RESULTS AND DISCUSSION

PROJECT D21102502 State of Washington

For those GFAA and CVAA analyses for which start and stop times were not recorded, 12:00:00 was arbitrarily chosen for the start time. A five minute increment between samples was also arbitrarily used.

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

ab Name: PACE_INCORPORATED_____ Contract: _____

ab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

OW No.: 3/90_

EPA Sample No.	Lab Sample ID
_H92077_____	__650189066___
_H92077D_____	__650189066S__
_H92077D_____	__650189066D__
_H92077S_____	__650189066S__
_H92077S_____	__650189066S__
_H92078_____	__650189074___

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:
____TWO_SOLID_SAMPLES_SUBMITTED_TO_PACE_ON_NOVEMBER_2,_1992_FOR_TARGET_____
____ANALYTE_LIST_METALS_ANALYSIS._____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

H92077

ab Name: PACE_INCORPORATED_____ Contract: _____

ab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

atrix (soil/water): SOIL_ Lab Sample ID: 650189066_

evel (low/med): _____ Date Received: 11/02/92

Solids: _94.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11000			P
7440-36-0	Antimony	6.1	U	N	P
7440-38-2	Arsenic	11.0		SN	F
7440-39-3	Barium	155			P
7440-41-7	Beryllium	0.60	B		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	19300			P
7440-47-3	Chromium	16.1			P
7440-48-4	Cobalt	11.3			P
7440-50-8	Copper	24.0			P
7439-89-6	Iron	20700			P
7439-92-1	Lead	16.1			F
7439-95-4	Magnesium	8870			P
7439-96-5	Manganese	589			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	13.3			P
7440-09-7	Potassium	2250			P
7782-49-2	Selenium	6.3	U	WN	F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	470	B		P
7440-28-0	Thallium	0.63	U		F
7440-62-2	Vanadium	33.2			P
7440-66-6	Zinc	57.8			P

olor Before: TAN_____ Clarity Before: _____ Texture: FINE__

olor After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:
TAL_METALS.__ARSENIC_ANALYZED_AT_A_5X_DILUTION,_SELENIUM_AT_A_10X.____

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

H92078

ab Name: PACE_INCORPORATED Contract: _____

ab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

atrix (soil/water): SOIL_ Lab Sample ID: 650189074_

evel (low/med): _____ Date Received: 11/02/92

Solids: _93.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6290			P
7440-36-0	Antimony	6.2	U	N	P
7440-38-2	Arsenic	7.2		SN	F
7440-39-3	Barium	101			P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	10800			P
7440-47-3	Chromium	9.8			P
7440-48-4	Cobalt	9.0	B		P
7440-50-8	Copper	14.0			P
7439-89-6	Iron	14100			P
7439-92-1	Lead	15.7			F
7439-95-4	Magnesium	4760			P
7439-96-5	Manganese	381			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	9.6			P
7440-09-7	Potassium	1810			P
7782-49-2	Selenium	6.4	U	WN	F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	77.1	B		P
7440-28-0	Thallium	1.6	B		F
7440-62-2	Vanadium	25.5			P
7440-66-6	Zinc	38.8			P

olor Before: TAN_____ Clarity Before: _____ Texture: FINE__

olor After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:
TAL_METALS.__SELENIUM_ANALYZED_AT_A_10X_DILUTION.

T.A. E 5946 > H92077
E 5945

T.A.# E 5947 > H92078

61410

pace INCORPORATED — THE ASSURANCE OF QUALITY

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: WASH. Dept. of Ecology
Address: 1601 W. ~~Clearwater~~ Clearwater #102
Kennewick, WA. 99336
Phone: (509) 546-2990

Report To: Billie Mauss
Bill To:
P.O. # / Billing Reference:
Project Name / No.:

Pace Client No.: 617018
Pace Project Manager: AT
Pace Project No.: D21102.502
*Requested Due Date: 12-21

Sampled By (PRINT): Steven L. Arbogast
Sampler Signature: [signature]
Date Sampled: 10-29-92

Remarks: R-3 + R-4

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	UNPRESERVED	H_2SO_4	HNO_3	VOA			VOA	Semi-VOA	TAL-Metals	PCB-Pest.	Herb.	TPH	Anions	REMARKS
1	H92077	2:53	Soil	189066	4	X						X	X	X	X	X	X	X	Military Cashe Siding (Cashe)
2	H92089		H2O	189082	1				X			X							TRIP BLANK
3	H92078	4:05	Soil	189094	4	X						X	X	X	X	X	X	X	Homestead
4																			
5																			
6																			
7																			
8																			

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT / DATE	RETURNED / DATE

Additional Comments

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
1-3	[signature] WDOE	[signature] WDOE	10-29-92	14:15
1-3	[signature]	[signature] WDOE	10-30-92	12:50
1-3	[signature] WDOE	[signature] PACE	[illegible]	[illegible]

SEE REVERSE SIDE FOR INSTRUCTIONS

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2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

ab Name: PACE_INCORPORATED_____ Contract: _____

ab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

nitial Calibration Source: SEE ATTACHED

ontinuing Calibration Source: SEE ATTACHED

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum	5000.0	4862.04	97.2	10000.0	9542.76	95.4	9814.79	98.1	P
Antimony	5000.0	4997.68	100.0	1000.0	991.32	99.1	1028.85	102.9	P
Arsenic	50.0	49.00	98.0	50.0	50.80	101.6	52.00	104.0	F
Barium	5000.0	4734.60	94.7	1000.0	952.67	95.3	977.29	97.7	P
Beryllium	5000.0	4701.25	94.0	1000.0	907.79	90.8	929.55	93.0	P
Cadmium	5000.0	4937.73	98.8	1000.0	979.66	98.0	982.85	98.3	P
Calcium	5000.0	5093.35	101.9	100000.0	100025.0	100.0	100158.9	100.2	P
Chromium	5000.0	4857.97	97.2	1000.0	939.09	93.9	953.52	95.4	P
Cobalt	5000.0	4900.31	98.0	1000.0	931.93	93.2	939.86	94.0	P
Copper	5000.0	4827.23	96.5	1000.0	933.94	93.4	957.20	95.7	P
Iron	5000.0	4817.28	96.3	10000.0	9100.13	91.0	9265.77	92.7	P
Lead	50.0	54.80	109.6	50.0	53.30	106.6	53.90	107.8	F
Magnesium	5000.0	4984.97	99.7	100000.0	98001.57	98.0	99325.31	99.3	P
Manganese	5000.0	4834.49	96.7	1000.0	938.11	93.8	946.65	94.7	P
Mercury	1.0	0.97	97.0	1.0	0.95	95.0	0.98	98.0	CV
Nickel	5000.0	4889.47	97.8	1000.0	912.87	91.3	936.10	93.6	P
Potassium	50000.0	46856.73	93.7	100000.0	98642.71	98.6	101488.5	101.5	P
Selenium	50.0	49.40	98.8	50.0	52.70	105.4	50.80	101.6	F
Silver	5000.0	4561.19	91.2	1000.0	1017.19	101.7	1023.80	102.4	P
Sodium	5000.0	4747.90	95.0	100000.0	98519.01	98.5	101887.8	101.9	P
Thallium	50.0	53.20	106.4	50.0	45.65	91.3	49.75	99.5	F
Vanadium	5000.0	5006.97	100.1	1000.0	993.86	99.4	1024.30	102.4	P
Zinc	5000.0	4696.73	93.9	1000.0	964.74	96.5	970.41	97.0	P

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

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2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Initial Calibration Source: SEE ATTACHED

Continuing Calibration Source: SEE ATTACHED

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum				10000.0	9728.68	97.3	9797.92	98.0	P
Antimony				1000.0	1018.71	101.9	1032.25	103.2	P
Arsenic				50.0	48.30	96.6	49.75	99.5	F
Barium				1000.0	981.51	98.2	990.09	99.0	P
Beryllium				1000.0	941.29	94.1	947.07	94.7	P
Cadmium				1000.0	986.69	98.7	981.49	98.1	P
Calcium				100000.0	102616.6	102.6	102271.1	102.3	P
Chromium				1000.0	973.62	97.4	975.94	97.6	P
Cobalt				1000.0	959.59	96.0	959.37	95.9	P
Copper				1000.0	947.33	94.7	957.49	95.7	P
Iron				10000.0	9452.81	94.5	9489.11	94.9	P
Lead	50.0	53.80	107.6	50.0	51.50	103.0	54.10	108.2	F
Magnesium				100000.0	97956.35	98.0	98213.30	98.2	P
Manganese				1000.0	964.76	96.5	966.47	96.6	P
Mercury				1.0	0.91	91.0	1.12	112.0	CV
Nickel				1000.0	941.69	94.2	944.58	94.5	P
Potassium				100000.0	96764.77	96.8	97668.13	97.7	P
Selenium				50.0	50.10	100.2	50.70	101.4	F
Silver				1000.0	1029.20	102.9	1029.52	103.0	P
Sodium				100000.0	98247.36	98.2	99258.15	99.3	P
Thallium	50.0	54.30	108.6	50.0	50.90	101.8	54.00	108.0	F
Vanadium				1000.0	1056.15	105.6	1057.47	105.7	P
Zinc				1000.0	983.12	98.3	983.67	98.4	P

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

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2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

ab Name: PACE_INCORPORATED_____ Contract: _____

ab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D2110250~~2~~

nitial Calibration Source: SEE ATTACHED

ontinuing Calibration Source: SEE ATTACHED

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic	50.0	50.00	100.0	50.0	49.10	98.2	49.85	99.7	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury				1.0	0.91	91.0	1.17	117.0	CV
Nickel									NR
Potassium									NR
Selenium	50.0	46.00	92.0	50.0	48.80	97.6	51.50	103.0	F
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR

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

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2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Initial Calibration Source: SEE ATTACHED

Continuing Calibration Source: SEE ATTACHED

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic	50.0	49.20	98.4	50.0	50.00	100.0	47.80	95.6	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury				1.0	1.03	103.0	0.97	97.0	CV
Nickel									NR
Potassium									NR
Selenium				50.0	51.50	103.0			F
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR

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

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Initial Calibration Source: SEE ATTACHED

Continuing Calibration Source: SEE ATTACHED

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic				50.0	47.00	94.0	47.80	95.6	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium	50.0	47.10	94.2	50.0	47.10	94.2	51.60	103.2	F
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR

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

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2B
CRDL STANDARD FOR AA AND ICP

Lab Name: PACE_INCORPORATED Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

AA CRDL Standard Source: SEE ATTACHED

ICP CRDL Standard Source: SEE ATTACHED

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial		Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony				120.0	112.96	94.1	119.76	99.8
Arsenic	10.0	9.85	98.5					
Barium								
Beryllium				10.0	9.27	92.7	9.97	99.7
Cadmium				10.0	12.17	121.7	11.52	115.2
Calcium								
Chromium				20.0	20.00	100.0	22.83	114.2
Cobalt				100.0	93.57	93.6	97.14	97.1
Copper				50.0	50.57	101.1	51.00	102.0
Iron								
Lead	3.0	4.30	143.3					
Magnesium								
Manganese				30.0	31.77	105.9	32.01	106.7
Mercury	0.2	0.12	60.0					
Nickel				80.0	84.10	105.1	81.19	101.5
Potassium								
Selenium	5.0	3.20	64.0					
Silver				20.0	22.28	111.4	21.68	108.4
Sodium								
Thallium	10.0	9.75	97.5					
Vanadium				100.0	107.49	107.5	108.14	108.1
Zinc				40.0	41.34	103.4	43.77	109.4

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2B
CRDL STANDARD FOR AA AND ICP

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

AA CRDL Standard Source: SEE ATTACHED

ICP CRDL Standard Source: _____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial		Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic	10.0	7.60	76.0					
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	3.0	1.50	50.0					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	5.0	5.00	100.0					
Silver								
Sodium								
Thallium	10.0	11.30	113.0					
Vanadium								
Zinc								

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2B
CRDL STANDARD FOR AA AND ICP

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

AA CRDL Standard Source: SEE ATTACHED

ICP CRDL Standard Source: _____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial		Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic	10.0	9.50	95.0					
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	5.0	1.80	36.0					
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

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3
BLANKS

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D2110250Q

Preparation Blank Matrix (soil/water): SOIL_

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	29.0	U	29.0	U	34.5	B	30.5	B	5.800	U	P
Antimony	29.0	U	29.0	U	29.0	U	29.0	U	5.800	U	P
Arsenic	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	F
Barium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	1.000	U	P
Calcium	11.0	U	11.0	U	11.0	U	11.0	U	2.200	U	P
Chromium	7.0	U	7.0	U	7.0	U	7.0	U	1.400	U	P
Cobalt	7.0	U	7.0	U	7.0	U	7.0	U	1.400	U	P
Copper	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Iron	6.0	U	6.0	U	6.0	U	6.0	U	1.200	U	P
Lead	2.0	U	2.0	U	2.6	B			0.400	U	F
Magnesium	41.0	U	41.0	U	41.0	U	41.0	U	8.200	U	P
Manganese	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	16.0	U	16.0	U	16.0	U	16.0	U	3.200	U	P
Potassium	536.0	U	536.0	U	536.0	U	536.0	U	107.200	U	P
Selenium	3.0	U	-3.7	B	3.0	U	3.0	U	0.600	U	F
Silver	5.0	U	5.0	U	5.0	U	5.0	U	1.000	U	P
Sodium	25.0	U	-32.4	B	-36.3	B	-69.8	B	-16.935	B	P
Thallium	3.0	U	3.0	U	3.0	U			0.600	U	F
Vanadium	6.0	U	6.0	U	6.0	U	6.0	U	1.200	U	P
Zinc	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P

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3
BLANKS

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			34.9	B							P
Antimony			29.0	U							P
Arsenic			3.0	U							F
Barium			1.0	U							P
Beryllium			1.0	U							P
Cadmium			5.0	U							P
Calcium			11.0	U							P
Chromium			7.0	U							P
Cobalt			7.0	U							P
Copper			3.0	U							P
Iron			6.0	U							P
Lead	2.0	U	2.0	U	2.0	U					F
Magnesium			41.0	U							P
Manganese			2.0	U							P
Mercury			0.2	U	0.2	U	0.2	U			CV
Nickel			16.0	U							P
Potassium			536.0	U							P
Selenium			-4.8	B							F
Silver			5.0	U							P
Sodium			-63.9	B							P
Thallium	3.0	U	3.0	U	3.0	U					F
Vanadium			6.0	U							P
Zinc			3.0	U							P

U.S. EPA - CLP

3
BLANKS

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	3.0	U	3.0	U	3.0	U					F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury			0.2	U	0.2	U					CV
Nickel											NR
Potassium											NR
Selenium	3.0	U	3.0	U	-3.1	B	3.0	U			F
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR

U.S. EPA - CLP

3
BLANKS

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D211025O2

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	3.0	U	3.0	U	3.0	U	3.0	U			F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium	3.0	U	3.0	U	3.0	U					F
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR

U.S. EPA - CLP

3
BLANKS

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic			3.0	U							F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No: _____ SDG No.: D21102502

ICP ID Number: TJA 61E_____ ICS Source: SEE ATTACHED

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum	482300	482300	519870	494821.2	102.6	518106	500951.7	103.9
Antimony								
Arsenic								
Barium		487		497.2	102.1		508.9	104.5
Beryllium		447		460.1	102.9		473.8	106.0
Cadmium		905		966.4	106.8		967.6	106.9
Calcium	482100	482100	516769	490361.0	101.7	514874	497410.7	103.2
Chromium		448		469.6	104.8		482.8	107.8
Cobalt		424		447.3	105.5		456.7	107.7
Copper		465		492.4	105.9		497.5	107.0
Iron	169000	169000	182682	174177.6	103.1	183667	178686.0	105.7
Lead								
Magnesium	492400	492400	530384	503836.8	102.3	518989	499638.0	101.5
Manganese		436		439.4	100.8		450.3	103.3
Mercury								
Nickel		851		860.7	101.1		884.6	103.9
Potassium								
Selenium								
Silver		895		912.8	102.0		917.8	102.5
Sodium								
Thallium								
Vanadium		452		478.2	105.8		508.0	112.4
Zinc		913		939.5	102.9		947.7	103.8

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

H92077S

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Matrix (soil/water): SOIL__ Level (low/med): _____

% Solids for Sample: _94.8

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	62.4989		6.1181	U	105.49	59.2	N	P
Arsenic	75-125	16.2447		10.9705		8.44	62.5	N	F
Barium	75-125	555.3306		155.1863		421.94	94.8		P
Beryllium	75-125	10.3346		0.6036	B	10.55	92.2		P
Cadmium	75-125	11.2707		1.0549	U	10.55	106.8		P
Calcium									NR
Chromium	75-125	62.5916		16.1222		42.19	110.1		P
Cobalt	75-125	115.3285		11.3316		105.49	98.6		P
Copper	75-125	76.7093		23.9930		52.74	100.0		P
Iron									NR
Lead	75-125	20.7595		16.1392		4.22	109.5		F
Magnesium									NR
Manganese		644.2700		588.7481		105.49	52.6		P
Mercury	75-125	0.6080		0.1034	U	0.53	114.7		CV
Nickel	75-125	120.9338		13.3059		105.49	102.0		P
Potassium									NR
Selenium	75-125	0.6329	U	6.3291	U	2.11	0.0	N	F
Silver	75-125	10.3540		1.0549	U	10.55	98.1		P
Sodium									NR
Thallium	75-125	12.2996		0.6329	U	10.55	116.6		F
Vanadium	75-125	148.8947		33.1665		105.49	109.7		P
Zinc	75-125	168.3441		57.7574		105.49	104.8		P

Comments:
TAL_METALS.__ARSENIC_ANALYZED_AT_A_5X_DILUTION.

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

H92077S

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Matrix (soil/water): SOIL__ Level (low/med): _____

% Solids for Sample: _94.8

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	65.3306		6.1181	U	105.49	61.9	N	P
Arsenic	75-125	17.2468		10.9705		8.44	74.4	N	F
Barium	75-125	575.4462		155.1863		421.94	99.6		P
Beryllium	75-125	10.3954		0.6036	B	10.55	92.8		P
Cadmium	75-125	12.7800		1.0549	U	10.55	121.1		P
Calcium									NR
Chromium	75-125	61.9392		16.1222		42.19	108.6		P
Cobalt	75-125	114.8827		11.3316		105.49	98.2		P
Copper	75-125	78.6671		23.9930		52.74	103.7		P
Iron									NR
Lead	75-125	21.0127		16.1392		4.22	115.5		F
Magnesium									NR
Manganese		752.4696		588.7481		105.49	155.2		P
Mercury	75-125	0.5633		0.1034	U	0.54	104.3		CV
Nickel	75-125	118.9236		13.3059		105.49	100.1		P
Potassium									NR
Selenium	75-125	0.6329	U	6.3291	U	2.11	0.0	N	F
Silver	75-125	10.3970		1.0549	U	10.55	98.5		P
Sodium									NR
Thallium	75-125	12.2152		0.6329	U	10.55	115.8		F
Vanadium	75-125	148.5726		33.1665		105.49	109.4		P
Zinc	75-125	166.4743		57.7574		105.49	103.1		P

Comments:
TAL_METALS.__ARSENIC_ANALYZED_AT_A_5X_DILUTION.

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

H92077A

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Matrix (soil/water) : SOIL__ Level (low/med): _____

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									NR
Antimony		497.88		29.00	U	500.0	99.6		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR

Comments:
TAL_METALS.

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

H92077D

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D2110250 2

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

% Solids for Sample: _94.8 % Solids for Duplicate: __94.8

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		10954.1171		10427.8806		4.9		P
Antimony		6.1181	U	6.1181	U			P
Arsenic		10.9705		10.8122		1.5		F
Barium	42.2	155.1863		144.4146		7.2		P
Beryllium		0.6036	B	0.5823	B	3.6		P
Cadmium		1.0549	U	1.0549	U			P
Calcium		19290.6694		19300.7873		0.1		P
Chromium		16.1222		15.5791		3.4		P
Cobalt	10.5	11.3316		11.1589		1.5		P
Copper	5.3	23.9930		22.3203		7.2		P
Iron		20686.9643		19325.1665		6.8		P
Lead		16.1392		17.2785		6.8		F
Magnesium		8868.7306		8537.0074		3.8		P
Manganese		588.7481		519.1665		12.6		P
Mercury		0.1034	U	0.1044	U			CV
Nickel	8.4	13.3059		15.5850		15.8		P
Potassium	1054.9	2254.9437		2205.6544		2.2		P
Selenium		6.3291	U	6.3291	U			F
Silver		1.0549	U	1.0549	U			P
Sodium		470.3443	B	456.3582	B	3.0		P
Thallium		0.6329	U	0.6329	U			F
Vanadium	10.5	33.1665		30.9998		6.8		P
Zinc		57.7574		54.5236		5.8		P

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6
DUPLICATES

EPA SAMPLE NO.

H92077D

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

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

% Solids for Sample: _94.8 % Solids for Duplicate: __94.8

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		19842.9671		19229.1049		3.1		P
Antimony	12.7	62.4989		65.3306		4.4		P
Arsenic		16.2447		17.2468		6.0		F
Barium		555.3306		575.4462		3.6		P
Beryllium		10.3346		10.3954		0.6		P
Cadmium		11.2707		12.7800		12.6		P
Calcium		21933.0559		21521.7192		1.9		P
Chromium		62.5916		61.9392		1.0		P
Cobalt		115.3285		114.8827		0.4		P
Copper		76.7093		78.6671		2.5		P
Iron		24757.1654		24286.9527		1.9		P
Lead		20.7595		21.0127		1.2		F
Magnesium		12239.9150		12271.9211		0.3		P
Manganese		644.2700		752.4696		15.5		P
Mercury		0.6080		0.5633		7.6		CV
Nickel		120.9338		118.9236		1.7		P
Potassium	1054.9	4601.5810		4732.5496		2.8		P
Selenium		0.6329	U	0.6329	U			F
Silver	2.1	10.3540		10.3970		0.4		P
Sodium	1054.9	2661.1669		2748.5124		3.2		P
Thallium		12.2996		12.2152		0.7		F
Vanadium		148.8947		148.5726		0.2		P
Zinc		168.3441		166.4743		1.1		P

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7
LABORATORY CONTROL SAMPLE

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

Solid LCS Source: SEE ATTACHED

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				4010.0	2621.5		1600.0	5610.0	65.4
Antimony				25.0	15.0		4.1	107.0	60.0
Arsenic				144.0	118.8		88.0	200.0	82.5
Barium				206.0	200.3		158.0	275.0	97.2
Beryllium				85.7	87.2		54.0	120.0	101.8
Cadmium				129.0	139.5		65.0	193.0	108.1
Calcium				2200.0	2081.4		1300.0	3100.0	94.6
Chromium				100.0	99.3		41.0	158.0	99.3
Cobalt				90.2	99.8		41.0	140.0	110.6
Copper				101.0	97.4		58.0	155.0	96.4
Iron				7990.0	3931.6		3230.0	12700.0	49.2
Lead				118.0	148.4		45.0	191.0	125.8
Magnesium				1980.0	1638.9		765.0	3200.0	82.8
Manganese				260.0	242.5		187.0	348.0	93.3
Mercury				4.9	4.9		2.9	9.2	100.0
Nickel				136.0	145.6		71.0	201.0	107.1
Potassium				2250.0	1882.7		1240.0	2930.0	83.7
Selenium				165.0	156.4		82.0	247.0	94.8
Silver				92.1	83.2		46.0	138.0	90.3
Sodium				1130.0	1045.1		663.0	1600.0	92.5
Thallium				59.4	59.2		30.0	89.0	99.7
Vanadium				74.0	64.3		52.0	110.0	86.9
Zinc				160.0	144.4		55.0	265.0	90.2

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8
STANDARD ADDITION RESULTS

Lab Name: PACE_INCORPORATED_____ Contract:_____

Lab Code: _____ Case No.: WASHIN SAS No.:_____ SDG No.:D21102502

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q
H92077	AS	0.044	15.00	0.091	30.00	0.137	45.00	0.194	10.4	0.9988	
H92078	AS	0.097	15.00	0.138	30.00	0.178	45.00	0.217	33.8	1.0000	

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9
ICP SERIAL DILUTION

EPA SAMPLE NO.

H92078L

Lab Name: PACE_INCORPORATED Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D211025002

Matrix (soil/water): SOIL Level (low/med): _____

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	29347.30		28830.88		1.8		P
Antimony	29.00	U	145.00	U			P
Arsenic							
Barium	469.50		460.85	B	1.8		P
Beryllium	1.60	B	5.00	U	100.0		P
Cadmium	5.00	U	25.00	U			P
Calcium	50306.20		49890.28		0.8		P
Chromium	45.76		58.82		28.5		P
Cobalt	41.97	B	50.79	B	21.0		P
Copper	65.38		66.52	B	1.7		P
Iron	65587.42		65807.05		0.3		P
Lead							
Magnesium	22190.25		21910.52	B	1.3		P
Manganese	1778.60		1772.03		0.4		P
Mercury							
Nickel	44.82		83.47	B	86.2		P
Potassium	8438.90		8006.50	B	5.1		P
Selenium							
Silver	5.00	U	25.00	U			P
Sodium	359.60	B	125.00	U	100.0		P
Thallium							
Vanadium	118.95		118.20	B	0.6		P
Zinc	180.86		187.02		3.4		P

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10
Instrument Detection Limits (Quarterly)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D211025O2

ICP ID Number: TJA_61E_____ Date: 12/01/92

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	29.0	P
Antimony	206.84		60	29.0	P
Arsenic			10		NR
Barium	493.41		200	1.0	P
Beryllium	313.04		5	1.0	P
Cadmium	228.80		5	5.0	P
Calcium	317.93		5000	11.0	P
Chromium	267.72		10	7.0	P
Cobalt	228.61		50	7.0	P
Copper	324.75		25	3.0	P
Iron	259.94		100	6.0	P
Lead			3		NR
Magnesium	279.08		5000	41.0	P
Manganese	257.61		15	2.0	P
Mercury			0.2		NR
Nickel	231.60		40	16.0	P
Potassium	766.49		5000	536.0	P
Selenium			5		NR
Silver	328.07		10	5.0	P
Sodium	589.59		5000	25.0	P
Thallium			10		NR
Vanadium	292.40		50	6.0	P
Zinc	213.86		20	3.0	P

Comments:

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10
Instrument Detection Limits (Quarterly)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

ICP ID Number: _____ Date: 10/01/92

Flame AA ID Number : _____

Furnace AA ID Number : PE_603_____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	193.70	BD	10	3.0	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium	276.80	BD	10	3.0	F
Vanadium			50		NR
Zinc			20		NR

Comments:

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10
Instrument Detection Limits (Quarterly)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

ICP ID Number: _____ Date: 10/01/92

Flame AA ID Number : _____

Furnace AA ID Number : VARIAN_1475_

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead	217.00	BD	3	2.0	F
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.00	BD	5	3.0	F
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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10
Instrument Detection Limits (Quarterly)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D211025202

ICP ID Number: _____ Date: 10/01/92

Flame AA ID Number : PE_2280_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.60		0.2		CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

ICP ID Number: TJA 61E_____ Date: 09/01/92

Analyte	Wave-length (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	AG_
Aluminum_	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic__	193.70	-0.0011200	0.0000000	-0.0035200	0.0000000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium__	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt___	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper___	324.75	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron_____	259.94	0.0000000	0.0000000	0.0000000	0.0003350	0.0000000
Lead_____	220.35	-0.0026600	0.0000000	0.0001530	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0002490	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	-0.0000700	0.0000180	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000	0.0000350	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.03	0.0001350	0.0000000	-0.0006200	0.0000000	0.0000000
Silver___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium___	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0013200
Thallium_						
Vanadium_	292.40	0.0000000	0.0000000	0.0001470	0.0000000	0.0000000
Zinc_____	213.86	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000

Comments:

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11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

ICP ID Number: TJA 61E_____ Date: 09/01/92

Analyte	Wave-length (nm)	Interelement Correction Factors for : AS_	B__	BA_	BE_	CO_
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	-0.0144000
Antimony	206.84	0.0000000	-0.0002010	0.0000000	0.0000000	-0.0008900
Arsenic	193.70	0.0000000	0.0000000	0.0000000	0.0000000	-0.0030100
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0019700	0.0000000	0.0000000	0.0017900	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.61	0.0000000	0.0000000	0.0006120	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0008240
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	-0.0016600
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	-0.0015100
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0011960
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

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11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

ICP ID Number: TJA 61E_____ Date: 09/01/92

Analyte	Wave-length (nm)	Interelement Correction Factors for : CR_	CU_	MN_	MO_	NI_
Aluminum_	308.22	0.0000000	0.0000000	0.0007020	0.0099200	0.0000000
Antimony_	206.84	0.0115000	0.0000000	0.0000000	0.0034600	-0.0013000
Arsenic__	193.70	0.0012500	0.0000000	0.0000000	0.0011100	0.0007520
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	-0.0000280	0.0000000
Cadmium__	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium__	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	-0.0002870	0.0000000
Cobalt___	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0003200
Copper___	324.75	0.0000000	0.0000000	0.0000000	0.0003610	0.0000000
Iron_____	259.94	0.0000000	0.0000000	-0.0003100	0.0000000	0.0000000
Lead_____	220.35	-0.0034100	0.0000000	0.0000000	0.0016930	-0.0004100
Magnesium	279.08	-0.0011400	0.0000000	-0.0076500	-0.0176000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	-0.0002400	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.03	0.0000000	0.0000000	-0.0003700	0.0000000	0.0000000
Silver___	328.07	0.0000000	0.0000000	0.0001760	0.0000000	0.0000000
Sodium___	589.59	0.0000000	0.0000000	0.0000000	0.0019520	0.0000000
Thallium_						
Vanadium_	292.40	0.0001260	0.0000000	-0.0002000	-0.0090050	0.0000000
Zinc_____	213.86	0.0000000	0.0034200	0.0000000	-0.0001500	0.0034600

Comments:

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11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

ICP ID Number: TJA 61E_____ Date: 09/01/92

Analyte	Wave-length (nm)	Interelement Correction Factors for : SI_	SN_	SR_	TI_	V__
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	-0.0190900
Antimony	206.84	0.0000880	-0.0021600	-0.0003300	0.0019320	-0.0086700
Arsenic	193.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0135000
Barium	493.41	0.0000000	0.0000000	0.0002120	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0039590
Cadmium	228.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0016600	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0002700
Cobalt	228.61	0.0000000	0.0000000	0.0000000	0.0015400	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001500
Iron	259.94	0.0000000	0.0000000	0.0000000	-0.0023200	0.0003230
Lead	220.35	-0.0002500	0.0000000	0.0000000	0.0004400	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	-0.0036700	-0.0003750
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001470
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000980	0.0000000	0.0000000	0.0000000	0.0008950
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	-0.0069300
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0043100
Thallium						
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0004840	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0000000	0.0001020	0.0000000

Comments:

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12
ICP LINEAR RANGES (QUARTERLY)

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.: D21102502

ICP ID Number: TJA 61E_____ Date: 12/01/92

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	5.00	600000.0	P
Antimony	5.00	100000.0	P
Arsenic	5.00	100000.0	P
Barium	5.00	100000.0	P
Beryllium	5.00	100000.0	P
Cadmium	5.00	100000.0	P
Calcium	5.00	600000.0	P
Chromium	5.00	100000.0	P
Cobalt	5.00	100000.0	P
Copper	5.00	100000.0	P
Iron	5.00	600000.0	P
Lead	5.00	100000.0	P
Magnesium	5.00	800000.0	P
Manganese	5.00	100000.0	P
Mercury			NR
Nickel	5.00	100000.0	P
Potassium	5.00	800000.0	P
Selenium	5.00	100000.0	P
Silver	5.00	100000.0	P
Sodium	5.00	800000.0	P
Thallium			NR
Vanadium	5.00	100000.0	P
Zinc	5.00	100000.0	P

Comments:

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13
PREPARATION LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.:_WASHIN SAS No.: _____ SDG No.:D211025~~0~~2

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
H92077	12/17/92	1.00	200
H92077D	12/17/92	1.00	200
H92077D	12/17/92	1.00	200
H92077S	12/17/92	1.00	200
H92077S	12/17/92	1.00	200
H92078	12/17/92	1.00	200
LCS	12/17/92	1.00	200
PREP_BK	12/17/92	1.00	200

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PREPARATION LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.:_WASHIN SAS No.: _____ SDG No.:D21102502

Method: F_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
H92077___	_12/17/92__	__1.00__	___200__
H92077D__	_12/17/92__	__1.00__	___200__
H92077D__	_12/17/92__	__1.00__	___200__
H92077S__	_12/17/92__	__1.00__	___200__
H92077S__	_12/17/92__	__1.00__	___200__
H92078___	_12/17/92__	__1.00__	___200__
LCS_____	_12/17/92__	__1.00__	___200__
PREP_BK__	_12/17/92__	__1.00__	___200__

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PREPARATION LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.:_WASHIN SAS No.: _____ SDG No.:D211025O2

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
H92077___	_12/31/92__	__0.20__	____10__
H92077D__	_12/31/92__	__0.20__	____10__
H92077D__	_12/31/92__	__0.20__	____10__
H92077S__	_12/31/92__	__0.20__	____10__
H92077S__	_12/31/92__	__0.20__	____10__
H92078___	_12/31/92__	__0.20__	____10__
LCS_____	_12/31/92__	__0.08__	____10__
PREP_BK__	_12/31/92__	__0.20__	____10__

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14
ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D2110252

Instrument ID Number: TJA 61E_____ Method: P_

Start Date: 12/18/92 End Date: 12/18/92

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
ICV	1.00	0956		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ZZZZZZ	1.00	0957																									
ICB	1.00	1000		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CRI	1.00	1002			X			X	X		X	X	X				X		X			X			X	X	
ICSA	1.00	1004		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSAB	1.00	1006		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV	1.00	1008		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1010		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
LCS	1.00	1012		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
PREP BK	1.00	1015		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
H92077	1.00	1020		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
H92077	1.00	1022		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
H92077	1.00	1024		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
H92077	1.00	1029		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
H92077	1.00	1033		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
H92078	1.00	1036		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
H92078	1.00	1039		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ZZZZZZ	1.00	1042																									
CCV	1.00	1044		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1046		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ZZZZZZ	1.00	1048																									
ZZZZZZ	1.00	1050																									
ZZZZZZ	1.00	1052																									
ZZZZZZ	1.00	1055																									
ZZZZZZ	1.00	1058																									
ZZZZZZ	1.00	1107																									
ZZZZZZ	1.00	1110																									
ZZZZZZ	1.00	1113																									
CRI	1.00	1116			X			X	X		X	X	X				X		X			X			X	X	
ICSA	1.00	1118		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV	1.00	1121		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1122		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: TJA 61E_____ Method: P_

Start Date: 12/18/92 End Date: 12/18/92

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
ICSAB	1.00	1124		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
CCV	1.00	1126		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
CCB	1.00	1129		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: PE 603_____ Method: F_

Start Date: 12/30/92 End Date: 12/30/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	1200				X																				
S20	1.00	1205				X																				
S50	1.00	1210				X																				
S100	1.00	1215				X																				
ICV	1.00	1225				X																				
ICB	1.00	1230				X																				
CRA	1.00	1235				X																				
CCV	1.00	1240				X																				
CCB	1.00	1245				X																				
PBS	1.00	1250				X																				
PBSA	1.00	1255	89.0			X																				
LCS	10.00	1300				X																				
LCSSA	10.00	1305	88.8			X																				
ZZZZZZ	1.00	1310																								
ZZZZZZA	1.00	1315	53.0																							
ZZZZZZ	1.00	1320																								
ZZZZZZA	1.00	1325	38.8																							
CCV	1.00	1330				X																				
CCB	1.00	1335				X																				
ZZZZZZ	1.00	1340																								
ZZZZZZ	1.00	1345																								
ZZZZZZ	1.00	1350																								
ZZZZZZA	1.00	1355	48.5																							
ZZZZZZ	1.00	1400																								
ZZZZZZA	1.00	1405	58.8																							
ZZZZZZ	1.00	1410																								
ZZZZZZA	1.00	1415	-9999.9																							
CCV	1.00	1420				X																				
CCB	1.00	1425				X																				
ZZZZZZ	1.00	1430																								
ZZZZZZA	1.00	1435	55.3																							
ZZZZZZ	1.00	1440																								

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: PE 603_____ Method: F_

Start Date: 12/30/92 End Date: 12/30/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
ZZZZZZA	1.00	1445	49.3																							
ZZZZZZ	1.00	1450																								
ZZZZZZ	1.00	1455																								
ZZZZZZ	1.00	1500																								
ZZZZZZA	1.00	1505	51.0																							
CCV	1.00	1510				X																				
CCB	1.00	1515				X																				

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: PE 603_____ Method: F_

Start Date: 12/28/92 End Date: 12/28/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	1200																						X		
S20	1.00	1205																						X		
S50	1.00	1210																						X		
S100	1.00	1215																						X		
ICV	1.00	1225																						X		
ICB	1.00	1230																						X		
CRA	1.00	1235																						X		
CCV	1.00	1240																						X		
CCB	1.00	1245																						X		
PREP BK	1.00	1250																						X		
PREP BKA	1.00	1255	87.8																					X		
LCS	20.00	1300																						X		
LCSA	20.00	1305	85.5																					X		
H92077	1.00	1310																						X		
H92077A	1.00	1315	108.8																					X		
H92077	1.00	1320																						X		
H92077A	1.00	1325	110.3																					X		
CCV	1.00	1330																						X		
CCB	1.00	1335																						X		

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: PE 603_____ Method: F_

Start Date: 12/31/92 End Date: 12/31/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	1200				X																				
S20	1.00	1205				X																				
S50	1.00	1210				X																				
S100	1.00	1215				X																				
ICV	1.00	1220				X																				
ICB	1.00	1225				X																				
CRA	1.00	1230				X																				
CCV	1.00	1235				X																				
CCB	1.00	1240				X																				
H92077	5.00	1245				X																				
H92077A	5.00	1250	86.0			X																				
H92077	5.00	1255				X																				
H92077	5.00	1300				X																				
ZZZZZZ	5.00	1305																								
ZZZZZZA	5.00	1310	83.3																							
CCV	1.00	1315				X																				
CCB	1.00	1320				X																				

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D2110250~~2~~

Instrument ID Number: PE 603_____ Method: F_

Start Date: 12/28/92 End Date: 12/28/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	0200																						X		
S20	1.00	0205																						X		
S50	1.00	0210																						X		
S100	1.00	0215																						X		
ICV	1.00	0225																						X		
ICB	1.00	0230																						X		
CRA	1.00	0235																						X		
CCV	1.00	0240																						X		
CCB	1.00	0245																						X		
H92077	1.00	0250																						X		
H92077	1.00	0255																						X		
H92078	1.00	0300																						X		
H92078A	1.00	0305	87.8																					X		
ZZZZZZ	1.00	0310																								
ZZZZZZA	1.00	0315	82.3																							
ZZZZZZ	1.00	0320																								
ZZZZZZA	1.00	0325	86.0																							
CCV	1.00	0330																						X		
CCB	1.00	0335																						X		

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14
ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: PE 603_____ Method: F_

Start Date: 12/31/92 End Date: 12/31/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	0200				X																				
S20	1.00	0205				X																				
S50	1.00	0210				X																				
S100	1.00	0215				X																				
ICV	1.00	0220				X																				
ICB	1.00	0225				X																				
CRA	1.00	0230				X																				
CCV	1.00	0235				X																				
CCB	1.00	0240				X																				
H920770_	5.00	0245																								
H920771_	5.00	0250				X																				
H920772_	5.00	0255				X																				
H920773_	5.00	0300				X																				
H920780_	1.00	0305																								
H920781_	1.00	0310				X																				
H920782_	1.00	0315				X																				
H920783_	1.00	0320				X																				
CCV	1.00	0325				X																				
CCB	1.00	0330				X																				
ZZZZZZ0_	1.00	0335																								
ZZZZZZ1_	2.00	0340																								
ZZZZZZ2_	2.00	0345																								
ZZZZZZ3_	2.00	0350																								
ZZZZZZ0_	1.00	0355																								
ZZZZZZ1_	1.00	0400																								
ZZZZZZ2_	1.00	0405																								
ZZZZZZ3_	1.00	0410																								
CCV	1.00	0415				X																				
CCB	1.00	0420				X																				
ZZZZZZ0_	1.00	0425																								
ZZZZZZ1_	1.00	0430																								
ZZZZZZ2_	1.00	0435																								

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D2110250

Instrument ID Number: PE 603_____ Method: F_

Start Date: 12/31/92 End Date: 12/31/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
ZZZZZZ3	1.00	0440																								
ZZZZZZ0	1.00	0445																								
ZZZZZZ1	5.00	0450																								
ZZZZZZ2	5.00	0455																								
ZZZZZZ3	5.00	0500																								
CCV	1.00	0505				X																				
CCB	1.00	0510				X																				

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14
ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D211025O2

Instrument ID Number: VARIAN 1475__ Method: F_

Start Date: 12/28/92 End Date: 12/28/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	1200													X											
S20	1.00	1205													X											
S50	1.00	1210													X											
S100	1.00	1215													X											
ICV	1.00	1225													X											
ICB	1.00	1230													X											
CRA	1.00	1235													X											
CCV	1.00	1240													X											
CCB	1.00	1245													X											
ZZZZZZ	1.00	1250																								
ZZZZZZA	1.00	1255	117.0																							
LCS	20.00	1300													X											
LCSA	20.00	1305	85.0												X											
H92077	1.00	1310													X											
H92077A	1.00	1315	99.0												X											
H92077	1.00	1320													X											
H92077A	1.00	1325	87.5												X											
CCV	1.00	1330													X											
CCB	1.00	1335													X											

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: VARIAN 1475__ Method: F_

Start Date: 12/28/92 End Date: 12/28/92

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	1200																			X					
S20	1.00	1205																			X					
S50	1.00	1210																			X					
S100	1.00	1215																			X					
ICV	1.00	1225																			X					
ICB	1.00	1230																			X					
CRA	1.00	1235																			X					
CCV	1.00	1240																			X					
CCB	1.00	1245																			X					
ZZZZZZ	1.00	1250																								
ZZZZZZA	1.00	1255	213.0																							
LCS	20.00	1300																			X					
LCSA	20.00	1305	71.0																		X					
ZZZZZZ	1.00	1310																								
ZZZZZZA	1.00	1315	0.0																							
ZZZZZZ	1.00	1320																								
ZZZZZZA	1.00	1325	0.0																							
CCV	1.00	1330																			X					
CCB	1.00	1335																			X					
H92077	1.00	1340																			X					
H92077	1.00	1345																			X					
ZZZZZZ	1.00	1350																								
ZZZZZZA	1.00	1355	0.0																							
ZZZZZZ	1.00	1400																								
ZZZZZZA	1.00	1405	0.0																							
ZZZZZZ	1.00	1410																								
ZZZZZZA	1.00	1415	0.0																							
CCV	1.00	1420																			X					
CCB	1.00	1425																			X					
ZZZZZZ	1.00	1430																								
ZZZZZZA	1.00	1435	0.0																							
ZZZZZZ	1.00	1440																								

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D211025O2

Instrument ID Number: VARIAN 1475__ Method: F_

Start Date: 12/28/92 End Date: 12/28/92

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
ZZZZZZA_	1.00	1445	0.0																								
ZZZZZZ__	1.00	1450																									
ZZZZZZ__	1.00	1455																									
ZZZZZZ__	1.00	1500																									
ZZZZZZA_	1.00	1505	0.0																								
CCV_____	1.00	1510																			X						
CCB_____	1.00	1515																			X						

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D2110250Q

Instrument ID Number: VARIAN 1475__ Method: F_

Start Date: 12/28/92 End Date: 12/28/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	0200													X											
S20	1.00	0205													X											
S50	1.00	0210													X											
S100	1.00	0215													X											
ICV	1.00	0225													X											
ICB	1.00	0230													X											
CRA	1.00	0235													X											
CCV	1.00	0240													X											
CCB	1.00	0245													X											
PBS	1.00	0250													X											
PBS	1.00	0255	98.5												X											
H92077	1.00	0300													X											
H92077	1.00	0305													X											
H92078	1.00	0310													X											
H92078A	1.00	0315	101.5												X											
ZZZZZZ	1.00	0320																								
ZZZZZZA	1.00	0325	100.5																							
CCV	1.00	0330													X											
CCB	1.00	0335													X											

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14
ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: VARIAN 1475__ Method: F_

Start Date: 12/30/92 End Date: 12/30/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	1200																			X					
S20	1.00	1205																			X					
S50	1.00	1210																			X					
S100	1.00	1215																			X					
ICV	1.00	1225																			X					
ICB	1.00	1230																			X					
CRA	1.00	1235																			X					
CCV	1.00	1240																			X					
CCB	1.00	1245																			X					
ZZZZZZ	1.00	1250																								
ZZZZZZA	1.00	1255	64.0																							
H92077	10.00	1300																			X					
H92077A	10.00	1305	65.0																		X					
H92077	10.00	1310																			X					
H92077A	10.00	1315	47.0																		X					
H92078	10.00	1320																			X					
H92078A	10.00	1325	62.0																		X					
CCV	1.00	1330																			X					
CCB	1.00	1335																			X					
ZZZZZZ	10.00	1340																								
ZZZZZZA	10.00	1345	79.0																							
ZZZZZZ	10.00	1350																								
ZZZZZZA	10.00	1355	64.0																							
ZZZZZZ	10.00	1400																								
ZZZZZZA	10.00	1405	67.0																							
ZZZZZZ	10.00	1410																								
ZZZZZZA	10.00	1415	59.0																							
CCV	1.00	1420																			X					
CCB	1.00	1425																			X					

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D2110250Z

Instrument ID Number: VARIAN 1475__ Method: F_

Start Date: 12/31/92 End Date: 12/31/92

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	
S0	1.00	1200																			X						
S20	1.00	1205																			X						
S50	1.00	1210																			X						
S100	1.00	1215																			X						
ICV	1.00	1225																			X						
ICB	1.00	1230																			X						
CRA	1.00	1235																			X						
CCV	1.00	1240																			X						
CCB	1.00	1245																			X						
PREP BK	1.00	1250																			X						
PREP BKA	1.00	1255	110.0																		X						
CCV	1.00	1300																			X						
CCB	1.00	1305																			X						

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: PE 2280_____ Method: CV

Start Date: 12/31/92 End Date: 12/31/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
S0	1.00	1200																X								
S0	1.00	1205																X								
S1	1.00	1210																X								
S1	1.00	1215																X								
S1	1.00	1220																X								
S2	1.00	1225																X								
S5	1.00	1230																X								
ICV	1.00	1235																X								
ICB	1.00	1240																X								
CRA	1.00	1245																X								
CCV	1.00	1250																X								
CCB	1.00	1255																X								
ZZZZZZ	1.00	1300																								
ZZZZZZ	1.00	1305																								
ZZZZZZ	1.00	1310																								
ZZZZZZ	1.00	1315																								
ZZZZZZ	1.00	1320																								
ZZZZZZ	1.00	1325																								
ZZZZZZ	1.00	1330																								
ZZZZZZ	1.00	1335																								
ZZZZZZ	1.00	1340																								
ZZZZZZ	1.00	1345																								
CCV	1.00	1350																X								
CCB	1.00	1355																X								
CCV	1.00	1400																X								
CCB	1.00	1405																X								
ZZZZZZ	1.00	1410																								
ZZZZZZ	1.00	1415																								
ZZZZZZ	1.00	1420																								
ZZZZZZ	1.00	1425																								
ZZZZZZ	1.00	1430																								
ZZZZZZ	1.00	1435																								

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ANALYSIS RUN LOG

Lab Name: PACE_INCORPORATED_____ Contract: _____

Lab Code: _____ Case No.: WASHIN SAS No.: _____ SDG No.:D21102502

Instrument ID Number: PE 2280_____ Method: CV

Start Date: 12/31/92 End Date: 12/31/92

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN
ZZZZZZ	1.00	1440																								
ZZZZZZ	1.00	1445																								
ZZZZZZ	1.00	1450																								
ZZZZZZ	1.00	1455																								
CCV	1.00	1500																X								
CCB	1.00	1505																X								
ZZZZZZ	1.00	1510																								
ZZZZZZ	1.00	1515																								
ZZZZZZ	1.00	1520																								
ZZZZZZ	1.00	1525																								
CCV	1.00	1530																X								
CCB	1.00	1535																X								
CCV	1.00	1540																X								
CCB	1.00	1545																X								
PREP BK	1.00	1550																X								
LCS	1.00	1555																X								
H92077	1.00	1600																X								
H92077	1.00	1605																X								
H92077	1.00	1610																X								
H92077	1.00	1615																X								
H92078	1.00	1620																X								
ZZZZZZ	1.00	1625																								
ZZZZZZ	1.00	1630																								
CCV	1.00	1635																X								
CCB	1.00	1640																X								
ZZZZZZ	1.00	1645																								
ZZZZZZ	1.00	1650																								
ZZZZZZ	1.00	1655																								
ZZZZZZ	1.00	1700																								
ZZZZZZ	1.00	1705																								
CCV	1.00	1710																X								
CCB	1.00	1715																X								

Quality Control Sources (PCN/SCN)

Inductively Coupled Argon Plasma (ICP)

Calibration Standards		PACE SCN	P921202-01 P921029-01 P920709-01 P921117-01
ICV PE Pure	Lot No. 3-159/128-AS	PACE PCN	I-00168/171
CRI		PACE SCN	I-P-00003
ICSA/ICSAB		PACE SCN	P920707-01/02
CCV		PACE SCN	P921023-01
Aqueous LCS		PACE SCN	P920611-02 P920611-03 P920611-04 P920723-02
Solids LCS	EPA Lot 214	PACE PCN	I-00218

Graphite Furnace Atomic Absorption (GFAA)

Calibration Standard		PACE SCN	I-A-921216-01
ICV		PACE SCN	I-A-921216-02
CRA		PACE SCN	I-A-921216-01
CCV		PACE SCN	I-A-921216-01
Aqueous LCS		PACE SCN	I-A-920128-01
Solid LCS	EPA Lot 214	PACE PCN	I-00218

Cold Vapor Atomic Absorption (CVAA)

Calibration Standard		PACE PCN	PI-HGS-04
ICV		PACE PCN	PI-HGS-05
CCV		PACE PCN	PI-HGS-04
Aqueous LCS		PACE PCN	PI-HGS-04
Solid LCS	EPA Lot 214	PACE PCN	I-00218

CKW1/dlj

SCN P921202-01

CKW

Method: PACE-DN1 Standard: STD1-Blank

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.9680	.0153	.0566	.0011	.0653	.0080	.0127
#1	.9780	.0160	.0056	.0001	.0660	.0100	.0100
#2	.9460	.0180	.1236	.0021	.0660	.0080	.0140
#3	.9800	.0120	.0407	.0010	.0640	.0060	.0140

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0653	.0233	-.0287	.0575	.0000	.0580	-.0073
#1	.0660	.0240	-.0260	.0534	.0000	.0440	-.0060
#2	.0580	.0220	-.0380	.0597	.0000	.0760	-.0040
#3	.0720	.0240	-.0220	.0594	.0000	.0540	-.0120

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	-.0120	.0180	.1007	-.0877	.3073	-.1700	.7133
#1	-.0120	.0180	.0960	-.0765	.2460	-.1960	.6880
#2	-.0220	.0180	.1000	-.0864	.3420	-.1580	.7320
#3	-.0020	.0180	.1060	-.1001	.3340	-.1560	.7200

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.0847	.3502	.0020	.1353	.0280	-.0280	.2067
#1	-.0860	.3420	.0061	.1440	.0280	-.0320	.2040
#2	-.0840	.3518	.0019	.1080	.0240	-.0240	.2100
#3	-.0840	.3569	-.0019	.1540	.0320	-.0280	.2060

SCN P921029-01

Method: PACE-DN1 Standard: STD3

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	26.54	.6013	3.742	6.179	7.147	.7707	1.547
#1	26.56	.6040	3.754	6.170	7.148	.7800	1.544
#2	26.53	.6000	3.654	6.193	7.142	.7580	1.546
#3	26.53	.6000	3.818	6.173	7.152	.7740	1.550

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mn2576	Mo2020
Avge	3.903	4.731	4.050	51.67	1.029	4.113	4.228
#1	3.918	4.744	4.056	51.62	1.026	4.112	4.236
#2	3.888	4.708	4.049	51.64	1.042	4.106	4.226
#3	3.904	4.740	4.044	51.76	1.020	4.122	4.222

Elem	Ni2316	Se1960	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	3.358	14.85	10.07	2.501	3.500	1.485	5.165
#1	3.387	14.87	10.06	2.448	3.492	1.486	5.136
#2	3.325	14.81	10.08	2.500	3.502	1.484	5.174
#3	3.363	14.88	10.06	2.556	3.506	1.484	5.186

SCN P920709-01

Method: PACE-DN1 Standard: STD4

Elem	Ca3179	Li6707	Mg2790	K_7664	Si2881	Na5895

CKW

Avge	515.2	442.2	84.84	45.25	236.5	177.0
#1	513.3	442.3	84.93	45.17	236.2	177.1
#2	515.6	444.0	85.03	45.26	236.9	177.5
#3	516.7	440.3	84.56	45.32	236.3	176.3

Method: PACE-DN1 Standard: STD2 SCN P921117-01

Elem	Ag3280
Avge	3.195
#1	3.176
#2	3.222
#3	3.186

Method: PACE-DN1 Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Al3082	308.215	STD3	STD1-Blank	.391083	-.378569	12/18/92 09:54:09
Sb2068	206.838	STD3	STD1-Blank	1.70648	-.026166	12/18/92 09:54:09
As1936	193.696	STD3	STD1-Blank	.271333	-.015369	12/18/92 09:54:09
Ba4934	493.409	STD3	STD1-Blank	.161864	-.000172	12/18/92 09:54:09
Be3130	313.042	STD3	STD1-Blank	.141203	-.009225	12/18/92 09:54:09
B_2496	249.678	STD3	STD1-Blank	1.31119	-.010490	12/18/92 09:54:09
Cd2288	228.802	STD3	STD1-Blank	.651891	-.008257	12/18/92 09:54:09
Ca3179	317.933	STD4	STD1-Blank	.194122	-.012683	12/18/92 09:54:09
Cr2677	267.716	STD3	STD1-Blank	.257732	-.006014	12/18/92 09:54:09
Co2286	228.606	STD3	STD1-Blank	.210113	.006023	12/18/92 09:54:09
Cu3247	324.754	STD3	STD1-Blank	.250492	-.014402	12/18/92 09:54:09
Fe2599	259.940	STD3	STD1-Blank	.193526	.000000	12/18/92 09:54:09
Pb2203	220.354	STD3	STD1-Blank	1.02951	-.059712	12/18/92 09:54:09
Li6707	670.784	STD4	STD1-Blank	.226134	.001658	12/18/92 09:54:09
Mg2790	279.078	STD4	STD1-Blank	1.17854	.014142	12/18/92 09:54:09
Mn2576	257.610	STD3	STD1-Blank	.244180	-.004395	12/18/92 09:54:09
Mo2020	202.030	STD3	STD1-Blank	.242287	-.024390	12/18/92 09:54:09
Ni2316	231.604	STD3	STD1-Blank	.290192	.025444	12/18/92 09:54:09
K_7664	766.491	STD4	STD1-Blank	2.22506	-.683834	12/18/92 09:54:09
Se1960	196.026	STD3	STD1-Blank	.665661	.113162	12/18/92 09:54:09
Si2881	288.158	STD4	STD1-Blank	.424163	-.302569	12/18/92 09:54:09
Ag3280	328.068	STD2	STD1-Blank	.304940	.025818	12/18/92 09:54:09
Na5895	589.592	STD4	STD1-Blank	.566207	-.198298	12/18/92 09:54:09
Sr4215	421.552	STD3	STD1-Blank	.099339	-.000201	12/18/92 09:54:09
Sn1899	189.989	STD3	STD1-Blank	.422654	-.057199	12/18/92 09:54:09
Ti3349	334.941	STD3	STD1-Blank	.288018	-.008065	12/18/92 09:54:09
V_2924	292.402	STD3	STD1-Blank	.661084	.018510	12/18/92 09:54:09
Zn2138	213.856	STD3	STD1-Blank	.201667	-.041678	12/18/92 09:54:09

Method: PACE-DN1 Sample Name: ICV1 Operator: CKW
Run Time: 12/18/92 09:56:05
Comment: PE PURE LOT NO 3-159/128-AS PCN I-00168/171
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	4.862	4.998	4.945	4.735	4.701	4.814	4.938

#1	4.874	5.008	4.976	4.763	4.713	4.848	4.934
#2	4.851	4.987	4.915	4.706	4.689	4.780	4.941
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	5.093	4.858	4.900	4.827	4.817	5.010	.0005
#1	5.094	4.858	4.902	4.845	4.816	4.998	.0008
#2	5.093	4.857	4.899	4.809	4.819	5.022	.0003
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	4.985	4.834	4.913	4.889	46.86	4.876	2.483
#1	5.002	4.835	4.921	4.890	46.72	4.905	2.485
#2	4.968	4.834	4.906	4.889	46.99	4.846	2.482
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	4.561	4.748	-.0004	.0068	4.801	5.007	4.697
#1	4.561	4.747	-.0004	.0047	4.815	5.020	4.695
#2	4.562	4.749	-.0004	.0088	4.787	4.994	4.699

Method: PACE-DN1 Sample Name: ICVB1 Operator: CKW
Run Time: 12/18/92 09:57:57
Comment: SCN I-P-00007
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.2148	4.979	5.100	.0026	.0001	4.896	.0156
#1	.2073	4.958	5.066	.0027	.0001	4.899	.0144
#2	.2223	4.999	5.135	.0024	.0001	4.893	.0168
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0060	.0030	.0032	.0012	.0046	4.951	49.84
#1	.0041	.0022	.0028	.0009	.0042	4.969	49.86
#2	.0079	.0038	.0036	.0014	.0050	4.932	49.81
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	.0188	.0000	.0006	.0034	.1928	4.981	50.49
#1	.0178	.0005	.0057	.0006	.2151	4.934	50.45
#2	.0199	-.0005	-.0045	.0062	.1706	5.027	50.52
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0350	.1896	.1170	4.991	4.813	.0023	.0014
#1	.0356	.1788	.1166	4.968	4.812	.0017	.0014
#2	.0344	.2003	.1173	5.014	4.813	.0029	.0014

Method: PACE-DN1 Sample Name: ICB1 Operator: CKW
Run Time: 12/18/92 10:00:08
Comment: SCN P921202-01

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CKW

Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.0188	-.0040	.0054	.0002	-.0000	.0066	.0022
#1	.0110	-.0057	-.0028	.0005	.0001	.0105	.0035
#2	.0266	-.0022	.0136	-.0002	-.0002	.0026	.0008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	-.0020	.0020	-.0005	.0003	.0012	.0042	.0003
#1	-.0041	.0027	.0010	.0001	.0008	.0124	.0003
#2	.0001	.0012	-.0020	.0004	.0015	-.0041	.0003

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	.0035	-.0000	-.0021	.0022	.0705	.0053	-.0616
#1	.0094	-.0000	-.0016	.0033	.0415	-.0013	-.0574
#2	-.0024	-.0000	-.0026	.0010	.0994	.0120	-.0659

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0005	-.0023	-.0005	.0159	-.0006	-.0007	.0005
#1	.0002	-.0049	-.0006	.0062	-.0006	-.0000	.0003
#2	.0008	.0003	-.0004	.0256	-.0006	-.0013	.0007

Method: PACE-DN1 Sample Name: CRI1 Operator: CKW
Run Time: 12/18/92 10:02:13
Comment: SCN I-P-00003
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.1062	.1130	.2069	.0102	.0093	.0497	.0122
#1	.1070	.1180	.2083	.0104	.0093	.0497	.0122
#2	.1053	.1079	.2054	.0100	.0093	.0497	.0122

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0421	.0200	.0936	.0506	.0511	.0682	.0543
#1	.0442	.0234	.0946	.0504	.0511	.0538	.0541
#2	.0399	.0167	.0925	.0508	.0511	.0826	.0546

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	.1074	.0318	.0464	.0841	2.262	.2255	-.0144
#1	.1121	.0318	.0444	.0900	1.968	.2421	-.0276
#2	.1027	.0318	.0483	.0782	2.556	.2088	-.0013

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0223	.1204	.0197	.0905	.0202	.1075	.0413
#1	.0211	.1289	.0199	.0804	.0208	.1075	.0401
#2	.0235	.1120	.0195	.1006	.0196	.1075	.0426

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CKW

ethod: PACE-DN1 Sample Name: ICSA1 Operator: CKW
un Time: 12/18/92 10:04:13
omment: SCN P920707-01
lode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	519.9	-.0146	-.1314	.0158	.0010	-.0985	.0031
#1	518.3	-.0197	-.1603	.0159	.0010	-.0933	.0038
#2	521.5	-.0094	-.1026	.0157	.0010	-.1036	.0024

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	516.8	.0058	.0027	.0085	182.7	-.1117	.0051
#1	513.8	.0053	.0018	.0082	181.7	-.0973	.0053
#2	519.7	.0064	.0035	.0087	183.7	-.1261	.0048

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	530.4	-.0043	.0135	-.0234	.1261	-.0370	-.1317
#1	528.1	-.0048	.0143	-.0483	.1172	-.0368	-.1238
#2	532.7	-.0037	.0127	.0014	.1350	-.0373	-.1396

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.0063	.1572	.0134	-.0652	.0043	-.0076	.0102
#1	-.0060	.1478	.0133	-.0620	.0046	-.0094	.0105
#2	-.0065	.1667	.0134	-.0684	.0040	-.0057	.0098

Method: PACE-DN1 Sample Name: ICSAB1 Operator: CKW
Run Time: 12/18/92 10:06:15
Comment: SCN P920707-02
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	494.8	-.0056	-.1427	.4972	.4601	-.0940	.9664
#1	495.2	.0012	-.1291	.4979	.4599	-.1098	.9573
#2	494.5	-.0124	-.1563	.4964	.4602	-.0781	.9756

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	490.4	.4696	.4473	.4924	174.2	.8078	.0041
#1	489.6	.4707	.4479	.4929	174.2	.8035	.0039
#2	491.1	.4686	.4467	.4918	174.2	.8120	.0044

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	503.8	.4394	.0060	.8607	.0438	-.0144	-.2012
#1	504.6	.4381	.0104	.8575	.1083	-.0444	-.1969
#2	503.1	.4406	.0016	.8639	-.0208	.0156	-.2054

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.9128	.1439	.0130	-.0573	.0039	.4782	.9395
#1	.9122	.1423	.0129	-.0620	.0045	.4769	.9394
#2	.9134	.1456	.0130	-.0525	.0033	.4795	.9397

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CKW

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ethod: PACE-DN1 Sample Name: CCV1 Operator: CKW
un Time: 12/18/92 10:08:29
omment: SCN P921023-01
ode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	9.543	.9913	1.006	.9527	.9078	.9494	.9797
#1	9.528	.9931	1.014	.9485	.9058	.9416	.9803
#2	9.558	.9896	.9985	.9568	.9098	.9573	.9790

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	100.0	.9391	.9319	.9339	9.100	.9966	98.17
#1	99.93	.9378	.9298	.9322	9.083	.9780	97.94
#2	100.1	.9404	.9340	.9357	9.118	1.015	98.39

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	98.00	.9381	.9558	.9129	98.64	9.581	99.73
#1	97.81	.9364	.9497	.9320	98.57	9.593	99.53
#2	98.20	.9398	.9618	.8938	98.72	9.570	99.93

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	1.017	98.52	.9426	.9876	.9729	.9939	.9647
#1	1.014	98.33	.9404	.9828	.9695	.9932	.9619
#2	1.020	98.71	.9447	.9924	.9764	.9946	.9676

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lethod: PACE-DN1 Sample Name: CCB1 Operator: CKW
Run Time: 12/18/92 10:10:21
Comment: SCN P921202-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.0133	-.0057	-.0154	-.0000	.0001	-.0039	.0002
#1	.0149	-.0023	-.0221	.0002	.0001	-.0026	.0009
#2	.0118	-.0091	-.0088	-.0002	.0001	-.0052	-.0004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0023	.0015	.0006	.0012	.0019	.0196	.0019
#1	.0032	.0033	.0022	.0018	.0023	.0227	.0030
#2	.0013	-.0003	-.0011	.0007	.0015	.0165	.0008

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	-.0012	-.0000	-.0016	-.0085	.3108	.0020	-.0739
#1	.0024	.0000	.0008	-.0032	.4554	.0040	-.0438
#2	-.0048	-.0000	-.0040	-.0137	.1661	.0000	-.1040

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0020	-.0324	-.0003	.0045	-.0003	.0013	.0003

#1	.0033	-.0342	-.0003	.0121	-.0000	.0027	.0007
#2	.0008	-.0307	-.0004	-.0031	-.0006	-.0000	-.0001

Method: PACE-DN1 Sample Name: LCSS Operator: CKW
Run Time: 12/18/92 10:12:36
Comment: PROJECTS D21102.502, 1104.501 PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	2622.	15.03	139.4	200.3	87.17	2.137	139.5
#1	2629.	12.30	147.1	200.8	87.37	2.925	140.0
#2	2614.	17.77	131.7	199.8	86.97	1.348	139.0

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	2081.	99.27	99.85	97.42	3932.	138.8	2.186
#1	2078.	98.80	99.51	97.68	3934.	142.1	2.141
#2	2085.	99.73	100.2	97.16	3929.	135.5	2.231

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	1639.	242.5	84.93	145.6	1883.	151.2	596.2
#1	1639.	242.7	84.83	142.6	1857.	152.3	625.8
#2	1639.	242.4	85.02	148.7	1909.	150.2	566.5

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	83.20	1045.	7.005	.4914	125.3	64.29	144.4
#1	83.63	1048.	6.994	.2672	126.2	64.42	144.5
#2	82.78	1042.	7.015	.7156	124.5	64.16	144.4

Method: PACE-DN1 Sample Name: PBS Operator: CKW
Run Time: 12/18/92 10:15:56
Comment: PROJECTS D21102.502, 1104.501 PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	2.263	-1.129	-4.178	.0304	-.0361	-1.048	.1821
#1	3.126	-1.805	-7.901	.0304	-.0366	.5256	.1895
#2	1.399	-.4525	-.4541	.0304	-.0356	-2.623	.1748

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.6488	-.1203	-.1812	-.0186	.8516	.8234	.0603
#1	-.1267	-.2752	-.6431	-.1322	.9293	.8264	-.1206
#2	1.424	.0346	.2807	.0950	.7739	.8203	.2412

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	-.9521	.0487	-.4686	-1.992	18.54	-6.919	-23.86
#1	-2.381	-.0002	-1.196	-2.706	-24.62	-9.848	-24.03
#2	.4764	.0977	.2583	-1.278	61.71	-3.991	-23.70

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CKW

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.1598	-16.94	-.1293	4.527	-.1732	-.4009	.3429
#1	.2827	-17.53	-.1388	5.286	-.2313	-.2752	.3054
#2	.0370	-16.34	-.1197	3.769	-.1150	-.5266	.3805

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ethod: PACE-DN1 Sample Name: 65-018906.6 Operator: CKW
un Time: 12/18/92 10:20:12
omment: PROJECTS D21102.502 PREPPED 1G/200G CLP
ode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	10380.	-3.021	4.636	147.1	.5721	-1.116	-.3578
#1	10370.	-1.652	8.773	146.7	.5726	-4.280	-.1052
#2	10400.	-4.389	.4983	147.6	.5717	2.049	-.6104

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	18290.	15.28	10.74	22.75	19610.	10.57	14.67
#1	18240.	15.28	10.58	22.77	19560.	11.99	14.62
#2	18340.	15.28	10.91	22.73	19660.	9.159	14.71

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	8408.	558.1	.8197	12.61	2138.	4.143	1595.
#1	8371.	556.9	.8113	12.49	2154.	-.2813	1594.
#2	8444.	559.4	.8281	12.74	2121.	8.568	1596.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.4496	445.9	52.34	2.284	622.1	31.44	54.75
#1	-.3282	444.6	52.22	3.780	621.0	31.32	54.92
#2	-.5709	447.2	52.46	.7887	623.2	31.57	54.59

Method: PACE-DN1 Sample Name: 650189066D Operator: CKW
Run Time: 12/18/92 10:22:28
Comment: PROJECTS D21102.502 PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	9886.	-.6012	8.568	136.9	.5521	1.257	.0256
#1	9879.	-.9431	7.846	136.9	.5813	.9834	-.3642
#2	9893.	-.2592	9.289	136.9	.5228	1.530	.4154

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	18300.	14.77	10.58	21.16	18320.	10.49	14.04
#1	18290.	14.77	10.79	21.03	18300.	10.47	14.08
#2	18310.	14.77	10.37	21.29	18340.	10.51	13.99

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	8093.	492.2	1.296	14.77	2091.	7.385	1624.

#1	8095.	491.4	1.002	16.06	2086.	6.973	1615.
#2	8091.	492.9	1.590	13.49	2096.	7.797	1633.
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.7571	432.6	50.91	-1.070	595.5	29.39	51.69
#1	-.6978	430.9	50.89	-.2390	597.5	29.12	51.81
#2	-.8164	434.3	50.93	-1.902	593.5	29.65	51.57

Method: PACE-DN1 Sample Name: 650189066S Operator: CKW
Run Time: 12/18/92 10:24:42
Comment: PROJECTS D21102.502 MATRIX SPIKE PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	18810.	59.25	413.5	526.5	9.797	38.26	10.68
#1	18760.	59.59	397.7	524.9	9.740	39.84	10.85
#2	18860.	58.91	429.3	528.0	9.855	36.68	10.52
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	20790.	59.34	109.3	72.72	23470.	108.6	2016.
#1	20790.	59.70	109.5	72.59	23480.	109.5	2005.
#2	20790.	58.98	109.2	72.85	23460.	107.7	2027.
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	11600.	610.8	37.35	114.6	4362.	401.4	3795.
#1	11610.	611.2	37.69	114.7	4368.	412.7	3778.
#2	11600.	610.3	37.01	114.6	4357.	390.1	3813.
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	9.816	2523.	94.07	103.1	1021.	141.2	159.6
#1	9.817	2509.	93.81	99.54	1015.	141.4	159.3
#2	9.814	2536.	94.34	106.6	1026.	140.9	159.8

Method: PACE-DN1 Sample Name: 650189066SD Operator: CKW
Run Time: 12/18/92 10:29:06
Comment: PROJECTS D21102.502 MATRIX SPIKE DUPE PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	18230.	61.93	415.1	545.5	9.855	42.00	12.12
#1	18200.	61.61	420.0	544.6	9.854	42.76	11.85
#2	18260.	62.26	410.3	546.5	9.855	41.24	12.39
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	20400.	58.72	108.9	74.58	23020.	110.5	2095.
#1	20400.	58.15	108.7	74.38	22960.	110.3	2090.
#2	20410.	59.29	109.1	74.77	23080.	110.8	2100.

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CKW

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	11630.	713.3	37.62	112.7	4486.	400.8	4391.
#1	11630.	711.6	37.71	117.6	4454.	407.2	4385.
#2	11640.	715.1	37.53	107.9	4519.	394.4	4397.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	9.856	2606.	95.67	100.1	1015.	140.8	157.8
#1	10.04	2599.	95.57	101.3	1014.	141.0	157.1
#2	9.672	2612.	95.77	98.83	1016.	140.7	158.5

Method: PACE-DN1 Sample Name: 650189066A Operator: CKW
Run Time: 12/18/92 10:33:56
Comment: PROJECTS D21102.502 ANALYTICAL SPIKE PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	10360.	99.58	411.4	527.8	9.696	37.51	10.56
#1	10340.	101.3	415.3	526.4	9.669	39.60	11.07
#2	10380.	97.86	407.5	529.2	9.724	35.41	10.04

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	19400.	53.57	107.9	70.37	18770.	107.5	2017.
#1	19360.	53.10	108.0	70.14	18760.	106.4	2017.
#2	19430.	54.03	107.9	70.60	18780.	108.6	2017.

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	10020.	623.3	38.55	112.4	4089.	392.3	3539.
#1	10000.	622.7	38.40	113.2	4116.	384.7	3530.
#2	10040.	623.9	38.70	111.7	4062.	399.8	3547.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	8.828	2420.	88.96	101.8	633.1	130.9	148.9
#1	8.887	2418.	88.78	102.8	631.9	130.7	148.3
#2	8.769	2422.	89.14	100.9	634.2	131.2	149.5

Method: PACE-DN1 Sample Name: 65018907.4 Operator: CKW
Run Time: 12/18/92 10:36:16
Comment: PROJECTS D21102.502 PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	5869.	.8660	5.578	93.90	.3200	.5681	.8142
#1	5888.	1.206	5.704	94.27	.3190	-.7292	.6835
#2	5851.	.5264	5.452	93.53	.3210	1.865	.9448

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	10060.	9.152	8.393	13.08	13120.	15.76	6.709

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CKW

#1	10050.	9.306	8.601	13.20	13160.	15.39	6.573
#2	10070.	8.997	8.186	12.95	13080.	16.13	6.844
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	4438.	355.7	.5749	8.963	1688.	3.386	1296.
#1	4458.	356.8	.4846	11.18	1698.	7.802	1290.
#2	4418.	354.6	.6652	6.741	1678.	-1.030	1302.
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0819	71.92	24.60	.1749	559.3	23.79	36.17
#1	.0225	72.22	24.68	-1.575	560.4	24.05	36.12
#2	.1413	71.62	24.52	1.925	558.2	23.53	36.22

Method: PACE-DN1 Sample Name: 650189074L Operator: CKW
Run Time: 12/18/92 10:39:48
Comment: PROJECTS D21102.502 5X SER DIL PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 1000

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	5766.	-10.15	-4.947	92.17	.5653	1.115	3.485
#1	5743.	-23.79	-.1862	91.93	.5679	-.2019	3.476
#2	5789.	3.491	-9.707	92.41	.5627	2.432	3.495
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	9978.	11.76	10.16	13.30	13160.	15.46	7.538
#1	9995.	11.50	8.898	13.27	13150.	17.46	7.538
#2	9961.	12.02	11.42	13.33	13180.	13.45	7.538
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	4382.	354.4	-1.242	16.69	1601.	4.641	1124.
#1	4383.	353.9	-2.941	15.66	1399.	8.631	1123.
#2	4381.	354.9	.4565	17.73	1804.	.6505	1125.
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	1.525	17.41	23.95	-.2461	549.8	23.64	37.40
#1	.9100	9.142	23.85	4.403	549.5	22.97	37.21
#2	2.139	25.68	24.05	-4.895	550.1	24.31	37.60

Method: PACE-DN1 Sample Name: 650169464 Operator: CKW
Run Time: 12/18/92 10:42:23
Comment: PROJECT D21104.501 PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	7225.	.1430	3.466	93.77	.3676	.0277	.6879
#1	7250.	-2.934	2.119	94.24	.3692	-.2351	.4298
#2	7201.	3.220	4.812	93.30	.3660	.2905	.9460

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CKW

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	12750.	12.66	7.816	14.56	14790.	6.534	10.64
#1	12700.	12.50	7.645	14.51	14800.	3.508	10.64
#2	12800.	12.81	7.988	14.60	14790.	9.561	10.64

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	6009.	350.1	.8871	12.77	1673.	5.037	1212.
#1	6032.	350.0	1.227	13.54	1655.	6.236	1206.
#2	5986.	350.3	.5470	12.00	1690.	3.839	1217.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.1454	221.9	40.46	1.001	578.6	26.05	38.94
#1	-.5750	223.7	40.69	.9736	580.5	25.65	38.94
#2	.2842	220.2	40.22	1.029	576.6	26.44	38.94

Method: PACE-DN1 Sample Name: CCV2 Operator: CKW
Run Time: 12/18/92 10:44:23
Comment: SCN P921023-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	9.815	1.029	1.019	.9773	.9296	.9742	.9829
#1	9.827	1.044	1.026	.9788	.9294	.9677	.9868
#2	9.802	1.013	1.012	.9758	.9297	.9808	.9790

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	100.2	.9535	.9399	.9572	9.266	.9925	100.9
#1	99.79	.9517	.9369	.9589	9.265	.9811	101.1
#2	100.5	.9553	.9428	.9556	9.267	1.004	100.8

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	99.33	.9467	.9624	.9361	101.5	9.808	100.7
#1	99.25	.9471	.9619	.9525	101.3	9.771	100.6
#2	99.40	.9462	.9628	.9197	101.7	9.845	100.9

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	1.024	101.9	.9618	.9853	.9919	1.024	.9704
#1	1.021	102.0	.9627	.9776	.9902	1.024	.9669
#2	1.026	101.8	.9608	.9929	.9937	1.025	.9739

Method: PACE-DN1 Sample Name: CCB2 Operator: CKW
Run Time: 12/18/92 10:46:07
Comment: SCN P921202-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.0345	.0046	.0108	.0003	.0001	.0026	.0008

#1	.0290	-.0057	.0160	.0003	.0001	.0079	.0008
#2	.0400	.0148	.0057	.0003	.0001	-.0026	.0009
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0077	.0022	.0031	.0014	.0023	.0238	.0026
#1	.0063	.0033	.0039	.0010	.0023	.0351	.0026
#2	.0090	.0012	.0022	.0018	.0023	.0124	.0026
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	.0200	-.0000	-.0011	.0001	.2129	-.0493	-.0833
#1	.0189	.0000	.0023	-.0016	.2640	-.0413	-.0641
#2	.0211	-.0000	-.0045	.0017	.1617	-.0572	-.1025
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0026	-.0363	-.0003	.0049	-.0000	.0007	.0025
#1	.0033	-.0296	-.0004	.0079	.0006	.0000	.0023
#2	.0020	-.0429	-.0003	.0019	-.0006	.0013	.0027

Method: PACE-DN1 Sample Name: 650169472 Operator: CKW
Run Time: 12/18/92 10:48:26
Comment: PROJECT D21104.501 PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	7676.	.1385	23.55	106.2	.3947	-.8153	.6483
#1	7684.	-.8878	23.25	106.4	.4235	.7683	.6488
#2	7669.	1.165	23.84	105.9	.3660	-2.399	.6477
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	13300.	12.91	8.074	22.40	14760.	6.386	11.73
#1	13290.	12.91	8.073	22.43	14790.	3.105	11.55
#2	13320.	12.91	8.075	22.37	14730.	9.667	11.91
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	6326.	335.8	.4953	15.32	1877.	2.124	1546.
#1	6345.	336.5	.6451	13.96	1878.	4.006	1540.
#2	6306.	335.1	.3455	16.67	1876.	.2427	1552.
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.2020	200.7	42.84	2.011	569.3	26.32	41.25
#1	-.0811	201.0	42.96	2.879	570.2	26.18	41.41
#2	-.3229	200.4	42.72	1.144	568.4	26.45	41.08

Method: PACE-DN1 Sample Name: 650169480 Operator: CKW
Run Time: 12/18/92 10:50:42
Comment: PROJECT D21104.501 PREPPED 1G/200G CLP

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CKW

Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	6875.	-3.401	4.589	89.61	.3696	-1.723	.4249
#1	6886.	-1.011	3.242	89.86	.3706	-2.765	.4275
#2	6864.	-5.790	5.936	89.35	.3685	-.6817	.4222

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	11400.	10.90	7.536	11.96	13590.	1.195	8.880
#1	11370.	10.96	7.411	12.11	13610.	-.8375	8.925
#2	11420.	10.85	7.661	11.82	13570.	3.228	8.834

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	5431.	364.4	.1167	14.63	1382.	3.485	1888.
#1	5440.	365.2	-.6073	12.84	1392.	5.760	1885.
#2	5423.	363.7	.8406	16.42	1371.	1.209	1890.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.0905	188.8	41.05	.4686	625.3	25.54	34.37
#1	-.0925	186.6	41.11	1.803	625.0	25.26	34.21
#2	-.0884	191.1	40.99	-.8658	625.7	25.81	34.53

Method: PACE-DN1 Sample Name: 650169480D Operator: CKW
Run Time: 12/18/92 10:52:52
Comment: PROJECT D21104.501 DUPLICATE PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	7321.	-.9970	3.695	95.22	.3637	-.9336	.9482
#1	7336.	-1.687	3.896	95.56	.3658	-.4327	.4263
#2	7306.	-.3070	3.495	94.88	.3616	-1.434	1.470

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	11380.	12.45	8.546	12.61	14300.	3.463	9.603
#1	11310.	12.09	8.249	12.41	14240.	4.748	9.558
#2	11450.	12.81	8.843	12.80	14350.	2.177	9.648

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	5717.	388.0	.7122	11.56	1438.	1.490	1696.
#1	5717.	386.4	-.2172	10.95	1406.	-2.940	1706.
#2	5718.	389.6	1.642	12.17	1471.	5.919	1685.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.0843	202.9	41.24	1.559	622.7	27.03	36.61
#1	-.3316	204.4	41.39	-.8326	624.4	26.50	36.66
#2	.1631	201.5	41.09	3.951	621.1	27.56	36.56

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Method: PACE-DN1 Sample Name: 650169480S Operator: CKW
Run Time: 12/18/92 10:55:28 (CKW) SPIKE
Comment: PROJECT D21104.501 DUPLICATE PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	12420.	83.00	424.3	494.9	9.647	39.61	11.05
#1	12400.	85.39	418.3	493.4	9.621	39.04	11.59
#2	12440.	80.61	430.3	496.5	9.673	40.18	10.52

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	14210.	55.93	107.9	62.42	18360.	104.8	2037.
#1	14170.	55.88	107.5	62.48	18250.	103.1	2045.
#2	14240.	55.99	108.3	62.36	18460.	106.5	2028.

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	8678.	490.5	38.24	111.7	3615.	402.8	3508.
#1	8659.	487.7	37.35	110.4	3634.	401.6	3505.
#2	8697.	493.2	39.13	113.0	3596.	404.1	3511.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	9.792	2444.	87.36	102.8	1132.	143.4	139.6
#1	9.971	2452.	87.19	102.4	1128.	142.9	139.6
#2	9.612	2436.	87.53	103.3	1136.	143.9	139.5

Method: PACE-DN1 Sample Name: 650169480SD Operator: CKW
Run Time: 12/18/92 10:58:42 SPIKE
Comment: PROJECT D21104.501 DUPLICATE PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	12620.	80.36	408.0	491.6	9.630	37.80	10.96
#1	12580.	79.33	408.8	490.0	9.575	36.46	11.61
#2	12660.	81.39	407.1	493.3	9.686	39.13	10.31

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	14550.	57.12	108.0	63.23	18560.	106.3	2028.
#1	14520.	57.22	107.6	63.06	18500.	106.2	2024.
#2	14590.	57.02	108.4	63.39	18610.	106.4	2033.

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	9149.	529.2	37.84	111.9	3724.	403.0	3985.
#1	9133.	527.9	38.17	110.1	3716.	395.0	3990.
#2	9165.	530.4	37.51	113.7	3732.	411.1	3980.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	9.399	2405.	87.13	100.0	1040.	140.5	140.8
#1	9.214	2402.	86.78	98.93	1037.	140.3	140.0
#2	9.583	2407.	87.49	101.1	1043.	140.8	141.7

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ethod: PACE-DN1 Sample Name: 650169480A Operator: CKW
un Time: 12/18/92 11:07:40
omment: PROJECT D21104.501 PREPPED 1G/200G CLP
ode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	6842.	-1.353	-.7685	88.85	.3677	-1.724	.4354
#1	6852.	-2.379	-.8254	88.90	.3661	-1.726	.4356
#2	6833.	-.3271	-.7116	88.80	.3692	-1.722	.4353

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	11420.	11.73	7.961	12.05	13570.	3.374	8.608
#1	11430.	11.68	7.835	12.18	13570.	3.606	8.834
#2	11420.	11.78	8.087	11.92	13570.	3.143	8.382

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	5372.	760.0	.7437	15.25	1378.	-4.764	1871.
#1	5395.	759.3	.7439	14.36	1413.	-8.226	1873.
#2	5349.	760.7	.7436	16.14	1342.	-1.302	1869.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.0347	188.0	40.90	.0426	622.4	26.02	34.89
#1	.3341	190.4	40.97	-1.988	622.5	26.42	34.94
#2	-.4035	185.6	40.83	2.073	622.3	25.63	34.85

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ethod: PACE-DN1 Sample Name: 650169499 Operator: CKW
un Time: 12/18/92 11:10:43
omment: PROJECT D21104.501 PREPPED 1G/200G CLP
ode: CONC Corr. Factor: 200

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	10660.	-1.016	9.221	133.4	.6257	-2.362	.4153
#1	10680.	.3403	6.468	133.7	.6251	-5.774	-.1008
#2	10640.	-2.372	11.97	133.1	.6262	1.050	.9314

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	17860.	15.70	10.80	22.62	19750.	9.866	15.30
#1	17830.	15.59	10.72	22.51	19750.	10.74	15.35
#2	17880.	15.80	10.88	22.73	19750.	8.990	15.26

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	8365.	508.7	.5513	16.41	2215.	-6.619	1668.
#1	8386.	508.2	.6480	14.86	2215.	-9.552	1678.
#2	8343.	509.1	.4547	17.95	2215.	-3.686	1658.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.1917	453.7	51.55	1.473	643.7	32.19	53.88

#1	-.3127	452.3	51.68	-1.648	644.0	32.32	53.60
#2	-.0707	455.1	51.42	4.594	643.3	32.06	54.16

Method: PACE-DN1 Sample Name: 650169499L Operator: CKW
Run Time: 12/18/92 11:13:08
Comment: PROJECT D21104.501 5X SER DIL PREPPED 1G/200G CLP
Mode: CONC Corr. Factor: 1000

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	10510.	-6.940	-4.793	132.2	1.098	-.3398	1.529
#1	10510.	-24.02	-1.087	131.6	1.105	4.894	.8694
#2	10500.	10.14	-8.500	132.9	1.090	-5.573	2.188

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	17920.	17.43	11.88	22.25	20150.	12.64	15.00
#1	17890.	17.17	12.51	22.81	20130.	.2987	15.23
#2	17950.	17.69	11.24	21.68	20180.	24.98	14.77

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	8248.	512.6	-2.568	14.24	2095.	-4.330	1468.
#1	8256.	511.6	1.547	9.938	2120.	20.28	1479.
#2	8239.	513.5	-6.682	18.54	2071.	-28.94	1458.

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0288	383.0	50.87	-2.844	644.9	31.84	55.07
#1	-1.509	385.9	50.97	6.006	644.0	29.90	53.48
#2	1.567	380.1	50.77	-11.69	645.7	33.78	56.67

Method: PACE-DN1 Sample Name: CRI2 Operator: CKW
Run Time: 12/18/92 11:16:42
Comment: SCN I-P-00003
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.1352	.1198	.2092	.0103	.0100	.0471	.0115
#1	.1219	.1010	.1962	.0100	.0098	.0497	.0135
#2	.1485	.1385	.2222	.0105	.0101	.0445	.0095

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0434	.0228	.0971	.0510	.0518	.0466	.0541
#1	.0345	.0197	.0946	.0511	.0511	.0455	.0546
#2	.0523	.0259	.0997	.0509	.0526	.0477	.0537

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	.1156	.0320	.0449	.0812	2.042	.2195	-.0348
#1	.0979	.0318	.0440	.0681	2.093	.2101	-.0368
#2	.1333	.0323	.0459	.0943	1.991	.2288	-.0328

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0217	.0939	.0202	.0862	.0199	.1081	.0438
#1	.0217	.0910	.0203	.0938	.0190	.1101	.0438
#2	.0217	.0967	.0202	.0787	.0208	.1062	.0437

Method: PACE-DN1 Sample Name: ICSA2 Operator: CKW
Run Time: 12/18/92 11:18:22
Comment: SCN P920707-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	518.1	.0077	-.0635	.0154	.0011	-.0768	-.0010
#1	517.9	-.0093	-.0580	.0155	.0010	-.1123	-.0029
#2	518.3	.0248	-.0689	.0154	.0012	-.0413	.0010

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	514.9	.0066	.0045	.0085	183.7	-.1114	.0041
#1	511.6	.0064	.0043	.0083	183.3	-.1068	.0035
#2	518.1	.0069	.0047	.0086	184.1	-.1160	.0048

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	519.0	-.0003	.0076	-.0238	.0015	-.0741	-.2357
#1	518.4	-.0011	.0068	-.0432	-.3056	-.1356	-.2510
#2	519.6	.0004	.0084	-.0044	.3085	-.0127	-.2203

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	-.0050	.1083	.0139	-.0340	.0032	-.0031	.0107
#1	-.0053	.1049	.0137	-.0089	.0029	-.0044	.0108
#2	-.0047	.1116	.0140	-.0590	.0035	-.0019	.0106

Method: PACE-DN1 Sample Name: CCV3 Operator: CKW
Run Time: 12/18/92 11:21:04
Comment: SCN P921023-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	9.729	1.019	1.046	.9815	.9413	.9587	.9867
#1	9.710	1.027	1.022	.9811	.9403	.9653	.9841
#2	9.747	1.010	1.070	.9819	.9423	.9522	.9893

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	102.6	.9736	.9596	.9473	9.453	1.035	96.92
#1	102.3	.9744	.9604	.9475	9.443	1.032	96.98
#2	103.0	.9728	.9587	.9471	9.463	1.039	96.86

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	97.96	.9648	.9796	.9417	96.76	9.875	100.7

#1	97.95	.9633	.9779	.9409	96.65	9.856	100.5
#2	97.96	.9662	.9813	.9424	96.88	9.895	100.9
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	1.029	98.25	.9672	1.033	1.003	1.056	.9831
#1	1.026	98.26	.9663	1.036	1.001	1.055	.9811
#2	1.033	98.24	.9681	1.031	1.006	1.057	.9851

Method: PACE-DN1 Sample Name: CCB3 Operator: CKW
Run Time: 12/18/92 11:22:59
Comment: SCN P921202-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.0305	-.0108	-.0210	.0001	.0004	-.0039	.0016
#1	.0399	.0012	-.0139	-.0002	.0004	-.0026	.0009
#2	.0211	-.0228	-.0281	.0003	.0004	-.0053	.0022
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0031	.0002	.0006	-.0007	.0012	.0001	.0017
#1	.0001	-.0003	-.0003	-.0009	.0012	-.0102	.0012
#2	.0060	.0007	.0014	-.0005	.0012	.0103	.0021
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	.0117	-.0002	-.0050	-.0085	.0771	-.0073	-.1078
#1	.0070	-.0000	-.0050	-.0004	-.0252	-.0093	-.0863
#2	.0164	-.0005	-.0050	-.0166	.1795	-.0053	-.1294
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0011	-.0698	-.0005	-.0032	-.0012	-.0020	.0011
#1	.0008	-.0700	-.0005	.0120	-.0017	-.0014	.0011
#2	.0014	-.0696	-.0005	-.0184	-.0006	-.0027	.0011

Method: PACE-DN1 Sample Name: ICSAB2 Operator: CKW
Run Time: 12/18/92 11:24:38
Comment: SCN P920707-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	501.0	.0014	-.0781	.5089	.4738	-.0548	.9676
#1	500.7	-.0088	-.1042	.5080	.4737	-.0550	.9676
#2	501.2	.0117	-.0519	.5099	.4739	-.0546	.9675
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	497.4	.4828	.4567	.4975	178.7	.8502	.0035
#1	494.4	.4784	.4530	.4966	178.0	.8424	.0030
#2	500.4	.4872	.4605	.4984	179.3	.8580	.0039

20
CKW

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	499.6	.4503	.0128	.8846	-.0964	-.0198	-.2519
#1	499.1	.4483	.0071	.8827	-.2032	-.0361	-.2619
#2	500.2	.4523	.0185	.8865	.0104	-.0035	-.2419

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.9179	.1186	.0133	-.0367	.0019	.5080	.9477
#1	.9160	.1180	.0133	-.0527	.0010	.5041	.9454
#2	.9197	.1193	.0133	-.0208	.0028	.5120	.9501

Method: PACE-DN1 Sample Name: CCV4 Operator: CKW
Run Time: 12/18/92 11:26:53
Comment: SCN P921023-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	9.798	1.032	1.031	.9901	.9471	.9797	.9815
#1	9.761	1.034	1.028	.9840	.9437	.9627	.9776
#2	9.835	1.031	1.034	.9962	.9504	.9967	.9854

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	102.3	.9759	.9594	.9575	9.489	1.005	98.32
#1	101.9	.9729	.9550	.9536	9.443	1.002	98.00
#2	102.7	.9790	.9638	.9614	9.536	1.008	98.64

Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	98.21	.9665	.9796	.9446	97.67	9.972	100.9
#1	97.92	.9638	.9794	.9514	97.25	9.956	100.5
#2	98.51	.9692	.9798	.9378	98.09	9.988	101.4

Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	1.030	99.26	.9745	.9942	1.006	1.057	.9837
#1	1.024	98.90	.9698	1.005	1.001	1.050	.9835
#2	1.035	99.62	.9792	.9834	1.011	1.065	.9839

Method: PACE-DN1 Sample Name: CCB4 Operator: CKW
Run Time: 12/18/92 11:29:24
Comment: SCN P921202-01
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	.0349	.0028	-.0374	.0001	.0004	-.0053	.0022
#1	.0298	.0080	-.0633	-.0000	.0004	-.0000	.0023
#2	.0400	-.0023	-.0114	.0002	.0004	-.0105	.0022

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	.0052	.0025	.0029	.0009	.0021	.0052	.0026

#1	.0056	.0012	.0031	.0006	.0015	.0001	.0030
#2	.0048	.0038	.0027	.0012	.0027	.0104	.0021
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	.0176	-.0000	-.0050	.0027	.4487	-.0133	-.1367
#1	.0140	-.0000	-.0099	.0002	.4198	-.0200	-.1313
#2	.0212	.0000	-.0002	.0052	.4776	-.0067	-.1422
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0033	-.0639	-.0004	-.0031	-.0000	.0006	-.0001
#1	.0026	-.0647	-.0005	-.0065	-.0006	-.0014	-.0001
#2	.0039	-.0631	-.0003	.0003	.0006	.0026	-.0002

Method: PACE-DN1 Sample Name: DLCSW Operator: CKW
Run Time: 12/18/92 11:31:13
Comment: PROJECT D21015.506 PREPPED 100G/100G
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	2.164	.5140	2.090	2.004	.0513	.2540	.0560
#1	2.161	.5260	2.101	2.019	.0516	.2527	.0566
#2	2.167	.5021	2.079	1.990	.0511	.2553	.0554
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Li6707
Avge	10.58	.2052	.5124	.2466	1.020	.5241	9.712
#1	10.55	.2021	.5090	.2468	1.020	.5107	9.791
#2	10.61	.2083	.5158	.2464	1.020	.5375	9.633
Elem	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Si2881
Avge	10.23	.5018	.1978	.5005	9.456	2.045	10.73
#1	10.22	.5006	.1968	.4978	9.485	2.054	10.73
#2	10.24	.5030	.1988	.5032	9.427	2.037	10.73
Elem	Ag3280	Na5895	Sr4215	Sn1899	Ti3349	V_2924	Zn2138
Avge	.0517	9.808	.2001	.5384	.1991	.5377	.5030
#1	.0502	9.899	.2010	.5422	.2000	.5384	.5026
#2	.0532	9.717	.1992	.5345	.1983	.5371	.5034

Method: PACE-DN1 Sample Name: LCSF Operator: CKW
Run Time: 12/18/92 11:36:41
Comment: PROJECT D21217.301 PREPPED 1FILTERG/10G
Mode: CONC Corr. Factor: 10

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	B_2496	Cd2288
Avge	22.45	4.737	20.65	20.63	.4723	2.948	.4887
#1	22.41	4.719	20.59	20.58	.4709	2.974	.4888
#2	22.49	4.754	20.70	20.67	.4737	2.921	.4886

PACER

INCORPORATED

THE ASSURANCE OF QUALITY

GFAA ANALYTE COVER SHEET

DATE: 1/5/93

PROJECT ID: D21104.501
D21102.502

ANALYTE: As

INSTRUMENT: 1-A

ANALYST: MSR

REVIEWED BY:

DATA ASSESSMENT LOG

Encountered severe matrix interference which resulted in poor analytical spike recoveries. Samples were reanalyzed using MSA and dilutions as required by SOW.

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

Pg. 1 of 4

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.067
Std.3	50.00	0.170
Std.4	100.00	~~0.322~~ 0.318

Analyte: TS

Date: 12/30/92

Project: D21104.501/D21102.502

Matrix: Solid

Analyst: MSR

Units: mg/Kg

Inst.ID: 1-A

Reviewed by: CKW 1-6-93

Comments: A = 20 ug/L ICV = 50 ug/L IDL = 3 ug/L

ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	48.5	49.5	49.0	1.4	1			98%R
2	ICB	-1.7	-0.9	-1.3	NC	1			
3	CRA	9.5	10.2	~~9.9~~ 9.8	5.0	1			99%R 98.0
4	CCV1	51.6	50.0	50.8	2.2	1			101.6%R
5	CCB1	-1.6	-2.5	~~2.1~~ -2.0	NC	1			
6	PBS	-2.2	-0.7	~~-1.5~~ -1.4	NC	1	200	ND 0.6 mg/Kg	
7	PBS A	18.7	16.9	17.8	~~7.7~~ 7.2				89%R
8	LCSS	29.1	30.3	29.7	2.9	20	200	119 mg/Kg	82.5%R
9	LCSS A	48.8	46.1	47.5	4.0				~~89~~ %R 88.5
10	18906.6	45.5	46.7	46.1	1.8	1	200	5X MSA	
11	18906.6A	55.5	57.9	56.7	3.0				53%R
12	18906.6 dup	52.7	49.8	51.2	4.0	1	200	5X RR	
13	18906.6A dup	59.2	58.8	59.0	0.5				38.5%R 39.0
14	CCV2	52.1	51.9	52.0	0.3	1			104%R
15	CCB2	1.7	1.2	1.4	NC	1			
16	18906.6 spk	29.5	72.4	51.0	59.4	1	200	5X RR	%RSD out
17	18906.6 dup spk	76.1	74.2	75.2	1.8	1	200	5X RR	
18	18907.4	21.4	21.6	21.5	0.7	1	200	MSA	
19	18907.4A	31.5	30.9	31.2	1.4				48.5%R
20	~~18~~ 16946.4	35.9	38.2	37.0	4.4	1	200	2X MSA	
21	16946.4A	47.6	50.0	48.8	3.5				~~38.5~~ %R 50.0
22	16947.2	89.1	89.1	89.1	0	1	200	5X RR	
23	16947.2A	101.5	99.7	100.6	1.3				57.5%R
24	CCV3	47.8	48.8	48.3	1.5	1			96.6%R
25	CCB3	-0.1	1.2	0.6	NC	1			
26	16948.0	25.5	26.7	26.1	3.2	1	200	MSA	
27	16948.0A	37.2	37.1	37.2	0.2				55.5%R
28	16948.0 dup	~~49.0~~ 28.2	~~47.9~~ 26.4	27.3	4.7	1	200	MSA	
29	16948.0A dup	~~48.2~~ 37.2	~~48.2~~ 37.1	37.2	0.2				~~53.5~~ %R 49.5%R
30	16948.0 spk	~~45.5~~ 47.0	~~45.4~~ 47.9	~~48.5~~ 47.4	1.6	1	200	9.7 mg/Kg	36.3%R
31	16948.0 dup spk	~~55.9~~ 48.2	48.2	48.2	0	1	200	9.64 mg/Kg	35.5%R
32	16949.9	45.5	45.4	~~45.5~~ 45.4	0.2	1	200	5X MSA	
33	16949.9A	55.4	55.9	~~55.6~~ 55.6	0.6				51%R
34	CCV4	50.2	49.3	49.8	1.3	1			99.6%R
35	CCB4	0.0	0.6	0.3	NC	1			

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.101
Std.3	50.00	0.210
Std.4	100.00	0.453

Analyte: As
Date: 12/31/92
Project: D21104.501/D21102.502
Matrix: Solid
Analyst: MSR
Units: mg/Kg
Inst.ID: I-A
Reviewed by: [illegible] 1-6-93
Comments: A=20 ug/L ICV=50 ug/L IDL=3.0 ug/L
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	51.0	49.0	50.0	2.8	1			100%R
2	ICB	-1.6	-1.5	-1.6	NC	1			
3	CRA	7.1	8.1	7.6	NC	1			76%R
4	CCV1	46.9	51.3	49.1	6.3	1			98.2%R
5	CCB1	-2.5	-2.2	-2.4	NC	1			
6	18906.6 dup	10.3	10.2	10.2	0.7	5	200	10 mg/Kg	
7	18906.6A trx	26.3	28.6	27.4	5.9				~~86.5%R~~ 80.0
8	18906.6 spK	15.0	15.8	15.4	3.7	5	200	15 mg/Kg	62.5%R
9	18906.6dup trx	17.0	15.7	16.4	5.6	5	200	16 mg/Kg	75%R
10	16947.2	19.9	19.8	19.8	0.4	5	200	~~20 mg/Kg~~	
11	16947.2A	38.0	35.0	36.5	5.8				~~83%R~~ 83.5
12	CCV2	50.7	49.0	49.8	2.4	1			~~99.8%R~~ 99.6
13	CCB2	-0.3	0.3	0	NC	1			
14									
15									
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34									
35									

not used MSR

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
d.1	0.00 ug/L	0.000
d.2	20.00	0.097
d.3	50.00	0.213
d.4	100.00	0.410

Analyte: As
Date: 12/31/92
Project: D21104.501/D21102.502
Matrix: Soil
Analyst: MSR
Units: mg/Kg
Inst. ID: I-A
Reviewed by: CKW 1-6-93
Comments: A=20 ug/L ICV=50 ug/L IDL=3.0 ug/L
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
ICV	49.2	N/A	N/A	N/A	1			98.4%R
ICB	-0.1				1			
CRA	9.5				1			95%R
CCV1	50.0				1			100%R
CCB1	-0.7				1			
18906.6	8.9				5	200	10 mg/Kg	r=.999
+15	20.6							x=10.4
+30	31.9							y=8.5
✓mk +45	46.9							m=0.82
18907.4	22.1				1	200	6.8 mg/Kg	r=.9999
+15	32.1							x=33.8
+30	42.0							y=22.2
✓mk +45	51.6							m=0.66
CCV2	47.8				1			95.6%R
CCB2	-1.3				1			
16946.4	15.6				2	200	7.9 mg/Kg	r=.9985
+15	29.7							x=18.8
+30	40.1							y=16.2
✓mk +45	53.1							m=0.82
16948.0	25.3				1	200	6.8 mg/Kg	r=.998
+15	39.0							x=34.2
+30	49.7							y=26.3
✓mk +45	60.1							m=0.77
CCV3	47.0				1	1 mk		94%R
CCB3	-1.7				1	1 mk		
16948.0dup	26.1				1	200	6.8 mg/Kg	r=.9995
+15	38.4							x=34.0
+30	48.9							y=26.3
✓mk +45	61.2							m=0.77
16949.9	7.3				5	200	9.4 mg/Kg	r=0.9996
+15	19.9							x=9.4
+30	30.8							y=7.5
✓mk +45	43.3							m=0.8
CCV4	47.8				1	1 mk		95.6%R
CCB4	-0.9	✓mk	✓mk	✓mk	1	1 mk		

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

Pg. 4 of 4

	Conc.	Abs.
td.1	0.000 ug/L	0.000
td.2	20.00	0.082
td.3	50.00	0.188
td.4	100.00	0.324

Analyte: As

Project: D211 04.501/D211 02.502

Analyst: MSR

Inst. ID: 1-E

Comments: See page 1

Date: 1/5/93

Matrix: Soil

Units: mg/Kg

Reviewed by: CKW 1-6-93

Lab ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
	ICV	47.1	N/A	N/A	N/A	1			94.2%R
	ICB	-1.6				1			
	CRA	11.5				1			115%R
	CCV1	47.0				1			94%R
	CCB1	-1.4				1			
	16947.2	20.6				5	200	22 mg/Kg	r=.9996
	+15	33.2							x=22.2
	+30	48.0							y=20.2
	+45	61.3							m=0.91
	CCV2	49.9				1			99.8%R
	CCB2	-2.5				1			
2									
3									
4									
5									
6									
7									
8									
9									
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
30									
31									
32									
33									
34									
35									

not used

abs - 0.170
abs - 0.322

0.714

0000084

[redacted]

Rg1

0.018		
0.000		
0.067		
20.0	I	
50.8	C	
50.0	II	
93.6	C	
	R III	
48.5		1
49.5		
-1.7		2
-0.9		
9.5		3
10.2		
51.6		4
50.0		
-1.6		5
-2.5		
-2.2		6
-0.7		
18.7		
16.9		7
29.1		8
30.3		
48.8		9
46.1		
45.5		10
46.7		
55.5		11
57.9		
52.7		12
49.8		
59.2		13
58.8		
52.1		14
51.9		
1.7		15
1.2		
29.5		16
MSR 72.4	R	
76.1	R	17
74.2	R	
21.4		18
21.6		
31.5		19
30.9		
35.9		20
38.2		
47.6		21
50.0		
MSR 89.1	R	22
89.1	R	
101.5	R	23
99.7	R	
47.8		24
48.8		

As PS 2
12/31/92
MSR

0.016		
0.000		
0.101		
20.0	I	
41.6	C	
50.0	II	
107.8	C	
100.0	III	
51.0		
49.0		
-1.6		
-1.5		
7.1		
8.1		
46.9		
51.3		
-2.5		
-2.2		
10.3		
10.2		
26.3		
28.6		
15.0		
15.8		
17.0		
15.7		
19.9	MSR	
19.8		
38.0		
35.0		
50.7		
49.0		
-0.3		
0.3		

As PS 4
D21104501
D21102502
Rg1
1/5/93
MSR

1.025		
20.015		
0.000		
0.082		
20.0	I	
45.9	C	
50.0	II	
86.1	C	
100.0	III	
47.1		
-1.6		
11.5		
47.0		
-1.4		
20.6		
33.2		
48.0		
61.3		
49.9		
-2.5		

50 - .214
100 - 0.347
Rg3

-0.005	
0.000	
0.097	
20.0	I
43.9	C
50.0	II
96.3	C
100.0	III
49.2	
2	-0.1
3	9.5
4	50.0
5	-0.7
6	8.9
7	20.6
8	31.9
9	45.9
10	22.1
11	32.1
12	42.0
13	51.6
14	47.8
15	-1.3
16	15.6

PACE R

INCORPORATED

THE ASSURANCE OF QUALITY

GFAA ANALYTE COVER SHEET

DATE: 12/30/92

PROJECT ID: D21104.501
D21102.502

ANALYTE: Pb

INSTRUMENT: 1-B

ANALYST: MSR

REVIEWED BY: CKW 1-4-93

DATA ASSESSMENT LOG

No problems.

PACE INCORPORATED - DENVER REGIONAL OFFICE

G.C. Benchsheet (CLP)

Pg. 1 of 3

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.089
Std.3	50.00	0.240
Std.4	100.00	0.455

Analyte: Pb

Project: D211015a/D211025a2

Analyst: MSR

Inst. ID: 1-B

Date: 12/28/92

Matrix: Solid

Units: mg/Kg

Reviewed by: CKW 1-7-93

Comments: A=20 ug/L ICV=50 ug/L IDL=2.0 ug/L

ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	See	printout	54.8	0.5	1			109.6%R
2	ICB			-0.4	NC	1			
3	CRA			4.3	0.0	1			143%R
4	CCV1			53.3	0.8	1			106.6%R
5	CCB1			0.7	NC	1			
6	PBS			0.6	NC	1	200	Not used	
7	PBSA			23.4	1.3				
8	LCSS			37.1	1.2	20	200	148 mg/Kg	125.8%R
9	LCSSA			54.1	3.8				85%R
10	18906.6			76.5	0.3	1	200	153 mg/Kg	
11	18906.6A			96.3	1.1				99%R
12	18906.6 dup			81.9	0.3	1	200	164 mg/Kg	
13	18906.6A			99.4	0.6				87.5%R
14	CCV2			53.9	1.0	1			107.8%R
15	CCB2			2.6B	~~6.5~~	1			
16	18906.6 spK								
17	18906.6 spK dup								
18	18907.4								
19	18907.4A								
20	16946.4								
21	16946.4A								
22	16947.2								
23	16947.2A								
24	CCV3								
25	CCB3								
26	16948.0								
27	16948.0A								
28	16948.0 dup								
29	16948.0A dup								
30	16948.0 spK								
31	16948.0 spK dup								
32	16949.9								
33	16949.9A								
34	CCV4								
35	CCB4								

NO X

Used MSR

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.098
Std.3	50.00	0.242
Std.4	100.00	0.450

Analyte: Ft Pb
Project: D21104.S01/D21102.S02
Analyst: MBR
Inst. ID: I-B
Date: 12/28/92
Matrix: Mg/Kg
Units: Solid
Reviewed by: CKW 1-4-93
Comments: A=20 ug/L ICV=50 ug/L IDL=2.0 ug/L
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	See	printout	53.8	0.0	1			107.6%R
2	ICB			-1.1	NC	1			
3	CRA			1.5	NC	1			50%R
4	CCV1			51.5	0.8	1			103%R
5	CCB1			-1.2	NC	1			
6	PBS			-1.0	NC	1	200	ND 0.4 mg/Kg	
7	PBSA			19.7	1.4				98.5%R
8	18906.6 spK			98.4	1.4	1	200	19.7 mg/Kg	110%R
9	18906.6 spKdup			99.6	0.6	1	200	19.9 mg/Kg	115%R
10	18907.4			73.3	0.2	1	200	14.7 mg/Kg	
11	18907.4A			93.6	0.4				101.5%R
12	18946.4			45.8	0.9	1	200	9.2 mg/Kg	
13	16946.4A			65.9	0.4				100.5%R
14	CCV2			54.1	4.5	1			108.2%R
15	CCB2			-1.2	NC	1			
16	16947.2								
17	16947.2A								
18	16948.0								
19	16948.0A								
20	16948.0dup								
21	16948.0A ↓ mr								
22	16948.0 spK								
23	16948.0 spKdup								
24	16949.9								
25	16949.9A								
26	CCV3								
27	CCB3	↓ mr	↓ mr						
28									
29									
30									
31									
32									
33									
34									
35									

26 ✗
less 8
MSK

PACE INCORPORATED - DENVER REGIONAL OFFICE

Quick Benchsheet (CLP) Pg. 3 of 3

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.116
Std.3	50.00	~~0.279~~ 0.270
Std.4	100.00	~~0.499~~ 0.497

Analyte: Pb
Project: D2 [illegible] / D211025D2
Analyst: MSR
Inst. ID: I-B
Date: 12/23/92
Matrix: Solid
Units: mg/Kg
Reviewed by:
Comments: A=2.0 ug/L ICV=50 ug/L IDL=2.0 ug/L
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	See	printout	54.0	1.2	1			108%R
2	ICB			-0.5	NC	1			
3	CRA			3.2	3.8	1			106.7%R
4	CCV1			51.7	3.8	1			103.4%R
5	CCB1			0.3	NC	1			
6	16947.2			47.0	1.6	1	200	9.4 mg/Kg	
7	16947.2A			68.6	0.3				108%R
8	16948.0			27.3	4.0	1	200	5.5 mg/Kg	
9	16948.0A			47.2	1.6				99.5%R
10	16948.0Dup			25.0	0.4	1	200	5.0 mg/Kg	
11	16948.0A Vmr			46.2	2.2				106%R
12	16948.0 Spk			47.3	1.3	1	200	9.5 mg/Kg	100%R
13	16948.0 Vmr Dup			47.3	1.9	1	200	9.5 mg/Kg	100%R
14	16949.9			73.2	1.3	1	200	~~14.6~~ 14.5 mg/Kg	
15	16949.9A			91.2	0.4				90%R
16	CCV2			51.8	1.5	1			103.6%R
17	CCB2	Vmr	Vmr	-0.9	NC	1			
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									

MSR

Varian DS-15 AA-1275/1475 Report

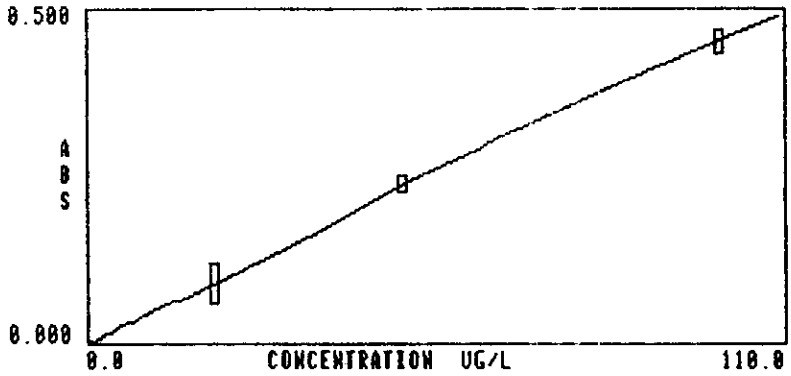
Pace, Inc.
5930 McIntyre St.
Golden, CO 80403

Pb pg 1
D21184.501
D21102.502
12/28/92
MSK

OPERATOR MSR 1100
DATE 12/28/92
BATCH Pb D21102.502

PROGRAM 6 Pb HNO3

SAMPLE	CONC UG/L	%RSD	MEAN ABS	READINGS	
BLANK	0.0		-0.018	-0.020	-0.017
STANDARD 1	20.0	6.3	0.089	0.093	0.085
STANDARD 2	50.0	2.6	0.240	0.245	0.236
STANDARD 3	100.0	3.5	0.455	0.443	0.466

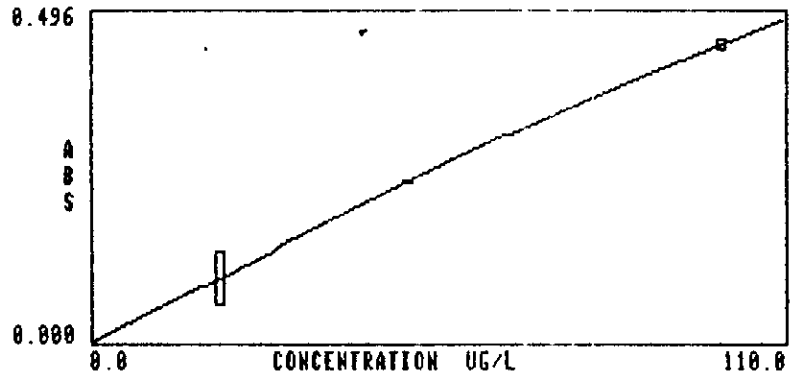


SAMPLE 1	54.8	0.5	0.262	0.263	0.261
SAMPLE 2	-0.4	99.9	-0.002	-0.004	0.000
SAMPLE 3	4.3	0.0	0.019	0.019	0.019
SAMPLE 4	53.3	0.8	0.255	0.254	0.257
SAMPLE 5	0.7	47.1	0.003	0.002	0.004
SAMPLE 6	0.6	28.2	0.002	0.003	0.002
SAMPLE 7	23.4	1.3	0.105	0.104	0.106
SAMPLE 8	37.1	1.2	0.172	0.171	0.174
SAMPLE 9	54.1	3.8	0.259	0.266	0.252
SAMPLE 10	76.5	0.3	0.357	0.356	0.358
SAMPLE 11	96.3	1.1	0.440	0.436	0.443
SAMPLE 12	81.9	0.3	0.380	0.379	0.381
SAMPLE 13	99.4	0.6	0.452	0.450	0.454
SAMPLE 14	53.9	1.0	0.258	0.256	0.260
SAMPLE 15	2.6	6.1	0.011	0.012	0.011
SAMPLE 16	98.2	0.6	0.447	0.445	0.449
SAMPLE 17	98.5	1.4	0.448	0.453	0.444
SAMPLE 18	74.2	1.2	0.347	0.344	0.350
SAMPLE 19	94.0	0.3	0.430	0.429	0.431

Pb pg 2
D21104.501
D21102.502
12/28/92
MSR

PROGRAM 6 Pb HNO3

SAMPLE	CONC UG/L	%RSD	MEAN ABS		READINGS
BLANK	0.0		0.024	0.029	0.020
STANDARD 1	20.0	7.8	0.098	0.093	0.104
STANDARD 2	50.0	0.2	0.242	0.242	0.243
STANDARD 3	100.0	1.4	0.450	0.446	0.455

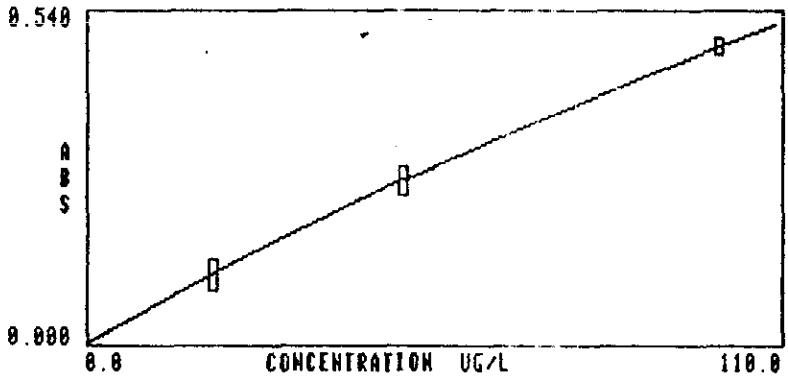


SAMPLE 1	53.8	0.0	0.260	0.260	0.260
SAMPLE 2	-1.1	64.2	-0.005	-0.003	-0.008
SAMPLE 3	1.5	9.4	0.007	0.007	0.008
SAMPLE 4	51.5	0.8	0.250	0.251	0.248
SAMPLE 5	-1.2	23.5	-0.006	-0.005	-0.007
SAMPLE 6	-1.0	0.0	-0.005	-0.005	-0.005
SAMPLE 7	19.7	1.4	0.097	0.096	0.098
SAMPLE 8	98.4	1.4	0.444	0.449	0.440
SAMPLE 9	99.6	0.6	0.449	0.451	0.447
SAMPLE 10	73.3	0.2	0.345	0.345	0.346
SAMPLE 11	93.6	0.4	0.427	0.428	0.425
SAMPLE 12	45.8	0.9	0.222	0.221	0.224
SAMPLE 13	65.9	0.4	0.314	0.313	0.315
SAMPLE 14	54.1	4.5	0.261	0.253	0.270
SAMPLE 15	-1.2	47.1	-0.006	-0.004	-0.008
SAMPLE 16	51.6	0.5	0.250	0.249	0.251
SAMPLE 17	73.7	0.0	0.347	0.347	0.347
SAMPLE 18	30.8	1.8	0.151	0.149	0.153
SAMPLE 19	51.4	0.5	0.249	0.248	0.250
SAMPLE 20	30.3	1.4	0.149	0.150	0.147
SAMPLE 21	50.8	0.0	0.246	0.246	0.246
SAMPLE 22	53.5	1.9	0.259	0.255	0.262
SAMPLE 23	51.4	0.0	0.249	0.249	0.249
SAMPLE 24	79.6	0.5	0.371	0.370	0.373
SAMPLE 25	101.7	0.3	0.457	0.456	0.458
SAMPLE 26	57.2	0.7	0.276	0.274	0.277
SAMPLE 27	-0.4	99.9	-0.002	0.000	-0.004

Pb pg 3
D21104.501
D21102.502
MSR

PROGRAM 6 Pb HNO3

SAMPLE	CONC UG/L	%RSD	MEAN ABS	READINGS	
BLANK	0.0		-0.023	-0.022	-0.024
STANDARD 1	20.0	4.8	0.116	0.112	0.120
STANDARD 2	50.0	4.4	0.270	0.279	0.262
STANDARD 3	100.0	2.4	0.490	0.499	0.482



SAMPLE 1	54.0	1.2	0.289	0.287	0.292
SAMPLE 2	-0.5	99.9	-0.003	0.000	-0.006
SAMPLE 3	3.2	26.7	0.018	0.015	0.022
SAMPLE 4	51.7	3.8	0.278	0.286	0.271
SAMPLE 5	0.3	99.9	0.001	0.003	0.000
SAMPLE 6	47.0	1.6	0.256	0.253	0.259
SAMPLE 7	68.6	0.3	0.357	0.358	0.356
SAMPLE 8	27.3	4.0	0.155	0.160	0.151
SAMPLE 9	47.2	1.6	0.257	0.260	0.254
SAMPLE 10	25.0	0.4	0.143	0.144	0.143
SAMPLE 11	46.2	2.2	0.252	0.256	0.248
SAMPLE 12	47.3	1.3	0.257	0.260	0.255
SAMPLE 13	47.3	1.9	0.257	0.254	0.261
SAMPLE 14	73.2	1.3	0.377	0.381	0.374
SAMPLE 15	91.2	0.4	0.455	0.456	0.453
SAMPLE 16	51.8	1.5	0.279	0.282	0.276
SAMPLE 17	-0.9	0.0	-0.005	-0.005	-0.005

PACER

INCORPORATED

THE ASSURANCE OF QUALITY

GFAA ANALYTE COVER SHEET

DATE: 12/31/92

PROJECT ID: D21104.501
D21102.502

ANALYTE: Se

INSTRUMENT: 1-B

ANALYST: MSR

REVIEWED BY: CKW 1-4-93

DATA ASSESSMENT LOG

Encountered severe matrix interference which resulted in poor analytical spike recoveries. Samples were diluted and reanalyzed.

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.081
Std.3	50.00	0.218
Std.4	100.00	0.429

Analyte: Se
Project: D21104.501
Analyst: D21102.502 / MSR
Inst.ID: 1-B
Comments: A = 10 ug/L ICV = 50 ug/L IDL = 3.0 ug/L
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Date: 12/28/92
Matrix: Solid
Units: mg/Kg
Reviewed by: CMD 1-4-93

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	See	printout	49.4	9.2	1			98.8%R
2	ICB			-1.0	NC	1			
3	CRA			3.2	NC	1			64%R
4	CCV1			52.7	5.2	1			105.4%R
5	CCB1			-3.7 B	NC	1			
6	PBS			-1.0	NC	1		Not used	RSD4
7	PBSA			21.3	20.4			wrong spk	(20)
8	LCSS			39.1	0.8	20	200	156 mg/Kg	94.8%R
9	LCSS A			46.2	3.8				
10	18906.6			-13.3	NC	1	200	10X RR	
11	18906.6A			-3.9	NC				0%R
12	18906.6 Dup			-16.7	NC	1	200	10XRR	
13	18906.6 A Dup			-6.7	NC				0%R
14	CCV2			50.8	0.3	1			101.6%R
15	CCB2			-0.9	NC	1			
16	18906.6 spK			-5.2	NC	1	200	ND 0.6 mg/K	0%R
17	18906.6 Dup Dup			-6.9	NC	1	200	ND 0.6 mg/K	0%R
18	18907.4			-9.6	NC	1	200	10XRR	
19	18907.4A			-2.2	NC				0%R
20	16946.4			-9.9	NC	1	200	10XRR	
21	16946.4A			-2.7	NC				0%R
22	16947.2			-7.3	NC	1	200	10XRR	
23	16947.2A			-6.0	NC				0%R
24	CCV3			50.1	0.9	1			100.2%R
25	CCB3			-1.0	NC	1			
26	16948.0			-7.5	NC	1	200	10XRR	
27	16948.0A			-4.3	NC				0%R
28	16948.0 Dup			-11.7	NC	1	200	10XRR	
29	16948.0A Dup			-2.1	NC				0%R
30	16948.0 spK			-8.4	NC	1	200	ND 0.6 mg/K	0%R
31	16948.0 Dup Dup			-7.4	NC	1		ND 0.6 mg/K	0%R
32	16949.9			-14.6	NC	1	200	10XRR	
33	16949.9A			-5.7	NC				
34	CCV4			50.7	1.9	1			101.4%R
35	CCB4	Dup	Dup	-4.8 B	NC	1			

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.098
Std.3	50.00	0.232
Std.4	100.00	0.438

Analyte: Se
Date: 12/30/92
Project: D21104.501 / D21102.02
Matrix: Solid
Analyst: MSR
Units: mg/kg
Inst. ID: 1-B
Reviewed by: CKW 1-4-93
Comments: A = 0 ug/L ICV = 50 ug/L IDL = 30 ug/L
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	See	printout	46.0	1.3	1			92%R
2	ICB			-0.8	NC	1			
3	CRA			5.0	NC	1			100%R
4	CCV1			48.8	3.1	1			~~93.6%R~~ 97%R
5	CCB1			1.5	NC	1			
6	PBS			-0.2	NC	1	200	Not used	
7	PBS A			6.4	20.2				64%R
8	189066			-0.1	NC	10	200	ND 6 mg/kg	(W)
9	189066A			6.5	0.0				65%R
10	189066 dup			-2.4	NC	10	200	ND 6 mg/kg	(W)
11	189066A Vmc			4.7	NC				47%R
12	189074			-0.3	NC	10	200	ND 6 mg/kg	(W)
13	189074A			6.2	2.3				62%R
14	CCV2			51.5	4.4	1			103%R
15	CCB2			-3.1B	NC	1			
16	169464			0.6	NC	10	200	ND 6 mg/kg	(W)
17	169464A			7.9	14.5				79%R
18	169480			-2.9	NC	10	200	ND 6 mg/kg	(W)
19	169480A			6.4	15.7				64%R
20	169480 dup			-1.2	NC	10	200	ND 6 mg/kg	(W)
21	169480A Vmc			6.7	0.0				67%R
22	169499			-2.5	NC	10	200	ND 6 mg/kg	(W)
23	169499A			5.9	14.6				59%R
24	CCV3			51.5	0.8	1			103%R
25	CCB3	Vmc	Vmc	2.4	NC	1			
26									
27									
28									
29									
30					Not				
31						used			
32						MSR			
33									
34									
35									

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.095
Std.3	50.00	0.234
Std.4	100.00	0.468

Analyte: Se
Project: D2104.501/D2110250 2
Analyst: MSR
Inst. ID: 1-B

Date: 12/31/92
Matrix: Solid
Units: mg/Kg
Reviewed by: [illegible] 1-4-93

Comments: A= ug/L ICV=50 ug/L IDL=
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	See	printout	47.1	0.0	1			94.2%R
2	ICB			0.0	NC	1			
3	CRA			1.8	NC	1			~~60%R~~ 36%R
4	CCV1			47.1	9.5	1			94.2%R
5	CCB1			-0.7	NC	1			
6	PBS			-1.9	NC	1	200	ND 0.6 mg/kg	
7	PBSA			11.0	12.1				110%R
8	CCV2			51.6	2.6	1			103.2%R
9	CCB2	Junk	Junk	-0.4	NC	1			
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
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33									
34									
35									

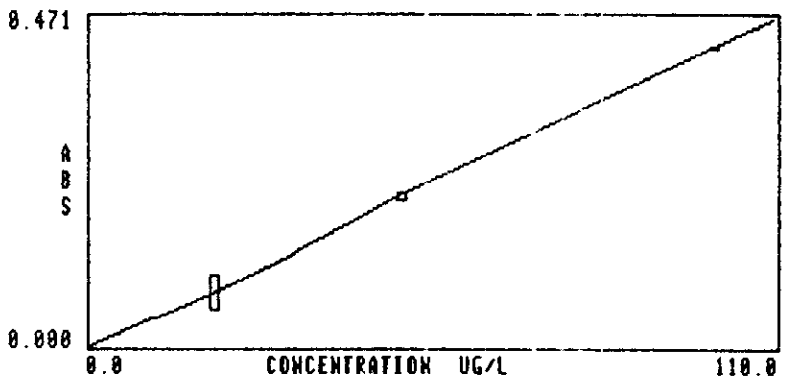
MSR

0000096

Se pg 1
D21104.504
D21102.502
12/28/92
MSR

PROGRAM 6 Pb HNO3

SAMPLE	CONC UG/L	%RSD	MEAN ABS	READINGS	
BLANK	0.0		-0.001	0.000	-0.003
STANDARD 1	20.0	5.2	0.081	0.084	0.078
STANDARD 2	50.0	1.2	0.218	0.216	0.220
STANDARD 3	100.0	0.4	0.429	0.430	0.427



SAMPLE 1	49.4	9.2	0.215	0.201	0.229
SAMPLE 2	-1.0	99.9	-0.004	-0.001	-0.007
SAMPLE 3	3.2	0.0	0.013	0.013	0.013
SAMPLE 4	52.7	5.2	0.229	0.238	0.221
SAMPLE 5	-3.7	18.8	-0.015	-0.013	-0.017
SAMPLE 6	-1.0	70.7	-0.004	-0.002	-0.006
SAMPLE 7	21.3	20.4	0.086	0.074	0.099
SAMPLE 8	39.1	0.8	0.166	0.167	0.165
SAMPLE 9	46.2	3.8	0.199	0.194	0.205
SAMPLE 10	-13.3	18.3	-0.054	-0.061	-0.047
SAMPLE 11	-3.9	26.5	-0.016	-0.019	-0.013
SAMPLE 12	-16.7	5.2	-0.067	-0.070	-0.065
SAMPLE 13	-6.7	0.0	-0.027	-0.027	-0.027
SAMPLE 14	50.8	0.3	0.222	0.221	0.222
SAMPLE 15	-0.9	99.9	-0.003	0.002	-0.009
SAMPLE 16	-5.2	13.4	-0.021	-0.023	-0.019
SAMPLE 17	-6.9	10.1	-0.028	-0.026	-0.030
SAMPLE 18	-9.6	21.7	-0.039	-0.045	-0.033
SAMPLE 19	-2.2	94.2	-0.009	-0.015	-0.003
SAMPLE 20	-9.9	10.6	-0.040	-0.043	-0.037
SAMPLE 21	-2.7	77.1	-0.011	-0.005	-0.017
SAMPLE 22	-7.3	16.7	-0.029	-0.026	-0.033
SAMPLE 23	-6.0	37.5	-0.024	-0.018	-0.031
SAMPLE 24	50.1	0.9	0.218	0.217	0.220
SAMPLE 25	-1.0	99.9	-0.004	-0.001	-0.007
SAMPLE 26	-7.5	11.5	-0.030	-0.033	-0.028
SAMPLE 27	-4.3	12.1	-0.017	-0.016	-0.019
SAMPLE 28	-11.7	10.4	-0.047	-0.044	-0.051

SAMPLE	31	-7.4	4.7	-0.030	-0.029	-0.031

0000097

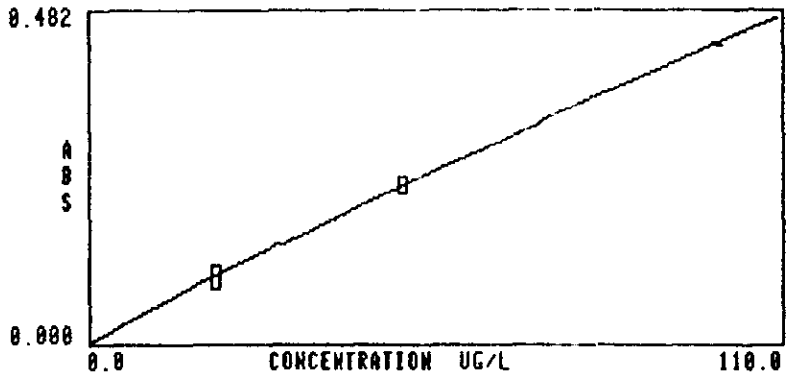
Se ps 1
D21104.501
D21102.502
12/28/92
MX

SAMPLE		CONC UG/L	%RSD	MEAN ABS		READINGS
SAMPLE	32	-14.6	14.3	-0.059	-0.053	-0.065
SAMPLE	33	-5.7	24.5	-0.023	-0.027	-0.019
SAMPLE	34	50.7	1.9	0.221	0.224	0.218
SAMPLE	35	-4.8	47.1	-0.019	-0.013	-0.026

Se PS 2
D21104.501
D21102.502
P2/30/92
MSK

PROGRAM 6 Pb HNO3

SAMPLE	CONC UG/L	%RSD	MEAN ABS	READINGS	
BLANK	0.0		-0.009	-0.009	-0.010
STANDARD 1	20.0	3.5	0.098	0.096	0.101
STANDARD 2	50.0	2.4	0.232	0.228	0.236
STANDARD 3	100.0	0.4	0.438	0.440	0.437



SAMPLE 1	46.0	1.3	0.215	0.217	0.213
SAMPLE 2	-0.8	99.9	-0.004	0.000	-0.008
SAMPLE 3	5.0	37.5	0.024	0.031	0.018
SAMPLE 4	48.8	3.1	0.227	0.232	0.222
SAMPLE 5	1.5	65.9	0.007	0.011	0.004
SAMPLE 6	-0.2	99.9	-0.001	0.000	-0.002
SAMPLE 7	6.4	20.2	0.031	0.036	0.027
SAMPLE 8	-0.1	99.9	-0.000	0.009	-0.010
SAMPLE 9	6.5	0.0	0.032	0.032	0.032
SAMPLE 10	-2.4	11.7	-0.012	-0.011	-0.013
SAMPLE 11	4.7	18.4	0.023	0.020	0.026
SAMPLE 12	-0.3	99.9	-0.001	0.000	-0.003
SAMPLE 13	6.2	2.3	0.030	0.030	0.031
SAMPLE 14	51.5	4.4	0.238	0.246	0.231
SAMPLE 15	-3.1	31.9	-0.015	-0.019	-0.012
SAMPLE 16	0.6	99.9	0.003	-0.003	0.009
SAMPLE 17	7.9	14.5	0.039	0.043	0.035
SAMPLE 18	-2.9	24.3	-0.014	-0.017	-0.012
SAMPLE 19	6.4	15.7	0.031	0.028	0.035
SAMPLE 20	-1.2	47.1	-0.006	-0.004	-0.008
SAMPLE 21	6.7	0.0	0.033	0.033	0.033
SAMPLE 22	-2.5	16.9	-0.013	-0.011	-0.014
SAMPLE 23	5.9	14.6	0.029	0.026	0.032
SAMPLE 24	51.5	0.8	0.238	0.237	0.240
SAMPLE 25	2.4	70.7	0.012	0.018	0.006

Se pg 3
D21104.501
D21102.502
12/31/92
MSR

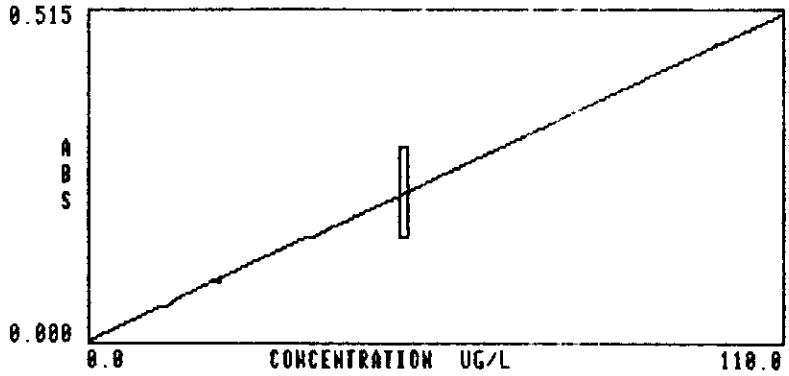
Varian DS-15 AA-1275/1475 Report

Pace, Inc.
5930 McIntyre St.
Golden, CO 80403

OPERATOR MSR 1215
DATE 12/31/92
BATCH Se D21102.502

PROGRAM 6 Pb HNO3

SAMPLE	CONC UG/L	%RSD	MEAN ABS	READINGS	
BLANK	0.0		0.067	0.065	0.069
STANDARD 1	20.0	0.7	0.095	0.096	0.095
STANDARD 2	50.0	13.9	0.234	0.257	0.211
STANDARD 3	100.0	0.0	0.468	0.468	0.468



SAMPLE 1	47.1	0.0	0.221	0.221	0.221
SAMPLE 2	0.0	99.9	0.000	-0.002	0.002
SAMPLE 3	1.8	58.2	0.009	0.005	0.012
SAMPLE 4	47.1	9.5	0.221	0.236	0.206
SAMPLE 5	-0.7	99.9	-0.003	-0.009	0.002
SAMPLE 6	-1.9	31.4	-0.009	-0.007	-0.011
SAMPLE 7	11.0	12.1	0.052	0.048	0.057
SAMPLE 8	51.6	2.6	0.241	0.237	0.246
SAMPLE 9	-0.4	70.7	-0.002	-0.003	-0.001

0000100

PACER

INCORPORATED

THE ASSURANCE OF QUALITY

GFAA ANALYTE COVER SHEET

DATE: 12/30/92

PROJECT ID: D21104.501
D21102.502

ANALYTE: TL

INSTRUMENT: 1-A

ANALYST: MSR

REVIEWED BY: CKW 1-4-93

DATA ASSESSMENT LOG

No problems.

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.102
Std.3	50.00	0.228
Std.4	100.00	0.409

Analyte: Tl

Project: D21104.S01/D21102.S02

Analyst: MSK

Inst.ID: 1-A

Date: 12/28/92

Matrix: Soil

Units: mg/kg

Reviewed by: CHW 1-4-93

Comments: A = 20 ug/L ICV = 50 ug/L IDL = 3.0 mg/L

ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	53.3	53.1	53.2	0.3	1			106.4%R
2	ICB	-0.4	-0.4	-0.4	NC	1			
3	CRA	8.3	11.2	9.8	NC	1			98%R
4	CCV1	46.3	45.0	45.6	2.0	1			~~91.4%R~~ 91.2%R
5	CCB1	-0.2	-0.2	-0.2	NC	1			
6	PBS	-0.4	-0.4	-0.4	NC	1	200	ND 0.6 mg/kg	
7	PBSA	14.8	20.3	17.6	22.1				88%R
8	LCSS	14.8	14.8	14.8	0	20	200	59.2 mg/kg	99.7%R
9	LCSSA	32.5	31.3	31.9	2.7				85.5%R
10	18906.6	0.6	0.7	0.6	NC	1	200	ND 0.6 mg/kg	
11	18906.6A	20.9	22.6	21.8	5.5				109%R
12	18906.6 dup	1.1	1.0	1.0	NC	1	200	ND 0.6 mg/kg	
13	18906.6A dup	21.5	22.6	22.0	3.5				110.5%R
14	CCV2	50.6	48.9	49.8	2.4	1			99.6%R
15	CCB2	-0.1	-0.3	-0.2	NC	1			
16									
17									
18									
19									
20									
21									
22									
23									
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30									
31									
32									
33									
34									
35									

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.099
Std.3	50.00	0.190
Std.4	100.00	~~0.309~~ (W) 0.309

Analyte: TL

Project: D21104.501/D21102.502

Analyst: MSR

Inst. ID: 1-A

Date: 12/30/92

Matrix: Solid

Units: mg/Kg

Reviewed by: (MW) 1-4-93

Comments: A=20 ug/L ICV=50 ug/L IDL=3.0 ug/L

ICV: I-A-921216-02 CAL STD: I-A-921216-01

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	49.5	49.1	49.3	0.6	1			98.6%R
2	ICB	-0.3	-0.3	-0.3	NC	1			
3	CRA	8.7	8.9	8.8	1.7 NC	1			88%R
4	CCV1	52.1	49.7	50.9	3.3	1			101.8%R
5	CCB1	-0.5	-0.6	-0.6	NC	1			
6	16946.4	1.1	1.1	1.1	NC	1	200	ND 0.6 mg/Kg	
7	16946.4A	20.6	18.2	19.4	8.7				97%R
8	16948.0	1.5	0.7	1.1	NC	1	200	ND 0.6 mg/Kg	
9	16948.0A	20.5	20.1	20.3	1.4				101.5%R
10	16948.0 Dup	1.8	0.7	1.3	NC	1	200	ND 0.6 mg/Kg	
11	16948.0A Dup	19.7	19.2	19.4	1.8				97%R
12	16948.0 spK	49.7	49.8	49.8	0.1	1	200	9.96 mg/Kg	99.6%R
13	16948.0 Dup spK	49.5	52.4	51.0	4.0	1	200	10.2 mg/Kg	102%R
14	16949.9	3.4	4.5	4.0	NC	1	200	0.8 mg/Kg (W)	
15	16949.9A	20.8	21.0	20.9	0.7				84.5%R
16	CCV2	52.7	53.7	53.2	1.3	1			106.4%R
17	CCB2	-0.8	-0.9	-0.9	NC	1			
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									

MSR

PACE INCORPORATED - DENVER REGIONAL OFFICE

GFAA Benchsheet (CLP)

	Conc.	Abs.
Std.1	0.00 ug/L	0.000
Std.2	20.00	0.088
Std.3	50.00	0.182
Std.4	100.00	0.404

Analyte: Tl
Project: D21104.501/D21102.502
Analyst: MSR
Inst. ID: 1-A
Comments: A=20 ug/L ICV=50 ug/L IDL=3.0 ug/L
ICV: I-A-921216-02 CAL STD: I-A-921216-01

Date: 12/28/92
Matrix: Solid
Units: mg/Kg
Reviewed by: 1-4-93

Cup ID	Sample ID	1st Burn (ppb)	2nd Burn (ppb)	Average (ppb)	CV	Serial DF	Prep DF	Final Concentration	Notes
1	ICV	53.6	55.0	54.3	1.8	1			108.6%R
2	ICB	-0.4	-0.3	-0.34	NC	1			
3	CRA	11.7	10.9	11.3	5.0	1			113%R
4	CCV1	48.8	53.0	50.9	5.8	1			101.8%R
5	CCB1	-0.3	-0.1	-0.2	NC	1			
6	18906.6 spK	57.8	58.8	58.3	1.2	1	200	11.7 mg/Kg	116.6%R
7	18906.6 dup ↓ rec	56.3	59.5	57.9	3.9	1	200	11.6 mg/Kg	115.8%R
8	18907.4	5.4	8.2	7.3	~~27.4~~ NC	1	200	1.5 mg/Kg	(B)
9	18907.4A	25.1	24.6	24.8	1.4				~~48%R~~ (B) 50%R
10	16946.4	9.0	6.0	7.5	~~28.3~~ NC	1	200	Rerun Rsdt	
11	16946.4A	22.7	25.2	24.0	7.4				
12	16947.2	9.5	8.4	9.0	NC	1	200	1.8 mg/Kg	(B)
13	16947.2A	26.5	25.8	26.2	1.9				86%R
14	CCV2	54.0	54.0	54.0	0	1			108%R
15	CCB2	0.7	0.7	0.7	NC	1			
16									
17									
18									
19									
20									
21									
22									
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27									
28									
29									
30									
31									
32									
33									
34									
35									

Not used MSR

50 - 190 lbs
100 - 309 lbs

TL pg 3
D21104.501
D21102.502
12/30/92
MSR

0.014		
0.000		
0.099		
20.0	I	
38.4	C	
50.0	II	
133.9	C	
100.0	III	
49.5	1	
49.1		
-0.3	2	
-0.3		
8.7	3	
8.9		
52.1	4	
49.7		
-0.5	5	
-0.6		
1.1	6	
1.1		
20.6	7	
18.2		
1.5	8	
0.7		
20.5	9	
20.1		
1.8	10	
0.7		
19.7	11	
19.2		
49.7	12	
49.8		
49.5	13	
52.4		
3.4	14	
4.5		
20.8	15	
21.0		
52.7	16	
53.7		
-0.8	17	
-0.9		

TL pg
D21104.501
D21102.502
12/28/92
MSR

-0.001		
0.000		
0.102		
20.0	I	
44.8	C	
50.0	II	
89.8	C	
100.0	III	
53.3	1	
53.1		
-0.4	2	
-0.4		
8.3	3	
11.2		
46.3	4	
45.0		
-0.2	5	
-0.2		
-0.4	6	
-0.4		
14.8	7	
20.3		
14.8	8	
14.8		
32.5	9	
31.3		
0.6	10	
0.7		
20.9	11	
22.6		
1.1	12	
1.0		
21.5	13	
22.6		
50.6	14	
48.9		
-0.1	15	
-0.3		
50.7	16	
50.7		
49.1	17	
51.2		
0.5	18	
0.5		
23.4	19	
22.2		
0.8	20	
0.6		
23.2	21	
21.9		
0.9	22	
0.9		
23.0	23	
23.2		
40.0	CCV out	

TL pg 2

0.002		
0.000		
0.088		
20.0	I	
41.3	C	
50.0	II	
111.1	C	
100.0	III	
53.6	1	
55.0		
-0.4	2	
-0.3		
11.7	3	
10.9		
48.8	4	
53.0		
-0.3	5	
-0.1		
57.8	6	
58.8		
56.3	7	
59.5		
6.4	8	
8.2		
25.1	9	
24.6		
9.0	10	
6.0		
22.7	11	
25.2		
9.5	12	
8.4		
26.5	13	
25.8		
54.0	14	
54.0		
0.7	15	
0.7		
10.3	16	
10.5		
25.5	17	
26.8		
11.7	18	
11.4		
27.0	19	
25.3		
61.3	20	
59.1		
64.4	21	
60.7		
11.6	22	
12.1		
26.5	23	
25.0		
53.6	24	
57.5		
1.5	25	
1.5		

Not used

CCV out

PACE

INCORPORATED

THE ASSURANCE OF QUALITY

GFAA ANALYTE COVER SHEET

DATE: 1-5-93

PROJECT ID: D21028.500
D21015.506 (RESIDUE)
D21202.501
D21203.502
D21102.502
D21104.501

ANALYTE: Hg
INSTRUMENT: 1-F
ANALYST: SES
REVIEWED BY: TC

DATA ASSESSMENT LOG

D21015.506 Had very low recovery on matrix spike duplicate on residue (20049.3).

CLP protocol was followed

-CLP-

0000105

Cold Vapor Atomic Absorption (CVAA) Benchsheet

(Hg)

Calibration Curve		
Standard	Concentration	Absorbance
S0	ZERO	0.000
S1	0.02 ug	0.019
S2	0.05	0.043
S3	0.08	0.079
S4	0.10	0.095
S5	0.20	0.178
S6	0.50 SES	0.424

Correlation Value: 0.9994
Reporting Limit 0.02 ug/TOTAL (0.2 mg/L)

Project Numbers
D21028.500
D21015.506 (RESIDUE)
D21202.501
D21203.502
D21102.502
D21104.501

Date: 12-31-92
Analyst: SES
Cal Std ID: PCN-I-00188
ICV Std ID: PI-HGS-05

Comments: CCV/ICV/MATRIX SPIKE @ 0.10 ug TOTAL
LCS SOLID #214 : TV = 4.88 mg/kg

Sample ID	Initial Absorb	Initial Conc	Initial Wt/Vol	Serial DF	Prep DF	Final Conc	Air Volume (Liters)	Conc in mg/M3	TV	Percent Rec
ICV	0.087	0.0970	10ml	1	0.1		NA	NA	1.0 ug/L	97.0
ICB	-0.001	-0.0073								
CRA	0.015	0.0116							0.2 ug/L	
CCV1	0.085	0.0946							1.0 ug/L	94.6
CCB1	-0.002	-0.0085								
PB1	-0.004	-0.0109	SES		SES	ND 0.2 ug/L				
LCS1	0.365	0.4264	0.08594 gm		1	4.96 mg/kg	MDL= 0.2		4.88 mg/kg	101.6%
D21028.500: 18876.0	0.000	-0.0061	0.19859			ND 0.1 mg/kg				
18876.0 dup	-0.002	-0.0085	0.19693			ND 0.1 mg/kg				
18877.9	0.002	-0.0037	0.20043			ND 0.1 mg/kg				
18877.9 spk	0.092	0.1029	0.19834			0.519 mg/kg	MDL= 0.1		0.504 mg/kg	103.0%
D21015.506: 20049.3	-0.004	-0.0109	0.21018			ND 0.1 mg/kg				
20049.3 dup	-0.006	-0.0132	0.19910			ND 0.1 mg/kg				
20049.3 spk	0.076	0.0839	0.19620			0.428 mg/kg	MDL= 0.1		0.510 mg/kg	83.9%
20049.3 spk dup	0.006	0.0010	0.19627 SES		SES	ND 0.1 mg/kg			0.510 mg/kg	0%
CCV2	0.088	0.0981	10ml		0.1				1.0 ug/L	98.1%
CCB2	-0.006	-0.0132								
BASELINE CORRECTION										
CCV3	0.082	0.0910							1.0 ug/L	91.0%
CCB3	0.001	-0.0050	SES	SES	SES		SES	SES		

651060 TALPREP CGA

TALPREP → CLPHGDIG-A
CGAA → HGCLP-A

CONTINUED RUN FROM PAGE 1.

Cold Vapor Atomic Absorption (CVAA) Benchsheet

Calibration Curve		
Standard	Concentration	Absorbance

Correlation Value:
Reporting Limit

Project Numbers
D21028.500
D21015.506 (RESIDUE)
D21202.501
D21203.502
D21102.502
D21104.501

Date: 12-31-92
Analyst: SES
Cal Std ID: PCN-I-00188
ICV Std ID: PI-HGS-05

Comments:

Sample ID	Initial Absorb	Initial Conc	Initial Wt/Vol	Serial DF	Prep DF	Final Conc	Air Volume (Liters)	Conc in mg/M3	TV	Percent Rec
PB2	0.000		10mg	1	0.1		NA	NA		
LCS2	0.368	0.4300	0.08066 gm			5.33 mg/kg	MDL: 0.2		4.88 mg/kg	109.2%
19393.4	0.008	0.0033	0.20298			ND 0.1 mg/kg				
19394.2	0.008	0.0033	0.19582			ND 0.1 mg/kg				
19395.0	0.006	0.0010	0.20345			ND 0.1 mg/kg				
19396.9	0.023	0.0211	0.19622			0.11 mg/kg RL 0.1				
19397.7	0.015	0.0116	0.19865			ND 0.1 mg/kg				
19398.5	0.003	-0.0026	0.19722			ND 0.1 mg/kg				
19399.3	0.003	-0.0026	0.19839			ND 0.1 mg/kg				
19400.0	0.013	0.0093	0.19722		SES	ND 0.1 mg/kg				
CCV4	0.100	0.1124	10ml		10ml/10ml 0.1				1.0 mg/L	112.4%
CCB4	0.001	-0.0050			SES					
19401.9	0.003	-0.0026	0.19776 gm		1	ND 0.1 mg/kg				
19402.7	0.002	-0.0038	0.19748			ND 0.1 mg/kg				
19403.5	0.001	-0.0050	0.20003	SES	SES	ND 0.1 mg/kg				
17605.3 RR	0.074	0.0815	0.10820	12	1	9.04 mg/kg	MDL: 2.2			
CCVS	0.082	0.0910	10ml		0.1				1.0 mg/L	91.0%
CCBS	-0.001	-0.0073								
BASELINE CORRECTION										
CCV6	0.104	0.1171	SES	SES	SES		SES	SES	1.0 mg/L	117.1

D21202.501

651059
HG-DIG
HG-SCA

JOG0106

J000107

CONTINUED RUN FROM PAGE 2.

Cold Vapor Atomic Absorption (CVAA) Benchsheet

Calibration Curve		
Standard	Concentration	Absorbance

Correlation Value:
Reporting Limit

Project Numbers

D21028.500
D21015.506 (RESIDUE)
D21202.501
D21203.502
D21102.502
D21104.501

Comments:

Date: 12-31-92

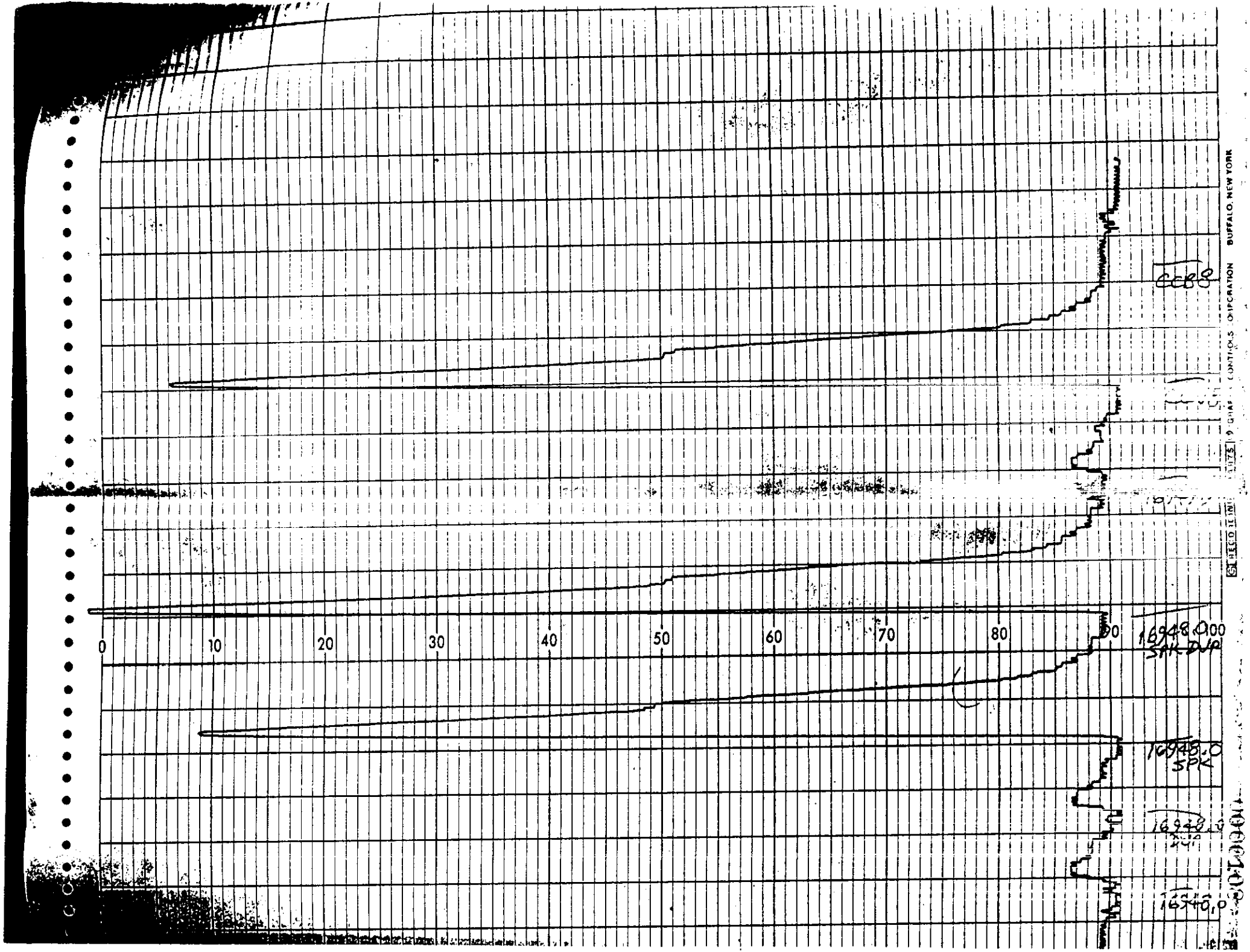
Analyst: SES

Cal Std ID:

ICV Std ID:

Sample ID	Initial Absorb	Initial Conc	Initial Wt/Vol	Serial DF	Prep DF	Final Conc	Air Volume (Liters)	Conc in mg/M3	TV	Percent Rec
CCB6	0.002	-0.0038	10ml	1	0.1		NA	NA		
PB3	0.001	-0.0050	↓		↓SES					
LCS3	0.342	0.3991	0.08115		1	4.92 mg/kg	MDL 0.2		4.88 mg/kg	100.8%
D21102.502: 18906.6	0.005	-0.0002	0.20366			ND 0.1 mg/kg				
18906.6 dup	0.005	-0.0002	0.20210			ND 0.1 mg/kg				
18906.6 spk	0.102	0.1147	0.19853			0.578 mg/kg	MDL 0.1		0.504 mg/kg	114.7%
18906.6 spk dup	0.094	0.1052	0.19684			0.534 mg/kg	MDL 0.1		0.508 mg/kg	105.1%
18907.4	0.003	-0.0026	0.19994			ND 0.1 mg/kg				
D21104.501: 16946.4	0.002	-0.0038	0.19605			ND 0.1 mg/kg				
16947.2	0.001	-0.0050	0.19682		↓SES	ND 0.1 mg/kg				
CCV7	0.092	0.1029	10ml		0.1				1.0 mg/L	102.9%
CCB7	0.000	-0.0061	↓SES		↓SES					
16948.0	0.002	-0.0038	0.19911		1	ND ~~0.10~~ 0.1 mg/kg				
16948.0 dup	0.002	-0.0038	0.19733			ND 0.1 mg/kg				
16948.0 spk	0.086	0.0958	0.19885			0.482 mg/kg	MDL 0.1		0.503 mg/kg	95.8%
16948.0 spk dup	0.095	0.1064	0.20410			0.521 mg/kg	MDL 0.1		0.490 mg/kg	106.3%
16949.9	0.002	-0.0038	0.19689		↓SES	ND 0.1 mg/kg				
CCV8	0.087	0.0970	10ml		0.1				1.0 mg/L	97.0%
CCB8	0.000	-0.0061	↓SES	↓SES	↓SES		SES ↓	↓SES		

TAL PCB GCMS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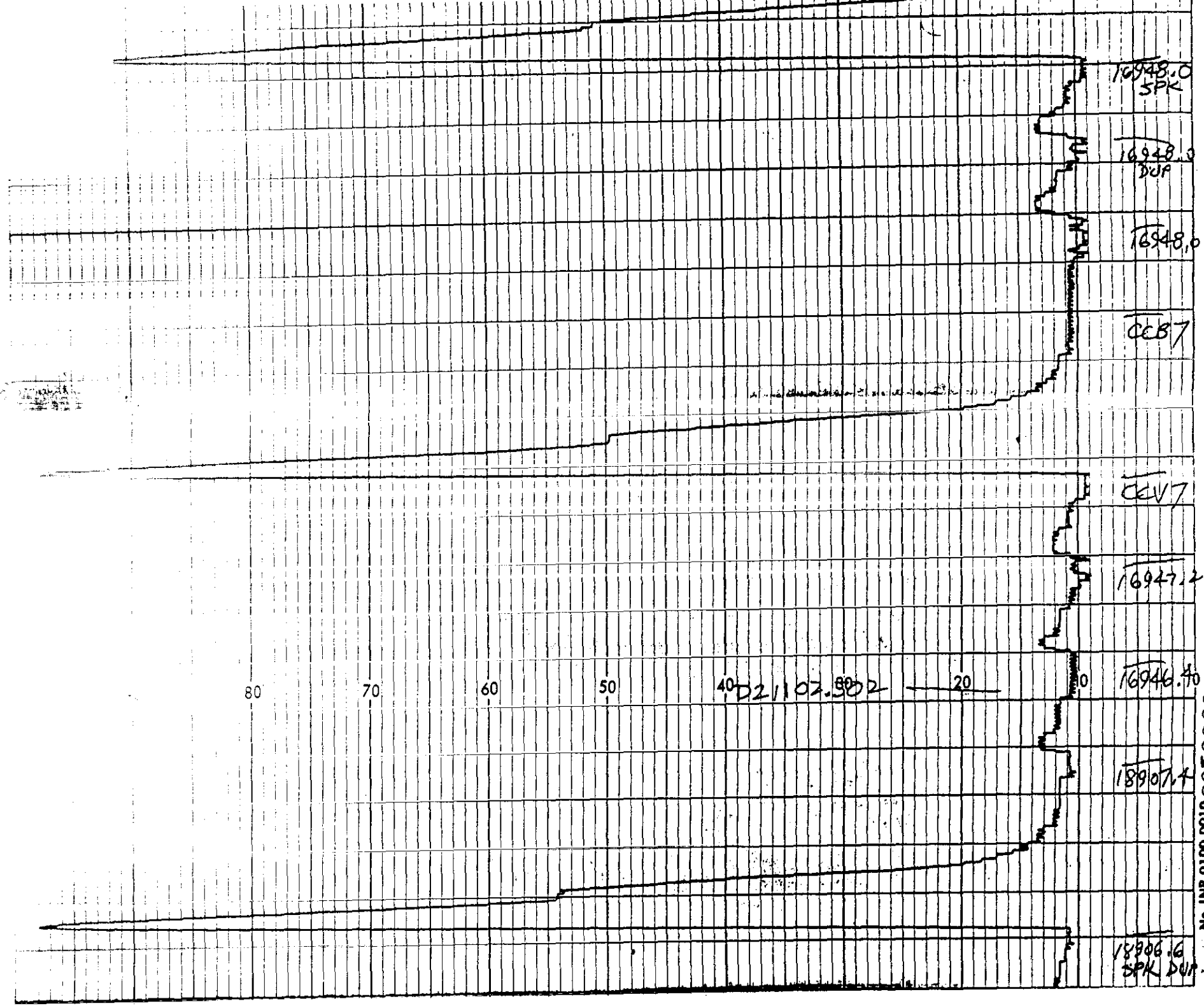
10
20
30
40
50
60
70
80
90
6089
16948.000
SPK-DUP
16948.0
SPK
16948.0
16948.0



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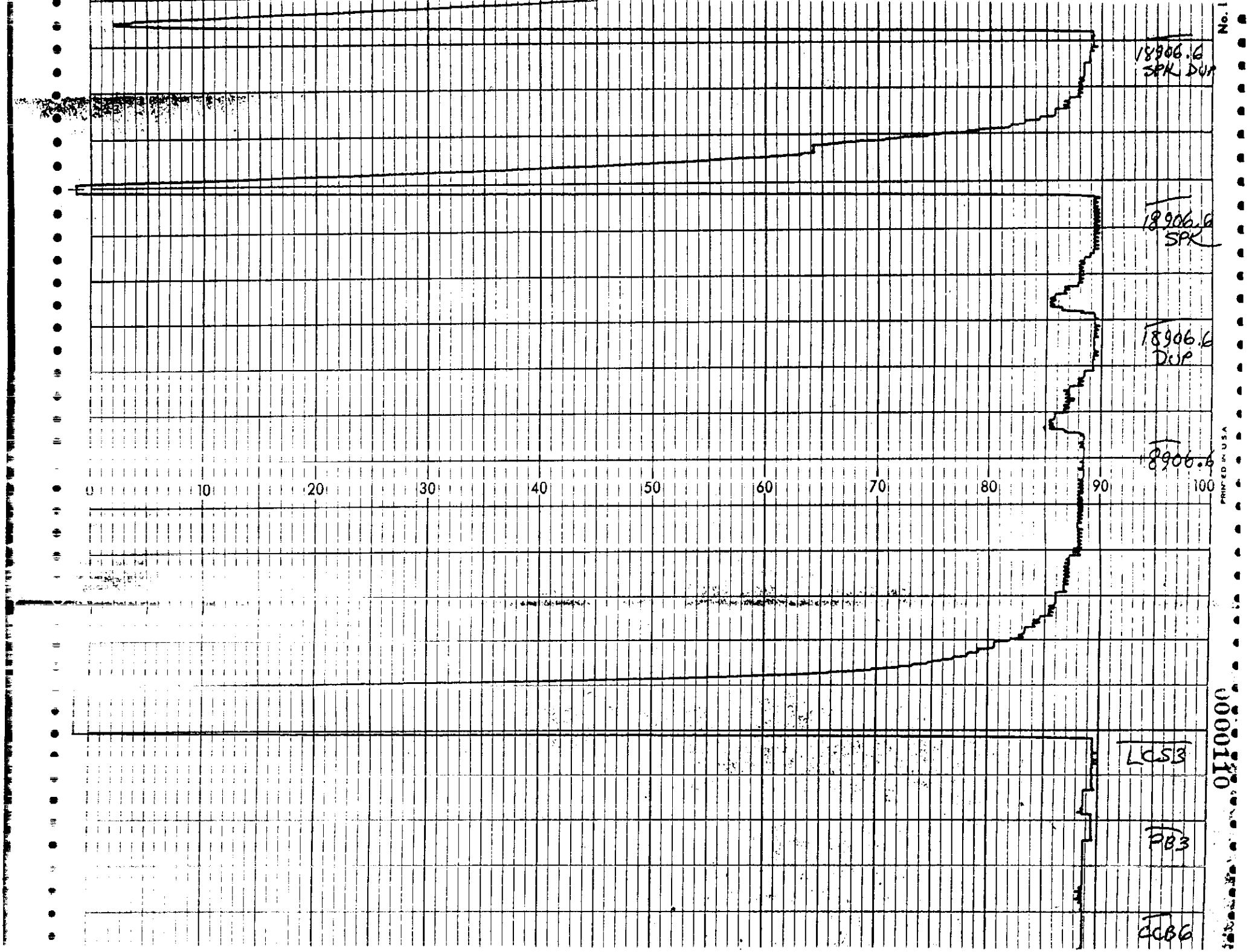
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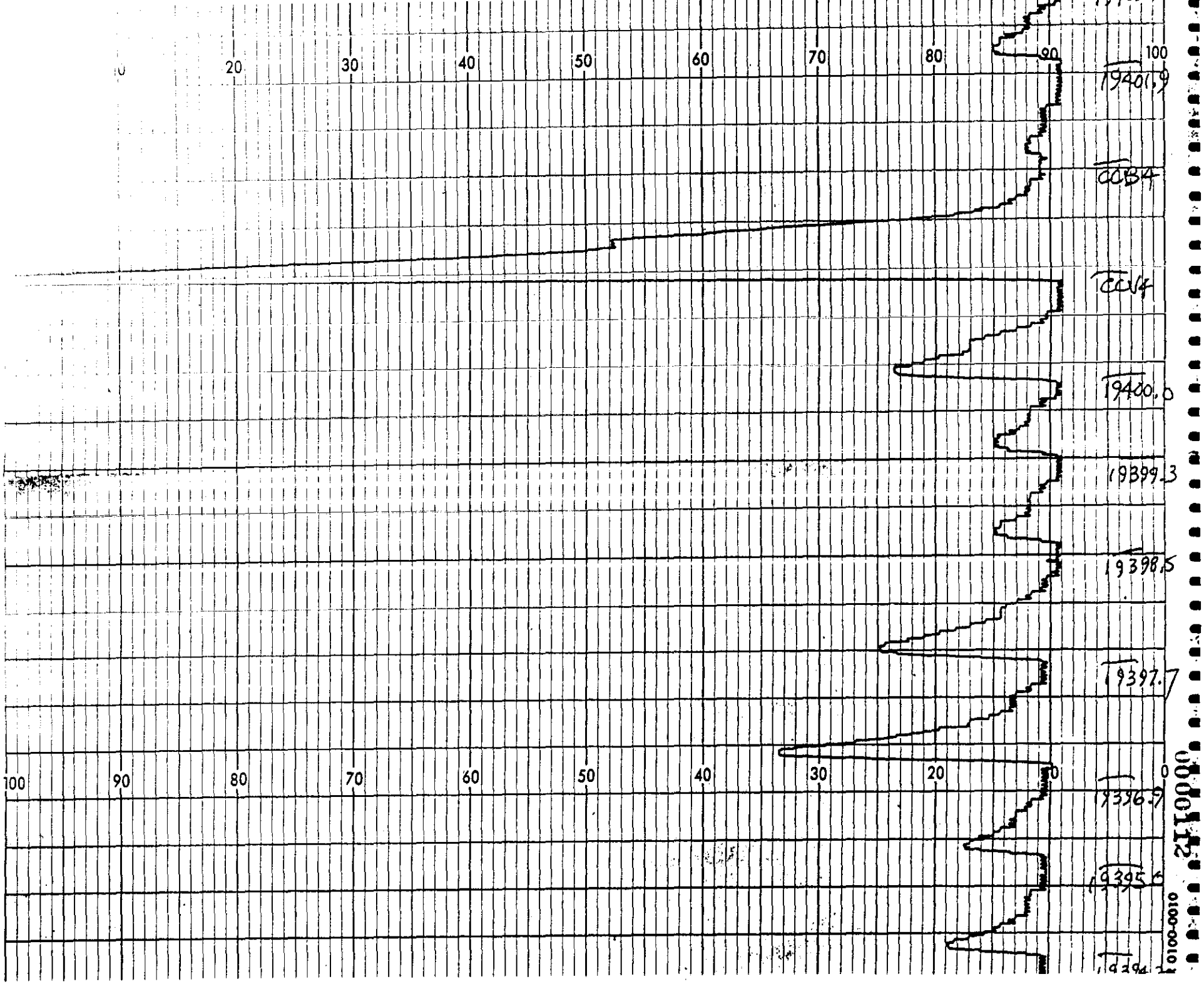
SPK DUP
18906.6
SPK
18906.6
DUP
18906.6
0
10
20
30
40
50
60
70
80
90
100
LCS3
PB3
CCB6
PRINTED IN U.S.A.
No. 1

0000110

100
90
80
70
60
50
40
30
20
10
0
9462
9463.5
7605.3
CCV5
CCB5
BASELINE CORRECTION
CCV6
CCB6
RECORDING CHARTS
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK



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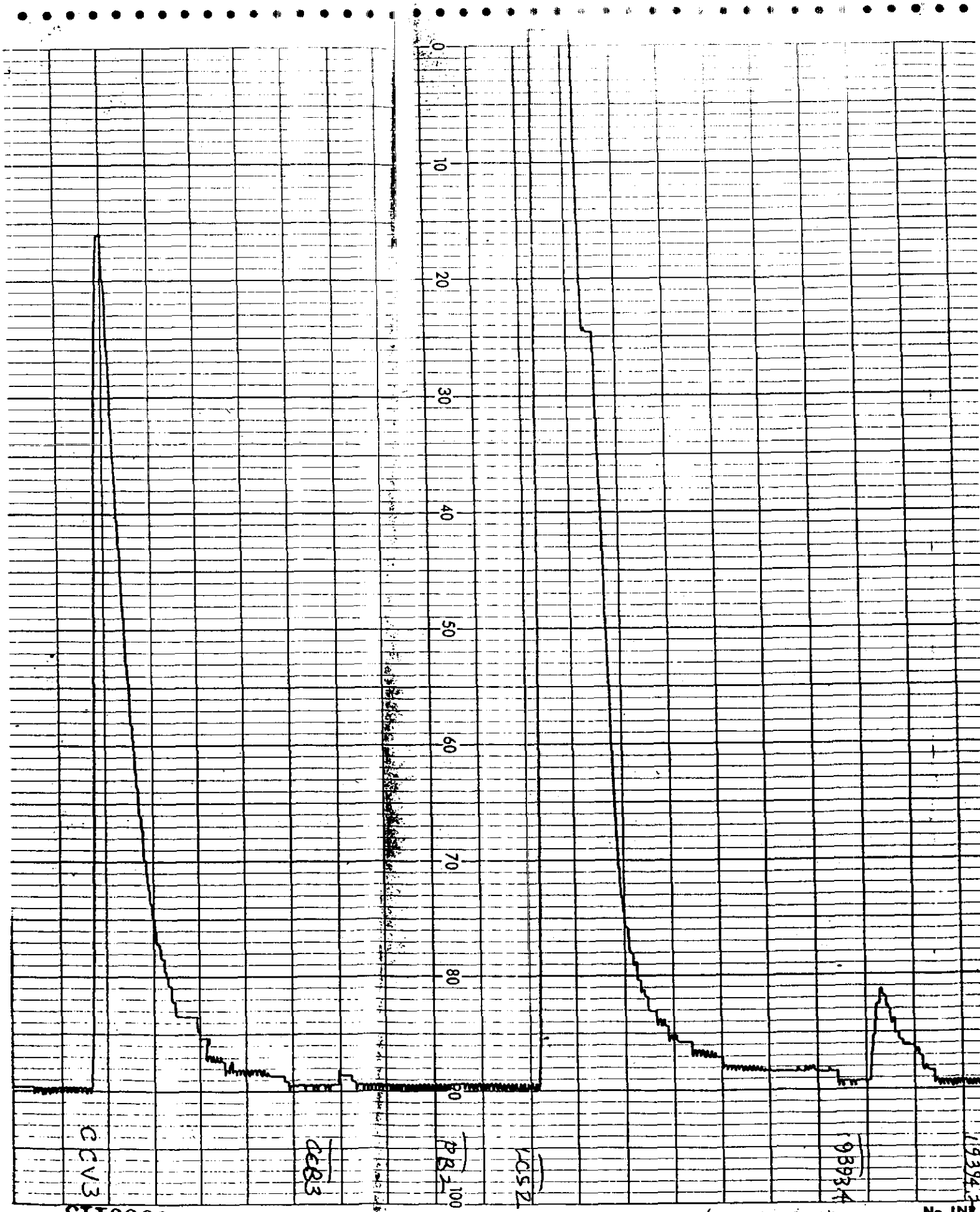
0100-0010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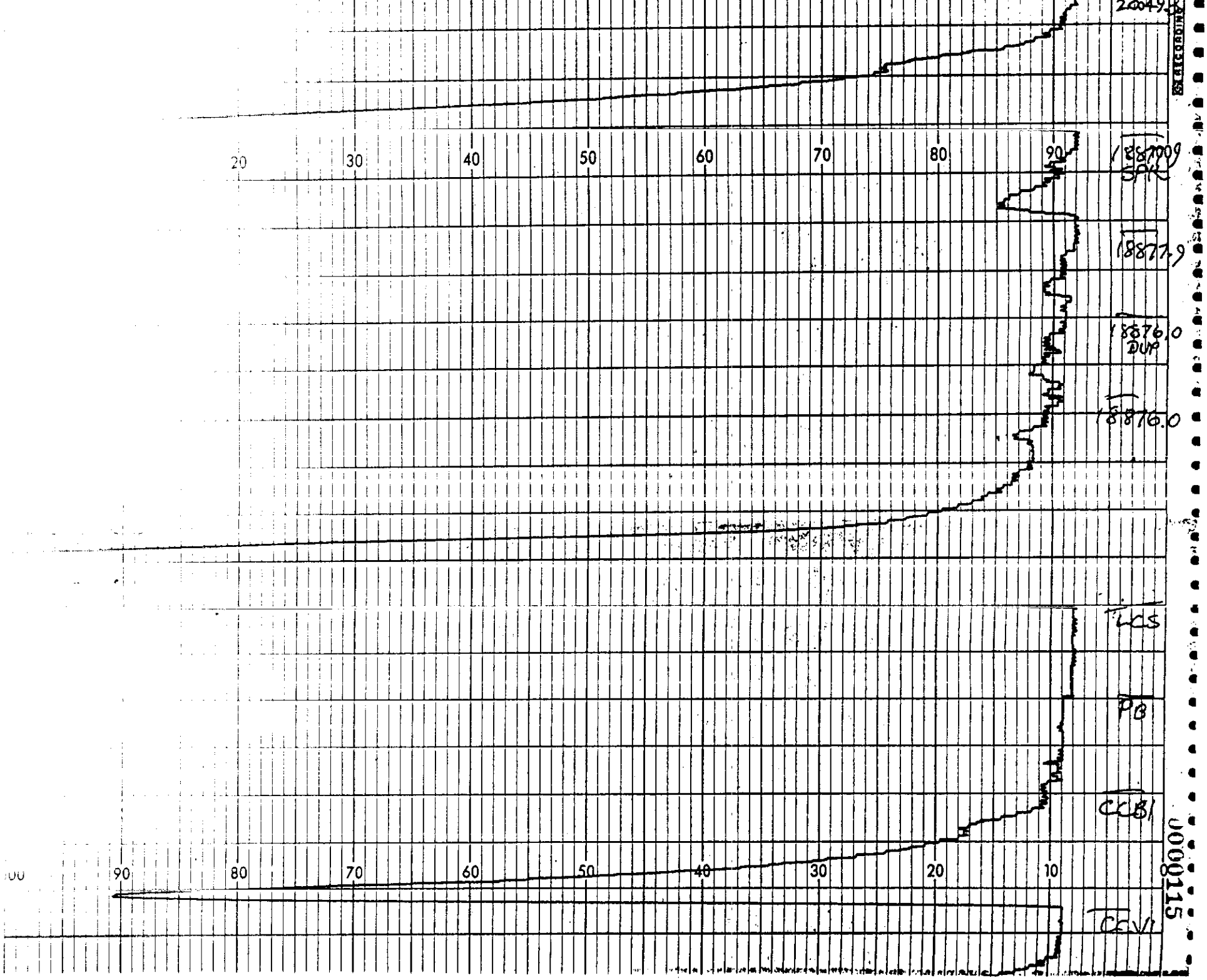
10
20
30
40
50
60
70
80
90
100
CCV3
CCB3
PB2
LCS2
193934
PRINTED IN U.S.A.
No. LNR

90
80
70
60
50
40
30
20
10
0
20049
20049
20049
20049
BASELINE CORRECTION
RECORDING CHARTS ® GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK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18877.0 SPK
18877.9
18876.0 DUP
18876.0
LCS
PB
CCB1
CrVI
100
90
80
70
60
50
40
30
20
10
0000115

CRA
ICB
ICV
SG
0.50
SS
0.20
10
20
30
40
50
60
70
80
90
100
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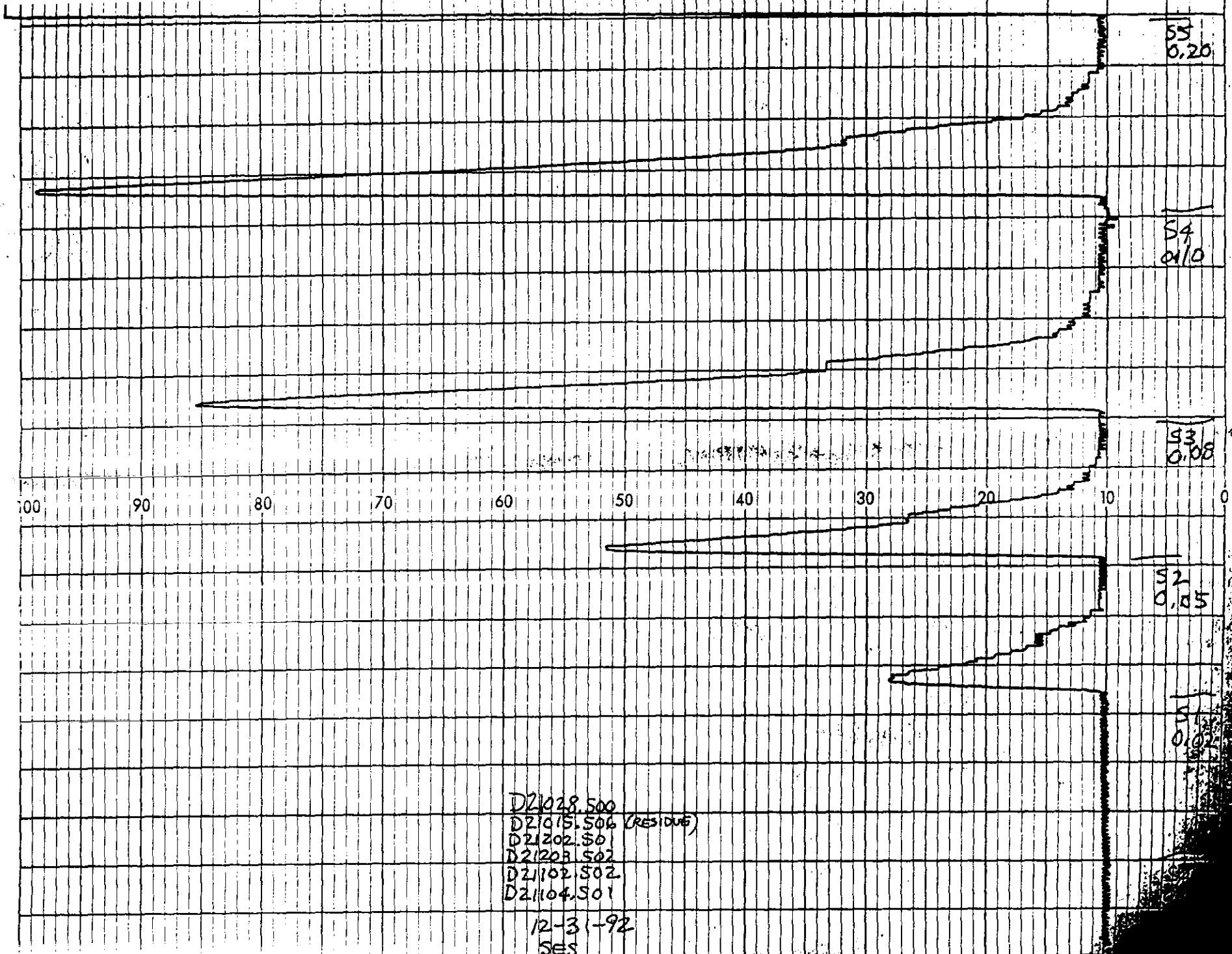
PRINTED IN U.S.A.


S5
0.20
S4
0.10
S3
0.08
S2
0.05
S1
0.02
100
90
80
70
60
50
40
30
20
10
0
D21028.500
D21015.506 (RESIDUE)
D21202.S01
D21203.S02
D21102.S02
D21104.S01
12-31-92
SES

Batch 651030 pg 1 of 1

% TS

~~SUSPENDED SOLIDS/TOTAL DISSOLVED SOLIDS/OIL & GREASE~~: mom

PROJECT ID: [illegible] METHOD: _____ UNITS: ~~mg/l~~ % ANALYST: mom

DATE IN: [illegible] TIME IN: 1820 OVEN TEMP IN: 106°C

DATE OUT: 11/28/2 TIME OUT: 1700 OVEN TEMP OUT: 101°C

SAMPLE ID	ID #	ALIQUOT ~~ml~~ (g)	SPIKE ADDED	TARE WT (g)	DRY WT + TARE (g)	DRY WT SAMPLE (g)	DF	CONC	CALC
21028.500 5018876.0	1	5.29	N/A	1.03	6.04	5.01	N/A	95%	
18877.9	2	5.30		1.00	6.07	5.07		96%	
21102.502 5018906.6	3	5.02		1.00	5.76	4.76		95%	
18907.4	4	5.23		1.02	5.90	4.88		93%	
21104.501 5016946.4	5	5.19		1.02	5.99	4.97		96%	
16947.2	6	5.74		1.02	6.51	5.49		96%	
16948.0	7	5.65		1.03	6.37	5.34		94%	
16949.9	8	6.03		1.03	6.78	5.75		95%	
16949.9®	9	5.23		1.03	6.00	4.97		95%	0% RPD

calc: $\frac{\text{Dry wt. (g)}}{\text{aliquot (g)}} * 100 = \%TS$

S, LCS-DUPE, SPIKE, CCV WITH: N/A PCN: N/A LCS TV: N/A

E NOMINAL DETECTION LIMIT IS 5 mg/l DUE TO BALANCE ACCURACY

MMENTS: _____

REVIEWED BY: TC

METALS PREPARATION/DIGESTION BENCHSHEET

PROJECT I.D.: D21102.502 –
D21104.501 –

ANALYST(S): MPM

BATCH #: 65 10785 N / 65 10786 U

REFERENCE: DN-I-001 (SOP)

DATE: 12-17-92

MATRIX: SOLID / QC

REVIEWED BY: TC

	PACE Sample[1] I.D. #	Client Sample[1] I.D. #	ICP/AA Sample(g)	Prep Final(g)	GFAA Sample(g)	Prep Final(g)	Density[2]	Spike Verif.[3]	Notes
	LCS	N/A	1.0g	200g	1.0g	200g	N/A	N/A	Priority Pollutn T™/QC soil PPS-46 Lot #214 (1.0g)
	LCS DUP	↓	↓	↓	↓	↓	↓	↓	↓
	PREP BLANK	↓	↓	↓	↓	↓	↓	↓	Blank
1.	D21102.502 18906.6	H92077	↓	↓	↓	↓	↓	↓	Tal Metals Fine, Tan Galorian Corp
2.	18906.6 (D)	↓	↓	↓	↓	↓	↓	↓	↓
3.	18906.6 MS	↓	↓	↓	↓	↓	↓	↓	★, ✱
4.	18906.6 MSD	↓	↓	↓	↓	↓	↓	↓	★, ✱
5.	18907.4	H92078	↓	↓	↓	↓	↓	↓	Fine, Light Brown
6.	D21104.501 16946.4	H92072	↓	↓	↓	↓	↓	↓	Fine, Tan
7.	16947.2	H92073	↓	↓	↓	↓	↓	↓	↓
8.	16948.0	H92074	↓	↓	↓	↓	↓	↓	↓
9.	16948.0 (D)	↓	↓	↓	↓	↓	↓	↓	↓
10.	16948.0 MS	↓	↓	↓	↓	↓	↓	↓	★, ✱

ICP Spike Solution: 2.0 ml SCN# P920611-02
2.0 ml SCN# P920611-03
2.0 ml SCN# P920611-04

2.0 ml SCN# P920723-02

GFAA Spike Solution: 2.0 ml SCN# I-A-92012B-01

PCN# HCl: I-216-B PCN# H_2O_2: I-174-B

PCN# HNO_3: I-128-B

[1] Always take I.D.s from the sample container (NOT SADEF) to support I.D. Validation. Client's ID from Client's label

[2] Necessary for all liquid samples.

[3] Spike verfication should include initial and date of observer.

★ ICP SPIKE SOLUTION A,B,C,D (2.0mL)

METALS PREPARATION/DIGESTION BENCHSHEET

	PACE Sample[1] I.D. #	Client Sample[1] I.D. #	ICP/AA Sample(g)	Prep Final(g)	GFAA Sample(g)	Prep Final(g)	Density[2]	Spike Verif.[3]	Notes
11.	16948.0 MSD	H92074	1.0g	200g	1.0g	200g	N/A	N/A	TAL Metals *,* Fine Tan
12.	16949.9	H92075	↓	↓	↓	↓	↓	↓	↓
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
21.									
22.									

Odorless Clear
↓

[1]Always take I.D.s from the sample container (NOT SADEF) to support I.D. Validation. Client's ID from Client's label

[2]Necessary for all liquid samples.

[3]Spike verfication should include initial and date of observer.

FORMS63