D Seq. No.: 00023 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:21
Peak Area (A-s): 0.136 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

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Hg2 ID: CCV Seq. No.: 00024 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:24
Peak Area (A-s): 2.797 Peak Height (A): 0.215
Blank Corrected Pk Height (A): 0.215
Concentration (ug/L): 5.0

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Hg2 ID: CCB Seq. No.: 00025 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:24
Peak Area (A-s): 0.201 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.32 FH Seq. No.: 00026 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:25
Peak Area (A-s): 0.159 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.32 FH D Seq. No.: 00027 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:26
Peak Area (A-s): 0.148 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.39 FH Seq. No.: 00028 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:27
Peak Area (A-s): 0.120 Peak Height (A): 0.006
Blank Corrected Pk Height (A): 0.006
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.39 FH D Seq. No.: 00029 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:27
Peak Area (A-s): 0.165 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2
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Hg2 ID: 57.113.46 FH Seq. No.: 00030 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:28
Peak Area (A-s): 0.138 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

Hg2 ID: 57.113.46 FH D Seq. No.: 00031 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:29
Peak Area (A-s): 0.120 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

Hg2 ID: 57.113.53 FH Seq. No.: 00032 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:30
Peak Area (A-s): 0.115 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

Hg2 ID: 57.113.53 FH D Seq. No.: 00033 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:31
Peak Area (A-s): 0.128 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

Hg2 ID: 57.113.60 FH Seq. No.: 00034 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:31
Peak Area (A-s): 0.109 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

Hg2 ID: 57.113.60 FH D Seq. No.: 00035 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:32
Peak Area (A-s): 0.119 Peak Height (A): 0.006
Blank Corrected Pk Height (A): 0.006
Concentration (ug/L): 0.2

Hg2 ID: 57.113.67 FH Seq. No.: 00036 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:33
Peak Area (A-s): 0.117 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

Hg2 ID: 57.113.67 FH D Seq. No.: 00037 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:34
Peak Area (A-s): 0.106 Peak Height (A): 0.006
Blank Corrected Pk Height (A): 0.006
Concentration (ug/L): 0.1

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Hg2 ID: 57.113.28 Seq. No.: 00038 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:34
Peak Area (A-s): 0.352 Peak Height (A): 0.027
Blank Corrected Pk Height (A): 0.027
Concentration (ug/L): 0.6

~~~~~~

Hg2 ID: 57.113.28 D Seq. No.: 00039 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:35
Peak Area (A-s): 0.372 Peak Height (A): 0.026
Blank Corrected Pk Height (A): 0.026
Concentration (ug/L): 0.6

~~~~~~

Hg2 ID: CCV Seq. No.: 00040 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:36
Peak Area (A-s): 2.535 Peak Height (A): 0.213
Blank Corrected Pk Height (A): 0.213
Concentration (ug/L): 5.0

~~~~~~

Hg2 ID: CCB Seq. No.: 00041 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:37
Peak Area (A-s): 0.179 Peak Height (A): 0.011
Blank Corrected Pk Height (A): 0.011
Concentration (ug/L): 0.3

~~~~~~

Hg2 ID: 57.113.30 Seq. No.: 00042 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:38
Peak Area (A-s): 0.170 Peak Height (A): 0.012
Blank Corrected Pk Height (A): 0.012
Concentration (ug/L): 0.3

~~~~~~

Hg2 ID: 57.113.30 D Seq. No.: 00043 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:38
Peak Area (A-s): 0.164 Peak Height (A): 0.011
Blank Corrected Pk Height (A): 0.011
Concentration (ug/L): 0.3

~~~~~~

ID: 57.113.31 Seq. No.: 00044 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:39
Peak Area (A-s): 0.099 Peak Height (A): 0.005
Blank Corrected Pk Height (A): 0.005
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Concentration (ug/L): 0.1

~~~~~~

Hg2 ID: S7.113.31 D Seq. No.: 00045 A/S Pos.: -- Date: 07/07/

Replicate 1 Time: 15:40
Peak Area (A-s): 0.104 Peak Height (A): 0.006
Blank Corrected Pk Height (A): 0.006
Concentration (ug/L): 0.2

~~~~~~

Hg2 ID: S7.113.35 Seq. No.: 00046 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:41
Peak Area (A-s): 0.365 Peak Height (A): 0.025
Blank Corrected Pk Height (A): 0.025
Concentration (ug/L): 0.6

~~~~~~

Hg2 ID: S7.113.35 D Seq. No.: 00047 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:41
Peak Area (A-s): 0.374 Peak Height (A): 0.024
Blank Corrected Pk Height (A): 0.024
Concentration (ug/L): 0.6

~~~~~~

Hg2 ID: S7.113.37 Seq. No.: 00048 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:42
Peak Area (A-s): 0.469 Peak Height (A): 0.028
Blank Corrected Pk Height (A): 0.028
Concentration (ug/L): 0.7

~~~~~~

Hg2 ID: S7.113.37 D Seq. No.: 00049 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:43
Peak Area (A-s): 0.234 Peak Height (A): 0.016
Blank Corrected Pk Height (A): 0.016
Concentration (ug/L): 0.4

Auto-zero performed.

~~~~~~

Hg2 ID: S7.113.38 Seq. No.: 00050 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:44
Peak Area (A-s): -0.117 Peak Height (A): -0.007
Blank Corrected Pk Height (A): -0.007
Concentration (ug/L): -0.2

~~~~~~

Hg2 ID: Seq. 00051 Seq. No.: 00051 A/S Pos.: -- Date: 07/07/

Replicate 1 Time: 15:45
Peak Area (A-s): -0.168 Peak Height (A): -0.013
Blank Corrected Pk Height (A): -0.013
Concentration (ug/L): -0.3
~~~~~~

Auto-zero performed.

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Hg2 ID: 57.113.38 D Seq. No.: 00052 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:49
Peak Area (A-s): 0.116 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

~~~~~~

Hg2 ID: 57.113.42 Seq. No.: 00053 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:50
Peak Area (A-s): 0.320 Peak Height (A): 0.027
Blank Corrected Pk Height (A): 0.027
Concentration (ug/L): 0.7

~~~~~~

Hg2 ID: 57.113.42 D Seq. No.: 00054 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:51
Peak Area (A-s): 0.323 Peak Height (A): 0.024
Blank Corrected Pk Height (A): 0.024
Concentration (ug/L): 0.6

~~~~~~

Hg2 ID: 57.113.44 Seq. No.: 00055 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:51
Peak Area (A-s): 0.161 Peak Height (A): 0.013
Blank Corrected Pk Height (A): 0.013
Concentration (ug/L): 0.3

~~~~~~

Hg2 ID: 57.113.44 D Seq. No.: 00056 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:52
Peak Area (A-s): 0.169 Peak Height (A): 0.013
Blank Corrected Pk Height (A): 0.013
Concentration (ug/L): 0.3

~~~~~~

Hg2 ID: CCV Seq. No.: 00057 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:53
Peak Area (A-s): 2.528 Peak Height (A): 0.202
Blank Corrected Pk Height (A): 0.202
Concentration (ug/L): 4.7

~~~~~~

Hg2 ID: CCB Seq. No.: 00058 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:54
Peak Area (A-s): 0.124 Peak Height (A): 0.006
Blank Corrected Pk Height (A): 0.006
Concentration (ug/L): 0.1
~~~~~~

Hg2 ID: 57.113.45 Seq. No.: 00059 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:55
Peak Area (A-s): 0.074 Peak Height (A): 0.004
Blank Corrected Pk Height (A): 0.004
Concentration (ug/L): 0.1

Hg2 ID: 57.113.45 D Seq. No.: 00060 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:55
Peak Area (A-s): 0.099 Peak Height (A): 0.006
Blank Corrected Pk Height (A): 0.006
Concentration (ug/L): 0.2

Hg2 ID: 57.113.49 Seq. No.: 00061 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:56
Peak Area (A-s): 0.131 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

Hg2 ID: 57.113.49 D Seq. No.: 00062 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:57
Peak Area (A-s): 0.130 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

Hg2 ID: 57.113.51 Seq. No.: 00063 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:58
Peak Area (A-s): 0.155 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

Hg2 ID: 57.113.51 D Seq. No.: 00064 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:59
Peak Area (A-s): 0.127 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

Hg2 ID: 57.113.52 Seq. No.: 00065 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 15:59
Peak Area (A-s): 0.096 Peak Height (A): 0.006
Blank Corrected Pk Height (A): 0.006
Concentration (ug/L): 0.1

Hg2 ID: 57.113.52 D Seq. No.: 00066 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:00
Peak Area (A-s): 0.074 Peak Height (A): 0.004
Blank Corrected Pk Height (A): 0.004
Concentration (ug/L): 0.1

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Hg2 ID: 57.113.56 Seq. No.: 00067 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:01
Peak Area (A-s): 0.145 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.56 D Seq. No.: 00068 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:06
Peak Area (A-s): 0.124 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.58 Seq. No.: 00069 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:07
Peak Area (A-s): 0.123 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.58 D Seq. No.: 00070 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:08
Peak Area (A-s): 0.153 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.59 Seq. No.: 00071 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:09
Peak Area (A-s): 0.101 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.59 D Seq. No.: 00072 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:10
Peak Area (A-s): 0.112 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

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ID: CCV Seq. No.: 00073 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:11
Peak Area (A-s): 2.844 Peak Height (A): 0.217
Blank Corrected Pk Height (A): 0.217
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Concentration (ug/L): 5.1

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Hg2 ID: CCB Seq. No.: 00074 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:11
Peak Area (A-s): 0.149 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.63 Seq. No.: 00075 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:12
Peak Area (A-s): 0.138 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.~~36~~ D Seq. No.: 00076 A/S Pos.: -- Date: 07/07/92

~~36~~ 63 7/11/92 PKC

Replicate 1 Time: 16:13
Peak Area (A-s): 0.141 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

~~~~~~

Hg2 ID: 57.113.65 Seq. No.: 00077 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:14
Peak Area (A-s): 0.134 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.65 D Seq. No.: 00078 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:14
Peak Area (A-s): 0.127 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

~~~~~~

Hg2 ID: 57.113.66 Seq. No.: 00079 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:15
Peak Area (A-s): 0.110 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.66 D Seq. No.: 00080 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:16
Peak Area (A-s): 0.115 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2
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Hg2 ID: 57.113.70 Seq. No.: 00081 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:17
Peak Area (A-s): 0.128 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

Hg2 ID: 57.113.70 D Seq. No.: 00082 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:18
Peak Area (A-s): 0.121 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

Hg2 ID: 57.113.72 Seq. No.: 00083 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:18
Peak Area (A-s): 0.119 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.2

Hg2 ID: 57.113.72 D Seq. No.: 00084 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:19
Peak Area (A-s): 0.121 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

Hg2 ID: 57.113.73 Seq. No.: 00085 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:20
Peak Area (A-s): 0.137 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

Hg2 ID: 57.113.73 D Seq. No.: 00086 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:21
Peak Area (A-s): 0.142 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

Hg2 ID: CCV Seq. No.: 00087 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:21
Peak Area (A-s): 2.896 Peak Height (A): 0.217
Blank Corrected Pk Height (A): 0.217
Concentration (ug/L): 5.0

Hg2 ID: CCB Seq. No.: 00088 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:22
Peak Area (A-s): 0.148 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

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Hg2 [redacted] Seq. No.: 00089 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:23
Peak Area (A-s): 0.168 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

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Hg2 [redacted] Seq. No.: 00090 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:24
Peak Area (A-s): 0.207 Peak Height (A): 0.013
Blank Corrected Pk Height (A): 0.013
Concentration (ug/L): 0.3

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Hg2 [redacted] Seq. No.: 00091 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:25
Peak Area (A-s): 0.988 Peak Height (A): 0.074
Blank Corrected Pk Height (A): 0.074
Concentration (ug/L): 1.8

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Hg2 [redacted] Seq. No.: 00092 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:26
Peak Area (A-s): 0.217 Peak Height (A): 0.013
Blank Corrected Pk Height (A): 0.013
Concentration (ug/L): 0.3

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Hg2 [redacted] Seq. No.: 00093 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:26
Peak Area (A-s): 0.210 Peak Height (A): 0.013
Blank Corrected Pk Height (A): 0.013
Concentration (ug/L): 0.3

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Hg2 [redacted] Seq. No.: 00094 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:27
Peak Area (A-s): 3.092 Peak Height (A): 0.225
Blank Corrected Pk Height (A): 0.225
Concentration (ug/L): 5.2

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ID: CCV 3.0 check Seq. No.: 00095 A/S Pos.: -- Date: 07/07/92

Replicate 1 Time: 16:30
Peak Area (A-s): 0.954 Peak Height (A): 0.081
Blank Corrected Pk Height (A): 0.081
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Concentration (ug/L): 1.9

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Hg2 ID: CCB Seq. No.: 00096 A/S Pos.: -- Date: 07/07

Replicate 1 Time: 16:31
Peak Area (A-s): 0.101 Peak Height (A): 0.005
Blank Corrected Pk Height (A): 0.005
Concentration (ug/L): 0.1
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57-113

BH

Element File: HG_.MEL Element: Hg2 Wavelength: 253.7
Date: 07/06/92 Time: 14:16 Slit: 0.7 H
Data File: 21152HG.DAT ID/Wt File: 21152HG.IDW Lamp Current: 6
Technique: MHS Calib. Type: Nonlinear Energy: 70

Hg2 ID: Seq. 00001 Seq. No.: 00001 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:16
Peak Area (A-s): -0.588 Peak Height (A): -0.029
Blank Corrected Pk Height (A): -0.029
Concentration (ug/L): -0.7

Auto-zero performed.

Hg2 ID: Seq. 00002 Seq. No.: 00002 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:17
Peak Area (A-s): 0.034 Peak Height (A): 0.002
Blank Corrected Pk Height (A): 0.002
Concentration (ug/L): 0.0

Hg2 ID: Seq. 00003 Seq. No.: 00003 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:18
Peak Area (A-s): 0.034 Peak Height (A): 0.001
Blank Corrected Pk Height (A): 0.001
Concentration (ug/L): 0.0

Hg2 ID: Seq. 00004 Seq. No.: 00004 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:20
Peak Area (A-s): 0.050 Peak Height (A): 0.003
Blank Corrected Pk Height (A): 0.003
Concentration (ug/L): 0.1

Hg2 ID: Seq. 00005 Seq. No.: 00005 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:22
Peak Area (A-s): 0.138 Peak Height (A): 0.008
Blank Corrected Pk Height (A): 0.008
Concentration (ug/L): 0.2

Auto-zero performed.

Hg2 ID: Seq. 00006 Seq. No.: 00006 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:23
Peak Area (A-s): 0.398 Peak Height (A): 0.027
Blank Corrected Pk Height (A): 0.027
Concentration (ug/L): 0.7

Standard number 1 applied. [0.5]

Correlation coefficient: 1.00000 Slope: 0.0532

~~~~~~

Hg2 ID: Seq. 00007 Seq. No.: 00007 A/S Pos.: -- Date: 07/06/92

Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 14:24
Peak Area (A-s): 0.821 Peak Height (A): 0.055
Blank Corrected Pk Height (A): 0.055
Concentration (ug/L): 1.0

Standard number 2 applied. [1.0]
Correlation coefficient: 1.00000 Slope: 0.0517

~~~~~~

Hg2 ID: Seq. 00008 Seq. No.: 00008 A/S Pos.: -- Date: 07/06/92

Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 14:24
Peak Area (A-s): 1.595 Peak Height (A): 0.108
Blank Corrected Pk Height (A): 0.108
Concentration (ug/L): 1.9

S-shaped calibration curve detected. 2-coef. equation used.
Standard number 3 applied. [2.0]
Correlation coefficient: 0.99982 Slope: 0.0536

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Hg2 ID: Seq. 00009 Seq. No.: 00009 A/S Pos.: -- Date: 07/06/92

Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 14:26
Peak Area (A-s): 3.842 Peak Height (A): 0.255
Blank Corrected Pk Height (A): 0.255
Concentration (ug/L): 4.6

S-shaped calibration curve detected. 2-coef. equation used.
Standard number 4 applied. [5.0]
Correlation coefficient: 0.99993 Slope: 0.0547

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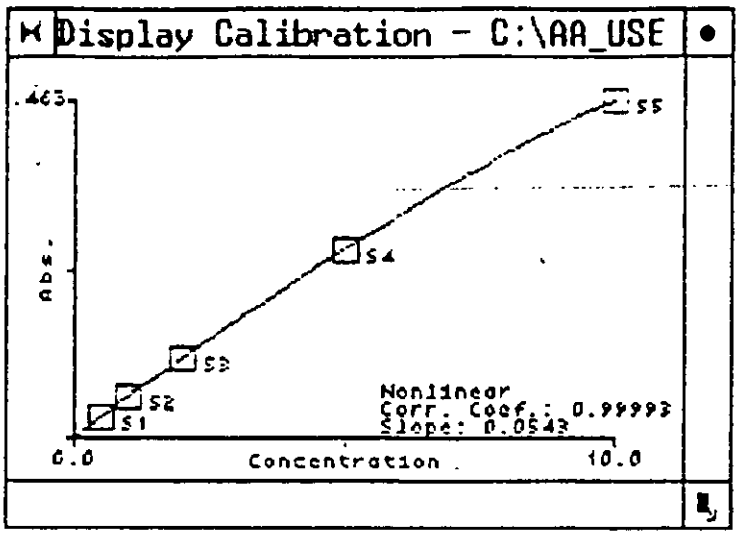
Hg2 ID: Seq. 00010 Seq. No.: 00010 A/S Pos.: -- Date: 07/06/92

Sample abs. is greater than that of the largest standard.
Replicate 1 Time: 14:27
Peak Area (A-s): 6.889 Peak Height (A): 0.463
Blank Corrected Pk Height (A): 0.463
Concentration (ug/L): 9.5

Standard number 5 applied. [10.0]
Correlation coefficient: 0.99993 Slope: 0.0543


Display Calibration - C:\AA_USE
.463
Abs.
S5
S4
S3
S2
S1
Nonlinear
Corr. Coef.: 0.99993
Slope: 0.0543
0.0
Concentration
10.0

Hg2 ID: ICV Seq. No.: 00011 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:32
Peak Area (A-s): 3.673 Peak Height (A): 0.245
Blank Corrected Pk Height (A): 0.245
Concentration (ug/L): 4.7

Hg2 ID: ICB Seq. No.: 00012 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 14:32
Peak Area (A-s): 0.146 Peak Height (A): 0.007
Blank Corrected Pk Height (A): 0.007
Concentration (ug/L): 0.1

Concentration (ug/L): 0.2

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[redacted] ID: [redacted]D Seq. No.: 00072 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 15:53
Peak Area (A-s): 0.231 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

~~~~~~

Hg2 ID: [redacted] Seq. No.: 00073 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 15:54
Peak Area (A-s): 0.304 Peak Height (A): 0.017
Blank Corrected Pk Height (A): 0.017
Concentration (ug/L): 0.3

~~~~~~

Hg2 ID: [redacted] Seq. No.: 00074 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 15:55
Peak Area (A-s): 0.338 Peak Height (A): 0.020
Blank Corrected Pk Height (A): 0.020
Concentration (ug/L): 0.4

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Hg2 ID: 57.113.3 BH Seq. No.: 00075 A/S Pos.: -- Date: 07/06/92

[redacted]cate 1 Time: 15:56
Peak Area (A-s): 0.776 Peak Height (A): 0.046
Blank Corrected Pk Height (A): 0.046
Concentration (ug/L): 0.9

~~~~~~

Hg2 ID: 57.113.3 BH D Seq. No.: 00076 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 15:57
Peak Area (A-s): 0.678 Peak Height (A): 0.045
Blank Corrected Pk Height (A): 0.045
Concentration (ug/L): 0.8

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Hg2 ID: 57.113.3 SPK Seq. No.: 00077 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 15:58
Peak Area (A-s): 3.978 Peak Height (A): 0.251
Blank Corrected Pk Height (A): 0.251
Concentration (ug/L): 4.8

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Hg2 ID: 57.113.7 BH Seq. No.: 00078 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 15:59
Peak Area (A-s): 0.864 Peak Height (A): 0.051
Blank Corrected Pk Height (A): 0.051
Concentration (ug/L): 0.9
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Hg2 ID: 57.113.7 BH D Seq. No.: 00079 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:00
Peak Area (A-s): 0.861 Peak Height (A): 0.051
Blank Corrected Pk Height (A): 0.051
Concentration (ug/L): 0.9

Hg2 ID: 57.113.11 BH Seq. No.: 00080 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:01
Peak Area (A-s): 0.812 Peak Height (A): 0.048
Blank Corrected Pk Height (A): 0.048
Concentration (ug/L): 0.9

Hg2 ID: 57.113.11 BH D Seq. No.: 00081 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:03
Peak Area (A-s): 0.716 Peak Height (A): 0.046
Blank Corrected Pk Height (A): 0.046
Concentration (ug/L): 0.9

Hg2 ID: CCV Seq. No.: 00082 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:04
Peak Area (A-s): 3.567 Peak Height (A): 0.218
Blank Corrected Pk Height (A): 0.218
Concentration (ug/L): 4.2

Hg2 ID: CCB Seq. No.: 00083 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:05
Peak Area (A-s): 0.389 Peak Height (A): 0.020
Blank Corrected Pk Height (A): 0.020
Concentration (ug/L): 0.4

Hg2 ID: 57.113.15 BH Seq. No.: 00084 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:06
Peak Area (A-s): 0.495 Peak Height (A): 0.027
Blank Corrected Pk Height (A): 0.027
Concentration (ug/L): 0.5

Hg2 ID: 57.113.15 BH D Seq. No.: 00085 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:07
Peak Area (A-s): 0.478 Peak Height (A): 0.025
Blank Corrected Pk Height (A): 0.025
Concentration (ug/L): 0.5

Hg2 ID: 57.113.19 BH Seq. No.: 00087 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:10
Peak Area (A-s): 0.218 Peak Height (A): 0.010
Blank Corrected Pk Height (A): 0.010
Concentration (ug/L): 0.2

Hg2 ID: 57.113.19 BH D Seq. No.: 00088 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:10
Peak Area (A-s): 0.442 Peak Height (A): 0.025
Blank Corrected Pk Height (A): 0.025
Concentration (ug/L): 0.5

Hg2 ID: 57.113.23 BH Seq. No.: 00089 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:11
Peak Area (A-s): 0.455 Peak Height (A): 0.025
Blank Corrected Pk Height (A): 0.025
Concentration (ug/L): 0.5

Hg2 ID: 57.113.23 BH D Seq. No.: 00090 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:12
Peak Area (A-s): 0.425 Peak Height (A): 0.023
Blank Corrected Pk Height (A): 0.023
Concentration (ug/L): 0.4

Hg2 ID: 57.113.29 BH Seq. No.: 00091 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:13
Peak Area (A-s): 0.864 Peak Height (A): 0.049
Blank Corrected Pk Height (A): 0.049
Concentration (ug/L): 0.9

Hg2 ID: 57.113.29 BH D Seq. No.: 00092 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:13
Peak Area (A-s): 0.840 Peak Height (A): 0.048
Blank Corrected Pk Height (A): 0.048
Concentration (ug/L): 0.9

Hg2 ID: 57.113.36 BH Seq. No.: 00093 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:14
Peak Area (A-s): 1.340 Peak Height (A): 0.079
Blank Corrected Pk Height (A): 0.079
Concentration (ug/L): 1.5

Hg2 ID: 57.113.36 BH D Seq. No.: 00094 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:15
Peak Area (A-s): 1.318 Peak Height (A): 0.080
Blank Corrected Pk Height (A): 0.080

Concentration (ug/L): 1.5

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Hg2 ID: 57.113.43 BH Seq. No.: 00095 A/S Pos.: -- Date: 07/06/

Replicate 1 Time: 16:16
Peak Area (A-s): 1.011 Peak Height (A): 0.062
Blank Corrected Pk Height (A): 0.062
Concentration (ug/L): 1.1

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Hg2 ID: CCV Seq. No.: 00096 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:16
Peak Area (A-s): 0.192 Peak Height (A): 0.009
Blank Corrected Pk Height (A): 0.009
Concentration (ug/L): 0.2

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Hg2 ID: 57.113.43 BH D Seq. No.: 00097 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:17
Peak Area (A-s): 0.894 Peak Height (A): 0.060
Blank Corrected Pk Height (A): 0.060
Concentration (ug/L): 1.1

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Hg2 ID: 57.113.50.BH Seq. No.: 00098 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:18
Peak Area (A-s): 0.665 Peak Height (A): 0.038
Blank Corrected Pk Height (A): 0.038
Concentration (ug/L): 0.7

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Hg2 ID: 57.113.50 BH D Seq. No.: 00099 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:19
Peak Area (A-s): 0.677 Peak Height (A): 0.037
Blank Corrected Pk Height (A): 0.037
Concentration (ug/L): 0.7

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Hg2 ID: CCV Seq. No.: 00100 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:20
Peak Area (A-s): 3.626 Peak Height (A): 0.227
Blank Corrected Pk Height (A): 0.227
Concentration (ug/L): 4.4

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Hg2 ID: CCB Seq. No.: 00101 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:20
Peak Area (A-s): 0.323 Peak Height (A): 0.015
Blank Corrected Pk Height (A): 0.015
Concentration (ug/L): 0.3
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Hg2 ID: 57.113.57 BH Seq. No.: 00102 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:22
Peak Area (A-s): 0.568 Peak Height (A): 0.032
Blank Corrected Pk Height (A): 0.032
Concentration (ug/L): 0.6

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Hg2 ID: 57.113.57 BH D Seq. No.: 00103 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:23
Peak Area (A-s): 0.561 Peak Height (A): 0.033
Blank Corrected Pk Height (A): 0.033
Concentration (ug/L): 0.6

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Hg2 ID: 57.113.64 BH Seq. No.: 00104 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:24
Peak Area (A-s): 0.551 Peak Height (A): 0.032
Blank Corrected Pk Height (A): 0.032
Concentration (ug/L): 0.6

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Hg2 ID: 57.113.64 BH D Seq. No.: 00105 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:25
Peak Area (A-s): 0.548 Peak Height (A): 0.031
Blank Corrected Pk Height (A): 0.031
Concentration (ug/L): 0.6

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Hg2 ID: 57.113.71 BH Seq. No.: 00106 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:25
Peak Area (A-s): 0.273 Peak Height (A): 0.014
Blank Corrected Pk Height (A): 0.014
Concentration (ug/L): 0.3

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Hg2 ID: 57.113.71 BH D Seq. No.: 00107 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:26
Peak Area (A-s): 0.257 Peak Height (A): 0.014
Blank Corrected Pk Height (A): 0.014
Concentration (ug/L): 0.3

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Hg2 ID: CCV Seq. No.: 00108 A/S Pos.: -- Date: 07/06/92

Replicate 1 Time: 16:27
Peak Area (A-s): 3.479 Peak Height (A): 0.225
Blank Corrected Pk Height (A): 0.225
Concentration (ug/L): 4.3

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Hg2 ID: CCB Seq. No.: 00109 A/S Pos.: -- Date: 07/06/92

Replicate 1
Peak Area (A-s): 0.335
Blank Corrected Pk Height (A): 0.016
Concentration (ug/L): 0.3

Time: 16:28
Peak Height (A): 0.016

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CERTIFICATE OF ANALYSIS

Client:

IEA, Inc.
120 S. Center Ct., Suite 200
Morrisville, NC 27560

Attn: Frank Stevens

Work Order #: 92-06-189
Client Code: IEA
Report Date: 07/14/92
Work ID: BIF Compliance, mets/wets
Date Received: 06/23/92

Purchase Order: FF 1069

SAMPLE IDENTIFICATION

Lab Number	Sample Description	Lab Number	Sample Description
01	K2-RFEED-1-MTL	02	K2-RFEED-2-MTL
03	K2-RFEED-3-MTL	04	K4-RFEED-1-MTL
05	K4-RFEED-2-MTL	06	K4-RFEED-2D-MTL
07	K4-RFEED-3-MTL	08	K2-PROD-1-MTL
09	K2-PROD-2-MTL	10	K2-PROD-3-MTL
11	K4-PROD-1-MTL	12	K4-PROD-2-MTL
13	K4-PROD-2D-MTL	14	K4-PROD-3-MTL
15	K2-DUST-1-MTL	16	K2-DUST-2-MTL
17	K2-DUST-3-MTL	18	K4-DUST-1-MTL
19	K4-DUST-2-MTL	20	K4-DUST-2D-MTL
21	K4-DUST-3-MTL	22	K2-LBM-1-MTL
23	K2-LBM-2-MTL	24	K2-LBM-3-MTL
25	K4-LBM-1-MTL	26	K4-LBM-2-MTL
27	K4-LBM-2D-MTL	28	K4-LBM-3-MTL
29	K2-RFEED-1-PHYS	30	K2-RFEED-2-PHYS
31	K2-RFEED-3-PHYS	32	K4-RFEED-1-PHYS
33	K4-RFEED-2-PHYS	34	K4-RFEED-2D-PHYS
35	K4-RFEED-3-PHYS	36	K2-PROD-1-PHYS
37	K2-PROD-2-PHYS	38	K2-PROD-3-PHYS
39	K4-PROD-1-PHYS	40	K4-PROD-2-PHYS
41	K4-PROD-2D-PHYS	42	K4-PROD-3-PHYS
43	K2-LBM-1-PHYS	44	K2-LBM-2-PHYS
45	K2-LBM-3-PHYS	46	K4-LBM-1-PHYS
47	K4-LBM-2-PHYS	48	K4-LBM-2D-PHYS
49	K4-LBM-3-PHYS		

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Data are reported on an as-received basis unless stated otherwise. Practical Quantitation Limits (PQL's) are listed; they are higher than instrument detection limits and take the sample's matrix into account. Metals and other inorganic data are corrected for laboratory blank values; organic data are not. Unless otherwise noted, organic analysis blanks had no targets found above their PQL's.

Craig H Caldwell

Certificate approved by
Craig H. Caldwell

REPORT COMMENTS

The recovery of silver from the Laboratory Control Sample (LCS) which was prepared for ICP analysis with the samples had very low recovery. This usually indicates inadequate dissolution with hydrochloric acid in the final step of the preparation. However, the recoveries of silver from spiked samples ranged from 8% to 84%, which are not atypical recoveries from complex matrices. I conclude that the low LCS value is an anomaly.

We had difficulties with the lead determinations by GFAA, so the ICP data are reported instead.

The RFEED, PROD, and DUST samples (RASI Nos. 01-21) required dilutions for their ICP analyses to reduce interferences from their high iron concentrations. The listed PQL's for the metals determined by ICP do not reflect those dilutions; the actual PQL's for the six metals in those samples are 10 times the listed values.

Work Order # 92-06-189 **Ross Analytical Services, Inc** **Reported: 07/14/92**

QUALITY CONTROL SUMMARY

Four samples were prepared for metals analysis with matrix spike/matrix spike duplicate (MS/MSD) pairs. The results of these analyses are listed below.

Sample K4-RFEED-2-MTL (RASI No. 05)

Metal	Sample Result	Spike	MS % Rec.	MSD % Rec.	RPD
Antimony	<PQL	5.0	0	0	(Not calculable)
Arsenic	6.38	5.0	42	42	1
Barium	9.95	20.0	90	100	7
Beryllium	0.15	20.0	93	104	12
Cadmium	<PQL	20.0	71	80	12
Chromium	9.64	20.0	88	96	6
Lead	<PQL	40.0	92	103	11
Mercury	<PQL	0.8	96	93	3
Silver	<PQL	20.0	8	47	142
Thallium	1.65	5.0	129	135	3

Sample K2-PROD-3-MTL (RASI No. 10)

Metal	Sample Result	Spike	MS % Rec.	MSD % Rec.	RPD
Antimony	<PQL	5.0	0	0	(Not calculable)
Arsenic	4.98	5.0	69	70	5
Barium	24.7	20.0	125	122	1
Beryllium	0.21	20.0	96	102	5
Cadmium	<PQL	20.0	68	73	8
Chromium	4.50	20.0	104	106	2
Lead	<PQL	40.0	102	104	2
Mercury	<PQL	0.8	97	96	1
Silver	<PQL	20.0	12	16	30
Thallium	1.62	5.0	125	125	3

Sample K2-DUST-1-MTL (RASI No. 15)

Metal	Sample Result	Spike	MS % Rec.	MSD % Rec.	RPD
Antimony	<PQL	5.0	0	0	(Not calculable)
Arsenic	19.1	5.0	0	69	112
Barium	13.9	20.0	97	88	6
Beryllium	0.38	20.0	92	91	1
Cadmium	0.56	20.0	88	88	0
Chromium	5.25	20.0	94	91	2
Lead	38.8	40.0	115	107	4
Mercury	<PQL	0.8	103	104	1
Silver	<PQL	20.0	84	80	4
Thallium	1.85	5.0	133	135	2

Sample K2-LBM-1-MTL (RASI No. 22)

Metal	Sample Result	Spike	MS % Rec.	MSD % Rec.	RPD
Antimony	2.99	5.0	31	47	21
Arsenic	0.33	5.0	46	27	44
Barium	148	100	97	93	2
Beryllium	<PQL	100	92	86	6
Cadmium	3.61	100	83	77	7
Chromium	22.1	100	95	89	5
Lead	139	200	89	82	4
Mercury	<PQL	0.8	88	90	2
Silver	<PQL	100	42	40	4
Thallium	<PQL	5.0	94	110	16

Two samples were analyzed for chloride with matrix spike/matrix spike duplicate (MS/MSD) pairs. The results of these analyses are listed below.

Sample	Sample Result	Spike	MS % Rec.	MSD % Rec.	RPD
2-RFEED-1-PHYS	<PQL	26.5	80	72	11
K4-PROD-2-PHYS	<PQL	31.3	62	85	33

The same two samples were analyzed for moisture in duplicate The results of these analyses are listed below.

Sample	Result 1	Result 2	RPD
K2-RFEED-1-PHYS	<PQL	<PQL	(Not calculable)
K4-PROD-2-PHYS	<PQL	<PQL	(Not calculable)

Sample K4-LBM-2D-PHYS (RASI No. 48) was analyzed in duplicate for ash, heating value, density, and water. The results of these analyses are listed below.

Analyte	Result 1	Result 2	RPD
Ash	<PQL	<PQL	(Not calculable)
Heating value	14,400	14,200	1
Density	0.929	0.927	0

The same sample as analyzed for halide with an MS/MSD pair. The results of these analyses are listed below.

Sample	Sample Result	Spike	MS % Rec.	MSD % Rec.	RPD
K4-LBM-2D-PHYS	2.51	31.5	85	90	3

TEST METHODOLOGIES

Chloride was determined by combustion in an oxygen bomb followed by electrometry as in ASTM Method D-4208.

Moisture was determined gravimetrically following drying at 105 C as in EPA Method 160.3.

Ash was determined gravimetrically following ignition at 1800 C as in ASTM Method D-482.

Heating value was determined by isothermal calorimetry as in ASTM Method D-240.

Total halides were determined by combustion in an oxygen bomb followed by a Volhard titration as in ASTM Method D-808.

Specific gravity was determined by weighing a measured volume of the sample.

Metals were determined in solid and non-aqueous liquid samples by digestion with nitric acid, hydrogen peroxide, and hydrochloric acid as in EPA Method 3050, followed by Inductively Coupled Plasma Emission Spectroscopy as in EPA Method 6010, unless noted otherwise.

Mercury was determined in solid and non-aqueous liquid samples by cold vapor atomic absorption after acid/permanganate digestion as in EPA Methods 245.5 and 7471.

Antimony was determined by graphite furnace AA as in EPA Methods 204.2 and 7041.

Arsenic was determined by graphite furnace AA as in EPA Methods 206.2 and 7061A.

Thallium was determined by graphite furnace AA as in EPA Methods 279.2 and 7841.

Water was determined by Karl Fischer titration.

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

RESULTS BY SAMPLE

Sample Description: K2-RFEED-1-MTL **Lab No.:** 01

Analyte Description	Result	Units	PQL
Barium by ICP	109	mg/Kg	0.07
Beryllium by ICP	3.47	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	74.5	mg/Kg	0.80
Lead by ICP	20.8	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	6.59	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.74	mg/Kg	0.40

Sample Description: K2-RFEED-2-MTL **Lab No.:** 02

Analyte Description	Result	Units	PQL
Barium by ICP	97.0	mg/Kg	0.07
eryllium by ICP	1.67	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	118	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	4.59	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.43	mg/Kg	0.40

Sample Description: K2-RFEED-3-MTL **Lab No.:** 03

Analyte Description	Result	Units	PQL
Barium by ICP	113	mg/Kg	0.07
Beryllium by ICP	1.23	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	82.7	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	7.05	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.48	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-RFEED-1-MTL **Lab No.:** 04

Analyte Description	Result	Units	PQL
Barium by ICP	100	mg/Kg	0.07
Beryllium by ICP	1.34	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	107	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	4.20	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.49	mg/Kg	0.40

Sample Description: K4-RFEED-2-MTL **Lab No.:** 05

Analyte Description	Result	Units	PQL
Barium by ICP	97.6	mg/Kg	0.07
Beryllium by ICP	1.45	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	94.5	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	6.38	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.65	mg/Kg	0.40

Sample Description: K4-RFEED-2D-MTL **Lab No.:** 06

Analyte Description	Result	Units	PQL
Barium by ICP	125	mg/Kg	0.07
Beryllium by ICP	6.77	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	108	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	4.01	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.51	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-RFEED-3-MTL **Lab No.:** 07

Analyte Description	Result	Units	PQL
Barium by ICP	114	mg/Kg	0.07
Beryllium by ICP	1.51	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	88.9	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	3.71	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.49	mg/Kg	0.40

Sample Description: K2-PROD-1-MTL **Lab No.:** 08

Analyte Description	Result	Units	PQL
Barium by ICP	205	mg/Kg	0.07
Beryllium by ICP	1.95	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	95.1	mg/Kg	0.80
Lead by ICP	41.4	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	4.26	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.20	mg/Kg	0.40

Sample Description: K2-PROD-2-MTL **Lab No.:** 09

Analyte Description	Result	Units	PQL
Barium by ICP	219	mg/Kg	0.07
Beryllium by ICP	2.38	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	58.7	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	4.08	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.44	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K2-PROD-3-MTL **Lab No.:** 10

Analyte Description	Result	Units	PQL
Barium by ICP	262	mg/Kg	0.07
Beryllium by ICP	2.22	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	47.8	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	4.98	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.62	mg/Kg	0.40

Sample Description: K4-PROD-1-MTL **Lab No.:** 11

Analyte Description	Result	Units	PQL
Barium by ICP	175	mg/Kg	0.07
Beryllium by ICP	8.94	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	46.1	mg/Kg	0.80
Lead by ICP	27.9	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	3.09	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.34	mg/Kg	0.40

Sample Description: K4-PROD-2-MTL **Lab No.:** 12

Analyte Description	Result	Units	PQL
Barium by ICP	196	mg/Kg	0.07
Beryllium by ICP	2.71	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	66.8	mg/Kg	0.80
Lead by ICP	20.8	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	4.23	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.48	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-PROD-2D-MTL **Lab No.:** 13

Analyte Description	Result	Units	PQL
Barium by ICP	174	mg/Kg	0.07
Beryllium by ICP	2.51	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	55.1	mg/Kg	0.80
Lead by ICP	48.9	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	5.79	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.38	mg/Kg	0.40

Sample Description: K4-PROD-3-MTL **Lab No.:** 14

Analyte Description	Result	Units	PQL
Barium by ICP	224	mg/Kg	0.07
Beryllium by ICP	1.75	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	41.1	mg/Kg	0.80
Lead by ICP	<PQL	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	7.88	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.31	mg/Kg	0.40

Sample Description: K2-DUST-1-MTL **Lab No.:** 15

Analyte Description	Result	Units	PQL
Barium by ICP	148	mg/Kg	0.07
Beryllium by ICP	4.01	mg/Kg	0.07
Cadmium by ICP	5.92	mg/Kg	0.45
Chromium by ICP	55.8	mg/Kg	0.80
Lead by ICP	412	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	19.1	mg/Kg	0.20
Mercury by CVAA	<PQL	mg/Kg	0.04
Thallium by GFAA	1.85	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K2-DUST-2-MTL **Lab No.:** 16

Analyte Description	Result	Units	PQL
Barium by ICP	172	mg/Kg	0.07
Beryllium by ICP	13.5	mg/Kg	0.07
Cadmium by ICP	34.0	mg/Kg	0.45
Chromium by ICP	72.4	mg/Kg	0.80
Lead by ICP	724	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	7.23	mg/Kg	0.20
Mercury by CVAA	0.08	mg/Kg	0.04
Thallium by GFAA	1.91	mg/Kg	0.40

Sample Description: K2-DUST-3-MTL **Lab No.:** 17

Analyte Description	Result	Units	PQL
Barium by ICP	150	mg/Kg	0.07
Beryllium by ICP	6.86	mg/Kg	0.07
Cadmium by ICP	34.6	mg/Kg	0.45
Chromium by ICP	58.8	mg/Kg	0.80
Lead by ICP	735	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	35.5	mg/Kg	0.20
Mercury by CVAA	0.09	mg/Kg	0.04
Thallium by GFAA	1.86	mg/Kg	0.40

Sample Description: K4-DUST-1-MTL **Lab No.:** 18

Analyte Description	Result	Units	PQL
Barium by ICP	139	mg/Kg	0.07
Beryllium by ICP	4.02	mg/Kg	0.07
Cadmium by ICP	102	mg/Kg	0.45
Chromium by ICP	56.7	mg/Kg	0.80
Lead by ICP	1370	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	43.6	mg/Kg	0.20
Mercury by CVAA	0.11	mg/Kg	0.04
Thallium by GFAA	2.65	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-DUST-2-MTL **Lab No.:** 19

Analyte Description	Result	Units	PQL
Barium by ICP	135	mg/Kg	0.07
Beryllium by ICP	8.72	mg/Kg	0.07
Cadmium by ICP	200	mg/Kg	0.45
Chromium by ICP	66.4	mg/Kg	0.80
Lead by ICP	2110	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	54.3	mg/Kg	0.20
Mercury by CVAA	0.10	mg/Kg	0.04
Thallium by GFAA	3.08	mg/Kg	0.40

Sample Description: K4-DUST-2D-MTL **Lab No.:** 20

Analyte Description	Result	Units	PQL
Barium by ICP	143	mg/Kg	0.07
Beryllium by ICP	7.62	mg/Kg	0.07
Cadmium by ICP	170	mg/Kg	0.45
Chromium by ICP	71.3	mg/Kg	0.80
Lead by ICP	2070	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	94.1	mg/Kg	0.20
Mercury by CVAA	0.10	mg/Kg	0.04
Thallium by GFAA	2.60	mg/Kg	0.40

Sample Description: K4-DUST-3-MTL **Lab No.:** 21

Analyte Description	Result	Units	PQL
Barium by ICP	147	mg/Kg	0.07
Beryllium by ICP	14.5	mg/Kg	0.07
Cadmium by ICP	265	mg/Kg	0.45
Chromium by ICP	79.3	mg/Kg	0.80
Lead by ICP	2210	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	<PQL	mg/Kg	0.39
Arsenic by GFAA	155	mg/Kg	0.20
Mercury by CVAA	0.11	mg/Kg	0.04
Thallium by GFAA	2.76	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K2-LBM-1-MTL **Lab No.:** 22

Analyte Description	Result	Units	PQL
Barium by ICP	148	mg/Kg	0.07
Beryllium by ICP	<PQL	mg/Kg	0.07
Cadmium by ICP	3.61	mg/Kg	0.45
Chromium by ICP	22.1	mg/Kg	0.80
Lead by ICP	139	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	2.99	mg/Kg	0.39
Arsenic by GFAA	0.33	mg/Kg	0.20
Mercury by CVAA	0.16	mg/Kg	0.04
Thallium by GFAA	<PQL	mg/Kg	0.40

Sample Description: K2-LBM-2-MTL **Lab No.:** 23

Analyte Description	Result	Units	PQL
Barium by ICP	114	mg/Kg	0.07
Beryllium by ICP	0.08	mg/Kg	0.07
Cadmium by ICP	3.13	mg/Kg	0.45
Chromium by ICP	16.9	mg/Kg	0.80
Lead by ICP	108	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	2.74	mg/Kg	0.39
Arsenic by GFAA	0.20	mg/Kg	0.20
Mercury by CVAA	0.40	mg/Kg	0.04
Thallium by GFAA	<PQL	mg/Kg	0.40

Sample Description: K2-LBM-3-MTL **Lab No.:** 24

Analyte Description	Result	Units	PQL
Barium by ICP	178	mg/Kg	0.07
Beryllium by ICP	<PQL	mg/Kg	0.07
Cadmium by ICP	2.85	mg/Kg	0.45
Chromium by ICP	26.3	mg/Kg	0.80
Lead by ICP	159	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	2.49	mg/Kg	0.39
Arsenic by GFAA	3.19	mg/Kg	0.20
Mercury by CVAA	0.36	mg/Kg	0.04
Thallium by GFAA	<PQL	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-LBM-1-MTL **Lab No.:** 25

Analyte Description	Result	Units	PQL
Barium by ICP	81.9	mg/Kg	0.07
Beryllium by ICP	<PQL	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	9.23	mg/Kg	0.80
Lead by ICP	35.2	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	2.48	mg/Kg	0.39
Arsenic by GFAA	6.40	mg/Kg	0.20
Mercury by CVAA	0.19	mg/Kg	0.04
Thallium by GFAA	<PQL	mg/Kg	0.40

Sample Description: K4-LBM-2-MTL **Lab No.:** 26

Analyte Description	Result	Units	PQL
Barium by ICP	68.5	mg/Kg	0.07
Beryllium by ICP	<PQL	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	7.75	mg/Kg	0.80
Lead by ICP	24.8	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	3.89	mg/Kg	0.39
Arsenic by GFAA	1.08	mg/Kg	0.20
Mercury by CVAA	0.16	mg/Kg	0.04
Thallium by GFAA	<PQL	mg/Kg	0.40

Sample Description: K4-LBM-2D-MTL **Lab No.:** 27

Analyte Description	Result	Units	PQL
Barium by ICP	66.0	mg/Kg	0.07
Beryllium by ICP	<PQL	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	7.94	mg/Kg	0.80
Lead by ICP	24.7	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	2.81	mg/Kg	0.39
Arsenic by GFAA	1.35	mg/Kg	0.20
Mercury by CVAA	0.16	mg/Kg	0.04
Thallium by GFAA	<PQL	mg/Kg	0.40

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-LBM-3-MTL **Lab No.:** 28

Analyte Description	Result	Units	PQL
Barium by ICP	58.2	mg/Kg	0.07
Beryllium by ICP	<PQL	mg/Kg	0.07
Cadmium by ICP	<PQL	mg/Kg	0.45
Chromium by ICP	6.20	mg/Kg	0.80
Lead by ICP	18.7	mg/Kg	2.1
Silver by ICP	<PQL	mg/Kg	0.70
Antimony by GFAA	3.33	mg/Kg	0.39
Arsenic by GFAA	<PQL	mg/Kg	0.20
Mercury by CVAA	0.10	mg/Kg	0.04
Thallium by GFAA	<PQL	mg/Kg	0.40

Sample Description: K2-RFEED-1-PHYS **Lab No.:** 29

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K2-RFEED-2-PHYS **Lab No.:** 30

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K2-RFEED-3-PHYS **Lab No.:** 31

Analyte Description	Result	Units	PQL
% moisture	0.72	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K4-RFEED-1-PHYS **Lab No.:** 32

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-RFEED-2-PHYS **Lab No.:** 33

Analyte Description	Result	Units	PQL
% moisture	0.89	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K4-RFEED-2D-PHYS **Lab No.:** 34

Analyte Description	Result	Units	PQL
% moisture	1.09	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K4-RFEED-3-PHYS **Lab No.:** 35

Analyte Description	Result	Units	PQL
% moisture	0.56	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K2-PROD-1-PHYS **Lab No.:** 36

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K2-PROD-2-PHYS **Lab No.:** 37

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K2-PROD-3-PHYS **Lab No.:** 38

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Sample Description: K4-PROD-1-PHYS **Lab No.:** 39

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K4-PROD-2-PHYS **Lab No.:** 40

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K4-PROD-2D-PHYS **Lab No.:** 41

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K4-PROD-3-PHYS **Lab No.:** 42

Analyte Description	Result	Units	PQL
% moisture	<PQL	%	0.5
Chloride in organics	<PQL	%	0.04

Sample Description: K2-LBM-1-PHYS **Lab No.:** 43

Analyte Description	Result	Units	PQL
Density	0.909	g/mL	
Heating value	12,100	Btu/lb	500
Ash	0.22	%	0.05
Total halides as chloride	1.69	% as Cl	0.20
Water by Karl Fischer	20	%	0.5

Sample Description: K2-LBM-2-PHYS **Lab No.:** 44

Analyte Description	Result	Units	PQL
Density	0.903	g/mL	
Heating value	10,000	Btu/lb	500
Ash	0.33	%	0.05
Total halides as chloride	0.94	% as Cl	0.20

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Analyte Description	Result	Units	PQL
Water by Karl Fischer	24	%	0.5

Sample Description: K2-LBM-3-PHYS **Lab No.:** 45

Analyte Description	Result	Units	PQL
Density	0.903	g/mL	
Heating value	10,700	Btu/lb	500
Ash	0.67	%	0.05
Total halides as chloride	0.76	% as Cl	0.20
Water by Karl Fischer	20	%	0.5

Sample Description: K4-LBM-1-PHYS **Lab No.:** 46

Analyte Description	Result	Units	PQL
Density	0.930	g/mL	
Heating value	14,800	Btu/lb	500
Ash	<PQL	%	0.05
Total halides as chloride	2.19	% as Cl	0.20
ater by Karl Fischer	<PQL	%	0.5

Sample Description: K4-LBM-2-PHYS **Lab No.:** 47

Analyte Description	Result	Units	PQL
Density	0.927	g/mL	
Heating value	14,500	Btu/lb	500
Ash	0.11	%	0.05
Total halides as chloride	2.28	% as Cl	0.20
Water by Karl Fischer	24	%	0.5

Sample Description: K4-LBM-2D-PHYS **Lab No.:** 48

Analyte Description	Result	Units	PQL
Density	0.929	g/mL	
Heating value	14,400	Btu/lb	500
Ash	<PQL	%	0.05
Total halides as chloride	2.51	% as Cl	0.20
Water by Karl Fischer	20	%	0.5

ample Description: K4-LBM-3-PHYS **Lab No.:** 49

Analyte Description	Result	Units	PQL
Density	0.923	g/mL	

Work Order # 92-06-189 Ross Analytical Services, Inc Reported: 07/14/92

Analyte Description	Result	Units	PQL
Heating value	14,600	Btu/lb	500
Ash	<PQL	%	0.05
Total halides as chloride	2.53	% as Cl	0.20
Water by Karl Fischer	<PQL	%	0.5

ROSS ANALYTICAL SERVICES

Analytical Data Sheet

000021

Client(s) IEA — Analyst dfm

Test Moisture — Date 7-8-92 — Checker [illegible]

SAMPLE ID	DISH WT	GROSS SAMPLE WET	GROSS SAMPLE DRY	LOSS WT. NET	% MOISTURE
92-06-189-29A	1.32 gm	6.01	6.01	<.01	<.50
-29A-DUP	1.32 gm	5.84	5.83	.01	<.50
-30A	1.32 gm	5.64	5.63	.01	<.50
-31A	1.32 gm	5.46	5.43	.03	.72 %
-32A	1.32 gm	5.07	5.06	.01	<.50
-33A	1.32 gm	5.82	5.78	.04	.89 %
-34A	1.32 gm	5.00	4.96	.04	1.09 %
-35A	1.32 gm	6.64	6.61	.03	.56 %
-36A	1.32 gm	6.16	6.14	.02	<.50
-37A	1.31 gm	4.89	4.89	<.01	<.50
-38A	1.31 gm	6.96	6.96	<.01	<.50
-39A	1.31 gm	5.44	5.44	<.01	<.50
-40A	1.31 gm	6.26	6.26	<.01	<.50
-40A DUP	1.32 gm	6.13	6.13	<.01	<.50
-41A	1.32 gm	7.57	7.57	<.01	<.50
-42A	1.33 gm	5.14	5.14	<.01	<.50

PQL = <.50 %

RCSS ANALYTICAL SERVICES

Analytical Data Sheet

000022

Client(s) IEA Analyst msp

Test CL Bomb Date 7-10-92 Checker

Sample ID	Samp wt.(g)	Spike wt. (g)	Final Volume	
92-06-189-29A	.508		100mL	
-29A MS	.532	.174 gm	of CH_2Cl_2	= .145 gm of Cl^- (100mL)
-29A MSD	.512	.159 gm	of CH_2Cl_2	= .132 gm of Cl^- (100mL)
-30A	.528		100mL	
-31A	.503		100mL	
-32A	.503		100mL	
-33A	.534		100mL	
-34A	.529		100mL	
-35A	.526		100mL	
-36A	.551		100mL	
-37A	.526		100mL	
-38A	.513		100mL	
-39A	.529		100mL	
-40A	.515		100mL	
-40A MS	.510	.189 gm	of CH_2Cl_2	= .158 gm of Cl^- (100mL)
-40A MSD	.524	.199 gm	of CH_2Cl_2	= .166 gm of Cl^- (100mL)
-41A	.503		100mL	
-42A	.508		100mL	
Prep. Blank #1 CL Bomb 7-10-92	—			
Prep. Blank #2 CL Bomb 7-10-92	—	dfm 7/10		.132
LCS	—	.138 ~~.130~~ gm	of CH_2Cl_2	= ~~.108~~ gm of Cl^-

ROSS ANALYTICAL SERVICES

000023

Analytical Data Sheet

Client(s) IEA Analyst SJ

Test Cl⁻ Selective Ion Date 7-13-92 Checker C.H.C.

Sample ID	Wt (gm) Final Vol	Dilution	Actual Concentration	Final Concentration	
Prep Blank 1	— 100 ml	—	<2.0 ug/ml	—	
Prep Blank 2	—	—	<2.0	—	
LCS		5-100	50.7	$\frac{10.4}{1320}(100) = 768$ % REC	
92-06-189-29A	.503gm	—	~~<20~~ <2.0	< PQL	
29A MS	.535	5-100	58.3	$\frac{1166}{1450}(100) = 804$ % REC	
29A MSD	.512	5-100	47.4	$\frac{948}{1320}(100) = 71.8$ % REC	
30A	.529	—	<2.0	< PQL	
31A	.503	—	<2.0	< PQL	
32A	.503	—	<2.0	< PQL	
33A	.534	—	<2.0	< PQL	
34A	.529	—	<2.0	< PQL	
35A	.526	—	<2.0	< PQL	
36A	.551	—	<2.0	< PQL	
37A	.526	—	<2.0	< PQL	
38A	.513	—	<2.0	< PQL	
39A	.529	—	<2.0	< PQL	
40A	.515	—	~~<20~~ <2.0	< PQL	
40A MS	.510	5-100	48.6	$\frac{972}{1580}(100) = 61.5$ % REC	
40A MSD	.524	5-100	70.9	$\frac{1418}{1660}(100) = 85.4$ % REC	
41A	.503	—	<2.0	< PQL	
42A	.508	—	<2.0	< PQL	

Stock Cl⁻ Std = CW 16 B = 1000 ug/ml used for 92-06-189, 29A → 42A & 92-06-178, 29A → 42A

* 2 ug/ml → 200 µl → 100 ml
* 10.0 ug/ml → 1.0 ml → 100 ml
* 20.0 ug/ml → 2.0 ml → 100 ml
* 50.0 ug/ml → 5.0 ml → 100 ml
* 100.0 ug/ml → 10.0 ml → 100 ml
* 200.0 ug/ml → 20.0 ml → 100 ml

PQL = 400 mg/kg or 20 ug

ROSS ANALYTICAL SERVICES

000024

Analytical Data Sheet

Client(s) IEA Analyst KN/msp/JO

Test Btu/Ash/spec.grv./Halide Date 6/29/92 Checker KN/ALC

W.O. #	Ash	Btu	spec grav	Halide	
92-06-189-43A	0.22 %	12,085	0.909	1.69 %	
-44A	0.33 %	10,009	0.903	0.94 %	
-45A	0.67 %	10,703	0.903	0.76 %	
-46A	0 %	14,771	0.930	2.19 %	
-47A	0.11 %	14,535	0.927	2.28 %	
-48A	0 %	14,384	0.929	2.51 %	
-48A DUP	0 %	14,170	0.927	2.22 %	
-49A	0 %	14,569	0.923	2.53 %	
				Halide	% Recovery
92-06-189-48A MS				10.81 %	95 %
MSD				11.19 %	90 %
(% Difference) -48A	0 %	1.50 %	0.22 %	12.26 %	

- molality KSCN = 0.0990N

* - Theoretical % Halogen Chlorobenzene used in MS/MSD = 31.5

Client # IEA

W.O.# 92-06-189

1-13A

SAMPLE WEIGHT .854 .850

ISO WEIGHT .332

$AgNO_3$	KSCN
5.22	3.90
5.87	4.90
5.13	4.46

1.69%

CALORIMETRY FINAL REPORT

06/25/92	21:17:31 DETERMINATION		
SAMPLE ID	895	CAL ID	9
WEIGHT	.854	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	23.8292	TEMP. RISE	2.38060
SPIKE WGHT.	0	EE VALUE	2414.58
GROSS HEAT	10000.4	BTU/LB	
DYNAMIC MODE			

Sec 9.4.1. $\frac{13.632}{15mL}$ .909

4AA-1 ~~Vacuum N~~ 10.54

SAMPLE WEIGHT .896 .900

ISO WEIGHT .332

$AgNO_3$	KSCN
5.87	4.90
6.90	9.50
5.03	4.60

0.94%

CALORIMETRY FINAL REPORT

03/09/ 3	12:06:59 DETERMINATION		
SAMPLE ID	646	CAL ID	2
WEIGHT	.895	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	23.8316	TEMP. RISE	2.06296
SPIKE WGHT.	0	EE VALUE	2419.77
GROSS HEAT	10009.3	BTU/LB	
DYNAMIC MODE			

Sec 9.4.1 $\frac{13.582}{15mL}$ .905

Continued on Page

Read and Understood By

KC 6/25/92

Signed Date Signed Date

92-06 189

-45A (1)

SAMPLE WEIGHT .812

ISO WEIGHT

$AgNO_3$	KSCN
5.05	4.75

CALORIMETRY FINAL REPORT

06/26/92	00:38:27	DETERMINATION	
SAMPLE ID	899	CAL ID	1
WEIGHT	.812	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	29.4437	TEMP. RISE	2.00341
SPIKE WGHT.	0	EE VALUE	2417.44
GROSS HEAT	10702.7	BTU/LB	
DYNAMIC MODE	7		

-46A (2)

SAMPLE WEIGHT .803

ISO WEIGHT

$AgNO_3$	KSCN
5.05	4.75
10.05	8.95
5	4.45

CALORIMETRY FINAL REPORT

03/09/ 3	15:28:18	DETERMINATION	
SAMPLE ID	649	CAL ID	2
WEIGHT	.803	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	28.4316	TEMP. RISE	2.72945
SPIKE WGHT.	0	EE VALUE	2419.77
GROSS HEAT	14771.3	BTU/LB	
DYNAMIC MODE			

Continued on Page

Signed 6/25/92 Date

Read and Understood By

Signed 6/25/92 Date

92-06-189

-17A (B)

SAMPLE WEIGHT .810

ISO WEIGHT $AgNO_3$	KSCN
10.05	5.00
15.10	12.85
5.05	7.85

2.8%

Spec grav 13.601 / 15sec

.927

CALORIMETRY FINAL REPORT

05/26/92	01:07:29 DETERMINATION		
SAMPLE ID	900	CAL ID	6
WEIGHT	.810	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	28.4493	TEMP. RISE	7.71479
SPIKE WGHT.	0	EE VALUE	2414.88
GROSS HEAT	14535.3 BTU/LB		
DYNAMIC MODE			

-48A (B)

SAMPLE WEIGHT .805

ISO WEIGHT $AgNO_3$	KSCN
15.10	12.85
20.10	16.75
5.0	3.9

2.5%

Spec grav 13.436 / 15sec

.929

CALORIMETRY FINAL REPORT

03/09/ 3	15:57:20 DETERMINATION		
SAMPLE ID	650	CAL ID	4
WEIGHT	.805	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	28.3347	TEMP. RISE	2.73854
SPIKE WGHT.	0	EE VALUE	2354.56
GROSS HEAT	14384.4 BTU/LB		
DYNAMIC MODE			

Continued on Page

Understood By

G.C. 6-25-92

Signed Date Signed Date

92-06-189

78A (DUPLICATE)

(1) See pg 51 for MS/MSD Value)

SAMPLE WEIGHT .829

ISO WEIGHT

$AgNO_3$	KSCN
0wd	0wd
5.05	4.05
	4.05

2.2710 ✓

Spec 9x16 13.905 / 15mL

.927

CALORIMETRY FINAL REPORT

06/26/92	0:39:38	DETERMINATION	
SAMPLE ID	901	CAL ID	1
WEIGHT	.829	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	28.3619	TEMP. RISE	2.70577
SPIKE WGHT.	0	EE VALUE	2417.44
GROSS HEAT	14169.9	BTU/LB	
DYNAMIC MODE			

49A (2)

SAMPLE WEIGHT .798

ISO WEIGHT

$AgNO_3$	KSCN
5.10 wd ✓	4.10 wd
	4.10

2.3516 ✓

CALORIMETRY FINAL REPORT

03/09/ 3	16:28:23	DETERMINATION	
SAMPLE ID	651	CAL ID	2
WEIGHT	.798	FUSE	15
ACID	0.00	SULFUR	0.00
INIT. TEMP.	28.1407	TEMP. RISE	2.67546
SPIKE WGHT.	0	EE VALUE	2419.77
GROSS HEAT	14569.1	BTU/LB	
DYNAMIC MODE	1		

Spec 9 AN. 13838 / 15mL

.923

Continued on Page

Read and Understood By

JO 6-25-92

Signed Date Signed

92-06-109-48A MS/MSD Halide

<MS>
SAMPLE WEIGHT 1.756 3.2179
<Halide> WEIGHT 1.523
Br^- KSCN
13.49 8.38
18.54 11.60
3.05 3.22
12.90%

<MSD>
SAMPLE WEIGHT 1.704 3.1049
<Halide> WEIGHT .337 3
$AgNO_3$ KSCN
18.54 11.65
23.70 15.57
5.16 3.93
10.81%

CALORIMETRY FINAL REPORT
06/26/92 21:38:48 DETERMINATION
SAMPLE ID 926 CAL ID
WEIGHT 1.279 FUSE
ACID 0.00 SULFUR
INIT. TEMP. 28.9644 TEMP. RISE 4.(
SPIKE WGHT. 0 EE VALUE 24
GROSS HEAT 15752.5 BTU/LB
DYNAMIC MODE

CALORIMETRY FINAL REPORT
03/10/ 3 12:25:22 DETERMINATION
SAMPLE ID 664 CAL ID
WEIGHT 1.041 FUSE 15
ACID 0.00 SULFUR 0.00
INIT. TEMP. 27.6071 TEMP. RISE 3.29673
SPIKE WGHT. 0 EE VALUE 2403.73
GROSS HEAT 13676.2 BTU/LB
DYNAMIC MODE

<MS>
① .523g × 315mg/g = 164.75
② .756g × 250mg/g = 189
③ 129 × 1.279 = 164.99
④ 129 - 18.9 = 110.10
⑤ 110.10 / 164.75 = 67%

<MSD>
① .337 × 315mg/g = 106.16
② .704 × 250mg/g = 176.0
③ 108 × 1.041 = 112.42
④ 108 - 17.67 = 90.33
⑤ 90.33 / 106.16 = 85%

Continued on Page

Read and Understood By

Signed [illegible] Date 6/29/92 Signed Date

N-44A MS bm

SAMPLE WEIGHT .718 1.021
cord BENZOIC ACID WEIGHT .313
$AgNO_3$ — KSCN

1.21	0.90
6.66	4.92
5.12	4.02
9.80 %	

CALORIMETRY FINAL REPORT
[illegible] DETERMINATION
SAMPLE ID [illegible] CAL ID 15
WEIGHT 1.021 FUSE 0.00
ACID 0.00 SULFUR 3.29565
INIT. TEMP. 29.1383 TEMP. RISE 2364.28
SPIKE WGHT. 0 EE VALUE
GROSS HEAT 13577.3 BTU/LB
DYNAMIC MODE

1119-44A MS

SAMPLE WEIGHT .772 1.044
cord BENZOIC ACID WEIGHT .332
$AgNO_3$ — KSCN

6.66	4.92
11.77	8.75
5.11	3.83
11.19 %	

CALORIMETRY FINAL REPORT
03/10/ 3 - 13:21:55 DETERMINATION
SAMPLE ID 665 CAL ID 2
WEIGHT 1.044 FUSE 15
ACID 0.00 SULFUR 0.00
INIT. TEMP. 27.7175 TEMP. RISE 3.37392
SPIKE WGHT. 0 EE VALUE 2419.77
GROSS HEAT 14050.1 BTU/LB
DYNAMIC MODE

Continued on Page

Read and Understood By

KN 11/29/00
Signed Date Signed Date

199-48 MS

% Recovery

① 3.32g x 31.5mg/g = 104.58mg

② 7.12g x 2.5mg/g = 17.8mg

③ 11.9 x 1.044g = 116.82

④ 11.9 - 11.8 = 94.10

⑤ 94.1 / 104.58 = 90%

Continued on Page

Read and Understood By

Signed _____ Date _____ Signed _____ Date _____

JECT RASI WORK ORDER

ASH

AMPLE	WEIGHTS	% ASH
2-06-189-43A	CRUCIBLE 19.1576 SAMPLE 1.5249 FINAL 19.1618	0.22 %
92-06-189-44A	CRUCIBLE 18.3539 SAMPLE 1.5327 FINAL 18.3596	0.33 %
92-06-189-45A	CRUCIBLE 18.7048 SAMPLE 1.5298 FINAL 18.7149	0.67 %
92-06-189-46A	CRUCIBLE 17.1265 SAMPLE 1.5136 FINAL 17.1256	0.00 %
92-06-189-47A	CRUCIBLE 17.5943 SAMPLE 1.5192 FINAL 17.5929	0.11 %
92-06-189-48A	CRUCIBLE 17.6086 SAMPLE 1.5499 FINAL 17.6026	0.00 %
92-06-189-49A (DUPLICATE)	CRUCIBLE 19.3100 SAMPLE 1.5436 FINAL 19.3100	0.00 %
92-06-189-49A	CRUCIBLE 17.1646 SAMPLE 1.4996 FINAL 17.1589	0.00 %

Continued on Page

Read and Understood By

Signed Date Signed Date

1) Specific gravity $\frac{14.4529}{10\text{ml}} = 1.4452\ g/ml$

2) Flash point 85°

3) BTU

.810

CALORIMETRY FINAL REPORT
06/26/92 8:39:09 DETERMINATION
SAMPLE ID 902 CAL ID G
WEIGHT .810 FUSE 15
ACID 0.00 SULFUR 0.00
INIT. TEMP. 27.6192 TEMP. RISE 2.83747
SPIKE WGHT. 0 EE VALUE 2414.88
GROSS HEAT 15172.2 BTU/LB
DYNAMIC MODE

4) TOH

.806

SAMPLE WEIGHT
ISO WEIGHT
$AgNO_3$ KSCN

10.21 8.10
15.21 10.55
5 2.45

CALORIMETRY FINAL REPORT
03/05/ 3 17:29:03 DETERMINATION
SAMPLE ID .652 CAL ID A
WEIGHT .801 FUSE 15
ACID 0.00 SULFUR 0.00
INIT. TEMP. 27.5567 TEMP. RISE 2.68112
SPIKE WGHT. 0 EE VALUE 2324.81
GROSS HEAT 11187.1 BTU/LB
DYNAMIC MODE

Read and Understood By

Signed	Date	Signed	Date
[signature]	6-25-92		

METALS PREP LOGSHEET

000034

CLIENT ID IEA

METHOD ID 3050 G

PREP LOCATION Rt 4C

PREP DATE 7-8-92

ANALYST INIT MSP

CHECKER INIT

SAMPLE ID	INITIAL WT(g) / ~~VOL~~	FINAL VOLUME	SPIKING DATA	COMMENTS
PB #1 3050-G 7/8/92	—	100 mL		
PB #2 3050-G 7/8/92	—			
LCS 3050-G 7/8/92	—		500 ul GFAA CW-158	
92-06-189-01A	.98			
-02A	1.03			
-03A	1.04			
-04A	1.04			
-05A	.96			
-05A-MS	.97		500ul GFAA CW-158	
-05A-MSD	.98		500 ul GFAA CW-158	
-06A	.94			
-07A	1.03			
-08A	.99			
-09A	1.04			
-10A	1.04			
-10A-MS	.95		500 ul GFAA CW-158	
-10A-MSD	1.08		500 ul GFAA CW-158	
-11A	.99			
-12A	1.00			
-13A	1.00			
-14A	.98			
-15A	.98	✓		

METALS PREP LOGSHEET

000035

CLIENT ID IEA
METHOD ID 3050 G
PREP LOCATION Rt 4C

PREP DATE 7-8-92
ANALYST INIT MSP
CHECKER INIT

SAMPLE ID	INITIAL WT(g)/ ~~VOL~~	FINAL VOLUME	SPIKING DATA	COMMENTS
92-06-189-15A MS	.96	100ML	500 ul GFAA CW-158	
-15A MSD	.99		500 ul GFAA CW-158	
-16A	.99			
-17A	.95			
-18A	.97			
-19A	1.00			
-20A	1.04			
-21A	.99			
-22A	~~1.00~~ 1.04			
-22A-MS	1.00		500 ul GFAA CW-158	
-22A-MSD	1.00		500 ul GFAA CW-158	
-23A	1.02			
-24A	1.02			
-25A	1.00			
-26A	1.02			
-27A	1.00			
-28A	1.00	✓		

ROSS ANALYTICAL SERVICES PQL = ~~310 ppt~~ 4 ppb (CCC)

000036

Analytical Data Sheet for Metals

Client(s) ~~Hitachi~~ IEA Analyst EH

Test Sb. Date 7/13/92 Checker CDM

Method No. 7041 SOP No. _____ Instrument GFAA

Sample Number	Dilution	ug/L Reading	Spike	Recovery	Final Conc. mg/kg
CCV		71.1	75.0	95%	
CCB		0.0			<PQL
PB1 3050G		2.4			<PQL
PB2 3050G		-0.8			<PQL
LCS 3050G		52.7	50.0	105%	
189-01A		-1.6			<PQL
189-02A		-2.0			<PQL
189-03A		-1.3			<PQL
189-04A		-1.0			<PQL
189-05A		-0.2			<PQL
189-05AMS		-0.6	50.0	0%	
CCV		80.9	75.0	108%	
CCB		1.6			<PQL
189-05A-MSD		0.7	50.0	0%	
189-06A		-1.3			<PQL
189-07A		0.4			<PQL
189-08A		-1.1			<PQL
189-09A		-0.8			<PQL
189-10A		-1.4			<PQL
189-10A-MS		-0.9	50.0	0%	
189-10A-MSD		0.6	50.0	0%	
CCV		74.1	75.0	99%	
CCB		1.3			<PQL

ROSS ANALYTICAL SERVICES

000037

Analytical Data Sheet for Metals

Client(s) IEA — Analyst ESH

Test Sb — Date 7/13/92 — Checker CDR

Method No. _____ SOP No. _____ Instrument GFAA

Sample Number	Dilution	Reading	Spike	Recovery	Final Conc.
189-11A		-0.6			<PQL
189-12A		-0.5			<PQL
189-13A		-1.1			<PQL
189-14A		-1.3			<PQL
189-15A		0.0			<PQL
189-15A·MS		-0.2	50.0	0%	
189-15A·MSD		-0.1	500	0%	
189-16A		-1.1			<PQL
189-17A		-1.6			<PQL
CCV		77.2	750	103%	
CCB		1.9			<PQL
189-18A		-0.1			<PQL
189-19A		-0.0			<PQL
189-20A		-0.5			<PQL
189-21A		0.2			<PQL
189-22A		31.1	31.0% REC.	~~22.4%~~ ~~81.0%~~	~~3.27~~
189-22A·MS		46.2	50.0	~~20.2%~~	4.76
189-22A·MSD		66.8	50.0	~~51.4%~~	5.57
189-23A		28.0	47.2% REC	~~47.2%~~	~~2.74~~ 2.86
189-24A		25.4			~~2.49~~ 2.54
CCV		68.9	75.0	91.9%	
CCB		0.5			<PQ
189-25A		24.8			~~2.46~~

ROSS ANALYTICAL SERVICES 000038

Analytical Data Sheet for Metals

Client(s) IEA Analyst ESH

Test Sb Date 7/13/92 Checker CSM

Method No. _____ SOP No. _____ Instrument GFAA

Sample Number	Dilution	Reading	Spike	Recovery	Final Conc.
189-26A		39.7			~~4.01~~ 3.97
189-27A		28.1			~~2.75~~ 2.8
189-28A.		33.3			3.33
CCV		73.7	75.0	98.3%	
CCB		0.9			<PQL

Varian SpectrAA 300/400 Zeeman Report

Ross Analytical Services, Inc.
16433 Foltz Industrial Parkway
Strongsville, Ohio 44136

OPERATOR ESH
DATE 07/13/92
BATCH ~~VIAR~~ IEA

PROGRAM 1 Sb Ptfrm 7041/204.2

INSTRUMENT MODE	ABSORBANCE
CALIBRATION MODE	CONCENTRATION
MEASUREMENT MODE	PEAK AREA
LAMP POSITION	4
LAMP CURRENT (mA)	10
SLIT WIDTH (nm)	0.5
SLIT HEIGHT	NORMAL
WAVELENGTH (nm)	217.6
SAMPLE INTRODUCTION	SAMPLER AUTOMIXING
TIME CONSTANT	0.05
MEASUREMENT TIME (sec)	1.0
REPLICATES	2
BACKGROUND CORRECTION	ON
MAXIMUM ABSORBANCE	2.00

FURNACE PARAMETERS

STEP NO.	TEMPERATURE (C)	TIME (sec)	GAS FLOW (L/min)	GAS TYPE	READ COMMAND
1	90	5.0	3.0	NORMAL	NO
2	90	25.0	3.0	NORMAL	NO
3	700	10.0	3.0	NORMAL	NO
4	700	20.0	3.0	NORMAL	NO
5	700	2.0	0.0	NORMAL	NO
6	1700	3.0	0.0	NORMAL	YES
7	1700	2.0	0.0	NORMAL	YES
8	1700	1.0	3.0	NORMAL	NO
9	2500	1.0	3.0	NORMAL	NO
10	2500	2.0	3.0	NORMAL	NO

SAMPLER PARAMETERS

	VOLUMES (fL) SOLUTION	BLANK	MODIFIER
BLANK	--	20	0
STANDARD 1	4	16	0
STANDARD 2	8	12	0
STANDARD 3	12	8	0
STANDARD 4	16	4	0

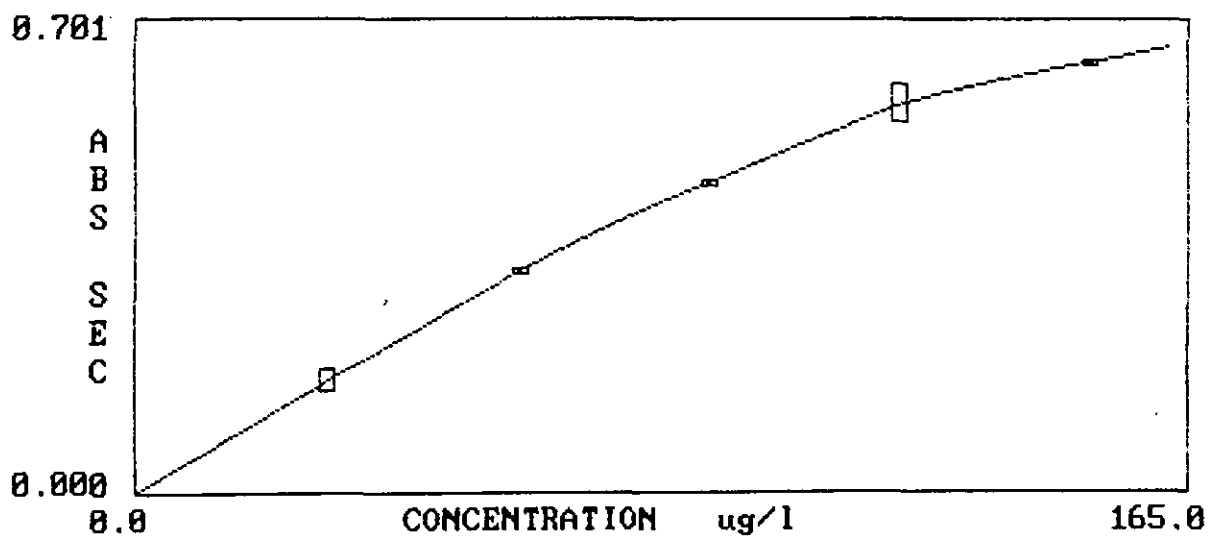
0-200

RECALIBRATION RATE 0
RESLOPE RATE 0

000040

MULTIPLE INJECT NO HOT INJECT YES PRE INJECT NO
TEMPERATURE 90
INJECT RATE 3

AMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS	
LANK	0.0		0.005	0.002	0.009
STANDARD 1	30.0	7.3	0.165	0.156	0.173
STANDARD 2	60.0	0.5	0.329	0.330	0.328
TANDARD 3	90.0	0.2	0.460	0.459	0.460
TANDARD 4	120.0	4.0	0.574	0.590	0.557
STANDARD 5	150.0	0.1	0.638	0.637	0.638



CV	71.9	1.5	0.386	0.390	0.381
ICB	2.3	23.9	0.013	0.015	0.011
C 1	67.4	1.0	0.365	0.368	0.362
C 1	1.8	19.6	0.010	0.009	0.011
RA	57.2	1.0	0.314	0.312	0.316
PB 1-2	3.9	24.5	0.021	0.025	0.018

BLANK QC	0.0		-0.006	-0.007 13Jul92	-0.005 14:35
BLANK QC	0.0		0.010	0.010 13Jul92	 14:38
QCSTANDARD QC	67.0	0.0 Q	0.363	0.363 13Jul92 %R =	 14:40 89.4

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS	
QCBLANK QC	0.7	0.0	0.004	0.004 13Jul92 ABS =	 14:41 0.006
BLANK QC	0.0		-0.021	-0.021 13Jul92	 14:44
QCSTANDARD QC	71.1	0.0	0.382	0.382 13Jul92 %R =	 14:46 94.8
QCBLANK QC	0.0	0.0	0.000	0.000 13Jul92 ABS =	 14:48 -0.002
PB1 3050G QC	2.4	0.0	0.013	0.013 13Jul92	 14:49
PB2 3050G QC	-0.8	0.0	-0.004	-0.004 13Jul92 RPD =	 14:51 396.5
LCS 3050G QC	52.7	0.0	0.289	0.289 13Jul92 %R =	 14:53 178.2
189-01A QC	-1.6	0.0	-0.009	-0.009 13Jul92	 14:55
189-02A QC	-2.0	0.0	-0.011	-0.011 13Jul92	 14:56
189-03A QC	-1.3	0.0	-0.007	-0.007 13Jul92	 14:58
189-04A QC	-1.0	0.0	-0.005	-0.005 13Jul92	 15:00
189-05A QC	-0.2	0.0	-0.001	-0.001 13Jul92	 15:02
189-05AMS	-0.6	0.0	-0.003	-0.003 13Jul92	 15:03

0-302

QCSPIKE QC	3.7	0.0 E	0.021	0.021 13Jul92 15:05 %R = 15.0 %R LESS THAN MINIMUM LIMIT
QCSTANDARD QC	65.0	0.0 Q	0.354	0.354 13Jul92 15:07 %R = 86.7
BLANK QC	0.0		0.009	0.009 13Jul92 15:10
QCSTANDARD QC	80.9	0.0	0.424	0.424 13Jul92 15:12 %R = 107.9

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
QCBLANK QC	1.6	0.0	0.009	0.009 13Jul92 15:14 ABS = 0.008
189-05AMS QC	-0.5	0.0	-0.003	-0.003 13Jul92 15:16
189-05AMSD QC	0.7	0.0	0.004	0.004 13Jul92 15:18 RPD = 1125.4
189-06A QC	-1.3	0.0	-0.007	-0.007 13Jul92 15:19 %R = -6.8
189-07A QC	0.4	0.0	0.002	0.002 13Jul92 15:21
189-08A QC	-1.1	0.0	-0.006	-0.006 13Jul92 15:23
189-09A QC	-0.8	0.0	-0.004	-0.004 13Jul92 15:25
189-10A QC	-1.4	0.0	-0.008	-0.008 13Jul92 15:26
189-10AMS QC	-0.9	0.0	-0.005	-0.005 13Jul92 15:28
189-10AMSD QC	0.6	0.0	0.004	0.004 13Jul92 15:30
QCSPIKE QC	3.0	0.0 E	0.017	0.017 13Jul92 15:32 %R = 7.9 %R LESS THAN MINIMUM LIMIT
QCSTANDARD QC	74.1	0.0	0.395	0.395 13Jul92 15:34 %R = 98.8
QCBLANK	1.3	0.0	0.007	0.007

189-11A QC	-0.6	0.0	-0.003	-0.003 13Jul92 15:37
189-12A QC	-0.5	0.0	-0.003	-0.003 13Jul92 15:39
189-13A QC	-1.1	0.0	-0.006	-0.006 13Jul92 15:41
189-14A QC	-1.3	0.0	-0.007	-0.007 13Jul92 15:42

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
189-15A QC	0.0	0.0	0.000	0.000 13Jul92 15:44
189-15AMS QC	-0.2	0.0	-0.001	-0.001 13Jul92 15:46
189-15AMSD QC	-0.1	0.0	-0.001	-0.001 13Jul92 15:48
189-16A QC	-1.1	0.0	-0.006	-0.006 13Jul92 15:49
189-17A QC	-1.6	0.0	-0.009	-0.009 13Jul92 15:51
QCSPIKE QC	2.0	0.0 E	0.011	0.011 13Jul92 15:53 %R = 11.8 %R LESS THAN MINIMUM LIMIT
QCSTANDARD QC	77.2	0.0	0.409	0.409 13Jul92 15:55 %R = 102.9
QCBLANK QC	1.9	0.0	0.010	0.010 13Jul92 15:57 ABS = 0.010
189-18A QC	-0.1	0.0	-0.000	-0.000 13Jul92 15:58
189-19A QC	-0.0	0.0	-0.000	-0.000 13Jul92 16:00
189-20A QC	-0.5	0.0	-0.003	-0.003 13Jul92 16:02
189-21A QC	0.2	0.0	0.001	0.001 13Jul92 16:04
189-22A QC	31.1	0.0	0.171	0.171 13Jul92 16:05

QC				13Jul92 16:07
[redacted]89-22AMSD	56.8	0.0	0.312	0.312
QC				13Jul92 16:09
[redacted]89-23A	28.0	0.0	0.154	0.154
QC				13Jul92 16:11
[redacted]89-24A	25.4	0.0	0.139	0.139
QC				13Jul92 16:13
[redacted]CSPIKE	33.5	0.0	0.184	0.184
QC		E		13Jul92 16:14
				%R = 27.0
				%R LESS THAN MINIMUM LIMIT

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SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
[redacted]CSTANDARD	68.9	0.0	0.372	0.372
QC				13Jul92 16:16
				%R = 91.9
[redacted]CBLANK	0.5	0.0	0.003	0.003
QC				13Jul92 16:18
				ABS = 0.003
189-25A	24.8	0.0	0.136	0.136
QC				13Jul92 16:20
[redacted]89-26A	39.7	0.0	0.218	0.218
QC				13Jul92 16:22
[redacted]89-27A	28.1	0.0	0.154	0.154
QC				13Jul92 16:23
[redacted]89-28A	33.3	0.0	0.183	0.183
QC				13Jul92 16:25
[redacted]LANK	0.0		-0.005	-0.005
QC				13Jul92 16:29
[redacted]CSTANDARD	73.7	0.0	0.393	0.393
QC				13Jul92 16:30
				%R = 98.2
[redacted]CBLANK	0.9	0.0	0.005	0.005
QC				13Jul92 16:32
				ABS = 0.004
[redacted]89-05AMS	-0.5	0.0	-0.003	-0.003
QC				13Jul92 16:34

PQL = 4 PPB

ROSS ANALYTICAL SERVICES

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Analytical Data Sheet for Metals

Client(s) ICF Analyst ESH

Test AS Date 7/13/92 Checker CJR

Method No. _____ SOP No. _____ Instrument GFAA

Sample Number	Dilution	~~Reading~~ ug/L	Spike	Recovery	Final Conc. ~~mg/kg~~
ICV		38.3	40	95.8%	
ICB		-0.7			<PQL
PB 3050G 7/8/92		5.1			
ABZ 3050G 7/8/92		0.2			<PQL
LCS 3050G 7/8/92		52.0	50	104%	
92-06-189-01A		64.6			~~6.27~~ 6.5
-02A		47.3			~~4.46~~ (4.5
-03A		73.3			~~6.98~~ 7.0
-04A		43.7			~~4.55~~ (4.2
-05A		61.2			~~5.88~~
-05A.MS		83.2	50 5.21	~~44%~~	~~6.16~~ (8.5
CCV		37.5	40	93.8%	
CCB		0.5			<PQL
92-06-189-05A MSD		83.7	50	~~43.2%~~	8.54
-06A		37.7			4.01
-07A		38.2			3.71
-08A		42.2			4.26
-09A		42.4			4.08
-10A		51.8	~~50~~	~~72.8%~~	4.98
-10A.MS		81.9	50 5.26	~~72.8%~~	8.62
-10A.MSD		88.8	50 4.63	~~64.8%~~	8.22
-11A		30.6			3.09
CCV		39.9	40	99.8%	
CCB		1.5			<PQL

ROSS ANALYTICAL SERVICES

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Analytical Data Sheet for Metals

Client(s) IEA Analyst ~~CJS~~

Test As Date 7/13/92 Checker ~~CSM~~

Method No. _____ SOP No. _____ Instrument GFAA

Sample Number	Dilution	~~ug/L~~ Reading	Spike ppb	Recovery	Final Conc. ~~ug/L~~
92-06-189-12A		42.3			4.23 ✓
-13A		57.9			~~5.85~~ 5.7
-14A		77.2			~~7.96~~ 7.
-15A		187.2		0%	~~19.5~~ 19.
-15A·MS		61.6	50 ppb	~~-26.9%~~ 0% REC	~~6.04~~ 6.
-15A·MSD		224.0	50	~~40%~~ ✓	~~21.5~~ 22
-16A		76.6		CSM 64 3%	~~8.06~~ 7
-17A		337.6			~~34.4~~ 35
-18A		422.9			~~43.6~~ 43
CCV ~~-17A CSM~~		36.3	40	90.8%	
CCB		2.2			HIGH
92-06-189-19A	1:10	54.3			~~56.6~~ 54
-20A	1:10	97.9			~~101~~ 94.
-21A	1:20	76.5			~~153~~ 15
-22A		3.4		46.2%	~~0.35~~ 0.3 ✓
-22A·MS		26.4	50	~~47.4%~~ ✓	~~2.72~~ 2.
-22A·MSD		16.9	50	~~26.2%~~ ✓	~~1.66~~ 1.6
-23A		2.0		27.2%	0.20
CCV		39.5	40	98.8%	
CCB		0.8			<PQL
92-06-189-24A	1:5	6.5			~~3.25~~ 3.1
-25A	1:5	12.8			~~1.27~~ 6. ✓
-26A	1:5	2.2			~~1.1~~ 1.0

ROSS ANALYTICAL SERVICES 000047

Analytical Data Sheet for Metals

Client(s) IEA Analyst BH

Test As Date 7/13/92 Checker CJ

Method No. _____ SOP No. _____ Instrument GFAA

Sample Number	Dilution	Reading	Spike	Recovery	Final Conc.
92-06-189-27A	1:5	2.7		-	~~1.32~~ 1.35
-28A	1:5	1.0			<PQL
CCV		38.9	40	97.2%	
CCB		-0.6			<PQL

Varian SpectrAA 300/400 Zeeman
QC Protocol Report

Ross Analytical Services, Inc.
16433 Foltz Industrial Parkway
Strongsville, Ohio 44136

OPERATOR ESH
DATE 07/13/92
BATCH VIAR

QC PROTOCOL PARAMETERS

QC STANDARD POSITION	45
IF THERE IS AN ERROR	FLAG AND CONTINUE
QC SPIKE POSITION	44
RECOVERY LIMITS (%)	85 TO 115
RECOVERY MINIMUM LIMIT (%)	40
CORRELATION COEFFICIENT (r)	0.995
OVERRANGE VOLUME REDUCTION	2
REPLICATE RSD LIMIT (%)	20.0

PROGRAM 2 As Ptfrm 7060A/206.2 HF

INSTRUMENT MODE	ABSORBANCE
CALIBRATION MODE	CONCENTRATION
MEASUREMENT MODE	PEAK AREA
LAMP POSITION	1
LAMP CURRENT (mA)	20
SLIT WIDTH (nm)	0.5
SLIT HEIGHT	NORMAL
WAVELENGTH (nm)	193.7
SAMPLE INTRODUCTION	SAMPLER AUTOMIXING
TIME CONSTANT	0.05
MEASUREMENT TIME (sec)	1.0
REPLICATES	1
BACKGROUND CORRECTION	ON
MAXIMUM ABSORBANCE	1.50

FURNACE PARAMETERS

STEP NO.	TEMPERATURE (C)	TIME (sec)	GAS FLOW (L/min)	GAS TYPE	READ COMMAND
	140	2.0	3.0	NORMAL	NO
	200	2.0	3.0	NORMAL	NO
3	200	10.0	3.0	NORMAL	NO
	1000	5.0	3.0	NORMAL	NO
	1000	20.0	3.0	NORMAL	NO
	1400	3.0	0.0	NORMAL	NO
7	2500	5.0	0.0	NORMAL	YES
	2500	5.0	0.0	NORMAL	YES
	2600	2.0	3.0	NORMAL	NO

SAMPLER PARAMETERS
VOLUMES (fL)

	SOLUTION	BLANK	MODIFIER
BLANK	--	25	2
STANDARD 1	5	20	2
STANDARD 2	10	15	2
STANDARD 3	15	10	2
STANDARD 4	20	5	2
STANDARD 5	25	0	2
SAMPLE	25	0	2

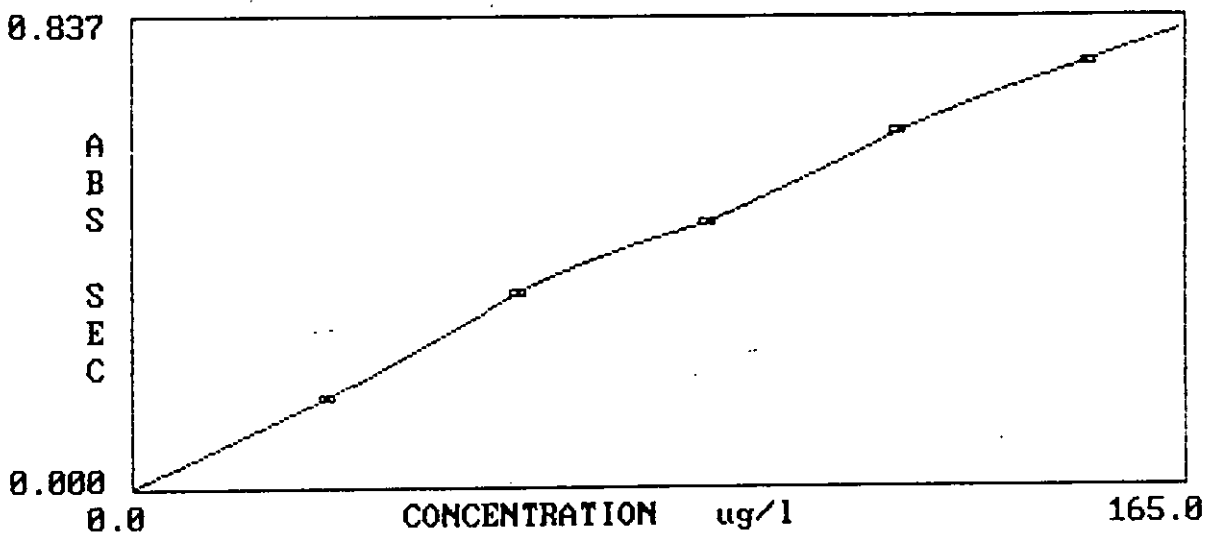
RECALIBRATION RATE 0
RESLOPE RATE 0

MULTIPLE INJECT NO HOT INJECT YES PRE INJECT NO
TEMPERATURE 90
INJECT RATE 3

QC PROTOCOL PARAMETERS

QC STANDARD RATE	9
QC STANDARD VOLUME (fL)	25
QC STANDARD CONCENTRATION	40.0 ug/l
QC STANDARD LIMITS (%)	90 TO 110
QC SPIKE RATE	9
QC SPIKE VOLUME (fL)	5
QC SPIKE CONCENTRATION	30.0 ug/l
MATRIX SPIKE CONCENTRATION	150.0 ug/l
REQUIRED DETECTION LIMIT	1.0 ug/l

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
BLANK	0.0		0.017	0.017
QC				13Jul92 17:07
STANDARD 1	30.0	0.0	0.160	0.160
QC				13Jul92 17:10
STANDARD 2	60.0	0.0	0.349	0.349
QC				13Jul92 17:12
STANDARD 3	90.0	0.0	0.473	0.473
QC				13Jul92 17:14
STANDARD 4	120.0	0.0	0.637	0.637
QC				13Jul92 17:16
STANDARD 5	150.0	0.0	0.761	0.761
QC				13Jul92 17:17



SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
CCSTANDARD QC	44.4	0.0 Q	0.246	0.246 13Jul92 17:20 %R = 111.1
BLANK QC	0.0		-0.001	-0.001 13Jul92 17:23
CCSTANDARD QC	38.3	0.0	0.209	0.209 13Jul92 17:25 %R = 95.7
CCBLANK QC	-0.7	0.0	-0.004	-0.004 13Jul92 17:26 ABS = -0.002
PB1 3050G QC	5.1	0.0	0.027	0.027 13Jul92 17:28
PB2 3050G QC	0.2	0.0	0.001	0.001 13Jul92 17:30 RPD = 182.7
LCS 3050G	53.0	0.0	0.285	0.285

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
189-01A QC	64.6	0.0	0.372	0.372 13Jul92 17:34
189-02A QC	47.3	0.0	0.264	0.264 13Jul92 17:36
189-03A QC	73.3	0.0	0.412	0.412 13Jul92 17:37
189-04A QC	43.7	0.0	0.242	0.242 13Jul92 17:39
189-05A QC	61.2	0.0	0.355	0.355 13Jul92 17:41
189-05AMS QC	83.2	0.0	0.451	0.451 13Jul92 17:43
QCSPIKE QC	92.4 N	0.0	0.486	0.486 13Jul92 17:45 %R = 152.0 %R FAILED, REPEAT BY STANDARD ADDIT(S
QCSTANDARD QC	37.5	0.0	0.204	0.204 13Jul92 17:47 %R = 93.8
QCBLANK QC	0.5	0.0	0.003	0.003 13Jul92 17:49 ABS = 0.005
189-05AMSD QC	83.7	0.0	0.452	0.452 13Jul92 17:50
189-06A QC	37.7	0.0	0.205	0.205 13Jul92 17:52
189-07A QC	38.2	0.0	0.208	0.208 13Jul92 17:54
189-08A QC	42.2	0.0	0.232	0.232 13Jul92 17:56
189-09A QC	42.4	0.0	0.234	0.234 13Jul92 17:57
189-10A QC	51.8	0.0	0.294	0.294 13Jul92 17:59
189-10AMS QC	81.9	0.0	0.446	0.446 13Jul92 18:01
189-10AMSD	88.8	0.0	0.470	0.470

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
89-11A C	30.6	0.0	0.163	0.163 13Jul92 18:05
CSPIKE QC	21.9	0.0 E	0.117	0.117 13Jul92 18:07 %R = -144.9 %R LESS THAN MINIMUM LIMIT
QCSTANDARD C	39.9	0.0	0.218	0.218 13Jul92 18:09 %R = 99.7
CBLANK C	1.5	0.0	0.008	0.008 13Jul92 18:11 ABS = 0.010
89-12A QC	42.3	0.0	0.233	0.233 13Jul92 18:12
89-13A QC	57.9	0.0	0.334	0.334 13Jul92 18:14
89-14A	77.2	0.0	0.428	0.428 13Jul92 18:16
89-15A C	OVER	0.0	0.834	0.834 13Jul92 18:18
189-15A C	187.2	0.0	0.473	0.473 13Jul92 18:20 DF = 2.08
89-15AMS C	61.6	0.0	0.357	0.357 13Jul92 18:22
189-15AMSD C	OVER	0.0	0.843	0.843 13Jul92 18:24
189-15AMSD C	224.0	0.0	0.568	0.568 13Jul92 18:25 DF = 2.08
89-16A C	76.6	0.0	0.425	0.425 13Jul92 18:27
189-17A C	OVER	0.0	1.254	1.254 13Jul92 18:29
7A C	337.6	0.0	0.808	0.808 13Jul92 18:31 DF = 2.08
89-18A C	OVER	0.0	1.691	1.691 13Jul92 18:33
189-18A	OVER	0.0	0.961	0.961

189-18A QC	422.9	0.0	0.536	0.536 13Jul92 18:36 DF = 4.17

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
QCSPIKE QC	517.4	0.0 N	0.656	0.656 13Jul92 18:38 DF = 4.17 %R = 378.3 %R FAILED, REPEAT BY STANDARD ADDITIONS
QCSTANDARD QC	36.3	0.0	0.196	0.196 13Jul92 18:40 %R = 90.7
QCBLANK QC	2.2	0.0	0.012	0.012 13Jul92 18:42 ABS = 0.013
189-19A 1:10 QC	54.3	0.0	0.310	0.310 13Jul92 18:44
189-20A 1:10 QC	97.9	0.0	0.516	0.516 13Jul92 18:46
189-21A 1:20 QC	76.5	0.0	0.425	0.425 13Jul92 18:48
189-22A QC	3.4	0.0	0.018	0.018 13Jul92 18:49
189-22AMS QC	26.4	0.0	0.141	0.141 13Jul92 18:51
189-22AMSD QC	16.9	0.0	0.090	0.090 13Jul92 18:53
189-23A QC	2.0	0.0	0.010	0.010 13Jul92 18:55
BLANK QC	0.0		-0.024	-0.024 13Jul92 19:14
QCSTANDARD QC	32.9	0.0 Q	0.177	0.177 13Jul92 19:16 %R = 82.3
BLANK QC	0.0		0.002	0.002 13Jul92 19:20
QCSTANDARD QC	34.3	0.0 Q	0.185	0.185 13Jul92 19:22 %R = 85.8
BLANK QC	0.0		0.005	0.005 13Jul92 19:25
QCSTANDARD	36.8	0.0	0.200	0.200 0-3/4

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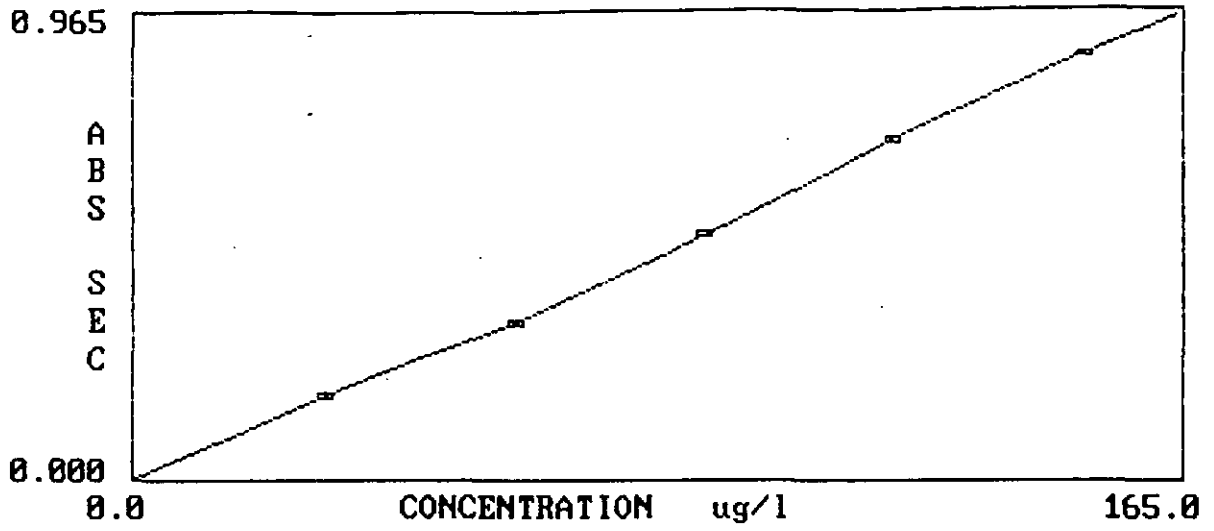
[redacted]BLANK	-0.8	0.0	-0.004	-0.004
[redacted]C				13Jul92 19:29
				ABS = -0.004
[redacted] 4	0.4	0.0	0.002	0.002
[redacted]C				13Jul92 19:38
[redacted]ANK	0.0		0.017	0.017
[redacted]C				13Jul92 19:43
[redacted]STANDARD	33.2	0.0	0.178	0.178
[redacted]C		Q		13Jul92 19:45
				%R = 83.0
[redacted]BLANK	1.1	0.0	0.006	0.006
[redacted]C				13Jul92 19:47
				ABS = 0.005
[redacted]89-25A	1.7	0.0	0.009	0.009
[redacted]C				13Jul92 19:49
[redacted]LANK	0.0		0.016	0.016
[redacted]C				13Jul92 20:08
[redacted]ANDARD 1	30.0	0.0	0.166	0.166
[redacted]C				13Jul92 20:10
[redacted]ANDARD 2	60.0	0.0	0.342	0.342
[redacted]C				13Jul92 20:12
[redacted] RD 3	90.0	0.0	0.529	0.529
[redacted]C				13Jul92 20:14
[redacted]ANDARD 4	120.0	0.0	0.685	0.685
[redacted]				13Jul92 20:16
[redacted]TANDARD 5	150.0	0.0	0.874	0.874
[redacted]				13Jul92 20:18

As FEA
7/13/92

BLANK	0.0		-0.061	-0.061	
QC				13Jul92	21:09
BLANK	0.0		0.016	0.016	
QC				13Jul92	21:12
STANDARD 1	30.0	0.0	0.172	0.172	
QC				13Jul92	21:14
STANDARD 2	60.0	0.0	0.323	0.323	
QC				13Jul92	21:16
STANDARD 3	90.0	0.0	0.507	0.507	
QC				13Jul92	21:18
STANDARD 4	120.0	0.0	0.705	0.705	
QC				13Jul92	21:20
STANDARD 5	150.0	0.0	0.877	0.877	
QC				13Jul92	21:22



SAMPLE		CONC ug/l	%RSD	MEAN ABS	READINGS
QCSTANDARD QC		39.5	0.0	0.222	0.222 13Jul92 21:25 %R = 98.8
QCBLANK QC		0.8	0.0	0.005	0.005 13Jul92 21:26 ABS = 0.007
89-24A QC	1:5	6.5	0.0	0.037	0.037 13Jul92 21:28
89-25A QC	1:5	12.8	0.0	0.074	0.074 13Jul92 21:30 RPD = 66.1
89-26A QC	1:5	2.2	0.0	0.013	0.013 13Jul92 21:32 %R = -7.1
189-27A QC	1:5	2.7	0.0	0.016	0.016 13Jul92 21:33
189-28A Q	1:5	-1.0	0.0	-0.005	-0.005 13Jul92 21:35
BLANK QC		0.0		-0.014	-0.014 13Jul92 21:39

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
QCSTANDARD QC	38.9	0.0	0.219	0.219 13Jul92 21:41 %R = 97.4
QCBLANK QC	-0.6	0.0	-0.004	-0.004 13Jul92 21:43 ABS = -0.003

PQL = 3 ug/L

ROSS ANALYTICAL SERVICES

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Analytical Data Sheet for Metals

Client(s) IEA Analyst CSM/ESH

Test Tl Date 7-14-92 Checker BNM

Method No. _____ SOP No. MT-008-01 Instrument VARIAN 400Z

Sample Number	Dilution	Reading	Spike	Recovery	Final Conc.
ICV		~~40~~ 41.2	40	103%	
CCB		0.8			
PB1 3050.G		0.3			<PQL
PB2 3050G		0.3			<PQL
LCS 3050G		51.0	50	102%	
92-06-189-01A		17.1			1.74
-02A		14.7			1.43
-03A		15.4			1.48 ✓
-04A		15.5			1.49
-05A		15.8			1.65
-05A-MS		80.2	50 5.15	129%	~~8.20~~ 8.27
CCV		39.8	40 ~~5.10~~	100%	
CCB		-0.1			<PQL
92-06-189-05A-MSD		83.9	50 5.10	135%	8.56
92-06-189-06A		14.2			1.51 ✓
-07A		15.3			1.49
-08A		11.9			1.20
-09A		15.0			1.44
-10A		16.8			1.62
-10A-MS		77.7	50 5.26	125%	8.18
-10A-MSD		79.9	50 4.63	125%	7.40
-11A		13.3			1.34 ✓

ROSS ANALYTICAL SERVICES 000059

Analytical Data Sheet for Metals

Client(s) IEA Analyst CSM/EG

Test Tl Date 7-14-92 Checker Bill

Method No. _____ SOP No. _____ Instrument VARIAN-400

Sample Number	Dilution	Reading	Spike	Recovery	Final Conc.
CCV		42.9	40	107%	
CCB		0.9			
92-06-189.-12A		14.8			1.48
-13A		13.8			1.38 ✓
-14A		12.8			1.31
-15A		18.1			1.85
-15A-MS		84.2	50 5.21	133%	8.77
-15A-MSD		85.7	50 5.05	135%	8.66
-16A		18.9			1.91
-17A		17.7			1.86
-18A		25.7			2.65
CCV		42.1	40	105%	
CCB		1.3			
92-06-189-19A		30.8			3.08 ✓
-20A		27.0			2.60 ✓
-21A		27.3			2.76
-22A		1.0			<PQL
-22A-MS		46.9	50 5	94%	4.69
-22A-MSD		54.9	50 5	110%	5.49
-23A		1.2			<PQL
-24A		1.2			<PQL
-25A		2.2			<PQL

ROSS ANALYTICAL SERVICES

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Analytical Data Sheet for Metals

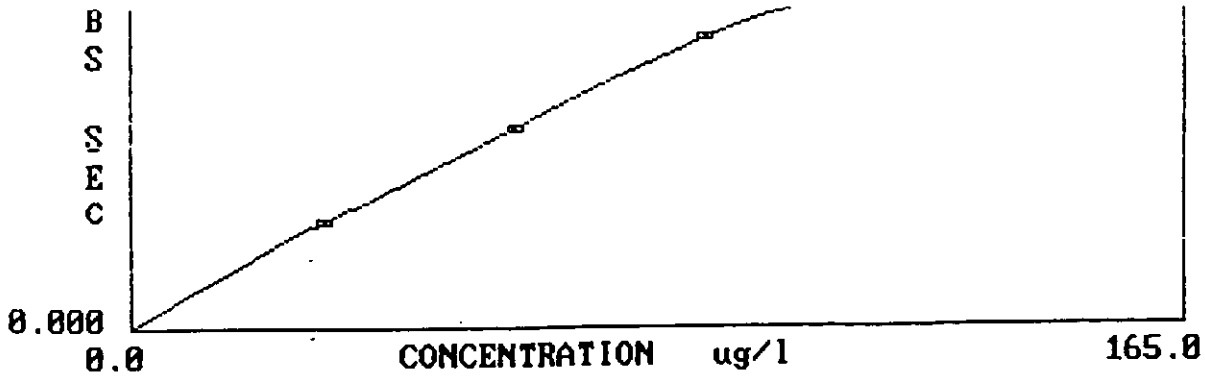
Client(s) IEA Analyst CSM/ESH

Test T1 Date 9-14-92 Checker BMM

Method No. _____ SOP No. _____ Instrument VARIAN 400

Sample Number	Dilution	Reading	Spike	Recovery	Final Conc.
CCV		42.1	40	105%	
CCB		0.9			<PQL
92-06-189-26A		0.7			<PQL
-27A		0.9			<PQL
-28A		1.3			<PQL
CCV		39.1	40		
CCB					<PQL

BLANK	0.0		-0.014	-0.014	
QC				14Jul92	15:07
BLANK	0.0		0.013	0.013	
QC				14Jul92	15:14
BLANK	0.0		-0.015	-0.015	
QC				14Jul92	15:17
BLANK	0.0		0.012	0.012	
QC				14Jul92	15:20
STANDARD 1	30.0	0.0	0.112	0.112	
QC				14Jul92	15:23
STANDARD 2	60.0	0.0	0.209	0.209	
QC				14Jul92	15:25
STANDARD 3	90.0	0.0	0.301	0.301	
QC				14Jul92	15:28
STANDARD 4	120.0	0.0	0.359	0.359	
QC				14Jul92	15:30
STANDARD 5	150.0	0.0	0.439	0.439	
QC				14Jul92	15:33



SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
QCSTANDARD QC	40.1	0.0	0.146	0.146 14Jul92 15:36 %R = 100.2
BLANK QC	0.0		0.003	0.003 14Jul92 15:49
QCSTANDARD QC	41.2	0.0	0.150	0.150 14Jul92 15:52 %R = 103.1
QCBLANK QC	0.8	0.0	0.003	0.003 14Jul92 15:54 ABS = 0.006
PB1 3050G QC	0.3	0.0	0.001	0.001 14Jul92 15:56
PB2 3050G QC	0.3	0.0	0.001	0.001 14Jul92 15:59 RPD = 11.8
LCS 3050G QC	51.0	0.0	0.182	0.182 14Jul92 16:01 %R = 169.1

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
1 1A QC	17.7	0.0	0.066	0.066 14Jul92 16:03
189-02A QC	14.7	0.0	0.055	0.055 14Jul92 16:05
189-03A	15.4	0.0	0.057	0.057

189-04A QC	15.5	0.0	0.058	0.058 14Jul92 16:10
189-05A QC	15.8	0.0	0.059	0.059 14Jul92 16:12
189-05AMS QC	80.2	0.0	0.272	0.272 14Jul92 16:14
QCSPIKE QC	103.8	0.0 N	0.331	0.331 14Jul92 16:17 %R = 78.8 %R FAILED, REPEAT BY STANDARD ADDITIONS
QCSTANDARD QC	44.6	0.0 Q	0.161	0.161 14Jul92 16:19 %R = 111.4
BLANK QC	0.0		-0.004	-0.004 14Jul92 16:22
QCSTANDARD QC	39.8	0.0	0.145	0.145 14Jul92 16:24 %R = 99.5
QCBLANK QC	-0.1	0.0	-0.001	-0.001 14Jul92 16:26 ABS = 0.002
189-05AMSD QC	83.9	0.0	0.283	0.283 14Jul92 16:28
189-06A QC	14.2	0.0	0.053	0.053 14Jul92 16:29 RPD = 142.3
189-07A QC	15.3	0.0	0.057	0.057 14Jul92 16:31 %R = 3.7
189-08A QC	11.9	0.0	0.044	0.044 14Jul92 16:33
189-09A QC	15.0	0.0	0.056	0.056 14Jul92 16:35
189-10A QC	16.8	0.0	0.063	0.063 14Jul92 16:37

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
189-10AMS QC	77.7	0.0	0.264	0.264 14Jul92 16:38
189-10AMSD QC	79.9	0.0	0.271	0.271 14Jul92 16:40
189-11A QC	13.3	0.0	0.050 0.394	0.050 14Jul92 16:42

QCSPIKE QC	46.8	0.0	0.168	0.168 14Jul92 16:44 %R = 111.7
QCSTANDARD QC	42.9	0.0	0.155	0.155 14Jul92 16:46 %R = 107.1
QCBLANK QC	0.9	0.0	0.003	0.003 14Jul92 16:47 ABS = 0.006
189-12A QC	14.8	0.0	0.055	0.055 14Jul92 16:49
189-13A QC	13.8	0.0	0.051	0.051 14Jul92 16:51
189-14A QC	12.8	0.0	0.048	0.048 14Jul92 16:53
189-15A QC	18.1	0.0	0.067	0.067 14Jul92 16:55
189-15AMS QC	84.2	0.0	0.284	0.284 14Jul92 16:57
189-15AMSD QC	85.7	0.0	0.288	0.288 14Jul92 16:58
189-16A QC	18.9	0.0	0.071	0.071 14Jul92 17:00
189-17A QC	17.7	0.0	0.066	0.066 14Jul92 17:02
189-18A QC	25.7	0.0	0.096	0.096 14Jul92 17:04
QCSPIKE QC	62.4	0.0 N	0.217	0.217 14Jul92 17:06 %R = 122.6 %R FAILED, REPEAT BY STANDARD ADDITIONS
QCSTANDARD QC	42.1	0.0	0.153	0.153 14Jul92 17:08 %R = 105.4

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
QCBLANK QC	1.3	0.0	0.005	0.005 14Jul92 17:10 ABS = 0.007
189-19A QC	30.8	0.0	0.115	0.115 14Jul92 17:11

189-21A QC	27.3	0.0	0.102	0.102 14Jul92 17:15
189-22A QC	1.0	0.0	0.004	0.004 14Jul92 17:17
189-22AMS QC	46.9	0.0	0.169	0.169 14Jul92 17:18
189-22AMSD QC	54.9	0.0	0.194	0.194 14Jul92 17:20
189-23A QC	1.2	0.0	0.004	0.004 14Jul92 17:22
189-24A QC	1.2	0.0	0.005	0.005 14Jul92 17:24
189-25A QC	2.2	0.0	0.008	0.008 14Jul92 17:25
QCSPIKE QC	34.1	0.0	0.126	0.126 14Jul92 17:27 %R = 106.2
QCSTANDARD QC	42.1	0.0	0.153	0.153 14Jul92 17:29 %R = 105.3
QCBLANK QC	0.9	0.0	0.003	0.003 14Jul92 17:31 ABS = 0.006
189-26A QC	0.7	0.0	0.003	0.003 14Jul92 17:33
189-27A QC	0.9	0.0	0.003	0.003 14Jul92 17:34
189-28A QC	1.3	0.0	0.005	0.005 14Jul92 17:36
BLANK QC	0.0		-0.006	-0.006 14Jul92 17:39
QCSTANDARD QC	39.1	0.0	0.143	0.143 14Jul92 17:41 %R = 97.8

SAMPLE	CONC ug/l	%RSD	MEAN ABS	READINGS
QCBLANK QC	0.4	0.0	0.001	0.001 14Jul92 17:42 ABS = 0.003

METALS PREP LOGSHEET

CLIENT ID IEA, Rusi Met. Rd
METHOD ID Mer-Sp
PREP LOCATION RT2C

PREP DATE 7-9-92
ANALYST INIT SJ
CHECKER INIT dfm

SAMPLE ID	INITIAL WT / VOL	FINAL VOLUME	SPIKING DATA	COMMENTS
2-07-052-01A	.46g	26 0ml		
2-07-053-01A	.53g	↓		
3 07-054-01A	.49g	↓		

METALS PREP LOGSHEET

CL[redacted] ID IEA, Risk Met Rd
METHOD ID Mer-Sp
PREP LOCATION RT 2C

PREP DATE 7-9-92
ANALYST INIT SJ
CHECKER INIT dfm

SAMPLE ID	INITIAL WT / VOL	FINAL VOLUME	SPIKING DATA	COMMENTS
B1 Mer-Sp 7-9	——	20ml		
B2 Mer-Sp 7-9	——			
BS Mer-Sp 7-9	——			.40 µg Std #1182
Std .10 µg 7-9	——		1.0 ml of Merc Std #1133	
.20 µg 7-9	——		2.0	
.40 µg 7-9	——		4.0	
1.00 µg 7-9	——		10.0	
2.00 µg 7-9	——		20.0	
2006-189-01A	.48g			
02A	.48g			
03A	.48g			
04A	.52g			
05A	.46g			
05AMS	.45g			.40 µg Std #1133
05AMSD	.48g			.40 µg Std #1133
06A	.47g			
07A	.47g			
08A	~~.47g~~ SD .47g			
09A	~~.51g~~ SD .53g			
10A	.51g			
10AMS	.46g			.40 µg Std #1133
10AMSD	.51g		0.327	.40 µg Std #1133

METALS PREP LOGSHEET

~~3~~ SJ
2 of 3 000067

CLIENT ID IEA, Rusi-Hot Rd
METHOD ID Mer-Sp
PREP LOCATION RT 2a

PREP DATE 7-9-92
ANALYST INIT SJ
CHECKER INIT dfm

SAMPLE ID	INITIAL WT / VOL	FINAL VOLUME	SPIKING DATA	COMMENTS
2-06-189-11A	.51g	260ml		
12A	.47g			
13A	.48g			
14A	.47g			
15A	.48g			
15A MS	.46g			.40 µg Std #1133
15A MSD	.46g			.40 µg Std #1133
16A	.48g			
17A	.47g			
18A	.46g			
19A	.47g			
20A	.52g			
21A	.47g			
22A	.48g			
22A MS	.47g			.40 µg Std #1133
22A MSD	.50g			.40 µg Std #1133
23A	.45g			
24A	.50g			
25A	.46g			
26A	.48g			
27A	.47g			
28A	.50g	↓		

ROSS ANALYTICAL SERVICES

000069

Analytical Data Sheet for Metals

Client(s) RISI MET RD; IEA Analyst AGA

Test Mercury - CVAA Date 6-9-92 Checker BMM

Method No. 7471 SOP No. MT-004-07 Instrument FIAB

Sample Number	Dilution	Reading	Spike	Recovery	Final Conc.
PB		0.001	—	—	< pqL
LCS		0.407	0.400	102%	—
92-06-189-01A		0.001	—	—	< .040
-02A		0.003	—	—	< .040
-03A		-0.005	—	—	< .040
-04A		-0.008	—	—	< .040
-05A		-0.010	—	—	< .040
-06A MS		0.384	0.400	96%	—
05A MSD		0.373	0.400	93%	—
-06A		-0.022	—	—	< .040
-07A		-0.010	—	—	< .040
-08A		0.001	—	—	< .040
PB		0.002	—	—	< pqL
LCS		0.405	0.400	101%	—
92-07-052-01A		.051/.050	AVG ~~0.505~~ 0.0505		.110
92-07-053-01A		.029/.035	AVG 0.032		.060
92-07-054-01A		.020	—	—	.041
PB		-0.019	—	—	< pqL
LCS		0.407	0.400	102%	—
PB		-0.005	—	—	< pqL
LCS		0.392	0.400	98%	—
92-06-189-09A		-0.012	—	—	< .040
-10A		-0.008	—	—	< .04

ROSS ANALYTICAL SERVICES

Analytical Data Sheet for Metals

Client(s) IEA Analyst C. Turner

Test Mercury - CVAA Date 7/09/92 Checker BMM

Method No. 7471 SOP No. MT-004-00 Instrument CVAA

Sample Number	Dilution	Reading ug	Spike	Recovery	Final Conc. ug/g
92-06-189-16A MS		.389	0.400	97%	—
-16A MSD		.384	0.400	96%	—
-11A		~~0.002~~ ~~0.011~~ mc	—	—	< 0.04
-12A		-0.005 ~~0.002~~ mc 7/10			< 0.040
-13A		-0.006			< 0.04
-14A		0.009			< 0.04
15A		0.002			< 0.04
PB		-0.032			< PQL
LCS		0.376	0.400	94.0%	—
92-06-189-15A MS		0.411	~~0.400~~ ~~105%~~ 0.400	103%	—
-15A MSD		0.417	0.400	104%	—
-16A		0.038			0.079 ✓
-17A		0.043			0.091 J
-18A		0.049			0.106 J
-19A		0.049			0.104 J
-20A		0.053			0.102 J
-21A		0.052			0.111 J
-22A 1/10		0.075			0.156 J
PB ~~22A MS~~ 1/10		-0.003			< PQL
PB 1/10 LCS		0.397	0.400	99.2%	—
92-06-189-22A MS ~~LCS~~		0.428	0.400	88.2%	—
92-06-189-22A MSD		0.436	0.400	90.2%	—
-23A		0.180			0.4 J

ROSS ANALYTICAL SERVICES

Analytical Data Sheet for Metals

Client(s) IEA Analyst C. Turner / A. Addison

Test Mercury - CVAA Date 7/09/92 Checker BMM

Method No. 7471 SOP No. MT-004-00 Instrument FIAA

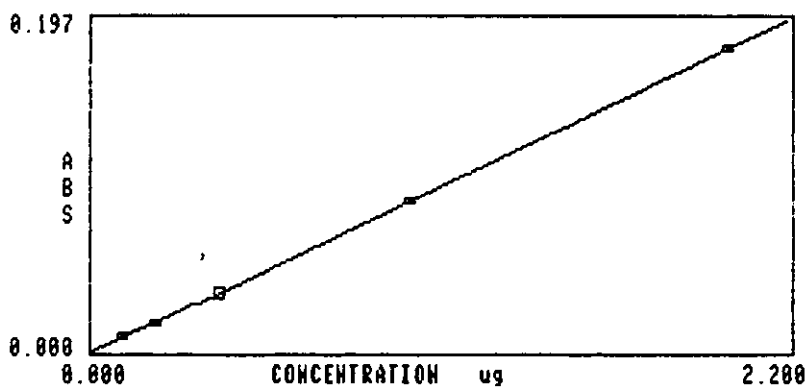
Sample Number	Dilution	Reading µg	Spike	Recovery	Final Conc µg/g
92-06-189-24A		0.167			0.363 J
-25A		0.087			0.189 J
-26A		0.075			0.156 J
-27A		0.074			0.157 J
-28A		~~0.053~~ 0.047			0.098 J
PB		-0.033			< PQL
LCS		0.364	0.400	91%	—
		✓			✓

Varian SpectrAA 10/20 System Report

OPERATOR ALA / CLT
DATE 7.10.92
BATCH NO. 1

PROGRAM 24 Hg cold vapor - solid

SAMPLE	CONC ug	%RSD	MEAN ABS	READINGS	
BLANK	0.000		0.003	0.003	0.003
STANDARD 1	0.100	2.7	0.009	0.009	0.009
STANDARD 2	0.200	2.6	0.017	0.017	0.018
STANDARD 3	0.400	2.3	0.036	0.036	0.035
STANDARD 4	1.000	0.2	0.090	0.090	0.090
STANDARD 5	2.000	0.0	0.179	0.179	0.179



1	0.001	0.0	0.000	0.000	0.000	— PB
2	0.407	0.8	0.036	0.036	0.037	— LCS
3	0.001	99.9	0.000	0.000	-0.000	— 92-06-RT-014
4	0.003	0.0	0.000	0.000	0.000	— " -02A
5	-0.005	64.7	-0.000	-0.000	-0.001	— " 03A
6	-0.008	99.9	-0.001	-0.000	-0.001	— " 04A
7	-0.010	19.5	-0.001	-0.001	-0.001	— " 05A
8	0.382	0.2	0.034	0.034	0.034	— " -05A MS
9	0.373	1.5	0.033	0.034	0.033	— " -05A MSD
10	-0.022	11.1	-0.002	-0.002	-0.002	— " -06A
11	-0.010	27.4	-0.001	-0.001	-0.001	— " -07A
12	0.001	99.9	0.000	-0.000	0.000	— " -08A
13	0.002	99.9	0.000	0.001	-0.000	— PB
14	0.405	0.5	0.036	0.036	0.036	— LCS

SAMPLE	CONC ug	%RSD	MEAN ABS	READINGS		
15	0.041	0.0	0.004	0.004	0.004	92-6-052-01A
16	0.042	5.2	0.004	0.004	0.004	
17	0.060	2.6	0.005	0.005	0.005	92-07-052-02A
18	0.083	5.4	0.007	0.007	0.008	92-07-054-01A
19	0.043	4.5	0.004	0.004	0.004	
20	0.043	15.6	0.004	0.003	0.004	
21	0.055	9.7	0.005	0.005	0.005	
22	0.076	2.0	0.007	0.007	0.007	
23	0.069	8.6	0.006	0.006	0.007	RINSES
24	0.077	2.0	0.007	0.007	0.007	
25	0.089	3.4	0.008	0.008	0.008	
26	0.197	0.0	0.017	0.017	0.017	1
BLANK	0.000		-0.004	-0.004	-0.004	"ANALYTICAL ZERO"
27	0.003	99.9	0.000	0.001	-0.000	~~ANALYTICAL ZERO~~ PB
28	0.411	0.9	0.037	0.037	0.037	LCS
29	-0.009	7.8	-0.001	-0.001	-0.001	RINSE
30	0.051	3.3	0.005	0.004	0.005	92-07-052-01A
31	0.050	22.7	0.004	0.005	0.004	" -052-01A
32	-0.011	38.1	-0.001	-0.001	-0.001	RINSE
33	0.029	11.1	0.003	0.003	0.002	92-7-052-01A
34	0.035	19.9	0.003	0.003	0.004	" -01A
35	-0.014	46.0	-0.001	-0.001	-0.002	RINSE
36	0.020	0.0	0.002	0.002	0.002	92-07-054-01A
37	-0.019	5.0	-0.002	-0.002	-0.002	PB
38	0.407	0.3	0.036	0.036	0.037	LCS
BLANK	0.000		-0.000	-0.000	-0.000	"ANALYTICAL ZERO"
39	-0.005	19.8	-0.000	-0.000	-0.001	PB
40	0.392	1.7	0.035	0.035	0.035	LCS
41	-0.019	0.0	-0.002	-0.002	-0.002	RINSE
42	-0.012	5.9	-0.001	-0.001	-0.001	92-06-189-09A
0000043	-0.008	8.2	-0.001	-0.001	-0.001	" -10A
0000044	0.389	0.4	0.035	0.035	0.035	" -10AMS
0000045	0.384	0.0	0.034	0.034	0.034	" 10 MSD
0000046	-0.011	22.7	-0.001	-0.001	-0.001	RINSE
0000047	0.002	99.9	0.000	0.000	0.000	92-06-189-11A
0000048	-0.005	58.2	-0.000	-0.001	-0.000	" 12A
0000049	-0.008	40.0	-0.001	-0.001	-0.001	" 13A
0000050	0.009	22.0	0.001	0.001	0.001	" 14A
0000051	0.002	99.9	0.000	-0.000	0.000	" 15A
0000052	-0.032	0.0	-0.003	-0.003	-0.003	PB
0000052	-0.039	0.0	-0.003	-0.003	-0.003	
0000053	0.031	10.8	0.003	0.003	0.003	"WRONG BOTTLE"
0000053	0.376	0.9	0.034	0.033	0.034	LCS
0000054	0.411	1.2	0.037	0.036	0.037	92-06-189-15A MS
0000055	0.417	0.6	0.037	0.037	0.038	" 15A MSD
0000056	0.038	7.6	0.003	0.003	0.004	92-06-189-16A
0000057	0.043	1.6	0.004	0.004	0.004	" -17A
0000058	0.049	6.5	0.004	0.005	0.004	" -18A
0000059	0.049	7.9	0.004	0.004	0.005	" -19A
0000060	0.053	1.8	0.005	0.005	0.005	" -20A
0000061	0.052	10.6	0.005	0.005	0.004	" 21A
0000062	0.075	0.9	0.007	0.007	0.007	" 22A
0000063	-0.003	35.4	-0.000	-0.000	-0.000	PB
0000064	0.397	0.5	0.035	0.036	0.035	LCS
1	0.428	0.0	0.038	0.038	0.038	92-06-189-22A MS
2	0.436	0.2	0.039	0.039	0.039	" -22AMSD
3	0.180	0.0	0.016	0.016	0.016	" 23A

* SAMPLES RERUN BELOW OMIT EXCESSIVE ERROR LIMITS ALA 7-10-92

SAMPLE	CONC ug	%RSD	MEAN ABS	READINGS		
4	0.167	3.5	0.015	0.015	0.014	— 52-6-183-84A
5	0.087	6.3	0.008	0.007	0.008	— " -25A
6	0.075	0.0	0.007	0.007	0.007	— " 26A
7	0.074	8.1	0.007	0.007	0.006	— " 27A
8	0.049	8.6	0.004	0.004	0.005	— " 28A
9	-0.033	2.9	-0.003	-0.003	-0.003	— PB
10	0.364	0.0	0.032	0.032	0.032	— LCS

METALS PREP LOGSHEET P1 of 2 000075

[redacted] ID IEA --
THOD 3050I
[redacted] LOCATION Rt 2D

PREP DATE 7-9-92
ANALYST INIT mgl
CHECKER INIT dfm

SAMPLE ID	INITIAL WT(g) / ~~VOL~~	FINAL VOLUME	SPIKING DATA	COMMENTS
B[redacted] #1 3050I 7-9-92	—	100mL	200 ul YEEN.VM	
#2 ---3050I 7-9-92	—			
S[redacted] 3050I 7-9-92	—		1000 ul RAS: 4&5B	
[redacted]-189-01A	1.04			
-06-189-02A	1.06			
[redacted]-189-03A	1.05			
-04A	.96			
-05A	1.04			
[redacted] -05A MS	1.02		2000 ul RAS: 4&5B	
-05A MSD	.99		2000 ul RAS: 4&5B	
-06A	1.06			
-07A	.96			
-08A	.98			
-09A	.97			
-10A	.98			
-10A MS	1.04		2000 ul RAS: 4&5B	
-10A MSD	.98		2000 ul RAS: 4&5B	
-11A	.97			
-12A	1.00			
3A	.99			
-14A	.97			

0226 Book Page

METALS PREP LOGSHEET

000076

CLIENT ID IEA --
METHOD ID 3050I
PREP LOCATION RTZD

PREP DATE 7-9-92
ANALYST INIT MSA
CHECKER INIT dfm

SAMPLE ID	INITIAL WT(g)/ ~~VOL~~	FINAL VOLUME	SPIKING DATA	COMMENTS
12-06-189-15A	.96	100mL	200 ul Yttrium	
-15AMS	1.02		2000 ul RAS: 485B	
-15AMSD	1.04		2000 ul RAS: 485B	
-16A	.95			
-17A	.98			
-18A	.97			
-19A	.96			
-20A	.97			
-21A	1.00			
-22A	.97			
-22A MS	.97		2000 ul RAS: 485B	
-22A MSD	1.02		2000 ul RAS: 485B	
-23A	.98			
-24A	1.00			
-25A	1.01			
-26A	.99			
-27A	1.02			
-28A	1.00			

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
W.O.#: 92-06-189
Units: mg/kg

Method: 6010
Date Analyzed: 07/11/92
Analyst: CLT

ICP_I 07/09/92 Element	PREP BLK Raw Number	PREP BLK 1 Value	PREP BLK Raw Number	PREP BLK 2 Value	EXTR BLK Raw Number	EXTR BLK 1 Value	Default PQL
i	2.07	2.07	0.5966	0.597			0.0172
b	-0.0089	<PQL	-0.0184	<PQL			0.0247
s	-0.0172	<PQL	-0.0273	<PQL			0.0255
a	0.0016	0.002	-0.0001	<PQL			0.0007
e	0.0002	<PQL	-0.0012	<PQL			0.0007
d	0.0062	0.006	-0.0013	<PQL			0.0045
a	2.21	2.21	0.6137	0.614			0.047
r	-0.0032	<PQL	-0.0063	<PQL			0.008
o	-0.0048	<PQL	-0.0081	<PQL			0.0038
u	0.0086	0.009	0.0161	0.016			0.0032
e	1.01	1.01	0.314	0.314			0.0058
b	-0.0113	<PQL	-0.0078	<PQL			0.0202
g	2.06	2.06	0.5545	0.554			0.0177
n	-0.0004	<PQL	-0.0009	<PQL			0.0018
o	0.003	<PQL	0.0008	<PQL			0.0035
i	-0.0003	<PQL	-0.0001	<PQL			0.0053
	0.0653	0.065	0.0799	0.08			0.0423
e	-0.0424	<PQL	-0.0428	<PQL			0.0308
i	0.0461	0.046	0.0429	0.043			0.0267
g	0.004	<PQL	0.0001	<PQL			0.007
a	1.81	1.81	2.96	2.96			0.2427
l	-0.3054	<PQL	-0.3037	<PQL			0.182
i	-0.0055	<PQL	-0.0276	<PQL			0.0497
n	0.0357	0.036	0.0306	0.031			0.0207
	-0.006	<PQL	-0.0102	<PQL			0.0033
n	0.0026	<PQL	-0.0055	<PQL			0.0043

roblems/Comments to be Addressed on Report: _____

Reviewed and Approved By: CDM

Date: 7/14/92

n 22/

Worksheet for ICP LCSA Analysis

To print this sheet press Alt+P then type "srsa" then Enter.

ROSS Analytical Servcies Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst: CLT
S.O. #'s:92-06-189
Client: IEA 92-06-189

Run Date: 07/11/92
PrepDate: 07/09/92

Matrix:	1. Water/wastewater	Analysis	X1. ICP
(x one)	2. TCLP/EP extract	type:	2. GFAA
	3. Soil/sludge	(x one)	3. FLAA
X	4. Waste		4. Vapor

Prep: 3050_I

LCS ANALYSIS RESULTS

Element	True value (ug/mL)	Value Obtained (ug/mL)	% Rec.	Value Obtained (ug/ml)	% Rec.
Al	1	ND	0.0		0.0
Sb	2	2.1669	108.3		0.0
As	2	2.1542	~~107.7~~		0.0
Ba	1	1.1148	111.5		0.0
Be	1	1.0485	104.8		0.0
Cd	1	1.0214	102.1		0.0
Ca	1	ND	0.0		0.0
Cr	1	1.1142	111.4		0.0
Co	1	1.0761	107.6		0.0
Cu	1	1.1055	110.5		0.0
Fe	1	0.6062	60.6		0.0
Pb	2	2.1524	107.6		0.0
Mg	1	ND	0.0		0.0
Mn	1	1.1277	112.8		0.0
Mo	2	2.1874	109.4		0.0
Ni	1	1.0761	107.6		0.0
K	25	27.5317	110.1		0.0
Se	2	2.1074	105.4		0.0
Si	2	1.1471	~~57.4~~		0.0
Ag	1	0.0161	~~1.6~~		0.0
Na	2	2.3487	~~117.4~~		0.0
Tl	2	2.0403	102.0		0.0
Ti	2	2.1591	108.0		0.0
Sn	2	2.1628	108.1		0.0
V	1	1.0977	109.8		0.0
Zn	1	1.0620	106.2		0.0

Checker: CLT Date: 7/14/92

Raw Data with:
IEA 92-06-189

000079

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA — Method: 6010

J.O.#: 92-06-189-01A — Date Analyzed: 07/11/92

Units: mg/kg — Analyst: CLT

Element	Factor Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
	306	29300	29600	16.5385			1.65385
	-0.0195	<PQL	<PQL	23.75			2.375
	0.0183	<PQL	<PQL	24.5192			2.45192
	1.1	105	109	0.67308			0.06731
	0.019	1.83	3.47	0.67308			0.06731
	-0.2878	<PQL	<PQL	4.32692			0.43269
	271	25900	27500	45.1923			4.51923
	0.734	70.6	74.5	7.69231			0.76923
	0.2192	21.1	19.9	3.65385			0.36538
	0.6666	62.9	68.4	3.07692			0.30769
	503	48300	57800	5.57692			0.55769
	0.1349	~~43~~	20.8	19.4231			1.94231
	283	27100	27400	17.0192			1.70192
	8.41	809	865	1.73077			0.17308
	0.0287	2.76	16.1	3.36538			0.33654
	0.4469	43	50.2	5.09615			0.50962
	178	17100	17000	40.6731			4.06731
	-0.1386	<PQL	<PQL	29.6154			2.96154
	1.3	121	174	25.6731			2.56731
	-0.0125	<PQL	<PQL	6.73077			0.67308
	50.8	4650	5720	233.365			23.3365
	-0.186	<PQL	<PQL	175			17.5
	11.8	1130	1190	47.7885			4.77885
	0.0381	<PQL	<PQL	19.9038			1.99038
	1.28	123	127	3.17308			0.31731
	1.19	114	127	4.13462			0.41346

Problems/Comments to be Addressed on Report: Use dil factor from 10. (except Pb for all)

21A → 21A estimated w/ Fe

Reviewed and Approved By: CDM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-02A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Dil. Factor 1 Blks Corr.	Dil. Factor 10 Adj. Value	Dil. Factor 10 PQL	Dil. Factor 50 Adj. Value	Dil. Factor 50 PQL	Default PQL
Al	275	25800	27600	16.2264			1.62264
Sb	0.0218	<PQL	<PQL	23.3019			2.33019
As	-0.0343	<PQL	<PQL	24.0566			2.40566
Ba	0.9634	90.8	97	0.66038			0.06604
Be	0.0193	1.82	1.67	0.66038			0.06604
Cd	-0.2998	<PQL	<PQL	4.24528			0.42453
Ca	280	26300	29300	44.3396			4.43396
Cr	1.1	103	118	7.54717			0.75472
Co	0.2061	19.4	15.9	3.58491			0.35849
Cu	0.6649	61.6	68.4	3.01887			0.30189
Fe	503	47400	53800	5.4717			0.54717
Pb	0.1132	10.7	<PQL	19.0566			1.90566
Mg	274	25800	27500	16.6981			1.66981
Mn	8.73	824	922	1.69811			0.16981
Mo	0.0497	4.68	7.23	3.30189			0.33019
Ni	0.6072	57.3	66.2	5			0.5
K	165	15600	16200	39.9057			3.99057
Se	-0.1269	<PQL	<PQL	29.0566			2.90566
Si	3.1	288	317	25.1887			2.51887
Ag	0.0003	<PQL	<PQL	6.60377			0.66038
Na	50.5	4540	4580	228.962			22.8962
Tl	0.0531	<PQL	<PQL	171.698			17.1698
Ti	11.8	1110	1240	46.8868			4.68868
Sn	0.0728	3.73	16.6	19.5283			1.95283
V	1.22	115	122	3.11321			0.31132
Zn	1.16	109	126	4.0566			0.40566

Problems/Comments to be Addressed on Report: use dil. factor 10.

Reviewed and Approved By: CDM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
Q.C.#: 92-06-189-03A
Date Analyzed: 07/11/92
Units: mg/kg
Analyst: CLT

Element	Factor Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
	336	31900	34300	16.381			1.6381
	0.1811	17.2	<PQL	23.5238			2.35238
	-0.11	<PQL	<PQL	24.2857			2.42857
	1.11	106	113	0.66667			0.06667
	0.0172	1.64	1.23	0.66667			0.06667
	-0.3287	<PQL	<PQL	4.28571			0.42857
	210	19800	22400	44.7619			4.47619
	0.7279	69.3	82.7	7.61905			0.7619
	0.2156	20.5	16.6	3.61905			0.3619
	0.694	64.9	73.8	3.04762			0.30476
	755	71800	52900	5.52381			0.55238
	0.1729	~~16.5~~	<PQL	19.2381			1.92381
	223	21100	23000	16.8571			1.68571
	8.82	840	937	1.71429			0.17143
	0.106	10.1	6.32	3.33333			0.33333
	0.4355	41.5	47.6	5.04762			0.50476
	141	13400	14300	40.2857			4.02857
	-0.2709	<PQL	<PQL	29.3333			2.93333
	7.3	691	720	25.4286			2.54286
	0.0893	8.51	<PQL	6.66667			0.66667
	103	9560	10100	231.143			23.1143
	-0.095	<PQL	<PQL	173.333			17.3333
	10.5	1000	1100	47.3333			4.73333
	0.1583	11.9	<PQL	19.7143			1.97143
	1.41	134	130	3.14286			0.31429
	1.18	112	131	4.09524			0.40952

Problems/Comments to be Addressed on Report: use dil. factor 10.

Reviewed and Approved By: COM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
W.O.#: 92-06-189-04A
Date Analyzed: 07/11/92
Units: mg/kg
Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	295	30600	32400	17.9167			1.79167
Sb	0.1982	20.6	<PQL	25.7292			2.57292
As	-0.0967	<PQL	<PQL	26.5625			2.65625
Ba	0.9079	94.5	100	0.72917			0.07292
Be	0.0172	1.79	1.34	0.72917			0.07292
Cd	-0.314	<PQL	<PQL	4.6875			0.46875
Ca	278	28800	31500	48.9583			4.89583
Cr	0.9228	96.1	107	8.33333			0.83333
Co	0.1769	18.4	15.9	3.95833			0.39583
Cu	0.5419	55.2	61.7	3.33333			0.33333
Fe	755	78600	54300	6.04167			0.60417
Pb	0.083	8.64	<PQL	21.0417			2.10417
Mg	243	25200	26600	18.4375			1.84375
Mn	8.15	849	934	1.875			0.1875
Mo	0.0499	5.19	7.32	3.64583			0.36458
Ni	0.5094	53.1	60.9	5.52083			0.55208
K	138	14400	14700	44.0625			4.40625
Se	-0.2993	<PQL	<PQL	32.0833			3.20833
Si	2.83	291	346	27.8125			2.78125
Ag	0.096	10	<PQL	7.29167			0.72917
Na	84.9	8590	8710	252.813			25.2813
Tl	-0.1478	<PQL	<PQL	189.583			18.9583
Ti	9.73	1010	1090	51.7708			5.17708
Sn	0.1756	14.8	<PQL	21.5625			2.15625
V	1.3	135	128	3.4375			0.34375
Zn	1.07	111	125	4.47917			0.44792

Problems/Comments to be Addressed on Report: use dil. fact. 10.

Reviewed and Approved By: [signature]

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA — Method: 6010

Lab.#: 92-06-189-05A — Date Analyzed: 07/11/92

Units: mg/kg — Analyst: CLT

Element	Dil. Factor / Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
l	287	27500	29400	16.5385			1.65385
b	0.1803	17.3	<PQL	23.75			2.375
s	-0.0673	<PQL	<PQL	24.5192			2.45192
a	0.9555	91.8	97.6	0.67308			0.06731
e	0.02	1.92	1.45	0.67308			0.06731
d	-0.3776	<PQL	<PQL	4.32692			0.43269
a	186	17700	20200	45.1923			4.51923
r	0.8375	80.5	94.5	7.69231			0.76923
o	0.2167	20.8	16.7	3.65385			0.36538
u	0.6801	64.2	73.1	3.07692			0.30769
e	755	72500	51200	5.57692			0.55769
b	0.0912	~~8.77~~	<PQL	19.4231			1.94231
g	256	24500	~~26100~~	17.0192			1.70192
m	6.23	599	672	1.73077			0.17308
c	0.0595	5.72	4.82	3.36538			0.33654
i	0.4864	46.8	53.2	5.09615			0.50962
	182	17500	18100	40.6731			4.06731
e	-0.2751	<PQL	<PQL	29.6154			2.96154
i	1.67	156	169	25.6731			2.56731
g	0.0934	8.98	<PQL	6.73077			0.67308
a	41.2	3730	3800	233.365			23.3365
l	-0.2624	<PQL	<PQL	175			17.5
i	12.6	1210	1310	47.7885			4.77885
n	0.165	12.7	<PQL	19.9038			1.99038
	1.45	139	133	3.17308			0.31731
n	1.05	101	113	4.13462			0.41346

Problems/Comments to be Addressed on Report: use dil fact. of 10. com

Reviewed and Approved By: COM

Date: 7/14/92

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
ample #	92-06-189-05A 1:10	
piked Sample wt. g	1.02	0.99
inal Vol. ml	100	100

LEMENT	spike added ug	unspiked conc ug/g	MS conc ug/g	MS % rec.	MSD conc ug/g	MSD % rec	% RPD
l	20	2997.03	2700.89	-1510.3	2743.12	-1294.9	-1.6
b	40	0.00	13.06	33.3	14.57	37.1	-10.9
s	40	0.00	36.20	92.3	40.09	102.2	-10.2
a	20	9.95	27.53	89.7	29.52	99.8	-7.0
e	20	0.15	18.32	92.7	20.57	104.1	-11.6
d	20	0.00	13.88	70.8	15.71	80.1	-12.4
a	20	2055.30	1895.09	-817.1	1988.30	-341.7	-4.8
r	20	9.64	26.88	87.9	28.56	96.5	-6.0
o	20	1.71	19.47	90.6	21.77	102.3	-11.2
u	20	7.45	25.78	93.5	27.92	104.4	-8.0
e	20	5220.32	4722.24	-2540.2	4874.70	-1762.7	-3.2
b	40	0.00	36.23	92.4	40.42	103.1	-10.9
g	20	2660.18	2435.42	-1146.3	2505.28	-790.0	-2.8
n	20	68.47	80.61	61.9	85.75	88.1	-6.2
o	40	0.49	36.09	90.8	41.13	103.6	-13.0
i	20	5.42	22.31	86.1	24.46	97.1	-9.2
	500	1848.19	2123.42	56.1	2214.16	74.7	-4.2
e	40	0.00	31.38	80.0	35.89	91.5	-13.4
i	20	17.28	106.27	453.9	152.72	690.7	-35.9
g	20	0.00	1.54	7.7	9.16	46.2	-142.3
a	40	387.27	358.64	-73.0	363.44	-60.8	-1.3
l	40	0.00	18.53	47.3	28.19	71.9	-41.4
i	40	133.88	169.35	90.4	177.19	110.5	-4.5
n	40	0.00	36.98	94.3	41.04	104.7	-10.4
	20	13.56	30.61	87.0	33.13	99.8	-7.9
n	20	11.55	28.56	86.7	31.38	101.1	-9.4

hecker/Date: CDM/7/14/92 Check(to use this dilution) ✓

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
Sample #	92-06-189-05A	
Spiked Sample wt. g	1.02	0.99
Final Vol. ml	100	100

ELEMENT	spike added ug	unspiked conc ug/g	MS conc ug/g	MS % rec.	MSD conc ug/g	MSD % rec	% RPD
Al	200	28024.65	24737.19	-1676.6	25554.62	-1259.7	-3.3
Sb	400	17.67	138.08	30.7	164.91	37.5	-17.7
As	400	0.00	333.69	85.1	368.43	93.9	-9.9
Ba	200	93.60	260.93	85.3	279.96	95.0	-7.0
Be	200	1.96	161.87	81.6	179.79	90.7	-10.5
Cd	200	0.00	117.34	59.8	125.16	63.8	-6.5
Ca	200	18080.47	16476.80	-817.9	17500.29	-295.9	-6.0
Cr	200	82.11	238.73	79.9	250.34	85.8	-4.7
Co	200	21.24	178.19	80.0	195.92	89.1	-9.5
Cu	200	65.47	233.41	85.6	257.51	97.9	-9.8
Fe	200	73930.07	49283.93	-12569.5	76192.34	1153.8	-42.9
Pb	400	8.94	333.08	~~82.7~~	365.88	~~91.0~~	-9.4
Mg	200	24965.71	22339.37	-1339.4	23314.94	-841.9	-4.3
Mn	200	611.25	716.10	53.5	767.42	79.6	-6.9
Mo	400	5.84	332.30	83.2	367.84	92.3	-10.2
Ni	200	47.69	195.59	75.4	212.07	83.8	-8.1
K	5000	17856.95	20090.99	45.6	21135.68	66.9	-5.1
Se	400	0.00	320.77	81.8	346.08	88.3	-7.6
Ag	200	159.01	1168.08	514.6	1537.07	702.8	-27.3
Na	200	9.16	17.35	4.2	88.92	40.7	-134.7
Sr	400	3802.52	3663.96	-35.3	3984.83	46.5	-8.4
Tl	400	0.00	336.02	85.7	397.66	101.4	-16.8
Sn	400	1231.42	1512.36	71.6	1608.39	96.1	-6.2
V	400	12.93	324.89	79.6	362.79	89.2	-11.0
Zn	200	141.70	287.14	74.2	319.71	90.8	-10.7
Zr	200	102.49	249.54	75.0	272.19	86.6	-8.7

Date: CDM 7/14/92 Check(to use this dilution) ___

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-06A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Dil. Factor 1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
Al	355	33400	35600	16.2264			1.62264
Sb	0.1888	17.8	<PQL	23.3019			2.33019
As	-0.1187	<PQL	<PQL	24.0566			2.40566
Ba	1.19	112	125	0.66038			0.06604
Be	0.0204	1.92	6.77	0.66038			0.06604
Cd	-0.3443	<PQL	<PQL	4.24528			0.42453
Ca	261	24500	27100	44.3396			4.43396
Cr	0.9397	88.7	108	7.54717			0.75472
Co	0.2047	19.3	20	3.58491			0.35849
Cu	0.67	62	76.5	3.01887			0.30189
Fe	755	71100	50500	5.4717			0.54717
Pb	0.1	~~9.43~~	<PQL	19.0566			1.90566
Mg	268	25200	27000	16.6981			1.66981
Mn	7.89	744	831	1.69811			0.16981
Mo	0.0945	8.91	26.7	3.30189			0.33019
Ni	0.5192	49	59.1	5			0.5
K	155	14600	15400	39.9057			3.99057
Se	-0.275	<PQL	<PQL	29.0566			2.90566
Si	2.16	200	260	25.1887			2.51887
Ag	0.0918	8.66	<PQL	6.60377			0.66038
Na	111	10300	10500	228.962			22.8962
Tl	-0.0618	<PQL	<PQL	171.698			17.1698
Ti	11.2	1050	1170	46.8868			4.68868
Sn	0.1576	11.7	21.4	19.5283			1.95283
V	1.38	131	130	3.11321			0.31132
Zn	1.22	115	143	4.0566			0.40566

Problems/Comments to be Addressed on Report: use dil. fact. 10.

Reviewed and Approved By: CDM

Date: 7/14/92

D-347

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-07A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Blks Corr.	Dil. Factor 1 Adj. Value	PQL	Dil. Factor 10 Adj. Value	PQL	Default PQL
Al	236	24500	27200	17.9167			1.79167
	0.1817	18.9	<PQL	25.7292			2.57292
As	-0.0787	<PQL	<PQL	26.5625			2.65625
Ba	0.997	104	114	0.72917			0.07292
	0.0176	1.84	1.51	0.72917			0.07292
	-0.3506	<PQL	<PQL	4.6875			0.46875
Ca	298	30900	34900	48.9583			4.89583
	0.7163	74.6	88.9	8.33333			0.83333
	0.1857	19.3	17.6	3.95833			0.39583
Cu	0.5804	59.2	70	3.33333			0.33333
	755	78600	54900	6.04167			0.60417
	0.113	~~11.8~~	<PQL	21.0417			2.10417
Mg	281	29100	~~31700~~	18.4375			1.84375
Mn	8.24	858	977	1.875			0.1875
	0.0605	6.3	9.93	3.64583			0.36458
	0.4209	43.8	51.2	5.52083			0.55208
K	152	15800	16800	44.0625			4.40625
	-0.3054	<PQL	<PQL	32.0833			3.20833
	1.14	114	154	27.8125			2.78125
Ag	0.0987	10.3	<PQL	7.29167			0.72917
Na	43.3	4260	4320	252.813			25.2813
	-0.0587	<PQL	<PQL	189.583			18.9583
Tl	11.2	1170	1310	51.7708			5.17708
Sn	0.1667	13.9	<PQL	21.5625			2.15625
	1.29	134	132	3.4375			0.34375
	0.9879	103	121	4.47917			0.44792

Problems/Comments to be Addressed on Report: use dil. factor 10.

Reviewed and Approved By: CDM

Date: 7/14/92

N-348

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
W.O.#: 92-06-189-08A
Date Analyzed: 07/11/92
Units: mg/kg
Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	397	40400	43000	17.551			1.7551
Sb	0.2107	21.5	<PQL	25.2041			2.52041
As	-0.1456	<PQL	<PQL	26.0204			2.60204
Ba	1.9	194	205	0.71429			0.07143
Be	0.0222	2.27	1.95	0.71429			0.07143
Cd	-0.3381	<PQL	<PQL	4.59184			0.45918
Ca	211	21300	24100	47.9592			4.79592
Cr	0.823	84	95.1	8.16327			0.81633
Co	0.1573	16	10.5	3.87755			0.38776
Cu	0.7161	71.8	81.7	3.26531			0.32653
Fe	755	77000	~~46100~~	5.91837			0.59184
Pb	0.4492	~~45.8~~	41.4	20.6122			2.06122
Mg	219	22200	24100	18.0612			1.80612
Mn	7.01	715	798	1.83673			0.18367
Mo	0.2308	23.5	21.6	3.57143			0.35714
Ni	0.5184	52.9	57.3	5.40816			0.54082
K	162	16500	17100	43.1633			4.31633
Se	-0.2767	<PQL	<PQL	31.4286			3.14286
Si	7.65	776	659	27.2449			2.72449
Ag	0.119	12.1	<PQL	7.14286			0.71429
Na	184	18500	18800	247.653			24.7653
Tl	-0.1011	<PQL	<PQL	185.714			18.5714
Ti	10.4	1060	1160	50.7143			5.07143
Sn	0.1705	14	<PQL	21.1224			2.11224
V	1.06	108	95.8	3.36735			0.33673
Zn	1.12	114	130	4.38776			0.43878

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CDM

Date: 7/14/92

D-349

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

S.O.#: 92-06-189-09A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	427	43900	48200	17.732			1.7732
Sb	0.0222	<PQL	<PQL	25.4639			2.54639
As	-0.1165	<PQL	<PQL	26.2887			2.62887
Ba	1.94	200	219	0.72165			0.07216
Be	0.0252	2.6	2.38	0.72165			0.07216
Cd	-0.2939	<PQL	<PQL	4.63918			0.46392
Ca	260	26700	30400	48.4536			4.84536
Cr	0.4759	49.1	58.7	8.24742			0.82474
Co	0.1799	18.5	15.7	3.91753			0.39175
Cu	0.7518	76.2	86.7	3.29897			0.3299
Fe	503	51800	54500	5.97938			0.59794
Pb	0.1956	~~20.2~~	<PQL	20.8247			2.08247
Mg	250	25700	28300	18.2474			1.82474
Mn	8.14	839	960	1.85567			0.18557
Hg	0.0222	2.29	3.96	3.60825			0.36082
Ni	0.33	34	37.5	5.46392			0.54639
K	178	18300	19500	43.6082			4.36082
Se	-0.1333	<PQL	<PQL	31.7526			3.17526
Si	24	2470	2560	27.5258			2.75258
Ag	0.0155	1.6	<PQL	7.21649			0.72165
Na	190	19400	20200	250.206			25.0206
Tl	0.0551	<PQL	<PQL	187.629			18.7629
Ti	11.3	1170	1330	51.2371			5.12371
Sn	0.0842	5.26	<PQL	21.3402			2.13402
V	0.9813	101	105	3.40206			0.34021
Zn	1.09	113	132	4.43299			0.4433

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-10A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	389	39600	43200	17.551			1.7551
Sb	0.1875	19.1	<PQL	25.2041			2.52041
As	-0.1127	<PQL	<PQL	26.0204			2.60204
Ba	2.38	242	262	0.71429			0.07143
Be	0.0238	2.42	2.22	0.71429			0.07143
Cd	-0.3694	<PQL	<PQL	4.59184			0.45918
Ca	308	31300	35200	47.9592			4.79592
Cr	0.3772	38.5	47.8	8.16327			0.81633
Co	0.1732	17.7	13.3	3.87755			0.38776
Cu	0.7024	70.4	80.2	3.26531			0.32653
Fe	755	76900	54600	5.91837			0.59184
Pb	0.2164	~~22.1~~	<PQL	20.6122			2.06122
Mg	253	25700	28100	18.0612			1.80612
Mn	9.97	1020	1150	1.83673			0.18367
Mo	0.0589	6.01	4.05	3.57143			0.35714
Ni	0.2615	26.7	31.8	5.40816			0.54082
K	174	17800	18900	43.1633			4.31633
Se	-0.2831	<PQL	<PQL	31.4286			3.14286
Si	20.3	2070	2220	27.2449			2.72449
Ag	0.0944	9.63	<PQL	7.14286			0.71429
Na	134	13400	14100	247.653			24.7653
Tl	-0.1301	<PQL	<PQL	185.714			18.5714
Ti	12.5	1280	1420	50.7143			5.07143
Sn	0.1589	12.8	<PQL	21.1224			2.11224
V	1.21	124	117	3.36735			0.33673
Zn	1.11	113	133	4.38776			0.43878

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CDM

Date: 7/14/92

D-351

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
Sample #	92-06-189-10A 1:10	
Spiked Sample wt. g	1.04	0.98
Final Vol. ml	100	100

ELEMENT	spike added ug	unspiked conc ug/g	MS conc ug/g	MS % rec.	MSD conc ug/g	MSD % rec	% RPD
Al	20	4070.12	4894.20	4285.2	4631.88	2921.1	5.5
Sb	40	0.00	18.72	48.7	22.80	59.3	-19.7
As	40	0.00	35.52	92.3	39.16	101.8	-9.7
Ba	20	24.68	48.74	125.1	48.04	121.5	1.4
Be	20	0.21	18.78	96.5	19.76	101.7	-5.1
Cd	20	0.00	13.07	67.9	14.08	73.2	-7.5
Ca	20	3317.83	3787.84	2444.1	3605.25	1494.6	4.9
Cr	20	4.50	24.49	104.0	24.90	106.1	-1.6
Co	20	1.25	19.85	96.7	21.24	103.9	-6.7
Cu	20	7.56	27.85	105.5	28.23	107.5	-1.4
Fe	20	5149.26	5936.59	4094.1	5620.73	2451.6	5.5
Pb	40	0.00	39.08	101.6	39.83	103.6	-1.9
Mg	20	2648.29	3045.52	2065.6	2895.78	1286.9	5.0
Mn	20	108.33	141.82	174.1	137.40	151.1	3.2
Mo	40	0.38	36.95	95.1	41.14	106.0	-10.7
Ni	20	2.96	21.51	96.4	21.98	98.9	-2.2
K	500	1777.35	2530.71	156.7	2452.63	140.5	3.1
Se	40	0.00	32.94	85.6	38.83	101.0	-16.4
Ag	20	209.06	142.83	-344.4	137.91	-370.0	3.5
Ag	20	0.00	2.23	11.6	3.03	15.8	-30.3
Na	40	1327.03	1575.34	645.6	1448.43	315.6	8.4
Tl	40	0.00	28.04	72.9	35.17	91.5	-22.6
Th	40	133.94	213.80	207.6	207.10	190.2	3.2
Sn	40	0.00	36.68	95.4	40.05	104.1	-8.8
V	20	10.99	32.33	111.0	33.44	116.7	-3.4
Zn	20	12.54	33.52	109.1	33.75	110.3	-0.7

Chem /Date: CDM 7/14/92 Check(to use this dilution) ✓

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
Sample #	92-06-189-10A	
Spiked Sample wt. g	1.04	0.98
Final Vol. ml	100	100

ELEMENT	spike added ug	unspiked conc ug/g	MS conc ug/g	MS % rec.	MSD conc ug/g	MSD % rec	% RPD
	200	37295.54	43737.25	3349.7	43103.73	3020.3	1.5
	400	18.03	173.32	40.4	214.39	51.1	-21.2
	400	0.00	330.72	86.0	347.13	90.3	-4.8
	200	228.32	439.69	109.9	454.36	117.5	-3.3
	200	2.28	158.02	81.0	169.45	86.9	-7.0
	200	0.00	106.41	55.3	110.61	57.5	-3.9
	200	29464.23	32006.22	1321.8	31997.88	1317.5	0.0
	200	36.27	211.75	91.2	217.31	94.1	-2.6
	200	16.65	173.06	81.3	183.50	86.8	-5.9
	200	66.35	248.51	94.7	257.36	99.3	-3.5
	200	72504.16	48299.09	-12586.6	76933.87	2303.5	-45.7
	400	20.81	340.74	~~-83.2~~	361.03	~~-88.5~~	-5.8
	200	24243.31	27062.69	1466.1	26835.18	1347.8	0.8
	200	958.57	1210.37	130.9	1218.17	135.0	-0.6
	400	5.67	323.49	82.6	351.82	90.0	-8.4
	200	25.15	177.41	79.2	188.59	85.0	-6.1
	5000	16726.88	23416.78	139.1	23661.02	144.2	-1.0
	400	0.00	324.62	84.4	331.53	86.2	-2.1
	200	1947.12	1444.96	-261.1	1493.05	-236.1	-3.3
	200	9.08	18.45	4.9	37.33	14.7	-67.7
	400	12650.94	14731.99	541.1	14608.80	509.0	0.8
	400	0.00	358.46	93.2	377.87	98.2	-5.3
	400	1205.90	1854.21	168.6	1868.65	172.3	-0.8
	400	12.09	311.51	77.8	346.14	86.9	-10.5
	200	116.74	286.02	88.0	308.49	99.7	-7.6
	200	106.25	279.17	89.9	293.77	97.5	-5.1

Checker/Date: dm 7/14/92 Check(to use this dilution) ___

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
P.O.#: 92-06-189-11A
Date Analyzed: 07/11/92
Units: mg/kg
Analyst: CLT

Element	Dil Factor Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
	467	48100	53700	17.732			1.7732
	0.1892	19.5	<PQL	25.4639			2.54639
	-0.1759	<PQL	<PQL	26.2887			2.62887
	1.43	147	175	0.72165			0.07216
	0.024	2.47	8.94	0.72165			0.07216
	-0.3185	<PQL	<PQL	4.63918			0.46392
	157	16000	19400	48.4536			4.84536
	0.3054	31.5	46.1	8.24742			0.82474
	0.1597	16.5	20	3.91753			0.39175
	0.5097	51.3	69.3	3.29897			0.3299
	755	77700	53800	5.97938			0.59794
	0.1607	~~18.6~~	~~27.9~~	20.8247			2.08247
	263	27000	30400	18.2474			1.82474
	8.06	831	982	1.85567			0.18557
	0.0383	3.95	27	3.60825			0.36082
	0.3215	33.1	46.2	5.46392			0.54639
	217	22400	24500	43.6082			4.36082
	-0.2703	<PQL	<PQL	31.7526			3.17526
	28.5	2940	3090	27.5258			2.75258
	0.1002	10.3	<PQL	7.21649			0.72165
	232	23600	25100	250.206			25.0206
	0.1244	<PQL	<PQL	187.629			18.7629
	10.1	1040	1190	51.2371			5.12371
	0.2214	19.4	32.7	21.3402			2.13402
	0.9849	102	102	3.40206			0.34021
	0.6869	70.8	98.3	4.43299			0.4433

Problems/Comments to be Addressed on Report: use dil. fact. 10.

Reviewed and Approved By: cbm

Date: 7/14/92

D-354

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA — Method: 6010

W.O.#: 92-06-189-12A — Date Analyzed: 07/11/92

Units: mg/kg — Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	382	38100	42200	17.2			1.72
Sb	0.183	18.3	<PQL	24.7			2.47
As	-0.0883	<PQL	<PQL	25.5			2.55
Ba	1.8	180	196	0.7			0.07
Be	0.0228	2.28	2.71	0.7			0.07
Cd	-0.3552	<PQL	<PQL	4.5			0.45
Ca	184	18300	21100	47			4.7
Cr	0.5572	55.7	66.8	8			0.8
Co	0.1911	19.1	15.5	3.8			0.38
Cu	0.6441	63.2	72	3.2			0.32
Fe	755	75400	~~54300~~	5.8			0.58
Pb	0.2417	~~24.2~~	20.8	20.2			2.02
Mg	250	24900	27500	17.7			1.77
Mn	7.96	796	910	1.8			0.18
Mo	0.0553	5.53	5.58	3.5			0.35
Ni	0.4874	48.7	55.9	5.3			0.53
K	165	16500	17800	42.3			4.23
Se	-0.287	<PQL	<PQL	30.8			3.08
Si	22.1	2200	2380	26.7			2.67
Ag	0.0929	9.29	<PQL	7			0.7
Na	170	16700	17600	242.7			24.27
Tl	0.0273	<PQL	<PQL	182			18.2
Ti	11.8	1180	1340	49.7			4.97
Sn	0.139	10.6	<PQL	20.7			2.07
V	1.08	108	101	3.3			0.33
Zn	0.8487	84.9	100	4.3			0.43

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CDM

Date: 7/14/92

0-355

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

ject: IEA — Method: 6010

.O.H: 92-06-189-13A — Date Analyzed: 07/11/92

its: mg/kg — Analyst: CLT

Factor	1	10		50		
Raw	Blks	Adj.		Adj.		Default
ement Number	Corr.	Value	PQL	Value	PQL	PQL
365	36700	40300	17.3737			1.73737
0.1993	20.1	<PQL	24.9495			2.49495
-0.0751	<PQL	<PQL	25.7576			2.57576
1.59	160	<PQL	0.70707			0.07071
0.0255	2.57	2.51	0.70707			0.07071
-0.3263	<PQL	<PQL	4.54545			0.45455
180	18000	20700	47.4747			4.74747
).4284	43.3	55.1	8.08081			0.80808
0.1926	19.5	16.8	3.83838			0.38384
0.6133	60.7	70.9	3.23232			0.32323
755	76200	51500	5.85859			0.58586
0.4227	42.7	48.9	20.404			2.0404
232	23300	25600	17.8788			1.78788
7.6	768	870	1.81818			0.18182
0.1141	11.5	9.67	3.53535			0.35354
0.3948	39.9	47.3	5.35354			0.53535
153	15400	16500	42.7273			4.27273
-0.2531	<PQL	<PQL	31.1111			3.11111
24.3	2450	2590	26.9697			2.69697
0.1019	10.3	<PQL	7.07071			0.70707
169	16800	17400	245.152			24.5152
0.0896	<PQL	<PQL	183.838			18.3838
10.8	1090	1220	50.202			5.0202
0.1807	14.9	<PQL	20.9091			2.09091
1.04	105	95.8	3.33333			0.33333
0.7662	77.4	90.4	4.34343			0.43434

oblems/Comments to be Addressed on Report: use dil factor 10

Reviewed and Approved By: CSM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
W.O.#: 92-06-189-14A
Date Analyzed: 07/11/92
Units: mg/kg
Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	381	39200	43600	17.732			1.7732
Sb	0.2122	21.9	<PQL	25.4639			2.54639
As	-0.0983	<PQL	<PQL	26.2887			2.62887
Ba	1.95	201	224	0.72165			0.07216
Be	0.02	2.06	1.75	0.72165			0.07216
Cd	-0.3289	<PQL	<PQL	4.63918			0.46392
Ca	222	22700	26500	48.4536			4.84536
Cr	0.3454	35.6	41.1	8.24742			0.82474
Co	0.1773	18.3	15.1	3.91753			0.39175
Cu	0.6106	61.7	71.5	3.29897			0.3299
Fe	755	77800	52200	5.97938			0.59794
Pb	0.2469	25.5	<PQL	20.8247			2.08247
Mg	234	24000	27000	18.2474			1.82474
Mn	7.24	747	872	1.85567			0.18557
Mo	0.1016	10.5	7.92	3.60825			0.36082
Ni	0.3397	35	39.2	5.46392			0.54639
K	158	16300	17600	43.6082			4.36082
Se	-0.2573	<PQL	<PQL	31.7526			3.17526
Si	23.2	2390	2590	27.5258			2.75258
Ag	0.1028	10.6	<PQL	7.21649			0.72165
Na	165	16800	17600	250.206			25.0206
Tl	-0.0338	<PQL	<PQL	187.629			18.7629
Ti	10.4	1070	1220	51.2371			5.12371
Sn	0.168	13.9	<PQL	21.3402			2.13402
V	1.05	109	102	3.40206			0.34021
Zn	0.7806	80.5	96.1	4.43299			0.4433

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

lient: IEA — Method: 6010

.H: 92-06-189-15A — Date Analyzed: 07/11/92

its: mg/kg — Analyst: CLT

Factor / Element	Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
	285	29500	32000	17.9167			1.79167
	0.2011	20.9	<PQL	25.7292			2.57292
	0.1892	19.7	<PQL	26.5625			2.65625
	1.31	136	148	0.72917			0.07292
	0.0401	4.18	4.01	0.72917			0.07292
	-0.0031	<PQL	5.92	4.6875			0.46875
	260	26900	30000	48.9583			4.89583
	0.4533	47.2	55.8	8.33333			0.83333
	0.2004	20.9	16.8	3.95833			0.39583
	2.05	212	231	3.33333			0.33333
	755	78600	52300	6.04167			0.60417
	3.76	~~392~~	412	21.0417			2.10417
	234	24200	26100	18.4375			1.84375
	7.74	806	900	1.875			0.1875
	0.2071	21.6	22.4	3.64583			0.36458
	0.307	32	33.3	5.52083			0.55208
	145	15100	15700	44.0625			4.40625
	-0.2289	<PQL	<PQL	32.0833			3.20833
	8.12	841	895	27.8125			2.78125
	0.1078	11.2	<PQL	7.29167			0.72917
	72.1	7260	7130	252.813			25.2813
	-0.0757	<PQL	<PQL	189.583			18.9583
	10.4	1080	1200	51.7708			5.17708
	0.1714	14.4	<PQL	21.5625			2.15625
	1.29	135	126	3.4375			0.34375
	3.11	324	361	4.47917			0.44792

roblems/Comments to be Addressed on Report: use dil. fact 10.

Reviewed and Approved By: CMM

Date: 7/14/92

A-354

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
Sample #	92-06-189-15A 1:10	
Spiked Sample wt. g	1.02	1.04
Final Vol. ml	100	100

ELEMENT	spike added ug	unspiked conc ug/g	MS conc ug/g	MS % rec.	MSD conc ug/g	MSD % rec	% RPD
Al	20	3013.15	2920.78	-471.1	2759.86	-1291.7	5.7
Sb	40	0.00	23.47	59.8	22.74	58.0	3.2
As	40	0.00	40.24	102.6	39.35	100.3	2.2
Ba	20	13.93	32.97	97.1	31.18	88.0	5.6
Be	20	0.38	18.43	92.1	18.21	90.9	1.2
Cd	20	0.56	17.87	88.3	17.88	88.3	-0.1
Ca	20	2820.91	2928.40	548.2	2754.14	-340.5	6.1
Cr	20	5.25	23.60	93.6	23.14	91.3	2.0
Co	20	1.58	19.37	90.7	19.00	88.8	1.9
Cu	20	21.71	43.06	108.9	41.50	100.9	3.7
Fe	20	4917.77	4793.75	-632.5	4508.54	-2087.1	6.1
Pb	40	38.81	83.73	114.6	80.80	107.1	3.6
Mg	20	2454.93	2435.61	-98.5	2277.96	-902.6	6.7
Mn	20	84.70	103.60	96.4	99.79	77.0	3.7
Mo	40	2.10	37.98	91.5	37.93	91.3	0.1
Ni	20	3.14	20.81	90.1	20.30	87.5	2.5
K	500	1474.55	1885.51	83.8	1776.85	61.7	5.9
Se	40	0.00	31.60	80.6	32.37	82.6	-2.4
Si	20	84.24	239.89	793.8	255.18	871.8	-6.2
Ag	20	0.00	16.37	83.5	15.76	80.4	3.8
Na	40	671.40	673.98	6.6	644.75	-68.0	4.4
Tl	40	0.00	30.58	78.0	35.52	90.6	-14.9
Ti	40	112.62	157.24	113.8	146.17	85.6	7.3
Sn	40	0.00	37.96	96.8	38.34	97.8	-1.0
V	20	11.85	29.98	92.5	29.13	88.2	2.8
Zn	20	34.02	56.22	113.2	52.66	95.1	6.5

Checker/Date: CDM 7/14/92 Check(to use this dilution) ✓

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
Sample #	92-06-189-15A	
Spiked Sample wt. g	1.02	1.04
Final Vol. ml	100	100

ELEMENT	spike added ug	unspiked conc ug/g	MS conc ug/g	MS % rec.	MSD conc ug/g	MSD % rec	% RPD
	200	27798.05	26416.41	-704.6	26000.24	-916.9	1.6
	400	19.72	242.32	56.8	240.10	56.2	0.9
	400	18.55	354.23	85.6	355.05	85.8	-0.2
	200	127.97	305.59	90.6	297.81	86.6	2.6
	200	3.94	162.08	80.7	160.56	79.9	0.9
	200	0.00	142.64	72.7	142.05	72.4	0.4
	200	25360.38	25309.81	-25.8	24425.38	-476.8	3.6
	200	44.44	202.23	80.5	199.23	78.9	1.5
	200	19.65	173.09	78.3	171.29	77.3	1.0
	200	199.58	390.24	97.2	383.63	93.9	1.7
	200	73941.08	73952.69	5.9	72531.89	-718.7	1.9
	400	369.10	715.99	~~88.5~~	697.93	~~83.9~~	2.6
	200	22817.11	21939.44	-447.6	21279.81	-784.0	3.1
	200	758.89	905.21	74.6	893.14	68.5	1.3
	400	20.30	342.95	82.3	341.63	81.9	0.4
	200	30.10	178.29	75.6	176.41	74.6	1.1
	5000	14187.41	17640.49	70.4	17147.99	60.4	2.8
	400	0.00	309.90	79.0	304.45	77.6	1.8
	200	791.55	2455.61	848.7	2651.21	948.4	-7.7
	200	10.57	153.08	72.7	154.52	73.4	-0.9
	400	6837.34	6969.52	33.7	7051.51	54.6	-1.2
	400	0.00	366.91	93.6	371.12	94.6	-1.1
	400	1020.67	1411.04	99.5	1324.71	77.5	6.3
	400	13.55	341.35	83.6	336.58	82.4	1.4
	200	126.76	287.32	81.9	282.74	79.5	1.6
	200	305.21	471.91	85.0	452.64	75.2	4.2

Review Date: CDM 7/14/92 Check(to use this dilution) ___

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010

W.O.#: 92-06-189-16A
Date Analyzed: 07/11/92

Units: mg/kg
Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	292	30600	33900	18.1053			1.81053
Sb	0.1979	20.8	<PQL	26			2.6
As	0.3057	32.2	54.7	26.8421			2.68421
Ba	1.42	150	172	0.73684			0.07368
Be	0.0619	6.52	13.5	0.73684			0.07368
Cd	0.1572	16.5	34	4.73684			0.47368
Ca	268	28000	32300	49.4737			4.94737
Cr	0.4922	51.8	72.4	8.42105			0.84211
Co	0.1996	21	21.8	4			0.4
Cu	2.75	288	333	3.36842			0.33684
Fe	755	79400	55300	6.10526			0.61053
Pb	5.75	605	724	21.2632			2.12632
Mg	241	25200	27900	18.6316			1.86316
Mn	8	842	976	1.89474			0.18947
Mo	0.2447	25.8	49.3	3.68421			0.36842
Ni	0.2996	31.5	41.1	5.57895			0.55789
K	147	15500	16900	44.5263			4.45263
Se	-0.3064	<PQL	<PQL	32.4211			3.24211
Si	8.84	926	1070	28.1053			2.81053
Ag	0.0978	10.3	<PQL	7.36842			0.73684
Na	74.9	7630	7500	255.474			25.5474
Tl	-0.0002	<PQL	<PQL	191.579			19.1579
Ti	10.8	1140	1300	52.3158			5.23158
Sn	0.1453	11.8	21.3	21.7895			2.17895
V	1.31	138	140	3.47368			0.34737
Zn	4.25	448	544	4.52632			0.45263

Problems/Comments to be Addressed on Report: use dil. fact. 10.

Reviewed and Approved By: COM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
W.O.#: 92-06-189-17A
Date Analyzed: 07/11/92
Units: mg/kg
Analyst: CLT

Dil. Factor		1	10		50		
Element	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
Al	291	29500	32400	17.551			1.7551
Sb	0.2071	21.1	<PQL	25.2041			2.52041
As	0.2615	26.7	<PQL	26.0204			2.60204
Ba	1.33	135	150	0.71429			0.07143
Be	0.0536	5.47	6.86	0.71429			0.07143
Cd	0.2094	21.4	34.6	4.59184			0.45918
Ca	259	26300	30100	47.9592			4.79592
Cr	0.4399	44.9	58.8	8.16327			0.81633
Co	0.2035	20.8	20.3	3.87755			0.38776
Cu	2.43	247	284	3.26531			0.32653
Fe	755	77000	53500	5.91837			0.59184
Pb	6.11	623	735	20.6122			2.06122
Mg	236	24000	26500	18.0612			1.80612
Mn	8.38	855	981	1.83673			0.18367
Mo	0.2233	22.8	25.6	3.57143			0.35714
Ni	0.2928	29.9	33.3	5.40816			0.54082
K	145	14800	15900	43.1633			4.31633
Se	-0.2699	<PQL	<PQL	31.4286			3.14286
Si	8.54	867	968	27.2449			2.72449
Ag	0.0961	9.81	<PQL	7.14286			0.71429
Na	72.5	7160	6970	247.653			24.7653
Tl	0.0388	<PQL	<PQL	185.714			18.5714
Ti	10.5	1070	1200	50.7143			5.07143
Sn	0.155	12.4	<PQL	21.1224			2.11224
V	1.32	135	131	3.36735			0.33673
Zn	3.38	345	423	4.38776			0.43878

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CDM

Date: 7/14/92

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Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-18A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Dil. Factor 1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
Al	281	28800	31800	17.732			1.7732
Sb	0.1909	19.7	<PQL	25.4639			2.54639
As	0.3554	36.6	42.3	26.2887			2.62887
Ba	1.22	126	139	0.72165			0.07216
Be	0.0355	3.66	4.02	0.72165			0.07216
Cd	0.7493	77.2	102	4.63918			0.46392
Ca	261	26800	30800	48.4536			4.84536
Cr	0.4534	46.7	56.7	8.24742			0.82474
Co	0.1911	19.7	19.5	3.91753			0.39175
Cu	1.09	111	134	3.29897			0.3299
Fe	755	77800	51300	5.97938			0.59794
Pb	11.3	1170	1370	20.8247			2.08247
Mg	225	23000	25500	18.2474			1.82474
Mn	8.06	831	958	1.85567			0.18557
Mo	0.2005	20.7	27	3.60825			0.36082
Ni	0.29	29.9	33.8	5.46392			0.54639
K	139	14400	15400	43.6082			4.36082
Se	-0.2776	<PQL	<PQL	31.7526			3.17526
Si	9.74	1000	1080	27.5258			2.75258
Ag	0.1057	10.9	<PQL	7.21649			0.72165
Na	71.9	7170	6910	250.206			25.0206
Tl	-0.034	<PQL	<PQL	187.629			18.7629
Ti	10.4	1080	1220	51.2371			5.12371
Sn	0.1642	13.5	<PQL	21.3402			2.13402
V	1.26	129	127	3.40206			0.34021
Zn	1.24	128	163	4.43299			0.4433

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CDM

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

lient: IEA — Method: 6010

W .#: 92-06-189-19A — Date Analyzed: 07/11/92

U ts: mg/kg — Analyst: CLT

il. Factor		1	10		50		
lement	Raw Number	Blks Corr.	Adj. Value	PQL	Adj. Value	PQL	Default PQL
l	270	28000	30700	17.9167			1.79167
b	0.2111	22	<PQL	25.7292			2.57292
s	1.01	105	105	26.5625			2.65625
a	1.19	124	135	0.72917			0.07292
e	0.0754	7.86	8.72	0.72917			0.07292
d	1.55	161	200	4.6875			0.46875
a	245	25300	29000	48.9583			4.89583
r	0.5434	56.6	66.4	8.33333			0.83333
o	0.1872	19.5	15.5	3.95833			0.39583
u	1.2	124	141	3.33333			0.33333
e	755	78600	49800	6.04167			0.60417
b	17.5	1820	2110	21.0417			2.10417
g	207	21400	23600	18.4375			1.84375
n	8.3	864	981	1.875			0.1875
o	0.2172	22.6	23.8	3.64583			0.36458
i	0.2791	29.1	32.9	5.52083			0.55208
	132	13700	14700	44.0625			4.40625
e	-0.2915	<PQL	<PQL	32.0833			3.20833
i	9.41	976	1030	27.8125			2.78125
g	0.1078	11.2	<PQL	7.29167			0.72917
a	63	6320	5920	252.813			25.2813
l	-0.0332	<PQL	<PQL	189.583			18.9583
i	9.72	1010	1140	51.7708			5.17708
n	0.1319	10.3	<PQL	21.5625			2.15625
	1.22	127	119	3.4375			0.34375
n	1.25	130	157	4.47917			0.44792

roblems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CM

Date: 7/14/92

n-364

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-20A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Dil. Factor 1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
Al	266	27300	29900	17.732			1.7732
Sb	0.2016	20.8	<PQL	25.4639			2.54639
As	0.8702	89.7	86.5	26.2887			2.62887
Ba	1.27	131	143	0.72165			0.07216
Be	0.0662	6.82	7.62	0.72165			0.07216
Cd	1.28	132	170	4.63918			0.46392
Ca	273	28000	31900	48.4536			4.84536
Cr	0.538	55.5	71.3	8.24742			0.82474
Co	0.1841	19	14.7	3.91753			0.39175
Cu	1.15	118	135	3.29897			0.3299
Fe	755	77800	50300	5.97938			0.59794
Pb	16.7	1720	2070	20.8247			2.08247
Mg	223	22800	25100	18.2474			1.82474
Mn	8.56	882	1010	1.85567			0.18557
Mo	0.2096	21.6	23.1	3.60825			0.36082
Ni	0.2719	28	30.8	5.46392			0.54639
K	134	13800	14600	43.6082			4.36082
Se	-0.2843	<PQL	<PQL	31.7526			3.17526
Si	9.69	994	1050	27.5258			2.75258
Ag	0.1052	10.8	<PQL	7.21649			0.72165
Na	65	6460	5980	250.206			25.0206
Tl	0.0255	<PQL	<PQL	187.629			18.7629
Ti	9.78	1010	1150	51.2371			5.12371
Sn	0.1522	12.3	<PQL	21.3402			2.13402
V	1.21	124	117	3.40206			0.34021
Zn	1.24	128	153	4.43299			0.4433

Problems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CJR

Date: 7/14/92

D-365

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

ient: IEA
Method: 6010

.O.#: 92-06-189-21A
Date Analyzed: 07/11/92

ts: mg/kg
Analyst: CLT

Factor	1	10		50		
Raw	Blks	Adj.		Adj.		Default
ement Number	Corr.	Value	PQL	Value	PQL	PQL
291	29100	31800	17.2			1.72
0.2069	20.7	<PQL	24.7			2.47
1.82	182	196	25.5			2.55
1.35	135	147	0.7			0.07
0.1268	12.7	14.5	0.7			0.07
2.14	214	265	4.5			0.45
256	25600	29300	47			4.7
0.6796	68	79.3	8			0.8
0.2192	21.9	18.1	3.8			0.38
1.31	131	147	3.2			0.32
755	75500	50900	5.8			0.58
18.6	1860	2210	20.2			2.02
218	21800	24100	17.7			1.77
8.68	868	989	1.8			0.18
0.2376	23.8	25	3.5			0.35
0.3079	30.8	32.2	5.3			0.53
141	14100	14900	42.3			4.23
-0.2934	<PQL	<PQL	30.8			3.08
10.1	1010	1040	26.7			2.67
0.0993	9.93	<PQL	7			0.7
66.6	6660	6240	242.7			24.27
-0.0137	<PQL	<PQL	182			18.2
10.6	1060	1190	49.7			4.97
0.1407	14.1	<PQL	20.7			2.07
1.28	128	122	3.3			0.33
1.39	139	164	4.3			0.43

oblems/Comments to be Addressed on Report: use dil. fact. 10

Reviewed and Approved By: CDM

Date: 7/14/92

0.36

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-22A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Dil. Factor 1 Blks Corr.	Dil. Factor 10 Adj. Value	PQL	Dil. Factor 50 Adj. Value	PQL	Default PQL
Al	5.43	560	1480	17.732			1.7732
Sb	0.0848	8.74	<PQL	25.4639			2.54639
As	-0.0058	<PQL	<PQL	26.2887			2.62887
Ba	1.44	148	151	0.72165			0.07216
Be	-0.0006	<PQL	<PQL	0.72165			0.07216
Cd	0.035	3.61	10	4.63918			0.46392
Ca	6.65	685	1570	48.4536			4.84536
Cr	0.2145	22.1	20.1	8.24742			0.82474
Co	0.1058	10.9	<PQL	3.91753			0.39175
Cu	9.34	963	974	3.29897			0.3299
Fe	6.49	669	2180	5.97938			0.59794
Pb	1.34	139	246	20.8247			2.08247
Mg	0.8712	89.8	801	18.2474			1.82474
Mn	0.5543	57.1	83.6	1.85567			0.18557
Mo	0.3421	35.3	34.1	3.60825			0.36082
Ni	0.0671	6.92	<PQL	5.46392			0.54639
K	1.28	132	509	43.6082			4.36082
Se	-0.0096	<PQL	<PQL	31.7526			3.17526
Si	0.7844	80.9	122	27.5258			2.75258
Ag	-0.0051	<PQL	<PQL	7.21649			0.72165
Na	6.2	639	<PQL	250.206			25.0206
Tl	-0.0996	<PQL	<PQL	187.629			18.7629
Ti	0.4043	41.7	71.4	51.2371			5.12371
Sn	0.0984	10.1	<PQL	21.3402			2.13402
V	0.0088	0.904	<PQL	3.40206			0.34021
Zn	18.7	1930	2040	4.43299			0.4433

Problems/Comments to be Addressed on Report: use dil. fact. 1

Reviewed and Approved By: CSM

Date: 7/14/92

D-367

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
Sample #	92-06-189-22A	
Spiked Sample wt. g	0.97	1.02
Final Vol. ml	100	100

		MS			MSD		
ELEMENT	spike added ug	unspiked conc ug/g	conc ug/g	% rec.	conc ug/g	% rec	% RPD
Al	200	560.05	656.76	46.9	649.69	43.5	1.1
Sb	400	8.74	393.52	93.3	372.83	88.3	5.4
As	400	0.00	403.60	97.9	377.40	91.5	6.7
Ba	200	148.14	248.65	48.7	244.47	46.7	1.7
Be	200	0.00	94.39	45.8	88.81	43.1	6.1
Cd	200	3.61	88.67	41.3	82.73	38.4	6.9
Ca	200	685.19	741.51	27.3	718.10	16.0	3.2
Cr	200	22.11	120.08	47.5	113.90	44.5	5.3
Co	200	10.91	106.28	46.3	100.48	43.4	5.6
Cu	200	962.76	1013.61	24.7	998.64	17.4	1.5
Fe	200	668.99	722.49	25.9	735.63	32.3	-1.8
Pb	400	138.51	321.20	44.3	308.31	41.2	4.1
Mg	200	89.82	207.44	57.0	201.77	54.3	2.8
Mn	200	57.14	155.92	47.9	149.56	44.8	4.2
Mo	400	35.27	432.82	96.4	413.51	91.7	4.6
Ni	200	6.92	100.83	45.5	95.00	42.7	6.0
K	5000	131.61	2636.25	48.6	2494.62	45.8	5.5
Se	400	0.00	401.41	97.3	380.43	92.3	5.4
Ag	200	80.86	510.52	208.4	504.75	205.6	1.1
Tl	200	0.00	86.27	41.8	83.32	40.4	3.5
Na	400	639.28	832.92	47.0	853.75	52.0	-2.5
Th	400	0.00	185.78	45.1	187.29	45.4	-0.8
Ti	400	41.68	431.27	94.5	420.64	91.9	2.5
Sn	400	10.15	420.56	99.5	398.25	94.1	5.5
V	200	0.90	100.34	48.2	95.80	46.0	4.6
Zn	200	1929.99	1989.80	29.0	1925.49	-2.2	3.3

spiked at 1/2 ??

Plainly spiked at 1/2 intended. All elements in mix are "40-50%". All elements in other mix are ~100% target. Double all recoveries.
CLK 7/14/92

Reviewed/Date: CLK 7/14/92 Check(to use this dilution) ✓

ROSS Analytical Services Inc.,
16433 Foltz Industrial Parkway
Strongsville, OH 44136

Analyst:CLT Date:07/11/92 Client:IEA

% Recovery of Spikes in Solid Samples
For Metals

	MS	MSD
Sample #	92-06-189-22A 1:10	
Spiked Sample wt. g	0.97	1.02
Final Vol. ml	100	100

ELEMENT	spike added ug	unspiked conc ug/g	MS conc ug/g	MS % rec.	MSD conc ug/g	MSD % rec	% RPD
Al	20	148.05	69.14	-382.7	346.38	961.9	-133.4
Sb	40	0.00	40.88	99.1	39.22	95.1	4.1
As	40	0.00	38.91	94.3	37.04	89.8	4.9
Ba	20	15.06	25.26	49.5	24.46	45.6	3.2
Be	20	0.00	9.78	47.4	9.27	45.0	5.3
Cd	20	1.00	9.02	38.9	8.41	35.9	7.0
Ca	20	156.60	79.13	-375.7	395.36	1158.0	-133.3
Cr	20	2.01	12.02	48.6	11.27	45.0	6.4
Co	20	0.00	10.45	50.7	9.89	48.0	5.6
Cu	20	97.39	106.06	42.1	102.93	26.9	3.0
Fe	20	218.35	76.70	-687.0	188.10	-146.7	-84.1
Pb	40	24.58	33.53	21.7	32.39	18.9	3.4
Mg	20	80.05	21.93	-281.9	302.39	1078.3	-172.9
Mn	20	8.36	15.96	36.9	15.24	33.4	4.6
Mo	40	3.41	45.03	100.9	42.60	95.0	5.6
Ni	20	0.00	10.28	49.9	9.81	47.6	4.7
K	500	50.89	263.22	41.2	256.31	39.9	2.7
Se	40	0.00	36.42	88.3	34.52	83.7	5.4
Si	20	12.24	57.76	220.8	55.25	208.6	4.4
Ag	20	0.00	8.42	40.8	8.23	39.9	2.4
Na	40	0.00	0.00	0.0	0.00	0.0	ERR
Tl	40	0.00	0.00	0.0	0.00	0.0	ERR
Ti	40	7.14	43.47	88.1	42.83	86.5	1.5
Sn	40	0.00	43.97	106.6	41.34	100.3	6.2
V	20	0.00	10.16	49.3	9.48	46.0	7.0
Zn	20	203.84	218.65	71.8	209.73	28.6	4.2

Checker/Date: cbm 7/14/92 Check(to use this dilution) ___

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
[redacted] O.#: 92-06-189-23A
Date Analyzed: 07/11/92
[redacted] its: mg/kg
Analyst: CLT

Dil. Factor		1		10		50		
Element	Raw Number	Blks Corr.		Adj. Value	PQL	Adj. Value	PQL	Default PQL
A[redacted]	3.98	406		477	17.551			1.7551
S[redacted]	0.0609	6.22		<PQL	25.2041			2.52041
As	-0.0068	<PQL		<PQL	26.0204			2.60204
Ba	1.12	114		121	0.71429			0.07143
Be	0.0008	0.085		1.93	0.71429			0.07143
Cd	0.0307	3.13		<PQL	4.59184			0.45918
Ca	5.13	524		594	47.9592			4.79592
C[redacted]	0.1661	16.9		17.3	8.16327			0.81633
Co	0.0979	9.99		6.73	3.87755			0.38776
Cu	7.67	782		835	3.26531			0.32653
Fe	4.42	451		512	5.91837			0.59184
P[redacted]	1.06	108		126	20.6122			2.06122
Mg	0.6855	69.9		97.7	18.0612			1.80612
Mn	0.5473	55.8		59.8	1.83673			0.18367
Mo	0.2603	26.6		66.7	3.57143			0.35714
Ni	0.0549	5.61		8.59	5.40816			0.54082
K	1.33	135		198	43.1633			4.31633
Se	-0.0246	<PQL		<PQL	31.4286			3.14286
Si	0.5728	58.4		94.7	27.2449			2.72449
Ag	-0.0029	<PQL		<PQL	7.14286			0.71429
Na	7.07	722		<PQL	247.653			24.7653
Tl	-0.1709	<PQL		<PQL	185.714			18.5714
Ti	0.4368	44.6		57.2	50.7143			5.07143
Sn	0.0876	8.94		38.5	21.1224			2.11224
V	0.0004	<PQL		<PQL	3.36735			0.33673
Zn	20	2040		2290	4.38776			0.43878

Problems/Comments to be Addressed on Report: use dil. fact. of 1. cm

Reviewed and Approved By: CM

Date: 7/14/92

N-370

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-24A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Dil. Factor 1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
Al	6.47	647	689	17.2			1.72
Sb	0.0911	9.11	<PQL	24.7			2.47
As	-0.0264	<PQL	<PQL	25.5			2.55
Ba	1.78	178	181	0.7			0.07
Be	-0.0001	<PQL	<PQL	0.7			0.07
Cd	0.0285	2.85	<PQL	4.5			0.45
Ca	7.79	779	827	47			4.7
Cr	0.2629	26.3	22.7	8			0.8
Co	0.1055	10.6	<PQL	3.8			0.38
Cu	10.8	1080	1120	3.2			0.32
Fe	7.71	771	801	5.8			0.58
Pb	1.59	159	170	20.2			2.02
Mg	1	100	104	17.7			1.77
Mn	0.5785	57.8	57.9	1.8			0.18
Mo	0.3778	37.8	49.3	3.5			0.35
Ni	0.0676	6.76	<PQL	5.3			0.53
K	1.28	128	113	42.3			4.23
Se	-0.0342	<PQL	<PQL	30.8			3.08
Si	0.7178	71.8	99.3	26.7			2.67
Ag	-0.0011	<PQL	<PQL	7			0.7
Na	5.82	582	<PQL	242.7			24.27
Tl	-0.0915	<PQL	<PQL	182			18.2
Ti	0.497	49.7	58.8	49.7			4.97
Sn	0.0939	9.39	28	20.7			2.07
V	0.0029	<PQL	<PQL	3.3			0.33
Zn	19.6	1960	2180	4.3			0.43

Problems/Comments to be Addressed on Report: use dil. factor 1

Reviewed and Approved By: cdm

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA — Method: 6010

W.O.#: 92-06-189-25A — Date Analyzed: 07/11/92

Units: mg/kg — Analyst: CLT

Element	Factor Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
l	1.46	145	175	17.0297			1.70297
b	0.0734	7.27	<PQL	24.4554			2.44554
s	-0.0082	<PQL	<PQL	25.2475			2.52475
a	0.8276	~~81.9~~ 81.9	86.3	0.69307			0.06931
e	-0.0007	<PQL	<PQL	0.69307			0.06931
d	0.0031	<PQL	<PQL	4.45545			0.44554
a	3.56	352	392	46.5347			4.65347
r	0.0932	9.23 ✓	<PQL	7.92079			0.79208
o	0.0238	2.35	<PQL	3.76238			0.37624
u	2.75	273	305	3.16832			0.31683
e	5.22	517	538	5.74257			0.57426
b	0.3553	35.2	45.2	20			2
g	0.4358	43.2	40.1	17.5248			1.75248
n	1.47	146	146	1.78218			0.17822
o	0.2298	22.8	26.3	3.46535			0.34653
i	0.0304	3.01	<PQL	5.24752			0.52475
	0.4594	45.5	<PQL	41.8812			4.18812
e	-0.0113	<PQL	<PQL	30.495			3.0495
i	0.5965	59.1	77.9	26.4356			2.64356
g	-0.0064	<PQL	<PQL	6.93069			0.69307
a	9.69	960	<PQL	240.297			24.0297
l	-0.1654	<PQL	<PQL	180.198			18.0198
i	0.2513	24.9	<PQL	49.2079			4.92079
n	0.0652	6.46	<PQL	20.495			2.0495
	0.0051	0.507	<PQL	3.26733			0.32673
n	4	396	511	4.25743			0.42574

Problems/Comments to be Addressed on Report: use dil. fact. 1

Reviewed and Approved By: CDM

Date: 7/14/92

n-377

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA

Method: 6010

W.O.#: 92-06-189-26A

Date Analyzed: 07/11/92

Units: mg/kg

Analyst: CLT

Element	Raw Number	Dil. Factor 1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
Al	1.15	117	138	17.3737			1.73737
Sb	0.044	4.44	<PQL	24.9495			2.49495
As	-0.0199	<PQL	<PQL	25.7576			2.57576
Ba	0.678	~~68.5~~ 69.3 corr 6mg 7/14/92	69.6	0.70707			0.07071
Be	-0.0009	<PQL	<PQL	0.70707			0.07071
Cd	-0.0019	<PQL	<PQL	4.54545			0.45455
Ca	2.73	276	311	47.4747			4.74747
Cr	0.0767	7.75	<PQL	8.08081			0.80808
Co	0.0181	1.82	<PQL	3.83838			0.38384
Cu	2.47	249	258	3.23232			0.32323
Fe	5.58	564	579	5.85859			0.58586
Pb	0.2455	24.8	<PQL	20.404			2.0404
Mg	0.3322	33.6	30.6	17.8788			1.78788
Mn	1.16	117	119	1.81818			0.18182
Mo	0.2269	22.9	33.8	3.53535			0.35354
Ni	0.0264	2.67	<PQL	5.35354			0.53535
K	0.308	31.1	<PQL	42.7273			4.27273
Se	-0.0435	<PQL	<PQL	31.1111			3.11111
Si	0.4592	46.4	70	26.9697			2.69697
Ag	-0.0067	<PQL	<PQL	7.07071			0.70707
Na	7.12	719	<PQL	245.152			24.5152
Tl	-0.158	<PQL	<PQL	183.838			18.3838
Ti	0.2211	22.3	<PQL	50.202			5.0202
Sn	0.0631	6.38	21.1	20.9091			2.09091
V	0.0012	<PQL	<PQL	3.33333			0.33333
Zn	4.98	504	547	4.34343			0.43434

Problems/Comments to be Addressed on Report: use dil fact. 1

Reviewed and Approved By: CLT

Date: 7/14/92

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

Client: IEA
Method: 6010
W.O.#: 92-06-189-27A
Date Analyzed: 07/11/92
Units: mg/kg
Analyst: CLT

Element	Dil. Factor	Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
[redacted]		1.15	113	134	16.8627			1.68627
[redacted]		0.0463	4.54	<PQL	24.2157			2.42157
As		-0.0289	<PQL	<PQL	25			2.5
[redacted]		0.6732	[redacted]	66.6	0.68627			0.06863
[redacted]		-0.0009	<PQL	<PQL	0.68627			0.06863
Cd		-0.0017	<PQL	<PQL	4.41176			0.44118
[redacted]		2.81	276	297	46.0784			4.60784
[redacted]		0.081	7.94	<PQL	7.84314			0.78431
Co		0.0349	3.43	<PQL	3.72549			0.37255
[redacted]		2.57	252	260	3.13725			0.31373
[redacted]		6.37	624	635	5.68627			0.56863
[redacted]		0.2521	24.7	20.4	19.8039			1.98039
Mg		0.336	32.9	26.2	17.3529			1.73529
[redacted]		1.2	117	118	1.76471			0.17647
[redacted]		0.2248	22	25.8	3.43137			0.34314
Ni		0.0299	2.93	<PQL	5.19608			0.51961
[redacted]		0.2956	29	<PQL	41.4706			4.14706
[redacted]		-0.0361	<PQL	<PQL	30.1961			3.01961
Si		0.4524	44.4	52	26.1765			2.61765
Ag		-0.0079	<PQL	<PQL	6.86275			0.68627
[redacted]		7.34	720	<PQL	237.941			23.7941
[redacted]		-0.1106	<PQL	<PQL	178.431			17.8431
Ti		0.2103	20.6	<PQL	48.7255			4.87255
[redacted]		0.0582	5.7	<PQL	20.2941			2.02941
[redacted]		0	<PQL	<PQL	3.23529			
Zn		5.17	507	557	4.21569			0.42157

Problems/Comments to be Addressed on Report: use dil. fact. 1

Reviewed and Approved By: [redacted]

Date: 7/14/92

D-374

Raw Data with:
IEA 92-06-189

ICP DATA SUMMARY SHEET

ROSS Analytical Services

lient: IEA
W.O.#: 92-06-189-28A
Units: mg/kg

Method: 6010
Date Analyzed: 07/11/92
Analyst: CLT

il. Factor / lement	Raw Number	1 Blks Corr.	10 Adj. Value	PQL	50 Adj. Value	PQL	Default PQL
l	4.39	439	135	17.2			1.72
b	0.0347	3.47	<PQL	24.7			2.47
s	-0.0237	<PQL	<PQL	25.5			2.55
a	0.5823	58.2	1.7	0.7			0.07
e	-0.0008	<PQL	<PQL	0.7			0.07
d	-0.0005	<PQL	<PQL	4.5			0.45
a	6.6	660	318	47			4.7
r	0.062	6.2	<PQL	8			0.8
o	0.0069	0.694	<PQL	3.8			0.38
u	2.32	232	250	3.2			0.32
e	5.46	546	463	5.8			0.58
b	0.1867	18.7	<PQL	20.2			2.02
g	3.59	359	27.3	17.7			1.77
n	1.22	122	129	1.8			0.18
o	0.1857	18.6	22.8	3.5			0.35
i	0.0235	2.35	<PQL	5.3			0.53
	0.3443	34.4	<PQL	42.3			4.23
e	-0.0391	<PQL	<PQL	30.8			3.08
i	0.4731	47.3	57	26.7			2.67
g	-0.0051	<PQL	<PQL	7			0.7
a	7.66	766	<PQL	242.7			24.27
l	-0.0381	<PQL	<PQL	182			18.2
i	0.1905	19.1	<PQL	49.7			4.97
n	0.0827	8.27	<PQL	20.7			2.07
	-0.0019	<PQL	<PQL	3.3			0.33
n	4.56	456	527	4.3			0.43

roblems/Comments to be Addressed on Report: use dil. fact. 1

Reviewed and Approved By: CM

Date: 7/14/92

D-375

dw data w/ IEA 92-06-189.

000115

Method: RASI_ICP Standard: CAL_BLANK

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Avge	-.02680	.01510	.02300	.00080	-.00310	.01640	.07280
SDev	.00071	.00354	.00368	.00014	.00042	.00085	.00339
%RSD	2.6385	23.414	15.987	17.678	13.686	5.1740	4.6622
#1	-.02630	.01760	.02560	.00090	-.00280	.01700	.07520
#2	-.02730	.01260	.02040	.00070	-.00340	.01580	.07040

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Avge	.00620	.00160	.00540	.02545	.01250	.00340	.00720
SDev	.00170	.00028	.00057	.00601	.00240	.00085	.00028
%RSD	27.372	17.678	10.476	23.617	19.233	24.957	3.9284
#1	.00740	.00180	.00580	.02970	.01080	.00400	.00740
#2	.00500	.00140	.00500	.02120	.01420	.00280	.00700

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Avge	-.00570	.00070	.00585	.00865	.03270	.00400	.04120
SDev	.00099	.00014	.00007	.00078	.00071	.00057	.00028
%RSD	17.368	20.203	1.2087	8.9921	2.1624	14.142	.68651
#1	-.00500	.00080	.00580	.00920	.03220	.00440	.04140
#2	-.00640	.00060	.00590	.00810	.03320	.00360	.04100

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138
Avge	.18850	-.33850	-.00050	-.00150	.01000	.01760
SDev	.00042	.00523	.00099	.00014	.00198	.00028
%RSD	.22508	1.5458	197.99	9.4281	19.799	1.6071
#1	.18820	-.33480	-.00120	-.00140	.01140	.01780
#2	.18880	-.34220	.00020	-.00160	.00860	.01740

Method: RASI_ICP Standard: CAL_STD_1

Elem	Al3082	As1936	Ba4934	Be3130	Cd2265	Ca3158	Cr2677
Avge	.44930	15.630	1.7473	2.1492	17.042	3.2151	4.0287
SDev	.00226	.032	.0030	.0023	.031	.0137	.0038
%RSD	.50361	.20178	.16997	.10528	.18257	.42667	.09478
#1	.44770	15.607	1.7452	2.1476	17.020	3.2054	4.0260
#2	.45090	15.652	1.7494	2.1508	17.064	3.2248	4.0314

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Avge	.91920	1.6824	7.9517	2.1023	.99250	1.6444	6.7571
SDev	.00000	.0048	.0517	.0018	.00240	.0037	.0052
%RSD	.00000	.28580	.65005	.08745	.24223	.22360	.07640
#1	.91920	1.6790	7.9151	2.1036	.99080	1.6418	6.7534
#2	.91920	1.6858	7.9882	2.1010	.99420	1.6470	6.7607

Elem	Se1960	Tl3775	V_2924	Zn2138	Y_3710
Avge	10.292	.97720	5.6354	5.2325	6.828
SDev	.021	.00509	.0130	.0137	.010
%RSD	.20886	.52100	.23087	.26217	.1470

#1	10.277	.97360	5.6262	5.2228	6.821
#2	10.308	.98080	5.6446	5.2422	6.836

Method: RASI_ICP Standard: CAL_STD_2

Elem	Sb2068	Mo2020	Si2881	Sn1899	Ti3248
Avge	9.8154	3.7337	2.0449	3.4721	.72310
SDev	.1146	.0352	.0216	.0426	.00354
%RSD	1.1671	.94314	1.0581	1.2260	.48894
#1	9.7344	3.7088	2.0296	3.4420	.72060
#2	9.8964	3.7586	2.0602	3.5022	.72560

Method: RASI_ICP Standard: CAL_STD_3

Elem	Fe_Hi	K_7664	Na5889
Avge	.35650	4.8300	8.1694
SDev	.00580	.0047	.0003
%RSD	1.6264	.09662	.00346
#1	.36060	4.8267	8.1692
#2	.35240	4.8333	8.1696

Method: RASI_ICP Standard: CAL_STD_4

Elem	Ag3280	Tl3775
Avge	1.7823	.18410
SDev	.0081	.00099
%RSD	.45228	.53772
#1	1.7766	.18480
#2	1.7880	.18340

Method: RASI_ICP Standard: BLANK_NO_Y

Elem	Y_3710
Avge	.1696
SDev	.0017
%RSD	1.001
#1	.1684
#2	.1708

Method: RASI_ICP Sample Name: Standard #1 Operator: CLT
Run Time: 07/11/92 16:22:53
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0493	.00713	20.140	2.0306	2.0155	5.0280	5.1284
SDev	.0011	.00682	.148	.0119	.0109	.0403	.0248

%RSD	.02160	95.724	.73676	.58608	.53974	.80223	.48329
[redacted]	5.0486	.01195	20.036	2.0222	2.0079	4.9995	5.1109
[redacted]	5.0501	.00230	20.245	2.0390	2.0232	5.0565	5.1460
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	5.0000		20.000	2.0000	2.0000	5.0000	5.0000
Range	5.0000		5.0000	5.0000	5.0000	5.0000	5.0000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0503	5.0716	5.0673	5.0785	Q5.4811	10.105	5.1126
SDev	.0233	.0216	.0240	.0224	.9183	.060	.0116
%RSD	.46072	.42549	.47450	.44175	16.754	.59407	.22595
#1	5.0338	5.0564	5.0503	5.0627	4.8318	10.063	5.1045
#2	5.0667	5.0869	5.0843	5.0944	Q6.1305	10.148	5.1208
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	5.0000	5.0000	5.0000	5.0000	5.0000	10.000	5.0000
Range	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0257	.00178	5.0293	10.176	20.169	-.03049	3.4686
SDev	.0134	.00076	.0301	.004	.162	.00379	.0422
%RSD	.65979	43.447	.59840	.04324	.80101	12.444	1.2178
[redacted]	2.0163	.00230	5.0080	10.179	20.055	-.03318	3.4387
#2	2.0352	.00122	5.0506	10.172	20.284	-.02781	3.4984
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK
Value	2.0000		5.0000	10.000	20.000		
Range	5.0000		5.0000	5.0000	5.0000		
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.058	10.331	-.01256	-.00473	5.0721	4.9992	10.12
SDev	.021	.146	.00900	.00046	.0283	.0371	.05
%RSD	.21141	1.4174	71.668	9.8048	.55891	.74226	.4888
#1	10.043	10.228	-.00619	-.00440	5.0521	4.9729	10.09
#2	10.073	10.435	-.01892	-.00506	5.0921	5.0254	10.16
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	10.000	10.000			5.0000	5.0000	
Range	5.0000	5.0000			5.0000	5.0000	

Method: RASI_ICP Sample Name: Standard #2 Operator: CLT
Run Time: 07/11/92 16:27:07
Comment: IEA
Mode: CONC Corr. Factor: 1

[redacted]	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05229	10.055	10.234	.00744	.00913	-.21236	-.02894

SDev	.00614	.101	.088	.00194	.00173	.00468	.01134
%RSD	11.745	1.0074	.85567	26.105	18.940	2.2020	39.173
#1	.05663	9.9834	10.172	.00881	.01035	-.20906	-.02093
#2	.04795	10.127	10.296	.00607	.00790	-.21567	-.03696
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		5.0000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01331	.03711	.01733	.02082	-1.1676	-.01415	-.01210
SDev	.00612	.00518	.00640	.00652	.0185	.01216	.01867
%RSD	45.986	13.967	36.953	31.325	1.5812	85.970	154.34
#1	.01764	.04077	.02185	.02543	-1.1807	-.00555	.00111
#2	.00898	.03344	.01280	.01621	-1.1546	-.02274	-.02530
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00335	10.025	.01259	.03941	10.289	10.028	.03270
SDev	.00252	.112	.00298	.02493	.032	.124	.00437
%RSD	75.154	1.1183	23.658	63.267	.30759	1.2361	13.375
#1	.00513	9.9452	.01470	.05704	10.267	9.9400	.03580
#2	.00157	10.104	.01049	.02178	10.311	10.115	.02961
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		5.0000				5.0000	

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.24308	-.15226	10.028	9.9253	.02454	.00757	10.03
SDev	.01240	.06616	.105	.0255	.00803	.00431	.05
%RSD	5.1028	43.453	1.0443	.25641	32.741	56.908	.5252
#1	-.25185	-.10548	9.9539	9.9073	.03022	.01061	9.992
#2	-.23431	-.19905	10.102	9.9433	.01886	.00452	10.07
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			5.0000	5.0000			

Method: RASI_ICP Sample Name: Standard #3 Operator: CLT
Run Time: 07/11/92 16:31:20
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	49.348	.05422	.21007	.00300	-.01204	.00252	48.972
SDev	.363	.01138	.00791	.00028	.00063	.00218	.352
%RSD	.73560	20.997	3.7666	9.2805	5.2305	86.767	.71864
#1	49.091	.06227	.21567	.00320	-.01159	.00406	48.723
#2	49.605	.04617	.20448	.00280	-.01248	.00097	49.221
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	50.000						50.000
Range	5.0000						5.0000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03504	48.526	.03862	48.797	51.299	.02873	49.796
SDev	.00301	.297	.00241	.358	1.077	.00162	.369
%RSD	8.5822	.61126	6.2490	.73342	2.1002	5.6335	.74051
#1	-.03291	48.316	.04033	48.544	50.537	.02987	49.535
#2	-.03716	48.736	.03691	49.050	52.061	.02758	50.057
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	[illegible]

Method: RAST ICP Sample Name: ICVA Operator: CLT
Run Time: 07/11/92 16:39:49
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0701	2.0685	2.1024	1.0504	1.0201	1.0077	1.0940
SDev	.0096	.0079	.0057	.0006	.0022	.0002	.0068
%RSD	.89424	.38106	.27135	.05404	.21340	.02057	.62110
#1	1.0769	2.0629	2.1065	1.0500	1.0185	1.0078	1.0988
#2	1.0633	2.0740	2.0984	1.0508	1.0216	1.0075	1.0892
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	2.0000	2.0000	1.0000	1.0000	1.0000	1.0000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe HI	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98376	1.0774	1.0496	1.0628	Q.27116	2.0822	1.0533
SDev	.00128	.0069	.0013	.0077	.60841	.0135	.0086
%RSD	.13066	.64065	.12028	.72041	224.37	.64597	.81872
#1	.98285	1.0822	1.0487	1.0682	Q.70137	2.0727	1.0594
#2	.98467	1.0725	1.0505	1.0574	Q-.15905	2.0917	1.0472
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	2.0000	1.0000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K 7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0442	2.0476	1.0571	25.817	2.0713	2.0773	.98037
SDev	.0021	.0034	.0013	.003	.0151	.0070	.00097
%RSD	.20562	.16643	.12280	.01136	.73129	.33506	.09947
#1	1.0457	2.0452	1.0580	25.815	2.0820	2.0723	.97968
#2	1.0427	2.0500	1.0562	25.820	2.0606	2.0822	.98106
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	2.0000	1.0000	25.000	2.0000	2.0000	1.0000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Na5890	Ti3775	Sn1899	Ti3248	V 2924	Zn2138	Y 3710

Avge	Q1.7805	2.0078	2.0081	2.0206	Q1.1534	1.0490	10.14
Dev	.0106	.1554	.0167	.0001	.0085	.0009	.01
RSD	.59713	7.7384	.83126	.00300	.73771	.09047	.1403
	Q1.7730	2.1176	1.9963	2.0206	Q1.1594	1.0497	10.13
	Q1.7880	1.8979	2.0199	2.0207	Q1.1474	1.0483	10.15
Errors	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	NOCHECK
Value	2.0000	2.0000	2.0000	2.0000	1.0000	1.0000	
Range	10.000	10.000	10.000	10.000	10.000	10.000	

000121

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Avge	Q2.8921	-.19787					
%RSD	119.09	130.05	146.76	72.235	1414.5	51.672	125.75
#1	Q5.3276	-.24546	.10033	.00802	-.00554	.00803	Q4.8386
#2	Q.45668	-.01028	-.00186	.00260	.00677	.00373	Q.28390
Errors	QC Fail	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Fail
Value	50.000						50.000
Range	5.0000						5.0000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03457	Q2.4895	.00621	Q2.4348	Q-14.519	.04119	Q2.1383
SDev	.04252	3.0845	.01629	3.0083	20.241	.04707	2.5122
%RSD	123.00	123.90	262.44	123.55	139.41	114.28	117.48
#1	-.06464	Q4.6706	.01772	Q4.5621	Q-28.832	.07448	Q3.9147
#2	-.00450	Q.30845	-.00531	Q.30763	Q-.20606	.00790	Q.36192
Errors	NOCHECK	QC Fail	NOCHECK	QC Fail	QC Fail	NOCHECK	QC Fail
Value		50.000		50.000	50.000		50.000
Range		5.0000		5.0000	5.0000		5.0000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q.99404	-.01712	-.03082	Q6.1611	-.19041	-.08336	-.03970
SDev	1.2271	.03601	.04834	7.2803	.23819	.11172	.02713
%RSD	123.45	210.26	156.86	118.16	125.09	134.02	68.399
#1	Q1.8617	-.04259	-.06500	Q11.309	-.35884	-.16235	-.05890
#2	Q.12634	.00834	.00336	Q1.0132	-.02199	-.00436	-.02050
Errors	QC Fail	NOCHECK	NOCHECK	QC Fail	NOCHECK	NOCHECK	NOCHECK
Value	20.000			100.00	0-363		

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q8.2209	-.01568	-.06048	.00422	Q2.2657	-.00307	.3549
SDev	6.6414	.78258	.10638	.01467	2.7555	.00380	.6378
%RSD	80.788	4991.8	175.90	347.50	121.62	123.79	179.7
	Q12.917	-.56904	-.13571	-.00615	Q4.2141	-.00038	.8058
#2	Q3.5247	.53769	.01474	.01460	Q.31719	-.00576	-.0961
Errors	QC Fail	NOCHECK	NOCHECK	NOCHECK	QC Fail	NOCHECK	NOCHECK
Value	100.00				50.000		
Range	5.0000				5.0000		

Method: RASI_ICP Sample Name: Standard #3 Operator: CLT
Run Time: 07/11/92 16:56:50

Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	48.700	-.00842	.14277	.00084	-.01196	-.00293	48.032
SDev	.239	.00007	.00672	.00014	.00107	.00009	.292
%RSD	.49094	.78055	4.7100	16.147	8.9256	3.0794	.60706
#1	48.531	-.00838	.13801	.00075	-.01120	-.00299	47.826
#2	48.869	-.00847	.14752	.00094	-.01271	-.00286	48.238
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	50.000						50.000
Range	5.0000						5.0000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03827	47.650	.03162	48.006	52.213	.01902	49.091
SDev	.00108	.220	.00118	.252	.466	.00059	.245
%RSD	2.8148	.46256	3.7440	.52473	.89342	3.1052	.49942
#1	-.03751	Q47.495	.03246	47.827	51.883	.01943	48.918
#2	-.03904	47.806	.03078	48.184	Q52.543	.01860	49.264
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		50.000		50.000	50.000		50.000
Range		5.0000		5.0000	5.0000		5.0000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.733	.00304	-.01394	99.103	-.05708	.00992	-.0436
SDev	.111	.00036	.00079	.606	.01074	.01911	.0008
%RSD	.56089	11.946	5.6859	.61120	18.817	192.54	1.9694
#1	19.655	.00330	-.01338	98.675	-.06468	-.00359	-.04306
#2	19.811	.00279	-.01450	99.531	-.04949	.02343	-.04428
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK

0-365

Range	5.0000			5.0000			
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	99.452	.43325	.01138	-.05583	48.337	-.00240	9.723
[illegible] v	.533	.04329	.00986	.01073	.268	.00027	.061
[illegible]	.53630	9.9909	86.645	19.212	.55429	11.299	.6313
#1	99.075	.46386	.00441	-.04825	48.147	-.00221	9.680
#2	99.830	.40265	.01835	-.06341	48.526	-.00260	9.766
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	100.00				50.000		
Range	5.0000				5.0000		

Method: RASI_ICP Sample Name: Standard #4 Operator: CLT

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Run Time: 07/11/92 17:01:04
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.18412	-.00402	8.3804	.82863	.82869	2.0815	.27991
SDev	.06444	.00010	.0306	.00024	.00085	.0010	.06567
%RSD	35.000	2.4029	.36571	.02850	.10304	.04694	23.461
#1	.22968	-.00409	8.3587	.82879	.82929	2.0822	.32635
#2	.13855	-.00395	Q8.4020	.82846	.82809	2.0808	.23347
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value			8.0000	.80000	.80000	2.0000	
Range			5.0000	5.0000	5.0000	5.0000	

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0890	.18987	2.0882	.18215	-1.7442	4.1744	.18905
SDev	.0013	.06395	.0034	.06639	.6177	.0090	.07046
%RSD	.06129	33.682	.16218	36.448	35.412	.21446	37.269
#1	2.0899	.23509	2.0906	.22910	-1.3074	4.1807	.23887
#2	2.0881	.14465	2.0858	.13521	-2.1809	4.1680	.13923
Errors	QC Pass	NOCHECK	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value	2.0000		2.0000			4.0000	
Range	5.0000		5.0000			5.0000	

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07496	-.00153	2.0842	.51230	8.3591	.00888	2.0084
SDev	.02581	.00038	.0092	.13639	.0015	.01103	.0008
%RSD	34.428	24.911	.43985	26.624	.01833	124.23	.04096
#1	.09321	-.00126	2.0907	.60875	8.3580	.01668	2.0078
#2	.05672	-.00180	2.0777	.41586	8.3601	.00108	2.0089

Value			2.0000		8.0000		2.0000
Range			5.0000		5.0000	000127	5.0000
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00376	4.1318	.00126	-.00290	.18947	2.0735	10.23
SDev	.17720	.0365	.00365	.00071	.06619	.0019	.01
%RSD	4714.1	.88238	290.07	24.649	34.935	.09364	.1349
#1	.12906	4.1060	-.00132	-.00340	.23628	2.0721	10.22
#2	-.12154	4.1575	.00384	-.00239	.14267	2.0749	10.24
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		4.0000				2.0000	
Range		5.0000				5.0000	

Method: RASI_ICP Sample Name: ICVA Operator: CLT
Run Time: 07/11/92 17:06:24
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0536	2.0442	2.0793	1.0453	1.0134	.99811	1.0789
SDev	.0096	.0092	.0026	.0006	.0008	.00083	.0012
%RSD	.91092	.44879	.12683	.06204	.08141	.08339	.10884
#1	1.0603	2.0507	2.0774	1.0448	1.0128	.99752	1.0797
#2	1.0468	2.0377	2.0812	1.0457	1.0140	.99870	1.0781
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	2.0000	2.0000	1.0000	1.0000	1.0000	1.0000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98379	1.0627	1.0481	1.0490	Q1.4636	2.0469	1.0405
SDev	.00089	.0062	.0009	.0060	.0236	.0161	.0007
%RSD	.09072	.57872	.08202	.57211	1.6145	.78880	.06980
#1	.98316	1.0670	1.0487	1.0532	Q1.4803	2.0355	1.0410
#2	.98442	1.0583	1.0475	1.0448	Q1.4469	2.0583	1.0400
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	2.0000	1.0000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0335	2.0399	1.0477	25.603	2.0458	2.0577	.96957
SDev	.0003	.0106	.0042	.022	.0017	.0097	.00228
%RSD	.02522	.51987	.40259	.08593	.08122	.47274	.23540
#1	1.0337	2.0324	1.0506	25.587	2.0446	2.0508	.96796

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	2.0000	1.0000	25.000	2.0000	2.0000	1.0000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.6427	2.0000	2.0193	2.0154	Q1.1397	1.0421	10.09
SDev	.0142	.0002	.0073	.0195	.0079	.0035	.01
%RSD	.86298	.00870	.36079	.96946	.69209	.33994	.1201
#1	Q1.6326	2.0001	2.0141	2.0016	Q1.1452	1.0395	10.07
#2	Q1.6527	1.9998	2.0244	2.0292	Q1.1341	1.0446	10.09
Errors	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	NOCHECK
Value	2.0000	2.0000	2.0000	2.0000	1.0000	1.0000	
Range	10.000	10.000	10.000	10.000	10.000	10.000	

000128

Method: RASI_ICP Sample Name: ICB Operator: CLT
Run Time: 07/11/92 17:10:38
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	A13082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00084	-.01074	-.00336	H.00246	H.00277	H.00248	.00579
SDev	.01332	.00434	.01227	.00073	.00078	.00071	.01190
%RSD	1585.1	40.398	365.35	29.588	28.250	28.760	205.58
#1	.01026	-.01380	.00532	H.00298	H.00333	H.00299	H.01420
#2	-.00858	-.00767	-.01204	H.00195	H.00222	H.00198	-.00263
Errors	LC Pass	LC Pass	LC Pass	LC High	LC High	LC High	LC Pass
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00384	H.00822	.00060	.00148	L-.61649	.00428	.00154
SDev	.00017	.00232	.00084	.00244	.52534	.00070	.00502
%RSD	4.5486	28.203	141.11	164.31	85.215	16.328	325.90
#1	-.00396	H.00986	.00000	H.00321	L-.24502	.00478	-.00201
#2	-.00372	H.00658	H.00119	-.00024	L-.98796	.00379	.00509
Errors	LC Pass	LC High	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340
Elem	Mn2576	Mo2020	Ni2316	K_7664	Na_560	Sr2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00442	H.01393	.00232	H.05496	-.01854	.00337	.00160
SDev	.00146	.00493	.00142	.02053	.01378	.00624	.00033
%RSD	32.933	35.364	61.355	37.357	74.341	185.04	20.359

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#2	H.00339	H.01045	.00131	.04045	-.02828	.00778	.00137
Errors	LC High	LC High	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470
[redacted]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.44105	-.08981	H.02131	-.00703	H.00428	H.00114	9.377
SDev	.06556	.00545	.00285	.00395	.00078	.00135	.009
%RSD	14.865	6.0675	13.386	56.176	18.134	118.66	.0997
#1	-.39469	-.08595	H.02332	-.00982	H.00373	H.00210	9.370
#2	-.48741	-.09366	H.01929	-.00423	H.00483	.00018	9.383
Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC High	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

000129

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 17:14:52
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5101	-.00076	10.095	1.0274	1.0226	2.5697	2.5383
SDev	.0015	.00951	.001	.0041	.0030	.0051	.0072
%RSD	.06041	1258.3	.01059	.40195	.28903	.20032	.28341
#1	2.5112	.00597	10.094	1.0245	1.0205	2.5660	2.5332
#2	2.5090	-.00748	10.096	1.0303	1.0247	2.5733	2.5433
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5857	2.5369	2.5830	2.5163	Q1.4411	5.1292	2.5376
SDev	.0011	.0077	.0051	.0025	.9344	.0101	.0043
%RSD	.04068	.30390	.19593	.09791	64.838	.19693	.16903
#1	2.5865	2.5315	2.5794	2.5145	Q.78040	5.1221	2.5406
#2	2.5850	2.5424	2.5866	2.5180	Q2.1018	5.1364	2.5346
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
[redacted]e	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
[redacted]e	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2676	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0109	.00073	2.5556	5.0349	10.331	-.01407	2.4821
SDev	.0027	.00113	.0039	.0645	.021	.00764	.0067
%RSD	.26272	155.15	.15336	1.2817	.20008	54.297	.26937

#2	1.0128	-.00007	2.5584	4.9893	10.346	-.01947	2.4868
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q4.4143	5.1836	-.00188	-.00040	2.5271	2.5565	9.438
SDev	.0106	.0473	.00002	.00187	.0040	.0049	.053
%RSD	.24086	.91338	.86693	467.77	.15861	.18976	.5580
#1	Q4.4218	5.2171	-.00187	-.00172	2.5243	2.5531	9.401
#2	Q4.4068	5.1502	-.00189	.00092	2.5299	2.5599	9.476
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

000130

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 17:19:07
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.124	-.01211	.09895	.00343	-.00269	.00566	24.977
SDev	.128	.00690	.04197	.00114	.00082	.00241	.097
%RSD	.50890	56.990	42.415	33.383	30.410	42.634	.38859
#1	25.034	-.01698	.12862	.00424	-.00211	.00736	24.908
#2	25.215	-.00723	.06927	.00262	-.00327	.00395	25.046
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00847	24.951	.02282	25.027	26.279	.02893	25.359
SDev	.00283	.057	.00334	.090	.055	.00374	.098
%RSD	33.483	.22848	14.647	.35956	.20852	12.930	.38559
#1	-.00646	24.911	.02518	24.964	26.240	.02628	25.294
#2	-.01047	24.991	.02046	25.091	26.318	.03157	25.425
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.130	.00030	-.00149	50.826	-.02288	.00773	.01774
SDev	.038	.00113	.00156	.180	.02333	.00570	.00408
%RSD	.37330	372.65	104.84	.35492	101.95	73.662	22.996

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#2	10.156	-.00050	-.00259	50.954	-.03938	-.01176	-.02063
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

00131

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.559	.09923	.00410	-.02867	25.075	.00132	9.799
SDev	.213	.04864	.00649	.00099	.095	.00297	.012
%RSD	.42058	49.022	158.29	3.4593	.38055	224.58	.1214
#1	50.409	.13362	.00868	-.02797	25.008	.00342	9.790
#2	50.710	.06483	-.00049	-.02937	25.143	-.00078	9.807
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

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Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 17:23:21
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.10462	10.326	10.429	.00171	.00258	-.23483	.04170
SDev	.02425	.077	.071	.00065	.00027	.00198	.02692
%RSD	23.179	.74538	.67628	37.818	10.459	.84385	64.559
#1	.12177	10.271	10.379	.00216	.00277	-.23343	.06074
#2	.08748	10.380	10.479	.00125	.00239	-.23623	.02267
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00267	.09820	.00188	.07777	1.1970	-.04543	.06108
SDev	.00208	.01830	.00344	.01958	1.0162	.00545	.02444
%RSD	78.079	18.639	182.76	25.171	84.901	12.002	40.008
#1	-.00119	.11115	.00431	.09161	1.9165	-.04157	.07836
#2	-.00414	.08528	-.00055	.06393	.47738	-.04928	.04380
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.02660	10.249	.00202	.13897	10.406	10.087	.00611
SDev	.00688	.073	.00210	.09826	.023	.107	.00113
%RSD	25.886	.70940	104.30	70.711	.22513	1.0646	18.437

#2	.02173	10.300	-.00350	.06948	10.423	10.163	.00531
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.41349	-.11897	10.333	10.139	.10483	-.01208	10.11
SDev	.02304	.03159	.094	.031	.01249	.00108	.09
%RSD	5.5711	26.555	.91061	.30988	11.912	8.9167	.9034
#1	-.39720	-.09663	10.267	10.116	.11366	-.01131	10.04
#2	-.42978	-.14130	10.400	10.161	.09600	-.01284	10.17
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

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Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 17:27:36
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.01926	H.05301	H.03030	-.00052	L-.00053	L-.00265	H.02325
SDev	.01018	.01939	.00245	.00024	.00001	.00019	.00353
%RSD	52.852	36.575	8.0912	46.885	1.9407	7.0134	15.196
#1	H.02646	H.06672	H.03203	-.00035	L-.00052	L-.00252	H.02575
#2	.01206	H.03930	H.02857	-.00069	L-.00054	L-.00278	H.02075
Errors	LC High	LC High	LC High	LC Pass	LC Low	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00052	H.01644	.00094	H.01153	L-.04454	-.01139	H.02744
SDev	.00245	.00464	.00041	.00335	.49757	.00407	.00286
%RSD	474.14	28.204	43.102	29.027	1117.2	35.765	10.416
#1	.00122	H.01972	-.00	H.013	.30780	-.0086	H.0251
#2	-.00225	H.01316	-.00	H.009	.39638	-.0126	H.0296
Errors	LC Pass	C High	LC P	LC	LC Low	LC Pass	igh
High	.00650	.00230	.001	.0	.00280	.02280	20
Low	-.00730	-.00310	-.00	.0	.00180	-.02700	13

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se_196	Si2881	Ag3280
Units	ppm	ppm	ppm		ppm	ppm	ppm
Avge	H.00617	H.05999	.00		.00402	.05437	L-.00275
SDev	.00171	.01858	.00	.0	.02093	.01181	.00000
%RSD	27.735	30.936	79.1	10	520.91	21.725	.13860

#1	H.00738	H.07312	-.00110	.05082	.01882	.06272	-.00275
#2	H.00496	H.04687	L-.00396	.00726	-.01078	.04601	-.00275

Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	-.00030	-.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

Elem	Na5889	T13775	Sn1899	T13248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.53753	-.02232	H.04581	.02745	H.01258	L-.00287	9.331
SDev	.01418	.00002	.00652	.00971	.00416	.00001	.016
%RSD	2.6372	.09785	14.229	35.363	33.043	.28738	.1707
#1	-.52751	-.02234	H.05042	-.03431	H.01552	L-.00287	9.319
#2	-.54756	-.02231	H.04120	.02058	H.00984	L-.00286	9.342

Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	**000133**
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: ICSA Operator: CLT
Run Time: 07/11/92 17:31:50
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	A13082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	483.51	L.01200	L-.25604	L-.00587	L-.00052	L-.01074	H555.23
SDev	2.41	.01003	.04869	.00019	.00007	.00098	2.11
%RSD	.49931	83.586	19.018	3.2769	13.266	9.1188	.38043
#1	481.80	L.00491	L-.22161	L-.00573	L-.00047	L-.01005	H553.74
#2	485.22	L.01909	L-.29047	L-.00600	L-.00056	L-.01144	H556.73

Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC High
High	500.00	100.00	200.00	50.000	20.0001	100.001	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.05722	L-.00700	L.00056	182.15	200.00	.03453	491.97
SDev	.00591	.00536	.00132	.75	.70	.00153	2.49
%RSD	10.334	76.662	236.822	.41014	.34870	4.4446	.5059
#1	L-.05304	L-.00320	L.00149	181.62	199.51	.03561	490.21
#2	L-.06140	L-.01079	L-.00037	182.68	200.50	.03344	493.73

Errors	LC Low	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	100.00	200.00	500.00
Low	.00800	.00880	.00320	.00580	.00000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00328	.02145	L-.01319	L-.02074	L-.06852	L-.04415	L-.00114
SDev	.00094	.00373	.00118	.02787	.00320	.01029	.00197

#1	L-.00259	.02408	L-.01236	L-.00104	L-.07079	L-.03687	L.00026
#2	L-.00393	.01881	L-.01403	L-.04045	L-.06626	L-.05142	L-.00253

Errors	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.59392	L-.08127	-.03870	L.00289	.00944	.01862	9.797
SDev	.02304	.01631	.01489	.00192	.00009	.00006	.034
%RSD	3.8786	20.073	38.478	66.493	.97418	.31666	.3490
#1	L-.57763	L-.06974	-.02817	L.00425	.00950	.01866	9.773
#2	L-.61021	L-.09281	-.04922	L.00153	.00937	.01858	9.821

Errors	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: ICSAB Operator: CLT
Run Time: 07/11/92 17:36:03
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	488.40	.00961	-.27985	.47766	.46350	.85984	472.56
SDev	3.80	.00799	.02036	.00453	.00526	.00669	3.74
%RSD	.77832	83.069	7.2735	.94835	1.1348	.77812	.79123
#1	485.71	.01526	-.29424	.47446	.45978	.85514	469.92
#2	491.09	.00397	-.26546	.48086	.46722	.86452	475.21

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00			.60000	.60000	1.2000	600.00
Low	400.00			.40000	.40000	.80000	400.00

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.40766	.43476	.48187	181.06	197.48	.96477	488.86
SDev	.00470	.00543	.00369	1.44	.23	.01764	3.18
%RSD	1.1530	1.2481	.75021	.79414	.11855	1.8284	.65092
#1	.40433	.43093	.48928	180.04	197.64	.95230	486.61
#2	.41098	.43860	.49448	182.07	197.31	.97725	491.11

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.60000	.60000	.60000	240.00	240.00	1.2000	600.00
Low	.40000	.40000	.40000	160.00	160.00	.80000	400.00

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.45047	.00849	.87204	-.05185	-.08513	-.05971	.87453
SDev	.00436	.00087	.00350	.01320	.01950	.00348	.00625

#2	.45355	.00911	.87452	-.04252	-.09891	-.06217	.87896

Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	LC Pass
High	1.60000		1.2000				1.2000
Low	.40000		.80000				.80000

	Na5889	T13775	Sn1899	T13248	V-2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.65281	-.03808	.01184	.00537	.47101	.93470	9.825
SDev	.02835	.02678	.01424	.00378	.00249	.00800	.081
%RSD	4.3431	70.340	120.27	70.264	.52855	.85630	.8279
#1	-.63278	-.01914	-.00177	-.00804	.46925	.92904	9.768
#2	-.67284	-.05702	.02191	-.00270	.47277	.94036	9.883

Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	LC Pass	NOCHECK
High					80000	1.2000	
Low					40000	.80000	

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Method: RASI_ICP Sample Name: PB1 3050_I 07/09/92 Operator: CLT
Run Time: 07/11/92 17:40:16
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0689	L-.00889	L-.01716	.00156	L.00023	.00622	2.2129
SDev	.3550	.01054	.01317	.00006	.00019	.00467	.3848
%RSD	17.156	118.61	76.757	4.1442	82.102	75.030	17.391
#1	2.3199	L-.01635	L-.00785	.00161	L.00036	.00952	2.4850
#2	1.8180	L-.00143	L-.02648	.00152	L.00010	L.00292	1.9408

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_H1	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00318	L-.00483	.00857	.01132	L.17100	L-.01128	2.0552
SDev	.00304	.00077	.00126	.00185	.55431	.00009	.3364
%RSD	95.434	15.983	14.677	16.361	324.00	.75688	16.371
#1	L-.00533	L-.00537	.00948	.01188	L.22300	L-.01122	2.2952
#2	L-.00103	L-.00428	.00768	.00819	L.70000	L-.01134	1.8152

Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	20.000	10.000	100.00	500.00
Low	.00800	.00380	.00820	.00560	.00400	.00820	.01170

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se_960	Si2881	Ag328
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00038	L.00301	L-.00033	.06533	L-.04242	-.04608	L.00396
SDev	.00036	.00001	.00088	.03813	.01702	.00057	.00152
%RSD	94.113	.34490	271.20	58.364	40.133	1.2485	38.460

#1	L-.00013	L.00302	L-.00095	L.03837	L-.03038	.04649	L.00503
#2	L-.00064	L.00301	L.00030	.09230	L-.05446	.04568	L.00288

Errors	LC Low	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000136

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8081	L-.30543	.03572	L-.00551	L-.00602	L.00260	10.74
SDev	.1099	.09904	.00240	.00586	.00045	.00161	.02
%RSD	6.0763	32.426	6.7234	106.35	7.4704	62.21u	.195
#1	1.7304	L-.28540	.03402	L-.00966	L-.00634	L.00371	10.76
#2	1.8858	L-.37548	.03742	L-.00137	L-.00570	L.00145	10.76

Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Method: RASI_ICP Sample Name: PB2 3050I 07-09-92 Operator: CLT
Run Time: 07/11/92 17:44:29
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.59658	L-.01843	L-.02734	L-.00014	L-.00124	L-.00128	.61366
SDev	.15594	.00010	.01193	.00064	.00042	.00036	.14592
%RSD	26.139	.54370	43.637	453.16	33.708	28.233	23.778
#1	.70684	L-.01850	L-.03578	L.00031	L-.00094	L-.00103	.71684
#2	.48631	L-.01836	L-.01890	L-.00059	L-.00153	L-.00154	.51048

Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00629	L-.00811	.01609	.31401	L-.41098	L-.00779	.55418
SDev	.00896	.00234	.00673	.06714	.30872	.00167	.15858
%RSD	142.33	28.853	41.803	21.382	75.118	21.371	28.620
#1	L.00004	L-.00846	.02085	.36148	L-.62928	L-.00897	.66661
#2	L-.01262	L-.00976	.01134	.26653	L-.19268	L-.00661	.44234

Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	100.00	200.00	500.00
Low	-.00800	.00980	.00320	.00580	.50.000	.02020	.04770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se_196	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00088	L.00082	L-.00012	.07985	L-.04284	.04291	L.00011
SDev	.00025	.00227	.00047	.00587	.00004	.01396	.00263
%RSD	28.808	276.91	380.24	7.3493	0.1010	32.526	2350.5

#2	L-.00070	L-.00079	L-.00046	.07570	L-.04281	.03394	L-.00175

Errors	LC Low	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	100.10	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000137

	Na5889	T13775	Sn1899	T13248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.9646	L-.30367	.03064	L-.02758	L-.01018	L-.00554	H11.22
SDev	.0089	.03142	.01507	.01757	.00269	.00065	.18
%RSD	.29885	10.346	49.171	63.692	26.446	11.717	1.643
#1	2.9583	L-.32589	.04129	L-.01516	L-.00827	L-.00598	H11.09
#2	2.9708	L-.28146	L.01899	L-.04001	L-.01208	L-.00600	H11.39

Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Low	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: LCS 3050I 07-09-92 Operator: CLT
Run Time: 07/11/92 17:48:42
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2768	2.1669	2.1542	1.1156	1.0485	1.0214	1.2439
SDev	.0334	100% .0040	100% .0060	111% .0005	105% .0022	102% .0020	.0417
%RSD	2.6125	.18333	.27747	.04339	.20520	.19650	3.3492
#1	1.3004	2.1697	2.1500	1.1159	1.0500	1.0228	1.2734
#2	1.2532	2.1641	2.1585	1.1152	1.0470	1.0200	1.2145

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	[redacted]	Co2286	Cu3247	Fe2599	Fe_Hi	[redacted]	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1142	1.0761	1.1178	1.2699	L.51336	2.1524	1.2503
SDev	.0025	.0031	.0051	.0136	.49530	100% .0014	.0044
%RSD	.22165	.28420	.45203	1.0737	96.482	.06598	.3515
#1	1.1125	1.0782	1.1142	1.2795	L.86850	2.1534	1.2475
#2	1.1160	1.0739	1.1214	1.2602	L.16313	2.1514	1.2530

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	100.10	200.00	500.00
Low	.00800	.00980	.00320	.00580	.50000	.02020	.04770

Elem	Mn2576	Mo2020	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1277	2.1874	100% 1.0761	27.604	2.1074	1.1916	.01607
SDev	.0013	.0038	.0005	.045	100% .0014	.0001	.00130
%RSD	.11448	.17314	.04786	.16470	.06575	.00421	8.0836

1.6%

#2	1.1268	2.1901	1.0757	27.636	2.1084	1.1916	.01699

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.98080	.02670	.00700

000138

Elem	Na5889	[redacted]	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.7351	2.0403	2.1960	2.1591	1.0977	1.0620	10.28
SDev	.0567	.0183	.0130	.0078	.0053	.0039	.01
%RSD	1.1975	.89803	.59270	.36316	.48501	.27949	.0950
#1	4.7752	2.0273	2.1868	2.1586	1.1015	1.0599	10.28
#2	4.6950	2.0532	2.2052	2.1596	1.0939	1.0641	10.29

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.000
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Method: RASI_ICP Sample Name: 92-06-189-01A 1:10 Operator: CLT
Run Time: 07/11/92 17:52:54
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.885	L-.00750	L-.00999	.11388	.00361	L-.02539	28.697
SDev	.232	.01738	.01049	.00209	.00086	.00178	.137
%RSD	.75241	231.69	104.99	1.8388	23.780	7.0039	.65047
#1	31.050	L.00479	L-.01741	.11536	.00422	L-.02413	28.829
#2	30.721	L-.01979	L-.00257	.11240	.00300	L-.02665	28.565

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07748	.02070	.07233	59.454	59.722	.02166	28.660
SDev	.00013	.00154	.00166	.370	1.970	.00184	.168
%RSD	.16519	7.4329	2.2972	.62274	3.2998	8.5006	.58724
#1	.07757	.02179	.07351	59.716	58.329	.02296	28.682
#2	.07739	.01961	.07116	59.192	61.116	.02036	28.554

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	200.00	200.00	500.00
Low	.00800	.00980	.00320	.00580	50.000	.02020	.07750

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.89976	.01672	.05217	17.650	L-.04309	.18502	L.00414
SDev	.00655	.00647	.00023	.120	.01552	.00974	.00094
%RSD	.72774	38.690	.44317	.68139	36.009	5.2639	22.753

0.300

#2	.89513	.01215	.05200	17.565	L-.05406	.19190	L.00347

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000139

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.1835	L-.16877	L.01738	1.2416	.13219	.13246	9.865
SDev	.3934	.05300	.00192	.0087	.00094	.00175	.069
%RSD	6.3618	31.402	11.053	.30036	.71051	1.3210	.7040
#1	6.4617	L-.20625	L.01602	1.2402	.13265	.13870	9.9107
#2	5.9053	L-.13130	L.01873	1.2889	.13162	.13139	9.8163

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.000
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

A-1000

Method: RASI_ICP Sample Name: 92-06-189-01A Operator: CLT
Run Time: 07/11/92 17:57:07
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	305.82	k-.01947	k.01831	k1.0953	k.01905	k-.28783	k271.26
SDev	2.79	.00644	.04696	.0095	.00022	.00204	2.06
%RSD	.91073	33.095	256.47	.86910	1.1583	.70949	.76114
#1	307.79	k-.01491	k.05151	k1.1020	k.01920	k-.28639	k272.72
#2	303.85	k-.02403	k-.01489	k1.0886	k.01889	k-.28928	k269.80
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.73403	k.21922	k.66658	S503.02	k601.53	k.13495	k282.95
SDev	.00404	.00082	.00515	.01	1.68	.00404	2.35
%RSD	.55034	.37301	.77307	.00101	.27954	2.9938	.82942
#1	k.73688	k.21980	k.67022	S503.02	k602.72	k.13780	k284.61
#2	k.73117	k.21864	k.66294	S503.02	k600.34	k.13209	k281.29
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.4097	k.02871	k.44690	177.82	k-.13858	k1.3021	k-.01246
SDev	.0624	.00264	.00299	1.61	.00634	.0307	.00126
%RSD	.74219	9.2041	.66985	.90724	4.5775	2.3609	10.072

#2	k0.3656	k.02664	k.44478	176.66	k-.14306	k1.2804	k-.01157
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
n	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
ts	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.798	k-.18602	k.03812	k11.779	k1.2755	k1.1891	H11.97
SDev	.588	.11856	.02324	.021	.0111	.0072	.10
%RSD	1.1581	63.737	60.970	.17979	.86774	.60705	.8765
#1	51.214	k-.26985	k.05455	k11.764	k1.2833	k1.1942	H12.04
#2	50.382	k-.10218	k.02168	k11.794	k1.2677	k1.1840	H11.90
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000141

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Method: RASI_ICP Sample Name: 92-06-189-02A 1:10 Operator: CLT
Run Time: 07/11/92 18:04:34
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.358	L-.00666	L-.02749	.10287	.00177	L-.03340	31.172
SDev	.032	.01567	.00375	.00024	.00006	.00138	.038
%RSD	.10878	235.26	13.657	.23794	3.5687	4.1318	.12051
#1	29.335	L.00442	L-.02483	.10305	.00182	L-.03243	31.145
#2	29.380	L-.01774	L-.03014	.10270	.00173	L-.03438	31.198
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12468	.01687	.07376	57.087	58.703	L.00659	29.315
SDev	.00352	.00075	.00085	.024	.872	.01139	.057
%RSD	2.8231	4.4601	1.1453	.04217	1.4857	172.84	.19581
#1	.12716	.01634	.07436	57.070	59.320	L.01465	29.274
#2	.12219	.01740	.07316	57.104	58.087	L-.00146	29.355
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97777	.00766	.07021	17.183	L-.03973	.34099	L-.00137
SDev	.00112	.00000	.00209	.012	.00884	.00133	.00275
%RSD	.11448	.02713	2.9817	.06827	22.247	.38917	200.48

#2	.97857	.00766	.06873	17.191	L-.04598	.34193	L-.00332

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0934	L-.07461	.02093	1.3154	.12952	.13396	9.509
SDev	.0496	.00006	.00896	.0019	.00038	.00014	.058
%RSD	.97413	.07489	42.818	.14670	.29482	.10779	.6053
#1	5.1285	L-.07457	.02726	1.3140	.12925	.13386	9.468
#2	5.0583	L-.07465	L.01459	1.3167	.12979	.13406	9.549

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-02A Operator: CLT
Run Time: 07/11/92 18:08:53
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	275.07	k.02181	k-.03433	k.96342	k.01933	k-.29982	k279.75
SDev	2.24	.00729	.00134	.00606	.00007	.00083	1.70
%RSD	.81550	33.412	3.8906	.62862	.37526	.27761	.60642
#1	273.49	k.01666	k-.03339	k.95914	k.01938	k-.30041	k278.55
#2	276.66	k.02697	k-.03527	k.96770	k.01928	k-.29923	k280.95

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k1.0951	k.20610	k.66488	S503.15	k541.19	k.11319	k274.49
SDev	.0073	.00077	.00471	.01	.14	.00050	2.13
%RSD	.67116	.37196	.70843	.00148	.02663	.44003	.77602
#1	k1.0899	k.20664	k.66155	S503.15	k541.29	k.11355	k272.98
#2	k1.1003	k.20556	k.66821	S503.16	k541.09	k.11284	k275.99

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.7337	k.04965	k.60717	165.04	k-.12694	k3.0999	k.00027
SDev	.0568	.00037	.00461	1.14	.03501	.0267	.00158
%RSD	.65084	.74440	.75947	.68868	27.576	.86256	590.67

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.514	k.05306	k.07276	k11.778	k1.2241	k1.1579	9.308
SDev	.323	.00623	.00286	.002	.0106	.0082	.064
%RSD	.63844	11.742	3.9253	.02026	.86194	.70630	.6845
#1	50.286	k.05746	k.07074	k11.776	k1.2166	k1.1521	9.263
#2	50.742	k.04865	k.07478	k11.780	k1.2316	k1.1637	9.353

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Method: RASI_ICP Sample Name: 92-06-189-03A 1:10 Operator: CLT
Run Time: 07/11/92 18:13:05
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	36.133	L-.00743	L-.01463	.11890	.00130	L-.02921	23.710
SDev	.160	.00187	.00327	.00056	.00014	.00085	.179
%RSD	.44173	25.137	22.319	.46912	10.631	2.9178	.75319
#1	36.246	L-.00611	L-.01694	.11930	.00139	L-.02861	23.836
#2	36.020	L-.00875	L-.01232	.11851	.00120	L-.02982	23.583

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08686	.01741	.07875	55.638	56.000	L.01316	24.323
SDev	.00005	.00002	.00083	.220	.170	.00370	.205
%RSD	.05481	.12902	1.0486	.39482	.30390	28.108	.84343
#1	.08683	.01739	.07933	55.794	55.880	L.01055	24.468
#2	.08690	.01742	.07816	55.483	56.120	L.01578	24.178

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98433	.00664	.05004	14.983	L-.05512	.76041	L-.00005
SDev	.00345	.00419	.00033	.119	.00843	.01112	.00008
%RSD	.35063	63.039	.65829	.79285	15.292	1.4622	169.42

n-dna

#2	.98189	.00858	.04980	14.859	L-.08208	.78327	L.00091
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	T13248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.867	L-.08259	L.00918	1.1552	.13646	.13704	9.811
SDev	.120	.03009	.01134	.0058	.00223	.00108	.059
%RSD	1.1088	36.427	123.49	.49886	1.6352	.78534	.5996
#1	10.952	L-.06132	L.00116	1.1592	.13804	.13780	9.770
#2	10.782	L-.10386	L.01721	1.1511	.13488	.13628	9.853
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000144

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 18:17:19
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.8364	-.00450	10.301	1.0454	1.0334	2.5830	Q2.8420
SDev	.0669	.00274	.084	.0024	.0009	.0076	.0423
%RSD	2.3577	60.916	.81364	.22490	.08283	.29490	1.4872
#1	Q2.8837	-.00256	10.242	1.0437	1.0328	2.5776	Q2.8719
#2	Q2.7891	-.00644	10.360	1.0470	1.0340	2.5884	Q2.8121
Errors	QC Fail	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6269	2.5516	2.6432	Q3.0417	Q3.3391	5.1853	Q2.8470
SDev	.0095	.0038	.0101	.0998	1.3703	.0113	.0430
%RSD	.36176	.15067	.38306	3.2821	41.038	.21858	1.5101
#1	2.6201	2.5489	2.6360	Q3.1123	Q4.3080	5.1773	Q2.8774
#2	2.6336	2.5544	2.6503	Q2.9711	2.3701	5.1933	Q2.8166
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Fail
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0269	-.00058	2.5683	5.2382	10.468	-.00324	2.5033
SDev	.0010	.00076	.0046	.0528	.044	.00816	.0007
%RSD	.09969	131.28	.17912	1.0080	.41320	251.90	.02752

Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.9731	5.2120	.00138	.01154	2.5525	2.5810	9.501
SDev	.0142	.0268	.00534	.00386	.0041	.0035	.025
%RSD	.28506	.51472	385.44	33.437	.16255	.13473	.2615
#1	4.9831	5.2310	.00516	.00881	2.5496	2.5785	9.518
#2	4.9631	5.1930	-.00239	.01426	2.5555	2.5834	9.483
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

000145

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 18:21:34
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.616	-.01447	.10278	.00361	-.00344	.00552	25.345
SDev	.073	.01738	.01979	.00162	.00109	.00310	.014
%RSD	.28569	120.10	16.335	44.904	31.691	56.067	.05419
#1	25.564	-.00218	.11465	.00476	-.00267	.00771	25.335
#2	25.667	-.02676	.09090	.00247	-.00421	.00333	25.355
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00959	25.221	.02259	25.370	26.604	.03222	25.893
SDev	.00251	.032	.00462	.021	.321	.01128	.006
%RSD	26.197	.12822	20.463	.08229	1.2063	35.022	.02467
#1	-.00781	25.198	.02586	25.355	26.377	.04020	25.897
#2	-.01136	25.244	.01932	25.385	26.831	.02424	25.888
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.251	-.00155	.00013	51.648	-.00723	.00063	-.01710
SDev	.014	.00151	.00474	.197	.02157	.01532	.00342
%RSD	.13218	97.333	3734.7	.38051	298.42	2419.6	20.006

Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

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Elem	Na5889	T13775	Sn1899	Ti3248	V_2024	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	51.731	.13108	.00274	-.02223	25.425	.00188	9.902
SDev	.147	.02690	.01201	.01010	.025	.00295	.013
%RSD	.28430	20.523	439.59	45.425	.09819	157.12	.1265
#1	51.627	.11206	.01166	-.01509	25.407	.00397	9.899
#2	51.835	.15010	-.00917	-.02937	25.443	-.00021	9.917

Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 18:26:17
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6680	-.00638	10.270	1.0415	1.0273	2.5612	2.6967
SDev	.0167	.00444	.021	.0055	.0062	.0122	.0319
%RSD	.62454	69.639	.20737	.52841	.60562	.47463	1.1834
#1	2.6798	-.00324	10.255	1.0454	1.0317	2.5698	2.7192
#2	2.6563	-.00952	10.285	1.0376	1.0229	2.5526	2.6741

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

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6028	2.6007	2.6244	2.7159	Q.50646	5.1044	2.6925
SDev	.0047	.0285	.0122	.0474	1.7919	.0243	.0252
%RSD	.17995	1.0965	.46588	1.7462	353.80	.47640	.93481
#1	2.6061	2.6208	2.6331	2.7495	Q-.76059	5.1216	2.7103
#2	2.5995	2.5805	2.6158	2.6824	Q1.7735	5.0872	2.6747

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0412	.00798	2.5531	5.2008	10.456	-.02175	2.4826
SDev	.0117	.00682	.0090	.0587	.007	.00490	.0076
%RSD	1.1200	85.534	.35243	1.1280	.06796	22.506	.30770

#2	1.0329	.00315	2.5467	5.1595	10.451	-.02522	2.4772
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.5621	5.2979	-.00612	-.01086	2.6045	2.5612	9.465
SDev	.0319	.0024	.00123	.00356	.0266	.0025	.046
%RSD	.69915	.04458	20.037	32.776	1.0223	.09778	.4824
#1	4.5847	5.2996	-.00698	-.00835	2.6234	2.5630	9.498
#2	4.5396	5.2963	-.00525	-.01338	2.5857	2.5595	9.433
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

000147

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 18:30:33
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.613	-.02411	.11003	.00332	-.00355	.00583	25.248
SDev	.058	.00338	.03780	.00122	.00067	.00331	.013
%RSD	.22591	14.004	34.359	36.597	18.931	56.854	.04965
#1	25.572	-.02172	.13676	.00419	-.00308	.00817	25.239
#2	25.654	-.02649	.08330	.00246	-.00403	.00348	25.256
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01487	25.252	.02052	25.323	26.269	.01755	25.813
SDev	.00896	.022	.00422	.007	2.012	.01741	.022
%RSD	60.235	.08854	20.558	.02699	7.6609	99.230	.08356
#1	-.00854	25.236	.02350	25.328	Q27.692	.02986	25.798
#2	-.02120	25.268	.01754	25.318	24.846	.00524	25.828
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.262	.00032	-.00066	51.776	-.00631	-.00446	-.01775
SDev	.002	.00189	.00448	.075	.00362	.00848	.00456
%RSD	.01671	588.75	678.23	.14447	57.324	189.90	25.673

#2	10.261	-.00102	-.00382	51.829	-.00687	-.01046	-.02097
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000148

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	51.938	.12661	.00275	-.03631	25.517	.00208	9.927
SDev	.032	.04001	.00449	.00579	.007	.00241	.027
%RSD	.06141	31.600	163.39	15.956	.02762	115.91	.2674
#1	51.915	.15490	-.00043	-.03221	25.512	.00379	9.909
#2	51.960	.09832	.00593	-.04040	25.522	.00038	9.946
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 18:34:49
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12675	10.433	10.614	.00142	.00276	-.24030	.07141
SDev	.02707	.114	.019	.00008	.00047	.00104	.02270
%RSD	21.357	1.0918	.17882	5.5284	16.942	.43378	31.787
#1	.14589	10.353	10.600	.00148	.00309	-.24104	.08746
#2	.10761	10.514	10.627	.00136	.00243	-.23956	.05536
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00134	.11049	.00110	.12721	-.77107	-.05823	.08139
SDev	.00446	.02599	.00081	.03834	.31729	.01542	.00148
%RSD	332.08	23.520	74.050	30.140	41.149	26.484	1.8194
#1	-.00450	.12887	.00052	.15432	-.54671	-.06913	.08244
#2	.00181	.09212	.00167	.10010	-.99542	-.04732	.08034
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03413	10.376	-.00299	.14000	10.516	10.033	.00527
SDev	.01366	.068	.00062	.00880	.060	.062	.00276
%RSD	40.032	.65696	20.751	6.2854	.57451	.61565	52.428

#2	.02447	10.425	-.00255	.13578	10.559	10.077	.00332
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

000149

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.69416	-.16803	10.485	10.333	.12055	-.01256	10.13
SDev	.05139	.00009	.105	.025	.03011	.00068	.00
%RSD	7.4029	.05113	.99925	.24235	24.978	5.4313	.0147
#1	-.65782	-.16797	10.410	10.351	.14185	-.01208	10.13
#2	-.73049	-.16809	10.559	10.315	.09926	-.01304	10.13
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 18:39:04
Comment: IEA
Calc: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.02336	H.05826	H.02717	-.00069	L-.00058	L-.00327	H.03837
SDev	.00030	.02506	.00574	.00000	.00008	.00028	.00959
%RSD	1.2819	43.007	21.120	.06026	13.103	8.4647	25.008
#1	H.02315	H.07598	H.03123	-.00069	L-.00052	L-.00347	H.04515
#2	H.02357	H.04055	H.02311	-.00069	L-.00063	L-.00308	H.03158
Errors	LC High	LC High	LC High	LC Pass	LC Low	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00537	H.02025	-.00333	H.03037	L-.95139	-.00900	H.02236
SDev	.00336	.00541	.00040	.00953	.71561	.00337	.00431
%RSD	62.590	26.738	12.112	31.392	75.218	37.436	19.285
#1	L-.00775	H.02408	-.00304	H.03711	L-.44538	-.01138	H.02541
#2	-.00300	H.01642	-.00361	H.02363	L-1.4574	-.00662	H.01931
Errors	LC Pass	LC High	LC Pass	LC High	LC Low	LC Pass	LC High
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00745	H.06455	L-.00371	-.03007	.01179	.05331	-.00401
SDev	.00231	.02273	.00049	.03227	.00168	.02004	.00081
%RSD	31.061	35.208	13.093	107.29	14.282	37.588	20.189

#2	H.00581	H.04848	-.00337	-.05289	.01299	.03914	-.00344

Errors	LC High	LC High	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.84326	-.03153	H.04322	.02880	H.01714	L-.00266	9.441
SDev	.01772	.02793	.00938	.01165	.00730	.00027	.026
%RSD	2.1014	88.584	21.697	40.456	42.605	10.182	.2789
#1	-.85579	-.01178	H.04985	.03704	H.02231	L-.00285	9.460
#2	-.83073	-.05128	H.03659	.02056	H.01198	L-.00247	9.422

Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

000150

Method: RASI_ICP Sample Name: 92-06-189-03A Operator: CLT
Run Time: 07/11/92 18:43:19
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	336.39	k.18106	k-.11005	k1.1143	k.01721	k-.32872	k209.54
SDev	2.24	.25206	.03321	.0063	.00001	.07714	1.00
%RSD	.66592	139.21	30.178	.56174	.05557	23.467	.47607
#1	337.98	k.35930	k-.13353	k1.1188	k.01721	k-.38327	k210.25
#2	334.81	k.00283	k-.08657	k1.1099	k.01722	k-.27417	k208.84

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.72790	k.21563	k.69400	S754.65	k539.22	k.17287	k223.08
SDev	.05029	.00326	.02193	355.71	5.16	.00639	1.06
%RSD	6.9086	1.5095	3.1593	47.136	.95771	3.6995	.47436
#1	k.69234	k.21793	k.67850	S1006.2	k542.88	k.16835	k223.83
#2	k.76346	k.21332	k.70951	S503.12	k535.57	k.17739	k222.33

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.8238	k.10600	k.43553	141.17	k-.27091	k7.3013	k.08932
SDev	.0822	.03614	.01103	.58	.14633	.0215	.11897
%RSD	.93187	34.097	2.5335	.41035	54.014	.29481	133.19

#2	k8.7657	k.08044	k.42772	140.76	k-.16744	k7.2861	k.00520
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000151

E	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	102.82	k-.09497	k.15831	k10.533	k1.4093	k1.1779	10.91
SDev	.52	.09552	.10381	.031	.1631	.0026	.09
%RSD	.51015	100.58	65.577	.29885	11.571	.21707	.8116
#1	103.19	k-.16252	k.23171	k10.510	k1.5246	k1.1797	10.98
#2	102.45	k-.02743	k.08490	k10.555	k1.2940	k1.1761	10.85
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-04A 1:10 Operator: CLT
Run Time: 07/11/92 18:47:31
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.231	L-.00842	L-.02804	.09620	.00129	L-.02667	30.355
SDev	.172	.00608	.01040	.00080	.00005	.00090	.119
%RSD	.55145	72.205	37.104	.83251	4.0450	3.3862	.39041
#1	31.353	L-.00412	L-.03540	.09677	.00133	L-.02603	30.439
#2	31.109	L-.01272	L-.02068	.09563	.00126	L-.02731	30.271
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.10286	.01522	.06047	52.207	54.578	L-.00592	25.664
SDev	.00310	.00001	.00167	.305	2.303	.01041	.133
%RSD	3.0164	.03202	2.7691	.58425	4.2197	175.65	.51957
#1	.10506	.01523	.06165	52.423	56.206	L-.01328	25.758
#2	.10067	.01522	.05928	51.992	52.949	L.00143	25.570
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.89708	.00703	.05845	14.154	L-.05817	.33625	L-.00229
SDev	.00500	.00191	.00145	.066	.00181	.01526	.00140
%RSD	.55728	27.206	2.4834	.46630	3.1149	4.5385	61.242

#2	.89354	.00568	.05948	14.107	L-.05689	.32546	L-.00328

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000152

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.6005	L-.10317	L.00833	1.0512	.12257	.11962	9.737
SDev	.1683	.04414	.00255	.0079	.00162	.00094	.017
%RSD	1.9573	42.782	30.646	.75482	1.3226	.78867	.1745
#1	8.7196	L-.07196	L.01014	1.0456	.12371	.12029	9.749
#2	8.4815	L-.13438	L.00653	1.0568	.12142	.11895	9.725

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-04A Operator: CLT
Run Time: 07/11/92 18:51:45
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	295.04	k.19816	k-.09670	k.90793	k.01721	k-.31403	k278.37
SDev	.47	.20395	.09531	.00359	.00013	.08204	1.23
%RSD	.15998	102.93	98.559	.39560	.77172	26.125	.44260
#1	294.70	k.34237	k-.16410	k.90539	k.01712	k-.37204	k277.50
#2	295.37	k.05394	k-.02931	k.91047	k.01730	k-.25602	k279.24

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.92285	k.17693	k.54187	S754.77	k518.31	k.08295	k243.47
SDev	.05890	.00091	.03012	355.75	3.38	.01972	.86
%RSD	6.3821	.51283	5.5580	47.134	.65191	23.772	.35302
#1	k.88120	k.17757	k.52058	S1006.3	k520.70	k.06901	k242.86
#2	k.96449	k.17629	k.56317	S503.21	k515.92	k.09690	k244.08

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.1460	k.04985	k.50941	138.11	k-.29931	k2.8336	k.09604
SDev	.0047	.02781	.00750	.31	.14610	.0080	.11718
%RSD	.05801	55.794	1.4720	.22619	48.811	.28245	122.01

#2	k8.1427	k.03018	k.50411	138.33	k-.19600	k2.8279	k.01319

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000153

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	84.890	k-.14778	k.17556	k9.7333	k1.2966	k1.0657	10.68
SDev	.165	.03656	.08653	.0994	.1511	.0048	.03
%RSD	.19413	24.741	49.287	1.0212	11.657	.44912	.3003
#1	84.774	k-.17364	k.23674	k9.8036	k1.4034	k1.0623	10.65
#2	85.007	k-.12193	k.11437	k9.6631	k1.1897	k1.0690	10.70

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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ethod: RASI_ICP Sample Name: 92-06-189-05A 1:10 Operator: CLT
Run Time: 07/11/92 18:55:58
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.703	L-.01310	L-.02344	.10157	.00151	L-.03494	21.105
SDev	.319	.01381	.00728	.00096	.00003	.00040	.208
%RSD	1.0378	105.42	31.069	.94201	2.2069	1.1581	.98672
#1	30.928	L-.02287	L-.01829	.10225	.00154	L-.03466	21.253
#2	30.478	L-.00334	L-.02859	.10089	.00149	L-.03523	20.958

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09833	.01740	.07722	53.314	54.298	L.00482	27.264
SDev	.00186	.00001	.00081	.395	.468	.00673	.220
%RSD	1.8922	.04195	1.0482	.74009	.86268	139.54	.80741
#1	.09964	.01741	.07780	53.593	53.967	L.00006	27.420
#2	.09701	.01740	.07665	53.035	54.629	L.00958	27.109

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.69844	.00501	.05530	18.859	L-.05376	.18068	L-.00244
SDev	.00698	.00111	.00088	.123	.00683	.00344	.00160
%RSD	.99922	22.105	1.5930	.65326	12.697	1.9015	65.879

#2	.69351	.00579	.05592	18.772	L-.04695	.17625	L-.00557

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000154

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.1888	L-.19242	L.01199	1.3656	.13829	.11780	9.783
SDev	.1488	.02676	.00374	.0232	.00102	.00135	.027
%RSD	3.5535	13.907	31.224	1.7018	.73531	1.1438	.2735
#1	4.2940	L-.17350	L.01464	1.3820	.13900	.11875	9.802
#2	4.0835	L-.21134	L.00934	1.3491	.13757	.11685	9.764

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-05A Operator: CLT
Run Time: 07/11/92 19:00:11
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	287.18	k.18028	k-.06731	k.95550	k.01999	k-.37758	k185.83
SDev	3.53	.22083	.11665	.01319	.00036	.07804	1.20
%RSD	1.2285	122.49	173.30	1.3803	1.7797	20.668	.64826
#1	284.69	k.33643	k-.14980	k.94617	k.01974	k-.43277	k184.98
#2	289.68	k.02413	k.01517	k.96482	k.02024	k-.32240	k186.69

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.83753	k.21667	k.68013	S754.75	k521.06	k.09121	k255.96
SDev	.05642	.00138	.03176	355.74	.34	.01625	2.83
%RSD	6.7370	.63541	4.6699	47.134	.06490	17.821	1.1057
#1	k.79763	k.21569	k.65767	S1006.3	k521.30	k.07972	k253.95
#2	k.87743	k.21764	k.70259	S503.20	k520.82	k.10271	k257.96

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k6.2347	k.05953	k.48644	182.21	k-.27514	k1.6664	k.09343
SDev	.0186	.02896	.01039	2.04	.18685	.0198	.12153
%RSD	.29858	48.646	2.1365	1.1188	67.912	1.1854	130.07

#2	k6.2479	k.03905	k.47909	183.65	k-.14302	k1.6804	k.00750

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000155

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	41.172	k-.26237	k.16504	k12.561	k1.4453	k1.0454	H11.29
SDev	.450	.12357	.09809	.017	.1358	.0051	.14
%RSD	1.0932	47.097	59.432	.13613	9.3979	.48997	1.266
#1	40.854	k-.17499	k.23439	k12.548	k1.5413	k1.0418	H11.19
#2	41.490	k-.34974	k.09568	k12.573	k1.3493	k1.0490	H11.39

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Method: RASI_ICP Sample Name: 92-06-189-05A-S 1:10 Operator: CLT
Run Time: 07/11/92 19:04:25
Comment: IEA
Data: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.682	.13319	.36923	.28087	.18689	.14158	19.471
SDev	.431	.00257	.00291	.00330	.00182	.00111	.306
%RSD	1.5585	1.9310	.78816	1.1738	.97595	.78689	1.5708
#1	27.987	.13137	.37129	.28320	.18818	.14236	19.688
#2	27.377	.13501	.36717	.27853	.18560	.14079	19.255

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.27421	.19858	.26423	48.233	50.033	.36953	24.972
SDev	.00330	.00078	.00038	.871	.039	.00246	.382
%RSD	1.2021	.39364	.14394	1.8049	.07730	.66681	1.5301
#1	.27188	.19803	.26450	48.849	50.060	.36779	25.242
#2	.27654	.19913	.26396	47.618	50.006	.37127	24.702

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.82227	.36815	.22758	21.666	.32013	1.0884	.01575
SDev	.01174	.00182	.00123	.324	.00507	.0271	.00101
%RSD	1.4275	.49488	.54014	1.4960	1.5822	2.4944	6.3875

#2	.81397	.36944	.22845	21.437	.31655	1.1076	.01646

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.8968	.18901	.38055	1.7274	.31220	.29127	9.804
SDev	.0691	.02389	.00625	.0101	.00101	.00230	.116
%RSD	1.7735	12.639	1.6427	.58265	.32345	.78828	1.181
#1	3.9457	L.17211	.37613	1.7202	.31292	.29290	9.885
#2	3.8479	.20590	.38497	1.7345	.31149	.28965	9.722
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-05A-SD1:10 Operator: CLT
Run Time: 07/11/92 19:08:38
Comment: IEA
Mode: CONC Corr. Factor: 1

				95%	101%	78%	
Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.290	.14420	.39687	.29233	.20364	.15553	19.825
SDev	.011	.00865	.00845	.00073	.00077	.00074	.077
%RSD	.04063	6.0001	2.1281	.24899	.37992	.47799	.38914
#1	27.282	.15032	.39090	.29181	.20309	.15500	19.771
#2	27.298	.13809	.40284	.29284	.20419	.15605	19.880
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
	92%						
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.28271	.21554	.27763	48.326	51.823	.40015	24.933
SDev	.00508	.00003	.00169	.115	.265	.00070	.013
%RSD	1.7970	.01607	.60712	.23858	.51135	.17572	.05201
#1	.27912	.21551	.27644	48.244	52.010	.39965	24.942
#2	.28630	.21556	.27882	48.407	51.636	.40064	24.924
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	[illegible]
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.84893	.40715	.24216	21.927	.35533	1.5164	.09069
SDev	.00206	.00189	.00556	.013	.00419	.0306	.00101
%RSD	.24306	.46535	2.2963	.06020	1.1802	2.0158	1.1155

#2	.85039	.40849	.24609	21.918	.35236	1.5380	.09141

000157

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

[redacted]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.8367	.27908	.40961	1.7542	.32796	.31065	9.738
SDev	.0372	.00199	.01755	.0098	.00029	.00106	.014
%RSD	.96991	.71439	4.2846	.56052	.08844	.34131	.1396
#1	3.8630	.28049	.39720	1.7612	.32775	.30990	9.729
#2	3.8103	.27767	.42202	1.7472	.32817	.31140	9.748

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-05A-S Operator: CLT
Run Time: 07/11/92 19:12:51
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	253.65	k1.4084	k3.4037	k2.6623	k1.6511	k1.1969	k169.48
SDev	.93	.0038	.0226	.0126	.0005	.0020	.54
%RSD	.36791	.26907	.66458	.47279	.03239	.17041	.31944
#1	252.99	k1.4111	k3.3877	k2.6534	k1.6507	k1.1954	k169.09
#2	254.31	k1.4057	k3.4197	k2.6712	k1.6515	k1.1983	k169.86

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k2.4350	k1.8175	k2.3931	S503.36	k459.74	k3.3974	k229.17
SDev	.0008	.0039	.0114	.00	9.74	.0337	1.14
%RSD	.03177	.21464	.47526	.00029	2.1190	.99222	.49700
#1	k2.4356	k1.8148	k2.3851	S503.36	k452.86	k3.3736	k228.36
#2	k2.4345	k1.8203	k2.4012	S503.36	k466.63	k3.4213	k229.97

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2816	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.3043	k3.3895	k1.9950	205.00	k3.2719	k11.959	k.17701
SDev	.0305	.0220	.0049	1.57	.0053	.054	.01021
%RSD	.41776	.64783	.24330	.76622	.16113	.45041	5.7677

#2	k7.3258	k3.4050	k1.9985	206.11	k3.2682	k11.997	k.16979

000158

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	39.759	k3.4274	k3.3471	k15.426	k2.9288	k2.5453	H11.67
SDev	.486	.0924	.0231	.062	.0167	.0105	.06
%RSD	1.2212	2.6947	.69045	.39951	.57062	.41239	.4766
#1	39.415	k3.3621	k3.3307	k15.383	k2.9170	k2.5378	H11.64
#2	40.102	k3.4928	k3.3634	k15.470	k2.9406	k2.5527	H11.71

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-05A-SD Operator: CLT
Run Time: 07/11/92 19:17:04
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k254.32	k1.6326	k3.6474	k2.7724	k1.7800	k1.2391	k174.67
SDev	.75	.2259	.1076	.0038	.0012	.0825	.58
%RSD	.29472	13.835	2.9487	.13809	.06881	6.6589	.33179
#1	k253.79	k1.7923	k3.5714	k2.7697	k1.7791	k1.1808	k174.26
#2	k254.85	k1.4729	k3.7235	k2.7751	k1.7808	k1.2975	k175.08

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k2.4784	k1.9396	k2.5617	S754.97	k464.50	k3.6222	k232.12
SDev	.0610	.0014	.0300	355.85	3.53	.0250	.78
%RSD	2.4617	.07090	1.1720	47.134	.75902	.69153	.33474
#1	k2.4352	k1.9386	k2.5405	S1006.6	k462.01	k3.6045	k231.57
#2	k2.5215	k1.9406	k2.5829	S503.35	k467.00	k3.6399	k232.67

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.5974	k3.6416	k2.0995	209.32	k3.4262	k15.261	k.88031
SDev	.0211	.0191	.0016	.22	.1511	.018	.10355
%RSD	.27773	.52494	.07782	.10370	4.4094	.11974	11.763

#2	k7.5825	k3.6281	k2.0984	209.47	k3.5330	k15.274	k.80709
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	41.836	k3.9368	k3.6248	k15.923	k3.1652	k2.6947	10.80
SDev	.206	.0011	.1010	.020	.1467	.0079	.00
%RSD	.49133	.02690	2.7858	.12606	4.6333	.29246	.0452
#1	41.691	k3.9361	k3.6962	k15.909	k3.2689	k2.6892	10.80
#2	41.981	k3.9376	k3.5534	k15.937	k3.0615	k2.7003	10.80
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-06A 1:10 Operator: CLT
Run Time: 07/11/92 19:21:18
Comment: IEA
[illegible] : CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	37.860	L-.00850	L-.01381	.13231	.00719	L-.02683	28.882
SDev	.184	.01932	.00740	.00299	.00213	.00245	.190
%RSD	.48624	227.13	53.598	2.2571	29.672	9.1424	.65716
#1	37.990	L.00515	L-.01904	.13442	.00870	L-.02510	29.017
#2	37.730	L-.02216	L-.00858	.13020	.00568	L-.02856	28.748
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11480	.02125	.08228	53.546	57.831	L.01369	28.798
SDev	.00132	.00232	.00671	.334	.166	.01050	.152
%RSD	1.1464	10.936	8.1528	.62443	.28751	76.725	.52779
#1	.11573	.02289	.08702	53.783	57.714	.02111	28.905
#2	.11387	.01960	.07753	53.310	57.949	L.00626	28.690
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	N12316	K_7664	Se1960	S12881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.88131	.02831	.06266	16.358	L-.04431	.28016	L-.00068
SDev	.00491	.00987	.00359	.239	.02435	.02770	.00142
%RSD	.55747	34.855	5.7222	1.4614	54.954	9.8875	208.21

#2	.87784	.02133	.06013	16.189	L-.06153	.26057	L-.00169
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.417	L-.14038	.02603	1.2448	.13738	.15188	9.746
SDev	.158	.10988	.00537	.0233	.00410	.00484	.023
%RSD	1.3813	78.277	20.632	1.8699	2.9837	3.1876	.2397
#1	11.529	L-.06268	.02983	1.2612	.14028	.15530	9.730
#2	11.306	L-.21808	.02223	1.2283	.13448	.14846	9.763
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000160

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 19:25:33
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.9236	-.00117	10.499	1.0690	1.0414	2.6109	Q2.8818
SDev	.0396	.00127	.087	.0108	.0124	.0202	.0436
%RSD	1.3555	108.65	.83223	1.0076	1.1904	.77274	1.5140
#1	Q2.9516	-.00027	10.437	1.0613	1.0327	2.5966	Q2.9126
#2	Q2.8956	-.00207	10.560	1.0766	1.0502	2.6251	Q2.8509
Errors	QC Fail	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6568	2.5789	2.6960	Q3.0903	Q2.8803	5.2175	Q2.8922
SDev	.0207	.0208	.0240	.1112	.2919	.0310	.0580
%RSD	.78036	.80740	.89188	3.5991	10.134	.59347	2.0057
#1	2.6422	2.5642	2.6790	Q3.1689	Q3.0867	5.1956	Q2.9332
#2	2.6715	2.5936	2.7130	Q3.0116	2.6739	5.2394	Q2.8512
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Fail
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Elem	Mn2576	Mo2020	[illegible]	K_7664	[illegible]	Si2881	[illegible]
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0358	.00396	2.5900	5.3782	10.684	.02264	2.5246
SDev	.0056	.00190	.0212	.0367	.117	.02603	.0118
%RSD	.53616	48.015	.81797	.68175	1.0972	114.97	.46814

#2	1.0397	.00262	2.6049	5.3522	10.767	.00424	2.5329
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8240	5.3667	-.00293	.00569	2.5832	2.6185	9.591
SDev	.0762	.0846	.00402	.00023	.0211	.0164	.053
%RSD	1.5795	1.5766	137.05	3.9908	.81731	.62600	.5536
#1	4.8779	5.4265	-.00577	.00585	2.5683	2.6069	9.553
#2	4.7701	5.3068	-.00009	.00553	2.5981	2.6301	9.628
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

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ethod: RASI_ICP Sample Name: CCVC Operator: CLT
un Time: 07/11/92 19:29:47
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.538	-.01939	.09594	.00460	-.00268	.00594	25.086
SDev	.159	.00590	.00843	.00074	.00012	.00185	.121
%RSD	.62323	30.444	8.7819	16.125	4.3262	31.097	.48176
#1	25.425	-.02357	.10190	.00512	-.00259	.00725	25.000
#2	25.650	-.01522	.08998	.00407	-.00276	.00484	25.171
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01023	25.056	.02313	25.202	Q28.030	.02436	25.766
SDev	.00107	.122	.00292	.117	.522	.00107	.190
%RSD	10.419	.48592	12.626	.46314	1.8614	4.3928	.73625
#1	-.00948	24.969	.02519	25.120	Q27.661	.02361	25.632
#2	-.01098	25.142	.02106	25.285	Q28.398	.02512	25.900
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Fail	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.169	.00058	.00116	51.564	-.00900	-.00420	-.01733
SDev	.045	.00001	.00042	.277	.01378	.00542	.00277
%RSD	.43846	2.2196	35.763	.53756	153.22	129.13	15.997

#2	10.200	.00059	.00087	51.760	-.01874	-.00037	-.01930
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

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Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	51.663	.16254	.00587	-.02420	25.304	.00341	9.820
SDev	.073	.05391	.00238	.01679	.093	.00270	.051
%RSD	.14063	33.166	40.638	69.386	.36582	79.283	.5169
#1	51.715	.12442	.00755	-.01232	25.238	.00532	9.784
#2	51.612	.20066	.00418	-.03607	25.369	.00150	9.856
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 19:34:02
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.21736	10.459	10.689	.00267	.00328	-.24000	.13367
SDev	.05487	.039	.047	.00056	.00059	.00092	.04551
%RSD	25.245	.37636	.44398	20.986	17.850	.38439	34.045
#1	.25616	10.431	10.722	.00307	.00369	-.23935	.16586
#2	.17856	10.487	10.655	.00228	.00286	-.24065	.10149
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00070	.10958	.00522	.24920	-1.2992	-.03992	.15999
SDev	.00115	.03230	.00167	.06699	1.4460	.00893	.05961
%RSD	164.07	29.476	31.868	26.883	111.30	22.369	37.261
#1	-.00011	.13242	.00640	.29657	-.27673	-.03360	.20214
#2	.00152	.08674	.00405	.20183	-2.3217	-.04623	.11783
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03327	10.400	-.00091	.24267	10.565	10.011	.00601
SDev	.01347	.014	.00535	.08653	.018	.030	.00179
%RSD	40.497	.13838	590.78	35.658	.16850	.29678	29.836

#2	.02374	10.389	-.00469	.18148	10.553	9.9896	.00474
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

[redacted]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.65281	-.05686	10.572	10.373	.12785	-.01220	10.08
SDev	.06379	.10132	.033	.031	.05331	.00120	.01
%RSD	9.7719	178.19	.30871	.29770	41.696	9.8026	.1117
#1	-.60770	-.12850	10.549	10.395	.16555	-.01135	10.08
#2	-.69792	.01478	10.595	10.351	.09016	-.01304	10.07
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

[redacted]ethod: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 19:38:17
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.06905	H.06062	H.03198	-.00023	-.00025	L-.00376	H.06458
SDev	.00199	.02576	.01862	.00000	.00028	.00105	.00846
%RSD	2.8809	42.504	58.221	.14058	112.78	27.862	13.106
#1	H.07045	H.07884	H.04515	-.00023	-.00005	L-.00302	H.07057
#2	H.06764	H.04240	.01882	-.00023	-.00045	L-.00450	H.05860
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00450	H.01754	-.00244	H.09490	L-1.7313	-.01939	H.04871
SDev	.00180	.00464	.00002	.01084	.9574	.00741	.00575
%RSD	39.988	26.437	.82740	11.424	55.300	38.242	11.796
#1	-.00578	H.02082	-.00246	H.10257	L-1.0543	-.01414	H.05277
#2	-.00323	H.01426	-.00243	H.08723	L-2.4083	-.02463	H.04465
Errors	LC Pass	LC High	LC Pass	LC High	LC Low	LC Pass	LC High
[redacted]	.00650	.00230	.00100	.00230	.00230	.02280	.01720
[redacted]	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00830	H.06830	-.00185	-.01970	.00202	.06018	L-.00479
SDev	.00214	.02349	.00038	.02933	.00659	.01314	.00098
%RSD	25.805	34.385	20.560	148.86	326.82	21.830	20.494

#2	H.00678	H.05169	-.00158	-.04045	-.00264	.05089	L-.00548

Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Low
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.84702	-.05591	H.05045	.03015	H.01425	L-.00296	9.428
SDev	.00177	.14226	.00570	.01361	.00312	.00014	.001
%RSD	.20920	254.44	11.306	45.131	21.923	4.6226	.0090
#1	-.84577	.04468	H.05448	.03977	H.01646	L-.00286	9.428
#2	-.84828	L-.15651	H.04641	.02053	H.01204	L-.00306	9.427

Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-189-06A Operator: CLT
Run Time: 07/11/92 19:42:31
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	355.36	k.18882	k-.11868	k1.1860	k.02037	k-.34434	k260.76
SDev	2.47	.23470	.10720	.0134	.00025	.08020	1.70
%RSD	.69479	124.30	90.325	1.1295	1.2213	23.291	.65048
#1	353.61	k.35478	k-.19448	k1.1765	k.02019	k-.40105	k259.56
#2	357.10	k.02286	k-.04288	k1.1955	k.02055	k-.28763	k261.96

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.93969	k.20465	k.67002	S754.70	k531.46	k.10000	k268.38
SDev	.06028	.00167	.03347	355.76	.84	.02070	1.88
%RSD	6.4150	.81536	4.9957	47.138	.15830	20.695	.70185
#1	k.89707	k.20583	k.64635	S1006.3	k530.87	k.08537	k267.05
#2	k.98232	k.20347	k.69369	S503.15	k532.06	k.11464	k269.71

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.8911	k.09449	k.51923	154.94	k-.27495	k2.1634	k.09179
SDev	.0205	.02783	.01117	1.23	.20865	.0249	.11844
%RSD	.25958	29.451	2.1512	.79514	75.887	1.1506	129.03

#2	k7.9056	k.07481	k.51133	155.81	k-.12741	k2.1810	k.00804
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	111.09	k-.06183	k.15757	k11.174	k1.3843	k1.2230	10.35
SDev	1.07	.00681	.08096	.016	.1438	.0060	.06
%RSD	.96185	11.019	51.379	.14434	10.389	.48701	.5643
#1	110.33	k-.06665	k.21481	k11.185	k1.4860	k1.2188	10.31
#2	111.85	k-.05701	k.10032	k11.162	k1.2826	k1.2272	10.39
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Sat 07-11-92 07:50:52 PM page 50

Method: RASI_ICP Sample Name: 92-06-189-07A 1:10 Operator: CLT
Run Time: 07/11/92 19:46:45
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	26.250	L-.00999	L-.02213	.10956	.00146	L-.03325	33.652
SDev	.450	.00267	.00718	.00176	.00004	.00051	.340
%RSD	1.7145	26.758	32.448	1.6049	2.5691	1.5450	1.0090
#1	26.569	L-.00810	L-.01706	.11080	.00148	L-.03362	33.892
#2	25.932	L-.01187	L-.02721	.10832	.00143	L-.03289	33.412
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08534	.01688	.06840	52.800	55.307	L-.00533	30.531
SDev	.00447	.00080	.00121	.760	1.147	.00577	.371
%RSD	5.2316	4.7220	1.7657	1.4391	2.0746	108.26	1.2164
#1	.08850	.01744	.06925	53.337	56.119	L-.00942	30.794
#2	.08218	.01632	.06754	52.263	54.496	L-.00125	30.269
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.93773	.00954	.04920	16.133	L-.04820	.15234	L-.00297
SDev	.01215	.00006	.00253	.217	.01832	.00622	.00282
%RSD	1.2960	.58492	5.1528	1.3454	38.016	4.0862	94.914

#2	.92914	.00950	.04740	15.980	L-.03524	.14794	L-.00098
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.3905	L-.11826	L.01976	1.2571	.12688	.11618	9.643
SDev	.1364	.08760	.01404	.0270	.00257	.00187	.042
%RSD	3.1077	74.072	71.039	2.1473	2.0227	1.6126	.4361
#1	4.4870	L-.18021	.02969	1.2762	.12869	.11751	9.673
#2	4.2940	L-.05632	L.00984	1.2381	.12506	.11486	9.614
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Method: RASI_ICP Sample Name: 92-06-189-07A Operator: CLT
Run Time: 07/11/92 19:50:57
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	236.13	k.18168	k-.07867	k.99698	k.01762	k-.35063	k298.14
SDev	1.41	.21425	.03911	.00539	.00009	.07983	.79
%RSD	.59559	117.93	49.710	.54089	.50599	22.768	.26499
#1	237.12	k.33317	k-.10633	k1.0008	k.01756	k-.40708	k298.70
#2	235.13	k.03018	k-.05102	k.99316	k.01768	k-.29418	k297.58
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.71634	k.18567	k.58042	S754.87	k507.69	k.11301	k280.52
SDev	.05331	.00055	.02238	355.77	3.69	.00594	1.12
%RSD	7.4419	.29427	3.8555	47.131	.72679	5.2534	.39820
#1	k.67864	k.18528	k.56459	S1006.4	k505.08	k.11721	k281.31
#2	k.75403	k.18605	k.59624	S503.29	k510.30	k.10882	k279.73
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.2366	k.06050	k.42088	151.89	k-.30538	k1.1429	k.09869
SDev	.0736	.02706	.01222	.73	.16842	.0140	.11688
%RSD	.89310	44.723	2.9047	.47892	55.149	1.2267	118.43

#2	k8.1846	k.04137	k.41224	151.38	k-.18630	k1.1330	k.01605
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.302	k-.05871	k.16675	k11.229	k1.2865	k.98787	10.08
SDev	.156	.01027	.12982	.002	.1606	.00068	.07
%RSD	.36011	17.493	77.853	.01716	12.484	.06856	.7357
#1	43.412	k-.05145	k.25854	k11.230	k1.4001	k.98835	10.13
#2	43.192	k-.06598	k.07495	k11.227	k1.1730	k.98739	10.02
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-08A 1:10 Operator: CLT
Run Time: 07/11/92 19:55:10
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.273	L-.02050	L-.03602	.20118	.00191	L-.03057	23.713
SDev	.069	.00130	.01591	.00032	.00005	.00039	.080
%RSD	.16327	6.3343	44.163	.15891	2.5416	1.2743	.33865
#1	42.224	L-.01958	L-.02477	.20096	.00188	L-.03030	23.657
#2	42.322	L-.02142	L-.04727	.20141	.00195	L-.03085	23.770
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09320	.01031	.08134	45.230	L47.811	.04056	23.782
SDev	.00054	.00079	.00042	.177	.519	.00756	.083
%RSD	.58011	7.6404	.52294	.39218	1.0858	18.627	.34968
#1	.09359	.01087	.08164	45.104	L47.444	.03522	23.723
#2	.09282	.00976	.08104	45.355	L48.178	.04590	23.840
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
[illegible]h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.78251	.02116	.05617	16.810	L-.05103	.85075	L-.00198
SDev	.00208	.00153	.00022	.076	.00946	.00206	.00038
%RSD	.26533	7.2237	.39296	.45369	18.545	.31654	19.238

#2	.78398	.02224	.05633	16.864	L-.05772	.65220	L-.00171
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.655	L-.14335	L.00760	1.1370	.09391	.12718	9.664
SDev	.044	.05176	.00849	.0118	.00036	.00095	.006
%RSD	.23747	36.111	111.73	1.0348	.38761	.74732	.0615
#1	18.686	L-.10674	L.01361	1.1453	.09417	.12785	9.668
#2	18.623	L-.17995	L.00160	1.1287	.09365	.12650	9.660
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-08A Operator: CLT
Run Time: 07/11/92 19:59:23
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	397.41	k.21073	k-.14562	k1.9013	k.02221	k-.33806	k210.62
SDev	1.81	.21416	.05642	.0095	.00016	.07851	.22
%RSD	.45426	101.63	38.744	.49792	.70228	23.223	.10262
#1	396.13	k.36216	k-.18551	k1.8946	k.02210	k-.39357	k210.77
#2	398.68	k.05929	k-.10573	k1.9080	k.02232	k-.28254	k210.46
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.82302	k.15729	k.71609	S754.95	k444.11	k.44919	k218.93
SDev	.04558	.00095	.02876	355.90	2.09	.02124	.71
%RSD	5.5376	.60156	4.0169	47.142	.47116	4.7290	.32540
#1	k.79079	k.15795	k.69575	S1006.6	k445.59	k.43417	k218.43
#2	k.85525	k.15662	k.73643	S503.29	k442.63	k.46421	k219.44
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.0075	k.23077	k.51637	161.87	k-.27672	k7.6479	k.11899
SDev	.0297	.02480	.01521	.88	.16296	.0164	.11837
%RSD	.42455	10.747	2.9337	.54092309	58.889	.21488	99.477

#2	k6.9864	k.21324	k.50762	162.48	k-.16149	k7.6596	k.03529
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
[redacted]	Na5889	T13775	Sn1899	T13248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	183.72	k-.10114	k.17053	k10.375	k1.0558	k1.1202	10.82
SDev	.80	.05276	.10626	.005	.1517	.0014	.06
%RSD	.43403	52.170	62.311	.04560	14.367	.12490	.5729
#1	183.16	k-.06383	k.24566	k10.371	k1.1631	k1.1192	10.78
#2	184.28	k-.13844	k.09539	k10.378	k.94854	k1.1212	10.87
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

[redacted]ethod: RASI_ICP Sample Name: 92-06-189-09A 1:10 Operator: CLT
Run Time: 07/11/92 20:03:35
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	46.882	L-.01417	L-.03100	.21217	.00232	L-.03533	29.623
SDev	.425	.00121	.00432	.00209	.00008	.00006	.172
%RSD	.90598	8.5642	13.918	.98442	3.3481	.17686	.58228
#1	47.183	L-.01502	L-.02795	.21365	.00226	L-.03529	29.745
#2	46.582	L-.01331	L-.03406	.21069	.00237	L-.03538	29.501
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05692	.01523	.08536	52.907	56.757	L.00405	27.571
SDev	.00233	.00002	.00170	.341	2.175	.00044	.156
%RSD	4.0964	.13064	1.9903	.64439	3.8323	10.901	.56424
#1	.05527	.01524	.08416	53.148	55.219	L.00374	27.681
#2	.05857	.01521	.08656	52.666	58.295	L.00436	27.461
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
[redacted]h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	S12881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.93092	.00384	.03641	18.884	L-.05722	2.4888	L-.00199
SDev	.00612	.00041	.00130	.155	.00652	.0161	.00119
%RSD	.65714	10.652	3.5601	.82325	11.390	.64495	59.436

#2	.92659	.00355	.03732	18.774	L-.05261	2.5002	L-.00116
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00780

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.835	L-.14166	L.00967	1.2877	.10151	.12776	9.492
SDev	.229	.02598	.00948	.0080	.00006	.00027	.004
%RSD	1.1525	18.342	98.028	.61841	.05549	.21302	.0447
#1	19.996	L-.16004	L.01637	1.2821	.10155	.12757	9.495
#2	19.673	L-.12329	L.00297	1.2933	.10147	.12795	9.489
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-09A Operator: CLT
Run Time: 07/11/92 20:07:49
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	427.38	k.02224	k-.11650	k1.9369	k.02518	k-.29387	k260.38
SDev	.25	.02062	.02541	.0108	.00003	.00022	.23
%RSD	.05906	92.699	21.814	.56005	.11281	.07626	.08936
#1	427.56	k.00766	k-.09853	k1.9446	k.02520	k-.29371	k260.54
#2	427.20	k.03682	k-.13447	k1.9292	k.02516	k-.29402	k260.21
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.47591	k.17985	k.75180	S503.14	k509.66	k.19559	k250.44
SDev	.00476	.00273	.00172	.00	6.50	.00527	.32
%RSD	1.0001	1.5175	.22918	.00049	1.2746	2.6963	.12808
#1	k.47927	k.17792	k.75302	S503.14	k505.07	k.19932	k250.22
#2	k.47254	k.18178	k.75059	S503.14	k514.25	k.19186	k250.67
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.1357	k.02221	k.33002	177.78	k-.13330	k24.039	k.01553
SDev	.0163	.00194	.00033	.21	.00083	.181	.00065
%RSD	.20025	8.7423	.09876	.11797	.62609	.75217	4.1841

#2	k8.1242	k.02084	k.32979	177.63	k-.13389	k24.167	k.01599

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Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	190.19	k.05508	k.08425	k11.302	k.98129	k1.0925	9.774
SDev	.89	.05283	.01506	.026	.00088	.0003	.066
%RSD	.46679	95.923	17.870	.22832	.08990	.02353	.6736
#1	190.81	k.01772	k.07360	k11.284	k.98067	k1.0926	9.821
#2	189.56	k.09244	k.09489	k11.320	k.98192	k1.0923	9.727

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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ethod: RASI_ICP Sample Name: 92-06-189-10A 1:10 Operator: CLT
Run Time: 07/11/92 20:12:03
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.463	L-.02288	L-.04098	.25673	.00218	L-.03666	34.647
SDev	.642	.00108	.00383	.00402	.00006	.00030	.537
%RSD	1.5127	4.7408	9.3434	1.5648	2.9376	.81921	1.5489
#1	42.917	L-.02212	L-.04369	.25957	.00213	L-.03645	35.026
#2	42.008	L-.02365	L-.03828	.25389	.00223	L-.03688	34.267

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04680	.01305	.07984	53.619	56.735	L.01636	27.673
SDev	.00209	.00079	.00205	1.055	.331	.00136	.451
%RSD	4.4737	6.0665	2.5746	1.9668	.58338	8.3211	1.6295
#1	.04532	.01361	.08129	54.364	56.969	L.01732	27.992
#2	.04828	.01249	.07838	52.873	56.501	L.01540	27.354

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1267	.00398	.03083	18.492	L-.06931	2.1787	L-.00412
SDev	.0209	.00044	.00164	.337	.00359	.0747	.00264
%RSD	1.8571	11.025	5.3222	1.8242	5.1732	3.4285	64.006

#2	1.1119	.00367	.03199	18.253	L-.06678	2.1259	L-.00599

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.040	L-.16178	L.01059	1.3930	.11434	.13038	9.443
SDev	.461	.05429	.01008	.0034	.00336	.00269	.062
%RSD	3.2815	33.558	95.169	.24092	2.9420	2.0650	.6545
#1	14.366	L-.20016	L.01771	1.3954	.11671	.13228	9.487
#2	13.714	L-.12339	L.00346	1.3906	.11196	.12848	9.399

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-10A Operator: CLT
Run Time: 07/11/92 20:16:16
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	389.21	k.18751	k-.11272	k2.3753	k.02377	k-.36943	k307.84
SDev	.99	.23303	.02321	.0056	.00002	.08096	.34
%RSD	.25356	124.28	20.595	.23548	.07019	21.914	.11052
#1	388.51	k.35229	k-.12914	k2.3714	k.02378	k-.42668	k307.60
#2	389.90	k.02273	k-.09631	k2.3793	k.02376	k-.31219	k308.08

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.37719	k.17315	k.70236	S754.71	k526.82	k.21642	k253.44
SDev	.05663	.00094	.02837	355.76	3.45	.01140	1.41
%RSD	15.014	.54265	4.0390	47.140	.65478	5.2679	.55491
#1	k.33714	k.17382	k.68230	S1006.3	k524.39	k.20836	k252.44
#2	k.41723	k.17249	k.72242	S503.14	k529.26	k.22448	k254.43

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k9.9691	k.05894	k.26151	174.03	k-.28312	k20.295	k.09440
SDev	.0182	.03202	.01343	.32	.18744	.121	.11897
%RSD	.18235	54.328	5.1361	.18456	66.204	.59831	126.02

#2	k9.9563	k.03630	k.25202	174.26	k-.15058	k20.380	k.01028

000173

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	133.96	k-.13006	k.15892	k12.541	k1.2141	k1.1050	10.17
SDev	.35	.05611	.10090	.023	.1513	.0033	.01
%RSD	.25927	43.146	63.489	.18264	12.465	.29963	.1315
#1	133.71	k-.09038	k.23027	k12.558	k1.3211	k1.1027	10.16
#2	134.20	k-.16973	k.08758	k12.525	k1.1071	k1.1073	10.18

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-10A-S 1:10 Operator: CLT
Run Time: 07/11/92 20:20:30
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934 (124%)	Be3130 (97%)	Cd2265 (68%)	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	51.033	.19472	.36938	.50697	.19526	.13590	39.535
SDev	.356	.00022	.00357	.00201	.00030	.00221	.265
%RSD	.69857	.11258	.96716	.39601	.15239	1.6266	.67128
#1	51.285	.19457	.36686	.50839	.19505	.13433	39.723
#2	50.781	.19488	.37191	.50555	.19547	.13746	39.347

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677 (104%)	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25475	.20648	.29090	61.807	66.861	.40640	31.804
SDev	.00062	.00193	.00166	.413	1.759	.00395	.268
%RSD	.24344	.93258	.56934	.66752	2.6310	.97271	.84332
#1	.25519	.20512	.29207	62.099	68.105	.40360	31.994
#2	.25431	.20784	.28973	61.515	65.617	.40919	31.614

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.4750	.38433	.22370	26.327	.34254	1.4899	.02325
SDev	.0097	.00002	.00033	.207	.02062	.0325	.00047
%RSD	.65934	.00598	.14630	.78549	6.0200	2.1826	2.0377

#2	1.4681	.38432	.22346	26.180	.35712	1.4669	.02291

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Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.622	.29164	.38474	2.2235	.33628	.34865	9.621
SDev	.193	.06234	.00132	.0212	.00041	.00066	.006
%RSD	1.1620	21.375	.34231	.95391	.12110	.18971	.0618
#1	16.759	.33572	.38567	2.2385	.33657	.34911	9.617
#2	16.486	.24756	.38381	2.2085	.33599	.34818	9.626
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 20:24:44
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q3.0971	-.00475	10.576	1.0670	1.0310	2.5902	Q3.0466
SDev	.1078	.00028	.103	.0051	.0041	.0098	.0981
%RSD	3.4799	5.8677	.97040	.47853	.39546	.37933	3.2191
#1	Q3.1733	-.00456	10.503	1.0634	1.0281	2.5832	Q3.1160
#2	Q3.0209	-.00495	10.648	1.0706	1.0339	2.5971	Q2.9773
Errors	QC Fail	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000.
Range	10.000		10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6640	2.5541	2.6963	Q3.2131	Q1.6270	5.1898	Q2.9682
SDev	.0165	.0058	.0135	.1648	2.3665	.0140	.0824
%RSD	.62061	.22690	.50063	5.1304	145.45	.26900	2.7768
#1	2.6523	2.5500	2.6867	Q3.3296	Q-.04636	5.1799	Q3.0265
#2	2.6757	2.5582	2.7058	Q3.0965	Q3.3004	5.1996	Q2.9100
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Fail
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0363	.00316	2.5647	5.4290	10.732	.02274	2.5175
SDev	.0003	.00001	.0061	.0792	.068	.01360	.0079
%RSD	.03104	.40065	.23645	1.4588	.63015	59.798	.31404

#2	1.0366	.00315	2.5690	5.3730	10.780	.01312	2.5231
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8203	5.3994	.00085	.01680	2.5676	2.6183	9.500
SDev	.1488	.0225	.00686	.00777	.0084	.0077	.041
%RSD	3.0880	.41601	807.76	46.266	.32592	.29276	.4315
#1	4.9255	5.4153	-.00400	.01130	2.5617	2.6128	9.471
#2	4.7150	5.3835	.00570	.02230	2.5735	2.6237	9.529
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 20:28:58
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.712	-.03159	.10731	.00568	-.00298	.00597	25.168
SDev	.229	.00011	.00790	.00083	.00085	.00278	.196
%RSD	.89101	.33344	7.3610	14.595	28.631	46.580	.77828
#1	25.550	-.03166	.10172	.00626	-.00238	.00794	25.030
#2	25.874	-.03151	.11289	.00509	-.00359	.00400	25.307
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00756	25.064	.02345	25.299	Q28.055	.02913	25.926
SDev	.00643	.211	.00003	.225	.084	.01020	.205
%RSD	85.056	.84079	.14615	.88974	.29775	35.021	.79052
#1	-.01210	24.915	.02343	25.140	Q28.114	.03634	25.781
#2	-.00301	25.213	.02348	25.458	Q27.996	.02191	26.071
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Fail	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.192	-.00023	.00154	51.656	-.00324	.00750	-.01711
SDev	.082	.00343	.00164	.175	.03440	.00827	.00373
%RSD	.80675	1508.0	106.54	.33787	1061.7	110.33	21.807

#2	10.251	.00220	.00038	51.779	-.02756	.01334	-.01975
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	52.057	.19306	.01050	-.02896	25.375	.00398	9.806
SDev	.243	.09294	.00971	.00759	.145	.00271	.051
%RSD	.46635	48.144	92.530	26.220	.57318	68.167	.5241
#1	51.885	.25878	.01736	-.03433	25.272	.00590	9.770
#2	52.228	.12733	.00363	-.02359	25.477	.00206	9.842
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

000176

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 20:33:13
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.22581	10.538	10.781	.00187	.00300	-.24045	.13966
SDev	.05515	.034	.007	.00024	.00033	.00267	.04334
%RSD	24.424	.32502	.06269	12.764	10.983	1.1099	31.030
#1	.26481	10.514	10.776	.00204	.00323	-.23856	.17030
#2	.18681	10.563	10.786	.00170	.00276	-.24234	.10902
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00401	.11458	-.00044	.22361	-1.7636	-.04656	.12550
SDev	.00137	.02896	.00216	.04886	.3430	.00216	.04096
%RSD	34.069	25.272	489.98	21.850	19.448	4.6455	32.635
#1	-.00304	.13506	.00109	.25816	-2.0061	-.04503	.15446
#2	-.00497	.09411	-.00197	.18907	-1.5211	-.04809	.09654
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03497	10.467	-.00389	.15867	10.613	10.035	.00369
SDev	.01234	.001	.00033	.03520	.025	.053	.00340
%RSD	35.287	.00734	8.4030	22.184	.23321	.52471	92.073

	.02625	10.468	-.00365	.13378	10.596	9.9973	.00129
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.68789	-.17357	10.754	10.318	.13960	-.01351	10.09
SDev	.06379	.03960	.029	.071	.02698	.00121	.02
%RSD	9.2735	22.815	.26577	.68384	19.330	8.9738	.1957
#1	-.64278	-.20157	10.774	10.268	.15868	-.01265	10.11
#2	-.73300	-.14557	10.734	10.368	.12052	-.01437	10.08
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 20:37:28
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.06270	H.05064	H.02728	-.00063	-.00048	L-.00423	H.05727
SDev	.01975	.01910	.00929	.00008	.00005	.00014	.01067
%RSD	31.502	37.721	34.066	12.577	11.078	3.1962	18.634
#1	H.07667	H.06414	H.03385	-.00058	L-.00052	L-.00413	H.06481
#2	H.04874	H.03713	H.02071	-.00069	-.00044	L-.00432	H.04972
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00910	H.01727	L-.00572	H.07243	L-1.7014	-.01750	H.03096
SDev	.00021	.00735	.00124	.02201	1.0869	.00737	.02800
%RSD	2.2737	42.562	21.744	30.383	63.885	42.099	90.440
#1	L-.00924	H.02246	-.00484	H.08799	L-2.4700	-.02271	H.05075
#2	L-.00895	H.01207	L-.00660	H.05687	L-.93283	-.01229	.01116
Errors	LC Low	LC High	LC Low	LC High	LC Low	LC Pass	LC High
[redacted]	.00650	.00230	.00100	.00230	.00230	.02280	.01720
[redacted]	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00823	H.07125	-.00343	-.01970	.02386	.06158	-.00399
SDev	.00325	.02689	.00053	.01467	.02091	.02217	.00017
%RSD	39.517	37.747	15.476	74.432	87.650	35.995	4.3312

#2	H.00593	H.05223	-.00306	-.03007	.00907	.04590	-.00411

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Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.91970	-.06890	H.05043	.03154	H.01522	L-.00400	9.446
SDev	.01595	.07864	.01386	.01163	.00468	.00000	.066
%RSD	1.7340	114.13	27.482	36.863	30.749	.07730	.7015
#1	-.90842	-.01330	H.06023	.03976	H.01853	L-.00400	9.493
#2	-.93097	L-.12451	H.04063	.02332	H.01191	L-.00400	9.399

Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-189-10A-SD1:10 Operator: CLT
Run Time: 07/11/92 20:41:42
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	45.526	.22349	.38373	.47086	.19364	.13800	35.473
SDev	.097	.00760	.01113	.00161	.00080	.00019	.081
%RSD	.21369	3.4002	2.8997	.34270	.41204	.13458	.22818
#1	45.594	.22886	.39160	.47200	.19420	.13814	35.530
#2	45.457	.21811	.37586	.46972	.19307	.13787	35.416

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24401	.20814	.27791	55.150	57.911	.39034	28.509
SDev	.00258	.00116	.00209	.221	.506	.01192	.108
%RSD	1.0568	.55944	.75321	.40094	.87340	3.0530	.37976
#1	.24583	.20897	.27939	55.306	58.268	.38191	28.586
#2	.24219	.20732	.27643	54.993	57.553	.39876	28.433

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.3465	.40316	.21539	24.043	.38055	1.3559	.02972
SDev	.0046	.00075	.00095	.048	.01394	.0125	.00056
%RSD	.34506	.18484	.43921	.20130	3.6634	.92155	1.9021

#2	1.3432	.40368	.21472	24.009	.37069	1.3471	.02932
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.433	.34472	.39576	2.0296	.32768	.33075	9.622
SDev	.000	.07760	.00455	.0077	.00201	.00026	.079
%RSD	.00000	22.510	1.1493	.37842	.61300	.07806	.8189
#1	14.433	.39959	.39898	2.0350	.32910	.33093	9.678
#2	14.433	.28985	.39255	2.0242	.32626	.33056	9.566
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-10A-S Operator: CLT
Run Time: 07/11/92 20:45:56
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	456.20	k1.8025	k3.4395	k4.5736	k1.6434	k1.1067	k334.28
SDev	.34	.0002	.0803	.0148	.0043	.0039	.07
%RSD	.07374	.00938	2.3354	.32410	.26351	.35198	.02159
#1	455.96	k1.8026	k3.4963	k4.5841	k1.6465	k1.1094	k334.23
#2	456.44	k1.8024	k3.3827	k4.5631	k1.6403	k1.1039	k334.33
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k2.2022	k1.7999	k2.5969	S502.97	k593.38	k3.5437	k282.76
SDev	.0117	.0038	.0056	.01	8.15	.0108	.32
%RSD	.53352	.21293	.21614	.00121	1.3743	.30384	.11449
#1	k2.2105	k1.8026	k2.6009	S502.97	k587.61	k3.5513	k282.99
#2	k2.1939	k1.7972	k2.5929	S502.98	k599.14	k3.5361	k282.53
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k12.588	k3.3643	k1.8451	243.61	k3.3761	k15.072	k.19184
SDev	.023	.0072	.0005	.26	.0113	.014	.00250
%RSD	.18319	.21403	.02459	.10717	.33396	.09484	1.3039

#2	k12.572	k3.3592	k1.8448	243.42	k3.3840	k15.082	k.19361

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	155.60	k3.7280	k3.2729	k19.284	k2.9746	k2.9034	9.967
SDev	.35	.0525	.0096	.172	.0142	.0063	.047
%RSD	.22435	1.4085	.29224	.89383	.47677	.21525	.4752
#1	155.85	k3.7651	k3.2661	k19.162	k2.9846	k2.8990	10.00
#2	155.35	k3.6909	k3.2797	k19.406	k2.9646	k2.9078	9.933

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-10A-SD Operator: CLT
Run Time: 07/11/92 20:50:09
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	423.75	k2.1010	k3.4018	k4.4535	k1.6606	k1.0840	k314.99
SDev	.62	.2226	.0419	.0079	.0061	.0814	.10
%RSD	.14568	10.595	1.2320	.17841	.36709	7.5070	.03107
#1	424.19	k2.2584	k3.3722	k4.4591	k1.6650	k1.0265	k315.06
#2	423.31	k1.9436	k3.4315	k4.4479	k1.6563	k1.1416	k314.92

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k2.1296	k1.7983	k2.5345	S754.62	k547.71	k3.5381	k264.29
SDev	.0537	.0004	.0199	355.70	2.95	.0089	.19
%RSD	2.5200	.01972	.78662	47.137	.53936	.25253	.07021
#1	k2.0917	k1.7980	k2.5204	S1006.1	k549.79	k3.5444	k264.16
#2	k2.1676	k1.7985	k2.5486	S503.10	k545.62	k3.5318	k264.42

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k11.938	k3.4478	k1.8482	231.95	k3.2490	k14.676	k.36581
SDev	.043	.0244	.0140	.04	.1262	.028	.11963
%RSD	.36208	.70755	.75665	.01770	3.8847	.19081	32.703

#2	k11.908	k3.4306	k1.8383	231.98	k3.3383	k14.657	k.28122

000181

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	145.55	k3.7031	k3.4254	k18.313	k3.0232	k2.8790	10.34
SDev	.19	.1236	.0352	.093	.1542	.0014	.03
%RSD	.13270	3.3373	1.0276	.50512	5.1003	.04739	.2589
#1	145.42	k3.7905	k3.4503	k18.378	k3.1322	k2.8799	10.36
#2	145.69	k3.6157	k3.4005	k18.247	k2.9142	k2.8780	10.32

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-11A 1:10 Operator: CLT
Run Time: 07/11/92 20:54:23
Comment: IEA
Type: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	52.239	L-.00399	L-.00350	.17030	.00867	L-.02315	18.962
SDev	.813	.00228	.01434	.00693	.00253	.00209	.470
%RSD	1.5565	57.188	409.60	4.0683	29.165	9.0313	2.4776
#1	52.814	L-.00238	L.00664	.17520	.01046	L-.02167	19.294
#2	51.664	L-.00560	L-.01364	.16540	.00689	L-.02463	18.629

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04470	.01938	.06851	52.330	56.673	.02708	29.622
SDev	.00336	.00348	.00374	.831	.124	.00983	.443
%RSD	7.5241	17.977	5.4571	1.5881	.21964	36.306	1.4960
#1	.04708	.02184	.07115	52.918	56.761	.03403	29.936
#2	.04233	.01692	.06586	51.743	56.585	L.02013	29.309

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.95243	.02616	.04485	23.736	L-.02628	3.0055	L-.00287
SDev	.02048	.01029	.00465	.400	.00562	.0221	.00214
%RSD	2.1499	39.311	10.369	1.6868	21.376	.73469	74.763

#2	.93795	.01889	.04156	23.453	L-.03026	2.9899	L-.00135

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000182

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.551	L-.09232	.03500	1.1560	.09884	.09539	9.612
SDev	.289	.04722	.00794	.0248	.00359	.00632	.047
%RSD	1.1765	51.154	22.693	2.1465	3.6295	6.6285	.4905
#1	24.755	L-.05892	.04062	1.1736	.10138	.09986	9.645
#2	24.347	L-.12571	.02938	1.1385	.09630	.09092	9.579

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-11A Operator: CLT
Run Time: 07/11/92 20:58:37
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	A13082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	467.43	k.18924	k-.17587	k1.4263	k.02397	k-.31847	k156.83
SDev	.17	.22666	.10949	.0016	.00040	.08015	.29
%RSD	.03637	119.77	62.258	.11490	1.6681	25.167	.18704
#1	467.55	k.34951	k-.25329	k1.4275	k.02368	k-.37514	k157.04
#2	467.31	k.02897	k-.09845	k1.4251	k.02425	k-.26179	k156.63

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.30545	k.15975	k.50970	S754.72	k503.40	k.16065	k263.07
SDev	.05083	.00097	.02368	355.81	5.62	.01134	.04
%RSD	16.642	.60516	4.6462	47.144	1.1168	7.0597	.01485
#1	k.26950	k.16043	k.49295	S1006.3	k507.37	k.16867	k263.09
#2	k.34139	k.15907	k.52644	S503.13	k499.42	k.15263	k263.04

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.0637	k.03829	k.32148	217.43	k-.27034	k28.548	k.10022
SDev	.0517	.02861	.01181	.20	.15107	.105	.11916
%RSD	.64113	74.702	3.6723	.09039	55.880	.36747	118.90

#2	k8.0271	k.01807	k.31314	217.57	k-.16352	k28.622	k.01596
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
[illegible]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	231.55	k.12436	k.22141	k10.073	k.98487	k.68690	9.949
SDev	.13	.03160	.11638	.012	.15795	.00044	.028
%RSD	.05586	25.408	52.560	.12176	16.037	.06465	.2796
#1	231.64	k.10202	k.30370	k10.082	k1.0966	k.68722	9.969
#2	231.46	k.14670	k.13912	k10.064	k.87318	k.68659	9.929
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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[illegible]ethod: RASI_ICP Sample Name: 92-06-189-12A 1:10 Operator: CLT
Run Time: 07/11/92 21:02:50
Comment: IEA
[illegible] : CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.327	L-.01749	L-.02540	.19638	.00271	L-.03511	21.246
SDev	.503	.01042	.00419	.00257	.00016	.00064	.147
%RSD	1.1878	59.567	16.510	1.3084	5.9483	1.8294	.69091
#1	42.683	L-.02485	L-.02836	.19820	.00283	L-.03557	21.350
#2	41.972	L-.01012	L-.02243	.19456	.00260	L-.03466	21.142
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06675	.01550	.07326	54.416	58.772	.02082	27.589
SDev	.00110	.00040	.00003	.445	.244	.00970	.306
%RSD	1.6479	2.5825	.04765	.81757	.41477	46.606	1.1074
#1	.06597	.01521	.07324	54.731	58.600	L.01396	27.805
#2	.06753	.01578	.07329	54.102	58.945	.02768	27.373
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
[illegible]gh	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.91034	.00559	.05586	17.764	L-.07400	2.3889	L-.00321
SDev	.00879	.00116	.00161	.197	.00548	.0325	.00293
%RSD	.96532	20.788	2.8779	1.1063	7.3999	1.3587	91.331

#2	.90413	.00477	.05699	17.625	L-.07013	2.3660	L-.00114

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.801	L-.12753	L.00859	1.3365	.10105	.10027	9.567
SDev	.369	.12531	.00723	.0212	.00143	.00108	.031
%RSD	2.0705	98.261	84.196	1.5894	1.4192	1.0743	.3263
#1	18.062	L-.21614	L.00347	1.3515	.10207	.10103	9.589
#2	17.541	L-.03892	L.01370	1.3215	.10004	.09951	9.545

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-12A Operator: CLT
Run Time: 07/11/92 21:07:04
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	382.17	k.18297	k-.08834	k1.8028	k.02278	k-.35523	k184.39
SDev	.63	.23506	.04142	.0057	.00015	.07800	.16
%RSD	.16393	128.47	46.885	.31458	.65260	21.957	.08662
#1	382.61	k.34918	k-.11763	k1.8068	k.02267	k-.41039	k184.50
#2	381.73	k.01675	k-.05905	k1.7988	k.02288	k-.30008	k184.28

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.55719	k.19107	k.64410	S754.70	k529.03	k.24175	k249.95
SDev	.05750	.00022	.02490	355.75	4.72	.00184	.29
%RSD	10.319	.11521	3.8651	47.139	.89212	.75908	.11439
#1	k.51654	k.19123	k.62649	S1006.3	k525.69	k.24045	k250.15
#2	k.59785	k.19092	k.66170	S503.14	k532.37	k.24305	k249.74

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.9592	k.05525	k.48744	165.22	k-.28702	k22.077	k.09287
SDev	.0398	.02592	.01144	.44	.19430	.035	.11797
%RSD	.49990	46.905	2.3478	.26452	67.696	.15791	127.02

#2	k7.9311	k.03693	k.47934	164.91	k-.14963	k22.052	k.00946
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	169.62	k.02729	k.13905	k11.846	k1.0800	k.84866	9.970
SDev	.58	.01846	.12546	.087	.1542	.00105	.071
%RSD	.34266	67.635	90.232	.73408	14.280	.12403	.7115
#1	170.03	k.04035	k.22776	k11.784	k1.1891	k.84791	10.02
#2	169.21	k.01424	k.05033	k11.907	k.97097	k.84940	9.920
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-13A 1:10 Operator: CLT
Run Time: 07/11/92 21:11:18
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	40.065	L-.00502	L-.02301	.17285	.00249	L-.03152	20.613
SDev	.423	.01384	.00650	.00185	.00006	.00001	.148
%RSD	1.0566	275.83	28.238	1.0676	2.6273	.02743	.71794
#1	40.364	L-.01480	L-.01841	.17415	.00244	L-.03152	20.718
#2	39.766	L.00477	L-.02760	.17154	.00254	L-.03151	20.508
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05450	.01661	.07144	51.023	56.644	.04838	25.476
SDev	.00444	.00116	.00213	.403	.903	.00314	.172
%RSD	8.1487	6.9703	2.9789	.78901	1.5944	6.5003	.67531
#1	.05136	.01579	.06993	51.307	57.282	.04616	25.598
#2	.05764	.01743	.07294	50.738	56.005	.05061	25.354
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.86130	.00957	.04680	16.316	L-.06362	2.5710	L-.00312
SDev	.00570	.00337	.00287	.153	.00338	.0168	.00409
%RSD	.66136	35.259	6.1351	.93483	5.3086	.65253	130.96

#2	.85727	.01196	.04883	16.208	L-.06601	2.5828	L-.00023
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.478	L-.12696	L.01697	1.2122	.09481	.08953	9.498
SDev	.326	.06485	.00152	.0001	.00051	.00150	.014
%RSD	1.8655	51.081	8.9660	.01154	.54115	1.6724	.1476
#1	17.709	L-.17281	L.01589	1.2121	.09445	.09059	9.508
#2	17.247	L-.08110	L.01804	1.2123	.09517	.08847	9.488
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-13A Operator: CLT
Run Time: 07/11/92 21:15:31
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	364.68	k.19926	k-.07510	k1.5866	k.02548	k-.32626	k179.63
SDev	.52	.23743	.03408	.0017	.00007	.08160	.17
%RSD	.14374	119.15	45.378	.10463	.29071	25.010	.09355
#1	364.31	k.36714	k-.09920	k1.5877	k.02543	k-.38395	k179.75
#2	365.05	k.03137	k-.05100	k1.5854	k.02554	k-.26856	k179.51
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.42839	k.19259	k.61326	S754.80	k505.67	k.42271	k231.60
SDev	.04875	.00022	.02413	355.81	4.52	.00162	.01
%RSD	11.380	.11540	3.9339	47.139	.89328	.38226	.00236
#1	k.39392	k.19243	k.59620	S1006.4	k502.47	k.42157	k231.60
#2	k.46286	k.19274	k.63031	S503.21	k508.86	k.42385	k231.60
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.6000	k.11415	k.39485	152.79	k-.25310	k24.307	k.10188
SDev	.0536	.02669	.00991	.13	.18030	.017	.12030
%RSD	.70503	23.382	2.5102	.08447	71.237	.06880	118.09

#2	k7.5621	k.09528	k.38784	152.89	k-.12561	k24.319	k.01681
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	168.98	k.08964	k.18066	k10.760	k1.0411	k.76619	10.000
SDev	.24	.07179	.10087	.053	.1556	.00101	.0314
%RSD	.14471	80.084	55.834	.49451	14.945	.13203	.3143
#1	168.80	k.14040	k.25198	k10.797	k1.1511	k.76691	9.977
#2	169.15	k.03888	k.10933	k10.722	k.93104	k.76548	10.02
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Method: RASI_ICP Sample Name: 92-06-189-14A 1:10 Operator: CLT
Run Time: 07/11/92 21:19:44
Comment: IEA
Type: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.408	L-.02311	L-.02777	.21709	.00170	L-.03236	25.869
SDev	.244	.00034	.00237	.00120	.00021	.00010	.111
%RSD	.57612	1.4557	8.5374	.55361	12.525	.31294	.43094
#1	42.580	L-.02287	L-.02944	.21794	.00185	L-.03243	25.947
#2	42.235	L-.02335	L-.02609	.21624	.00155	L-.03229	25.790
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03990	.01470	.07057	50.657	54.082	L.01248	26.313
SDev	.00082	.00000	.00251	.355	.696	.00456	.243
%RSD	2.0579	.02934	3.5519	.70114	1.2878	36.576	.92397
#1	.04048	.01469	.07234	50.908	53.589	L.01571	26.485
#2	.03932	.01470	.06880	50.405	54.574	L.00925	26.141
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.84614	.00768	.03806	17.105	L-.05641	2.5129	L-.00287
SDev	.00860	.00230	.00046	.192	.00488	.0159	.00142
%RSD	1.0169	29.873	1.1990	1.1232	8.6439	.63315	49.503

#2	.84005	.00606	.03838	16.969	L-.05296	2.5016	L-.00388
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.278	L-.17039	L.01201	1.1851	.09880	.09322	9.587
SDev	.156	.00551	.00195	.0115	.00092	.00134	.015
%RSD	.90254	3.2357	16.242	.96905	.93221	1.4399	.1529
#1	17.388	L-.17429	L.01063	1.1932	.09945	.09417	9.577
#2	17.167	L-.16649	L.01339	1.1770	.09815	.09227	9.598
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 21:23:58
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q3.0761	-.00627	10.536	1.0604	1.0208	2.5570	Q2.8734
SDev	.0936	.00120	.011	.0037	.0032	.0033	.0718
%RSD	3.0444	19.064	.10805	.35166	.31501	.12976	2.4983
#1	Q3.1423	-.00712	10.544	1.0578	1.0185	2.5546	Q2.9241
#2	Q3.0099	-.00543	10.528	1.0631	1.0230	2.5593	Q2.8226
Errors	QC Fail	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6191	2.5246	2.6751	Q3.1836	Q1.3788	5.1382	Q2.9174
SDev	.0017	.0043	.0063	.1549	.5909	.0126	.0537
%RSD	.06670	.16880	.23684	4.8643	42.858	.24525	1.8420
#1	2.6204	2.5216	2.6706	Q3.2931	Q1.7966	5.1293	Q2.9554
#2	2.6179	2.5277	2.6796	Q3.0741	Q.96093	5.1471	Q2.8794
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Fail
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0182	-.00246	2.5322	5.3180	10.653	.03335	2.5000
SDev	.0014	.00264	.0046	.0513	.060	.00902	.0060
%RSD	.14102	107.19	.17980	.96524	.56744	27.041	.23839

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#2	1.0192	-.00060	2.5354	5.2817	10.696	.02698	2.5043
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000

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m	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
ts	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.5271	5.2728	-.00373	.01464	2.5360	2.5946	9.451
SDev	.1205	.0174	.01013	.00006	.0040	.0046	.042
%RSD	2.6617	.33037	271.49	.37976	.15893	.17636	.4449
#1	4.6123	5.2605	-.01089	.01468	2.5331	2.5913	9.421
#2	Q4.4419	5.2851	.00343	.01460	2.5388	2.5978	9.481
Errors	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 21:28:12
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.290	-.02347	.09501	.00532	-.00296	.00676	24.741
SDev	.007	.00449	.03227	.00170	.00165	.00317	.004
%RSD	.02795	19.146	33.966	31.998	55.934	46.808	.01601
#1	25.285	-.02665	.11782	.00652	-.00179	.00900	24.744
#2	25.295	-.02030	.07219	.00411	-.00413	.00452	24.738
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00510	24.701	.02394	24.871	26.906	.03264	25.473
SDev	.00479	.011	.00253	.048	.666	.00408	.042
%RSD	93.889	.04361	10.570	.19121	2.4762	12.510	.16322
#1	-.00171	24.694	.02573	24.905	26.435	.02975	25.502
#2	-.00849	24.709	.02215	24.838	27.377	.03553	25.443
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
ge		10.000		10.000	10.000		10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	10.020	-.00161	.00329	51.225	-.00096	.01433	-.01625
SDev	.003	.00076	.00546	.194	.01490	.00634	.00263
%RSD	.02994	47.268	165.62	.37792	1558.9	44.278	16.165

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#2	10.022	-.00214	-.00056	51.362	-.01149	.00984	-.01811
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000190

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.969	.17806	.00173	-.02717	24.972	.00264	9.715
SDev	.112	.02608	.00817	.00970	.027	.00350	.018
%RSD	.21902	14.647	471.08	35.695	.10672	132.43	.1814
#1	50.890	.19650	.00751	-.03403	24.953	.00512	9.728
#2	51.048	.15962	-.00404	-.02031	24.991	.00017	9.703
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 21:48:38
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03164	10.372	10.638	.00045	.00225	-.24006	-.03142
SDev	.01211	.069	.022	.00032	.00008	.00381	.00505
%RSD	38.271	.66873	.20687	71.070	3.6330	1.5879	16.060
#1	.04021	10.323	10.623	.00068	.00230	-.23737	-.02785
#2	.02308	10.421	10.654	.00023	.00219	-.24276	-.03498
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00518	.01237	.00030	.02214	-.31613	-.05323	-.01167
SDev	.00198	.00004	.00137	.00772	1.91876	.00947	.00502
%RSD	38.195	.30630	462.85	34.885	606.96	17.791	42.997
#1	-.00658	.01234	.00126	.02760	-1.6729	-.04653	-.00812
#2	-.00378	.01240	-.00067	.01668	1.0406	-.05992	-.01522
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00697	10.321	-.00547	-.06533	10.480	9.7921	.00304
SDev	.00053	.008	.00158	.04400	.019	.0104	.00092
%RSD	7.5535	.07705	28.947	67.344	.17857	.10663	30.350

#2	-.00734	10.327	-.00659	-.09645	10.493	9.7995	.00238
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

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Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.0375	-.19178	10.731	10.195	.05655	-.01715	9.916
SDev	.0549	.14750	.020	.160	.01042	.00013	.013
%RSD	5.2948	76.908	.18843	1.5700	18.419	.73139	.1349
#1	-.99863	-.08749	10.717	10.082	.06391	-.01706	9.906
#2	-1.0763	-.29608	10.746	10.308	.04918	-.01723	9.925
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 21:52:54
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00049	H.06021	H.02938	-.00069	-.00050	L-.00472	.00602
SDev	.00468	.02297	.02340	.00016	.00011	.00007	.00057
%RSD	946.68	38.154	79.624	23.563	22.694	1.4660	9.5473
#1	-.00281	H.07646	H.04593	L-.00080	L-.00058	L-.00477	.00562
#2	.00380	H.04397	.01284	-.00057	-.00042	L-.00467	H.00643
Errors	LC Pass	LC High	LC High	LC Pass	LC Pass	LC Low	LC Pass
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00580	L-.00751	-.00334	L-.00267	L-.86144	-.01336	-.01169
SDev	.00085	.00073	.00213	.00023	.01194	.00406	.00072
%RSD	14.613	9.6617	63.690	8.6027	1.3862	30.354	6.1570
#1	-.00640	L-.00802	-.00485	L-.00251	L-.85299	-.01623	-.01220
#2	-.00520	L-.00700	-.00184	L-.00284	L-.86988	-.01049	-.01118
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Pass
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00256	H.07793	-.00092	L-.06948	.02647	.06656	-.00446
SDev	.00001	.02727	.00257	.02347	.03941	.02494	.00048
%RSD	.33766	34.989	278.38	33.772	148.86	37.464	10.753

#2	L-.00256	H.05865	.00089	-.05289	-.00139	.04893	-.00412
Errors	LC Low	LC High	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

000192

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.0362	L-.11002	H.05847	.03457	L-.00959	L-.00478	9.149
SDev	.0284	.12636	.02200	.01172	.00132	.00029	.066
%RSD	2.7361	114.85	37.622	33.899	13.735	6.0050	.7173
#1	-1.0563	L-.19937	H.07403	H.04286	L-.01052	L-.00458	9.196
#2	-1.0162	-.02067	H.04292	.02629	L-.00866	L-.00498	9.103
Errors	LC Pass	LC Low	LC High	LC Pass	LC Low	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-189-14A Operator: CLT
Run Time: 07/11/92 21:57:08
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	381.45	k.21224	k-.09829	k1.9462	k.02001	k-.32886	k221.89
SDev	3.44	.22621	.07394	.0177	.00032	.08070	1.89
%RSD	.90312	106.58	75.225	.90700	1.5903	24.539	.85215
#1	379.01	k.37220	k-.15057	k1.9337	k.01979	k-.38593	k220.55
#2	383.88	k.05229	k-.04601	k1.9587	k.02024	k-.27180	k223.23
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.34543	k.17731	k.61064	S754.85	k486.75	k.24692	k234.32
SDev	.05891	.00169	.03009	355.83	.40	.02348	2.43
%RSD	17.053	.95470	4.9276	47.140	.08262	9.5100	1.0361
#1	k.30378	k.17612	k.58936	S1006.5	k486.46	k.23031	k232.60
#2	k.38708	k.17851	k.63191	S503.24	k487.03	k.26352	k236.03
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.2431	k.10158	k.33975	158.49	k-.25732	k23.237	k.10284
SDev	.0308	.02980	.00998	1.59	.18746	.297	.11910
%RSD	.42502	29.335	2.9380	1.0012	72.849	1.2782	115.81

#2	k7.2649	k.08051	k.33269	159.61	k-.12477	k23.447	k.01863

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	164.98	k-.03377	k.16802	k10.397	k1.0538	k.78057	9.970
SDev	1.50	.08515	.13357	.030	.1444	.00730	.096
%RSD	.91082	252.15	79.497	.29277	13.702	.93461	.9585
#1	163.92	k.02644	k.26246	k10.375	k1.1559	k.77541	9.903
#2	166.04	k-.09398	k.07357	k10.418	k.95171	k.78573	10.04

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-15A 1:10 Operator: CLT
Run Time: 07/11/92 22:01:22
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	30.867	L-.00878	L.00956	.14215	.00386	.00569	28.915
SDev	.402	.00390	.01280	.00209	.00006	.00045	.198
%RSD	1.3015	44.379	133.85	1.4697	1.5661	7.8734	.68536
#1	31.151	L-.01154	L.00051	.14363	.00390	.00537	29.055
#2	30.583	L-.00603	L.01861	.14067	.00381	.00600	28.774

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05355	.01609	.22270	50.228	54.230	.39584	25.171
SDev	.00551	.00116	.00339	.353	2.462	.00387	.169
%RSD	10.295	7.2359	1.5234	.70361	4.5398	.97713	.67216
#1	.04965	.01526	.22030	50.477	55.971	.39311	25.290
#2	.05745	.01691	.22510	49.978	52.489	.39858	25.051

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.86393	.02148	.03200	15.048	L-.05516	.86374	L-.00410
SDev	.00261	.00073	.00153	.216	.00809	.00538	.00118
%RSD	.30175	3.4111	4.7835	1.4327	14.663	.62311	28.686

#2	.86208	.02200	.03092	14.895	L-.06088	.85993	L-.00327
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.0869	L-.07373	L.01485	1.1487	.12084	.34697	9.426
SDev	.0904	.04310	.00478	.0040	.00059	.00122	.038
%RSD	1.2752	58.455	32.186	.34617	.48472	.35060	.4055
#1	7.1508	L-.04326	L.01147	1.1459	.12043	.34783	9.454
#2	7.0230	L-.10421	L.01823	1.1515	.12126	.34611	9.399
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-15A Operator: CLT
Run Time: 07/11/92 22:05:35
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	284.87	k.20112	k.18923	k1.3061	k.04015	k-.00310	k260.09
SDev	.84	.17270	.16021	.0039	.00015	.08525	.93
%RSD	.29440	85.869	84.664	.29849	.37552	2746.6	.35946
#1	284.28	k.32323	k.07595	k1.3033	k.04004	k-.06338	k259.43
#2	285.47	k.07900	k.30252	k1.3088	k.04025	k.05718	k260.75
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.45332	k.20042	k2.0480	S754.86	k505.46	k3.7648	k234.04
SDev	.06590	.00722	.0508	355.80	4.76	.0286	1.28
%RSD	14.537	3.6023	2.4789	47.134	.94111	.76039	.54880
#1	k.40672	k.19531	k2.0121	S1006.5	k508.83	k3.7446	k233.13
#2	k.49992	k.20552	k2.0839	S503.27	k502.10	k3.7851	k234.95
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.7406	k.20708	k.30703	144.78	k-.22893	k8.1183	k.10780
SDev	.0049	.00588	.01077	1.91	.26464	.1050	.10956
%RSD	.06390	2.8400	3.5069	1.3189	115.60	1.2931	101.63

#2	k7.7441	k.20292	k.29941	146.13	k-.04181	k8.1926	k.03033

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	72.127	k-.07568	k.17137	k10.411	k1.2930	k3.1131	10.27
SDev	2.157	.10123	.06903	.082	.1433	.0227	.05
%RSD	2.9899	133.77	40.281	.78845	11.085	.73078	.4529
#1	70.602	k-.14726	k.22018	k10.469	k1.3944	k3.0971	10.30
#2	73.652	k-.00410	k.12256	k10.353	k1.1917	k3.1292	10.24

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-15A-S 1:10 Operator: CLT
Run Time: 07/11/92 22:09:50
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.925	.23939	.41044	.33639	.18797	.18226	30.011
SDev	.235	.00977	.00922	.00080	.00072	.00043	.210
%RSD	.78678	4.0830	2.2473	.23715	.38171	.23407	.69919
#1	30.092	.24630	.40391	.33696	.18746	.18196	30.159
#2	29.759	.23248	.41696	.33583	.18847	.18257	29.863

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24073	.19754	.44046	48.963	53.087	.85408	24.974
SDev	.00253	.00228	.00044	.395	.216	.00184	.197
%RSD	1.0492	1.1557	.10013	.80572	.40663	.21580	.78949
#1	.23895	.19593	.44015	49.242	52.934	.85538	25.113
#2	.24252	.19916	.44077	48.684	53.240	.85277	24.834

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0567	.38740	.21225	19.239	.32236	2.4514	.16696
SDev	.0068	.00452	.00073	.072	.01882	.0041	.00014
%RSD	.64377	1.1663	.34307	.37353	5.8382	.16645	.08322

#2	1.0519	.39060	.21276	19.189	.30906	2.4485	.16686
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.1132	.31194	.39046	1.6039	.30576	.57346	9.268
SDev	.0744	.00522	.01396	.0037	.00023	.00122	.051
%RSD	1.0463	1.6747	3.5760	.23235	.07483	.21234	.5545
#1	7.1659	.31563	.40034	1.6065	.30592	.57432	9.232
#2	7.0606	.30824	.38059	1.6012	.30560	.57260	9.305
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-15A-SD1:10 Operator: CLT
Run Time: 07/11/92 22:14:03
Comment: IEA
[illegible]: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934 (91%)	Be3130 (92%)	Cd2265 (90%)	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	28.836	.23651	.40927	.32431	.18938	.18594	28.784
SDev	.051	.00188	.01265	.00081	.00065	.00008	.005
%RSD	.17758	.79523	3.0903	.24925	.34511	.04344	.01877
#1	28.800	.23518	.40033	.32374	.18892	.18600	28.781
#2	28.872	.23784	.41822	.32489	.18984	.18588	28.788
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677 (94%)	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24067	.19757	.43288	46.955	51.479	.84034	23.821
SDev	.00050	.00000	.00211	.004	.363	.00011	.011
%RSD	.20653	.00087	.48683	.00932	.70553	.01324	.04821
#1	.24102	.19757	.43437	46.952	51.222	.84026	23.829
#2	.24032	.19757	.43139	46.958	51.736	.84042	23.813
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280 (82%)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0379	.39443	.21109	18.487	.33669	2.6583	.16394
SDev	.0008	.00189	.00157	.007	.01075	.0014	.00487
%RSD	.07433	.48029	.74230	.03967	3.1924	.05280	2.9718

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#2	1.0384	.39577	.20999	18.492	.34429	2.6573	.16050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.9441	.36936	.40209	1.5202	.30301	.54763	9.291
SDev	.0195	.13487	.00082	.0020	.00061	.00150	.026
%RSD	.28070	36.514	.20386	.12932	.20131	.27438	.2766
#1	6.9579	.46473	.40151	1.5216	.30258	.54657	9.273
#2	6.9303	.27399	.40267	1.5188	.30344	.54870	9.309
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000197

Method: RASI_ICP Sample Name: 92-06-189-15A-S Operator: CLT
Run Time: 07/11/92 22:18:16
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	270.78	k2.4717	k3.6131	k3.1178	k1.6532	k1.4549	k259.57
SDev	4.17	.2079	.0900	.0383	.0088	.0894	2.44
%RSD	1.5403	8.4125	2.4907	1.2271	.53179	6.1466	.93989
#1	267.83	k2.6187	k3.5495	k3.0907	k1.6470	k1.3917	k257.85
#2	273.73	k2.3247	k3.6768	k3.1448	k1.6594	k1.5182	k261.30
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k2.0628	k1.7655	k3.9928	S754.98	k487.94	k7.3031	k225.09
SDev	.0761	.0172	.0837	355.88	4.53	.0736	3.70
%RSD	3.6896	.97249	2.0953	47.138	.92901	1.0079	1.6458
#1	k2.0090	k1.7534	k3.9336	S1006.6	k491.15	k7.2511	k222.47
#2	k2.1166	k1.7777	k4.0519	S503.33	k484.74	k7.3552	k227.71
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k9.7	k3.4981	k1.8185	180.01	k3.1610	k25.092	k1.5614
SDev	.	.0035	.0018	2.08	.1814	.282	.0954
%RSD	.7	.10120	.09885	1.1561	5.7383	1.1236	6.1089

#2	k9.2791	k3.5006	k1.8198	181.48	k3.2892	k25.291	k1.4940
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
[redacted]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y 3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	73.475	k3.7425	k3.5149	k14.393	k2.9306	k4.8135	9.747
SDev	1.193	.0917	.1002	.037	.1310	.0401	.093
%RSD	1.6231	2.4493	2.8511	.25904	4.4711	.83382	.9522
#1	72.632	k3.8073	k3.5858	k14.366	k3.0233	k4.7851	9.681
#2	74.319	k3.6776	k3.4440	k14.419	k2.8380	k4.8419	9.812
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000196

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Method: RASI_ICP Sample Name: 92-06-189-15A-SD Operator: CLT
Run Time: 07/11/92 22:22:31
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k271.74	k2.4970	k3.6926	k3.0980	k1.6699	k1.4773	k255.44
SDev	.57	.2050	.0758	.0026	.0026	.0784	.24
%RSD	.21134	8.2091	2.0541	.08485	.15563	5.3099	.09404
#1	k271.33	k2.6420	k3.6389	k3.0961	k1.6680	k1.4218	k255.27
#2	k272.14	k2.3521	k3.7462	k3.0998	k1.6717	k1.5328	k255.61
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k2.0720	k1.7814	k4.0021	S755.00	k472.42	k7.2585	k222.61
SDev	.0466	.0011	.0304	355.87	3.55	.0159	.11
%RSD	2.2491	.06083	.75984	47.136	.75176	.21903	.04955
#1	k2.0390	k1.7806	k3.9806	S1006.6	k469.91	k7.2473	k222.54
#2	k2.1050	k1.7822	k4.0236	S503.36	k474.93	k7.2698	k222.69
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
Hi-h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k9.2887	k3.5529	k1.8346	178.41	k3.1663	k27.617	k1.6070
SDev	.0286	.0134	.0052	.37	.2429	.095	.1182
%RSD	.30769	.37741	.28578	.20715	7.6705	.34347	7.3530

A-4 cm

#2	k9.2664	k3.5434	k1.8309	178.67	k3.5381	k27.550	k1.5235

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	75.722	k3.8597	k3.5336	k13.777	k2.9405	k4.7075	10.03
SDev	.269	.0271	.0538	.061	.1454	.0099	.04
%RSD	.35570	.70207	1.5218	.44470	4.9436	.21096	.4235
#1	75.532	k3.8789	k3.5716	k13.734	k3.0433	k4.7004	9.999
#2	75.913	k3.8405	k3.4956	k13.820	k2.8377	k4.7145	10.06

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-16A 1:10 Operator: CLT
Run Time: 07/11/92 22:26:44
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	32.351	L-.00421	.05198	.16331	.01280	.03233	30.823
SDev	.161	.01149	.02370	.00331	.00208	.00303	.237
%RSD	.49807	273.09	45.602	2.0270	16.212	9.3593	.76749
#1	32.465	L.00392	.06874	.16565	.01427	.03447	30.990
#2	32.237	L-.01233	.03522	.16097	.01134	.03019	30.655

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06880	.02075	.31794	52.595	58.383	.68776	26.673
SDev	.00362	.00234	.00418	.346	.995	.01584	.189
%RSD	5.2580	11.302	1.3148	.65734	1.7041	2.3036	.70705
#1	.07135	.02241	.32090	52.839	59.086	.69896	26.807
#2	.06624	.01909	.31499	52.350	57.679	.67655	26.540

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.92693	.04679	.03900	16.033	L-.04938	1.0244	L.00066
SDev	.00894	.00911	.00081	.142	.01618	.0458	.00468
%RSD	.96467	19.461	2.0729	.88731	32.765	4.4674	711.09

N-460

#2	.92061	.04035	.03843	15.932	L-.03794	.99208	L-.00265
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
[redacted]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
[redacted] s	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.3651	L-.10166	.02358	1.2381	.13340	.51638	9.508
SDev	.1045	.05909	.01595	.0271	.00112	.00730	.021
%RSD	1.4195	58.125	67.626	2.1876	.84021	1.4137	.2189
#1	7.4390	L-.05987	.03486	1.2572	.13419	.52154	9.494
#2	7.2912	L-.14344	L.01231	1.2189	.13261	.51122	9.523
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000200

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[redacted]ethod: RASI_ICP Sample Name: 92-06-189-16A Operator: CLT
[redacted]un Time: 07/11/92 22:30:58
Comment: IEA
[redacted] : CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	292.47	k.19788	k.30575	k1.4250	k.06193	k.15718	k267.78
SDev	1.73	.20411	.08166	.0082	.00057	.08111	1.21
%RSD	.59293	103.15	26.707	.57880	.91734	51.601	.45022
#1	291.24	k.34221	k.24801	k1.4191	k.06153	k.09983	k266.92
#2	293.70	k.05356	k.36349	k1.4308	k.06233	k.21454	k268.63
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.49215	k.19964	k2.7502	S754.83	k520.27	k5.7510	k240.50
SDev	.05257	.00016	.0443	355.79	8.15	.0305	1.08
%RSD	10.681	.07862	1.6116	47.134	1.5667	.53108	.44780
#1	k.45498	k.19976	k2.7189	S1006.4	k514.51	k5.7294	k239.74
#2	k.52932	k.19953	k2.7816	S503.26	k526.03	k5.7726	k241.27
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
[redacted]h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k7.9970	k.24465	k.29957	147.42	k-.30636	k8.8428	k.09776
SDev	.0056	.02139	.01238	.90	.20120	.0145	.11859
%RSD	.06977	8.7411	4.1335	.60785	65.675	.16398	121.30

D-461

#2	k7.9931	k.22953	k.29082	148.06	k-.16409	k8.8531	k.01391

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000201

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	74.854	k-.00015	k.14530	k10.823	k1.3096	k4.2544	9.978
SDev	.526	.07979	.09699	.109	.1460	.0211	.046
%RSD	.70308	53021.	66.749	1.0114	11.147	.49662	.4597
#1	74.482	k.05627	k.21389	k10.746	k1.4128	k4.2394	9.946
#2	75.226	k-.05657	k.07672	k10.901	k1.2064	k4.2693	10.01

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-17A 1:10 Operator: CLT
Run Time: 07/11/92 22:35:12
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.915	L-.02581	L-.00225	.14736	.00673	.03393	29.673
SDev	.345	.00675	.00480	.00209	.00041	.00032	.412
%RSD	1.0797	26.167	213.11	1.4179	6.0846	.95128	1.3875
#1	32.159	L-.02103	L.00114	.14884	.00702	.03370	29.964
#2	31.671	L-.03058	L-.00565	.14588	.00644	.03416	29.381

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05762	.01992	.27928	52.544	58.306	.72013	26.103
SDev	.00093	.00271	.00335	.410	1.515	.00815	.227
%RSD	1.6206	13.610	1.1980	.78108	2.5981	1.1315	.87077
#1	.05696	.01800	.28165	52.834	59.377	.72590	26.264
#2	.05828	.02184	.27691	52.254	57.235	.71437	25.942

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.96141	.02511	.03264	15.566	L-.05907	.95288	L-.00642
SDev	.00664	.00111	.00075	.195	.01081	.01378	.00034
%RSD	.69062	4.4209	2.2844	1.2531	18.307	1.4462	5.2464

#2	.95671	.02590	.03211	15.428	L-.06672	.94314	L-.00618
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000202

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.0644	L-.07422	L.01583	1.1792	.12826	.41482	9.519
SDev	.0053	.06714	.00723	.0115	.00191	.00771	.031
%RSD	.07525	90.458	45.657	.97789	1.4852	1.8574	.3235
#1	7.0606	L-.12170	L.01072	1.1874	.12961	.42027	9.541
#2	7.0681	L-.02675	.02094	1.1711	.12691	.40937	9.497
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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ethod: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 22:39:27
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.8941	-.00273	10.323	1.0315	.98559	2.4771	Q2.8225
SDev	.0655	.00019	.069	.0010	.00451	.0057	.0830
%RSD	2.2631	6.9007	.67291	.09453	.45761	.23024	2.9411
#1	Q2.9404	-.00260	10.274	1.0308	.98241	2.4730	Q2.8812
#2	Q2.8478	-.00286	10.372	1.0321	.98878	2.4811	Q2.7638
Errors	QC Fail	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5472	2.4546	2.6187	Q3.0672	Q2.1375	5.0309	Q2.8380
SDev	.0098	.0077	.0076	.1558	.4692	.0021	.0767
%RSD	.38631	.31496	.29036	5.0798	21.951	.04236	2.7022
#1	2.5403	2.4491	2.6133	Q3.1774	Q1.8057	5.0324	Q2.8923
#2	2.5542	2.4601	2.6241	Q2.9571	2.4693	5.0294	Q2.7838
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Fail
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.99271	.00156	2.4615	5.2299	10.404	.01864	2.4603
SDev	.00122	.00077	.0022	.0352	.043	.00886	.0115
%RSD	.12280	49.229	.09101	.67303	.40882	47.547	.46643

#2	.99185	.00102	2.4631	5.2050	10.434	.01237	2.4684
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q4.2927	5.2236	.00208	.00867	2.4751	2.5559	9.186
SDev	.0159	.0390	.01178	.00974	.0093	.0062	.013
%RSD	.37151	.74616	566.86	112.29	.37514	.24281	.1433
#1	Q4.3040	5.1960	-.00625	.01556	2.4686	2.5515	9.176
#2	Q4.2815	5.2512	.01041	.00179	2.4817	2.5603	9.195
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

000203

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 22:43:41
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.128	-.01668	.10740	.00517	-.00256	.00667	24.296
SDev	.071	.00203	.00209	.00112	.00115	.00340	.077
%RSD	.28449	12.193	1.9466	21.767	44.875	50.949	.31755
#1	25.179	-.01812	.10888	.00596	-.00175	.00907	24.351
#2	25.078	-.01525	.10592	.00437	-.00338	.00427	24.242
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00505	24.250	.02536	24.456	26.600	.03073	25.336
SDev	.00001	.097	.00298	.139	.778	.01303	.060
%RSD	.17056	.40189	11.756	.56967	2.9230	42.390	.23865
#1	-.00506	24.319	.02747	24.555	26.050	.03995	25.379
#2	-.00505	24.182	.02325	24.358	27.150	.02152	25.293
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.8679	.00048	.00272	51.167	.00023	.01016	-.01648
SDev	.0466	.00075	.00149	.091	.02980	.00286	.00292
%RSD	.47180	153.74	54.839	.17771	13179.	28.129	17.751

#2	9.8350	.00101	.00167	51.103	-.02085	.01219	-.01855
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000204

[redacted]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.884	.14316	.01025	-.01764	24.679	.00773	9.614
SDev	.140	.06470	.01056	.00319	.095	.00446	.051
%RSD	.27511	45.197	102.99	18.068	.38594	57.689	.5280
#1	50.983	.09741	.00278	-.01989	24.746	.01088	9.650
#2	50.785	.18891	.01771	-.01539	24.612	.00457	9.578
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

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ethod: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 22:47:55
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.21464	10.306	10.522	.00181	.00317	-.23220	.14347
SDev	.04211	.060	.065	.00048	.00049	.00152	.03449
%RSD	19.620	.58653	.62221	26.591	15.289	.65493	24.037
#1	.24442	10.264	10.476	.00215	.00351	-.23113	.16785
#2	.18486	10.349	10.568	.00147	.00283	-.23328	.11908
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00394	.12431	.00168	.23185	-.90786	-.04225	.13110
SDev	.00117	.02538	.00048	.04436	.96012	.00550	.04597
%RSD	29.696	20.418	28.640	19.134	105.76	13.026	35.066
#1	-.00311	.14226	.00202	.26322	-1.5868	-.03836	.16361
#2	-.00477	.10637	.00134	.20048	-.22895	-.04615	.09859
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
[redacted] ue							
[redacted] ge							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03923	10.234	-.00077	.18563	10.334	9.7787	.00320
SDev	.01022	.091	.00321	.06453	.0816	.0818	.00131
%RSD	26.042	.89183	415.34	34.763	.78447	.83632	40.806

#2	.03201	10.299	-.00304	.14000	10.392	9.8365	.00413
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

000205

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.87334	-.12903	10.579	9.9879	.17560	-.01027	9.837
SDev	.08506	.01424	.024	.0100	.02668	.00148	.051
%RSD	9.7392	11.039	.22354	.10023	15.192	14.397	.5138
#1	-.81319	-.11896	10.562	9.9808	.19447	-.00922	9.802
#2	-.93348	-.13911	10.596	9.9950	.15674	-.01131	9.873
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 22:52:11
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.06525	H.05341	H.04043	-.00063	-.00014	L-.00363	H.05882
SDev	.00708	.02423	.02871	.00024	.00002	.00017	.01967
%RSD	10.850	45.362	71.002	38.171	12.074	4.5816	33.438
#1	H.07025	H.07054	H.06073	-.00046	-.00013	L-.00351	H.07273
#2	H.06024	H.03628	.02013	L-.00080	-.00016	L-.00375	H.04491
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00451	H.02110	-.00275	H.07558	H.71517	.00062	H.03909
SDev	.00386	.00737	.00040	.01698	.01568	.00070	.01652
%RSD	85.558	34.923	14.447	22.459	2.1921	113.21	42.264
#1	-.00178	H.02631	-.00247	H.08759	H.70408	.00112	H.05077
#2	-.00724	H.01589	-.00303	H.06358	H.72625	.00012	H.02741
Errors	LC Pass	LC High	LC Pass	LC High	LC High	LC Pass	LC High
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.0134

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00999	H.07633	-.00184	-.00933	.01585	H.07193	L-.00583
SDev	.00317	.02727	.00130	.01173	.01678	.02014	.00048
%RSD	31.686	35.727	70.926	125.71	105.82	28.005	8.2156

#2	H.00775	H.05705	-.00276	-.01763	.00399	.05769	L-.00549

Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC High	LC Low
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.0876	-.06204	H.05991	H.04115	H.01931	L-.00238	9.203
SDev	.0195	.05186	.02403	.01748	.00862	.00014	.065
%RSD	1.7922	83.597	40.110	42.477	44.652	5.9348	.7085
#1	-1.0738	-.09871	H.07690	H.05350	H.02541	L-.00248	9.157
#2	-1.1014	-.02537	H.04292	.02879	H.01321	L-.00228	9.249

Errors	LC Pass	LC Pass	LC High	LC High	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-189-17A Operator: CLT
Run Time: 07/11/92 22:56:25
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	290.67	k.20707	k.26150	k1.3259	k.05357	k.20937	k258.87
SDev	.81	.21311	.05730	.0041	.00015	.07858	.34
%RSD	.27805	102.92	21.914	.30730	.27595	37.531	.12948
#1	290.10	k.35776	k.22098	k1.3230	k.05347	k.15380	k258.63
#2	291.24	k.05637	k.30202	k1.3288	k.05367	k.26493	k259.10

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.43987	k.20353	k2.4292	S754.85	k521.83	k6.1072	k236.30
SDev	.05539	.00131	.0253	355.79	.25	.0434	.40
%RSD	12.594	.64358	1.0432	47.134	.04868	.70991	.17118
#1	k.40070	k.20261	k2.4113	S1006.4	k522.01	k6.0765	k236.01
#2	k.47904	k.20446	k2.4472	S503.27	k521.65	k6.1378	k236.58

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.3775	k.22331	k.29280	144.88	k-.26995	k8.5411	k.09613
SDev	.0233	.02971	.01224	.35	.16482	.0061	.11651
%RSD	.27835	13.306	4.1809	.24092	61.055	.07109	121.19

#2	k8.3610	k.20230	k.28414	145.13	k-.15341	k8.5368	k.01375

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	72.542	k.03882	k.15504	k10.459	k1.3216	k3.3846	9.799
SDev	.273	.06087	.13241	.088	.1511	.0112	.031
%RSD	.37618	156.80	85.405	.84595	11.434	.33047	.3186
#1	72.349	k.08186	k.24867	k10.396	k1.4285	k3.3767	9.821
#2	72.735	k-.00422	k.06141	k10.521	k1.2148	k3.3925	9.777

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-18A 1:10 Operator: CLT
Run Time: 07/11/92 23:00:38
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.023	L-.00739	.04101	.13511	.00391	.09855	30.004
SDev	.189	.00183	.00972	.00088	.00007	.00048	.145
%RSD	.60800	24.754	23.714	.65338	1.9315	.48628	.48358
#1	31.157	L-.00609	.03413	.13573	.00396	.09889	30.106
#2	30.890	L-.00868	.04789	.13449	.00385	.09821	29.901

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05504	.01887	.13126	49.810	54.596	1.3253	24.906
SDev	.00084	.00194	.00462	.201	1.454	.0199	.078
%RSD	1.5308	10.258	3.5216	.40277	2.6632	1.5050	.31372
#1	.05564	.02024	.13452	49.952	53.568	1.3394	24.961
#2	.05445	.01750	.12799	49.668	55.624	1.3112	24.850

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.92910	.02622	.03277	14.948	L-.05851	1.0510	L-.00295
SDev	.00327	.00001	.00168	.034	.02553	.0180	.00154
%RSD	.35231	.03513	5.1258	.22566	43.630	1.7120	52.119

#2	.92678	.02621	.03158	14.924	L-.07657	1.0383	L-.00403

000208

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.9416	L-.04547	L.01262	1.1829	.12283	.15811	9.507
SDev	.0904	.00425	.00452	.0077	.00171	.00540	.070
%RSD	1.3019	9.3380	35.789	.65206	1.3930	3.4136	.7327
#1	7.0055	L-.04247	L.01581	1.1883	.12404	.16192	9.458
#2	6.8777	L-.04847	L.00943	1.1774	.12162	.15429	9.556

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-18A Operator: CLT
Run Time: 07/11/92 23:04:52
Comment: IEA
Type: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	280.93	k.19095	k.35543	k1.2214	k.03552	k.74927	k261.06
SDev	.49	.24288	.08473	.0024	.00008	.07631	.25
%RSD	.17356	127.20	23.840	.19927	.21856	10.185	.09763
#1	281.28	k.36269	k.29551	k1.2231	k.03546	k.69531	k261.24
#2	280.59	k.01921	k.41534	k1.2197	k.03557	k.80323	k260.88

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.45339	k.19112	k1.0928	S754.93	k495.57	k11.344	k224.58
SDev	.05523	.00136	.0257	355.83	.07	.020	.39
%RSD	12.183	.71355	2.3544	47.135	.01432	.17919	.17460
#1	k.41433	k.19208	k1.0746	S1006.5	k495.52	k11.330	k224.86
#2	k.49244	k.19015	k1.1110	S503.32	k495.62	k11.358	k224.31

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.0643	k.20049	k.28998	139.30	k-.27764	k9.7449	k.10574
SDev	.0542	.02821	.01218	.09	.15492	.0281	.11767
%RSD	.67199	14.070	4.2011	.06528	55.797	.28847	111.29

#2	k8.0260	k.18055	k.28137	139.23	k-.16810	k9.7648	k.02253

000309

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	71.923	k-.03402	k.16421	k10.429	k1.2554	k1.2379	10.27
SDev	.103	.02379	.12021	.081	.1571	.0004	.06
%RSD	.14290	69.915	73.201	.78133	12.511	.02999	.5562
#1	71.850	k-.01720	k.24921	k10.371	k1.3665	k1.2377	10.31
#2	71.996	k-.05084	k.07921	k10.486	k1.1444	k1.2382	10.23

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-19A 1:10 Operator: CLT
Run Time: 07/11/92 23:09:06
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.591	L-.01271	.10090	.12981	.00838	.19168	27.972
SDev	.159	.00520	.00906	.00072	.00003	.00007	.193
%RSD	.53722	40.945	8.9791	.55472	.33957	.03429	.69157
#1	29.703	L-.01639	.09449	.13032	.00840	.19172	28.109
#2	29.478	L-.00903	.10730	.12930	.00836	.19163	27.836

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06380	.01485	.13654	47.858	51.990	2.0293	22.770
SDev	.00189	.00152	.00166	.276	1.878	.0145	.166
%RSD	2.9649	10.262	1.2157	.57721	3.6127	.71400	.72750
#1	.06513	.01592	.13772	48.054	53.319	2.0395	22.887
#2	.06246	.01377	.13537	47.663	50.662	2.0190	22.653

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.94194	.02288	.03160	14.086	L-.04874	.98922	L-.00494
SDev	.00474	.00002	.00032	.150	.02163	.01317	.00043
%RSD	.50320	.07138	1.0123	1.0620	44.376	1.3312	8.6856

#2	.93859	.02286	.03138	13.981	L-.06403	.97990	L-.00525
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000210

[redacted]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.9204	L-.11341	L.01226	1.0915	.11423	.15046	9.426
SDev	.0638	.01203	.00851	.0194	.00023	.00243	.074
%RSD	1.0775	10.608	69.398	1.7765	.20266	1.6145	.7886
#1	5.9655	L-.12192	L.00625	1.1052	.11440	.15218	9.374
#2	5.8753	L-.10491	L.01828	1.0777	.11407	.14875	9.479
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-19A Operator: CLT
Run Time: 07/11/92 23:13:20
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	270.05	k.21111	k1.0095	k1.1925	k.07543	k1.5483	k244.73
SDev	3.01	.21117	.0806	.0134	.00112	.0966	2.43
%RSD	1.1131	100.03	7.9874	1.1216	1.4825	6.2424	.99220
#1	267.92	k.36043	k.95252	k1.1831	k.07464	k1.4799	k243.02
#2	272.17	k.06179	k1.0666	k1.2020	k.07622	k1.6166	k246.45
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.54340	k.18721	k1.2012	S754.99	k475.29	k17.484	k206.53
SDev	.06116	.00330	.0373	355.87	1.22	.138	2.24
%RSD	11.255	1.7603	3.1030	47.136	.25670	.78793	1.0862
#1	k.50015	k.18488	k1.1748	S1006.6	k474.43	k17.387	k204.95
#2	k.58664	k.18954	k1.2276	S503.35	k476.16	k17.582	k208.12
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
[redacted]	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.2970	k.21719	k.27914	131.76	k-.29145	k9.4108	k.10780
SDev	.0482	.02444	.00767	1.22	.19741	.0775	.12023
%RSD	.58055	11.252	2.7483	.92942	67.734	.82343	111.53

#2	k8.3310	k.19991	k.27372	132.63	k-.15186	k9.4656	k.02278

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	63.044	k-.03318	k.13191	k9.7175	k1.2210	k1.2485	10.04
SDev	.698	.02505	.10841	.0417	.1392	.0116	.09
%RSD	1.1074	75.506	82.186	.42891	11.402	.92998	.9180
#1	62.551	k-.01546	k.20856	k9.6880	k1.3194	k1.2403	9.976
#2	63.538	k-.05089	k.05525	k9.7470	k1.1226	k1.2567	10.11

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-20A 1:10 Operator: CLT
Run Time: 07/11/92 23:17:33
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	29.137	L-.01301	.08390	.13838	.00740	.16538	31.097
SDev	.305	.00127	.00042	.00152	.00040	.00374	.287
%RSD	1.0475	9.7966	.50198	1.1008	5.4238	2.2618	.92292
#1	29.352	L-.01211	.08420	.13946	.00768	.16802	31.300
#2	28.921	L-.01391	.08361	.13731	.00711	.16273	30.894

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06913	.01427	.13203	48.816	55.116	2.0054	24.440
SDev	.00289	.00078	.00377	.501	1.002	.0283	.227
%RSD	4.1846	5.4729	2.8525	1.0254	1.8185	1.4102	.92989
#1	.07117	.01482	.13469	49.170	55.825	2.0254	24.601
#2	.06708	.01371	.12937	48.462	54.407	1.9854	24.280

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97614	.02240	.02989	14.188	L-.05747	1.0208	L-.00533
SDev	.00982	.00155	.00056	.138	.00884	.0090	.00129
%RSD	1.0056	6.9185	1.8663	.97168	15.379	.88177	24.130

#2	.96920	.02131	.03028	14.090	L-.06372	1.0144	L-.00442

000212

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

[redacted]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.0344	L-.12750	L.00532	1.1195	.11369	.14828	9.379
SDev	.1471	.05265	.00419	.0056	.00127	.00310	.005
%RSD	2.4373	41.297	78.768	.49990	1.1178	2.0899	.0498
#1	6.1384	L-.09027	L.00829	1.1235	.11459	.15047	9.383
#2	5.9304	L-.16473	L.00236	1.1156	.11279	.14609	9.376

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-20A Operator: CLT
Run Time: 07/11/92 23:21:47
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	265.71	k.20165	k.87022	k1.2684	k.06620	k1.2809	k273.03
SDev	1.35	.22570	.02985	.0100	.00083	.0791	1.66
%RSD	.50745	111.93	3.4298	.78878	1.2489	6.1745	.60844
#1	266.67	k.36124	k.84911	k1.2755	k.06678	k1.2250	k274.20
#2	264.76	k.04205	k.89132	k1.2613	k.06561	k1.3368	k271.85

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.53802	k.18407	k1.1535	S754.97	k485.94	k16.722	k222.56
SDev	.05208	.00097	.0156	355.85	4.94	.070	1.41
%RSD	9.6801	.52437	1.3538	47.134	1.0159	.42057	.63378
#1	k.50119	k.18476	k1.1425	S1006.6	k482.45	k16.672	k223.55
#2	k.57485	k.18339	k1.1646	S503.35	k489.43	k16.772	k221.56

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
[redacted]h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]w	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.5562	k.20962	k.27190	134.19	k-.28426	k9.6888	k.10518
SDev	.0904	.02895	.01537	1.08	.16570	.0404	.11871
%RSD	1.0562	13.811	5.6535	.80329	58.291	.41698	112.86

#2	k8.4923	k.18915	k.26103	134.95	k-.16710	k9.6602	k.02124

000213

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	65.032	k.02549	k.15220	k9.7769	k1.2052	k1.2414	10.14
SDev	.089	.06565	.11524	.0015	.1640	.0032	.06
%RSD	.13625	257.59	75.712	.01504	13.608	.25416	.5674
#1	64.969	k-.02094	k.23369	k9.7780	k1.3212	k1.2391	10.18
#2	65.094	k.07191	k.07072	k9.7759	k1.0893	k1.2436	10.10

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-21A 1:10 Operator: CLT
Run Time: 07/11/92 23:26:00
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	31.818	L-.01558	.19622	.14734	.01451	.26476	29.263
SDev	.465	.00174	.01482	.00232	.00008	.00417	.497
%RSD	1.4609	11.151	7.5509	1.5776	.52366	1.5755	1.6987
#1	32.147	L-.01435	.18574	.14899	.01457	.26771	29.614
#2	31.490	L-.01681	.20669	.14570	.01446	.26181	28.911

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07930	.01814	.14735	50.938	57.050	2.2051	24.078
SDev	.00199	.00078	.00206	.778	1.333	.0360	.379
%RSD	2.5124	4.3078	1.4015	1.5282	2.3372	1.6339	1.5752
#1	.08071	.01869	.14881	51.488	57.993	2.2305	24.346
#2	.07789	.01759	.14589	50.387	56.108	2.1796	23.810

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	S12881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98854	.02497	.03217	14.908	L-.05591	1.0405	L-.00639
SDev	.01627	.00195	.00238	.182	.00511	.0207	.00038
%RSD	1.6459	7.7966	7.4119	1.2199	9.1370	1.9933	5.8963

#2	.97703	.02359	.03049	14.779	L-.05952	1.0258	L-.00613

000214

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.2437	L-.13662	L.00283	1.1910	.12199	.16436	9.448
SDev	.1063	.06497	.00426	.0093	.00357	.00350	.044
%RSD	1.7028	47.555	150.63	.78257	2.9226	2.1277	.4676
#1	6.3188	L-.18256	L.00585	1.1976	.12451	.16684	9.479
#2	6.1685	L-.09068	L-.00018	1.1844	.11947	.16189	9.417

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-21A Operator: CLT
Run Time: 07/11/92 23:30:14
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	291.01	k.20689	k1.8247	k1.3534	k.12678	k2.1400	k255.71
SDev	.48	.23259	.1248	.0034	.00030	.0831	.32
%RSD	.16599	112.42	6.8416	.25356	.23389	3.8848	.12544
#1	290.66	k.37136	k1.7364	k1.3510	k.12657	k2.0812	k255.48
#2	291.35	k.04242	k1.9129	k1.3558	k.12699	k2.1988	k255.93

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.67960	k.21919	k1.3064	S754.88	k511.38	k18.569	k218.44
SDev	.05169	.00023	.0283	355.81	.30	.077	.74
%RSD	7.6052	.10554	2.1650	47.135	.05879	.41472	.33927
#1	k.64306	k.21903	k1.2864	S1006.5	k511.17	k18.514	k217.92
#2	k.71615	k.21936	k1.3264	S503.28	k511.59	k18.623	k218.97

Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k8.6834	k.23761	k.30786	140.63	k-.29344	k10.142	k.09930
SDev	.0049	.02633	.01219	.22	.21941	.064	.11958
%RSD	.05657	11.079	3.9587	.15539	74.771	.63055	120.43

#2	k8.6799	k.21899	k.29924	140.79	k-.13829	k10.187	k.01474

000215

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	66.593	k-.01365	k.14070	k10.579	k1.2846	k1.3851	10.24
SDev	.209	.01682	.09506	.145	.1511	.0032	.01
%RSD	.31399	123.24	67.562	1.3667	11.763	.22981	.0809
#1	66.445	k-.00176	k.20792	k10.477	k1.3914	k1.3828	10.25
#2	66.741	k-.02555	k.07348	k10.682	k1.1777	k1.3873	10.23

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-22A 1:10 Operator: CLT
Run Time: 07/11/92 23:34:27
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.4361	L.00050	L-.01183	.14611	L-.00031	.00973	1.5190
SDev	.3661	.00816	.00383	.00217	.00007	.00427	.3289
%RSD	25.489	1618.9	32.383	1.4840	21.360	43.916	21.649
#1	1.6950	L-.00526	L-.01454	.14765	L-.00027	.01275	1.7515
#2	1.1773	L.00627	L-.00912	.14458	L-.00036	.00671	1.2865

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01945	L.00357	.94473	2.1180	L2.9699	.23844	.77651
SDev	.00079	.00114	.00545	.5801	.5284	.03716	.26814
%RSD	4.0784	31.914	.57700	27.389	17.792	15.586	34.531
#1	.02001	.00438	.94858	2.5282	L2.5963	.26472	.96611
#2	.01889	L.00277	.94087	1.7078	L3.3436	.21216	.58691

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08110	.03308	L.00523	.49364	L-.04148	.11869	L-.00291
SDev	.01128	.00383	.00228	.13346	.01022	.01104	.00020
%RSD	13.915	11.577	43.535	27.036	24.653	9.2993	6.8620

#2	.07312	.03037	L.00362	.39927	L-.03425	.11089	L-.00305

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

[redacted]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.11903	L-.12826	L.01649	.06928	L-.00285	1.9773	9.330
SDev	.12404	.04110	.00923	.00164	.00133	.0109	.062
%RSD	104.21	32.043	55.982	2.3731	46.697	.55362	.6647
#1	L-.03132	L-.15732	L.00996	.07045	L-.00191	1.9850	9.374
#2	L-.20674	L-.09920	.02302	.06812	L-.00379	1.9695	9.286

Errors	LC Low	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 23:38:41
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q3.0167	-.00621	10.262	1.0257	.98041	2.4511	Q2.9155
SDev	.1359	.01030	.032	.0012	.00181	.0014	.1262
%RSD	4.5055	165.74	.30813	.11773	.18488	.05687	4.3283
#1	Q3.1128	.00107	10.239	1.0265	.98170	2.4521	Q3.0047
#2	Q2.9206	-.01349	10.284	1.0248	.97913	2.4501	Q2.8262

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

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5106	2.4325	2.5910	Q3.2849	Q1.2232	5.0111	Q2.9165
SDev	.0036	.0050	.0013	.2143	.8478	.0064	.1176
%RSD	.14525	.20582	.04980	6.5252	69.311	.12703	4.0319
#1	2.5131	2.4290	2.5901	Q3.4365	Q1.8227	5.0156	Q2.9997
#2	2.5080	2.4360	2.5919	Q3.1333	Q.62373	5.0066	Q2.8334

Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Fail
[redacted]e	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
[redacted]e	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98752	-.00270	2.4465	5.2724	10.395	.01415	2.4357
SDev	.00533	.00153	.0004	.0572	.009	.01181	.0024
%RSD	.54010	56.501	.01545	1.0849	.08326	83.462	.09671

#2	.98375	-.00378	2.4463	5.2319	10.401	.00580	2.4340
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q4.0672	5.2224	-.00995	.01301	2.4582	2.5385	9.171
SDev	.0514	.0031	.00125	.02718	.0018	.0018	.000
%RSD	1.2635	.05840	12.601	208.96	.07209	.06941	.0046
#1	Q4.1035	5.2245	-.00906	.03223	2.4595	2.5397	9.170
#2	Q4.0309	5.2202	-.01084	-.00621	2.4570	2.5372	9.171
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

000217

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 23:42:57
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.769	-.02031	.10876	.00555	-.00329	.00800	23.963
SDev	.120	.00370	.00347	.00147	.00146	.00455	.059
%RSD	.48636	18.194	3.1934	26.451	44.508	56.830	.24551
#1	24.684	-.01770	.10631	.00659	-.00225	.01122	23.921
#2	24.854	-.02293	.11122	.00451	-.00432	.00479	24.004
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00226	23.889	.02466	24.166	26.172	.05535	24.932
SDev	.00317	.123	.00210	.016	1.232	.01113	.118
%RSD	140.36	.51444	8.4997	.06569	4.7090	20.102	.47319
#1	-.00002	23.802	.02614	24.155	27.043	.06322	24.849
#2	-.00451	23.976	.02317	24.177	25.300	.04748	25.016
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.7025	-.00008	.00589	50.417	-.01257	.00622	-.01753
SDev	.0379	.00151	.00482	.292	.03690	.00641	.00167
%RSD	.39056	1958.7	81.824	.57887	293.52	103.04	9.5248

#2	9.7293	-.00114	.00248	50.624	-.03867	.00169	-.01871
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000218

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.100	.15717	-.00368	-.01880	24.279	.00514	9.488
SDev	.282	.00195	.00734	.01268	.104	.00405	.033
%RSD	.56237	1.2409	199.55	67.433	.42789	78.756	.3514
#1	49.900	.15579	.00151	-.02777	24.206	.00800	9.464
#2	50.299	.15855	-.00887	-.00984	24.353	.00228	9.511
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 23:47:11
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.26332	10.236	10.461	.00175	.00278	-.22680	.19066
SDev	.06124	.020	.043	.00056	.00027	.00171	.06400
%RSD	23.258	.19175	.40771	32.016	9.6215	.75585	33.568
#1	.30662	10.222	10.430	.00215	.00297	-.22559	.23591
#2	.22001	10.250	10.491	.00136	.00259	-.22801	.14540
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00469	.12276	-.00024	.32716	-.45086	-.03213	.17419
SDev	.00076	.03390	.00171	.07617	.32290	.00454	.05244
%RSD	16.253	27.617	717.43	23.281	71.617	14.122	30.104
#1	-.00415	.14673	.00097	.38102	-.67918	-.03534	.21127
#2	-.00523	.09879	-.00145	.27331	-.22254	-.02892	.13711
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn257620	Mo202018	Ni231604	K_766490	Se196081	Si288158	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0407509	10.17609	-.003226	.16385	10.370	9.6900	.00052
SDev	.0145820	.02945	.00076	.07186	.001	.0506	.00016
%RSD	35.782	.28646	23.596	43.859	.00711	.52252	31.004

#2	.03044	10.197	-.00268	.11304	10.370	9.7258	.00041
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

000219

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.96606	-.17996	10.616	9.7615	.18377	-.01304	9.732
SDev	.07442	.05287	.003	.0101	.04687	.00108	.014
%RSD	7.7039	29.380	.02665	.10360	25.504	8.2816	.1440
#1	-.91343	-.14258	10.614	9.7544	.21692	-.01227	9.742
#2	-1.0187	-.21735	10.618	9.7687	.15063	-.01380	9.722
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 23:51:26
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.09872	H.06189	H.04063	-.00012	-.00011	L-.00378	H.08188
SDev	.01005	.01492	.02201	.00016	.00006	.00035	.01811
%RSD	10.175	24.112	54.168	135.53	57.873	9.2945	22.119
#1	H.10583	H.07244	H.05619	-.00024	-.00016	L-.00403	H.09468
#2	H.09162	H.05133	H.02507	-.00001	-.00007	L-.00353	H.06907
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00278	H.02138	-.00156	H.11938	L-1.4119	.00404	H.06140
SDev	.00037	.00620	.00044	.02257	.5094	.00003	.01221
%RSD	13.372	29.003	28.196	18.902	36.081	.65729	19.878
#1	-.00305	H.02577	-.00187	H.13533	L-1.7721	.00406	H.07003
#2	-.00252	H.01700	-.00125	H.10342	L-1.0517	.00402	H.05277
Errors	LC Pass	LC High	LC Pass	LC High	LC Low	LC Pass	LC High
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.01024	H.07955	-.00338	.01556	.02304	H.07537	-.00432
SDev	.00300	.02652	.00120	.00293	.01760	.01800	.00131
%RSD	29.273	33.332	35.449	18.856	76.410	23.884	30.235

n-479

#2	H.00812	H.06080	L-.00423	.01348	.01059	.06264	L-.00525

000220

Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC High	LC Pass
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.1615	-.08345	H.06483	.03562	H.02488	L-.00382	9.023
SDev	.0248	.01076	.01793	.00577	.00728	.00000	.024
%RSD	2.1358	12.892	27.657	16.203	29.244	.07067	.2636
#1	-1.1440	-.07584	H.07751	.03971	H.03003	L-.00382	9.006
#2	-1.1791	-.09105	H.05215	.03154	H.01974	L-.00382	9.040

Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-189-22A Operator: CLT
Run Time: 07/11/92 23:55:41
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.4325	.08476	L-.00575	1.4370	L-.00057	.03501	6.6463
SDev	.0090	.00861	.00250	.0054	.00019	.00078	.0243
%RSD	.16606	10.161	43.539	.37756	32.647	2.2319	.36530
#1	5.4261	.07867	L-.00752	1.4408	L-.00044	.03446	6.6635
#2	5.4389	.09085	L-.00398	1.4332	L-.00070	.03556	6.6292

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.21446	.10582	9.3388	6.4893	L6.4077	1.3436	.87125
SDev	.00528	.00155	.0004	.0143	.0093	.0115	.00503
%RSD	2.4605	1.4627	.00451	.22021	.14578	.85464	.57747
#1	.21073	.10692	9.3385	6.4994	L6.4011	1.3355	.86769
#2	.21819	.10473	9.3391	6.4792	L6.4143	1.3517	.87480

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.55426	.34209	.06709	1.2766	L-.00959	.78440	L-.00512
SDev	.00103	.00720	.00245	.0293	.01294	.01447	.00032
%RSD	.18550	2.1032	3.6461	2.2978	134.98	1.8451	6.2680

#2	.55353	.33701	.06882	1.2974	L-.01874	.77417	L-.00490

000221

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.2011	L-.09963	.09844	.40427	.00877	18.721	10.15
SDev	.0425	.00543	.00286	.00587	.00164	.043	.02
%RSD	.68582	5.4538	2.9085	1.4530	18.685	.22883	.1716
#1	6.2311	L-.10347	.10046	.40011	.00993	18.691	10.16
#2	6.1710	L-.09579	.09641	.40842	.00761	18.751	10.14

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-22A-S 1;10 Operator: CLT
Run Time: 07/11/92 23:59:54
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.67068	.39650	.37739	.24503	.09489	.08754	.76753
SDev	.00884	.00246	.00031	.00162	.00006	.00046	.00403
%RSD	1.3177	.62095	.08247	.66075	.06122	.52845	.52554
#1	.67693	.39476	.37761	.24617	.09493	.08787	.77039
#2	.66444	.39824	.37717	.24388	.09485	.08721	.76468

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11656	.10142	1.0288	.74404	L-.47566	.32522	.21276
SDev	.00087	.00193	.0059	.00836	.52603	.00474	.00215
%RSD	.74806	1.9037	.57375	1.1241	110.59	1.4570	1.0125
#1	.11717	.10278	1.0330	.74995	L-.10371	.32857	.21429
#2	.11594	.10005	1.0247	.73813	L-.84762	.32186	.21124

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.15484	.43680	.09971	2.5532	.35326	.56028	.08170
SDev	.00051	.00378	.00053	.0015	.01295	.01664	.00000
%RSD	.33190	.86632	.53220	.05745	3.6655	2.9700	.00218

#2	.15447	.43413	.09933	2.5522	.34410	.54851	.08170

000222

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.10901	L.05564	.42656	.42166	.09861	2.1209	9.446
SDev	.02126	.01082	.00204	.00392	.00185	.0205	.011
%RSD	19.506	19.445	.47788	.92984	1.8784	.96432	.1147
#1	L-.09397	L.06329	.42800	.41889	.09992	2.1353	9.454
#2	L-.12405	L.04799	.42511	.42444	.09730	2.1064	9.438

Errors	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-22A-SD1:10 Operator: CLT
Run Time: 07/12/92 00:04:07
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.5331	.40009	.37784	.24953	.09459	.08580	4.0327
SDev	.0260	.00479	.01022	.00170	.00053	.00155	.0162
%RSD	.73588	1.1967	2.7040	.68104	.56496	1.8089	.40168
#1	3.5147	.39670	.37062	.24833	.09421	.08690	4.0212
#2	3.5515	.40347	.38507	.25073	.09497	.08471	4.0441

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11500	.10086	1.0499	1.9186	L1.6619	.33043	3.0844
SDev	.00210	.00114	.0072	.0161	.6831	.01016	.0136
%RSD	1.8296	1.1348	.68226	.83756	41.103	3.0740	.44185
#1	.11648	.10005	1.0448	1.9072	L1.1789	.32325	3.0748
#2	.11351	.10167	1.0550	1.9299	L2.1449	.33761	3.0940

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.000	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	5000.00	.02020	.01770

Elem	Mn2576	Mo20206	Ni2316	K_76640	Si1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.15455	.434485	.10004	2.61443	.352065	.563592	.08391
SDev	.00052	.001148	.00115	.02933	.00884	.00419	.00243
%RSD	.33298	.26226	1.1522	1.12194	2.5098	.74415	2.8958

#2	.15582	.43529	.10085	2.6352	.34581	.56062	.08219
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.14159	L.12546	.42169	.43682	.09668	2.1392	9.282
SDev	.01772	.03021	.00530	.00583	.00011	.0057	.059
%RSD	12.515	24.080	1.2568	1.3358	.11464	.26485	.6407
#1	L-.15412	L.14683	.42544	.43269	.09676	2.1352	9.240
#2	L-.12906	L.10410	.41795	.44095	.09660	2.1432	9.324
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000223

Method: RASI_ICP Sample Name: 92-06-189-22A-S Operator: CLT
Run Time: 07/12/92 00:08:22
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.3705	3.8171	3.9150	2.4119	.91556	.86010	7.1926
SDev	.0102	.0137	.0008	.0081	.00097	.00322	.0146
%RSD	.16019	.35844	.02003	.33571	.10572	.37433	.20264
#1	6.3633	3.8075	3.9155	2.4062	.91488	.85782	7.1823
#2	6.3777	3.8268	3.9144	2.4176	.91624	.86237	7.2029
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1648	1.0310	9.8320	7.0082	L6.7624	3.1156	2.0121
SDev	.0020	.0027	.0342	.0236	.8891	.0155	.0100
%RSD	.16861	.26199	.34744	.33679	13.148	.49812	.49907
#1	1.1634	1.0290	9.8079	6.9915	L6.1337	3.1047	2.0192
#2	1.1662	1.0329	9.8562	7.0249	L7.3911	3.1266	2.0050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.5124	4.1983	.97809	25.572	3.8937	4.9521	.83685
SDev	.0076	.0163	.00359	.142	.0209	.0139	.00488
%RSD	.50440	.38795	.36724	.55632	.53762	.28063	.58309

#2	1.5178	4.2098	.98063	25.672	3.9085	4.9619	.84030
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
[redacted]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.0793	1.8020	4.0794	4.1833	.97333	19.301	10.62
SDev	.0443	.1412	.0012	.0119	.00000	.106	.03
%RSD	.54832	7.8350	.03051	.28531	.00015	.54939	.2920
#1	8.0480	1.9019	4.0785	4.1918	.97333	19.226	10.60
#2	8.1106	1.7022	4.0803	4.1749	.97333	19.376	10.64
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-22A-SD Operator: CLT
Run Time: 07/12/92 00:12:37
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.6268	3.8029	3.8494	2.4936	.90586	.84388	7.3247
SDev	.0575	.0374	.0102	.0078	.00201	.00525	.0289
%RSD	.86834	.98472	.26508	.31166	.22232	.62227	.39448
#1	6.5861	3.7764	3.8422	2.4881	.90444	.84017	7.3042
#2	6.6675	3.8294	3.8567	2.4991	.90729	.84760	7.3451
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1618	1.0249	10.186	7.5034	L7.9989	3.1448	2.0581
SDev	.0007	.0066	.048	.0311	.7030	.0183	.0194
%RSD	.06280	.64534	.46773	.41427	8.7883	.58240	.94127
#1	1.1623	1.0202	10.152	7.4814	L8.4960	3.1318	2.0718
#2	1.1613	1.0296	10.220	7.5254	L7.5018	3.1577	2.0444
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
[redacted]	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.5256	4.2179	.96895	25.445	3.8803	5.1485	.84992
SDev	.0063	.0273	.00958	.101	.0333	.0021	.00618
%RSD	.40973	.64671	.98861	.39770	.85884	.03995	.72713

#2	1.5300	4.2371	.97573	25.517	3.9039	5.1499	.85429
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.7083	1.9104	4.0621	4.2905	.97720	19.640	9.933
SDev	.0691	.0434	.0298	.0119	.00549	.123	.047
%RSD	.79358	2.2700	.73290	.27791	.56228	.62380	.4747
#1	8.6594	1.8797	4.0411	4.2990	.97331	19.553	9.900
#2	8.7572	1.9410	4.0832	4.2821	.98108	19.727	9.967
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

00027

Method: RASI_ICP Sample Name: 92-06-189-23A 1:10 Operator: CLT
Run Time: 07/12/92 00:16:50
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46794	L.02055	L-.00297	.11891	.00190	L.00303	.58171
SDev	.01322	.00285	.00279	.00300	.00085	.00295	.01705
%RSD	2.8259	13.862	93.797	2.5193	44.777	97.316	2.9309
#1	.47729	L.02257	L-.00495	.12102	.00250	.00512	.59377
#2	.45859	L.01854	L-.00100	.11679	.00130	L.00095	.56965
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01696	.00661	.81839	.50149	L-1.0099	.12394	.09577
SDev	.00051	.00156	.01391	.01759	.9264	.01081	.00646
%RSD	2.9766	23.674	1.6998	3.5067	91.729	8.7214	6.7467
#1	.01732	.00771	.82823	.51393	L-.35487	.13159	.09120
#2	.01661	.00550	.80856	.48906	L-1.6650	.11630	.10033
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05858	.06538	.00843	.19393	L-.01045	.09285	L-.00129
SDev	.00240	.01174	.00385	.04693	.02893	.00901	.00049
%RSD	4.0917	17.960	45.641	24.200	276.97	9.7083	38.239

#2	.05689	.05707	.00571	.16074	L-.03091	.08648	L-.00164

000226

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.05012	L-.07654	.03773	.05611	L-.00282	2.2471	9.396
SDev	.09746	.06589	.01059	.00203	.00145	.0394	.043
%RSD	194.45	86.091	28.070	3.6230	51.217	1.7532	.4588
#1	L.01879	L-.02995	.04522	.05467	L-.00180	2.2750	9.426
#2	L-.11903	L-.12313	.03024	.05755	L-.00385	2.2193	9.366

Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-23A Operator: CLT
Run Time: 07/12/92 00:21:03
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.9769	.06092	L-.00681	1.1181	.00083	.03069	5.1338
SDev	.0118	.00644	.00032	.0035	.00015	.00005	.0072
%RSD	.29757	10.565	4.6646	.31139	18.543	.16789	.14073
#1	3.9685	.06547	L-.00703	1.1157	.00094	.03073	5.1287
#2	3.9853	.05637	L-.00658	1.1206	.00072	.03065	5.1389

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.16608	.09792	7.6651	4.4168	L4.8779	1.0593	.68546
SDev	.00107	.00190	.0207	.0053	.2209	.0047	.01220
%RSD	.64271	1.9397	.26968	.11942	4.5291	.44326	1.7795
#1	.16684	.09658	7.6505	4.4131	L5.0342	1.0626	.69408
#2	.16533	.09926	7.6797	4.4206	L4.7217	1.0560	.67683

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.54728	.26029	.05494	1.3264	L-.02464	.57279	L-.00285
SDev	.00206	.00152	.00121	.0587	.00938	.00276	.00033
%RSD	.37676	.58231	2.1992	4.4229	38.047	.48114	11.501

#2	.54873	.26136	.05580	1.2849	L-.03127	.57473	L-.00309
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.0719	L-.17090	.08760	.43680	L.00044	19.974	10.66
SDev	.0514	.06374	.01342	.01568	.00044	.134	.04
%RSD	.72665	37.298	15.319	3.5896	99.595	.67170	.3725
#1	7.0355	L-.21597	.09709	.44789	L.00074	19.879	10.63
#2	7.1082	L-.12583	.07811	.42572	L.00013	20.069	10.69
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000227

Method: RASI_ICP Sample Name: 92-06-189-24A 1:10 Operator: CLT
Run Time: 07/12/92 00:25:17
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.68869	L-.00080	L-.02200	.18142	L-.00005	L.00023	.82682
SDev	.02227	.01403	.00662	.00040	.00020	.00066	.00225
%RSD	3.2345	1760.7	30.104	.22286	425.94	290.08	.27231
#1	.70444	L.00912	L-.02669	.18171	L.00009	L.00070	.82841
#2	.67294	L-.01071	L-.01732	.18114	L-.00019	L-.00024	.82522
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02266	L.00359	1.1213	.80094	L-.67925	.16969	.10424
SDev	.00266	.00115	.0029	.00211	1.88238	.00745	.00287
%RSD	11.748	32.083	.26313	.26294	277.13	4.3919	2.7540
#1	.02078	.00440	1.1234	.80243	L.65179	.17496	.10221
#2	.02454	L.00277	1.1192	.79945	L-2.0103	.16442	.10627
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05795	.04933	L.00496	.11304	L-.04841	.09927	L-.00682
SDev	.00077	.00114	.00346	.02933	.02013	.00273	.00130
%RSD	1.3354	2.3053	69.621	25.949	41.576	2.7482	19.061

#2	.05740	.04852	L.00252	.09230	L-.03418	.09734	L-.00773

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000228

[redacted]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.26689	L-.14538	.02798	.05880	L-.00556	2.1791	9.358
SDev	.07442	.10469	.00325	.00192	.00012	.0200	.003
%RSD	27.886	72.007	11.629	3.2630	2.0804	.91993	.0363
#1	L-.21426	L-.07136	.02567	.06015	L-.00564	2.1932	9.356
#2	L-.31951	L-.21941	.03028	.05744	L-.00547	2.1649	9.361

Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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[redacted]ethod: RASI_ICP Sample Name: 92-06-189-24A Operator: CLT
Run Time: 07/12/92 00:29:32
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.4743	.09106	L-.02639	1.7829	L-.00010	.02848	7.7905
SDev	.0267	.00072	.00718	.0051	.00000	.00008	.0346
%RSD	.41313	.79420	27.204	.28606	1.8019	.28508	.44438
#1	6.4554	.09054	L-.02132	1.7793	L-.00010	.02842	7.7661
#2	6.4932	.09157	L-.03147	1.7865	L-.00011	.02853	7.8150

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.26287	.10551	10.800	7.7065	L6.3410	1.5884	1.0047
SDev	.00018	.00041	.051	.0295	.4356	.0014	.0108
%RSD	.06941	.38620	.47630	.38225	6.8698	.08837	1.0704
#1	.26274	.10522	10.764	7.6856	L6.0330	1.5874	.99709
#2	.26300	.10580	10.837	7.7273	L6.6491	1.5894	1.0123

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
[redacted]	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.57850	.37783	.06764	1.2839	L-.03425	.71783	L-.00110
SDev	.00189	.00000	.00225	.0015	.00663	.01386	.00113
%RSD	.32603	.00028	3.3287	.11423	19.364	1.9308	102.74

#2	.57983	.37783	.06604	1.2849	L-.03893	.72763	L-.00189
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000229

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.8214	L-.09147	.09391	.49697	L.00288	19.632	10.19
SDev	.0230	.03567	.01101	.00201	.00112	.123	.04
%RSD	.39571	38.993	11.721	.40471	38.822	.62833	.3792
#1	5.8051	L-.06625	.08612	.49839	.00367	19.545	10.17
#2	5.8377	L-.11670	.10169	.49555	L.00209	19.719	10.22
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-25A 1:10 Operator: CLT
Run Time: 07/12/92 00:33:46
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17682	L.00446	L-.02593	.08719	L-.00057	L-.00178	.39545
SDev	.00223	.00240	.00289	.00154	.00006	.00185	.00135
%RSD	1.2629	53.835	11.147	1.7650	9.8187	104.25	.34139
#1	.17840	L.00276	L-.02798	.08828	L-.00053	L-.00309	.39641
#2	.17525	L.00615	L-.02389	.08611	L-.00061	L-.00047	.39450
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00651	L-.00489	.30782	.54377	L.45222	.04564	.04051
SDev	.00437	.00000	.00591	.00522	.96660	.01416	.01723
%RSD	67.073	.01668	1.9194	.95962	213.75	31.019	42.529
#1	L.00342	L-.00489	.31200	.54746	L1.1357	.03563	.02833
#2	.00960	L-.00490	.30364	.54008	L-.23127	.05565	.05270
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.14719	.02654	L.00166	L.01867	L-.03714	.07867	L-.00486
SDev	.00086	.00076	.00356	.02787	.00166	.00422	.00260
%RSD	.58259	2.8622	213.78	149.28	4.4636	5.3641	53.502

#2	.14659	.02600	L.00418	L.03837	L-.03596	.08165	L-.00302

000230

Errors	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

[redacted]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.08646	L-.07643	L.00760	L.01670	L-.00630	.51639	9.367
SDev	.03544	.08743	.00043	.00782	.00217	.02182	.064
%RSD	40.992	114.39	5.6116	46.809	34.394	4.2259	.6802
#1	L.11152	L-.13826	L.00790	L.01118	L-.00784	.53182	9.412
#2	L.06140	L-.01461	L.00730	L.02223	L-.00477	.50096	9.322

Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/12/92 00:38:00
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5069	-.00314	10.239	1.0153	.97083	2.4242	2.4360
SDev	.0120	.00781	.056	.0018	.00110	.0026	.0054
%RSD	.47967	248.42	.54872	.17543	.11315	.10923	.22032
#1	2.5154	.00238	10.199	1.0141	.97005	2.4261	2.4398
#2	2.4984	-.00867	10.279	1.0166	.97160	2.4224	2.4322

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

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4851	2.4110	2.5779	2.4132	Q1.2038	4.9394	2.5134
SDev	.0051	.0023	.0004	.0195	.9410	.0061	.0007
%RSD	.20499	.09630	.01627	.80859	78.171	.12283	.02814
#1	2.4815	2.4126	2.5782	2.3994	Q1.8692	4.9437	2.5129
#2	2.4887	2.4093	2.5776	2.4270	Q.53839	4.9351	2.5139

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
[redacted]lue	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
[redacted]e	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.96689	.00312	2.4183	5.0027	10.467	.00553	2.4256
SDev	.00076	.00076	.0044	.0484	.043	.00409	.0047
%RSD	.07915	24.368	.18376	.96744	.41363	73.936	.19434

#2	.96635	.00366	2.4151	4.9685	10.436	.00264	2.4223
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q3.9569	5.2364	-.00293	-.00567	2.4465	2.5525	9.093
SDev	.0266	.0626	.00324	.00777	.0072	.0163	.030
%RSD	.67173	1.1961	110.84	137.13	.29227	.63682	.3247
#1	Q3.9757	5.2807	-.00063	-.00017	2.4414	2.5640	9.114
#2	Q3.9382	5.1921	-.00522	-.01116	2.4515	2.5410	9.072
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 00:46:42
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.315	-.01511	.05973	.00152	-.00587	-.00264	23.475
SDev	.204	.01307	.02282	.00010	.00076	.00103	.126
%RSD	.83738	86.533	38.205	6.5029	12.943	39.199	.53508
#1	24.171	-.00586	.07586	.00159	-.00533	-.00191	23.386
#2	24.459	-.02435	.04359	.00145	-.00641	-.00337	23.564
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01475	23.569	.01898	23.593	26.437	.00517	24.433
SDev	.00436	.171	.00164	.166	1.810	.00484	.209
%RSD	29.523	.72420	8.6576	.70537	6.8477	93.697	.85612
#1	-.01167	23.448	.02014	23.476	25.157	.00859	24.285
#2	-.01783	23.690	.01781	23.711	Q27.717	.00174	24.581
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.5965	.00094	-.00524	49.616	-.04936	-.00645	-.02624
SDev	.0677	.00301	.00067	.352	.00536	.00786	.00311
%RSD	.70582	319.28	12.692	.70943	10.860	121.92	11.859

#2	9.6444	-.00119	-.00571	49.865	-.05315	-.01201	-.02844
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000232

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	49.179	.23342	.01521	-.02562	24.059	.01393	9.347
SDev	.478	.00860	.00239	.00959	.157	.00041	.083
%RSD	.97286	3.6859	15.717	37.434	.65232	2.9363	.8930
#1	48.840	.22734	.01690	-.01884	23.948	.01364	9.288
#2	49.517	.23951	.01352	-.03241	24.170	.01422	9.406
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 00:50:57
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13501	10.190	10.418	.00181	.00236	-.22882	.08080
SDev	.02617	.064	.029	.00032	.00013	.00052	.02189
%RSD	19.385	.62566	.28299	17.623	5.6231	.22721	27.088
#1	.15352	10.145	10.397	.00204	.00246	-.22919	.09628
#2	.11651	10.235	10.438	.00159	.00227	-.22845	.06532
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00453	.12149	.00628	.11509	-1.9361	-.04425	.08192
SDev	.00147	.02965	.00172	.03258	.8075	.00011	.03522
%RSD	32.461	24.406	27.322	28.312	41.708	.25549	42.995
#1	-.00349	.14246	.00749	.13812	-2.5071	-.04417	.10683
#2	-.00557	.10053	.00507	.09205	-1.3651	-.04433	.05702
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03593	10.234	-.00295	.18356	10.378	9.6537	.00044
SDev	.01193	.081	.00218	.05867	.100	.0312	.00017
%RSD	33.194	.79576	73.740	31.960	.96207	.32342	39.959

#2	.02750	10.291	-.00449	.14208	10.449	9.6758	.00056
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

000233

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.0613	-.12121	10.665	9.7934	.23140	.00804	9.694
SDev	.0709	.00860	.007	.0348	.05099	.00080	.043
%RSD	6.6787	7.0952	.06955	.35572	22.033	9.9505	.4469
#1	-1.0112	-.12729	10.660	9.8180	.26746	.00860	9.663
#2	-1.1114	-.11513	10.670	9.7688	.19535	.00747	9.725
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

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ethod: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 00:55:12
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.04209	H.07067	H.03997	-.00000	-.00031	L-.00513	H.03686
SDev	.00240	.01513	.00002	.00032	.00006	.00019	.00007
%RSD	5.7066	21.415	.03986	7393.6	18.252	3.6567	.19192
#1	H.04039	H.08137	H.03996	-.00023	-.00035	L-.00526	H.03681
#2	H.04379	H.05997	H.03998	.00022	-.00027	L-.00499	H.03691
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00383	H.02412	H.00231	H.04237	L-.48548	-.00701	H.04266
SDev	.00281	.00694	.00170	.01893	1.25987	.01147	.00862
%RSD	73.350	28.756	73.535	44.668	259.51	163.54	20.200
#1	-.00582	H.02902	H.00111	H.05575	H.40538	-.01512	H.04876
#2	-.00184	H.01921	H.00351	H.02899	L-1.3763	.00110	H.03657
Errors	LC Pass	LC High	LC High	LC High	LC Low	LC Pass	LC High
h	.00650	.00230	.00100	.00230	.00230	.02280	.01720
	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00932	H.09320	L-.00380	-.00104	.02423	H.07485	L-.00700
SDev	.00309	.01780	.00196	.00587	.01816	.01451	.00405
%RSD	33.113	19.101	51.627	565.68	74.976	19.388	57.886

#2	H.00714	H.08062	-.00241	-.00519	.01138	.06459	-.00414

Errors	LC High	LC High	LC Low	LC Pass	LC Pass	LC High	LC Low
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.2267	-.01483	H.07144	H.04255	H.04625	H.01170	9.049
SDev	.0284	.03463	.00039	.00773	.00193	.00272	.013
%RSD	2.3113	233,47	.54787	18.174	4.1745	23.283	.1385
#1	-1.2066	-.03932	H.07116	H.04802	H.04762	H.01363	9.041
#2	L-1.2467	.00965	H.07171	.03708	H.04489	H.00977	9.058

Errors	LC Pass	LC Pass	LC High	LC High	LC High	LC High	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-189-25A Operator: CLT
Run Time: 07/11/92 00:59:27
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.4623	.07344	L-.00824	.82763	L-.00075	L.00315	3.5598
SDev	.0149	.00027	.00313	.00793	.00000	.00051	.0191
%RSD	1.0185	.36957	38.013	.95875	.47813	16.064	.53724
#1	1.4518	.07363	L-.00603	.82202	L-.00075	L.00279	3.5463
#2	1.4728	.07324	L-.01046	.83324	L-.00075	L.00350	3.5734

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09322	.02378	2.7523	5.2249	L4.5518	.35527	.43584
SDev	.00142	.00269	.0215	.0434	.9727	.00199	.00288
%RSD	1.5197	11.307	.78203	.82986	21.371	.56001	.66033
#1	.09221	.02568	2.7371	5.1943	L3.8639	.35668	.43788
#2	.09422	.02188	2.7675	5.2556	L5.2396	.35387	.43381

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.4728	.22981	.03042	.45941	L-.01131	.59649	L-.00637
SDev	.0141	.00151	.00089	.00587	.01049	.00342	.00131
%RSD	.96042	.65746	2.9230	1.2769	92.782	.57384	20.640

#2	1.4828	.22874	.02979	.46356	L-.01873	.59407	L-.00544
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000235

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.6944	L-.16541	.06523	.25127	.00512	3.9992	10.27
SDev	.0390	.05718	.00409	.00428	.00280	.0393	.07
%RSD	.40213	34.571	6.2723	1.7038	54.756	.98144	.6950
#1	9.6668	L-.12497	.06234	.25430	.00710	3.9715	10.22
#2	9.7220	L-.20585	.06813	.24825	L.00314	4.0270	10.32
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-26A 1;10 Operator: CLT
Run Time: 07/11/92 01:03:40
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13674	L.00547	L-.02044	.06887	L-.00066	L-.00328	.30822
SDev	.00961	.00671	.01009	.00041	.00008	.00044	.00137
%RSD	7.0264	122.65	49.339	.58896	11.311	13.432	.44478
#1	.14354	L.01021	L-.01331	.06859	L-.00061	L-.00297	.30725
#2	.12995	L.00073	L-.02757	.06916	L-.00072	L-.00360	.30919
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00436	L.00031	.25560	.57357	L.66019	L.01744	.03032
SDev	.00563	.00192	.00210	.00496	.99327	.00947	.02011
%RSD	129.10	622.85	.82169	.86443	150.45	54.278	66.310
#1	.00834	L.00167	.25708	.57006	L-.04215	.02414	.04454
#2	L.00038	L-.00105	.25411	.57708	L1.3625	L.01075	L.01610
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11828	.03351	L.00230	L.02385	L-.02314	.06928	L-.00646
SDev	.00060	.00378	.00016	.07626	.00992	.01879	.00000
%RSD	.50795	11.287	7.0018	319.74	42.881	27.118	.00937

#2	.11871	.03084	L.00219	L-.03007	L-.03015	.05600	L-.00646
Errors	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.22429	L.00521	.02086	L.02300	L.00211	.54197	9.464
SDev	.08860	.04534	.00042	.00782	.00210	.00218	.171
%RSD	39.503	869.63	2.0107	34.001	99.279	.40177	1.809
#1	L-.16164	L-.02685	L.02057	L.02853	.00360	.54043	9.343
#2	L-.28694	L.03727	.02116	L.01747	L.00063	.54351	9.585
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000236

Method: RASI_ICP Sample Name: 92-06-189-26A Operator: CLT
Run Time: 07/11/92 01:07:54
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1535	.04397	L-.01990	.67803	L-.00088	L-.00192	2.7312
SDev	.0045	.00479	.01198	.00089	.00012	.00041	.0007
%RSD	.38934	10.882	60.179	.13138	14.149	21.148	.02546
#1	1.1504	.04059	L-.01143	.67740	L-.00079	L-.00221	2.7307
#2	1.1567	.04736	L-.02837	.67866	L-.00097	L-.00164	2.7317
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07668	.01806	2.4677	5.5833	L5.0068	.24545	.33222
SDev	.00158	.00076	.0042	.0024	.2258	.00808	.00789
%RSD	2.0657	4.1786	.17071	.04349	4.5099	3.2919	2.3764
#1	.07780	.01753	2.4648	5.5850	L5.1665	.25117	.33781
#2	.07556	.01860	2.4707	5.5816	L4.8472	.23974	.32664
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1568	.22692	.02644	.30801	L-.04345	.45917	L-.00674
SDev	.0015	.00114	.00100	.00587	.00000	.00003	.00260
%RSD	.13321	.50082	3.7798	1.9047	.00225	.00565	38.557

#2	1.1557	.22612	.02573	.31215	L-.04345	.45915	L-.00858
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.1208	L-.15802	.06312	.22109	L.00119	4.9849	10.49
SDev	.0602	.01721	.00814	.00395	.00077	.0100	.02
%RSD	.84609	10.888	12.898	1.7849	64.951	.20106	.2166
#1	7.0782	L-.17019	.06888	.21829	L.00174	4.9778	10.48
#2	7.1634	L-.14585	.05737	.22388	L.00064	4.9920	10.51
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000237

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Method: RASI_ICP Sample Name: 92-06-189-27A 1;10 Operator: CLT
Run Time: 07/11/92 01:12:08
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13635	L-.00155	L-.02464	.06796	L-.00063	L-.00319	.30268
SDev	.00142	.00308	.01213	.00138	.00002	.00053	.00430
%RSD	1.0439	198.32	49.216	2.0257	3.9297	16.662	1.4194
#1	.13534	L-.00373	L-.03321	.06893	L-.00061	L-.00356	.29965
#2	.13735	L.00062	L-.01606	.06698	L-.00065	L-.00281	.30572
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00104	L-.00325	.26515	.64768	L.70530	.02076	.02672
SDev	.00123	.00152	.00463	.00958	.33248	.00876	.00072
%RSD	118.87	46.921	1.7461	1.4788	47.140	42.200	2.7032
#1	L.00191	L-.00432	.26842	.65446	L.94039	L.01457	.02621
#2	L.00017	L-.00217	.26187	.64091	L.47020	.02696	.02723
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12047	.02629	L.00063	L-.03319	L-.04753	.05308	L-.00632
SDev	.00145	.00038	.00084	.00440	.00635	.00275	.00080
%RSD	1.2080	1.4473	132.77	13.258	13.354	5.1781	12.716

#2	.11945	.02602	L.00122	L-.03630	L-.04304	.05502	L-.00575
Errors	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.22429	L-.11528	L.01398	L.01191	L-.00381	.56774	9.424
SDev	.04607	.00655	.00935	.01558	.00172	.01016	.116
%RSD	20.542	5.6802	66.904	130.81	45.071	1.7889	1.230
#1	L-.19171	L-.11991	L.02059	L.02292	L-.00502	.57492	9.506
#2	L-.25686	L-.11065	L.00737	L.00089	L-.00259	.56056	9.342
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000238

Method: RASI_ICP Sample Name: 92-06-189-27A Operator: CLT
Run Time: 07/11/92 01:16:21
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1504	.04629	L-.02890	.67316	L-.00085	L-.00173	2.8117
SDev	.0030	.00420	.00093	.00146	.00019	.00013	.0083
%RSD	.25975	9.0670	3.2086	.21649	22.900	7.4754	.29660
#1	1.1483	.04332	L-.02824	.67213	L-.00071	L-.00164	2.8058
#2	1.1526	.04925	L-.02955	.67419	L-.00099	L-.00182	2.8176
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08103	.03494	2.5733	6.3652	L6.5872	.25209	.33599
SDev	.00052	.00001	.0084	.0158	.7755	.01214	.00072
%RSD	.64836	.01979	.32785	.24832	11.773	4.8141	.21284
#1	.08066	.03495	2.5673	6.3541	L7.1356	.24351	.33548
#2	.08140	.03494	2.5793	6.3764	L6.0389	.26067	.33649
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1984	.22484	.02992	.29556	L-.03609	.45243	L-.00786
SDev	.0038	.00190	.00036	.02640	.00883	.01387	.00032
%RSD	.31491	.84342	1.2124	8.9319	24.470	3.0658	4.0689

#2	1.2011	.22350	.03018	.31423	L-.04233	.46224	L-.00698

000239

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.3438	L-.11064	.05818	.21028	L.00003	5.1741	10.58
SDev	.0815	.00864	.00326	.00185	.00040	.0389	.05
%RSD	1.1100	7.8079	5.6045	.87882	1513.2	.75152	.4376
#1	7.2861	L-.10454	.06048	.20897	L-.00026	5.1466	10.55
#2	7.4014	L-.11675	.05587	.21158	L.00031	5.2016	10.61

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-189-28A 1:10 Operator: CLT
Run Time: 07/11/92 01:20:35
Comment: IEA
Type : CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13476	L-.00823	L-.01690	.06172	L-.00074	L-.00258	.31831
SDev	.00814	.00261	.00339	.00049	.00001	.00076	.00517
%RSD	6.0388	31.663	20.075	.78844	1.7402	29.415	1.6244
#1	.12901	L-.01008	L-.01930	.06206	L-.00073	L-.00312	.31466
#2	.14052	L-.00639	L-.01450	.06137	L-.00075	L-.00205	.32197

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00117	L-.00517	.25027	.46302	L-.43627	L.01171	.02733
SDev	.00191	.00269	.00211	.01240	.77041	.00676	.01579
%RSD	163.54	52.063	.84131	2.6786	176.59	57.728	57.775
#1	L-.00252	L-.00707	.25176	.45425	L.10850	L.00693	L.01616
#2	L.00018	L-.00327	.24879	.47179	L-.98103	L.01649	.03849

Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12925	.02279	L.00010	L-.02489	L-.05736	.05697	L-.00467
SDev	.00068	.00076	.00146	.02200	.01708	.00280	.00293
%RSD	.52963	3.3266	1414.7	88.388	29.782	4.9076	62.729

#1	.12978	.02383	L-.00093	L-.04948	L-.00548	.05886	L-.00274
#2	.12876	.02226	L.00114	L-.00933	L-.04528	.05895	L-.00260
Errors	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_371C
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.16038	L-.12744	L.00531	L-.00212	L-.00377	.52704	9.473
SDev	.00532	.06694	.00284	.00779	.00143	.00840	.106
%RSD	3.3145	52.526	53.522	368.02	37.795	1.5947	1.114
#1	L-.15662	L-.17477	L.00731	L.00339	L-.00478	.53298	9.548
#2	L-.16414	L-.08011	L.00330	L-.00763	L-.00277	.52110	9.399
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000248

Method: RASI_ICP Sample Name: 92-06-189-28A Operator: CLT
Run Time: 07/11/92 01:24:49
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.3885	.03467	L-.02367	.58227	L-.00083	L-.00054	6.5953
SDev	.0074	.00602	.00728	.00283	.00016	.00012	.0018
%RSD	.16775	17.364	30.744	.48678	19.003	22.414	.02741
#1	4.3833	.03892	L-.01852	.58427	L-.00072	L-.00063	6.5940
#2	4.3937	.03041	L-.02881	.58026	L-.00094	L-.00045	6.5966
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06200	.00694	2.3176	5.4640	L4.6788	.18670	3.5907
SDev	.00192	.00116	.0017	.0144	1.7243	.00133	.0086
%RSD	3.0953	16.738	.07237	.26407	36.854	.71466	.23985
#1	.06336	.00776	2.3188	5.4742	L5.8980	.18764	3.5846
#2	.06064	.00612	2.3164	5.4538	L3.4595	.18575	3.5968
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2179	.18566	.02355	.34430	L-.03906	.47307	L-.00507
SDev	.0020	.00038	.00267	.01613	.00385	.00690	.00001
%RSD	.16181	.20256	11.360	4.6856	9.8502	1.4575	.21309

[redacted]2	1.2166	.18592	.02544	.33289	L-.04178	.47795	L-.00508
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
[redacted]ow	.00180	.00350	.00530	.04230	.03080	.02670	.00700
[redacted]Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
[redacted]nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
[redacted]vge	7.6595	L-.03807	.08274	.19055	L-.00187	4.5601	10.27
SDev	.0284	.05162	.00324	.01752	.00067	.0077	.01
[redacted]RSD	.37015	135.61	3.9207	9.1955	35.994	.16943	.0496
#1	7.6395	L-.00157	.08503	.20294	L-.00235	4.5547	10.27
#2	7.6796	L-.07457	.08045	.17816	L-.00140	4.5656	10.28
[redacted]rrors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
[redacted]ow	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000241

[redacted]thod: RASI_ICP Sample Name: 92-06-178-11A Operator: CLT
?un Time: 07/11/92 01:29:02
[redacted]mment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
[redacted]nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
[redacted]vge	49.690	L-.01203	.03313	.36790	.00131	L-.03477	23.080
SDev	.907	.00717	.02035	.00466	.00013	.00061	.281
[redacted]RSD	1.8249	59.579	61.434	1.2654	9.7806	1.7425	1.2196
#1	49.049	L-.00696	.04752	.36460	.00140	L-.03434	22.881
#2	50.332	L-.01710	L.01874	.37119	.00121	L-.03520	23.279
[redacted]rrors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
[redacted]ow	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
[redacted]nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
[redacted]vge	.47378	.09091	.40406	93.124	102.43	.13633	30.384
SDev	.00545	.00003	.00587	1.279	.21	.00750	.490
[redacted]RSD	1.1499	.02703	1.4520	1.3735	.20667	5.5008	1.6137
#1	.46992	.09093	.39991	92.219	102.28	.14163	30.037
#2	.47763	.09089	.40821	94.028	102.58	.13103	30.730
[redacted]rrors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
H[redacted]	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]ow	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
[redacted]vge	2.9710	.01574	.38680	18.544	L-.05939	5.2952	L-.00563
SDev	.0432	.00409	.00302	.358	.02107	.0630	.00314
[redacted]RSD	1.4553	25.962	.78054	1.9298	35.468	1.1901	55.841

#1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
#2	3.0015	.01285	.38894	18.797	L-.07429	5.3397	L-.00785

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.2211	L-.32290	.04172	1.2615	.09776	.16057	10.26
SDev	.1630	.08096	.01103	.0008	.00263	.00293	.14
%RSD	2.6205	25.073	26.448	.06326	2.6858	1.8246	1.343
#1	6.1058	L-.26565	.04952	1.2610	.09962	.15850	10.16
#2	6.3364	L-.38015	.03392	1.2621	.09591	.16264	10.36

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-178-11A-S Operator: CLT
Run Time: 07/11/92 01:33:15
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	94.789	3.4461	3.8768	2.4977	1.7475	1.5941	27.596
SDev	.833	.0357	.0328	.0264	.0129	.0157	.201
%RSD	.87828	1.0368	.84725	1.0586	.74098	.98682	.72837
#1	94.200	3.4208	3.9000	2.4791	1.7384	1.5830	27.454
#2	95.378	3.4713	3.8536	2.5164	1.7567	1.6052	27.738

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3057	1.8581	2.2793	120.76	133.66	3.7204	41.481
SDev	.0149	.0216	.0223	.93	1.67	.0362	.445
%RSD	.64774	1.1636	.97998	.77366	1.2469	.97239	1.0718
#1	2.2952	1.8428	2.2635	120.10	134.84	3.6948	41.167
#2	2.3163	1.8734	2.2951	121.43	132.48	3.7459	41.796

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.2292	3.8032	2.1167	77.803	3.6897	7.6708	1.7093
SDev	.0496	.0345	.0233	.804	.0298	.0742	.0151
%RSD	.94896	.90776	1.1024	1.0330	.80797	.96783	.88229

#2	5.2643	3.8276	2.1332	78.371	3.7108	7.7233	1.7200
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.466	3.6660	3.8692	5.0996	2.0212	1.9977	10.31
SDev	.120	.0221	.0186	.0287	.0192	.0170	.09
%RSD	.96659	.60234	.48171	.56320	.95028	.85328	.9190
#1	12.381	3.6817	3.8560	5.1199	2.0076	1.9857	10.24
#2	12.551	3.6504	3.8824	5.0793	2.0348	2.0098	10.37
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

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ethod: RASI_ICP Sample Name: 92-06-178-11A-SD Operator: CLT
Run Time: 07/11/92 01:37:28
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	103.34	3.3405	3.8323	2.5893	1.7793	1.6245	27.975
SDev	1.08	.0339	.0382	.0393	.0263	.0147	.272
%RSD	1.0477	1.0142	.99552	1.5181	1.4787	.90237	.97076
#1	104.11	3.3645	3.8593	2.6171	1.7979	1.6349	28.167
#2	102.58	3.3166	3.8054	2.5616	1.7607	1.6142	27.783
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3499	1.8910	2.3304	124.53	139.83	3.8123	42.945
SDev	.0192	.0166	.0282	1.07	.94	.0084	.324
%RSD	.81850	.87840	1.2111	.85926	.67394	.22144	.75438
#1	2.3635	1.9027	2.3503	125.28	139.17	3.8183	43.174
#2	2.3363	1.8792	2.3104	123.77	140.50	3.8063	42.716
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.2905	3.7634	2.1644	80.959	3.7023	8.3072	1.7647
SDev	.0518	.0281	.0198	.791	.0581	.0347	.0172
%RSD	.97869	.74671	.91336	.97643	1.5703	.41826	.97721

#2	5.3539	3.7435	2.1504	80.400	3.6612	8.2826	1.7525
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.259	3.7664	3.8183	5.1075	2.0780	2.1061	10.84
SDev	.190	.1870	.0195	.0073	.0283	.0157	.15
%RSD	1.4300	4.9637	.51023	.14291	1.3604	.74429	1.390
#1	13.393	3.8986	3.8321	5.1023	2.0979	2.1172	10.94
#2	13.125	3.6342	3.8045	5.1126	2.0580	2.0950	10.73
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000244

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 01:41:42
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.8452	.00408	10.613	1.0438	.99167	2.4949	2.5768
SDev	.0920	.00654	.006	.0027	.00085	.0022	.0213
%RSD	3.2340	160.16	.05192	.26335	.08555	.08636	.82768
#1	Q2.9102	.00870	10.609	1.0458	.99107	2.4934	2.5919
#2	Q2.7801	-.00054	10.617	1.0419	.99227	2.4965	2.5618
Errors	QC Fail	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5540	2.4821	2.6289	Q2.8470	Q1.1411	5.1318	2.6946
SDev	.0015	.0073	.0093	.1125	.9200	.0292	.0545
%RSD	.05924	.29439	.35246	3.9512	80.626	.56845	2.0229
#1	2.5551	2.4873	2.6354	Q2.9265	Q1.7917	5.1524	2.7332
#2	2.5529	2.4770	2.6223	Q2.7675	Q.49056	5.1112	2.6561
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0064	.02645	2.4964	5.3502	10.731	.01628	2.5089
SDev	.0048	.00569	.0007	.0499	.006	.01109	.0057
%RSD	.47810	21.509	.02909	.93203	.05322	68.137	.22818

#2	1.0030	.02242	2.4969	5.3149	10.727	.00844	2.5049
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q4.1800	5.3369	.00284	-.01113	2.5001	2.6320	9.319
SDev	.1045	.2038	.00569	.00573	.0028	.0145	.004
%RSD	2.5012	3.8186	200.35	51.445	.11005	.55002	.0479
#1	Q4.2539	5.4810	-.00118	-.00708	2.5020	2.6422	9.322
#2	Q4.1061	5.1928	.00686	-.01518	2.4981	2.6217	9.316
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

000245

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 01:45:57
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.027	-.02040	.09914	.00512	-.00292	.00581	24.163
SDev	.110	.00108	.02533	.00136	.00160	.00343	.090
%RSD	.44152	5.3086	25.553	26.649	54.765	59.101	.37324
#1	25.105	-.02117	.11706	.00609	-.00179	.00823	24.227
#2	24.949	-.01964	.08123	.00416	-.00405	.00338	24.099
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00189	24.198	.02387	24.279	Q27.923	.02997	25.130
SDev	.00133	.105	.00425	.127	1.619	.00978	.106
%RSD	69.992	.43475	17.814	.52481	5.7972	32.617	.42352
#1	-.00096	24.273	.02687	24.369	26.779	.03689	25.205
#2	-.00283	24.124	.02086	24.189	Q29.068	.02306	25.055
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Fail	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.8428	.00583	.00203	50.972	-.00367	-.00145	-.01685
SDev	.0552	.00077	.00244	.317	.02675	.00545	.00372
%RSD	.56091	13.134	120.04	.62150	729.04	375.18	22.100

#2	9.8037	.00529	.00031	50.748	-.02259	-.00530	-.01948
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000246

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	50.518	.15851	.00473	-.02525	24.603	.01052	9.598
SDev	.278	.02157	.00613	.00439	.119	.00458	.086
%RSD	.55071	13.611	129.60	17.377	.48391	43.590	.8939
#1	50.715	.17376	.00907	-.02215	24.687	.01376	9.659
#2	50.321	.14325	.00040	-.02835	24.519	.00728	9.538
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 01:50:10
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13749	10.453	10.651	.00233	.00312	-.22881	.05348
SDev	.02289	.007	.007	.00008	.00008	.00040	.02744
%RSD	16.648	.07006	.06423	3.5766	2.5722	.17306	51.307
#1	.15367	10.448	10.656	.00227	.00318	-.22909	.07288
#2	.12130	10.458	10.646	.00239	.00306	-.22853	.03408
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00406	.09699	.00136	.21409	-1.2989	-.03572	.09349
SDev	.00256	.02358	.00168	.08601	.9768	.00393	.02574
%RSD	62.962	24.309	123.32	40.175	75.202	11.016	27.532
#1	-.00587	.11367	.00017	.15327	-1.9897	-.03850	.07529
#2	-.00225	.08032	.00256	.27490	-.60822	-.03294	.11169
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02985	10.433	-.00256	.11408	10.556	9.7714	.00075
SDev	.00667	.012	.00214	.03080	.014	.0521	.00022
%RSD	22.344	.11263	83.519	26.999	.13040	.53297	28.757

#2	.02514	10.425	-.00105	.09230	10.546	9.8082	.00090
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

000247

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.0738	-.19582	10.943	9.8350	.18384	-.00652	9.875
SDev	.0567	.00965	.037	.0002	.05181	.00028	.082
%RSD	5.2806	4.9273	.33467	.00171	28.179	4.3451	.8323
#1	-1.1139	-.18900	10.969	9.8348	.22047	-.00632	9.933
#2	-1.0337	-.20264	10.917	9.8351	.14721	-.00672	9.817
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 01:54:25
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.07886	H.05511	H.03758	H.00051	H.00073	L-.00235	H.03575
SDev	.02993	.02642	.02639	.00056	.00017	.00055	.01381
%RSD	37.956	47.935	70.229	110.66	24.012	23.618	38.627
#1	H.05770	H.07379	H.05625	.00011	H.00060	L-.00196	H.02598
#2	H.10003	H.03643	.01892	H.00091	H.00085	L-.00274	H.04551
Errors	LC High	LC High	LC High	LC High	LC High	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00133	H.01155	-.00006	H.09551	L-.31621	.00685	H.04820
SDev	.00090	.00155	.00002	.04008	.77768	.00129	.01792
%RSD	67.966	13.434	36.373	41.963	245.94	18.760	37.180
#1	.00197	H.01265	-.00008	H.06717	H.23369	.00776	H.03552
#2	.00069	H.01046	-.00005	H.12384	L-.86611	.00594	H.06087
Errors	LC Pass	LC High	LC Pass	LC High	LC Low	LC Pass	LC High
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00781	H.08303	.00104	-.02593	.03730	.06565	-.00260
SDev	.00078	.02689	.00200	.04400	.00358	.01803	.00113
%RSD	9.9440	32.385	191.86	169.71	9.6007	27.470	43.302

#2	H.00836	H.06402	.00245	.00519	H.03984	.05290	-.00340

000248

Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.2342	-.02224	H.05532	.02877	H.01411	H.00143	8.938
SDev	.0071	.07998	.00528	.01564	.00026	.00067	.094
%RSD	.57430	359.56	9.5507	54.362	1.8062	46.799	1.048
#1	-1.2392	-.07880	H.05906	.03983	H.01429	H.00096	8.872
#2	-1.2292	.03431	H.05159	.01771	H.01393	H.00191	9.004

Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC High	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-178-12A Operator: CLT
Run Time: 07/11/92 01:58:39
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	82.759	L-.00045	.03930	.66461	.00474	L-.04331	29.396
SDev	.167	.01990	.02241	.00211	.00054	.00027	.019
%RSD	.20200	4436.4	57.014	.31775	11.302	.62831	.06633
#1	82.641	L.01362	.05514	.66611	.00512	L-.04350	29.383
#2	82.877	L-.01452	L.02345	.66312	.00436	L-.04311	29.410

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.23084	.10680	.35870	125.08	138.82	.07904	44.809
SDev	.00157	.00152	.00126	.02	.67	.01114	.130
%RSD	.68192	1.4269	.34984	.01822	.48138	14.090	.28989
#1	.23195	.10788	.35959	125.09	138.35	.07116	44.717
#2	.22973	.10572	.35781	125.06	139.29	.08691	44.901

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.3180	.03042	.22913	36.525	L-.06178	10.549	L-.00434
SDev	.0010	.00607	.00184	.131	.01542	.038	.00050
%RSD	.03104	19.959	.80392	.35736	24.953	.36076	11.430

#2	3.3173	.02613	.22782	36.617	L-.07269	10.576	L-.00470
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000249

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.3437	L-.39622	.05921	1.6256	.17413	.19502	10.41
SDev	.0815	.02267	.00813	.0097	.00415	.00068	.03
%RSD	.97693	5.7206	13.725	.59824	2.3826	.35079	.2633
#1	8.2860	L-.41224	.05347	1.6324	.17707	.19454	10.43
#2	8.4013	L-.38019	.06496	1.6187	.17120	.19550	10.39
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-178-13A Operator: CLT
Run Time: 07/11/92 02:02:54
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	37.100	L-.01470	.03145	.30229	.00129	L-.03148	16.261
SDev	.257	.00750	.00531	.00104	.00027	.00050	.042
%RSD	.69272	50.998	16.892	.34400	20.773	1.5929	.25674
#1	36.918	L-.00940	.03520	.30156	.00148	L-.03113	16.232
#2	37.281	L-.02001	.02769	.30303	.00110	L-.03184	16.291
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46145	.08496	.30923	82.534	93.132	.07978	31.673
SDev	.00217	.00307	.00170	.427	1.854	.01833	.201
%RSD	.46943	3.6128	.55074	.51746	1.9903	22.970	.63604
#1	.46298	.08713	.31043	82.232	94.442	.09274	31.530
#2	.45992	.08279	.30803	82.836	91.821	.06682	31.815
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
[illegible]h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8345	.01882	.31983	16.015	L-.06571	6.8885	L-.00672
SDev	.0069	.00490	.00141	.015	.00656	.0297	.00197
%RSD	.37587	26.044	.43950	.09157	9.9773	.43149	29.327

#1	1.8297	.02228	.32082	16.003	L-.06197	6.8974	L-.00809
#2	1.8394	.01535	.31883	16.026	L-.07034	6.9095	L-.00811
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.7550	L-.25932	.06105	1.1083	.07537	.15934	10.51
SDev	.0425	.02915	.00624	.0041	.00169	.00028	.08
%RSD	.73898	11.243	10.227	.36815	2.2374	.17271	.7276
#1	5.7249	L-.23871	.05664	1.1111	.07656	.15915	10.45
#2	5.7851	L-.27994	.06547	1.1054	.07418	.15954	10.56
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000250

Method: RASI_ICP Sample Name: 92-06-178-14A Operator: CLT
Run Time: 07/11/92 02:07:07
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.446	L-.01665	.02741	.13936	L.00041	L-.01944	13.402
SDev	.022	.00200	.01081	.00008	.00006	.00006	.048
%RSD	.11076	11.995	39.426	.05712	15.494	.33060	.35919
#1	19.431	L-.01524	.03505	.13930	L.00036	L-.01949	13.368
#2	19.461	L-.01806	L.01977	.13941	L.00045	L-.01940	13.436
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.31761	.06564	.35248	54.429	60.884	.15161	22.255
SDev	.00401	.00037	.00084	.113	.210	.01073	.002
%RSD	1.2630	.56209	.23899	.20772	.34549	7.0767	.00946
#1	.31477	.06590	.35189	54.349	61.033	.15920	22.253
#2	.32044	.06538	.35308	54.509	60.735	.14403	22.256
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.6582	.00895	.27465	6.3509	L-.05343	7.8829	L-.00863
SDev	.0046	.00038	.00005	.0044	.00821	.0209	.00175
%RSD	.27955	4.2045	.01771	.06928	15.371	.26451	20.261

#2	1.6615	.00869	.27462	6.3540	L-.04762	7.8976	L-.00986
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000251

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.2376	L-.18263	.04645	.70593	.03486	.10235	10.30
SDev	.0159	.05931	.00859	.00207	.00025	.00068	.03
%RSD	.37634	32.475	18.500	.29383	.70454	.65902	.3216
#1	4.2263	L-.22456	.04037	.70739	.03503	.10187	10.28
#2	4.2489	L-.14069	.05253	.70446	.03469	.10283	10.33
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: PB1 3010 07/02/92 Operator: CLT
Run Time: 07/11/92 02:11:21
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.15499	L-.00870	L-.02832	L.00034	L.00027	L-.00380	.14454
SDev	.03786	.00116	.00490	.00032	.00013	.00015	.02181
%RSD	24.425	13.372	17.311	95.567	46.720	3.9407	15.092
#1	.18176	L-.00788	L-.03178	L.00056	L.00018	L-.00390	.15996
#2	.12822	L-.00953	L-.02485	L.00011	L.00036	L-.00369	.12911
Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00331	L-.00705	L.00178	.26404	L-.40777	L-.00683	.09983
SDev	.00421	.00076	.00168	.08131	.14544	.00193	.03800
%RSD	127.14	10.837	94.214	30.794	35.667	28.270	38.069
#1	L-.00033	L-.00651	L.00297	.32154	L-.51061	L-.00820	.12670
#2	L-.00628	L-.00759	L.00060	.20655	L-.30493	L-.00547	.07296
Errors	LC Low	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00542	L.00051	L-.00028	L.04045	L-.04886	.18466	L-.00818
SDev	.00249	.00038	.00058	.03520	.00244	.01184	.00160
%RSD	46.038	74.932	207.39	87.029	4.9849	6.4101	19.510

#2	.00365	L.00024	L-.00069	L.01556	L-.05059	.17629	L-.00705

Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.73425	.22047	L.01967	L-.00980	L-.00836	.00689	L7.354
SDev	.02304	.01080	.00283	.00384	.00159	.00026	.012
%RSD	3.1373	4.8986	14.387	39.121	19.020	3.8077	.1617
#1	L-.71796	.21284	L.01767	L-.00709	L-.00724	.00708	L7.346
#2	L-.75054	.22811	.02167	L-.01251	L-.00949	.00671	L7.362

Errors	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: PB2 3010 07/02/92 Operator: CLT
Run Time: 07/11/92 02:15:35
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05840	L-.00966	L-.02160	L-.00040	L-.00017	L-.00352	.09190
SDev	.00815	.00521	.00603	.00008	.00025	.00068	.00405
%RSD	13.948	53.941	27.909	19.991	149.12	19.155	4.4103
#1	.06416	L-.00598	L-.02586	L-.00035	L.00001	L-.00305	.08904
#2	.05264	L-.01334	L-.01734	L-.00046	L-.00035	L-.00400	.09477

Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00313	L-.00541	L.00089	.07991	L-.66303	L-.00942	.03090
SDev	.00016	.00078	.00043	.00869	.01692	.00268	.00502
%RSD	5.0670	14.322	48.102	10.871	2.5520	28.424	16.250
#1	L-.00324	L-.00486	L.00119	.08605	L-.67500	L-.01131	.03445
#2	L-.00302	L-.00596	L.00058	.07376	L-.65107	L-.00753	.02735

Errors	LC Low	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00011	L.00160	L-.00084	L-.00415	L-.05988	.07247	L-.00813
SDev	.00069	.00114	.00157	.04840	.00552	.00277	.00179
%RSD	597.26	71.158	186.37	1166.7	9.2129	3.8179	21.990

#2	L-.00060	L.00240	L-.00195	L-.03837	L-.05598	.07051	L-.00939
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000253

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.89213	L.10679	L.01844	L.00553	L-.00822	L-.00000	L8.706
SDev	.02304	.08731	.00205	.00588	.00125	.00001	.055
%RSD	2.5821	81.763	11.127	106.39	15.196	319.91	.6269
#1	L-.87584	L.04505	L.01990	L.00137	L-.00734	L-.00001	L8.668
#2	L-.90842	L.16852	L.01699	L.00968	L-.00911	L.00000	L8.745
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: LCS 3010 07/02/92 Operator: CLT
Run Time: 07/11/92 02:19:48
Comment: IEA
CONC Corr. Factor: 1

		104%	104%	103%	97%	92%	
Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0663	2.0827	2.0799	1.0335	.97307	.91796	1.0503
SDev	.0217	.0131	.0249	.0023	.00249	.00108	.0086
%RSD	2.0346	.62909	1.1971	.21945	.25607	.11811	.81618
#1	1.0817	2.0735	2.0623	1.0319	.97131	.91720	1.0564
#2	1.0510	2.0920	2.0975	1.0351	.97484	.91873	1.0442
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

	100%					97% 99%	
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0037	.97588	1.0478	1.0391	L1.5623	1.9721	1.0292
SDev	.0002	.00192	.0004	.0090	.5982	.0168	.0122
%RSD	.01810	.19697	.03972	.86298	38.294	.85193	1.1846
#1	1.0036	.97452	1.0475	1.0454	L1.1392	1.9602	1.0378
#2	1.0038	.97724	1.0481	1.0328	L1.9853	1.9839	1.0206
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
h	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

			97%		101%		
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0218	2.0878	.97291	25.765	2.0107	3.0685	.97732
SDev	.0003	.0121	.00013	.060	.0270	.0083	.00276
%RSD	.02537	.58066	.01297	.23339	1.3435	.27088	.28227

#2	1.0218	2.0954	.97300	25.807	2.0298	3.0626	.97927
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1315	2.0652	2.1162	1.9760	1.0129	1.0021	9.907
SDev	.0000	.0388	.0024	.0019	.0024	.0037	.027
%RSD	.00000	1.8807	.11550	.09845	.23328	.36520	.2701
#1	1.1315	2.0926	2.1179	1.9774	1.0113	.99954	9.888
#2	1.1315	2.0377	2.1145	1.9746	1.0146	1.0047	9.926
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000254

Method: RASI_ICP Sample Name: TCLP BLK 237-01A,04A Operator: CLT
Run Time: 07/11/92 02:24:03
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08238	L-.00269	L-.01558	.09573	.00388	L.00014	.44456
SDev	.00829	.00403	.00347	.00162	.00097	.00146	.00069
%RSD	10.067	150.01	22.272	1.6920	25.114	1083.4	.15632
#1	.07652	L-.00553	L-.01313	.09688	.00457	L.00117	.44407
#2	.08824	L.00016	L-.01803	.09459	.00319	L-.00090	.44505
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00293	L-.00317	.00952	.05986	L-.52901	L.01209	.05173
SDev	.00319	.00076	.00000	.00007	.14466	.00339	.00575
%RSD	108.71	23.850	.01337	.11163	27.345	28.040	11.104
#1	L.00068	L-.00371	.00953	.05991	L-.63130	L.00969	.04767
#2	L.00519	L-.00264	.00952	.05982	L-.42672	L.01448	.05579
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00345	.01602	L.00452	.41067	L-.04487	.20681	L-.00330
SDev	.00094	.00720	.00051	.01320	.00083	.00282	.00081
%RSD	27.286	44.923	11.227	3.2141	1.8435	1.3621	24.545

#2	.00278	.01093	L.00487	.42001	L-.04429	.20880	L-.00387

Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000255

[redacted]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.7705	.20432	.04866	L.01369	L-.00451	.24291	L7.800
SDev	.0142	.07229	.00571	.00588	.00226	.00190	.085
%RSD	.80068	35.379	11.731	42.935	50.247	.78226	1.089
#1	1.7805	.25543	.05269	L.00953	L-.00291	.24425	L7.860
#2	1.7605	L.15320	.04462	L.01785	L-.00611	.24156	L7.740

Errors	LC Pass	LC Pass	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-237-01A Operator: CLT
Run Time: 07/11/92 02:28:16
Comment: IEA
[redacted] CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.35928	L-.00998	L-.01626	.12973	.00124	L-.00281	417.52
SDev	.01930	.00314	.00989	.00065	.00020	.00016	2.15
%RSD	5.3718	31.520	60.784	.49848	16.028	5.7111	.51498
#1	.34564	L-.00775	L-.02325	.12928	.00139	L-.00292	416.00
#2	.37293	L-.01220	L-.00927	.13019	.00110	L-.00269	419.05

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00817	L-.00704	L-.00005	.06154	L-3.2005	L-.01206	.09486
SDev	.00105	.00153	.00084	.04332	.7373	.00063	.02366
%RSD	12.800	21.733	1798.5	70.389	23.036	5.2616	24.940
#1	.00891	L-.00596	L.00055	.03091	L-3.7218	L-.01161	.07813
#2	L.00743	L-.00813	L-.00064	.09217	L-2.6791	L-.01251	.11159

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[redacted]	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00067	.08798	L-.00174	1.2704	L-.05173	.59636	L-.00346
SDev	.00077	.00076	.00130	.0088	.00439	.00900	.00007
%RSD	114.90	.86192	75.022	.69267	8.4884	1.5094	2.1548

#2	L.00122	.08852	L-.00266	1.2766	L-.04862	.60273	L-.00341
Errors	LC Low	LC Pass	LC Low	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.7605	L.08385	.02393	L-.00553	L.00147	.00465	L7.983
SDev	.0071	.06377	.00490	.00197	.00052	.00027	.048
%RSD	.40263	76.056	20.479	35.575	35.204	5.8669	.6039
#1	1.7554	L.12894	L.02046	L-.00414	L.00184	.00485	L7.948
#2	1.7655	L.03876	.02739	L-.00692	L.00111	.00446	L8.017
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000256

Method: RASI_ICP Sample Name: 92-06-237-04A Operator: CLT
Run Time: 07/11/92 02:32:30
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.1572	L-.00612	L-.01532	.06162	.01655	L-.00055	204.80
SDev	.0327	.00290	.00014	.00081	.00027	.00055	1.80
%RSD	.45682	47.394	.91339	1.3121	1.6224	99.122	.87958
#1	7.1803	L-.00407	L-.01542	.06219	.01674	L-.00094	206.07
#2	7.1341	L-.00818	L-.01523	.06105	.01636	L-.00017	203.53
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05244	.01501	.13857	.71962	L-.86517	L-.01257	7.9197
SDev	.00051	.00040	.00211	.00885	.34607	.00479	.0144
%RSD	.97562	2.6396	1.5227	1.2295	40.000	38.091	.18121
#1	.05208	.01473	.14006	.72587	L-.62046	L-.00918	7.9298
#2	.05280	.01529	.13707	.71336	L-1.1099	L-.01595	7.9096
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.44465	.00523	.10759	1.8823	L-.06258	9.8196	L-.01183
SDev	.00283	.00153	.00126	.0059	.00606	.0603	.00022
%RSD	.63649	29.261	1.1711	.31167	9.6835	.61381	1.8381

#2	.44265	.00631	.10848	1.3884	L-.06867	9.7770	L-.01199
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000257

[illegible]	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
[illegible]cts	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3005	L-.02801	.02325	L-.00249	L-.00898	.29924	L8.576
SDev	.0089	.07548	.00530	.00383	.00006	.00189	.075
%RSD	.38513	269.42	22.782	153.76	.71589	.63064	.8767
#1	2.3068	L-.08139	L.01951	L.00022	L-.00893	.30057	L8.629
#2	2.2942	L.02536	.02700	L-.00520	L-.00902	.29790	L8.522
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-01F Operator: CLT
Run Time: 07/11/92 02:36:44
Comment: IEA
[illegible] : CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04996	L-.02013	L-.03264	L.00022	L-.00098	L-.00371	1.9014
SDev	.00376	.00156	.01323	.00016	.00008	.00073	.2622
%RSD	7.5171	7.7727	40.544	73.292	8.3052	19.587	13.788
#1	.05262	L-.02124	L-.04199	L.00011	L-.00092	L-.00422	2.0868
#2	.04731	L-.01902	L-.02328	L.00034	L-.00104	L-.00320	1.7160
Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00473	L-.00625	L.00207	.37960	L-.52346	L-.00659	.35248
SDev	.00350	.00193	.00127	.00181	.27341	.00000	.00503
%RSD	73.965	30.887	61.485	.47647	52.231	.02329	1.4274
#1	L-.00721	L-.00762	L.00117	.38088	L-.71679	L-.00659	.34892
#2	L-.00226	L-.00489	L.00296	.37832	L-.33013	L-.00659	.35604
Errors	LC Low	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
[illegible]	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00070	L.00127	L-.00083	L-.04874	L-.05009	.38702	L-.00499
SDev	.00009	.00000	.00346	.00880	.01020	.00144	.00050
%RSD	12.184	.01465	416.88	18.054	20.361	.37162	10.008

#2	L.00064	L.00127	L.00161	L-.04252	L-.05731	.38803	L-.00535
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.05638	L-.13363	L.00644	L-.00830	L-.00804	.02309	10.31
SDev	.03544	.06176	.00286	.00977	.00126	.00012	.12
%RSD	62.854	46.214	44.444	117.74	15.723	.52443	1.141
#1	L.08144	L-.17730	L.00442	L-.00139	L-.00894	.02301	10.40
#2	L.03132	L-.08996	L.00847	L-.01520	L-.00715	.02318	10.23
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000258

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 02:40:57
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6043	-.00581	10.443	1.0368	.99626	2.4766	2.7206
SDev	.0063	.01814	.140	.0161	.01297	.0251	.0920
%RSD	.24146	312.04	1.3445	1.5540	1.3019	1.0120	3.3827
#1	2.6087	-.01864	10.542	1.0482	1.0054	2.4944	Q2.7856
#2	2.5998	.00701	10.344	1.0254	.98709	2.4589	2.6555
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5258	2.4808	2.6397	2.4619	Q1.2752	5.0936	2.5801
SDev	.0147	.0285	.0363	.0292	.0368	.0472	.0087
%RSD	.58184	1.1498	1.3741	1.1878	2.8885	.92707	.33645
#1	2.5362	2.5009	2.6653	2.4826	Q1.3013	5.1270	2.5862
#2	2.5155	2.4606	2.6140	2.4412	Q1.2492	5.0602	2.5739
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.99501	-.00117	2.4892	5.1770	10.657	.00216	2.5146
SDev	.01088	.00076	.0260	.0396	.119	.00950	.0250
%RSD	1.0936	64.990	1.0447	.76490	1.1121	440.66	.99501

#2	.98731	-.00063	2.4708	5.2050	10.573	.00858	2.4969
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q4.1925	5.3671	-.00416	-.01219	2.5087	2.5969	9.444
SDev	.0620	.0147	.00084	.00820	.0280	.0227	.152
%RSD	1.4793	.27473	20.234	67.214	1.1149	.87432	1.608
#1	Q4.2364	5.3776	-.00476	-.01799	2.5284	2.6129	9.551
#2	Q4.1487	5.3567	-.00357	-.00640	2.4889	2.5808	9.337
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

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ethod: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 02:45:11
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.479	-.01881	.11121	.00412	-.00317	.00629	24.236
SDev	.018	.01606	.03538	.00114	.00175	.00271	.058
%RSD	.07025	85.353	31.817	27.609	55.399	43.032	.24058
#1	25.466	-.00746	.13623	.00492	-.00193	.00821	24.195
#2	25.492	-.03016	.08619	.00331	-.00441	.00438	24.278
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00482	24.332	.02187	24.395	Q28.134	.01693	25.548
SDev	.00679	.042	.00378	.064	1.667	.01610	.037
%RSD	140.89	.17420	17.284	.26120	5.9262	95.128	.14577
#1	-.00002	24.302	.02454	24.350	Q29.313	.02831	25.575
#2	-.00963	24.362	.01919	24.440	26.955	.00554	25.522
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Fail	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.9366	-.00059	.00186	52.038	-.01299	-.00231	-.01843
SDev	.0235	.00001	.00495	.047	.03155	.00638	.00553
%RSD	.23642	1.4797	266.77	.09019	242.80	276.55	29.992

#2	9.9532	-.00059	-.00165	52.072	-.03530	-.00662	-.02234
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	51.779	.27745	.00910	-.02773	24.852	.00371	9.826
SDev	.158	.04947	.00246	.00135	.049	.00282	.021
%RSD	.30458	17.832	27.015	4.8676	.19531	76.062	.2097
#1	51.667	.24246	.00736	-.02868	24.818	.00570	9.812
#2	51.890	.31243	.01084	-.02677	24.886	.00171	9.841
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 02:49:27
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13526	10.494	10.585	.00153	.00263	-.22874	.12770
SDev	.02866	.010	.034	.00008	.00013	.00171	.02778
%RSD	21.193	.09237	.31837	5.0943	4.8932	.74872	21.751
#1	.15552	10.487	10.561	.00159	.00272	-.22753	.14734
#2	.11499	10.501	10.608	.00148	.00253	-.22995	.10806
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00579	.12161	.00074	.11129	-1.7700	-.04052	.07787
SDev	.00007	.02676	.00081	.02769	.2372	.00126	.02517
%RSD	1.2352	22.004	109.49	24.885	13.401	3.1048	32.325
#1	-.00585	.14053	.00017	.13087	-1.6022	-.04141	.09567
#2	-.00574	.10269	.00131	.09171	-1.9377	-.03963	.06007
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	S12881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03705	10.429	-.00084	.15141	10.494	9.8654	.00430
SDev	.01061	.020	.00000	.06600	.024	.0409	.00001
%RSD	28.634	.19604	.56876	43.589	.22546	.41480	.28162

#2	.02955	10.443	-.00083	.10474	10.478	9.8944	.00431
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

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Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.96982	-.07260	10.723	9.9024	.17580	-.01247	10.03
SDev	.07265	.03786	.085	.0256	.03133	.00054	.00
%RSD	7.4913	52.142	.79408	.25877	17.822	4.3662	.0445
#1	-.91844	-.04583	10.783	9.8843	.19796	-.01208	10.03
#2	-1.0212	-.09937	10.663	9.9205	.15365	-.01285	10.02
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 02:53:42
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.04050	H.05157	H.03246	-.00058	-.00007	L-.00334	H.06249
SDev	.00697	.01194	.00543	.00049	.00000	.00034	.00326
%RSD	17.207	23.157	16.743	84.451	4.9009	10.073	5.2165
#1	H.03557	H.06001	H.02862	L-.00092	-.00007	L-.00357	H.06479
#2	H.04543	H.04312	H.03630	-.00023	-.00006	L-.00310	H.06018
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00539	H.02464	-.00363	H.02734	L-1.0249	-.01373	.01273
SDev	.00545	.00620	.00170	.00578	.0366	.00744	.00502
%RSD	101.18	25.180	46.741	21.128	3.5704	54.181	39.405
#1	L-.00925	H.02902	-.00483	H.03143	L-1.0508	-.01898	.00918
#2	-.00153	H.02025	-.00243	H.02326	L-.99905	-.00847	.01628
Errors	LC Pass	LC High	LC Pass	LC High	LC Low	LC Pass	LC Pass
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.01041	H.07820	-.00102	-.02593	.03283	H.06996	L-.00722
SDev	.00239	.02463	.00184	.04986	.01817	.00632	.00049
%RSD	23.001	31.490	180.59	192.33	55.335	9.0321	6.7234

#2	H.00572	H.00579	.00628	.00953	.01999	H.01440	L-.00688
Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC High	LC Low
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.1678	.00133	H.05761	.03147	H.02112	L-.00420	9.242
SDev	.0018	.00762	.01834	.00006	.00327	.00001	.089
%RSD	.15173	575.02	31.838	.17903	15.456	.28575	.9582
#1	-1.1690	-.00407	H.07058	.03143	H.02343	L-.00420	9.305
#2	-1.1665	.00672	H.04464	.03151	H.01882	L-.00421	9.180
Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

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Method: RASI_ICP Sample Name: 92-06-160-01F-DUP Operator: CLT
Run Time: 07/11/92 02:57:57
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04005	L-.00229	L-.00597	L-.00012	L-.00717	L-.00229	.73613
SDev	.00224	.00341	.00563	.00000	.00008	.00048	.00362
%RSD	5.6033	148.87	94.386	.07806	1.1573	20.997	.49131
#1	.04164	L.00012	L-.00995	L-.00012	L-.00711	L-.00263	.73358
#2	.03847	L-.00471	L-.00198	L-.00012	L-.00723	L-.00195	.73869
Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00272	L.00032	.00806	.09240	L-1.2566	L-.01183	.29073
SDev	.00192	.00040	.00041	.00026	.8654	.01145	.00072
%RSD	70.551	123.56	5.1275	.27860	68.867	96.761	.24599
#1	L-.00136	L.00060	.00835	.09222	L-1.8685	L-.01992	.29022
#2	L-.00408	L.00004	.00777	.09258	L-.64467	L-.00374	.29124
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00207	.02269	L-.00132	L-.02385	L-.02209	.31403	L.00601
SDev	.00017	.00151	.00199	.00000	.00275	.00349	.00260
%RSD	8.3852	6.6721	151.13	.00000	12.463	1.1123	43.316

n 571

#2	.00219	.02152	L.00009	L-.02385	L-.02403	.31156	L.00417
Errors	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

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	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.07017	L-1.6713	.02370	L-.04007	L.00274	.00994	H23.78
SDev	.02658	.0474	.00529	.01172	.00006	.00054	.16
%RSD	37.881	2.8384	22.323	29.249	2.0434	5.4040	.6913
#1	L-.05137	L-1.6378	.02744	L-.03179	L.00278	.00956	H23.66
#2	L-.08896	L-1.7048	L.01996	L-.04836	L.00271	.01032	H23.89

Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-01F-MS Operator: CLT
Run Time: 07/11/92 03:02:10
Comment: IEA
[illegible]: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0874	4.0781	4.0840	2.0548	1.8773	1.7977	2.5996
SDev	.0098	.0132	.0147	.0167	.0125	.0124	.0224
%RSD	.46847	.32356	.35921	.81171	.66491	.68969	.86065
#1	2.0805	4.0687	4.0736	2.0430	1.8685	1.7890	2.5837
#2	2.0943	4.0874	4.0943	2.0666	1.8861	1.8065	2.6154

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8378	1.9305	2.0429	1.9106	L.73525	3.8681	2.2754
SDev	.0101	.0120	.0164	.0156	.79822	.0412	.0044
%RSD	.55163	.62107	.80447	.81463	108.57	1.0640	.19129
#1	1.8306	1.9220	2.0312	1.8996	L.17082	3.8390	2.2723
#2	1.8450	1.9390	2.0545	1.9216	L1.2997	3.8972	2.2784

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9342	4.0705	1.9269	50.693	3.9835	5.6181	1.8534
SDev	.0165	.0371	.0165	.339	.0308	.0618	.0175
%RSD	.85496	.91166	.85399	.66831	.77422	1.1003	.94668

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.1862	3.4688	4.0850	3.8431	2.1488	1.9629	H15.75
SDev	.0532	.0349	.0199	.0112	.0191	.0153	.09
%RSD	1.2699	1.0056	.48785	.29174	.89067	.78187	.5921
#1	4.1487	3.4441	4.0709	3.8352	2.1353	1.9520	H15.68
#2	4.2238	3.4934	4.0991	3.8511	2.1623	1.9737	H15.81
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-01F-PS Operator: CLT
Run Time: 07/11/92 03:06:23
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0721	2.0234	2.0257	1.0662	.97385	.93500	1.6243
SDev	.0026	.0281	.0282	.0083	.00896	.01026	.0078
%RSD	.24628	1.3868	1.3914	.77456	.91996	1.0976	.47953
#1	1.0740	2.0036	2.0057	1.0604	.96752	.92774	1.6188
#2	1.0703	2.0433	2.0456	1.0721	.98019	.94226	1.6298
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.95250	.99413	1.0630	1.3504	L.27513	1.9835	1.3239
SDev	.00507	.00928	.0084	.0094	1.2132	.0222	.0043
%RSD	.53199	.93373	.79425	.69777	440.96	1.1215	.32741
#1	.94891	.98756	1.0570	1.3438	L-.58273	1.9678	1.3208
#2	.95608	1.0007	1.0689	1.3571	L1.1330	1.9992	1.3269
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0033	2.1044	1.0040	26.149	2.0234	2.3806	.80394
SDev	.0080	.0201	.0115	.167	.0298	.0015	.00665
%RSD	.79412	.95409	1.1456	.63938	1.4709	.06126	.82759

#2	1.0089	2.1186	1.0122	20.266	2.0444	2.3815	.80864
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000265

Run s	Na5889 ppm	Tl3775 ppm	Sn1899 ppm	Ti3248 ppm	V_2924 ppm	Zn2138 ppm	Y_3710 ppm
Avge	2.1790	2.0605	2.0989	1.9653	1.1023	1.0372	10.03
SDev	.0000	.0230	.0147	.0217	.0109	.0083	.09
%RSD	.00000	1.1159	.70030	1.1052	.98890	.80415	.9404
#1	2.1790	2.0442	2.0886	1.9807	1.0946	1.0313	9.961
#2	2.1790	2.0768	2.1093	1.9500	1.1100	1.0431	10.09
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-02A Operator: CLT
Run Time: 07/11/92 03:10:37
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03227	L.01100	L-.00041	.00635	.00332	L.00401	.09251
SDev	.00436	.00308	.00293	.00170	.00171	.00103	.00452
%RSD	13.515	27.959	717.57	26.757	51.648	25.535	4.8862
#1	.03535	L.00883	L-.00248	.00756	.00453	.00474	.08931
#2	.02918	L.01317	L.00166	.00515	.00211	L.00329	.09570
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00024	L-.00051	.00894	.06190	L-.57422	L.00578	L-.00408
SDev	.00194	.00154	.00084	.00384	.27270	.00942	.00574
%RSD	816.05	302.89	9.3497	6.2087	47.490	162.87	140.43
#1	L.00113	L.00058	.00954	.06461	L-.38139	L-.00088	L-.00814
#2	L-.00161	L-.00160	.00835	.05918	L-.76704	L.01244	L-.00003
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Low
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00509	.02435	.00672	.08504	L-.01953	.11563	L.00243
SDev	.00137	.00833	.00035	.01027	.01186	.00973	.00244
%RSD	26.943	34.217	5.2316	12.073	60.750	8.4135	100.38

#2	.00412	.01548	.00697	.07772	L-.01114	.10875	L.00070
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000266

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.98235	L-.60762	L.01646	L-.01672	L-.00027	.03053	H14.37
SDev	.02658	.04101	.00000	.00582	.00190	.00230	.17
%RSD	2.7058	6.7497	.01461	34.805	696.89	7.5439	1.148
#1	L-1.0011	L-.63662	L.01646	L-.01261	L.00107	.03216	H14.49
#2	L-.96355	L-.57862	L.01646	L-.02084	L-.00162	.02890	H14.25

Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-02A-DUP Operator: CLT
Run Time: 07/11/92 03:14:50
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01882	L-.00714	L-.02466	.00114	L-.00217	L-.00139	.07108
SDev	.00005	.00173	.01123	.00016	.00038	.00106	.00158
%RSD	.24493	24.248	45.529	14.145	17.365	76.389	2.2193
#1	.01878	L-.00591	L-.01672	.00126	L-.00190	L-.00064	.07220
#2	.01885	L-.00836	L-.03260	.00103	L-.00243	L-.00214	.06997

Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00340	L-.00543	.00656	.12038	L1.0676	L-.00379	L-.00058
SDev	.00227	.00000	.00084	.00143	.3624	.00674	.00072
%RSD	66.778	.02886	12.745	1.1886	33.951	178.11	123.93
#1	L-.00179	L-.00543	.00597	.12139	L.81128	L.00098	L-.00007
#2	L-.00500	L-.00543	.00715	.11937	L1.3239	L-.00855	L-.00109

Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Low
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00025	.00963	L.00066	L-.02593	L-.03924	.10089	L-.00077
SDev	.00017	.00038	.00063	.00293	.02206	.00135	.00146
%RSD	67.208	3.9280	95.436	11.314	56.215	1.3404	189.71

#2	L.00015	.00936	L.00021	L-.02385	L-.05483	.10184	L-.00180

Errors	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000267

Elem s	Na5889 ppm	Tl3775 ppm	Sn1899 ppm	Ti3248 ppm	V_2924 ppm	Zn2138 ppm	Y_3710 ppm
Avge	L-.99237	L-.90059	L.00841	L-.02347	L-.00543	.00832	H16.37
SDev	.00886	.07125	.00080	.01172	.00068	.00014	.03
%RSD	.89282	7.9114	9.5381	49.917	12.587	1.6405	.1908
#1	L-.98610	L-.85021	L.00785	L-.03176	L-.00495	.00841	H16.34
#2	L-.99863	L-.95097	L.00898	L-.01519	L-.00591	.00822	H16.39

Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-02A-MS Operator: CLT
Run Time: 07/11/92 03:19:03
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9505	3.8617	3.8647	1.9610	1.7656	1.6962	1.9457
SDev	.0127	.0113	.0042	.0215	.0178	.0145	.0021
%RSD	.65224	.29221	.10790	1.0942	1.0078	.85196	.10547
#1	1.9415	3.8537	3.8618	1.9458	1.7530	1.6860	1.9443
#2	1.9595	3.8697	3.8677	1.9762	1.7782	1.7064	1.9472

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.7395	1.8240	1.9437	2.2657	L1.8179	3.6413	1.8373
SDev	.0110	.0139	.0152	.0111	.9950	.0270	.0087
%RSD	.63247	.76457	.78027	.49012	54.734	.74176	.47134
#1	1.7317	1.8141	1.9330	2.2578	L2.5215	3.6222	1.8312
#2	1.7472	1.8338	1.9545	2.2735	L1.1144	3.6604	1.8434

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8351	3.8584	1.8121	48.351	3.7481	4.3393	1.6753
SDev	.0127	.0436	.0157	.458	.0375	.0043	.0112
%RSD	.69073	1.1291	.86537	.94639	.99947	.09949	.66900

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#2	1.0440	3.0082	1.0201	40.074	[illegible]	1.0421	1.0002
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.9282	1.3861	3.8280	3.5633	2.0445	1.8462	H31.59
SDev	.0106	.1460	.0338	.0016	.0153	.0110	.37
%RSD	.36308	10.534	.88282	.04374	.74747	.59662	1.166
#1	2.9207	1.2828	3.8041	3.5622	2.0337	1.8385	H31.33
#2	2.9358	1.4893	3.8519	3.5644	2.0553	1.8540	H31.86
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-02A-PS Operator: CLT
Run Time: 07/11/92 03:23:18
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1109	2.0502	2.0301	1.1210	1.0053	.97341	1.1300
SDev	.0140	.0106	.0323	.0045	.0053	.00508	.0023
%RSD	1.2635	.51697	1.5930	.40445	.53127	.52178	.20182
#1	1.1010	2.0428	2.0072	1.1178	1.0015	.96982	1.1284
#2	1.1209	2.0577	2.0529	1.1242	1.0091	.97700	1.1316
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.99645	1.0358	1.1092	1.0875	L1.0263	2.0962	1.0567
SDev	.00789	.0019	.0029	.0029	.6912	.0020	.0007
%RSD	.79175	.18265	.26541	.26528	67.349	.09405	.06936
#1	.99087	1.0345	1.1072	1.0855	L.53754	2.0976	1.0562
#2	1.0020	1.0372	1.1113	1.0896	L1.5150	2.0948	1.0572
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0418	2.1258	1.0459	27.575	2.0348	2.1279	.93728
SDev	.0045	.0049	.0046	.110	.0127	.0050	.00407
%RSD	.42815	.23155	.43620	.39889	.62304	.23343	.43377

#2	1.0450	2.1295	1.0491	[illegible]	2.0438	2.1314	.94018
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000269

[redacted] s	Na5889 ppm	T13775 ppm	Sn1899 ppm	Ti3248 ppm	V_2924 ppm	Zn2138 ppm	Y_3710 ppm
Avge	1.2455	1.8437	2.1043	1.9628	1.1637	1.0786	H14.06
SDev	.0053	.0292	.0175	.0155	.0044	.0023	.06
%RSD	.42681	1.5818	.83260	.78866	.37604	.21138	.4486
#1	1.2492	1.8231	2.1167	1.9518	1.1606	1.0770	H14.02
#2	1.2417	1.8644	2.0919	1.9737	1.1668	1.0802	H14.10
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: 92-06-160-03A Operator: CLT
Run Time: 07/11/92 03:27:31
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03492	L.01354	L-.01824	.00624	.00436	L.00314	.05223
SDev	.00381	.00359	.01541	.00154	.00171	.00233	.00295
%RSD	10.908	26.534	84.480	24.661	39.132	74.061	5.6389
#1	.03222	L.01608	L-.00734	.00733	.00557	.00478	.05015
#2	.03761	L.01100	L-.02913	.00515	.00315	L.00150	.05432
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00814	L-.00078	.01132	.05236	L-1.7556	L.01295	L.01369
SDev	.00086	.00116	.00084	.00066	1.5934	.00203	.01076
%RSD	10.506	149.10	7.4310	1.2616	90.760	15.669	78.621
#1	L.00754	L.00004	.01192	.05283	L-.62889	L.01152	L.00608
#2	.00875	L-.00160	.01073	.05189	L-2.8823	L.01439	.02130
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Low
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00503	.02569	.00764	.10889	L-.01348	.09714	L.00346
SDev	.00163	.00720	.00093	.01760	.01488	.00137	.00032
%RSD	32.327	28.010	12.158	16.162	110.38	1.4141	9.3908

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#2	.00388	.02061	.00830	.09645	L-.02401	.09617	L.00323
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.97984	L-.30712	L.01817	L-.00430	L-.00038	.01528	H11.84
SDev	.00532	.11652	.00326	.00004	.00164	.00190	.07
%RSD	.54254	37.941	17.961	.93096	434.87	12.428	.6136
#1	L-.97608	L-.38951	L.02047	L-.00433	L.00078	.01662	H11.89
#2	L-.98360	L-.22472	L.01586	L-.00427	L-.00153	.01393	H11.79
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000270

Method: RASI_ICP Sample Name: 92-06-160-03A-DUP Operator: CLT
Run Time: 07/11/92 03:31:46
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02357	L-.00328	L-.02533	.00206	L-.00221	L-.00084	.08570
SDev	.00221	.00777	.00924	.00032	.00034	.00082	.00022
%RSD	9.3932	236.81	36.471	15.732	15.388	96.583	.25994
#1	.02200	L.00221	L-.03186	.00229	L-.00197	L-.00027	.08554
#2	.02513	L-.00878	L-.01880	.00183	L-.00245	L-.00142	.08586
Errors	LC Pass	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00112	L-.00433	.00715	.14758	L1.5244	L-.00616	L-.00160
SDev	.00018	.00153	.00085	.00012	.4555	.00742	.00933
%RSD	16.478	35.421	11.845	.08053	29.878	120.47	581.70
#1	L-.00125	L-.00541	.00655	.14766	L1.8465	L-.01140	L-.00820
#2	L-.00099	L-.00324	.00775	.14749	L1.2024	L-.00091	L.00499
Errors	LC Low	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Low
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.00032	.00936	L-.00016	L.00207	L-.04958	.09504	L.00165
SDev	.00026	.00000	.00021	.01320	.00524	.00277	.00162
%RSD	81.188	.00689	134.85	636.40	10.560	2.9138	98.214

#2	L.00013	.00936	L-.00001	L.01141	L-.04588	.09309	L.00280
Errors	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
E	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Uni	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-1.0049	L-1.0631	L.01648	L-.02071	L-.00607	.01110	H18.12
SDev	.0124	.0269	.00407	.00780	.00025	.00055	.04
%RSD	1.2344	2.5317	24.714	37.666	4.0767	4.9206	.2239
#1	L-1.0137	L-1.0441	L.01937	L-.01520	L-.00590	.01148	H18.15
#2	L-.99613	L-1.0821	L.01360	L-.02623	L-.00625	.01071	H18.09
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000271

Method: RASI_ICP Sample Name: 92-06-160-03A-MS Operator: CLT
Run Time: 07/11/92 03:35:59
Comment: IEA
Mode CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0533	4.0383	4.0570	2.0426	1.8523	1.7750	1.9937
SDev	.0092	.0274	.0313	.0006	.0013	.0073	.0022
%RSD	.44638	.67801	.77257	.02776	.06880	.41206	.10869
#1	2.0597	4.0189	4.0348	2.0422	1.8513	1.7699	1.9922
#2	2.0468	4.0576	4.0792	2.0430	1.8532	1.7802	1.9953
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8168	1.9031	2.0250	2.0415	L1.1160	3.8122	1.9296
SDev	.0004	.0005	.0030	.0040	1.3390	.0067	.0079
%RSD	.02014	.02408	.14624	.19555	119.99	.17639	.40909
#1	1.8170	1.9028	2.0229	2.0387	L2.0629	3.8075	1.9352
#2	1.8165	1.9035	2.0271	2.0443	L.16916	3.8170	1.9240
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
Hi	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
L	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9141	4.0373	1.9053	50.486	3.9350	4.4811	1.8517
SDev	.0014	.0110	.0004	.0371	.0378	.0242	.0073
%RSD	.07561	.27193	.02045	.07263	.95997	.54102	.39446

n_c20

#2	1.9151	4.0451	1.9056	50.512	3.9617	4.4982	1.8569
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0535	3.1652	4.0295	3.7968	2.1236	1.9389	H18.32
SDev	.0106	.0044	.0334	.0235	.0053	.0076	.04
%RSD	.34818	.13791	.82996	.61791	.24743	.39105	.2005
#1	3.0611	3.1621	4.0059	3.8134	2.1198	1.9335	H18.35
#2	3.0460	3.1683	4.0532	3.7802	2.1273	1.9442	H18.30
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000272

Method: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 03:40:12
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5903	.01163	10.549	1.0525	.99614	2.4672	2.4660
SDev	.0066	.01197	.111	.0054	.00557	.0136	.0072
%RSD	.25427	102.97	1.0569	.51534	.55917	.55050	.29358
#1	2.5857	.02010	10.470	1.0487	.99220	2.4576	2.4609
#2	2.5950	.00316	10.628	1.0563	1.0001	2.4768	2.4711
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5145	2.4783	2.6456	2.4587	Q1.9811	5.0821	2.5836
SDev	.0192	.0120	.0177	.0123	.0752	.0216	.0064
%RSD	.76173	.48227	.66963	.50021	3.7935	.42555	.24845
#1	2.5010	2.4699	2.6331	2.4500	Q1.9280	5.0668	2.5882
#2	2.5280	2.4868	2.6581	2.4674	Q2.0343	5.0974	2.5791
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.99846	.02723	2.4832	5.3232	10.655	.00836	2.5183
SDev	.00377	.01137	.0022	.0205	.089	.00458	.0033
%RSD	.37728	41.752	.08734	.38572	.83571	54.752	.12914

#2	1.0011	.01919	2.4847	5.3087	10.718	.00512	2.5206
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000

000273

	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q4.1411	5.4914	.01226	-.00398	2.5091	2.6011	9.510
SDev	.0248	.1250	.00201	.00011	.0151	.0031	.039
%RSD	.59905	2.2771	16.438	2.8326	.60178	.11726	.4087
#1	Q4.1587	Q5.5798	.01084	-.00390	2.4984	2.5989	9.482
#2	Q4.1236	5.4029	.01369	-.00406	2.5198	2.6032	9.537
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 03:44:27
Comment: IEA
: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.424	-.01980	.13218	.00579	-.00151	.00758	23.931
SDev	.066	.00430	.00450	.00105	.00164	.00253	.009
%RSD	.25880	21.719	3.4020	18.066	108.89	33.384	.03900
#1	25.470	-.02285	.13536	.00653	-.00035	.00937	23.938
#2	25.377	-.01676	.12900	.00505	-.00266	.00579	23.925
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00512	24.090	.02330	24.224	Q27.852	.02625	25.414
SDev	.00248	.029	.00255	.051	.055	.00651	.055
%RSD	48.478	.11996	10.955	.20986	.19666	24.786	.21488
#1	-.00337	24.111	.02511	24.260	Q27.891	.02165	25.452
#2	-.00688	24.070	.02150	24.188	Q27.813	.03085	25.375
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Fail	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.8472	.00581	.00515	52[illegible].1225	-.00508	-.00610	-.01760
SDev	.0253	.00227	.00192	[illegible].1049	.01814	.00490	.00242
%RSD	.25684	39.057	37.267	.19978	258.68	80.260	13.738

n-532

#2	9.8293	.00742	.00379	52.049	-.01437	-.00264	-.01951
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000274

Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	51.720	.21057	.01825	-.02262	24.683	.00504	9.825
SDev	.284	.04310	.00080	.00128	.072	.00310	.046
%RSD	.54818	20.466	4.3862	5.6440	.29332	61.603	.4669
#1	51.920	.18010	.01768	-.02172	24.734	.00723	9.857
#2	51.519	.24104	.01882	-.02352	24.631	.00284	9.792
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 03:48:41
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12695	10.585	10.700	.00222	.00341	-.22853	.06086
SDev	.02653	.144	.066	.00040	.00010	.00127	.02035
%RSD	20.900	1.3590	.61583	18.131	2.8465	.55430	33.433
#1	.14571	10.483	10.653	.00250	.00348	-.22764	.07525
#2	.10818	10.687	10.746	.00193	.00334	-.22943	.04648
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00259	.12113	.00010	.10335	-1.2919	-.02906	.07229
SDev	.00206	.02496	.00006	.02677	.3360	.00261	.03593
%RSD	79.540	20.606	55.289	25.902	26.011	8.9906	49.706
#1	-.00113	.13878	.00014	.12227	-1.5296	-.03091	.09770
#2	-.00405	.10348	.00006	.08442	-1.0543	-.02721	.04688
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03674	10.490	.00169	.13897	10.524	9.8875	.00199
SDev	.00954	.091	.00034	.06600	.128	.0956	.00193
%RSD	25.957	.86279	19.940	47.492	1.2208	.96712	97.143

#2	.03000	10.554	.00145	.09230	10.615	9.9551	.00062
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.0062	-.17568	10.754	9.9134	.19976	-.01257	10.16
SDev	.0673	.02559	.042	.0061	.02588	.00068	.05
%RSD	6.6924	14.569	.38722	.06132	12.958	5.3777	.4894
#1	-.95854	-.19377	10.724	9.9091	.21806	-.01209	10.12
#2	-1.0538	-.15758	10.783	9.9177	.18145	-.01305	10.19
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 03:52:57
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.04994	H.05989	H.03293	-.00023	-.00002	L-.00292	H.03082
SDev	.00193	.02339	.00900	.00016	.00005	.00069	.00103
%RSD	3.8679	39.059	27.335	70.107	219.11	23.696	3.3598
#1	H.05130	H.07644	H.03929	-.00035	-.00006	L-.00341	H.03009
#2	H.04857	H.04335	H.02656	-.00012	.00001	L-.00243	H.03155
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00102	H.02300	-.00274	H.02450	H.43560	-.00798	H.02339
SDev	.00139	.00621	.00125	.00505	.05164	.01414	.02298
%RSD	136.16	26.998	45.485	20.599	11.855	177.21	98.255
#1	-.00004	H.02739	-.00186	H.02806	H.47211	-.01798	H.03964
#2	-.00200	H.01861	-.00362	H.02093	H.39908	.00202	.00714
Errors	LC Pass	LC High	LC Pass	LC High	LC High	LC Pass	LC High
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00974	H.07928	-.00031	-.04045	.02075	.06855	-.00344
SDev	.00282	.02538	.00211	.00000	.00769	.02496	.00032
%RSD	28.966	32.009	671.52	.00000	37.050	36.412	9.3620

#2	H.00775	H.06133	.00118	-.04045	.01532	.05090	-.00321

Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

000276

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.1866	-.07034	H.05704	.02873	H.02099	L-.00459	9.289
SDev	.0177	.01603	.02241	.01164	.00549	.00027	.029
%RSD	1.4934	22.795	39.293	40.529	26.174	5.8498	.3110
#1	-1.1991	-.05900	H.07289	.03696	H.02488	L-.00478	9.309
#2	-1.1741	-.08167	H.04119	.02049	H.01711	L-.00440	9.268

Errors	LC Pass	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

Method: RASI_ICP Sample Name: 92-06-160-03A-PS Operator: CLT
Run Time: 07/11/92 03:57:12
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0266	2.0002	1.9645	1.0211	.93565	.89438	.99332
SDev	.0057	.0106	.0106	.0145	.01145	.01006	.00512
%RSD	.55203	.52998	.54038	1.4195	1.2242	1.1244	.51578
#1	1.0306	1.9927	1.9570	1.0108	.92755	.88727	.98970
#2	1.0226	2.0077	1.9721	1.0313	.94375	.90149	.99695

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.91675	.95886	1.0168	.99679	L1.2274	1.9228	.97424
SDev	.00736	.00886	.0131	.00911	.2765	.0027	.00506
%RSD	.80302	.92406	1.2869	.91347	22.526	.14076	.51925
#1	.91155	.95260	1.0075	.99035	L1.4229	1.9209	.97066
#2	.92196	.96513	1.0260	1.0032	L1.0319	1.9247	.97782

Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.96433	2.0664	.96224	25.218	1.9879	2.0523	.81576
SDev	.01208	.0231	.00999	.258	.0449	.0174	.00828
%RSD	1.2531	1.1180	1.0384	1.0236	2.2597	.84953	1.0148

#2	.97287	2.0827	.96931	25.401	2.0197	2.0646	.82161
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700
Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0450	1.8547	2.0491	1.9389	1.0726	.97676	H11.54
SDev	.0159	.0342	.0028	.0218	.0125	.01063	.15
%RSD	1.5261	1.8430	.13730	1.1257	1.1683	1.0887	1.324
#1	1.0563	1.8789	2.0511	1.9543	1.0638	.96924	H11.43
#2	1.0337	1.8305	2.0471	1.9235	1.0815	.98428	H11.65
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

000277

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Method: RASI_ICP Sample Name: ICSA Operator: CLT
Run Time: 07/11/92 04:01:25
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	491.24	L.00907	L-.16280	L-.00309	.00250	L-.00760	H535.71
SDev	.30	.00426	.04695	.00130	.00120	.00012	.70
%RSD	.06078	46.966	28.838	42.253	47.914	1.5404	.13106
#1	491.03	L.00606	L-.12960	L-.00217	.00335	L-.00768	H535.22
#2	491.45	L.01208	L-.19600	L-.00401	.00165	L-.00751	H536.21
Errors	LC Pass	LC Low	LC Low	LC Low	LC Pass	LC Low	LC High
High	500.00	100.00	200.00	50.000	20.000	100.00	500.00
Low	.01720	.02470	.02550	.00070	.00070	.00450	.04700
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.05366	L-.00695	L.00007	176.70	211.22	.07908	495.89
SDev	.00226	.00080	.00084	.13	4.52	.01143	.02
%RSD	4.2158	11.477	1229.7	.07145	2.1381	14.450	.00406
#1	L-.05526	L-.00751	L.00066	176.61	214.41	.07100	495.90
#2	L-.05206	L-.00638	L-.00053	176.79	208.03	.08716	495.87
Errors	LC Low	LC Low	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	100.00	100.00	50.000	200.00	1000.0	200.00	500.00
Low	.00800	.00380	.00320	.00580	50.000	.02020	.01770
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00270	.02023	L-.01278	L.00726	L-.08088	L-.04273	L-.00475
SDev	.00136	.00795	.00161	.04106	.04224	.00552	.00217
%RSD	50.296	39.269	12.608	565.69	52.227	12.909	45.635

#2	L-.00366	.01462	L-.01164	L-.02178	L-.11074	L-.03883	L-.00322

Errors	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low
High	25.000	5.0000	100.00	1000.0	200.00	100.00	10.000
Low	.00180	.00350	.00530	.04230	.03080	.02670	.00700

000278

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-1.3582	L-.02543	.06157	L-.00127	.00431	.01957	9.904
SDev	.0408	.03097	.01349	.01168	.00080	.00069	.026
%RSD	3.0006	121.80	21.905	923.11	18.446	3.5286	.2637
#1	L-1.3294	L-.04733	.05203	L.00699	.00487	.02005	9.923
#2	L-1.3871	L-.00353	.07110	L-.00952	.00375	.01908	9.886

Errors	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	1000.0	100.00	100.00	100.00	100.00	100.00	11.00
Low	.24270	.18200	.02070	.04970	.00330	.00430	9.000

Method: RASI_ICP Sample Name: ICSAB Operator: CLT
Run Time: 07/11/92 04:05:38
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	490.47	-.00331	-.13905	.47805	.44637	.81478	452.26
SDev	1.04	.00188	.06032	.00054	.00008	.00076	.08
%RSD	.21153	56.744	43.381	.11351	.01820	.09308	.01750
#1	491.20	-.00464	-.18171	.47844	.44642	.81425	452.20
#2	489.73	-.00198	-.09640	.47767	.44631	.81532	452.31

Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00			.60000	.60000	1.2000	600.00
Low	400.00			.40000	.40000	.80000	400.00

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.38684	.41784	.49235	174.38	208.15	.94035	487.64
SDev	.00385	.00082	.00126	.09	.96	.01595	.41
%RSD	.99514	.19538	.25678	.05403	.46307	1.6961	.08314
#1	L.38412	.41726	.49324	174.31	208.84	.92907	487.36
#2	L.38956	.41841	.49146	174.45	207.47	.95162	487.93

Errors	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.60000	.60000	.60000	240.00	240.00	1.2000	600.00
Low	.40000	.40000	.40000	160.00	160.00	.80000	400.00

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.43481	.00933	.84229	-.07570	-.08520	-.05898	.86407
SDev	.00136	.00037	.00032	.00880	.00336	.00512	.00036
%RSD	.31371	3.9990	.03764	11.624	3.9386	8.6842	.04104

#2	.43577	.00907	.84251	-.06948	-.08757	-.05536	.86432
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	LC Pass
High	.60000		1.2000				1.2000
Low	.40000		.80000				.80000
E	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.4109	.01510	.00703	-.00624	.45695	.93003	9.811
SDev	.0018	.00755	.02284	.00980	.00104	.00355	.013
%RSD	.12559	50.011	324.75	157.02	.22695	.38211	.1299
#1	-1.4096	.00976	-.00912	.00069	.45622	.92752	9.820
#2	-1.4121	.02044	.02318	-.01316	.45769	.93254	9.802
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass	LC Pass	NOCHECK
High					.60000	1.2000	
Low					.40000	.80000	

000279

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ethod: RASI_ICP Sample Name: CCVA Operator: CLT
Run Time: 07/11/92 04:09:52
Comment: IEA
CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q5.1883	-.00629	10.429	1.0282	.98586	2.4439	Q5.0795
SDev	.6039	.00240	.081	.0042	.00584	.0148	.6147
%RSD	11.639	38.150	.77470	.40428	.59244	.60580	12.101
#1	Q5.6153	-.00459	10.371	1.0253	.98173	2.4334	Q5.5141
#2	Q4.7613	-.00798	10.486	1.0311	.98999	2.4543	Q4.6449
Errors	QC Fail	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.5000		10.000	1.0000	1.0000	2.5000	2.5000
Range	10.000		10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4876	2.4402	2.5978	Q3.4713	2.3241	5.0105	Q5.1502
SDev	.0104	.0127	.0135	.2383	.3053	.0324	.5998
%RSD	.41748	.52077	.52013	6.8641	13.136	.64686	11.646
#1	2.4803	2.4312	2.5883	Q3.6398	2.5400	4.9876	Q5.5744
#2	2.4950	2.4491	2.6074	Q3.3028	Q2.1082	5.0334	Q4.7261
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass	QC Fail
Value	2.5000	2.5000	2.5000	2.5000	2.5000	5.0000	2.5000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98149	.00053	2.4543	5.0411	10.570	-.01263	2.4652
SDev	.00443	.00078	.0129	.0088	.103	.00666	.0105
%RSD	.45088	148.19	.52622	.17456	.97669	52.702	.41796

#2	.98463	-.00003	2.4634	5.0473	10.643	-.01734	2.4725
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	NOCHECK	QC Pass
Value	1.0000		2.5000	5.0000	10.000		2.5000
Range	10.000		10.000	10.000	10.000		10.000
Elem	Na5889	T13775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q3.8429	5.3328	-.00008	-.00480	2.4680	2.5706	9.384
SDev	.0496	.0069	.00702	.00179	.0101	.0123	.017
%RSD	1.2911	.12867	8694.0	37.198	.41084	.47723	.1811
#1	Q3.8078	5.3377	.00488	-.00607	2.4609	2.5619	9.372
#2	Q3.8780	5.3280	-.00504	-.00354	2.4752	2.5793	9.396
Errors	QC Fail	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK
Value	5.0000	5.0000			2.5000	2.5000	
Range	10.000	10.000			10.000	10.000	

000280

Method: RASI_ICP Sample Name: CCVC Operator: CLT
Run Time: 07/11/92 04:14:06
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	A13082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.950	-.01306	.11553	.00473	-.00210	.00752	24.838
SDev	.191	.00366	.02567	.00120	.00104	.00194	.190
%RSD	.73734	28.045	22.217	25.393	49.233	25.798	.76507
#1	26.085	-.01565	.13367	.00558	-.00137	.00889	24.973
#2	25.815	-.01047	.09738	.00388	-.00284	.00615	24.704
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	QC Pass
Value	25.000						25.000
Range	10.000						10.000
Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00274	24.194	.02449	24.535	Q28.199	.03302	26.042
SDev	.00124	.076	.00253	.114	.102	.00088	.191
%RSD	45.327	.31213	10.316	.46267	.36320	2.6519	.73346
#1	-.00186	24.247	.02628	24.615	Q28.126	.03241	26.177
#2	-.00361	24.141	.02270	24.455	Q28.271	.03364	25.907
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Fail	NOCHECK	QC Pass
Value		25.000		25.000	25.000		25.000
Range		10.000		10.000	10.000		10.000
Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.8774	.00076	.00467	51.665	.00007	-.00661	-.01517
SDev	.0140	.00113	.00230	.094	.00036	.00266	.00277
%RSD	.14160	67	49.144	181673	477.37	40.321	18.224

#2	9.8675	.00155	.00305	51.599	-.00018	-.00849	-.01713
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value	10.000			50.000			
Range	10.000			10.000			

000281

Units	Na5889 ppm	Tl3775 ppm	Sn1899 ppm	Ti3248 ppm	V_2924 ppm	Zn2138 ppm	Y_3710 ppm
Avge	50.853	.18411	-.00009	-.02342	24.675	.00521	9.786
SDev	.177	.06255	.00159	.00623	.074	.00418	.048
%RSD	.34846	33.973	1817.3	26.620	.29815	80.294	.4905
#1	50.978	.22834	-.00121	-.02782	24.727	.00817	9.820
#2	50.727	.13989	.00104	-.01901	24.623	.00225	9.752
Errors	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK	NOCHECK
Value	50.000				25.000		
Range	10.000				10.000		

Method: RASI_ICP Sample Name: CCVB Operator: CLT
Run Time: 07/11/92 04:18:21
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.37365	10.465	10.685	.00186	.00305	-.22754	.30183
SDev	.09579	.076	.041	.00105	.00045	.00065	.10433
%RSD	25.636	.72957	.38604	56.195	14.628	.28775	34.567
#1	.44138	10.411	10.656	.00260	.00336	-.22708	.37560
#2	.30592	10.519	10.715	.00112	.00273	-.22800	.22805
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value		10.000					
Range		10.000					

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00100	.11893	.00349	.19595	-1.5701	-.04568	.32800
SDev	.00645	.03195	.00466	.05925	.6403	.00157	.12062
%RSD	644.08	26.864	133.52	30.239	40.784	3.4387	36.775
#1	.00556	.14152	.00678	.23785	-1.1173	-.04457	.41330
#2	-.00356	.09634	.00019	.15405	-2.0229	-.04679	.24271
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03561	10.422	-.00138	.14104	10.503	9.7959	.00222
SDev	.01236	.082	.00400	.14226	.080	.0879	.00295
%RSD	34.703	.78846	290.20	100.87	.75904	.89766	132.62

#2	.02687	10.480	-.00421	.04045	10.559	9.8581	.00014
Errors	NOCHECK	QC Pass	NOCHECK	NOCHECK	NOCHECK	QC Pass	NOCHECK
Value		10.000				10.000	
Range		10.000				10.000	

000282

Elem	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-1.1565	-.09510	10.745	9.7907	.19436	-.01287	9.960
SDev	.0780	.04423	.014	.0465	.01784	.00187	.099
%RSD	6.7417	46.515	.12984	.47523	9.1815	14.507	.9936
#1	-1.1014	-.06382	10.735	9.8236	.20698	-.01155	9.890
#2	-1.2116	-.12638	10.755	9.7578	.18174	-.01419	10.03
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK	NOCHECK
Value			10.000	10.000			
Range			10.000	10.000			

Method: RASI_ICP Sample Name: CCB Operator: CLT
Run Time: 07/11/92 04:22:35
Comment: IEA
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.10462	H.05741	H.04077	-.00041	-.00025	L-.00373	H.08540
SDev	.02415	.02527	.00906	.00024	.00001	.00024	.02487
%RSD	23.084	44.013	22.229	59.335	5.9458	6.5611	29.121
#1	H.12170	H.07528	H.04718	-.00024	-.00024	L-.00390	H.10298
#2	H.08755	H.03954	H.03437	-.00058	-.00026	L-.00356	H.06781
Errors	LC High	LC High	LC High	LC Pass	LC Pass	LC Low	LC High
High	.01590	.01250	.02030	.00050	.00010	.00180	.00640
Low	-.01530	-.01450	-.03190	-.00070	-.00050	-.00120	-.01100

Elem	Cr2677	Co2286	Cu3247	Fe2599	Fe_Hi	Pb2203	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00503	H.02081	-.00304	H.04652	L-1.2801	-.01883	H.08985
SDev	.00384	.00772	.00166	.01441	.9889	.00398	.03375
%RSD	76.255	37.085	54.734	30.971	77.252	21.121	37.560
#1	-.00232	H.02627	-.00186	H.05671	L-1.9794	-.02164	H.11371
#2	L-.00774	H.01535	-.00421	H.03633	L-.58084	-.01601	H.06598
Errors	LC Pass	LC High	LC Pass	LC High	LC Low	LC Pass	LC High
High	.00650	.00230	.00100	.00230	.00230	.02280	.01720
Low	-.00730	-.00310	-.00500	-.00190	-.00190	-.02700	-.01340

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.00902	H.07312	-.00203	-.05496	.02367	.06750	L-.00561
SDev	.00351	.02803	.00062	.04986	.02836	.02361	.00115
%RSD	38.935	38.333	30.692	90.723	119.80	34.970	20.424

#2	H.00654	H.05330	-.00247	L-.09022	.00362	.05081	L-.00642

000283

Errors	LC High	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Low
High	-.00030	.00300	.00430	.05090	.03760	.06890	.00430
Low	-.00150	-.00360	-.00350	-.05770	-.03140	-.06370	-.00470

[illegible]	Na5889	Tl3775	Sn1899	Ti3248	V_2924	Zn2138	Y_3710
[illegible]cs	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-1.2781	.04474	H.05129	.03427	H.02060	L-.00536	9.101
SDev	.0337	.04951	.00612	.01552	.00834	.00028	.038
%RSD	2.6343	110.67	11.926	45.280	40.484	5.2220	.4130
#1	L-1.2542	.07975	H.05561	H.04524	H.02649	L-.00555	9.075
#2	L-1.3019	.00973	H.04696	.02330	H.01470	L-.00516	9.128

Errors	LC Low	LC Pass	LC High	LC Pass	LC High	LC Low	NOCHECK
High	.80990	.09930	.01050	.04010	.00150	.00030	
Low	-1.2403	-.10050	-.02250	-.02470	-.00150	-.00150	

PROJECT#

SAMPLE ID

SAMPLE DATE

RELINQUISHED BY/AFFIL

RECEIVED BY/AFFIL

D-544

D-542

12-06-187

CHAIN OF CUSTODY RECORD

NO: 32113

iea
an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: ROSS ANALYTICAL

PROJECT #: 1381-004 PROJECT NAME: Virginia Solite BIF Test

SAMPLER(S) (SIGNATURE)

SAMPLE ID	DATE	TIME	COMP	GRAB	SAMPLE ID / STATION LOCATION	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	REQUESTED PARAMETERS: METALS	CHLORINE	MOISTURE
	6/16		X		H2-PROD-1-PHYS	1				X	X
	6/16		X		H4-DUST-3-MTL	1			X		
0-	6/16		X		H4-PROD-2-MTL	1			X		
5+3	6/16		X		H4-PROD-2D-PHYS	1				X	X
3	6/16		X		H4-PROD-2D-MTL	1			X		
	6/16		X		H4-PROD-3-PHYS	1				X	X
	6/16		X		H4-RFEED-3-PHYS	1				X	X
	6/16		X		H4-RFEED-3-MTL	1			X		
	6/16		X		H4-PROD-3-MTL	1			X		

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Gerald C Bowser	6/19	14:15			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			Linda Tuckett	6/23/92	10:00

IEA QUOTE NO.	IEA RUSH NO.
PROJECT MANAGER (PLEASE PRINT)	P.O. NO.
JAMES PETERS	

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS: METALS = Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ag, Tl

FIELD REMARKS:

an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 2109

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: ROSS ANALYTICAL

Page 2 of 5

PROJECT #: 1281.004 PROJECT NAME: VIRGINIA SOLITE BIF TEST

SAMPLER(S) (SIGNATURE)

SAMPLE ID	DATE	TIME			SAMPLE ID DESCRIPTION	# OF CONTAINERS	SOIL	WATER	METALS	CHLORINE	MOISTURE	BTU	ASH	DENSITY	REQUESTED PARAMETERS
	6/18		X		H2-RFEED-3-MTL	1			X						
	6/18		X		H2-LBM-3-PHYS	1				X	X	X	X	X	
	6/18		X		H2-PROD-3-PHYS	1				X	X				
	6/18		X		H2-PROD-3-MTL	1			X						
	6/18		X		H2-LMB-3-MTL	1			X						
	6/18		X		H2-LBM-2-PHYS	1				X	X	X	X	X	
	6/18		X		H2-LBM-1-MTL	1			X						
	6/18		X		H2-LBM-1-PHYS	1				X	X	X	X	X	
	6/18		X		H2-LMB-2-MTL	1			X						
	6/18		X		H4-RFEED-1-PHYS	1				X	X				

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Jerold C. Bowen	6/19	14:15			
				6/23/97	10:00

IEA QUOTE NO.

IEA RUSH NO.

PROJECT MANAGER (PLEASE PRINT): JAMES PETERS

P.O. NO.

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

IEA REMARKS

FIELD REMARKS

92-06-189

iea an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 32111

REGULATORY CLASSIFICATION - PLEASE SPECIFY
☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: ROSS ANALYTICAL

PROJECT # | PROJECT NAME: 1391-004 Virginia Solite BIF Test

SAMPLERS (SIGNATURE): SAMPLE ID

SAMPLE I.D.	DATE	TIME			STATION LOCATION	# OF CONTAINERS	SOIL	WATER	METALS	CHLORINE	MOISTURE	BTU	ASH	DENSITY	REQUESTED PARAMETERS
	6/16		X		H4-LBM-1-MTL	1			X						
	6/16		X		H4-LBM-2D-MTL	1			X						
0-5	6/16		X		H4-LBM-2D-PHYS	1				X	X	X	X	X	
5-9	6/16		X		H4-LBM-1-PHYS	1				X	X	X	X	X	
	6/16		X		H4-LMB-2-MTL	1			X						
	6/16		X		H4-LMB-3-MTL	1			X						
	6/16		X		H4-LBM-3-PHYS	1				X	X	X	X	X	
	6/16				H4-LBM-2-PHYS	1				X	X				
	6/16		X		H4-PROD-1-MTL	1			X						
	6/16		X		H2-DUST-3-MTL	1			X						

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED	DATE	TIME
Gerald C. Bauser	6/19	14:15			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	6/23/92	10:00

IEA QUOTE NO.: | IEA RUSH NO.:

PROJECT MANAGER (PLEASE PRINT): JAMES PETERS | P.O. NO.:

REMARKS ON SAMPLE RECEIPT
☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERV ☐ SEALS INTACT
☐ SEE REMARKS

IEA REMARKS:

FIELD REMARKS:

iec an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 112

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY NAME: ROSS ANALYTICAL

Page 4 of 5

PROJECT #	PROJECT NAME
1381-003	Virgina Solite BIF Test

SAMPLERS (SIGNATURE)

SAMPLE ID	DATE	TIME	GRAB	COMP	STATION LOCATION	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	REQUESTED PARAMETERS: METALS	CHLORINE	MOISTURE
	6/18		X		H2-RFEED-3-PHYS	1				X	X
	6/18		X		H2-RFEED-1-MTL	1			X		
	6/18		X		H2-RFEED-1-PHYS	1				X	X
	6/19		X		H2-PROD-2-PHYS	1				X	X
	6/18		X		H2-PROD-2-MTL	1			X		
	6/18		X		H2-DUST-2-MTL	1			X		
	6/18		X		H2-RFEED-2-PHYS	1				X	X
	6/18		X		H2-DUST-1-MTL	1			X		
	6/18		X		H2-RFEED-2-MTL	1			X		
	6/18		X		H2-PROD-1-MTL	1			X		

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Gerald C. Bowser	6/19	14:15			
			RECEIVED FOR LAB BY	DATE	TIME
				6/23/92	10:00

IEA QUOTE NO.

IEA RUSH NO.

PROJECT MANAGER (PLEASE PRINT): JAMES PETERS

P.O. NO.

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ CHILLED ☐ SEE REMARKS

LAB REMARKS

FIELD REMARKS

92-06-184

CHAIN OF CUSTODY RECORD

NO: 32110

iea
an environmental testing company
3000 WESTON PKWY.
CARY, N.C. 27513

REGULATORY CLASSIFICATION - PLEASE SPECIFY

☐ NPDES ☐ DRINKING WATER ☒ RCRA ☐ OTHER _____

COMPANY: ROSS ANALYTICAL

PROJECT # | PROJECT NAME: 1381-004 | Virginia Solite BIF Test

SAMPLER'S SIGNATURE:

SAMPLE #	DATE	TIME	GRAB	COMP	SAMPLE ID / LOCATION / DESCRIPTION	# OF CONTAINERS	MATRIX: SOIL	MATRIX: WATER	REQUESTED PARAMETERS: METALS	CHLORINE	MOISTURE
	6/16		X		H4-RFEED-2D-PHYS	1				X	X
	6/16		X		H4-DUST-2D-MTL	1			X		
	6/16		X		H4-PROD-2-PHYS	1				X	X
	6/16		X		H4-RFEED-1-MTL	1			X		
	6/16		X		H4-PROD-1-PHYS	1				X	X
	6/16		X		H4-RFEED-2D-MTL	1			X		
	6/16		X		H4-DUST-2-MTL	1			X		
	6/16		X		H4-RFEED-2-MTL	1			X		
	6/16		X		H4-DUST-1-MTL	1			X		
	6/16		X		H4-RFEED-2-PHYS	1				X	X

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
Jerald C. Bowser	6/19	14:15			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	6/23/92	10:00

IEA QUOTE NO.

IEA RUSH NO.

PROJECT MANAGER (PLEASE PRINT): JAMES PETERS

P.O. NO.

REMARKS ON SAMPLE RECEIPT

☐ BOTTLE INTACT ☐ CUSTODY SEALS
☐ PRESERVED ☐ SEALS INTACT
☐ SEE REMARKS

IEA REMARKS

FIELD REMARKS

Appendix E

Equipment Calibration Data Sheets

TYPE S PITOT TUBE INSPECTION DATA FORM

Pitot tube assembly level? ✓ yes _____ no

Pitot tube openings damaged? _____ yes (explain below) X no

α_1 = 4 ° (<10°), α_2 = 1 ° (<10°), β_1 = 1 ° (<5°),

β_2 = 1 ° (<5°)

γ = 1 °, θ = 0 °, A = 1.052 ~~cm~~ (in.)

z = A sin γ = .0184 ~~cm~~ (in.); <0.32 cm (<1/8 in.),

w = A sin θ = 0 ~~cm~~ (in.); <.08 cm (<1/32 in.)

P_A .530 ~~cm~~ (in.) P_b .522 ~~cm~~ (in.)

D_t = .374 ~~cm~~ (in.)

Comments: _____

_____

_____

Calibration required? ✓ yes _____ no

DEECO

Date 7/13/92 Thermocouple No. Stack Thermocouple
Ambient temperature 91.4 °F Barometric pressure 29.54 in Hg
Calibration person MRH Reference: mercury-in-glass 91.4 °F
other _____ °F

Reference point number	Source[a] (specify)	Reference thermometer temperature, °F	Thermocouple potentiometer temperature, °F	Temperature[b] difference, %
1	Ice Bath	35.4	34.0	.28%
2	Hot Bath	200	199.67	.05%

[a]Type of calibration system used.

[b] $\frac{(\text{ref temp, °F} + 460) - (\text{test thermom temp, °F} + 460)}{\text{ref temp, °F} + 460} \times 100 =$ (<1.5%)

DEECO

Date 7/13/92 Thermocouple No. Probe Thermocouple
Ambient temperature 91.4 °F Barometric pressure 29.54 in Hg
Calibration person MSH Reference: mercury-in-glass 91.4 °F
other ____ °F

Reference point number	Source[a] (specify)	Reference thermometer temperature, °F	Thermocouple potentiometer temperature, °F	Temperature[b] difference, %
1	Ice Bath	38.3	37	.26%
2	Hot Bath	200	199.67	.05%

[a]Type of calibration system used.

[b] $\frac{(\text{ref temp, °F} + 460) - (\text{test thermom temp, °F} + 460)}{\text{ref temp, °F} + 460} \times 100 =$ (<1.5%)

SET K

VA SOLITE

NOZZLE CALIBRATION

Date 6/25/91 Calibrated by MCR

Nozzle identification number	D1, in.	D2, in.	D3, in.	delta D, in.	Davg
K.20	0.196 ~~0.197~~	0.197 ~~0.196~~	0.196 ~~0.195~~	.001 ~~0.002~~	0.196 ~~0.195~~
K.25	0.235	0.235	0.236	0.001	0.235
K.28	0.272	~~0.276~~ 0.273	0.272	~~0.002~~ 0.001	0.273
K.31	0.310	0.309	0.311	0.002	0.310
K.38	0.376	0.377	0.375	0.002	0.376

NEW NOZZLE #2

where:

D1, D2, D3 = nozzle diameter measured on a different diameter, in.
Tolerance = measure within 0.001 in.

delta D = maximum difference in any two measurements, in.
Tolerance = 0.004 in.

Davg = average of D1, D2, and D3.

VA SOLITE

NOZZLE CALIBRATION

Date 4-10-92 Calibrated by JAB

Nozzle identification number	D1, in.	D2, in.	D3, in.	D, in.	Davg
X-27	.276	.274	.275	.002	.275
X-23	.237	.236	.2375	.0015	.237
X-309	.309	.310	.3095	.001	.3095
X-4	.276	.277	.277	.001	.277
X-5	.277	.276	.276	.001	.276
X-25	.233	.234	.232	.002	.233

where:

D1, D2, D3 = nozzle diameter measured on a different diameter, in.
Tolerance = measure within 0.001 in.

D = maximum difference in any two measurements, in.
Tolerance = 0.004 in.

Davg = average of D1, D2, and D3.

TYPE S PITOT TUBE INSPECTION DATA FORM

Pitot tube assembly level? _____ yes _____ no

Pitot tube openings damaged? _____ yes (explain below) _____ no

α_1 = 2° (<10°), α_2 = 1° (<10°), β_1 = .5° (<5°),

β_2 = 1° (<5°)

γ = 1°, θ = 0°, A = .063 cm (in.)

z = A sin γ = .018 cm (in.); <0.32 cm (<1/8 in.),

w = A sin θ = 0 cm (in.); <.08 cm (<1/32 in.)

P_A .532 cm (in.) P_b .531 cm (in.)

D_t = .375 cm (in.)

Comments: insp. by JAB 4-8-92

PROBE #.5 B

Calibration required? _____ yes ✓ no

TYPE S PITOT TUBE INSPECTION DATA FORM

Pitot tube assembly level? ✓ yes _____ no

Pitot tube openings damaged? _____ yes (explain below) ✓ no

α_1 = 3 ° (<10°), α_2 = 3 ° (<10°), β_1 = 0 ° (<5°),

β_2 = 1 ° (<5°)

γ = 0 °, θ = 1 °, A = .939 cm (in.)

z = A sin γ = .000 cm (in.); <0.32 cm (<1/8 in.),

w = A sin θ = .016 cm (in.); <.08 cm (<1/32 in.)

P_A .468 cm (in.) P_b .470 cm (in.)

t = .375 cm (in.)

Comments: INSP'd By JAB 6-8-92

PROBE #: 5C

Calibration required? _____ yes ✓ no

TYPE S PITOT TUBE INSPECTION DATA FORM

itot tube assembly level? ✓ yes _____ no

itot tube openings damaged? _____ yes (explain below) ✓ no

$_1$ = 0 ° (<10°), α_2 = 0 ° (<10°), β_1 = 0 ° (<5°),

β_2 = 0 ° (<5°)

= 0 °, θ = 0 °, A = ~~0.860~~ 0.686 (cm) ~~(in.)~~

□ A sin γ = 0 cm (in.); <0.32 cm (<1/8 in.),

w = A sin θ = 0 cm (in.); <.08 cm (<1/32 in.)

A 0.360 cm (in.) P_b 0.356 cm (in.)

$_t$ = 0.285 cm (in.)

omments: 10-8-91

Checked by RS.

CL-5

alibration required? _____ yes ✓ no

TYPE S PITOT TUBE INSPECTION DATA FORM

Pitot tube assembly level? ✓ yes _____ no

Pitot tube openings damaged? _____ yes (explain below) X no

α_1 = _____° (<10°), α_2 = _____° (<10°), β_1 = _____° (<5°),

β_2 = _____° (<5°)

γ = 0 °, θ = 1 °, A = .717 cm (in.)

z = A sin γ = 0 cm (in.); <0.32 cm (<1/8 in.),

w = A sin θ = .012 cm (in.); <.08 cm (<1/32 in.)

P_A .358 cm (in.) P_b .359 cm (in.)

D_t = .25 cm (in.)

Comments: Insp. by JAB 6-8-97

PROBE #: CR4 Hex 2

Calibration required? _____ yes ✓ no

TEMPERATURE CALIBRATION DATA FORM

Date 6-8-92 Calibrator Name James Clark Malone

Ambient Temperature 72.9 Barometric Pressure 29.81 in. Hg

Reference: Hg-in-glass _____

Other _____

Thermocouple No.	Source (specify)	Reference thermometer temperature °F	Thermocouple indicator temperature °F	Percent error %
S-C	ambient	79.4	79.2	.037
	Boiling H2O	211.0	207.8	.496
	Ice Bath	37.8	37.4	.080
S-13	Ambient	71.8	71.4	.075
	Boiling H2O	212.0	211.8	.029
	ICE Bath	36.8	36.4	.040

Source: ice bath, ambient air, boiling H2O, hot oil

iea

$$\% \text{ error} = \frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 1.5\%$$

tempcal.wk1

IERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA FORM

Date -93 Calibrator Name JAB

Indicator Oven Serial No. 007

Calibratio CI 300 Manufacturer Omega

Millivolt Test Poi Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
	100	99	
	200	198	
	300	300	
	400	401	
	500	499	
	600	598	
	700	700	
	800	802	
	900	901	
	1100	1099	

Percent dif less than or equal to 0.5%

Percent Di

$$\frac{\text{+ 460) – (Test temp + 460)}}{\text{f temp + 460)}} \text{ x 100\% should be < 0.5\%}$$

THERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA FORM

Date 6-26-92 Calibrator Name JAB

Indicator No. M-11. Readout Serial No. 007

Calibration Device No. CL 300 Manufacturer Omega

Test Point No.	Millivolt Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
		100	99	
		200	199	
		300	300	
		400	398	
		500	502	
		600	599	
		700	701	
		800	801	
		900	900	
		1100	1101	

Percent difference must be less than or equal to 0.5%

Percent Difference:

$$\frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 0.5\%$$

THERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA FORM

Date 6-26-92 Calibrator Name JKB

Indicator No. M-10 Readout Serial No. 007

Calibration Device No. CL 300 Manufacturer Omega

Test Point No.	Millivolt Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
		100	100	
		200	200	
		300	301	
		400	400	
		500	500	
		600	601	
		700	699	
		800	799	
		900	900	
		1100	1101	

Percent difference must be less than or equal to 0.5%

Percent Difference:

$$\frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 0.5\%$$

THERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA FORM

Date 6-26-92 Calibrator Name JAB

Indicator No. M-10 oven Serial No. 007

Calibration Device No. CL-300 Manufacturer Omega

Test Point No.	Millivolt Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
		100	101	
		200	201	
		300	300	
		400	400	
		500	501	
		600	599	
		700	701	
		800	802	
		900	900	
		1100	1099	

Percent difference must be less than or equal to 0.5%

Percent Difference:

$$\frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 0.5\%$$

THERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA FORM

Date 6-26-92 Calibrator Name JAB

Indicator No. M-10. Probe Serial No. 007

Calibration Device No. CI 300 Manufacturer Omega

Test Point No.	Millivolt Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
		100	99	
		200	200	
		300	301	
		400	401	
		500	500	
		600	599	
		700	699	
		800	800	
		900	900	
		1100	1102	

Percent difference must be less than or equal to 0.5%

Percent Difference:

$$\frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 0.5\%$$

THERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA FORM

Date 6-24-92 Calibrator Name JAB

Indicator No. M-4 - Readout Serial No. 007

Calibration Device No. C1 300 Manufacturer Omega

Test Point No.	Millivolt Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
		100	100	
		200	200	
		300	301	
		400	400	
		500	500	
		600	600	
		700	700	
		810	799	
		900	899	
		1100	1101	

Percent difference must be less than or equal to 0.5%

Percent Difference:

$$\frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 0.5\%$$

THERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA FORM

Date 6-26-92 Calibrator Name JAB

Indicator No. M-4. Probe Serial No. 007

Calibration Device No. C1 300 Manufacturer Omega

Test Point No.	Millivolt Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
		100	99	
		200	199	
		300	300	
		400	401	
		500	502	
		600	601	
		700	700	
		800	799	
		900	898	
		1100	1099	

Percent difference must be less than or equal to 0.5%

Percent Difference:

$$\frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 0.5\%$$

all other solite

THERMOCOUPLE DIGITAL INDICATOR CALIBRATION DATA FORM

Date 6-26-92 Calibrator Name JAB

Indicator No. M-4 oven Serial No. 007

Calibration Device No. CI 300 Manufacturer Omega

Test Point No.	Millivolt Signal	Equivalent Temperature deg. F	Digital Indicator Temperature deg. F	Percent difference %
		100	101	
		200	202	
		300	301	
		400	400	
		500	498	
		600	599	
		700	701	
		900	800	
		900	900	
		1100	1101	

Percent difference must be less than or equal to 0.5%

Percent Difference:

$$\frac{(\text{Ref temp} + 460) - (\text{Test temp} + 460)}{(\text{Ref temp} + 460)} \times 100\% \text{ should be} < 0.5\%$$