SCOPE OF WORK - SEPTEMBER 1993 SUPPLEMENTAL WORK PLAN

Niagara Cold Drawn Corporation
Buffalo, New York

NOVEMBER 1993

REF. NO. 3829 (3)

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CONESTOGA-ROVERS & ASSOCIATES

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1.0 INTRODUCTION

On May 28, 1993, Mr. John T. Kolaga of Whiteman, Osterman & Hanna, representing the Niagara Cold Drawn Corporation, sent a petition to delist to Mr. Thomas C. Jorling of the New York State Department of Environmental Conservation (NYSDEC) requesting the removal of the Niagara Cold Drawn Site (No. 915046A) (the Site) from the NYSDEC's Registry of Inactive Hazardous Waste Sites. The petition to delist was accompanied by a report entitled "January 1993 Data Collection Program" which summarized historical investigative data and presented data collected in January 1993 to assess those areas of the Site which had previously been identified as areas of possible concern. The January 1993 Data Collection Program report concluded that no further investigatory or remedial activities were required at the Site prior to delisting.

On September 13, 1993, Mr. Michael J. O'Toole, Jr. of the NYSDEC sent a response to Mr. Kolaga indicating that the NYSDEC had denied Niagara Cold Drawn's petition to delist. The letter indicated that there was insufficient information to properly assess the petition to delist and that several specific areas of concern needed to be addressed in order to complete the assessment of the petition. The specific areas of concern identified by the NYSDEC were as follows:

1. The investigation did not sufficiently investigate the potential for PCB exposure. No subsurface soil samples were collected and analyzed for PCBs in the oil stained area or near the north fence where PCBs were detected in the past.

2. Discrete surface and subsurface soil samples need to be collected near the abandoned sulfuric acid storage tank. Composite sampling covering a large area is not the preferred method when specific areas of contamination or potentially contaminated areas are known.

3. It appears that the proper extraction procedure was not followed for the Target Compound List (TCL) analytes. Therefore, the analytical data is

questionable. The TCL parameters should have been analyzed according to the NYS Analytical Services Protocol (ASP).

In response to the above concerns identified by the NYSDEC, Niagara Cold Drawn Corporation has prepared this draft work plan (the September 1993 Supplemental Work Plan) to identify the efforts Niagara Cold Drawn Corporation will make to supply additional information to the NYSDEC to address the specific areas of concern set forth in the September 13, 1993 NYSDEC letter. This work plan presents the proposed scope of work for a supplemental investigation to be conducted immediately upon approval by the NYSDEC in order to attain the delisting of the Site.

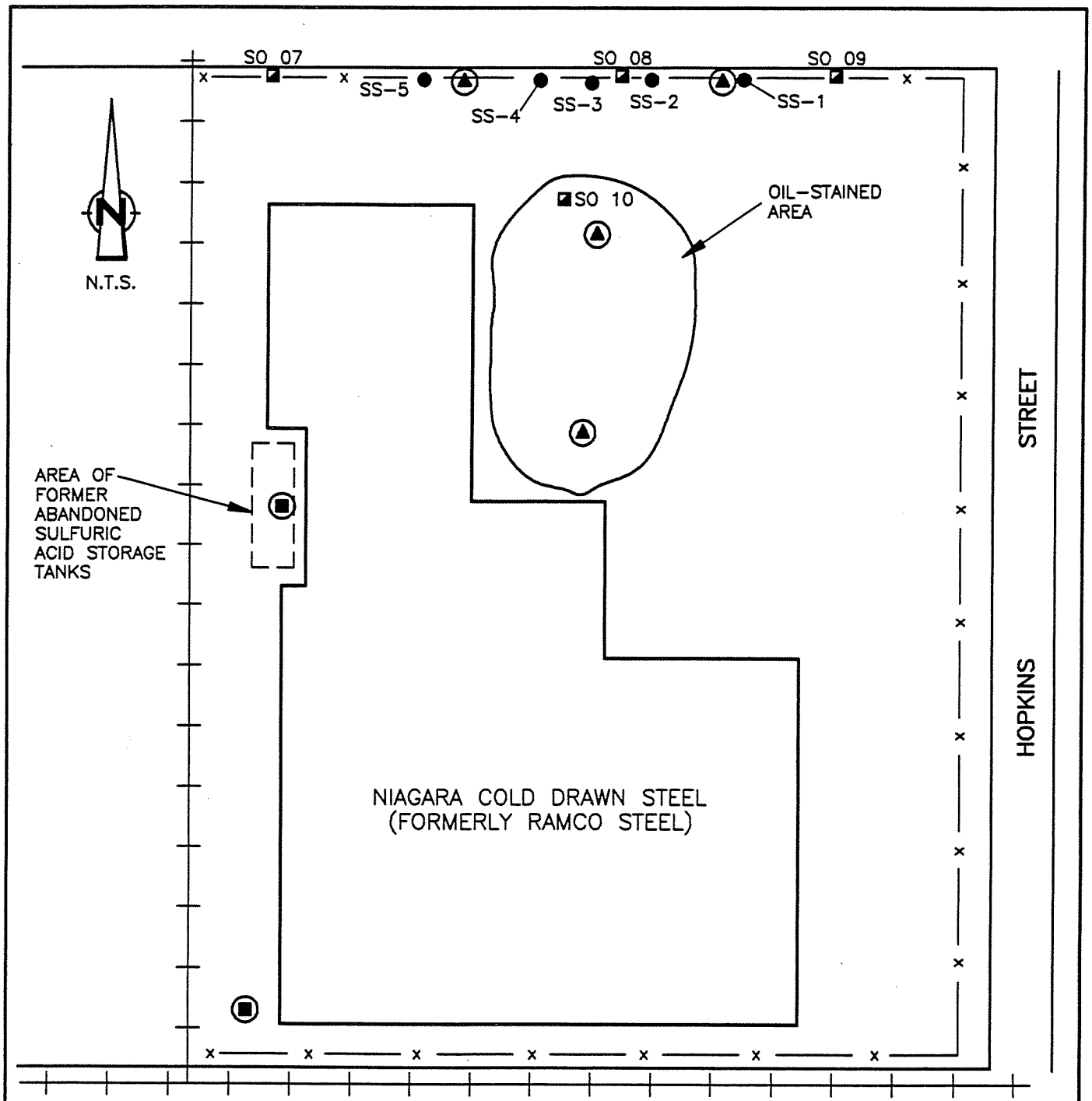
2.0 PROPOSED ACTIVITIES

2.1 PCB SAMPLING

In 1984, NUS Corporation, on behalf of the United States Environmental Protection Agency (USEPA), conducted some testing at the Site. No hazardous waste was identified at the Site, with the exception of one soil sample collected near the north fence which was reported to contain PCB (Arochlor 1254 at 62 ppm and Arochlor 1260 at 123 ppm) along with several metals and organics at low levels. There was also an oil-stained area observed at the Site which was not sampled by NUS.

No evidence of PCB presence was identified by Conestoga-Rovers & Associates (CRA) at the Site during prior sampling events. Specifically, in January 1991, CRA collected three discrete surface soil samples (upper six inches) at three locations along the north fence line and one composite surface soil sample (upper three inches at three locations) within the oil-stained area. In January 1993, CRA collected composite surface soil samples (upper six inches within 10-foot by 5-foot area) at five locations along the north fence line with no additional sampling within the oil-stained area. PCBs were not detected in eight of these nine samples, with the remaining result being only 0.03 µg/g above the detection limit.

Because no evidence of PCB presence was identified in the surface soils during previous investigations, CRA did not perform subsequent subsurface soil sampling. Nonetheless, in response to the NYSDEC concerns regarding PCB presence in the subsurface soils, Niagara Cold Drawn Corporation is prepared to collect two discrete subsurface soil samples within each of the areas of concern at NYSDEC-approved locations adjacent to the north fence line and within the oil-stained area, as shown on Figure 2.1. Each sample will be collected by driving a split-spoon sampler twelve inches into the ground and subsequently collecting a sample for analysis from the bottom six inches of each retrieved soil sample. All sampling techniques and cleaning procedures will be identical to those used during the January 1993 Data Collection Program. Each of the four subsurface samples collected will be submitted for analysis of PCBs. In addition, one of



LEGEND

- SURFACE SOIL SAMPLE COLLECTED IN MARCH 1991 FOR PCB ANALYSIS
- COMPOSITE SOIL SAMPLE COLLECTED IN JANUARY 1993 FOR PCB ANALYSIS
- PROPOSED SUBSURFACE SOIL SAMPLE FOR PCB ANALYSIS (ONE SAMPLE IN OIL-STAINED AREA FOR TCL/TAL)
- PROPOSED SUBSURFACE SOIL SAMPLE FOR METALS/PCBs/pH/SULPHATE ANALYSIS

CRA

figure 2.1

SAMPLE LOCATIONS
NIAGARA COLD DRAWN CORP.
Buffalo, New York

3829 (3) NOV 15/93(W) REV.0 (P-03)

the two samples collected within the oil-stained area will also be analyzed for the full Target Compound List (TCL)/Target Analyte List (TAL) parameters. The analytical results will be compiled, validated and submitted to the NYSDEC.

2.2 ABANDONED SULFURIC ACID STORAGE TANKS

Another identified area of concern is an area along the west side of the main building where sulfuric acid storage tanks were temporarily staged following their removal from the building. These tanks are no longer present in this area and were never used as sulfuric acid storage tanks in this area outside the building.

Niagara Cold Drawn Corporation will conduct an investigation of the soils in this area and collect one soil sample at a location approved by the NYSDEC. The sample will be collected by driving a split-spoon sampler twelve inches into the ground at the location shown on Figure 2.1 and subsequently collecting a sample for analysis from the bottom six inches of the retrieved soil sample. If the material encountered in the 6 to 12-inch layer is crushed stone fill, the sampler will be driven deeper to the uppermost layer of soil material which may be analyzed. In addition, a subsurface soil sample will be collected in a general use area of the Site to determine background conditions, the location of which to be field-selected with NYSDEC approval. All sampling techniques and cleaning procedures will be identical to those previously used by CRA and each of the two subsurface samples will be submitted for analysis of TAL Metals, EP Tox Metals, PCBs, pH and sulfate. The analytical results will be compiled, validated and submitted to the NYSDEC.

2.3 ANALYTICAL SERVICES PROTOCOL

The NYSDEC has questioned the validity of the previous analytical data for TAL parameters, as the analysis was not performed in accordance with the methods specified by NYS in its Analytical Services

Protocol (ASP). However, the extraction and analysis of the previously collected samples was performed using Method 3050 contained in SW846, which is the specific method referenced in ASP. Therefore, the analytical data collected are valid, notwithstanding the absence of certain deliverables required by ASP. In order to satisfy NYSDEC's concerns, however, CRA has contacted the analytical facility and acquired all available deliverables (attached hereto as Appendix A).

The analysis of sampling events proposed in this work plan will be performed in accordance with ASP and all deliverables will be made available to the NYSDEC in a timely fashion

During this supplemental sampling event, NYSDEC may request split samples collected for its own analysis. Niagara Cold Drawn Corporation will supply the NYSDEC with the required glassware for any samples, upon notification of its intent to analyse such split samples.

3.0 SUMMARY

Niagara Cold Drawn Corporation is prepared to conduct additional sampling in the areas of potential concern identified by the NYSDEC in its September 13, 1993 letter. These samples will be analyzed in accordance with ASP. Following completion of these activities, and assuming all the results are below action levels, Niagara Cold Drawn Corporation will resubmit its petition to delist for approval by the NYSDEC.

APPENDICES

APPENDIX A

NOTEBOOK NO. [illegible]

PROJECT DIGESTIONS

Continued From Page

SAMPLE NUMBER	DATE TIME	PREP BY	TYPE DIGEST	SPIKE SOL USED	INIT SAMPLE	FINAL VOLUME
SAND BLANK	1-26-93	mw	3050F		1.00	100
LCS-5	10A				1.02	
CCG7-01					1.02	
02					1.02	
03					1.03	
04					1.00	
05					1.04	
06					1.01	
07					1.00	
08					1.00	
09					1.04	
10					1.05	
11					1.01	
12					1.03	
13					1.00	
05 Rep					1.00	
05 Spk	↓	↓	↓	2 ml Fluoride Spk	1.00	↓
0029-05	1-26-93	mw	3-50P		1.05	200
05	10A				1.00	
05	↓		↓	2 ml SPIKE-1	1.02	↓
SAND BLANK	~~1-25-93~~ 1-26-93 mw	mw	3050P		1.00	200
LCS-5					1.00	
0029-05					1.00	
0104-01					1.00	
02					1.01	
03					1.01	
04					1.00	
05					1.00	
01 Rep					1.03	
01 Spk			↓	2 ml SPIKE-1	1.01	

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Read and Understood By

Signed Date Signed Date

PROJECT MERCURY 1-27-93 Continued From Page

SAMPLE NUMBER	Read	Conc	IS	UNITS	AMT SAMPLE	~~FINAL~~ NW 1-27-93 CONC DIL	FINAL CONC	
							CORR	.99937
							SLOPE	42.000
							INTCPT	1.315
BLANK	2							
0.2	10							
0.4	18							
0.8	36							
1.0	40							
2.0	87							
3.0	127							
ICV	49	1.135		ug/L	100ml	0.0002mg/L	0.00114	113.5%
ICB	1	-0.008			↓	0.0002 mg/L	<0.0002	
LCS-W 1.0TV	30	0.683				0.0002 mg/L	0.00068	68.3%
LCS-S 13.7TV	56	1.302		ug/g	0.08g	0.100mg/kg	10.85 mg/kg	79.2%
CCV	46	1.064		ug/L	100ml	0.0002 mg/L	0.00106	106.4%
CCB	2	0.016			↓	↓	<0.0002	
ICV-2 1.5TV	57	1.326		↓	↓	↓	0.00133	88.4%
S.H. 0103-01	2	0.016		ug/g	0.21g	0.100mg/kg	<0.100	
0103-01 Rep	4	0.064			0.23g		<0.100	
Spk	34	2.778			0.21g		0.37 mg/kg	77.5%
0104-01	10	0.207			0.21g		<0.100	
01 Rep	8	0.159			0.20g		<0.100	
01 Spk	49	1.135			0.21g		0.54 mg/kg	113.5%
02	4	0.064			0.24g		<0.100	
03	3	0.040			0.23g		<0.100	
04	4	0.064			0.23g		<0.100	
05	4	0.064			0.20g		<0.100	
SAND BLANK	1	-0.008		↓	0.20g	↓	<0.100	
CCV	35	0.902		ug/L	100ml	0.0002 mg/L	0.00080	80.2%
CCB	2	0.016		↓	↓	↓	<0.0002	

Continued on Page

Read and Understood By Conc = $\frac{\text{Read} - 1.315}{42.000}$

Signed Date Signed Date

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-A
HAS Sample #93-0104-01
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC	SPIKE %REC	RPD
ALUMINUM	6010	1/28/93	2910	2	0.698	30.0	86000	8340000	*95		
ANTIMONY	6010	1/28/93	9.91	2	0.698	50.0	143000	<DL	*95		<1.0
ARSENIC	7060	2/02/93	9.5	2	0.698	10.0	28700	<DL	*95	96.8	
BARIUM	6010	1/28/93	42.8	2	0.698	10.0	28700	123000	*95		<1.0
BERYLLIUM	6010	1/28/93	1.76	2	0.698	5.00	14300	<DL	*95		<1.0
CADMIUM	6010	1/28/93	2.6	2	0.698	5.00	14300	<DL	*95		<1.0
CALCIUM	6010	1/28/93	26100	2	0.698	20.0	57300	74800000	*95		
CHROMIUM	6010	1/28/93	13.1	2	0.698	10.0	28700	37500	*95		
COBALT	6010	1/28/93	7.15	2	0.698	10.0	28700	<DL	*95		<1.0
COPPER	6010	1/28/93	18.3	2	0.698	10.0	28700	52400	*95		
IRON	6010	1/28/93	22400	2	0.698	20.0	57300	64200000	*95		
LEAD	7421	2/01/93	7.5	20	0.698	5.00	143000	215000	*95		
MAGNESIUM	6010	1/28/93	2920	2	0.698	40.0	115000	8370000	*95		3.5
MANGANESE	6010	1/28/93	475	2	0.698	10.0	28700	1360000	*95		
MERCURY	7471	1/27/93	0.207	0.1	0.147	0.20	136	141	*95	92.8	<1.0
NICKEL	6010	1/28/93	-6.02	2	0.698	40.0	115000	<DL	*95		<1.0
POTASSIUM	6010	1/28/93	1330	2	0.698	3000	8600000	<DL	*95		<1.0
SELENIUM	7740	2/01/93	1	0.2	0.698	5.00	1430	<DL	*95	90.2	<1.0
SILVER	6010	1/28/93	-1.14	2	0.698	10.0	28700	<DL	*95		<1.0
SODIUM	6010	1/28/93	-39.7	2	0.698	50.0	143000	<DL	*95		<1.0
THALLIUM	7841	2/02/93	0.7	0.2	0.698	10.0	2870	<DL	*95		<1.0
VANADIUM	6010	1/28/93	15.5	2	0.698	20.0	57300	<DL	*95		<1.0
ZINC	6010	1/28/93	159	2	0.698	20.0	57300	456000	*95		

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

ALL SOIL/SLUDGE SAMPLE RESULTS ARE BASED UPON DRY WEIGHT.

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-B
HAS Sample #93-0104-02
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO> DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	15000	2	0.834	30.0	71900	36000000	*95
ANTIMONY	6010	1/28/93	-15.7	2	0.834	50.0	120000	<DL	*95
ARSENIC	7060	2/02/93	0.5	2	0.834	10.0	24000	<DL	*95
BARIUM	6010	1/28/93	113	2	0.834	10.0	24000	271000	*95
BERYLLIUM	6010	1/28/93	5.42	2	0.834	5.00	12000	13000	*95
CADMIUM	6010	1/28/93	0.0001	2	0.834	5.00	12000	<DL	*95
CALCIUM	6010	1/28/93	91200	2	0.834	20.0	48000	219000000	*95
CHROMIUM	6010	1/28/93	19.5	2	0.834	10.0	24000	46800	*95
COBALT	6010	1/28/93	-2.44	2	0.834	10.0	24000	<DL	*95
COPPER	6010	1/28/93	6.03	2	0.834	10.0	24000	<DL	*95
IRON	6010	1/28/93	11200	2	0.834	20.0	48000	26900000	*95
LEAD	7421	2/01/93	1.1	20	0.834	5.00	120000	<DL	*95
MAGNESIUM	6010	1/28/93	22700	2	0.834	40.0	95900	54400000	*95
MANGANESE	6010	1/28/93	930	2	0.834	10.0	24000	2230000	*95
MERCURY	7471	1/27/93	0.064	0.1	0.192	0.20	104	<DL	*95
NICKEL	6010	1/28/93	-2.93	2	0.834	40.0	95900	<DL	*95
POTASSIUM	6010	1/28/93	1770	2	0.834	3000	7190000	<DL	*95
SELENIUM	7740	2/01/93	1.7	2	0.834	5.00	12000	<DL	*95
SILVER	6010	1/28/93	-1.14	2	0.834	10.0	24000	<DL	*95
SODIUM	6010	1/28/93	626	2	0.834	50.0	120000	1500000	*95
THALLIUM	7841	2/02/93	-0.1	0.2	0.834	10.0	2400	<DL	*95
VANADIUM	6010	1/28/93	3.12	2	0.834	20.0	48000	<DL	*95
ZINC	6010	1/28/93	13.1	2	0.834	20.0	48000	<DL	*95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

ALL SOIL/SLUDGE SAMPLE RESULTS ARE BASED UPON DRY WEIGHT.

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-C
HAS Sample #93-0104-03
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	6860	2	0.797	30.0	75300	17200000	*95
ANTIMONY	6010	1/28/93	-3.3	2	0.797	50.0	125000	<DL	*95
ARSENIC	7060	2/02/93	2.6	2	0.797	10.0	25100	<DL	*95
BARIUM	6010	1/28/93	56.2	2	0.797	10.0	25100	141000	*95
BERYLLIUM	6010	1/28/93	2.85	2	0.797	5.00	12500	<DL	*95
CADMIUM	6010	1/28/93	0.434	2	0.797	5.00	12500	<DL	*95
CALCIUM	6010	1/28/93	91500	2	0.797	20.0	50200	230000000	*95
CHROMIUM	6010	1/28/93	241	2	0.797	10.0	25100	605000	*95
COBALT	6010	1/28/93	8.43	2	0.797	10.0	25100	<DL	*95
COPPER	6010	1/28/93	32.5	2	0.797	10.0	25100	81600	*95
IRON	6010	1/28/93	56300	2	0.797	20.0	50200	141000000	*95
LEAD	7421	2/01/93	2.6	20	0.797	5.00	125000	<DL	*95
MAGNESIUM	6010	1/28/93	9850	2	0.797	40.0	100000	24700000	*95
MANGANESE	6010	1/28/93	3890	2	0.797	10.0	25100	9760000	*95
MERCURY	7471	1/27/93	0.04	0.1	0.189	0.20	106	<DL	*95
NICKEL	6010	1/28/93	-27	2	0.797	40.0	100000	<DL	*95
POTASSIUM	6010	1/28/93	1640	2	0.797	3000	7530000	<DL	*95
SELENIUM	7740	2/01/93	0.4	2	0.797	5.00	12500	<DL	*95
SILVER	6010	1/28/93	-10.3	2	0.797	10.0	25100	<DL	*95
SODIUM	6010	1/28/93	191	2	0.797	50.0	125000	479000	*95
THALLIUM	7841	2/02/93	-1	0.2	0.797	10.0	2510	<DL	*95
VANADIUM	6010	1/28/93	81	2	0.797	20.0	50200	203000	*95
ZINC	6010	1/28/93	22.7	2	0.797	20.0	50200	57000	*95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

ALL SOIL/SLUDGE SAMPLE RESULTS ARE BASED UPON DRY WEIGHT.

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-D
HAS Sample #93-0104-04
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	11600	2	0.827	30.0	72600	28100000	*95
ANTIMONY	6010	1/28/93	7.43	2	0.827	50.0	121000	<DL	*95
ARSENIC	7060	2/02/93	3.1	2	0.827	10.0	24200	<DL	*95
BARIUM	6010	1/28/93	90.8	2	0.827	10.0	24200	220000	*95
BERYLLIUM	6010	1/28/93	4.47	2	0.827	5.00	12100	<DL	*95
CADMIUM	6010	1/28/93	-0.434	2	0.827	5.00	12100	<DL	*95
CALCIUM	6010	1/28/93	76700	2	0.827	20.0	48400	185000000	*95
CHROMIUM	6010	1/28/93	54	2	0.827	10.0	24200	131000	*95
COBALT	6010	1/28/93	2.98	2	0.827	10.0	24200	<DL	*95
COPPER	6010	1/28/93	15.5	2	0.827	10.0	24200	37500	*95
IRON	6010	1/28/93	37200	2	0.827	20.0	48400	90000000	*95
LEAD	7421	2/01/93	1.2	20	0.827	5.00	121000	<DL	*95
MAGNESIUM	6010	1/28/93	17500	2	0.827	40.0	96700	42300000	*95
MANGANESE	6010	1/28/93	1190	2	0.827	10.0	24200	2880000	*95
MERCURY	7471	1/27/93	0.064	0.1	0.198	0.20	101	<DL	*95
NICKEL	6010	1/28/93	-16.6	2	0.827	40.0	96700	<DL	*95
POTASSIUM	6010	1/28/93	1670	2	0.827	3000	7260000	<DL	*95
SELENIUM	7740	2/01/93	-0.1	2	0.827	5.00	12100	<DL	*95
SILVER	6010	1/28/93	-4.56	2	0.827	10.0	24200	<DL	*95
SODIUM	6010	1/28/93	329	2	0.827	50.0	121000	796000	*95
THALLIUM	7841	2/02/93	0.3	0.2	0.827	10.0	2420	<DL	*95
VANADIUM	6010	1/28/93	16.3	2	0.827	20.0	48400	<DL	*95
ZINC	6010	1/28/93	8.54	2	0.827	20.0	48400	<DL	*95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

ALL SOIL/SLUDGE SAMPLE RESULTS ARE BASED UPON DRY WEIGHT.

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-OS
HAS Sample #93-0104-05
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	2720	2	0.853	30.0	70300	6380000	*95
ANTIMONY	6010	1/28/93	7.43	2	0.853	50.0	117000	<DL	*95
ARSENIC	7060	2/02/93	3.4	2	0.853	10.0	23400	<DL	*95
BARIUM	6010	1/28/93	42.8	2	0.853	10.0	23400	100000	*95
BERYLLIUM	6010	1/28/93	1.63	2	0.853	5.00	11700	<DL	*95
CADMIUM	6010	1/28/93	0.0001	2	0.853	5.00	11700	<DL	*95
CALCIUM	6010	1/28/93	76900	2	0.853	20.0	46900	180000000	*95
CHROMIUM	6010	1/28/93	476	2	0.853	10.0	23400	1120000	*95
COBALT	6010	1/28/93	1.92	2	0.853	10.0	23400	<DL	*95
COPPER	6010	1/28/93	22.3	2	0.853	10.0	23400	52300	*95
IRON	6010	1/28/93	48500	2	0.853	20.0	46900	114000000	*95
LEAD	7421	2/01/93	6.3 ✓	20 ✓	0.853	5.00	117000	148000	*95
MAGNESIUM	6010	1/28/93	5530	2	0.853	40.0	93800	13000000	*95
MANGANESE	6010	1/28/93	6480	2	0.853	10.0	23400	15200000	*95
MERCURY	7471	1/27/93	0.064	0.1	0.171	0.20	117	<DL	*95
NICKEL	6010	1/28/93	-28	2	0.853	40.0	93800	<DL	*95
POTASSIUM	6010	1/28/93	624	2	0.853	3000	7030000	<DL	*95
SELENIUM	7740	2/01/93	4	0.2	0.853	5.00	1170	<DL	*95
SILVER	6010	1/28/93	-10.3	2	0.853	10.0	23400	<DL	*95
SODIUM	6010	1/28/93	52.2	2	0.853	50.0	117000	122000	*95
THALLIUM	7841	2/02/93	-0.9	0.2	0.853	10.0	2340	<DL	*95
VANADIUM	6010	1/28/93	95.3	2	0.853	20.0	46900	223000	*95
ZINC	6010	1/28/93	43.6	2	0.853	20.0	46900	102000	*95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

ALL SOIL/SLUDGE SAMPLE RESULTS ARE BASED UPON DRY WEIGHT.

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SOIL BLANK
HAS Sample #93-0104-SB
Date Sampled: NA
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	22.4	0.2	1.000	30.0	6000	<DL	*95
ANTIMONY	6010	1/28/93	0.0001	0.2	1.000	50.0	10000	<DL	*95
ARSENIC	7060	2/02/93	-1.8	0.2	1.000	10.0	2000	<DL	*95
BARIUM	6010	1/28/93	0.222	0.2	1.000	10.0	2000	<DL	*95
BERYLLIUM	6010	1/28/93	1.49	0.2	1.000	5.00	1000	<DL	*95
CADMIUM	6010	1/28/93	0.434	0.2	1.000	5.00	1000	<DL	*95
CALCIUM	6010	1/28/93	-5.61	0.2	1.000	20.0	4000	<DL	*95
CHROMIUM	6010	1/28/93	-2.84	0.2	1.000	10.0	2000	<DL	*95
COBALT	6010	1/28/93	0.344	0.2	1.000	10.0	2000	<DL	*95
COPPER	6010	1/28/93	0.928	0.2	1.000	10.0	2000	<DL	*95
IRON	6010	1/28/93	-13.3	0.2	1.000	20.0	4000	<DL	*95
LEAD	7421	2/01/93	1.1	0.2	1.000	5.00	1000	<DL	*95
MAGNESIUM	6010	1/28/93	10.6	0.2	1.000	40.0	8000	<DL	*95
MANGANESE	6010	1/28/93	-0.345	0.2	1.000	10.0	2000	<DL	*95
MERCURY	7471	1/27/93	-8E-06	0.1	0.200	0.20	100	<DL	*95
NICKEL	6010	1/28/93	-6.72	0.2	1.000	40.0	8000	<DL	*95
POTASSIUM	6010	1/28/93	67.2	0.2	1.000	3000	600000	<DL	*95
SELENIUM	7740	2/01/93	-1	0.2	1.000	5.00	1000	<DL	*95
SILVER	6010	1/28/93	1.14	0.2	1.000	10.0	2000	<DL	*95
SODIUM	6010	1/28/93	-138	0.2	1.000	50.0	10000	<DL	*95
THALLIUM	7841	2/02/93	-0.7	0.2	1.000	10.0	2000	<DL	*95
VANADIUM	6010	1/28/93	0.321	0.2	1.000	20.0	4000	<DL	*95
ZINC	6010	1/28/93	-0.296	0.2	1.000	20.0	4000	<DL	*95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

ALL SOIL/SLUDGE SAMPLE RESULTS ARE BASED UPON DRY WEIGHT.

PRQ

PERCENT SOLID - DRY WEIGHT - 160.3

Book 654
Page 34

DATE/TIME/INIT. IN: 1/28/93 1:30pm PB
DATE/TIME/INIT. OUT: 1/29/93 9:00am PB

HAS ID	QC	Dish Wt. (grams)	ID	Wet Weight Sample only (g)	Dry Dish+ Residue (g) 103	Residue (g) 103	% Solid dry weight	
0104-01		0.9900	8	6.5600	5.5700	4.5800	69.8	70.0
0104-01	dup	0.9900	9	8.0700	6.6500	5.6600	70.1	0.5
0104-02		0.9900	10	5.6100	5.6700	4.6800	83.4	
0104-03		0.9900	11	7.8700	7.2000	6.2100	78.9	
0104-04		0.9900	12	6.8800	6.6800	5.6900	82.7	
0104-05		0.9900	13	6.2500	6.3200	5.3300	85.3	

~~Titles, Window, Status, Page — PERCENT SOLID - DRY WEIGHT - 160.3~~
~~Book 654~~
~~Page 34~~

1-29-93

ICP RAW DATA

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	CAL BLANK	P112831	LOW-MIP	01/28/93	10:21	mip	S	CONC
2	ICV-1	P112831	LOW-MIP	01/28/93	10:27	mip	S	CONC
3	ICV-2	P112831	LOW-MIP	01/28/93	10:56	mip	S	CONC
4	ICV-7	P112831	LOW-MIP	01/28/93	11:04	mip	S	CONC
5	0028.01 NIOSH-P.E.	P112831	LOW-MIP	01/28/93	11:15	mip	S	CONC
6	0028.02	P112831	LOW-MIP	01/28/93	11:30	mip	S	CONC
7	0028.03	P112831	LOW-MIP	01/28/93	11:50	mip	S	CONC
8	0028.04	P112831	LOW-MIP	01/28/93	12:08	mip	S	CONC
9	0028.05	P112831	LOW-MIP	01/28/93	12:28	mip	S	CONC
10	CAL BLANK	P112831	LOW-MIP	01/28/93	12:47	mip	S	CONC
11	CCV	P112831	LOW-MIP	01/28/93	12:58	mip	S	CONC
12	CAL BLANK 1	P112831	LOW-MIP	01/28/93	14:49	mip	S	CONC
13	CCV 1	P112831	LOW-MIP	01/28/93	15:00	mip	S	CONC
14	PRP.BLNK 3050P 01/26	P112831	LOW-MIP	01/28/93	15:27	mip	S	CONC
15	LCS-S 01/26 1	P112831	LOW-MIP	01/28/93	15:38	mip	S	CONC
16	0104.01 (1/10) 1	P112831	LOW-MIP	01/28/93	16:00	mip	S	CONC
17	0104.01 (1/10) REP.1	P112831	LOW-MIP	01/28/93	16:16	mip	S	CONC
18	0104.02 (1/10) 1	P112831	LOW-MIP	01/28/93	16:32	mip	S	CONC
19	0104.03 (1/10) 1	P112831	LOW-MIP	01/28/93	16:49	mip	S	CONC
20	0104.04 (1/10) 1	P112831	LOW-MIP	01/28/93	17:05	mip	S	CONC
21	0104.05 (1/10) 1	P112831	LOW-MIP	01/28/93	17:21	mip	S	CONC
22	CAL BLANK 1	P112831	LOW-MIP	01/28/93	17:49	mip	S	CONC
23	CCV 1	P112831	LOW-MIP	01/28/93	17:59	mip	S	CONC
24	0102.01 (1/10) 1	P112831	LOW-MIP	01/28/93	18:21	mip	S	CONC
25	0102.02 (1/10) 1	P112831	LOW-MIP	01/28/93	18:37	mip	S	CONC
26	0102.02 (1/10) REP.1	P112831	LOW-MIP	01/28/93	18:54	mip	S	CONC
27	0102.03 (1/10) 1	P112831	LOW-MIP	01/28/93	19:10	mip	S	CONC
28	0102.04 (1/10) 1	P112831	LOW-MIP	01/28/93	19:26	mip	S	CONC
29	0102.05 (1/10) 1	P112831	LOW-MIP	01/28/93	19:43	mip	S	CONC
30	0102.06 (1/10) 1	P112831	LOW-MIP	01/28/93	19:59	mip	S	CONC
31	CAL BLANK 1	P112831	LOW-MIP	01/28/93	20:26	mip	S	CONC
32	CCV 1	P112831	LOW-MIP	01/28/93	20:37	mip	S	CONC
33	0102.07 (1/10) 1	P112831	LOW-MIP	01/28/93	20:59	mip	S	CONC
34	0102.08 (1/10) 1	P112831	LOW-MIP	01/28/93	21:15	mip	S	CONC
35	0102.09 (1/10) 1	P112831	LOW-MIP	01/28/93	21:31	mip	S	CONC
36	0102.10 (1/10) 1	P112831	LOW-MIP	01/28/93	21:48	mip	S	CONC
37	0102.11 (1/10) 1	P112831	LOW-MIP	01/28/93	22:04	mip	S	CONC
38	0102.12 (1/10) 1	P112831	LOW-MIP	01/28/93	22:20	mip	S	CONC
39	0102.13 (1/10) 1	P112831	LOW-MIP	01/28/93	22:37	mip	S	CONC
40	CAL BLANK 1	P112831	LOW-MIP	01/28/93	23:04	mip	S	CONC
41	CAL BLANK 1	P112831	LOW-MIP	01/28/93	23:15	mip	S	CONC
42	CAL BLANK 1	P112831	LOW-MIP	01/28/93	23:25	mip	S	CONC
43	CCV 1	P112831	LOW-MIP	01/28/93	23:36	mip	S	CONC
44	CCV 1	P112831	LOW-MIP	01/28/93	23:47	mip	S	CONC
45	CCV 1	P112831	LOW-MIP	01/28/93	23:58	mip	S	CONC

#	Sample Name		Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496
1	CAL BLANK		L-10.8	L4.95	L14.3	L.222	L.813	L1.91
2	ICV-1		1830.	550.	97.6	2010.	51.2	30.6
3	ICV-2		L24.8	L.000	512.	L.222	L.813	L10.5
4	ICV-7		991.	L-5.78	L18.5	1050.	L.407	1120.
5	0028.01 NIOSH-P.E.		L6.56	L5.78	L11.3	L.222	L.497	L13.0
6	0028.02		L7.97	L9.91	L8.90	L.222	L.723	L8.91
7	0028.03		L8.78	L10.5	L10.1	L.222	L.768	L8.58
8	0028.04		L1.70	L.826	L4.69	L.222	L.587	L11.1
9	0028.05		L5.61	L.275	L14.2	L.222	L.632	L10.5
10	CAL BLANK		L-2.07	L-1.65	L6.95	L.222	L.632	L8.90
11	CCV		954.	988.	980.	998.	1010.	1060.
12	CAL BLANK	1	L17.0	L-9.08	L16.0	L.222	L.813	L4.78
13	CCV	1	926.	943.	936.	950.	967.	998.
14	PRP.BLNK 3050P 01/26		L22.4	L.000	L8.83	L.222	L1.49	L8.59
15	LCS-S 01/26	1	19700.	228.	L8.92	462.	290.	L14.4
16	0104.01 (1/10)	1	2910.	L9.91	L1.57	42.8	L1.76	L8.44
17	0104.01 (1/10) REP.	1	3420.	L4.95	L1.85	42.8	L1.22	L12.0
18	0104.02 (1/10)	1	15000.	L-15.7	L-85.8	113.	L5.42	L25.7
19	0104.03 (1/10)	1	6860.	L-3.30	L-49.9	56.2	L2.85	L4.18
20	0104.04 (1/10)	1	11600.	L7.43	L-69.0	90.8	L4.47	L12.9
21	0104.05 (1/10)	1	2720.	L7.43	L-21.9	42.8	L1.63	L9.17
22	CAL BLANK	1	L24.6	L-4.13	L5.87	L.222	L.678	L-9.56
23	CCV	1	925.	956.	942.	948.	973.	989.
24	0102.01 (1/10)	1	657.	L-.826	L-.099	387.	L3.25	L15.7
25	0102.02 (1/10)	1	10500.	L-30.6	L-65.5	211.	L1.22	L15.0
26	0102.02 (1/10) REP.	1	10600.	L-29.7	L-64.1	174.	L.813	L16.2
27	0102.03 (1/10)	1	127.	L-9.08	L12.6	L19.5	L.813	L-11.2
28	0102.04 (1/10)	1	2170.	L1.65	L-7.80	728.	L.813	L15.2
29	0102.05 (1/10)	1	2460.	L.826	L-5.99	146.	L.813	L12.4
30	0102.06 (1/10)	1	240.	L5.78	L7.78	30.4	L.813	L-6.59
31	CAL BLANK	1	L27.4	L-.826	L21.6	L.222	L.813	L-9.55
32	CCV	1	899.	961.	921.	930.	962.	976.
33	0102.07 (1/10)	1	639.	L1.65	L2.18	85.5	L2.44	L13.9
34	0102.08 (1/10)	1	151.	L4.13	L21.8	L18.2	L.813	L-2.74
35	0102.09 (1/10)	1	175.	L-9.08	L7.91	L12.4	L.813	L-11.1
36	0102.10 (1/10)	1	70.8	L-14.0	L11.5	52.8	L.813	L-11.1
37	0102.11 (1/10)	1	124.	L-5.78	L14.2	L10.2	L.813	L-3.81
38	0102.12 (1/10)	1	282.	L10.7	L36.8	201.	L.813	L15.1
39	0102.13 (1/10)	1	186.	L-4.13	L5.30	L14.0	L.813	L-11.5
40	CAL BLANK	1	L25.0	L1.65	L15.4	L.222	L.813	L-9.53
41	CAL BLANK	1	L29.4	L5.78	L16.2	L.222	L.813	L-9.53
42	CAL BLANK	1	L29.9	L4.95	L14.1	L.222	L.678	L-9.53
43	CCV	1	955.	973.	929.	967.	979.	1020.
44	CCV	1	925.	965.	941.	951.	977.	993.
45	CCV	1	952.	979.	955.	973.	995.	1010.

#	Sample Name	Cd2288	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
1	CAL BLANK	L-1.30	L2.75	L-.875	L-1.03	L.464	L6.21
2	ICV-1	51.6	50000.	93.4	501.	243.	1030.
3	ICV-2	L4.34	27.8	L-3.50	L.688	L.464	L-17.5
4	ICV-7	L3.47	L10.7	L-3.94	L-.687	L-.696	L-17.5

#	Sample Name		Cd2288	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
5	0028.01 NIOSH-P.E.		29.4	L15.6	454.	L-.344	L.155	L-12.2
6	0028.02		44.0	26.1	637.	L.917	L.851	L-7.21
7	0028.03		93.6	33.4	1130.	L.344	L.155	L14.7
8	0028.04		62.4	L17.0	779.	L-.917	L-.155	L-7.61
9	0028.05		L.000	L19.2	L-2.33	L.802	L.232	L-3.46
10	CAL BLANK		L-.868	L-.165	L-.729	L-1.49	L-1.08	L10.7
11	CCV		1020.	1020.	1000.	1030.	979.	1010.
12	CAL BLANK	1	L.000	L-7.87	L-3.94	L.344	L-1.16	L-3.56
13	CCV	1	973.	973.	952.	968.	941.	973.
14	PRP.BLNK 3050P 01/26		L.434	L-5.61	L-2.84	L.344	L.928	L-13.3
15	LCS-S 01/26	1	389.	11000.	816.	629.	454.	45200.
16	0104.01 (1/10)	1	L2.60	26100.	13.1	L7.15	18.3	22400.
17	0104.01 (1/10)	REP.1	L.000	13900.	21.2	L6.44	26.5	30000.
18	0104.02 (1/10)	1	L.000	91200.	19.5	L-2.44	L6.03	11200.
19	0104.03 (1/10)	1	L.434	91500.	241.	L8.43	32.5	56300.
20	0104.04 (1/10)	1	L-.434	76700.	54.0	L2.98	15.5	37200.
21	0104.05 (1/10)	1	L.000	76900.	476.	L1.92	22.3	48500.
22	CAL BLANK	1	L.000	97.8	L-4.81	L-3.09	L-1.62	42.4
23	CCV	1	978.	995.	953.	978.	940.	982.
24	0102.01 (1/10)	1	L4.77	39100.	35.9	L7.49	38.3	23600.
25	0102.02 (1/10)	1	L.000	5320.	215.	65.6	10000.	36000.
26	0102.02 (1/10)	REP.1	L-.434	2800.	219.	72.4	12700.	37400.
27	0102.03 (1/10)	1	L.000	212.	L-1.75	L.334	94.5	3170.
28	0102.04 (1/10)	1	L4.34	13700.	87.3	14.3	78.9	35100.
29	0102.05 (1/10)	1	L.868	12100.	22.3	L6.78	72.6	32900.
30	0102.06 (1/10)	1	L.000	780.	L4.59	L1.69	57.3	10500.
31	CAL BLANK	1	L.000	L1.95	L-5.25	L-1.38	L-.928	L5.05
32	CCV	1	970.	975.	952.	974.	918.	974.
33	0102.07 (1/10)	1	L4.34	1790.	15.3	L5.12	44.6	11400.
34	0102.08 (1/10)	1	L.434	364.	L-1.09	L-.697	31.6	3330.
35	0102.09 (1/10)	1	L.868	336.	L-2.84	L-.696	34.1	2860.
36	0102.10 (1/10)	1	L.434	831.	L-1.31	L1.37	37.4	2860.
37	0102.11 (1/10)	1	L.868	684.	L-3.06	L-2.08	68.2	5320.
38	0102.12 (1/10)	1	L.868	1370.	L7.87	L8.23	28.3	5510.
39	0102.13 (1/10)	1	L.000	388.	L-.875	L-1.04	19.7	3730.
40	CAL BLANK	1	L.434	L-5.18	L-5.47	L-2.06	L-1.62	L-8.90
41	CAL BLANK	1	L.000	L-3.69	L-4.81	L-.687	L-.928	L-14.8
42	CAL BLANK	1	L.868	L.353	L-2.41	L2.06	L1.39	L-17.8
43	CCV	1	989.	980.	964.	987.	968.	959.
44	CCV	1	980.	980.	962.	983.	942.	973.
45	CCV	1	997.	993.	976.	993.	969.	970.

#	Sample Name	Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664
1	CAL BLANK	L-6.79	L-28.5	L-.345	L.647	L.827	L-62.0
2	ICV-1	48.0	49100.	154.	L-2.16	402.	55700.
3	ICV-2	529.	L6.36	L-.345	L1.29	L-8.40	L244.
4	ICV-7	L13.1	L-5.27	L-.345	L.647	L-5.04	11000.
5	0028.01 NIOSH-P.E.	425.	L-.342	L-.345	L-.647	L-8.97	L34.9
6	0028.02	175.	L3.53	L-.345	L1.58	L-5.88	L122.
7	0028.03	299.	L-.012	L.805	L.719	L-5.34	L-23.0
8	0028.04	128.	L-6.69	L-.345	L.287	L-6.45	L239.
9	0028.05	L2.40	L.707	L-.345	L.431	L-2.52	L-32.5

	Sample Name		Pb2203	Mg2790	Mn2576	Mo2020	Ni2316	K_7664
10	CAL BLANK		L-17.7	L-10.2	L-.345	L-.359	L1.11	L-343.
11	CCV		1040.	981.	1010.	1020.	1030.	9330.
12	CAL BLANK	1	L-19.1	L-18.0	L-.345	L-.862	L.837	L-80.9
13	CCV	1	965.	956.	965.	960.	981.	9040.
14	PRP.BLNK 3050P 01/26	1	L-8.77	L10.6	L-.345	L3.67	L-6.72	L67.2
15	LCS-S 01/26	1	244.	7380.	715.	268.	682.	12200.
16	0104.01 (1/10)	1	64.1	2920.	475.	L2.16	L-6.02	L1330.
17	0104.01 (1/10) REP.	1	111.	2820.	726.	L5.17	L-9.10	L1500.
18	0104.02 (1/10)	1	L23.2	22700.	930.	L-.647	L-2.93	L1770.
19	0104.03 (1/10)	1	L16.0	9850.	3890.	11.4	L-27.0	L1640.
20	0104.04 (1/10)	1	L5.20	17500.	1190.	L1.51	L-16.6	L1670.
21	0104.05 (1/10)	1	68.8	5530.	6480.	L7.76	L-28.0	L624.
22	CAL BLANK	1	L-8.78	L-3.21	L7.59	L-.862	L-15.2	L131.
23	CCV	1	976.	928.	974.	963.	981.	9130.
24	0102.01 (1/10)	1	243.	1630.	115.	L3.88	L7.92	L178.
25	0102.02 (1/10)	1	177.	611.	425.	22.6	2920.	L100.0
26	0102.02 (1/10) REP.	1	153.	486.	369.	37.5	2820.	L294.
27	0102.03 (1/10)	1	L.165	L37.6	16.2	L.647	L16.6	L-97.4
28	0102.04 (1/10)	1	593.	1920.	207.	L5.17	L17.7	L1160.
29	0102.05 (1/10)	1	237.	2680.	163.	L3.02	L16.0	L737.
30	0102.06 (1/10)	1	43.7	48.5	46.6	L.647	L.255	L274.
31	CAL BLANK	1	L-30.7	L24.3	L-.345	L-1.72	L-5.88	L511.
32	CCV	1	991.	970.	962.	960.	981.	8820.
33	0102.07 (1/10)	1	317.	277.	71.1	L3.67	L3.99	L-18.3
34	0102.08 (1/10)	1	L2.93	L22.6	16.2	L-.431	L-5.41	L386.
35	0102.09 (1/10)	1	L19.0	L28.3	16.2	L.431	L3.29	L627.
36	0102.10 (1/10)	1	96.8	L36.8	15.2	L.647	L4.14	L573.
37	0102.11 (1/10)	1	L26.0	53.8	24.5	L-.862	L-.737	L98.0
38	0102.12 (1/10)	1	62.0	149.	32.8	L2.80	L6.75	L997.
39	0102.13 (1/10)	1	L32.8	54.0	22.4	L-.647	L3.61	L-184.
40	CAL BLANK	1	L.410	L-15.8	L-.345	L-2.59	L-3.37	L-172.
41	CAL BLANK	1	L-27.1	L6.35	L-.345	L1.08	L-1.67	L264.
42	CAL BLANK	1	L-18.3	L22.2	L-.345	L1.08	L-1.66	L550.
43	CCV	1	971.	991.	978.	969.	981.	10200.
44	CCV	1	983.	964.	978.	972.	972.	9200.
45	CCV	1	986.	957.	992.	986.	1010.	9690.

	Sample Name		Se1960	Si2516	Ag3280	Na5889	Tl1908	Sn1899
1	CAL BLANK		L39.7	L.967	L5.70	L-17.9	L28.6	L3.54
2	ICV-1		81.1	82.4	96.9	45900.	177.	L2.90
3	ICV-2		548.	35.4	L7.98	L7.61	483.	L2.58
4	ICV-7		L58.6	848.	1020.	1020.	L53.2	L13.2
5	0028.01 NIOSH-P.E.		L48.8	49.6	L7.22	L14.8	L39.6	L-2.90
6	0028.02		L54.8	35.8	L4.94	L6.15	L33.1	L36.1
7	0028.03		L53.3	69.3	L2.66	L-5.06	L37.6	L-8.70
8	0028.04		L53.4	109.	L3.04	L-17.0	L42.4	L-6.98
9	0028.05		L56.8	L25.2	L3.80	L-18.2	L39.8	L27.0
10	CAL BLANK		76.3	L1.63	L4.56	L-109.	L36.6	L7.09
11	CCV		1060.	5020.	988.	901.	985.	974.
12	CAL BLANK	1	L53.9	L-2.92	L3.42	L-124.	L19.4	L6.12
13	CCV	1	1010.	4840.	954.	940.	940.	924.
14	PRP.BLNK 3050P 01/26		76.2	L4.62	L1.14	L-138.	L27.8	L5.48

#	Sample Name		Se1960	Si2516	Ag3280	Na5889	Tl1908	Sn1899
15	LCS-S 01/26	1	204.	1490.	198.	1720.	406.	L18.7
16	0104.01 (1/10)	1	L57.7	149.	L-1.14	L-39.7	L-60.0	L11.6
17	0104.01 (1/10)	REP.1	L47.1	121.	L-5.70	L-51.6	L-93.7	L3.87
18	0104.02 (1/10)	1	L53.1	139.	L-1.14	626.	L6.62	L7.73
19	0104.03 (1/10)	1	L25.5	146.	L-10.3	191.	L-163.	L7.73
20	0104.04 (1/10)	1	L37.5	106.	L-4.56	329.	L-92.4	L11.9
21	0104.05 (1/10)	1	L31.8	112.	L-10.3	52.2	L-124.	L5.15
22	CAL BLANK	1	L59.4	L-3.24	L3.42	L-188.	L37.4	L5.15
23	CCV	1	1020.	4840.	954.	917.	926.	920.
24	0102.01 (1/10)	1	L51.0	84.1	L-1.14	230.	L-61.0	51.2
25	0102.02 (1/10)	1	L37.6	96.8	L-5.70	L-61.6	L-98.3	301.
26	0102.02 (1/10)	REP.1	L50.5	105.	L-1.14	L-85.3	L-105.	104.
27	0102.03 (1/10)	1	64.5	31.9	L1.14	145.	L14.0	L1.93
28	0102.04 (1/10)	1	L32.4	79.3	L-3.42	1070.	L-109.	84.7
29	0102.05 (1/10)	1	L35.5	68.6	L-5.70	1180.	L-106.	110.
30	0102.06 (1/10)	1	L43.1	68.8	L.000	11300.	L-13.2	L28.4
31	CAL BLANK	1	84.1	L-2.25	L6.84	L-169.	L45.2	L9.34
32	CCV	1	1030.	4780.	948.	860.	913.	917.
33	0102.07 (1/10)	1	64.4	86.3	L2.28	5290.	L-4.02	65.1
34	0102.08 (1/10)	1	69.2	55.2	L3.42	2860.	L19.3	L23.8
35	0102.09 (1/10)	1	78.9	78.8	L-3.42	6140.	L13.5	L16.1
36	0102.10 (1/10)	1	L55.3	47.9	L1.14	3480.	L25.5	L5.48
37	0102.11 (1/10)	1	L58.9	55.5	L5.70	400.	L8.71	L11.0
38	0102.12 (1/10)	1	78.7	98.3	L7.98	1300.	L12.9	L26.7
39	0102.13 (1/10)	1	L53.6	73.3	L.000	4100.	L9.45	L14.5
40	CAL BLANK	1	71.1	L-.948	L3.42	L-193.	L40.4	L.322
41	CAL BLANK	1	79.0	L.696	L4.56	L-163.	L45.4	L12.9
42	CAL BLANK	1	60.7	L1.35	L2.28	L-189.	L25.2	L5.15
43	CCV	1	1030.	4970.	971.	1070.	953.	931.
44	CCV	1	1010.	4880.	968.	875.	938.	940.
45	CCV	1	1040.	4970.	984.	996.	965.	954.

#	Sample Name		Ti3349	V_2924	Zn2138	N+1999
1	CAL BLANK		L1.13	L-.319	L-.302	.000
2	ICV-1		L1.41	508.	197.	.000
3	ICV-2		L1.69	L1.91	L.305	.000
4	ICV-7		L.846	L1.27	L.107	.000
5	0028.01 NIOSH-P.E.		L1.50	L.320	L.302	.000
6	0028.02		L2.73	L1.48	L2.10	.000
7	0028.03		L1.32	L.315	L2.90	.000
8	0028.04		L1.88	L1.38	L1.90	.000
9	0028.05		L2.73	L1.17	L2.90	.000
10	CAL BLANK		L.376	L.316	L-.101	.000
11	CCV		992.	1010.	1000.	.000
12	CAL BLANK	1	L-.846	L1.27	L-.897	.000
13	CCV	1	952.	946.	964.	.000
14	PRP.BLNK 3050P 01/26		L2.26	L.321	L-.296	.000
15	LCS-S 01/26	1	1060.	179.	427.	.000
16	0104.01 (1/10)	1	23.1	L15.5	159.	.000
17	0104.01 (1/10)	REP.1	33.3	L17.1	234.	.000
18	0104.02 (1/10)	1	246.	L3.12	L13.1	.000
19	0104.03 (1/10)	1	501.	81.0	22.7	.000

#	Sample Name		Ti3349	V_2924	Zn2138	N+1999		
20	0104.04 (1/10)		1 232.	L16.3	L8.54	.000		
21	0104.05 (1/10)		1 541.	95.3	43.6	.000		
22	CAL BLANK		1 L.282	L3.17	L-.902	.000		
23	CCV		1 956.	951.	965.	.000		
24	0102.01 (1/10)		1 31.9	L8.86	1860.	.000		
25	0102.02 (1/10)		1 68.2	L4.10	1510.	.000		
26	0102.02 (1/10)	REP.1	83.8	L6.68	1640.	.000		
27	0102.03 (1/10)		1 L5.36	L1.26	123.	.000		
28	0102.04 (1/10)		1 93.3	L6.50	2110.	.000		
29	0102.05 (1/10)		1 40.9	L5.99	965.	.000		
30	0102.06 (1/10)		1 L7.33	L1.35	459.	.000		
31	CAL BLANK		1 L-.846	L3.81	L1.20	.000		
32	CCV		1 947.	943.	962.	.000		
33	0102.07 (1/10)		1 13.0	L1.80	400.	.000		
34	0102.08 (1/10)		1 L5.36	L4.72	64.3	.000		
35	0102.09 (1/10)		1 L4.79	L2.28	168.	.000		
36	0102.10 (1/10)		1 L.564	L5.77	85.1	.000		
37	0102.11 (1/10)		1 L1.69	L4.32	403.	.000		
38	0102.12 (1/10)		1 L7.33	L3.64	196.	.000		
39	0102.13 (1/10)		1 L4.23	L.829	57.1	.000		
40	CAL BLANK		1 L-.282	L-.316	L-.896	.000		
41	CAL BLANK		1 L.000	L2.86	L.305	.000		
42	CAL BLANK		1 L.846	L2.23	L-.894	.000		
43	CCV		1 970.	960.	973.	.000		
44	CCV		1 963.	955.	975.	.000		
45	CCV		1 980.	970.	986.	.000		

ID Weight File: 0059.IDW
Sample Volume: 100 mL

Analyst: LEAD
Nominal Weight: 1.0 g

Loc.	Sample ID	Weight	Dilution
1	PB 3020 1/28/93		
2	LCSW 1/28/93		
3	0059-06		
4	0059-06REP		
5	0059-06 SPK		
6	0059-07		
7	0059-08		
8	0059-09		
9	0059-10		
10	PBS 1/26/93		
11	LCSS 1/26 1-10		10
12	0104-01 1-100		100
13	0104-01 REP 100		100
14	0104-01 SPK 100		100
15	0104-02 100		100
16	0104-03 1-100		100
17	0104-04 1-100		100
18	0104-05 1-100		100

All analysis took place on 2/1/93.

Element File: PBBRIEF.GEL
Date: 01/30/93
Data File: F320131.DAT
Technique: HGA
Remark 1: Matrix modifier:
Remark 2: Lamp:
Remark 3: Energy:
Remark 4: Char. Mass: 20 ppb:
Remark 5: 60 ppb: 100 ppb:

Element: Pb
Time: 13:14
ID/Wt File: 0059.IDW
Calib. Type: Nonlinear
4% NH4PO4 .2% MgNO3
Temp. program:
Current:

Wavelenoth: 283.3
Slit: 0.70 L
Lamp Current: 10
Energy: 64
Integration time: 3 s

Pb ID: Calib. Blank Seq. No.: 00001 A/S Pos.: 37 Date: 01/30/93

uL dispensed: 10 from 0. 5 from 38. 20 from 37

Replicate 1 (Peak Stored) Time: 13:16
Peak Area (A-s): 0.001 Peak Height (A): 0.003
Background Pk Area (A-s): 0.005 Background Pk Height (A): 0.006
Blank Corrected Pk Area (A-s): 0.001

Auto-zero performed.

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Pb ID: 20 ppb Seq. No.: 00002 A/S Pos.: 36 Date: 01/30/93

uL dispensed: 26 from 0. 5 from 38. 4 from 36
Replicate 1 (Peak Stored) Time: 13:19
Peak Area (A-s): 0.053 Peak Height (A): 0.182
Background Pk Area (A-s): 0.014 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.052

Standard number 1 applied. [20.0]
Correlation coefficient: 1.00000 Slope: 0.0026

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P_ ID: 60 ppb Seq. No.: 00003 A/S Pos.: 36 Date: 01/30/93

u dispensed: 18 from 0. 5 from 38. 12 from 36
Replicate 1 (Peak Stored) Time: 13:23
Peak Area (A-s): 0.130 Peak Height (A): 0.242
Background Pk Area (A-s): 0.033 Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.130
Concentration (ug/L): 49.8

Standard number 2 applied. [60.0]
Correlation coefficient: 1.00000 Slope: 0.0029

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P ID: 100ppb Seq. No.: 00004 A/S Pos.: 36 Date: 01/30/93

u dispensed: 10 from 0. 5 from 38. 20 from 36
Replicate 1 (Peak Stored) Time: 13:26
Peak Area (A-s): 0.203 Peak Height (A): 0.379
Background Pk Area (A-s): 0.047 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.202
Concentration (ug/L): 115.7

Standard number 3 applied. [100.0]
Correlation coefficient: 1.00000 Slope: 0.0045

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P ID: ICV Seq. No.: 00005 A/S Pos.: 35 Date: 01/30/93

uL dispensed: 10 from 0. 5 from 38. 20 from 35
Replicate 1 (Peak Stored) Time: 13:29
Peak Area (A-s): 0.106 Peak Height (A): 0.205
Background Pk Area (A-s): 0.033 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.105
Concentration (ug/L): 46.7

QC sample is within range 45 - 55

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Pb ID: ICB Seq. No.: 00006 A/S Pos.: 37 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 37
Replicate 1 (Peak Stored) Time: 13:32
Peak Area (A-s): 0.001 Peak Height (A): 0.003
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.006
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.1

QC sample is within range -10 - 10

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Pb ID: PB 3020 1/28/93 Seq. No.: 00007 A/S Pos.: 1 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 1
Replicate 1 (Peak Stored) Time: 13:36
Peak Area (A-s): 0.002 Peak Height (A): 0.005
Background Pk Area (A-s): 0.010 Background Pk Height (A): 0.006
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

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Pb ID: PB 3020 1/28/93 Seq. No.: 00008 A/S Pos.: 1 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 1
Replicate 1 (Peak Stored) Time: 13:39
Peak Area (A-s): 0.023 Peak Height (A): 0.039
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.011
Blank Corrected Pk Area (A-s): 0.022
Concentration (ug/L): 6.8

Recovery is 66.0% (outside of specified limits)

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Pb ID: LCSW 1/28/93 Seq. No.: 00009 A/S Pos.: 2 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 2
Replicate 1 (Peak Stored) Time: 13:42
Peak Area (A-s): 0.046 Peak Height (A): 0.075
Background Pk Area (A-s): 0.018 Background Pk Height (A): 0.017
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 16.9

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Pb ID: LCSW 1/28/93 Seq. No.: 00010 A/S Pos.: 2 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 2
Replicate 1 (Peak Stored) Time: 13:46
Peak Area (A-s): 0.070 Peak Height (A): 0.121
Background Pk Area (A-s): 0.022 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): 0.069
Concentration (ug/L): 28.2

Recovery is 113.4%

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Pb ID: 0059-06 Seq. No.: 00011 A/S Pos.: 3 Date: 01/30/93

ul dispensed: 10 from 0. 5 from 38. 20 from 3
Replicate 1 (Peak Stored) Time: 13:49
Peak Area (A-s): 0.006 Peak Height (A): 0.014
Background Pk Area (A-s): 0.040 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 1.3

Pb ID: 0059-06 Seq. No.: 00012 A/S Pos.: 3 Date: 01/30/93

ul dispensed: 5 from 0. 5 from 38. 5 from 40. 20 from 3
Replicate 1 (Peak Stored) Time: 13:52
Peak Area (A-s): 0.029 Peak Height (A): 0.064
Background Pk Area (A-s): 0.038 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.028
Concentration (ug/L): 9.2

Recovery is 78.6% (outside of specified limits)

P ID: 0059-06REP Seq. No.: 00013 A/S Pos.: 4 Date: 01/30/93

ul dispensed: 10 from 0. 5 from 38. 20 from 4
Replicate 1 (Peak Stored) Time: 13:55
Peak Area (A-s): 0.006 Peak Height (A): 0.015
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.025
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 1.4

P ID: 0059-06REP Seq. No.: 00014 A/S Pos.: 4 Date: 01/30/93

ul dispensed: 5 from 0. 5 from 38. 5 from 40. 20 from 4
Replicate 1 (Peak Stored) Time: 13:58
Peak Area (A-s): 0.072 Peak Height (A): 0.167
Background Pk Area (A-s): 0.045 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.071
Concentration (ug/L): 29.5

Recovery is 281.5% (outside of specified limits)

Pb ID: 0059-06 SPK Seq. No.: 00015 A/S Pos.: 5 Date: 01/30/93

uL dispensed: 10 from 0. 5 from 38. 20 from 5
Replicate 1 (Peak Stored) Time: 14:01
Peak Area (A-s): 0.053 Peak Height (A): 0.120
Background Pk Area (A-s): 0.042 Background Pk Height (A): 0.049
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 20.0

Pb ID: 0059-06 SPK Seq. No.: 00016 A/S Pos.: 5 Date: 01/30/93

uL dispensed: 5 from 0. 5 from 38. 5 from 40. 20 from 5
Replicate 1 (Peak Stored) Time: 14:05
Peak Area (A-s): 0.072 Peak Height (A): 0.182
Background Pk Area (A-s): 0.047 Background Pk Height (A): 0.058
Blank Corrected Pk Area (A-s): 0.071

Concentration (ug/L): 29.3

Recovery is 92.4%

Pb ID: CCV Seq. No.: 00017 A/S Pos.: 35 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 35
Replicate 1 (Peak Stored) Time: 14:08
Peak Area (A-s): 0.108 Peak Height (A): 0.265
Background Pk Area (A-s): 0.036 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.107
Concentration (ug/L): 48.1

QC sample is within range 45 - 55

Pb ID: CCB Seq. No.: 00018 A/S Pos.: 37 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 37
Replicate 1 (Peak Stored) Time: 14:11
Peak Area (A-s): 0.002 Peak Height (A): 0.005
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.016
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.3

QC sample is within range -10 - 10

Pb ID: 0059-07 Seq. No.: 00019 A/S Pos.: 6 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 6
Replicate 1 (Peak Stored) Time: 14:14
Peak Area (A-s): 0.005 Peak Height (A): 0.012
Background Pk Area (A-s): 0.032 Background Pk Height (A): 0.020
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 0.9

Pb ID: 0059-07 Seq. No.: 00020 A/S Pos.: 6 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 6
Replicate 1 (Peak Stored) Time: 14:17
Peak Area (A-s): 0.027 Peak Height (A): 0.072
Background Pk Area (A-s): 0.039 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.026
Concentration (ug/L): 8.4

Recovery is 74.2% (outside of specified limits)

Pb ID: 0059-08 Seq. No.: 00021 A/S Pos.: 7 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 7
Replicate 1 (Peak Stored) Time: 14:20
Peak Area (A-s): 0.005 Peak Height (A): 0.012
Background Pk Area (A-s): 0.038 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 1.0

Pb ID: 0059-08 Seq. No.: 00022 A/S Pos.: 7 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 7
Replicate 1 (Peak Stored) Time: 14:23
Peak Area (A-s): 0.025 Peak Height (A): 0.069
Background Pk Area (A-s): 0.042 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.024
Concentration (ug/L): 7.8

Recovery is 68.7% (outside of specified limits)

Pb ID: 0059-09 Seq. No.: 00023 A/S Pos.: 8 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 8
Replicate 1 (Peak Stored) Time: 14:26
Peak Area (A-s): 0.006 Peak Height (A): 0.019
Background Pk Area (A-s): 0.040 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 1.4

Pb ID: 0059-09 Seq. No.: 00024 A/S Pos.: 8 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 8
Replicate 1 (Peak Stored) Time: 14:30
Peak Area (A-s): 0.029 Peak Height (A): 0.069
Background Pk Area (A-s): 0.044 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.028
Concentration (ug/L): 9.4

Recovery is 80.7% (outside of specified limits)

Pb ID: 0059-10 Seq. No.: 00025 A/S Pos.: 9 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 9
Replicate 1 (Peak Stored) Time: 14:33
Peak Area (A-s): 0.009 Peak Height (A): 0.020
Background Pk Area (A-s): 0.038 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.008
Concentration (ug/L): 2.0

Pb ID: 0059-10 Seq. No.: 00026 A/S Pos.: 9 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 9
Replicate 1 (Peak Stored) Time: 14:36
Peak Area (A-s): 0.033 Peak Height (A): 0.077
Background Pk Area (A-s): 0.039 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): 0.032
Concentration (ug/L): 11.2

Recovery is 91.6%

Pb ID: PBS 1-26/93 Seq. No.: 00027 A/S Pos.: 10 Date: 01/30/93

2/1/93

uL dispensed: 10 from 0, 5 from 38, 20 from 10
Replicate 1 (Peak Stored) Time: 14:39
Peak Area (A-s): 0.005 Peak Height (A): 0.011
Background Pk Area (A-s): 0.014 Background Pk Height (A): 0.016
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 1.1

Pb ID: PBS 1/26/93 Seq. No.: 00028 A/S Pos.: 10 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 10
Replicate 1 (Peak Stored) Time: 14:42
Peak Area (A-s): 0.028 Peak Height (A): 0.052
Background Pk Area (A-s): 0.020 Background Pk Height (A): 0.019
Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 8.8

Recovery is 76.9% (outside of specified limits)

P ID: CCV Seq. No.: 00029 A/S Pos.: 35 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 35
Replicate 1 (Peak Stored) Time: 14:45
Peak Area (A-s): 0.111 Peak Height (A): 0.252
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.110
Concentration (ug/L): 49.4

QC sample is within range 45 - 55

Pb ID: CCB Seq. No.: 00030 A/S Pos.: 37 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 37
Replicate 1 (Peak Stored) Time: 14:48
Peak Area (A-s): 0.003 Peak Height (A): 0.006
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.018
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.4

QC sample is within range -10 - 10

Pb ID: LCSS 1/26 1-10 Seq. No.: 00031 A/S Pos.: 11 Date: 01/30/93
2/1/93 EH.

uL dispensed: 10 from 0, 5 from 38, 20 from 11
Replicate 1 (Peak Stored) Time: 14:51
Peak Area (A-s): 0.054 Peak Height (A): 0.102
Background Pk Area (A-s): 0.029 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): 0.053
Concentration (ug/L): 20.4 Corrected Conc (ug/L): 204.
40.8 mg/kg. 91.7% Rec.

Pb ID: LCSS 1/26 1-10 Seq. No.: 00032 A/S Pos.: 11 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 11
Replicate 1 (Peak Stored) Time: 14:55
Peak Area (A-s): 0.075 Peak Height (A): 0.137

Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.074
Concentration (ug/L): 30.9 Corrected Conc (ug/L): 309.

Recovery is 104.6%

Pi ID: 0104-01 1-100 Seq. No.: 00033 A/S Pos.: 12 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 12
Replicate 1 (Peak Stored) Time: 15:00
Peak Area (A-s): 0.026 Peak Height (A): 0.043
Background Pk Area (A-s): 0.021 Background Pk Height (A): 0.019
Blank Corrected Pk Area (A-s): 0.025
Concentration (ug/L): 8.3 Corrected Conc (ug/L): 830.

Pi ID: 0104-01 1-100 Seq. No.: 00034 A/S Pos.: 12 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 12
Replicate 1 (Peak Stored) Time: 15:03
Peak Area (A-s): 0.042 Peak Height (A): 0.091
Background Pk Area (A-s): 0.028 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.041
Concentration (ug/L): 14.9 Corrected Conc (ug/L): 1489.

Recovery is 65.9% (outside of specified limits)

Ph ID: 0104-01 REP 100 Seq. No.: 00035 A/S Pos.: 13 Date: 01/30/93

2/1/93 EH.

uL dispensed: 10 from 0, 5 from 38, 20 from 13
Replicate 1 (Peak Stored) Time: 15:06
Peak Area (A-s): 0.029 Peak Height (A): 0.051
Background Pk Area (A-s): 0.022 Background Pk Height (A): 0.019
Blank Corrected Pk Area (A-s): 0.028
Concentration (ug/L): 9.2 Corrected Conc (ug/L): 925.

Pb ID: 0104-01 REP 100 Seq. No.: 00036 A/S Pos.: 13 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 13
Replicate 1 (Peak Stored) Time: 15:10
Peak Area (A-s): 0.048 Peak Height (A): 0.080
Background Pk Area (A-s): 0.028 Background Pk Height (A): 0.022
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 17.9 Corrected Conc (ug/L): 1791.

Recovery is 86.6%

P ID: 0104-01 SPK 100 Seq. No.: 00037 A/S Pos.: 14 Date: 01/30/93

2/1/93 EH.

uL dispensed: 10 from 0, 5 from 38, 20 from 14
Replicate 1 (Peak Stored) Time: 15:13
Peak Area (A-s): 0.040 Peak Height (A): 0.076
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.039
Concentration (ug/L): 14.1 Corrected Conc (ug/L): 1413.

116.9% Lee.

Pb ID: 0104-01 SPK 100 Seq. No.: 00038 A/S Pos.: 14 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 14
Replicate 1 (Peak Stored) Time: 15:16
Peak Area (A-s): 0.056 Peak Height (A): 0.100
Background Pk Area (A-s): 0.028 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.055
Concentration (ug/L): 21.4 Corrected Conc (ug/L): 2142.

Recovery is 72.9% (outside of specified limits)

Pb ID: 0104-02 100 Seq. No.: 00039 A/S Pos.: 15 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 15
Replicate 1 (Peak Stored) Time: 15:19
Peak Area (A-s): 0.005 Peak Height (A): 0.011
Background Pk Area (A-s): 0.021 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 1.1 Corrected Conc (ug/L): 106.

Pb ID: 0104-02 100 Seq. No.: 00040 A/S Pos.: 15 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 15
Replicate 1 (Peak Stored) Time: 15:22
Peak Area (A-s): 0.026 Peak Height (A): 0.048
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.025
Concentration (ug/L): 8.2 Corrected Conc (ug/L): 822.

Recovery is 71.6% (outside of specified limits)

Pb ID: CCV Seq. No.: 00041 A/S Pos.: 35 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 35
Replicate 1 (Peak Stored) Time: 15:25
Peak Area (A-s): 0.119 Peak Height (A): 0.255
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.118
Concentration (ug/L): 53.7

QC sample is within range 45 - 55

Pb ID: CCB Seq. No.: 00042 A/S Pos.: 37 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 37
Replicate 1 (Peak Stored) Time: 15:28
Peak Area (A-s): 0.002 Peak Height (A): 0.005
Background Pk Area (A-s): 0.017 Background Pk Height (A): 0.017
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.3

QC sample is within range -10 - 10

Pl ID: 0104-03 1-100 Seq. No.: 00043 A/S Pos.: 16 Date: 01/30/93

ul dispensed: 10 from 0, 5 from 38, 20 from 16
Replicate 1 (Peak Stored) Time: 15:32
Peak Area (A-s): 0.011 Peak Height (A): 0.020
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): 0.010
Concentration (ug/L): 2.6 Corrected Conc (ug/L): 259.

Pl ID: 0104-03 1-100 Seq. No.: 00044 A/S Pos.: 16 Date: 01/30/93

ul dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 16
Replicate 1 (Peak Stored) Time: 15:35
Peak Area (A-s): 0.031 Peak Height (A): 0.051
Background Pk Area (A-s): 0.030 Background Pk Height (A): 0.022
Blank Corrected Pk Area (A-s): 0.030
Concentration (ug/L): 10.3 Corrected Conc (ug/L): 1032.

Recovery is 77.3% (outside of specified limits)

Pb ID: 0104-04 1-100 Seq. No.: 00045 A/S Pos.: 17 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 17
Replicate 1 (Peak Stored) Time: 15:38
Peak Area (A-s): 0.006 Peak Height (A): 0.011
Background Pk Area (A-s): 0.024 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 1.2 Corrected Conc (ug/L): 122.

Pb ID: 0104-04 1-100 Seq. No.: 00046 A/S Pos.: 17 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 17
Replicate 1 (Peak Stored) Time: 15:41
Peak Area (A-s): 0.028 Peak Height (A): 0.047
Background Pk Area (A-s): 0.029 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 8.9 Corrected Conc (ug/L): 889.

Recovery is 76.7% (outside of specified limits)

Pb ID: 0104-05 1-100 Seq. No.: 00047 A/S Pos.: 18 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 18
Replicate 1 (Peak Stored) Time: 15:44
Peak Area (A-s): 0.021 Peak Height (A): 0.043
Background Pk Area (A-s): 0.027 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): 0.020
Concentration (ug/L): 6.3 Corrected Conc (ug/L): 632.

Pb ID: 0104-05 1-100 Seq. No.: 00048 A/S Pos.: 18 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 18
Replicate 1 (Peak Stored) Time: 15:48

Peak Area (A-s): 0.043 Peak Height (A): 0.072
Background Pk Area (A-s): 0.032 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 15.2 Corrected Conc (ug/L): 1520.

Recovery is 88.8%

Pb ID: CCV Seq. No.: 00049 A/S Pos.: 35 Date: 01/30/93

ul dispensed: 10 from 0. 5 from 38. 20 from 35

Pb ID: CCV Seq. No.: 00050 A/S Pos.: 35 Date: 01/30/93

uL dispensed: 10 from 0. 5 from 38. 20 from 35
Replicate 1 (Peak Stored) Time: 15:52
Peak Area (A-s): 0.206 Peak Height (A): 0.428
Background Pk Area (A-s): 0.080 Background Pk Height (A): 0.104
Blank Corrected Pk Area (A-s): 0.205
Concentration (ug/L): 101.6

QC ~~sample is out of range 45 - 55~~ double injection w/o dilution TV = 100 ug/L - in range.

Pb ID: CCB Seq. No.: 00051 A/S Pos.: 37 Date: 01/30/93

ul dispensed: 10 from 0. 5 from 38. 20 from 37

Pb ID: PB 3020 1/28/93 Seq. No.: 00052 A/S Pos.: 1 Date: 01/30/93

ul dispensed: 10 from 0. 5 from 38. 20 from 1
Replicate 1 (Peak Stored) Time: 15:56
Peak Area (A-s): 0.003 Peak Height (A): 0.008
Background Pk Area (A-s): 0.015 Background Pk Height (A): 0.014
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.6

Pb ID: PB 3020 1/28/93 Seq. No.: 00053 A/S Pos.: 1 Date: 01/30/93

ul dispensed: 5 from 0. 5 from 38. 5 from 40. 20 from 1
Replicate 1 (Peak Stored) Time: 15:59
Peak Area (A-s): 0.025 Peak Height (A): 0.054
Background Pk Area (A-s): 0.021 Background Pk Height (A): 0.017
Blank Corrected Pk Area (A-s): 0.024
Concentration (ug/L): 7.9

Recovery is 73.4% (outside of specified limits)

Pb ID: LCSW 1/28/93 Seq. No.: 00054 A/S Pos.: 2 Date: 01/30/93

uL dispensed: 10 from 0. 5 from 38. 20 from 2
Replicate 1 (Peak Stored) Time: 16:02
Peak Area (A-s): 0.047 Peak Height (A): 0.125
Background Pk Area (A-s): 0.029 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L): 17.4

Pb ID: LCSW 1/28/93 Seq. No.: 00055 A/S Pos.: 2 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 2
Replicate 1 (Peak Stored) Time: 16:05
Peak Area (A-s): 0.067 Peak Height (A): 0.151
Background Pk Area (A-s): 0.036 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.066
Concentration (ug/L): 26.6

Recovery is 91.8%

Pb ID: 0104-01 1-100 Seq. No.: 00056 A/S Pos.: 12 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 12
Replicate 1 (Peak Stored) Time: 16:08
Peak Area (A-s): 0.021 Peak Height (A): 0.042
Background Pk Area (A-s): 0.020 Background Pk Height (A): 0.015
Blank Corrected Pk Area (A-s): 0.020
Concentration (ug/L): 6.3 Corrected Conc (ug/L): 632.

Pb ID: 0104-01 1-100 Seq. No.: 00057 A/S Pos.: 12 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 12
Replicate 1 (Peak Stored) Time: 16:12
Peak Area (A-s): 0.041 Peak Height (A): 0.079
Background Pk Area (A-s): 0.027 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.040
Concentration (ug/L): 14.5 Corrected Conc (ug/L): 1453.

Recovery is 82.1% (outside of specified limits)

Pb ID: CCV Seq. No.: 00058 A/S Pos.: 35 Date: 01/30/93

ul dispensed: 10 from 0, 5 from 38, 20 from 35
Replicate 1 (Peak Stored) Time: 16:15
Peak Area (A-s): 0.109 Peak Height (A): 0.237
Background Pk Area (A-s): 0.035 Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 48.4

sample is within range 45 - 55

Pb ID: 0104-01 1-100 Seq. No.: 00059 A/S Pos.: 12 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 12
Replicate 1 (Peak Stored) Time: 16:18
Peak Area (A-s): 0.024 Peak Height (A): 0.045
Background Pk Area (A-s): 0.022 Background Pk Height (A): 0.016
Blank Corrected Pk Area (A-s): 0.023
Concentration (ug/L): 7.5 Corrected Conc (ug/L): 745.

Pb ID: 0104-01 1-100 Seq. No.: 00060 A/S Pos.: 12 Date: 01/30/93

uL dispensed: 5 from 0, 5 from 38, 5 from 40, 20 from 12
Replicate 1 (Peak Stored) Time: 16:21
Peak Area (A-s): 0.046 Peak Height (A): 0.085
Background Pk Area (A-s): 0.028 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 16.6 Corrected Conc (ug/L): 1663.

Recovery is 91.8%

Pb ID: CCV Seq. No.: 00061 A/S Pos.: 35 Date: 01/30/93

uL dispensed: 10 from 0, 5 from 38, 20 from 35
Replicate 1 (Peak Stored) Time: 16:24
Peak Area (A-s): 0.110 Peak Height (A): 0.229
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.110
Concentration (ug/L): 49.2

QC samole is within range 45 - 55

ID/Weight File: 0059.IDW
Sample Volume: 100 mL

Analyst: ARSENIC
Nominal Weight: 1.0 g

Loc.	Sample ID	Weight	Dilution
1	PBS 1/26/93 ✓		
2	LCSS 1/26 1-10 ✓		10
3	0104-01 1-10 ✓		10
4	0104-01 REP 10 ✓		10
5	0104-01 SPK 50 ✓		50
6	0104-02 10 ✓		10
7	0104-03 1-10 ✓		10
8	0104-04 1-10		10
9	0104-05 1-10		10

Element File: ASBRIEF.GEL
Element: As Analyst:
Print Data: Main+Suppl. Peak Storage: 1 Repl./Sample
Remarks:
Matrix Modifier: Palladium/ Magnesium Int time = 3 sec
Ramp:
Energy: Current
Char. Mass: 20 ppb
0 ppb: 100 ppb:

INSTRUMENT: 4100 ZL Technique: HGA
Wavelength: 193.7 Peak Slit: 0.7 Low
Signal Type: Zeeman AA Signal Measurement: Peak Area
Read Time: 3.0 Read Delay: 0.0 BOC Time: 2
Sample Replicates: 1
Standard Replicates: 1 Spike Replicates: Same as Sample

CALIBRATION:

Solutions	ID	Conc	Location	Volume	Diluent Volume	Modifier #1	Modifier #2
Calib. Blank	CAL BLANK		37	20	10		5
Standard 1	20 ppb	20.0	36	4	26		5
Standard 2	60 ppb	60.0	36	12	18		5
Standard 3	100 ppb	100.0	36	20	10		5
Samples				20	10		5

Diluent Location: 0
Modifier #1 Location: Modifier #2 Location: 39
Calibration Units: ug/L Sample Units: ug/L
Calibration Type: Nonlinear

Furnace Time/Temperature Program:

Step	Temp	Ramp	Hold	Gas Flow	Read	Gas Type
1	110	1	20	250		Norm
2	130	5	30	250		Norm
3	1000	10	20	250		Alt
4	2000	0	5	0	*	Norm
5	2400	1	2	250		Norm

Injection Temp: 20 Pipette Speed: 100% Extraction System: On

SEQUENCE:

Step	Action and Parameters
1	Pipet diluent + modifier 2 + spike + sample/std
2	Run HGA steps 1 to End

CHECKS:
Recalibration Type: Completely Recalibrate
Locations: None

Conc. Above Calibration Action: Dilute & Reanalyze After All Reps
Alternate Sample Volumes (uL): 10,5,4
RL Alternate Volume Blanks: No

If %RSD > 20.0 and Concentration > .05 then Retry 1 times
Check %RSD on: Samples + Standards

Recovery Measurements:
10 uL of 40 ug/L Standard at Location 40 Gives 20.0 ug/L
Measure Recovery on Samples: All Samples
Add to QC Samples: No % Recovery Limits: 85 to 115

QC #	A/S Loc.	QC Sample ID	Conc. Limits Lower	Conc. Limits Upper	After Calib	Periodic Check	At End	Count As Sample
1	35	ICV	45.0	55.0	X			
2	37	ICB	-10.0	10.0				
3	38	CRA	1.0	20.0				
4	35	CCV	45.0	55.0		X	X	
5	37	CCB	-10.0	10.0				

Run Periodic QC Samples: Every 10
Out of Limit Action: Stop Element and Continue With Next

Matrix Check Calculations:
% Difference for Dupls: No Locations:
% Recovery for Spike: No Locations: Conc:

```
Element File: ASBRIEF.GEL     Element: As                    Wavelength: 193.7
Date: 02/02/93                Time: 09:26                    Slit: 0.7 L
Data File: F320231.DAT        ID/Wt File: 0059.IDW           Lamp Current: 0
Technique: HGA                Calib. Type: Nonlinear         Energy: 50
Remark 1: Matrix Modifier:  Palladium/ Magnesium  Int time = 3 sec
Remark 2: Lamp:
Remark 3: Energy:                              Current
Remark 4: Char. Mass:  20 ppb
Remark 5: 60 ppb:      100 ppb:
```

As ID: CAL BLANK Seq. No.: 00001 A/S Pos.: 37 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:26
Peak Area (A-s): 0.005 Peak Height (A): 0.007
Background Pk Area (A-s): 0.027 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.005

Auto-zero performed.

As ID: 20 ppb Seq. No.: 00002 A/S Pos.: 36 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:28
Peak Area (A-s): 0.041 Peak Height (A): 0.127
Background Pk Area (A-s): 0.023 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.036

Standard number 1 applied. [20.0]
Correlation coefficient: 1.00000 Slope: 0.0018

As ID: 60 ppb Seq. No.: 00003 A/S Pos.: 36 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:31
Peak Area (A-s): 0.114 Peak Height (A): 0.324
Background Pk Area (A-s): 0.030 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.110
Concentration (ug/L): 60.2

Standard number 2 applied. [60.0]
Correlation coefficient: 1.00000 Slope: 0.0018

As ID: 100 ppb Seq. No.: 00004 A/S Pos.: 36 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:34
Peak Area (A-s): 0.191 Peak Height (A): 0.544
Background Pk Area (A-s): 0.031 Background Pk Height (A): 0.037
Blank Corrected Pk Area (A-s): 0.186
Concentration (ug/L): 101.5

Standard number 3 applied. [100.0]
Correlation coefficient: 1.00000 Slope: 0.0018

As ID: ICV Seq. No.: 00005 A/S Pos.: 35 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:37
Peak Area (A-s): 0.099 Peak Height (A): 0.315
Background Pk Area (A-s): 0.025 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.094
Concentration (ug/L): 51.5

QC sample is within range 45.0 - 55.0

As ID: PBS 1/26/93 Seq. No.: 00006 A/S Pos.: 1 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:39
Peak Area (A-s): 0.001 Peak Height (A): 0.009
Background Pk Area (A-s): 0.017 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -1.8

As ID: PBS 1/26/93 Seq. No.: 00007 A/S Pos.: 1 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:42
Peak Area (A-s): 0.041 Peak Height (A): 0.128
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.022
Blank Corrected Pk Area (A-s): 0.036
Concentration (ug/L): 19.9

Recovery is 108.6%

As ID: LCSS 1/26 1-10 Seq. No.: 00008 A/S Pos.: 2 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:45
Peak Area (A-s): 0.031 Peak Height (A): 0.074
Background Pk Area (A-s): 0.032 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.026
Concentration (ug/L): 14.4 Corrected Conc (ug/L): 144.

28.8 mg/Kg 84.29. Lee.

As ID: LCSS 1/26 1-10 Seq. No.: 00009 A/S Pos.: 2 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:47
Peak Area (A-s): 0.069 Peak Height (A): 0.191
Background Pk Area (A-s): 0.024 Background Pk Height (A): 0.022
Blank Corrected Pk Area (A-s): 0.064
Concentration (ug/L): 35.4 Corrected Conc (ug/L): 354.

Recovery is 104.7%

As ID: 0104-01 1-10 Seq. No.: 00010 A/S Pos.: 3 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:50
Peak Area (A-s): 0.022 Peak Height (A): 0.036
Background Pk Area (A-s): 0.043 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.017
Concentration (ug/L): 9.5 Corrected Conc (ug/L): 95.

As ID: 0104-01 1-10 Seq. No.: 00011 A/S Pos.: 3 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:53
Peak Area (A-s): 0.058 Peak Height (A): 0.092
Background Pk Area (A-s): 0.039 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): 0.053
Concentration (ug/L): 29.0 Corrected Conc (ug/L): 290.

Recovery is 97.8%

As ID: 0104-01 REP 10 Seq. No.: 00012 A/S Pos.: 4 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:55
Peak Area (A-s): 0.029 Peak Height (A): 0.044
Background Pk Area (A-s): 0.040 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.024
Concentration (ug/L): 13.2 Corrected Conc (ug/L): 132.

As ID: 0104-01 REP 10 Seq. No.: 00013 A/S Pos.: 4 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 09:58
Peak Area (A-s): 0.069 Peak Height (A): 0.096
Background Pk Area (A-s): 0.045 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.065
Concentration (ug/L): 35.6 Corrected Conc (ug/L): 356.

Recovery is 112.0%

As ID: 0104-01 SPK 50 Seq. No.: 00014 A/S Pos.: 5 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:01
Peak Area (A-s): 0.075 Peak Height (A): 0.194
Background Pk Area (A-s): 0.027 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.071
Concentration (ug/L): 38.7 Corrected Conc (ug/L): 1936.

96.8% Rec.

As ID: 0104-01 SPK 50 Seq. No.: 00015 A/S Pos.: 5 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:04
Peak Area (A-s): 0.121 Peak Height (A): 0.224
Background Pk Area (A-s): 0.033 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): 0.116
Concentration (ug/L): 63.5 Corrected Conc (ug/L): 3176.

Recovery is 124.0% (outside of specified limits)

As ID: CCV Seq. No.: 00016 A/S Pos.: 35 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:06
Peak Area (A-s): 0.085 Peak Height (A): 0.123
Background Pk Area (A-s): 0.101 Background Pk Height (A): 0.215
Blank Corrected Pk Area (A-s): 0.081
Concentration (ug/L): 44.1

QC sample is out of range 45.0 - 55.0

As ID: ICV Seq. No.: 00017 A/S Pos.: 35 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:35
Peak Area (A-s): 0.094 Peak Height (A): 0.256
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.090
Concentration (ug/L): 49.0

QC sample is within range 45.0 - 55.0

As ID: 0104-02 10 Seq. No.: 00018 A/S Pos.: 6 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:37
Peak Area (A-s): 0.006 Peak Height (A): 0.012
Background Pk Area (A-s): 0.076 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.5 Corrected Conc (ug/L): 5.

As ID: 0104-02 10 Seq. No.: 00019 A/S Pos.: 6 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:40
Peak Area (A-s): 0.047 Peak Height (A): 0.070
Background Pk Area (A-s): 0.068 Background Pk Height (A): 0.065
Blank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 23.1 Corrected Conc (ug/L): 231.

Recovery is 113.0%

As ID: 0104-03 1-10 Seq. No.: 00020 A/S Pos.: 7 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:43
Peak Area (A-s): 0.009 Peak Height (A): 0.014
Background Pk Area (A-s): 0.074 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 2.6 Corrected Conc (ug/L): 26.

As ID: 0104-03 1-10 Seq. No.: 00021 A/S Pos.: 7 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:46
Peak Area (A-s): 0.054 Peak Height (A): 0.062
Background Pk Area (A-s): 0.079 Background Pk Height (A): 0.055
Blank Corrected Pk Area (A-s): 0.049
Concentration (ug/L): 27.1 Corrected Conc (ug/L): 271.

Recovery is 122.6% (outside of specified limits)

As ID: 0104-04 1-10 Seq. No.: 00022 A/S Pos.: 8 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:48
Peak Area (A-s): 0.010 Peak Height (A): 0.017
Background Pk Area (A-s): 0.076 Background Pk Height (A): 0.062

Blank Corrected Pk Area (A-s): 0.006
Concentration (ug/L): 3.1 Corrected Conc (ug/L): 31.

As ID: 0104-04 1-10 Seq. No.: 00023 A/S Pos.: 8 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:51
Peak Area (A-s): 0.055 Peak Height (A): 0.067
Background Pk Area (A-s): 0.082 Background Pk Height (A): 0.069
Blank Corrected Pk Area (A-s): 0.051
Concentration (ug/L): 27.8 Corrected Conc (ug/L): 278.

Recovery is 123.6% (outside of specified limits)

As ID: 0104-05 1-10 Seq. No.: 00024 A/S Pos.: 9 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:53
Peak Area (A-s): 0.011 Peak Height (A): 0.016
Background Pk Area (A-s): 0.063 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.006
Concentration (ug/L): 3.4 Corrected Conc (ug/L): 34.

As ID: 0104-05 1-10 Seq. No.: 00025 A/S Pos.: 9 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:56
Peak Area (A-s): 0.051 Peak Height (A): 0.060
Background Pk Area (A-s): 0.063 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L): 25.3 Corrected Conc (ug/L): 253.

Recovery is 109.4%

As ID: CCV Seq. No.: 00026 A/S Pos.: 35 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 10:59
Peak Area (A-s): 0.101 Peak Height (A): 0.299
Background Pk Area (A-s): 0.023 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.096
Concentration (ug/L): 52.7

QC sample is within range 45.0 - 55.0

As ID: ICV Seq. No.: 00027 A/S Pos.: 35 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:08
Peak Area (A-s): 0.099 Peak Height (A): 0.272
Background Pk Area (A-s): 0.023 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.095
Concentration (ug/L): 52.0

QC sample is within range 45.0 - 55.0

As ID: IDL Seq. No.: 00028 A/S Pos.: 10 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:11
Peak Area (A-s): 0.020 Peak Height (A): 0.061
Background Pk Area (A-s): 0.019 Background Pk Height (A): 0.025
Blank Corrected Pk Area (A-s): 0.015
Concentration (ug/L): 8.4

As ID: IDL Seq. No.: 00029 A/S Pos.: 11 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:13
Peak Area (A-s): 0.021 Peak Height (A): 0.071
Background Pk Area (A-s): 0.019 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.016
Concentration (ug/L): 8.8

As ID: IDL Seq. No.: 00030 A/S Pos.: 12 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:16
Peak Area (A-s): 0.021 Peak Height (A): 0.063
Background Pk Area (A-s): 0.020 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.016
Concentration (ug/L): 8.9

As ID: IDL Seq. No.: 00031 A/S Pos.: 13 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:18
Peak Area (A-s): 0.020 Peak Height (A): 0.069
Background Pk Area (A-s): 0.023 Background Pk Height (A): 0.025
Blank Corrected Pk Area (A-s): 0.016
Concentration (ug/L): 8.6

As ID: IDL Seq. No.: 00032 A/S Pos.: 14 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:21
Peak Area (A-s): 0.021 Peak Height (A): 0.053
Background Pk Area (A-s): 0.037 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.016
Concentration (ug/L): 9.0

As ID: IDL Seq. No.: 00033 A/S Pos.: 15 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:23
Peak Area (A-s): 0.023 Peak Height (A): 0.062
Background Pk Area (A-s): 0.028 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.018
Concentration (ug/L): 9.9

A ID: IDL Seq. No.: 00034 A/S Pos.: 16 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:26
Peak Area (A-s): 0.020 Peak Height (A): 0.056
Background Pk Area (A-s): 0.036 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.015
Concentration (ug/L): 8.5

As ID: CCV Seq. No.: 00035 A/S Pos.: 35 Date: 02/02/93

Replicate 1 (Peak Stored) Time: 11:29
Peak Area (A-s): 0.091 Peak Height (A): 0.263
Background Pk Area (A-s): 0.032 Background Pk Height (A): 0.039
Blank Corrected Pk Area (A-s): 0.086
Concentration (ug/L): 47.1

QC sample is within range 45.0 - 55.0

$\bar{x} = 8.81$

$SD = .5023$

$IOL = 1.501$

P.E. AA GRAPHITE FURNACE 5100Z RUN LOG

P.E. AA GRAPHITE FURNACE 5100Z RUN LOG

Date: 2/1/93 Element: Se

Date Storage File: F220131 Lamp: P.E EDL

Energy: Current:

Char. Mass @ 20 ppb: Temp. Program:
60 ppb:
100 ppb:

POS #	SAMPLE ID		
1	PBS 1/26/93	21	
2	LCSS 1/26/93 1-10	22	
3	0104-01	23	
4	0104-01 REP	24	
5	0104-01 SPK	25	
6	0104-02	26	
7	0104-03	27	
8	0104-04	28	
9	0104-05	29	
10		30	
11		31	
12		32	
13		33	
14		34	
15		35	
16		36	100 ppb standard
17		37	Blank
18		38	NH4PO4 Mg(NO3)2 modifier
19		39	Pd/Mg
20		40	40 ppb spk sol

Element File: SEBRIEF.GEL Element: Se
Date: 01/29/93 Time: 13:57
Data Storage File: F220131.DAT ID/Weight File: 0104.A60
Technique: HGA Calibration Type: Nonlinear
Remark 1: Analysis was run with Palladium/Magnesium modifier.
Remark 2: Integration time = 5 seconds.

ID: Blank Seq. No.: 00001 A/S Pos.: 37 Date: 01/29/93

Replicate 1 Time: 13:57
Peak Area (A-s): 0.002 Peak Height (A): 0.005
Background Pk Area (A-s): 0.021 Background Pk Height (A): 0.009
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): 0.1

all analysis performed. 2/1/93. GG.

Auto-zero performed.

ID: Standard 1 Seq. No.: 00002 A/S Pos.: 36 Date: 01/29/93

Replicate 1 Time: 14:00
Peak Area (A-s): 0.053 Peak Height (A): 0.112
Background Pk Area (A-s): 0.039 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.050
Concentration (ug/L): 17.5

Standard number 1 applied. [20.0]
Correlation coefficient: 1.00000 Slope: 0.0025

ID: Standard 2 Seq. No.: 00003 A/S Pos.: 36 Date: 01/29/93

Replicate 1 Time: 14:03
Peak Area (A-s): 0.150 Peak Height (A): 0.291
Background Pk Area (A-s): 0.084 Background Pk Height (A): 0.130
Blank Corrected Pk Area (A-s): 0.147
Concentration (ug/L): 58.6

Standard number 2 applied. [60.0]
Correlation coefficient: 1.00000 Slope: 0.0025

ID: Standard 3 Seq. No.: 00004 A/S Pos.: 36 Date: 01/29/93

Replicate 1 Time: 14:06
Peak Area (A-s): 0.223 Peak Height (A): 0.445
Background Pk Area (A-s): 0.118 Background Pk Height (A): 0.217
Blank Corrected Pk Area (A-s): 0.221
Concentration (ug/L): 91.6

Standard number 3 applied. [100.0]
Correlation coefficient: 1.00000 Slope: 0.0025

ID: EP-8 Seq. No.: 00005 A/S Pos.: 35 Date: 01/29/93

Replicate 1 Time: 14:09
Peak Area (A-s): 0.120 Peak Height (A): 0.272
Background Pk Area (A-s): 0.074 Background Pk Height (A): 0.124
Blank Corrected Pk Area (A-s): 0.118
Concentration (ug/L): 47.4 Corrected Conc (mg/L): 0.0474

Check sample is within range 45.0 - 55.0

ID: PBS 1/26/93 Seq. No.: 00006 A/S Pos.: 1 Date: 01/29/93

2/1/93 GH.

Replicate 1 Time: 14:12
Peak Area (A-s): -0.000 Peak Height (A): 0.004
Background Pk Area (A-s): 0.021 Background Pk Height (A): 0.010
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -1.0 Corrected Conc (mg/L): -0.0010

ID: PBS 1/26/93 Seq. No.: 00007 A/S Pos.: 1 Date: 01/29/93

Replicate 1 Time: 14:15
Peak Area (A-s): 0.020 Peak Height (A): 0.045
Background Pk Area (A-s): 0.029 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): 0.017
Concentration (ug/L): 6.9 Corrected Conc (mg/L): 0.0069

Recovery is 79.2%

ID: LCSS 1/26 1-10 Seq. No.: 00008 A/S Pos.: 2 Date: 01/29/93

35.4 mg/kg. 103.5% Rec. 2/1/93 GH.

Replicate 1 Time: 14:18
Peak Area (A-s): 0.047 Peak Height (A): 0.092
Background Pk Area (A-s): 0.047 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 17.7 Corrected Conc (mg/L): 0.0177

ID: LCSS 1/26 1-10 Seq. No.: 00009 A/S Pos.: 2 Date: 01/29/93

Replicate 1 Time: 14:21
Peak Area (A-s): 0.072 Peak Height (A): 0.135
Background Pk Area (A-s): 0.054 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 27.9 Corrected Conc (mg/L): 0.0279

Recovery is 102.2%

ID: 0104-01 1-10 Seq. No.: 00010 A/S Pos.: 3 Date: 01/29/93

Replicate 1 Time: 14:24
Peak Area (A-s): 0.001 Peak Height (A): 0.005
Background Pk Area (A-s): 0.033 Background Pk Height (A): 0.017
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.4 Corrected Conc (mg/L): -0.0004

ID: 0104-01 1-10 Seq. No.: 00011 A/S Pos.: 3 Date: 01/29/93

eplicate 1 Time: 14:27
Peak Area (A-s): 0.027 Peak Height (A): 0.051
Background Pk Area (A-s): 0.042 Background Pk Height (A): 0.026
lank Corrected Pk Area (A-s): 0.025
oncentration (ug/L): 9.8 Corrected Conc (mg/L): 0.0098

ecovery is 102.3%

D: 0104-01 REP 10 Seq. No.: 00012 A/S Pos.: 4 Date: 01/29/93

eplicate 1 Time: 14:30
Peak Area (A-s): 0.000 Peak Height (A): 0.004
ackground Pk Area (A-s): 0.034 Background Pk Height (A): 0.019
lank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.9 Corrected Conc (mg/L): -0.0009

ID: 0104-01 REP 10 Seq. No.: 00013 A/S Pos.: 4 Date: 01/29/93

eplicate 1 Time: 14:34
Peak Area (A-s): 0.025 Peak Height (A): 0.053
Background Pk Area (A-s): 0.046 Background Pk Height (A): 0.027
lank Corrected Pk Area (A-s): 0.022
oncentration (ug/L): 8.9 Corrected Conc (mg/L): 0.0089

ecovery is 97.6%

D: 0104-01 SPK 10 Seq. No.: 00014 A/S Pos.: 5 Date: 01/29/93

Sample abs. exceeds the range of the calibration function.
Replicate 1 Time: 14:37
eak Area (A-s): 0.332 Peak Height (A): 0.586
ackground Pk Area (A-s): 0.199 Background Pk Height (A): 0.343
Blank Corrected Pk Area (A-s): 0.330
oncentration (ug/L): ---------- Corrected Conc (mg/L): ----------

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D: 0104-01 SPK 10 Seq. No.: 00015 A/S Pos.: 5 Date: 01/29/93

Replicate 1 Time: 14:40
Peak Area (A-s): 0.114 Peak Height (A): 0.238
ackground Pk Area (A-s): 0.073 Background Pk Height (A): 0.109
lank Corrected Pk Area (A-s): 0.112
Concentration (ug/L): 45.1 Corrected Conc (mg/L): 0.1802

90.27. Rec.

ID: 0104-01 SPK 10 Seq. No.: 00016 A/S Pos.: 5 Date: 01/29/93

eplicate 1 Time: 14:43
Peak Area (A-s): 0.135 Peak Height (A): 0.279
Background Pk Area (A-s): 0.085 Background Pk Height (A): 0.129
lank Corrected Pk Area (A-s): 0.133
oncentration (ug/L): 53.7 Corrected Conc (mg/L): 0.2148

ecovery is 86.4%

ID: 0104-02 1-10 Seq. No.: 00017 A/S Pos.: 6 Date: 01/29/93

Replicate 1 Time: 14:46
Peak Area (A-s): 0.007 Peak Height (A): 0.012
Background Pk Area (A-s): 0.067 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 1.7 Corrected Conc (mg/L): 0.0017

ID: 0104-02 1-10 Seq. No.: 00018 A/S Pos.: 6 Date: 01/29/93

Replicate 1 Time: 14:49
Peak Area (A-s): 0.027 Peak Height (A): 0.065
Background Pk Area (A-s): 0.083 Background Pk Height (A): 0.042
Blank Corrected Pk Area (A-s): 0.024
Concentration (ug/L): 9.6 Corrected Conc (mg/L): 0.0096

Recovery is 78.7%

ID: 0104-03 1-10 Seq. No.: 00019 A/S Pos.: 7 Date: 01/29/93

Replicate 1 Time: 14:52
Peak Area (A-s): 0.003 Peak Height (A): 0.010
Background Pk Area (A-s): 0.060 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): 0.4 Corrected Conc (mg/L): 0.0004

0.4 upload this result 2/1/93 CH

ID: 0104-03 1-10 Seq. No.: 00020 A/S Pos.: 7 Date: 01/29/93

Replicate 1 Time: 14:55
Peak Area (A-s): 0.023 Peak Height (A): 0.059
Background Pk Area (A-s): 0.066 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.021
Concentration (ug/L): 8.3 Corrected Conc (mg/L): 0.0083

Recovery is 79.4%

ID: 0104-04 1-10 Seq. No.: 00021 A/S Pos.: 8 Date: 01/29/93

Replicate 1 Time: 14:58
Peak Area (A-s): 0.002 Peak Height (A): 0.009
Background Pk Area (A-s): 0.056 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.1 Corrected Conc (mg/L): -0.0001

upload this result 2/1/93 CH

ID: 0104-04 1-10 Seq. No.: 00022 A/S Pos.: 8 Date: 01/29/93

Replicate 1 Time: 15:01
Peak Area (A-s): 0.024 Peak Height (A): 0.060
Background Pk Area (A-s): 0.074 Background Pk Height (A): 0.037
Blank Corrected Pk Area (A-s): 0.022
Concentration (ug/L): 8.7 Corrected Conc (mg/L): 0.0087

Recovery is 88.9%

ID: 0104-05 1-10 Seq. No.: 00023 A/S Pos.: 9 Date: 01/29/93

Replicate 1 Time: 15:04
Peak Area (A-s): 0.001 Peak Height (A): 0.007
Background Pk Area (A-s): 0.044 Background Pk Height (A): 0.020
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.4 Corrected Conc (mg/L): -0.0004

ID: 0104-05 1-10 Seq. No.: 00024 A/S Pos.: 9 Date: 01/29/93

Replicate 1 Time: 15:07
Peak Area (A-s): 0.019 Peak Height (A): 0.044
Background Pk Area (A-s): 0.052 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.017
Concentration (ug/L): 6.8 Corrected Conc (mg/L): 0.0068

Recovery is 71.7%

ID: EP-8 Seq. No.: 00025 A/S Pos.: 35 Date: 01/29/93

Replicate 1 Time: 15:11
Peak Area (A-s): 0.112 Peak Height (A): 0.237
Background Pk Area (A-s): 0.071 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.110
Concentration (ug/L): 44.3 Corrected Conc (mg/L): 0.0443

Check sample is out of range 45.0 - 55.0

ID: EP-8 Seq. No.: 00026 A/S Pos.: 35 Date: 01/29/93

Replicate 1 Time: 15:14
Peak Area (A-s): 0.112 Peak Height (A): 0.234
Background Pk Area (A-s): 0.065 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.110
Concentration (ug/L): 44.3 Corrected Conc (mg/L): 0.0443

Check sample is out of range 45.0 - 55.0

ID: EP-8 Seq. No.: 00027 A/S Pos.: 35 Date: 01/29/93

Replicate 1 Time: 15:19
Peak Area (A-s): 0.120 Peak Height (A): 0.253
Background Pk Area (A-s): 0.066 Background Pk Height (A): 0.113
Blank Corrected Pk Area (A-s): 0.117
Concentration (ug/L): 47.3 Corrected Conc (mg/L): 0.0473

Check sample is within range 45.0 - 55.0

ID: PBS 1/26/93 Seq. No.: 00029 A/S Pos.: 1 Date: 01/29/93

Replicate 1 Time: 15:23

Peak Area (A-s): 0.002 Peak Height (A): 0.004
Background Pk Area (A-s): 0.021 Background Pk Height (A): 0.011
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.2 Corrected Conc (mg/L): -0.0002

ID: PBS 1/26/93 Seq. No.: 00030 A/S Pos.: 1 Date: 01/29/93

Replicate 1 Time: 15:27
Peak Area (A-s): 0.021 Peak Height (A): 0.050
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.019
Concentration (ug/L): 7.4 Corrected Conc (mg/L): 0.0074

Recovery is 76.4%

ID: 0104-01 1-10 Seq. No.: 00031 A/S Pos.: 3 Date: 01/29/93

Replicate 1 Time: 15:30
Peak Area (A-s): 0.005 Peak Height (A): 0.011
Background Pk Area (A-s): 0.162 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 1.0 Corrected Conc (mg/L): 0.0010

ID: 0104-01 1-10 Seq. No.: 00032 A/S Pos.: 3 Date: 01/29/93

Replicate 1 Time: 15:33
Peak Area (A-s): 0.020 Peak Height (A): 0.041
Background Pk Area (A-s): 0.190 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.018
Concentration (ug/L): 7.1 Corrected Conc (mg/L): 0.0071

Recovery is 61.2%

ID: 0104-01 REP Seq. No.: 00033 A/S Pos.: 4 Date: 01/29/93

Replicate 1 Time: 15:36
Peak Area (A-s): 0.006 Peak Height (A): 0.014
Background Pk Area (A-s): 0.198 Background Pk Height (A): 0.085
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 1.5 Corrected Conc (mg/L): 0.0015

ID: 0104-01 REP Seq. No.: 00034 A/S Pos.: 4 Date: 01/29/93

Replicate 1 Time: 15:39
Peak Area (A-s): 0.020 Peak Height (A): 0.045
Background Pk Area (A-s): 0.173 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.018
Concentration (ug/L): 7.1 Corrected Conc (mg/L): 0.0071

Recovery is 55.7%

ID: 4 ppb / 40 ppb Seq. No.: 00035 A/S Pos.: 40 Date: 01/29/93

Replicate 1 Time: 15:43
Peak Area (A-s): 0.089 Peak Height (A): 0.190
Background Pk Area (A-s): 0.070 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.087
Concentration (ug/L): 34.6 Corrected Conc (mg/L): 0.0346

ID: 4 ppb / 40 ppb Seq. No.: 00036 A/S Pos.: 40 Date: 01/29/93

Replicate 1 Time: 15:49
Peak Area (A-s): 0.091 Peak Height (A): 0.186
Background Pk Area (A-s): 0.055 Background Pk Height (A): 0.082
Blank Corrected Pk Area (A-s): 0.089
Concentration (ug/L): 35.5 Corrected Conc (mg/L): 0.0355

ID: PBS 1/26/93 Seq. No.: 00037 A/S Pos.: 1 Date: 01/29/93

Replicate 1 Time: 15:53
Peak Area (A-s): -0.001 Peak Height (A): 0.004
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.009
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -1.3 Corrected Conc (mg/L): -0.0013

ID: PBS 1/26/93 Seq. No.: 00038 A/S Pos.: 1 Date: 01/29/93

Replicate 1 Time: 15:57
Peak Area (A-s): 0.020 Peak Height (A): 0.048
Background Pk Area (A-s): 0.025 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.018
Concentration (ug/L): 7.1 Corrected Conc (mg/L): 0.0071

Recovery is 83.8%

ID: 0104-02 Seq. No.: 00039 A/S Pos.: 6 Date: 01/29/93

Replicate 1 Time: 16:00
Peak Area (A-s): 0.030 Peak Height (A): 0.048
Background Pk Area (A-s): 0.624 Background Pk Height (A): 0.711
Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 10.8 Corrected Conc (mg/L): 0.0108

ID: 0104-02 Seq. No.: 00040 A/S Pos.: 6 Date: 01/29/93

Replicate 1 Time: 16:03
Peak Area (A-s): 0.039 Peak Height (A): 0.064
Background Pk Area (A-s): 0.634 Background Pk Height (A): 0.621
Blank Corrected Pk Area (A-s): 0.037
Concentration (ug/L): 14.5 Corrected Conc (mg/L): 0.0145

Recovery is 37.1%

ID: 0104-03 Seq. No.: 00041 A/S Pos.: 7 Date: 01/29/93

Replicate 1 Time: 16:06

Peak Area (A-s): 0.030 Peak Height (A): 0.052
Background Pk Area (A-s): 0.409 Background Pk Height (A): 0.239
Blank Corrected Pk Area (A-s): 0.028
Concentration (ug/L): 11.2 Corrected Conc (mg/L): 0.0112

ID: 0104-03 Seq. No.: 00042 A/S Pos.: 7 Date: 01/29/93

Replicate 1 Time: 16:09
Peak Area (A-s): 0.048 Peak Height (A): 0.085
Background Pk Area (A-s): 0.413 Background Pk Height (A): 0.236
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L): 18.3 Corrected Conc (mg/L): 0.0183

Recovery is 71.7%

ID: 0104-04 Seq. No.: 00043 A/S Pos.: 8 Date: 01/29/93

Replicate 1 Time: 16:12
Peak Area (A-s): 0.034 Peak Height (A): 0.050
Background Pk Area (A-s): 0.555 Background Pk Height (A): 0.441
Blank Corrected Pk Area (A-s): 0.031
Concentration (ug/L): 12.5 Corrected Conc (mg/L): 0.0125

ID: 0104-04 Seq. No.: 00044 A/S Pos.: 8 Date: 01/29/93

Replicate 1 Time: 16:15
Peak Area (A-s): 0.048 Peak Height (A): 0.068
Background Pk Area (A-s): 0.566 Background Pk Height (A): 0.457
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L): 18.2 Corrected Conc (mg/L): 0.0182

Recovery is 57.4%

ID: 0104-05 Seq. No.: 00045 A/S Pos.: 9 Date: 01/29/93

Replicate 1 Time: 16:18
Peak Area (A-s): 0.012 Peak Height (A): 0.032
Background Pk Area (A-s): 0.273 Background Pk Height (A): 0.104
Blank Corrected Pk Area (A-s): 0.010
Concentration (ug/L): 4.0 Corrected Conc (mg/L): 0.0040

ID: 0104-05 Seq. No.: 00046 A/S Pos.: 9 Date: 01/29/93

Replicate 1 Time: 16:21
Peak Area (A-s): 0.028 Peak Height (A): 0.068
Background Pk Area (A-s): 0.296 Background Pk Height (A): 0.110
Blank Corrected Pk Area (A-s): 0.025
Concentration (ug/L): 10.0 Corrected Conc (mg/L): 0.0100

Recovery is 60.4%

ID: EP-8 Seq. No.: 00047 A/S Pos.: 35 Date: 01/29/93

eplicate 1 Time: 16:24
eak Area (A-s): 0.120 Peak Height (A): 0.255
Background Pk Area (A-s): 0.080 Background Pk Height (A): 0.106
lank Corrected Pk Area (A-s): 0.117
oncentration (ug/L): 47.3 Corrected Conc (mg/L): 0.0473

Check sample is within range 45.0 - 55.0

ID: Seq. No.: 00048 A/S Pos.: 10 Date: 01/29/93

eplicate 1 Time: 16:27
Peak Area (A-s): -0.000 Peak Height (A): 0.005
ackground Pk Area (A-s): 0.021 Background Pk Height (A): 0.013
lank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -1.0 Corrected Conc (mg/L): -0.0010

ID: EP-8 Seq. No.: 00050 A/S Pos.: 35 Date: 01/29/93

eplicate 1 Time: 16:32
eak Area (A-s): 0.119 Peak Height (A): 0.252
Background Pk Area (A-s): 0.065 Background Pk Height (A): 0.102
lank Corrected Pk Area (A-s): 0.117
oncentration (ug/L): 47.0 Corrected Conc (mg/L): 0.0470

Check sample is within range 45.0 - 55.0

ID: IDL Seq. No.: 00051 A/S Pos.: 11 Date: 01/29/93

eplicate 1 Time: 16:35
Peak Area (A-s): 0.012 Peak Height (A): 0.030
ackground Pk Area (A-s): 0.028 Background Pk Height (A): 0.020
lank Corrected Pk Area (A-s): 0.010
Concentration (ug/L): 4.0 Corrected Conc (mg/L): 0.0040

ID: IDL Seq. No.: 00052 A/S Pos.: 12 Date: 01/29/93

Replicate 1 Time: 16:38
Peak Area (A-s): 0.015 Peak Height (A): 0.030
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.019
Blank Corrected Pk Area (A-s): 0.012
Concentration (ug/L): 4.9 Corrected Conc (mg/L): 0.0049

ID: IDL Seq. No.: 00053 A/S Pos.: 13 Date: 01/29/93

Replicate 1 Time: 16:41
Peak Area (A-s): 0.011 Peak Height (A): 0.030
Background Pk Area (A-s): 0.025 Background Pk Height (A): 0.015
Blank Corrected Pk Area (A-s): 0.008
Concentration (ug/L): 3.3 Corrected Conc (mg/L): 0.0033

ID: IDL Seq. No.: 00054 A/S Pos.: 14 Date: 01/29/93

Replicate 1 Time: 16:44

Peak Area (A-s): 0.014 Peak Height (A): 0.032
ackground Pk Area (A-s): 0.025 Background Pk Height (A): 0.019
Blank Corrected Pk Area (A-s): 0.011
Concentration (ug/L): 4.4 Corrected Conc (mg/L): 0.0044

ID: IDL Seq. No.: 00055 A/S Pos.: 15 Date: 01/29/93

eplicate 1 Time: 16:47
Peak Area (A-s): 0.012 Peak Height (A): 0.030
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.019
lank Corrected Pk Area (A-s): 0.010
Concentration (ug/L): 3.9 Corrected Conc (mg/L): 0.0039

D: EP-8 Seq. No.: 00056 A/S Pos.: 35 Date: 01/29/93

eplicate 1 Time: 16:50
eak Area (A-s): 0.133 Peak Height (A): 0.270
Background Pk Area (A-s): 0.069 Background Pk Height (A): 0.107
lank Corrected Pk Area (A-s): 0.131
oncentration (ug/L): 52.8 Corrected Conc (mg/L): 0.0528

Check sample is within range 45.0 - 55.0

ID: IDL Seq. No.: 00057 A/S Pos.: 16 Date: 01/29/93

eplicate 1 Time: 16:53
Peak Area (A-s): 0.014 Peak Height (A): 0.033
ackground Pk Area (A-s): 0.022 Background Pk Height (A): 0.019
lank Corrected Pk Area (A-s): 0.012
Concentration (ug/L): 4.8 Corrected Conc (mg/L): 0.0048

D: IDL Seq. No.: 00058 A/S Pos.: 17 Date: 01/29/93

eplicate 1 Time: 16:56
eak Area (A-s): 0.013 Peak Height (A): 0.030
Background Pk Area (A-s): 0.023 Background Pk Height (A): 0.018
lank Corrected Pk Area (A-s): 0.011
oncentration (ug/L): 4.4 Corrected Conc (mg/L): 0.0044

$\bar{X} = 4.24$ $SD = .556$ $IDL = 6.669$

D: EP-8 Seq. No.: 00059 A/S Pos.: 35 Date: 01/29/93

Replicate 1 Time: 17:26
eak Area (A-s): 0.133 Peak Height (A): 0.294
ackground Pk Area (A-s): 0.066 Background Pk Height (A): 0.114
Blank Corrected Pk Area (A-s): 0.131
oncentration (ug/L): 52.8 Corrected Conc (mg/L): 0.0528

Thallium

P.E. AA GRAPHITE FURNACE 5100Z RUN LOG

P.E. AA GRAPHITE FURNACE 5100Z RUN LOG

Date: 2/2/93 Element: Tl

Date Storage File: F220231 Lamp: Hamamatsu HCL

Energy: 51 Current: 5

Char. Mass @ 20 ppb: 34 Temp. Program:
60 ppb: 38
100 ppb: 32

POS #	SAMPLE ID		
1	PBS 1/26/93	21	
2	LCSS 1/26/93 1-20	22	
3	0104-01	23	
4	0104-01 REP	24	
5	0104-01 SPK 1-50	25	
6	0104-02	26	
7	0104-03	27	
8	0104-04	28	
9	0104-05	29	
10		30	
11		31	
12		32	
13		33	
14		34	
15		35	
16		36	100 ppb standard
17		37	Blank
18		38	NH4PO4 Mg(NO3)2 modifier
19		39	Pd/Mg
20		40	40 ppb spk sol

Element File: TLBRIEF.GEL Element: Tl
Date: 02/02/93 Time: 09:27
Data Storage File: F220231.DAT ID/Weight File: 0104.A60
Technique: HGA Calibration Type: Nonlinear
Remark 1: Analysis was run with 4% ammonium phosphate/.2% magnesium
Remark 2: nitrate matrix modifier.
Remark 3: Integration time = 5 seconds.

ID: Blank Seq. No.: 00001 A/S Pos.: 37 Date: 02/02/93

Replicate 1 Time: 09:27
Peak Area (A-s): 0.004 Peak Height (A): 0.009
Background Pk Area (A-s): 0.009 Background Pk Height (A): 0.014
Blank Corrected Pk Area (A-s): 0.004

Auto-zero performed.

ID: Standard 1 Seq. No.: 00002 A/S Pos.: 36 Date: 02/02/93

Replicate 1 Time: 09:30
Peak Area (A-s): 0.078 Peak Height (A): 0.147
Background Pk Area (A-s): 0.077 Background Pk Height (A): 0.120
Blank Corrected Pk Area (A-s): 0.074

Standard number 1 applied. [20.0]
Correlation coefficient: 1.00000 Slope: 0.0037

ID: Standard 2 Seq. No.: 00003 A/S Pos.: 36 Date: 02/02/93

Replicate 1 Time: 09:33
Peak Area (A-s): 0.194 Peak Height (A): 0.340
Background Pk Area (A-s): 0.176 Background Pk Height (A): 0.322
Blank Corrected Pk Area (A-s): 0.190
Concentration (ug/L): 51.5

Standard number 2 applied. [60.0]
Correlation coefficient: 1.00000 Slope: 0.0040

ID: Standard 3 Seq. No.: 00004 A/S Pos.: 36 Date: 02/02/93

Replicate 1 Time: 09:35
Peak Area (A-s): 0.277 Peak Height (A): 0.437
Background Pk Area (A-s): 0.269 Background Pk Height (A): 0.452
Blank Corrected Pk Area (A-s): 0.273
Concentration (ug/L): 97.9

Standard number 3 applied. [100.0]
Correlation coefficient: 1.00000 Slope: 0.0040

ID: EP - 8 Seq. No.: 00005 A/S Pos.: 34 Date: 02/02/93

Replicate 1 Time: 09:38

Peak Area (A-s): -0.003 Peak Height (A): 0.007
Background Pk Area (A-s): 0.012 Background Pk Height (A): 0.010
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.9

Check sample is out of range 36 - 44

ID: EP-8 Seq. No.: 00006 A/S Pos.: 35 Date: 02/02/93

Replicate 1 Time: 09:44
Peak Area (A-s): 0.129 Peak Height (A): 0.223
Background Pk Area (A-s): 0.119 Background Pk Height (A): 0.194
Blank Corrected Pk Area (A-s): 0.125
Concentration (ug/L): 36.0

Check sample is out of range 36 - 44

ID: EP-8 Seq. No.: 00007 A/S Pos.: 35 Date: 02/02/93

Replicate 1 Time: 09:57
Peak Area (A-s): 0.136 Peak Height (A): 0.234
Background Pk Area (A-s): 0.119 Background Pk Height (A): 0.199
Blank Corrected Pk Area (A-s): 0.132
Concentration (ug/L): 38.3

Check sample is within range 36 - 44

ID: PBS 1/26/93 Seq. No.: 00008 A/S Pos.: 1 Date: 02/02/93

Replicate 1 Time: 09:59
Peak Area (A-s): 0.001 Peak Height (A): 0.009
Background Pk Area (A-s): 0.011 Background Pk Height (A): 0.013
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.7

ID: PBS 1/26/93 Seq. No.: 00009 A/S Pos.: 1 Date: 02/02/93

Replicate 1 Time: 10:02
Peak Area (A-s): 0.072 Peak Height (A): 0.130
Background Pk Area (A-s): 0.062 Background Pk Height (A): 0.107
Blank Corrected Pk Area (A-s): 0.068
Concentration (ug/L): 18.4

Recovery is 95.4%

ID: LCSS 1/26 1-20 Seq. No.: 00010 A/S Pos.: 2 Date: 02/02/93

Replicate 1 Time: 10:05
Peak Area (A-s): 0.109 Peak Height (A): 0.211
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.177
Blank Corrected Pk Area (A-s): 0.105
Concentration (ug/L): 29.4 Corrected Conc (ug/L): 588.

117.6 mg/Kg 84.0% Rec.

ID: LCSS 1/26 1-20 Seq. No.: 00011 A/S Pos.: 2 Date: 02/02/93

Replicate 1 Time: 10:08
Peak Area (A-s): 0.161 Peak Height (A): 0.283
Background Pk Area (A-s): 0.150 Background Pk Height (A): 0.254
Blank Corrected Pk Area (A-s): 0.157
Concentration (ug/L): 47.3 Corrected Conc (ug/L): 946.

Recovery is 89.4%

ID: 0104-01 Seq. No.: 00012 A/S Pos.: 3 Date: 02/02/93

Replicate 1 Time: 10:11
Peak Area (A-s): 0.007 Peak Height (A): 0.015
Background Pk Area (A-s): 0.382 Background Pk Height (A): 0.164
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.7

ID: 0104-01 Seq. No.: 00013 A/S Pos.: 3 Date: 02/02/93

Replicate 1 Time: 10:14
Peak Area (A-s): 0.074 Peak Height (A): 0.129
Background Pk Area (A-s): 0.368 Background Pk Height (A): 0.137
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 18.8

Recovery is 90.1%

ID: 0104-01 REP Seq. No.: 00014 A/S Pos.: 4 Date: 02/02/93

Replicate 1 Time: 10:17
Peak Area (A-s): 0.011 Peak Height (A): 0.020
Background Pk Area (A-s): 0.353 Background Pk Height (A): 0.150
Blank Corrected Pk Area (A-s): 0.007
Concentration (ug/L): 1.8

ID: 0104-01 REP Seq. No.: 00015 A/S Pos.: 4 Date: 02/02/93

Replicate 1 Time: 10:19
Peak Area (A-s): 0.069 Peak Height (A): 0.132
Background Pk Area (A-s): 0.355 Background Pk Height (A): 0.127
Blank Corrected Pk Area (A-s): 0.065
Concentration (ug/L): 17.5

Recovery is 78.7%

ID: 0104-01 SPK 50 Seq. No.: 00016 A/S Pos.: 5 Date: 02/02/93

Replicate 1 Time: 10:22
Peak Area (A-s): 0.112 Peak Height (A): 0.205
Background Pk Area (A-s): 0.115 Background Pk Height (A): 0.172
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 30.3

95.8% Rec.

D: 0104-01 SPK 50 Seq. No.: 00017 A/S Pos.: 5 Date: 02/02/93

Replicate 1 Time: 10:25
Peak Area (A-s): 0.163 Peak Height (A): 0.299
Background Pk Area (A-s): 0.166 Background Pk Height (A): 0.271
Blank Corrected Pk Area (A-s): 0.159
Concentration (ug/L): 48.1

Recovery is 88.6%

ID: 0104-02 Seq. No.: 00018 A/S Pos.: 6 Date: 02/02/93

Replicate 1 Time: 10:28
Peak Area (A-s): 0.004 Peak Height (A): 0.010
Background Pk Area (A-s): 0.429 Background Pk Height (A): 0.208
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.1

ID: 0104-02 Seq. No.: 00019 A/S Pos.: 6 Date: 02/02/93

Replicate 1 Time: 10:31
Peak Area (A-s): 0.044 Peak Height (A): 0.092
Background Pk Area (A-s): 0.470 Background Pk Height (A): 0.214
Blank Corrected Pk Area (A-s): 0.040
Concentration (ug/L): 10.4

Recovery is 52.8%

ID: 0104-03 Seq. No.: 00020 A/S Pos.: 7 Date: 02/02/93

Replicate 1 Time: 10:33
Peak Area (A-s): -0.000 Peak Height (A): 0.010
Background Pk Area (A-s): 0.333 Background Pk Height (A): 0.162
Blank Corrected Pk Area (A-s): -0.004
Concentration (ug/L): -1.0

ID: 0104-03 Seq. No.: 00021 A/S Pos.: 7 Date: 02/02/93

Replicate 1 Time: 10:36
Peak Area (A-s): 0.031 Peak Height (A): 0.057
Background Pk Area (A-s): 0.379 Background Pk Height (A): 0.170
Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 7.0

Recovery is 40.2%

ID: 0104-04 Seq. No.: 00022 A/S Pos.: 8 Date: 02/02/93

Replicate 1 Time: 10:39
Peak Area (A-s): 0.005 Peak Height (A): 0.013
Background Pk Area (A-s): 0.452 Background Pk Height (A): 0.210
Blank Corrected Pk Area (A-s): 0.001

Concentration (ug/L): 0.3

ID: 0104-04 Seq. No.: 00023 A/S Pos.: 8 Date: 02/02/93

Replicate 1 Time: 10:42
Peak Area (A-s): 0.040 Peak Height (A): 0.084
Background Pk Area (A-s): 0.470 Background Pk Height (A): 0.204
Blank Corrected Pk Area (A-s): 0.036
Concentration (ug/L): 9.3

Recovery is 45.2%

ID: 0104-05 Seq. No.: 00024 A/S Pos.: 9 Date: 02/02/93

Replicate 1 Time: 10:45
Peak Area (A-s): 0.001 Peak Height (A): 0.008
Background Pk Area (A-s): 0.376 Background Pk Height (A): 0.169
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.9

ID: 0104-05 Seq. No.: 00025 A/S Pos.: 9 Date: 02/02/93

Replicate 1 Time: 10:47
Peak Area (A-s): 0.065 Peak Height (A): 0.122
Background Pk Area (A-s): 0.384 Background Pk Height (A): 0.149
Blank Corrected Pk Area (A-s): 0.061
Concentration (ug/L): 16.3

Recovery is 85.8%

ID: EP-8 Seq. No.: 00026 A/S Pos.: 35 Date: 02/02/93

Replicate 1 Time: 10:50
Peak Area (A-s): 0.133 Peak Height (A): 0.238
Background Pk Area (A-s): 0.130 Background Pk Height (A): 0.208
Blank Corrected Pk Area (A-s): 0.129
Concentration (ug/L): 37.4

Check sample is within range 36 - 44

Replicate 1 Time: 10:53
Peak Area (A-s): 0.000 Peak Height (A): 0.009
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.013
Blank Corrected Pk Area (A-s): -0.004
Concentration (ug/L): -0.9

ID: Seq. No.: 00028 A/S Pos.: 10 Date: 02/02/93

Replicate 1 Time: 10:56
Peak Area (A-s): 0.072 Peak Height (A): 0.144
Background Pk Area (A-s): 0.070 Background Pk Height (A): 0.115
Blank Corrected Pk Area (A-s): 0.068
Concentration (ug/L): 18.4

Recovery is 96.4%

ID: IDL 1 Seq. No.: 00029 A/S Pos.: 11 Date: 02/02/93

Replicate 1 Time: 11:09
Peak Area (A-s): 0.033 Peak Height (A): 0.067
Background Pk Area (A-s): 0.046 Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 7.5

ID: IDL 2 Seq. No.: 00030 A/S Pos.: 12 Date: 02/02/93

Replicate 1 Time: 11:12
Peak Area (A-s): 0.033 Peak Height (A): 0.068
Background Pk Area (A-s): 0.049 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 7.4

ID: IDL 3 Seq. No.: 00031 A/S Pos.: 13 Date: 02/02/93

Replicate 1 Time: 11:15
Peak Area (A-s): 0.034 Peak Height (A): 0.068
Background Pk Area (A-s): 0.047 Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.030
Concentration (ug/L): 7.9

ID: IDL 4 Seq. No.: 00032 A/S Pos.: 14 Date: 02/02/93

Replicate 1 Time: 11:18
Peak Area (A-s): 0.035 Peak Height (A): 0.062
Background Pk Area (A-s): 0.041 Background Pk Height (A): 0.049
Blank Corrected Pk Area (A-s): 0.031
Concentration (ug/L): 7.9

ID: IDL 5 Seq. No.: 00033 A/S Pos.: 15 Date: 02/02/93

Replicate 1 Time: 11:21
Peak Area (A-s): 0.031 Peak Height (A): 0.064
Background Pk Area (A-s): 0.038 Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 6.9

ID: EP-8 Seq. No.: 00034 A/S Pos.: 35 Date: 02/02/93

Replicate 1 Time: 11:23
Peak Area (A-s): 0.129 Peak Height (A): 0.229
Background Pk Area (A-s): 0.131 Background Pk Height (A): 0.194
Blank Corrected Pk Area (A-s): 0.125
Concentration (ug/L): 35.9

Check sample is out of range 36 - 44

6

Replicate 1 — Time: 11:33
Peak Area (A-s): 0.034 — Peak Height (A): 0.061
Background Pk Area (A-s): 0.043 — Background Pk Height (A): 0.052
Blank Corrected Pk Area (A-s): 0.030
Concentration (ug/L): 7.6

ID: IDL 7 — Seq. No.: 00037 — A/S Pos.: 17 — Date: 02/02/93

Replicate 1 — Time: 11:36
Peak Area (A-s): 0.037 — Peak Height (A): 0.065
Background Pk Area (A-s): 0.044 — Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.033
Concentration (ug/L): 8.6

$\bar{X} = 7.41$

$SD = .527$

$IDL = 1.58$

SPEX

CERTIFICATE OF ANALYSIS

Catalog Number: SPIKE-1

Description: Spike Sample Standard

Lot Number: 4-257AS

Cu 5/1/93.

ICP CHECK:

Element	Labeled[ug/ml]	Measured[ug/ml]	Element	Labeled[ug/ml]	Measured[ug/ml]
Al	200	199.54	Fe	100	100.07
Sb	50	49.92	Pb	50	49.93
As	200	200.50	Mn	50	49.86
Ba	200	199.29	Ni	50	50.10
Be	5	4.99	Se	200	201.06
Cd	5	5.01	Ag	5	4.96
Cr	20	19.96	Tl	200	198.68
Co	50	50.09	V	50	49.79
Cu	25	25.32	Zn	50	49.96

Instrumental Analysis by Inductively Coupled Plasma Spectroscopy:

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

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

Spex Reference Multi: Lot #1-79STDBD, 3-150AS

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

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

N. Kocherlakota

MAY 93

Signed by: _____, Chemical Production Manager, Date: _____

SPEX

Printed on Recycled Paper

SPEX INDUSTRIES, INC. 3880 PARK AVE. EDISON, N.J. 08820 908 549 7144 FAX: 908 549 5125

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-B
HAS Sample #93-0104-02
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	15000	2	0.834	30.0	71900	36000000	*95
ANTIMONY	6010	1/28/93	-15.7	2	0.834	50.0	120000	<DL	*95
ARSENIC	7060	2/02/93	0.5	2	0.834	10.0	24000	<DL	*95
BARIUM	6010	1/28/93	113	2	0.834	10.0	24000	271000	*95
BERYLLIUM	6010	1/28/93	5.42	2	0.834	5.00	12000	13000	*95
CADMIUM	6010	1/28/93	0.0001	2	0.834	5.00	12000	<DL	*95
CALCIUM	6010	1/28/93	91200	2	0.834	20.0	48000	219000000	*95
CHROMIUM	6010	1/28/93	19.5	2	0.834	10.0	24000	46800	*95
COBALT	6010	1/28/93	-2.44	2	0.834	10.0	24000	<DL	*95
COPPER	6010	1/28/93	6.03	2	0.834	10.0	24000	<DL	*95
IRON	6010	1/28/93	11200	2	0.834	20.0	48000	26900000	*95
LEAD	7421	2/01/93	5	2	0.834	5.00	12000	12000	*95
MAGNESIUM	6010	1/28/93	22700	2	0.834	40.0	95900	54400000	*95
MANGANESE	6010	1/28/93	930	2	0.834	10.0	24000	2230000	*95
MERCURY	7471	1/27/93	0.064	0.1	0.192	0.20	104	<DL	*95
NICKEL	6010	1/28/93	-2.93	2	0.834	40.0	95900	<DL	*95
POTASSIUM	6010	1/28/93	1770	2	0.834	3000	7190000	<DL	*95
SELENIUM	7740	2/01/93	1.7	2	0.834	5.00	12000	<DL	*95
SILVER	6010	1/28/93	-1.14	2	0.834	10.0	24000	<DL	*95
SODIUM	6010	1/28/93	626	2	0.834	50.0	120000	1500000	*95
THALLIUM	7841	2/02/93	-0.1	0.2	0.834	10.0	2400	<DL	*95
VANADIUM	6010	1/28/93	3.12	2	0.834	20.0	48000	<DL	*95
ZINC	6010	1/28/93	13.1	2	0.834	20.0	48000	<DL	*95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

ALL SOIL/SLUDGE SAMPLE RESULTS ARE BASED UPON DRY WEIGHT.

THIS REPORT HAS BEEN AMENDED TO INCLUDE THE RESULTS OF THE ANALYSIS OF LEAD BY MSA.

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-C
HAS Sample #93-0104-03
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	6860	2	0.797	30.0	75300	17200000	*95
ANTIMONY	6010	1/28/93	-3.3	2	0.797	50.0	125000	<DL	*95
ARSENIC	7060	2/02/93	2.6	2	0.797	10.0	25100	<DL	*95
BARIUM	6010	1/28/93	56.2	2	0.797	10.0	25100	141000	*95
BERYLLIUM	6010	1/28/93	2.85	2	0.797	5.00	12500	<DL	*95
CADMIUM	6010	1/28/93	0.434	2	0.797	5.00	12500	<DL	*95
CALCIUM	6010	1/28/93	91500	2	0.797	20.0	50200	230000000	*95
CHROMIUM	6010	1/28/93	241	2	0.797	10.0	25100	605000	*95
COBALT	6010	1/28/93	8.43	2	0.797	10.0	25100	<DL	*95
COPPER	6010	1/28/93	32.5	2	0.797	10.0	25100	81600	*95
IRON	6010	1/28/93	56300	2	0.797	20.0	50200	141000000	*95
LEAD	7421	2/01/93	8	10	0.797	5.00	62700	100000	*95
MAGNESIUM	6010	1/28/93	9850	2	0.797	40.0	100000	24700000	*95
MANGANESE	6010	1/28/93	3890	2	0.797	10.0	25100	9760000	*95
MERCURY	7471	1/27/93	0.04	0.1	0.189	0.20	106	<DL	*95
NICKEL	6010	1/28/93	-27	2	0.797	40.0	100000	<DL	*95
POTASSIUM	6010	1/28/93	1640	2	0.797	3000	7530000	<DL	*95
SELENIUM	7740	2/01/93	0.4	2	0.797	5.00	12500	<DL	*95
SILVER	6010	1/28/93	-10.3	2	0.797	10.0	25100	<DL	*95
SODIUM	6010	1/28/93	191	2	0.797	50.0	125000	479000	*95
THALLIUM	7841	2/02/93	-1	0.2	0.797	10.0	2510	<DL	*95
VANADIUM	6010	1/28/93	81	2	0.797	20.0	50200	203000	*95
ZINC	6010	1/28/93	22.7	2	0.797	20.0	50200	57000	*95

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THIS REPORT HAS BEEN AMENDED TO INCLUDE THE RESULTS OF THE ANALYSIS OF LEAD BY MSA.

HUNTINGDON ANALYTICAL SERVICES

Sample ID: SS-D
HAS Sample #93-0104-04
Date Sampled: 1/19/93
Date Prepared: 1/26/93

ANALYTE	EPA METHOD	DATE ANALYZE	RESULT	FINAL VOL.(L)	(ml) (gm) DRY WT.	METHO DL	DET.LIMIT (ug/kg)	RESULT ug/kg	QC
ALUMINUM	6010	1/28/93	11600	2	0.827	30.0	72600	28100000	*95
ANTIMONY	6010	1/28/93	7.43	2	0.827	50.0	121000	<DL	*95
ARSENIC	7060	2/02/93	3.1	2	0.827	10.0	24200	<DL	*95
BARIUM	6010	1/28/93	90.8	2	0.827	10.0	24200	220000	*95
BERYLLIUM	6010	1/28/93	4.47	2	0.827	5.00	12100	<DL	*95
CADMIUM	6010	1/28/93	-0.434	2	0.827	5.00	12100	<DL	*95
CALCIUM	6010	1/28/93	76700	2	0.827	20.0	48400	185000000	*95
CHROMIUM	6010	1/28/93	54	2	0.827	10.0	24200	131000	*95
COBALT	6010	1/28/93	2.98	2	0.827	10.0	24200	<DL	*95
COPPER	6010	1/28/93	15.5	2	0.827	10.0	24200	37500	*95
IRON	6010	1/28/93	37200	2	0.827	20.0	48400	90000000	*95
LEAD	7421	2/01/93	58	0.2	0.827	5.00	1210	14000	*95
MAGNESIUM	6010	1/28/93	17500	2	0.827	40.0	96700	42300000	*95
MANGANESE	6010	1/28/93	1190	2	0.827	10.0	24200	2880000	*95
MERCURY	7471	1/27/93	0.064	0.1	0.198	0.20	101	<DL	*95
NICKEL	6010	1/28/93	-16.6	2	0.827	40.0	96700	<DL	*95
POTASSIUM	6010	1/28/93	1670	2	0.827	3000	7260000	<DL	*95
SELENIUM	7740	2/01/93	-0.1	2	0.827	5.00	12100	<DL	*95
SILVER	6010	1/28/93	-4.56	2	0.827	10.0	24200	<DL	*95
SODIUM	6010	1/28/93	329	2	0.827	50.0	121000	796000	*95
THALLIUM	7841	2/02/93	0.3	0.2	0.827	10.0	2420	<DL	*95
VANADIUM	6010	1/28/93	16.3	2	0.827	20.0	48400	<DL	*95
ZINC	6010	1/28/93	8.54	2	0.827	20.0	48400	<DL	*95

*THIS INDICATES A 95% CONFIDENCE LIMIT ACHIEVED WITH AN EPA QUALITY CONTROL SOLUTION ANALYZED ALONG WITH YOUR SAMPLE.

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THIS REPORT HAS BEEN AMENDED TO INCLUDE THE RESULTS OF THE ANALYSIS OF LEAD BY MSA.

Element File: PBMSA.GEL
Element: Pb Analyst: ECG
Print Data: Main+Suppl. Peak Storage: 1 Repl./Sample
Print:
Remarks:
Matrix modifier: 4% NH4PO4 .2% MgNO3 Integration time: 3 s
Lamp: Temp. program:
Energy: Current:
Char. Mass: 20 ppb:
60 ppb: 100 ppb:

INSTRUMENT: 4100 ZL Technique: HGA
Wavelength: 283.3 Peak Slit: 0.70 Low
Signal Type: Zeeman AA Signal Measurement: Peak Area
Read Time: 3.0 Read Delay: 0.0 BOC Time: 2
Sample Replicates: 1
Standard Replicates: 1 Spike Replicates: Same as Sample

CALIBRATION:

Solutions	ID	Conc	Location	Volume	Diluent Volume	Modifier #1	Modifier #2
Calib. Blank			37	20		5	
Standard 1	10 ppb	10.	36	2	18	5	
Standard 2	30 ppb	30.	36	6	14	5	
Standard 3	50 ppb	50.	36	10	10	5	
Samples				20		5	

Diluent Location: 0
Modifier #1 Location: 38 Modifier #2 Location:
Calibration Units: ug/L Sample Units: ug/L
Calibration Type: Method of Add.

Furnace Time/Temperature Program:

Step	Temp	Ramp	Hold	Gas Flow	Read	Gas Type
1	120	1	40	250		Norm
	140	1	45	250		Norm
	800	7	20	250		Norm
4	1500	0	3	0	*	Norm
5	2400	1	2	250		Norm

Injection Temp: 120 Pipette Speed: 100% Extraction System: On

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SEQUENCE:

Step	Action and Parameters
1	Pipet diluent + modifier 1 + spike + sample/std
2	Run HGA steps 1 to End

CHECKS:
Recalibration Type: Completely Recalibrate
Locations: None

Conc. Above Calibration Action: Dilute & Reanalyze After 1 Rep
Alternate Sample Volumes (uL): 10.5.4
Run Alternate Volume Blanks: No

If %RSD > 20.0 and Peak Area > .05 then Retry 1 times
Check %RSD on: Samples

Recovery Measurements:
10 uL of 40 ug/L Standard at Location 40 Gives 20.000 ug/L
Measure Recovery on Samples: All Samples
Add to QC Samples: No % Recovery Limits: 85 to 115

QC:

#	A/S Loc.	QC Sample ID	Conc. Limits Lower	Upper	After Calib	Periodic Check	At End	Count As Sample
1	35	ICV	45	55	X			
2	37	ICB	-10	10				
3	39	CRA	0	10				
4	35	CCV	45	55		X	X	
5	37	CCB	-10	10				

Run Periodic QC Samples: Every 10
Out of Limit Action: Stop Element and Continue With Next

Matrix Check Calculations:
% Difference for Duals: No Locations:
% Recovery for Spike: No Locations: Conc:

```
Element File: PBMSA.GEL        Element: Pb                    Wavelength: 283.3
Date: 03/25/93                 Time: 15:53                    Slit: 0.70 L
Data File: 32532.DAT           ID/Wt File: 0104.IDW           Lamp Current: 10
Technique: HGA                 Calib. Type: Method of Add.    Energy: 64
Remark 1: Matrix modifier:  4% NH4PO4 .2% MgNO3  Integration time: 3 s
Remark 2: Lamp:                        Temp. program:
Remark 3: Energy:                      Current:
Remark 4: Char. Mass:  20 ppb:
Remark 5: 60 ppb:        100 ppb:
```

Pb ID: Calib. Blank Seq. No.: 00001 A/S Pos.: 37 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 37
Replicate 1 (Peak Stored) Time: 15:56
Peak Area (A-s): 0.000 Peak Height (A): 0.005
Background Pk Area (A-s): 0.005 Background Pk Height (A): 0.006
Blank Corrected Pk Area (A-s): 0.000

Auto-zero performed.

Pb ID: ICV Seq. No.: 00002 A/S Pos.: 35 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 35
Replicate 1 (Peak Stored) Time: 15:59
Peak Area (A-s): -0.000 Peak Height (A): 0.003
Background Pk Area (A-s): 0.004 Background Pk Height (A): 0.004
Blank Corrected Pk Area (A-s): -0.001

Pb ID: Calib. Blank Seq. No.: 00003 A/S Pos.: 37 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 37
Replicate 1 (Peak Stored) Time: 16:02
Peak Area (A-s): 0.000 Peak Height (A): 0.004
Background Pk Area (A-s): 0.005 Background Pk Height (A): 0.006
Blank Corrected Pk Area (A-s): 0.000

Auto-zero performed.

Pb ID: ICV Seq. No.: 00004 A/S Pos.: 35 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 35
Replicate 1 (Peak Stored) Time: 16:05
Peak Area (A-s): 0.108 Peak Height (A): 0.207
Background Pk Area (A-s): 0.045 Background Pk Height (A): 0.049
Blank Corrected Pk Area (A-s): 0.107

Pb ID: 0104-01 Seq. No.: 00005 A/S Pos.: 1 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 1
Replicate 1 (Peak Stored) Time: 16:08
Peak Area (A-s): 0.927 Peak Height (A): 1.240
Background Pk Area (A-s): 0.291 Background Pk Height (A): 0.497
Blank Corrected Pk Area (A-s): 0.927

b· ID: 10 ppb Seq. No.: 00006 A/S Pos.: 1 Date: 03/25/93

L dispensed: 18 from 0. 5 from 38. 2 from 36. 20 from 1
ep icate 1 (Peak Stored) Time: 16:11
ea Area (A-s): 0.892 Peak Height (A): 1.167
ackground Pk Area (A-s): 0.303 Background Pk Height (A): 0.418
la k Corrected Pk Area (A-s): 0.892

'b ID: 30 ppb Seq. No.: 00007 A/S Pos.: 1 Date: 03/25/93

L ispensed: 14 from 0. 5 from 38. 6 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 16:15
Peak Area (A-s): 1.002 Peak Height (A): 1.200
Bac ground Pk Area (A-s): 0.348 Background Pk Height (A): 0.472
Bla k Corrected Pk Area (A-s): 1.002

Pb ID: 50 ppb Seq. No.: 00008 A/S Pos.: 1 Date: 03/25/93

L dispensed: 10 from 0. 5 from 38. 10 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 16:18
Pea Area (A-s): 0.858 Peak Height (A): 1.156
Background Pk Area (A-s): 0.309 Background Pk Height (A): 0.391
Blank Corrected Pk Area (A-s): 0.858

St ndard abs. & conc. values are not in the same order.
Pb ID: 0104-01 Seq. No.: 00005 A/S Pos.: 1 Date: 03/25/93

Co centration (ug/L): --------

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Pb ID: 0104-02 Seq. No.: 00009 A/S Pos.: 2 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 2
Re licate 1 (Peak Stored) Time: 16:22
Pe k Area (A-s): 0.162 Peak Height (A): 0.133
Background Pk Area (A-s): 0.084 Background Pk Height (A): 0.053
Bl nk Corrected Pk Area (A-s): 0.162
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El ment File: PBMSA.GEL
El ment: Pb Analyst: ECG
Print Data: Main+Suppl. Peak Storage: 1 Repl./Sample
Print:
Re arks:
Matrix modifier: 4% NH4P04 .2% MgNO3 Integration time: 3 s
Lamp: Temp. program:
E nergy: Current:
Char. Mass: 20 ppb:
60 ppb: 100 ppb:

IN STRUMENT: 4100 ZL Technique: HGA
Wavelength: 283.3 Peak Slit: 0.70 Low
Signal Type: Zeeman AA Signal Measurement: Peak Area
Re ad Time: 3.0 Read Delay: 0.0 BOC Time: 2
Sample Replicates: 1
Standard Replicates: 1 Spike Replicates: Same as Sample

CA LIBRATION:

Solutions	ID	Conc	Location	Volume	Diluent Volume	Modifier #1	Modifier #2
Ca ib. Blank			37	20		5	
Standard 1	25 ppb	25.	36	5	15	5	
Standard 2	50 ppb	50.	36	10	5	5	
Samples				20		5	

Diluent Location: 0
Modifier #1 Location: 38 Modifier #2 Location:
Calibration Units: ug/L Sample Units: ug/L
Calibration Type: Method of Add.

Furnace Time/Temperature Program:

Step	Temp	Ramp	Hold	Gas Flow	Read	Gas Type
1	120	1	40	250		Norm
2	140	1	45	250		Norm
3	800	7	20	250		Norm
4	1500	0	3	0	*	Norm
5	2400	1	2	250		Norm

Injection Temp: 120 Pipette Speed: 100% Extraction System: On

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SEQUENCE:

Step	Action and Parameters
1	Pipet diluent + modifier 1 + spike + sample/std
2	Run HGA steps 1 to End

CHECKS:
Recalibration Type: Completely Recalibrate
Locations: None

Conc. Above Calibration Action: Dilute & Reanalyze After 1 Reo
Alternate Sample Volumes (uL): 10.5.4
Run Alternate Volume Blanks: No

If %RSD > 20.0 and Peak Area > .05 then Retry 1 times
Check %RSD on: Samples

Recovery Measurements:
10 uL of 40 ug/L Standard at Location 40 Gives 20.000 ug/L
Measure Recovery on Samples: All Samples
Add to QC Samples: No % Recovery Limits: 85 to 115

QC:

#	A/S Loc.	QC Sample ID	Conc. Limits Lower	Upper	After Calib	Periodic Check	At End	Count As Sample
1	35	ICV	45	55	X			
2	37	ICB	-10	10				
3	39	CRA	0	10				
4	35	CCV	45	55		X	X	
5	37	CCB	-10	10				

Run Periodic QC Samples: Every 10
Out of Limit Action: Stop Element and Continue With Next

Matrix Check Calculations:
% Difference for Duols: No Locations:
% Recovery for Spike: No Locations: Conc:

Pb ID: Calib. Blank Seq. No.: 00010 A/S Pos.: 37 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 37
Replicate 1 (Peak Stored) Time: 16:30
Peak Area (A-s): 0.001 Peak Height (A): 0.004
Background Pk Area (A-s): 0.008 Background Pk Height (A): 0.006
Blank Corrected Pk Area (A-s): 0.000

Auto-zero performed.

Pb ID: ICV Seq. No.: 00011 A/S Pos.: 35 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 35
Replicate 1 (Peak Stored) Time: 16:33
Peak Area (A-s): 0.107 Peak Height (A): 0.165
Background Pk Area (A-s): 0.057 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.106

Pb ID: 0104-01 Seq. No.: 00012 A/S Pos.: 1 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 1
Replicate 1 (Peak Stored) Time: 16:36
Peak Area (A-s): 1.085 Peak Height (A): 0.954
Background Pk Area (A-s): 0.299 Background Pk Height (A): 0.255
Blank Corrected Pk Area (A-s): 1.085

Pb ID: 25 ppb Seq. No.: 00013 A/S Pos.: 1 Date: 03/25/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 16:39
Peak Area (A-s): 0.862 Peak Height (A): 1.220
Background Pk Area (A-s): 0.319 Background Pk Height (A): 0.483
Blank Corrected Pk Area (A-s): 0.861

Pb ID: 50 ppb Seq. No.: 00014 A/S Pos.: 1 Date: 03/25/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 16:42
Peak Area (A-s): 0.895 Peak Height (A): 1.193
Background Pk Area (A-s): 0.305 Background Pk Height (A): 0.408
Blank Corrected Pk Area (A-s): 0.895

Standard abs. & conc. values are not in the same order.
Pb ID: 0104-01 Seq. No.: 00012 A/S Pos.: 1 Date: 03/25/93

Concentration (ug/L): --------

Pb ID: 0104-02 Seq. No.: 00015 A/S Pos.: 2 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 2
Replicate 1 (Peak Stored) Time: 16:45
Peak Area (A-s): 0.084 Peak Height (A): 0.130
Background Pk Area (A-s): 0.072 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.083

Pb ID: 25 ppb Seq. No.: 00016 A/S Pos.: 2 Date: 03/25/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 2
Replicate 1 (Peak Stored) Time: 16:49
Peak Area (A-s): 0.138 Peak Height (A): 0.191
Background Pk Area (A-s): 0.106 Background Pk Height (A): 0.125
Blank Corrected Pk Area (A-s): 0.137

Pb ID: 50 ppb Seq. No.: 00017 A/S Pos.: 2 Date: 03/25/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 2
Replicate 1 (Peak Stored) Time: 16:52
Peak Area (A-s): 0.171 Peak Height (A): 0.293
Background Pk Area (A-s): 0.101 Background Pk Height (A): 0.146
Blank Corrected Pk Area (A-s): 0.170

The standard additions calibration curve may not be linear.
Pb ID: 0104-02 Seq. No.: 00015 A/S Pos.: 2 Date: 03/25/93

Concentration (ug/L): 50.

Correlation coefficient: 0.99031 Slope: 0.0017 Int: 0.087

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Pb ID: 0104-03 Seq. No.: 00018 A/S Pos.: 3 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 3
Replicate 1 (Peak Stored) Time: 16:55
Peak Area (A-s): 0.447 Peak Height (A): 0.556
Background Pk Area (A-s): 0.220 Background Pk Height (A): 0.124
Blank Corrected Pk Area (A-s): 0.446

Pb ID: 25 ppb Seq. No.: 00019 A/S Pos.: 3 Date: 03/25/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 3
Replicate 1 (Peak Stored) Time: 16:58
Peak Area (A-s): 0.477 Peak Height (A): 0.642
Background Pk Area (A-s): 0.189 Background Pk Height (A): 0.208
Blank Corrected Pk Area (A-s): 0.477

Pb ID: 50 ppb Seq. No.: 00020 A/S Pos.: 3 Date: 03/25/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 3
Replicate 1 (Peak Stored) Time: 17:01
Peak Area (A-s): 0.464 Peak Height (A): 0.636
Background Pk Area (A-s): 0.165 Background Pk Height (A): 0.248
Blank Corrected Pk Area (A-s): 0.464

Standard abs. & conc. values are not in the same order.
Pb ID: 0104-03 Seq. No.: 00018 A/S Pos.: 3 Date: 03/25/93

Concentration (ug/L): --------

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Pb ID: [redacted] Seq. No.: 00021 A/S Pos.: 4 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 4
Replicate 1 (Peak Stored) Time: 17:04
Peak Area (A-s): 0.118 Peak Height (A): 0.198

Background Pk Area (A-s): 0.106 Background Pk Height (A): 0.063
Blank Corrected Pk Area (A-s): 0.117

Pb ID: 25 ppb Seq. No.: 00022 A/S Pos.: 4 Date: 03/25/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 4
Replicate 1 (Peak Stored) Time: 17:07
Peak Area (A-s): 0.175 Peak Height (A): 0.238
Background Pk Area (A-s): 0.132 Background Pk Height (A): 0.130
Blank Corrected Pk Area (A-s): 0.174

Pb ID: 50 ppb Seq. No.: 00023 A/S Pos.: 4 Date: 03/25/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 4
Replicate 1 (Peak Stored) Time: 17:11
Peak Area (A-s): 0.221 Peak Height (A): 0.423
Background Pk Area (A-s): 0.136 Background Pk Height (A): 0.146
Blank Corrected Pk Area (A-s): 0.220

Pb ID: 0104-04 Seq. No.: 00021 A/S Pos.: 4 Date: 03/25/93

Concentration (ug/L): 58

Correlation coefficient: 0.99807 Slope: 0.0021 Int: 0.119

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Pb ID: 0104-05 Seq. No.: 00024 A/S Pos.: 5 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 5
Replicate 1 (Peak Stored) Time: 17:14
Peak Area (A-s): 0.908 Peak Height (A): 1.037
Background Pk Area (A-s): 0.291 Background Pk Height (A): 0.284
Blank Corrected Pk Area (A-s): 0.907

Pb ID: 25 ppb Seq. No.: 00025 A/S Pos.: 5 Date: 03/25/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 5
Replicate 1 (Peak Stored) Time: 17:17
Peak Area (A-s): 0.979 Peak Height (A): 1.286
Background Pk Area (A-s): 0.338 Background Pk Height (A): 0.515
Blank Corrected Pk Area (A-s): 0.978

Pb ID: 50 ppb Seq. No.: 00026 A/S Pos.: 5 Date: 03/25/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 5
Replicate 1 (Peak Stored) Time: 17:20
Peak Area (A-s): 0.922 Peak Height (A): 1.141
Background Pk Area (A-s): 0.330 Background Pk Height (A): 0.435
Blank Corrected Pk Area (A-s): 0.921

Standard abs. & conc. values are not in the same order.
Pb ID: 0104-05 Seq. No.: 00024 A/S Pos.: 5 Date: 03/25/93

Concentration (ug/L): --------

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Pb ID: CCV Seq. No.: 00027 A/S Pos.: 35 Date: 03/25/93

uL dispensed: 5 from 38. 20 from 35

Replicate 1 (Peak Stored)
Peak Area (A-s): 0.107
Background Pk Area (A-s): 0.126
Blank Corrected Pk Area (A-s): 0.107

Time: 17:23
Peak Height (A): 0.158
Background Pk Height (A): 0.069

Pb ID: Calib. Blank Seq. No.: 00028 A/S Pos.: 37 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 37

Pb ID: Calib. Blank Seq. No.: 00029 A/S Pos.: 37 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 37
Replicate 1 (Peak Stored) Time: 08:39
Peak Area (A-s): 0.001 Peak Height (A): 0.005
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.012
Blank Corrected Pk Area (A-s): 0.000

Auto-zero performed.

Pb ID: ICV Seq. No.: 00030 A/S Pos.: 35 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 35
Replicate 1 (Peak Stored) Time: 08:42
Peak Area (A-s): 0.000 Peak Height (A): 0.003
Background Pk Area (A-s): 0.009 Background Pk Height (A): 0.008
Blank Corrected Pk Area (A-s): -0.001

Pb ID: EP-8 TV 50 Seq. No.: 00031 A/S Pos.: 1 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 1
Replicate 1 (Peak Stored) Time: 08:45
Peak Area (A-s): 0.108 Peak Height (A): 0.161
Background Pk Area (A-s): 0.088 Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): 0.107

Pb ID: 25 ppb Seq. No.: 00032 A/S Pos.: 1 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 08:48
Peak Area (A-s): 0.143 Peak Height (A): 0.186
Background Pk Area (A-s): 0.123 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.142

Pb ID: 50 ppb Seq. No.: 00033 A/S Pos.: 1 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 08:51
Peak Area (A-s): 0.193 Peak Height (A): 0.260
Background Pk Area (A-s): 0.124 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.192

Pb ID: EP-8 TV 50 Seq. No.: 00031 A/S Pos.: 1 Date: 03/26/93

Concentration (ug/L): 62.

Correlation coefficient: 0.99565 Slope: 0.0017 Int: 0.105

Pb ID: [redacted] Seq. No.: 00034 A/S Pos.: 2 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 2

Replicate 1 (Peak Stored) Time: 08:54
Peak Area (A-s): 0.011 Peak Height (A): 0.021
Background Pk Area (A-s): 0.152 Background Pk Height (A): 0.097
Blank Corrected Pk Area (A-s): 0.011

Pb ID: 25 ppb Seq. No.: 00035 A/S Pos.: 2 Date: 03/26/93

ul dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 2
Replicate 1 (Peak Stored) Time: 08:58
Peak Area (A-s): 0.061 Peak Height (A): 0.079
Background Pk Area (A-s): 0.148 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.061

Pb ID: 50 ppb Seq. No.: 00036 A/S Pos.: 2 Date: 03/26/93

ul dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 2
Replicate 1 (Peak Stored) Time: 09:01
Peak Area (A-s): 0.112 Peak Height (A): 0.154
Background Pk Area (A-s): 0.153 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.112

Pb ID: 0104-02 1-10 Seq. No.: 00034 A/S Pos.: 2 Date: 03/26/93

Concentration (ug/L): [redacted] Corrected Conc (ug/L): 52.

Correlation coefficient: 0.99998 Slope: 0.0020 Int: 0.010

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Pb ID: 0104-02 1-50 Seq. No.: 00037 A/S Pos.: 3 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 3
Replicate 1 (Peak Stored) Time: 09:04
Peak Area (A-s): 0.005 Peak Height (A): 0.016
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): 0.004

Pb ID: 25 ppb Seq. No.: 00038 A/S Pos.: 3 Date: 03/26/93

ul dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 3
Replicate 1 (Peak Stored) Time: 09:07
Peak Area (A-s): 0.054 Peak Height (A): 0.076
Background Pk Area (A-s): 0.110 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.053

Pb ID: 50 ppb Seq. No.: 00039 A/S Pos.: 3 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 3
Replicate 1 (Peak Stored) Time: 09:10
Peak Area (A-s): 0.105 Peak Height (A): 0.157
Background Pk Area (A-s): 0.111 Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.104

Pb ID: 0104-02 1-50 Seq. No.: 00037 A/S Pos.: 3 Date: 03/26/93

Concentration (ug/L): 2. Corrected Conc (ug/L): 90.

Correlation coefficient: 0.99996 Slope: 0.0020 Int: 0.004
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Pb ID: 0104-03 1-10 Seq. No.: 00040 A/S Pos.: 4 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 4
Replicate 1 (Peak Stored) Time: 09:13
Peak Area (A-s): 0.075 Peak Height (A): 0.130
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.074

Pb ID: 25 ppb Seq. No.: 00041 A/S Pos.: 4 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 4
Replicate 1 (Peak Stored) Time: 09:17
Peak Area (A-s): 0.095 Peak Height (A): 0.201
Background Pk Area (A-s): 0.131 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.094

Pb ID: 50 ppb Seq. No.: 00042 A/S Pos.: 4 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 4
Replicate 1 (Peak Stored) Time: 09:20
Peak Area (A-s): 0.136 Peak Height (A): 0.278
Background Pk Area (A-s): 0.114 Background Pk Height (A): 0.093
Blank Corrected Pk Area (A-s): 0.135

Th standard additions calibration curve may not be linear.
Pb ID: 0104-03 1-10 Seq. No.: 00040 A/S Pos.: 4 Date: 03/26/93

Concentration (ug/L): 57. Corrected Conc (ug/L): 570.

Correlation coefficient: 0.97998 Slope: 0.0012 Int: 0.070

Pb ID: [redacted] Seq. No.: 00043 A/S Pos.: 5 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 5
Replicate 1 (Peak Stored) Time: 09:23
Peak Area (A-s): 0.013 Peak Height (A): 0.024
Background Pk Area (A-s): 0.047 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): 0.012

Pb ID: 25 ppb Seq. No.: 00044 A/S Pos.: 5 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 5
Replicate 1 (Peak Stored) Time: 09:26
Peak Area (A-s): 0.054 Peak Height (A): 0.097
Background Pk Area (A-s): 0.087 Background Pk Height (A): 0.054
Blank Corrected Pk Area (A-s): 0.053

Pb ID: 50 ppb Seq. No.: 00045 A/S Pos.: 5 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 5
Replicate 1 (Peak Stored) Time: 09:29
Peak Area (A-s): 0.094 Peak Height (A): 0.202
Background Pk Area (A-s): 0.098 Background Pk Height (A): 0.075
Blank Corrected Pk Area (A-s): 0.093

Pb ID: 0104-03 1-50 Seq. No.: 00043 A/S Pos.: 5 Date: 03/26/93

Concentration (ug/L): [redacted] Corrected Conc (ug/L): 378.

Correlation coefficient: 0.99999 Slope: 0.0016 Int: 0.012

Pb ID: CCV Seq. No.: 00046 A/S Pos.: 35 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 35
Replicate 1 (Peak Stored) Time: 09:32
Peak Area (A-s): 0.000 Peak Height (A): 0.002
Background Pk Area (A-s): 0.009 Background Pk Height (A): 0.007
Blank Corrected Pk Area (A-s): -0.001

Pb ID: EP-8 TV 50 Seq. No.: 00047 A/S Pos.: 1 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 1
Replicate 1 (Peak Stored) Time: 09:45
Peak Area (A-s): 0.087 Peak Height (A): 0.184
Background Pk Area (A-s): 0.067 Background Pk Height (A): 0.054
Blank Corrected Pk Area (A-s): 0.086

Pb ID: 25 oob Seq. No.: 00048 A/S Pos.: 1 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 09:48
Peak Area (A-s): 0.120 Peak Height (A): 0.264
Background Pk Area (A-s): 0.088 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.120

Pb ID: 50 oob Seq. No.: 00049 A/S Pos.: 1 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 1
Replicate 1 (Peak Stored) Time: 09:51
Peak Area (A-s): 0.162 Peak Height (A): 0.366
Background Pk Area (A-s): 0.091 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.161

Pb ID: EP-8 TV 50 Seq. No.: 00047 A/S Pos.: 1 Date: 03/26/93

Concentration (ug/L): 56.

Correlation coefficient: 0.99807 Slope: 0.0015 Int: 0.085

Pb ID: 0104-02 1-10 Seq. No.: 00050 A/S Pos.: 2 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 2
Replicate 1 (Peak Stored) Time: 09:54
Peak Area (A-s): 0.009 Peak Height (A): 0.016
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.008

Pb ID: 25 oob Seq. No.: 00051 A/S Pos.: 2 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 2
Replicate 1 (Peak Stored) Time: 09:57
Peak Area (A-s): 0.047 Peak Height (A): 0.096
Background Pk Area (A-s): 0.107 Background Pk Height (A): 0.069

3l nk Corrected Pk Area (A-s): 0.047

Pb ID: 50 ppb Seq. No.: 00052 A/S Pos.: 2 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 2
Replicate 1 (Peak Stored) Time: 10:01
Peak Area (A-s): 0.930 Peak Height (A): 0.935
Ba kground Pk Area (A-s): 0.277 Background Pk Height (A): 0.276
Bl ink Corrected Pk Area (A-s): 0.930

Th standard additions calibration curve may not be linear.
Pb ID: 0104-02 1-10 Seq. No.: 00050 A/S Pos.: 2 Date: 03/26/93

Concentration (ug/L): -7. Corrected Conc (ug/L): -72.

Correlation coefficient: 0.88405 Slope: 0.0184 Int: -0.133

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Pb ID: 0104-02 1-50 Seq. No.: 00053 A/S Pos.: 3 Date: 03/26/93

ul dispensed: 5 from 38. 20 from 3
Re plicate 1 (Peak Stored) Time: 10:04
Peak Area (A-s): 0.086 Peak Height (A): 0.078
Background Pk Area (A-s): 0.057 Background Pk Height (A): 0.035
B ank Corrected Pk Area (A-s): 0.086

Pb ID: 25 ppb Seq. No.: 00054 A/S Pos.: 3 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 3
Replicate 1 (Peak Stored) Time: 10:07
P ak Area (A-s): 0.055 Peak Height (A): 0.101
B ckground Pk Area (A-s): 0.082 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.054

P ID: 50 ppb Seq. No.: 00055 A/S Pos.: 3 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 3
R plicate 1 (Peak Stored) Time: 10:10
P ak Area (A-s): 0.082 Peak Height (A): 0.131
Background Pk Area (A-s): 0.080 Background Pk Height (A): 0.054
B ank Corrected Pk Area (A-s): 0.081

Standard abs. & conc. values are not in the same order.
Pb ID: 0104-02 1-50 Seq. No.: 00053 A/S Pos.: 3 Date: 03/26/93

Concentration (ug/L): --------

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Pb ID: 0104-03 1-10 Seq. No.: 00056 A/S Pos.: 4 Date: 03/26/93

u dispensed: 5 from 38. 20 from 4
Replicate 1 (Peak Stored) Time: 10:13
Peak Area (A-s): 0.056 Peak Height (A): 0.083
Background Pk Area (A-s): 0.078 Background Pk Height (A): 0.047
B ank Corrected Pk Area (A-s): 0.055

Pb ID: 25 ppb Seq. No.: 00057 A/S Pos.: 4 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 4

Replicate 1 (Peak Stored) Time: 10:16
Peak Area (A-s): 0.086 Peak Height (A): 0.166
Background Pk Area (A-s): 0.127 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.085

Pb ID: 50 ppb Seq. No.: 00058 A/S Pos.: 4 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 4
Replicate 1 (Peak Stored) Time: 10:20
Peak Area (A-s): 0.128 Peak Height (A): 0.224
Background Pk Area (A-s): 0.093 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.127

The standard additions calibration curve may not be linear.
Pb ID: 0104-03 1-10 Seq. No.: 00056 A/S Pos.: 4 Date: 03/26/93

Concentration (ug/L): 37. Corrected Conc (ug/L): 373.

Correlation coefficient: 0.99559 Slope: 0.0014 Int: 0.054

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Pb ID: 0104-03 1-50 Seq. No.: 00059 A/S Pos.: 5 Date: 03/26/93

uL dispensed: 5 from 38. 20 from 5
Replicate 1 (Peak Stored) Time: 10:22
Peak Area (A-s): 0.012 Peak Height (A): 0.025
Background Pk Area (A-s): 0.043 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.011

Pb ID: 25 ppb Seq. No.: 00060 A/S Pos.: 5 Date: 03/26/93

uL dispensed: 15 from 0. 5 from 38. 5 from 36. 20 from 5
Replicate 1 (Peak Stored) Time: 10:26
Peak Area (A-s): 0.047 Peak Height (A): 0.103
Background Pk Area (A-s): 0.073 Background Pk Height (A): 0.052
Blank Corrected Pk Area (A-s): 0.047

Pb ID: 50 ppb Seq. No.: 00061 A/S Pos.: 5 Date: 03/26/93

uL dispensed: 5 from 0. 5 from 38. 10 from 36. 20 from 5
Replicate 1 (Peak Stored) Time: 10:29
Peak Area (A-s): 0.079 Peak Height (A): 0.132
Background Pk Area (A-s): 0.062 Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.078

Pb ID: 0104-03 1-50 Seq. No.: 00059 A/S Pos.: 5 Date: 03/26/93

Concentration (ug/L): 9. Corrected Conc (ug/L): 429.

Correlation coefficient: 0.99923 Slope: 0.0013 Int: 0.012
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