

DYNAMAC
CORPORATION
Environmental Services

159700

80 W. Lancaster Avenue
Devon, PA 19333

Telephone: 215-989-9400
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March 4, 1994

Ms. Karen Melvin
Removal Enforcement Section (3HW33)
U.S. Environmental Protection Agency
841 Chestnut Street
Philadelphia, PA 19107

Subject: Trip Report for Soil Sampling
METCOA Restart Site
Work Assignment No. C03112

Dear Ms. Melvin:

Enclosed is the additional copy of the Field Trip Report, dated December 21, 1994, for the soil sampling conducted by Dynamac's subcontractor PRC. It is important to note that the data package is unvalidated. One of our chemists is presently validating the data, but there is a backlog of work and it may be two weeks before the data validation is complete.

If you have any questions or comments, please do not hesitate to contact me or Charles Hale at (610) 989-9400.

Sincerely,



Michael Heffron
Project Manager

cc: Robert Stecik, Dynamac, TES VIII Regional Manager
Charles Hale, Dynamac Program Manager

DYNAMAC
CORPORATION
Environmental Services

80 W. Lancaster Avenue
Devon, PA 19333

Telephone: 215-989-9400
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December 21, 1993

Ms. Karen Melvin, Chief
Removal Enforcement Section (3HW33)
U.S. Environmental Protection Agency (EPA) Region 3
841 Chestnut Street
Philadelphia, PA 19107

Subject: Trip Report for Soil Sampling at the METCOA Restart Site, Pulaski, Pennsylvania
Work Assignment No. C0311Z

Dear Ms. Melvin:

As authorized by EPA, Dynamac's subcontractor, PRC Environmental Management Inc. (PRC), conducted sampling activities at the METCOA Restart Site located in Pulaski, Pennsylvania. PRC personnel Mrinal K. Biswas and David J. Owen visited the site on November 18 and 19, 1993 to collect soil samples. Ten soil samples were collected from the northeastern corner of the site, an area identified by EPA for further investigation (See Attachment A). The soil samples, collected on November 19, 1993, were shipped via Federal Express the same day to G.P. Environmental Services, Inc. located in Gaithersburg, Maryland. The soil samples were analyzed for nickel, cadmium, chromium, copper, and lead using EPA Contract Laboratory Program (CLP) 3/90 protocols.

Instead of utilizing the EPA Sample Management Office (SMO) to arrange a Contract Laboratory Program (CLP) laboratory, GP Environmental Services, Inc., was privately contracted for the analyses because the soils were potentially contaminated with radioactive thorium and a quick turn-around on the analyses was required by EPA. G.P. Environmental Services was contracted after soliciting several bids for the analyses. G.P. Environmental, which was the low bidder, is a CLP lab under the EPA Special Analytical Services (SAS) program, and has operated as a CLP lab under the Routine Analytical Services (RAS) program in the past.

The PRC personnel arrived at the Metcoa site on the afternoon of November 18, 1993. Mr. William Hogue, Chief of Police, Pulaski, Pennsylvania, was present at the site to provide the key to the main entrance of the Metcoa site.

Mr. Biswas and Mr. Owen walked the perimeter of the sampling area and monitored with a radiation meter and a Miniram particulate meter to measure the intensity of background radiation at the site and the concentration of particulates in the air. Information on background levels from the radiation meter

Ms. Karen Melvin
December 21, 1993
Page 2

indicated a reading of 0.02 mR/h. The Miniram recorded a background reading of particulates in the range of 0 to 0.02 milligrams per cubic meter (mg/m^3).

Most of the wooden stakes used earlier to mark the grid nodes for sampling activities were intact, but grid marking on most of the stakes were not visible because of weathering. However, faint markings on the stake at grid node 410 N, 455 E could be detected. That stake was near the main gate and to the right of the entrance road between Route 551 and the site.

Because the sampling activity was of a time-critical nature, the sampling area was not resurveyed, but the location of the known node described above was used as a reference to locate all the sample locations (See Attachment A). The sample locations were plotted on the larger grid map using the existing grid system (See Attachment B).

The PRC personnel collected 11 soil samples (including one duplicate) and one field blank (distilled, deionized water) on the morning of November 19, 1993. During the sampling, the sky was overcast and the temperature was in the 50s ($^{\circ}\text{F}$). Because the ground was moist, no airborne particulate were present during sampling, and therefore the sampling was performed in level D personal protective equipment (PPE).

Each sample was collected by hand auger and mixed thoroughly in an aluminum pan with a plastic spoon. The samples were collected from a depth of 0 to 5 inches. Between the sampling activities, the auger was decontaminated with a mixture of distilled water and Alconox (laboratory grade washing detergent), rinsed with distilled water, and dried with paper toweling. A new plastic spoon, a new mixing pan, and new gloves were used for each sample location. All disposable material, including gloves, paper, Tyvek, and booties, were left on site in a plastic garbage bag.

The samples collected were placed on ice and shipped Priority Overnight via Federal Express, with the proper Chain-Of-Custody, to G.P. Environmental Services in Gaithersburg, Maryland.

The analytical results of the sampling activity are located in Table 1, and the analytical data package is Attachment C of this report. The analytical results of the recent soil sampling revealed the highest concentration of lead (43.5 mg/kg) at SS #9 location, cadmium (1,960 mg/kg) at SS #3 location, chromium (212 mg/kg) at SS #9 location, copper (91.5 mg/kg) at SS #8 location, and nickel (1,050 mg/kg) at SS #9 location.

AR101429

TABLE I: SAMPLE RESULTS

SAMPLE #	CADMIUM MG/KG	CHROMIUM MG/KG	COPPER MG/KG	LEAD MG/KG	NICKEL MG/KG
SS #1	8.3	8.1	10.5	13.6	24.8
SS #2	24.3	10.8	20.5	26.6	79.6
SS #3	1960	9.0	13.8	17.5	53.4
SS #4	9.9	13.5	14.8	28.5	112
SS #5	8.3	13.9	18.9	11.7	127
SS #6	7.6	7.8	5.1 B	7.1	38.2
SS #7	28	11.8	9.4	7.7	152
SS #8	70.7	86.6	91.5	30.0	447
SS #9	1020	212	51.8	43.5	1050
SS #10	76.2	15.6	42.6	30.6	200
SS #11	8.7	10	18.1	9.4	106
SS #12 (Field Blank)	2.4 ug/l U	7.2 ug/l U	16.2 ug/l U	4.5 ug/l	13.6 ug/l U

Table 5 of Work Plan No. 2, Management Option and Analysis Report, Metcoa Restart Site, proposes clean-up action levels of 1,307 mg/kg for cadmium, and 18,554 mg/kg for nickel. Only one sample location in the area of concern most recently sampled revealed a concentration above the proposed clean-up action level. The soil sample obtained from the SS #3, located at grid node (465 N, 450 E), had a cadmium concentration of 1,960 mg/kg. Only one other sample revealed elevated levels close to, but below the proposed clean-up action levels. Sample SS #9, located at (440 N, 430 E), had a cadmium level of 1020 mg/kg, and a lead level of 43.5 mg/kg.

The most recent sampling results revealed cadmium concentrations in the soil above the proposed clean-up action levels in the northeastern portion of the sampling area. Additional sampling north and east of the SS #3 sample location may reveal concentrations of cadmium in the soil above the proposed action levels.

Ms. Karen Melvin
December 21, 1993
Page 4

If you have any questions or comments, please do not hesitate to contact me at (215) 989-9400.

Sincerely,

Michael Heffron
Project Manager

cc: Donna McGowan, U.S. EPA Region III CERCLA RPO
Robert Stecik, Dynamac, Northeastern Operations Manager
Mrinal K. Biswas, PRC, WAM

AR101431

Attachment A

Soil Sampling at METCOA Restart Site

Sampling Date: November 19, 1993

Sampling Performed by David J. Owent and Mrinal Biswas, PRC Environmental Management, Inc.

Sample #1 Soil sample #1 was collected outside the fence at grid location 420 N, 450 E. Because of existing layers of gravel below the surface, it was not possible to collect the sample at the desired depth from 0 to 12 inches. A composite sample was taken from 0 to 3 inches.

Soil samples #2 through #11, were collected inside the chain-link fence. Because of the presence of an existing layer of stone chips below the surface, it was not possible to take composite samples at the desired depth from 0 to 12 inches with the hand auger. All samples were collected at depths between 0 and 5 inches. All soil samples were collected in four-ounce glass jars, which were provided by G.P. Environmental Services, Inc.

Sample #2 The soil sample was collected at grid location 440 N, 450 E. The soil was moist.

Sample #3 The soil sample was collected at grid location 465 N, 450 E. The soil was moist.

Sample #4 The soil sample was collected at grid location 465 N, 440 E. The soil was moist.

Sample #5 The soil sample was collected at grid location 450 N, 440 E. The soil was moist.

Sample #6 The soil sample was collected at grid location 440 N, 440 E. The soil was moist.

Sample #7 The soil sample was collected at grid location 430 N, 440 E. The soil was moist.

Sample #8 The soil sample was collected at grid location 425 N, 430 E. The soil was moist.

Sample #9 The soil sample was collected at grid location 440 N, 430 E. The soil was moist.

Sample #10 The soil sample was collected at grid location 455 N, 430 E. The soil was moist.

Sample #11

A duplicate soil sample was collected at grid location 450 N, 440 E, the location at which sample #5 was collected.

Sample #12

A field blank water sample was collected from a bottle of deionized water to a one-liter polyethylene plastic bottle. The water and sample container were provided by G.P. Environmental Services of Maryland. According to the laboratory, the amount of acid required to preserve the sample had been put in the sample container by laboratory personnel.

EP ENVIRONMENTAL SERVICES, INC.

202 Perry Parkway
 Gaithersburg, Maryland 20877
 (301) 926-6802

Contact Billing Reference

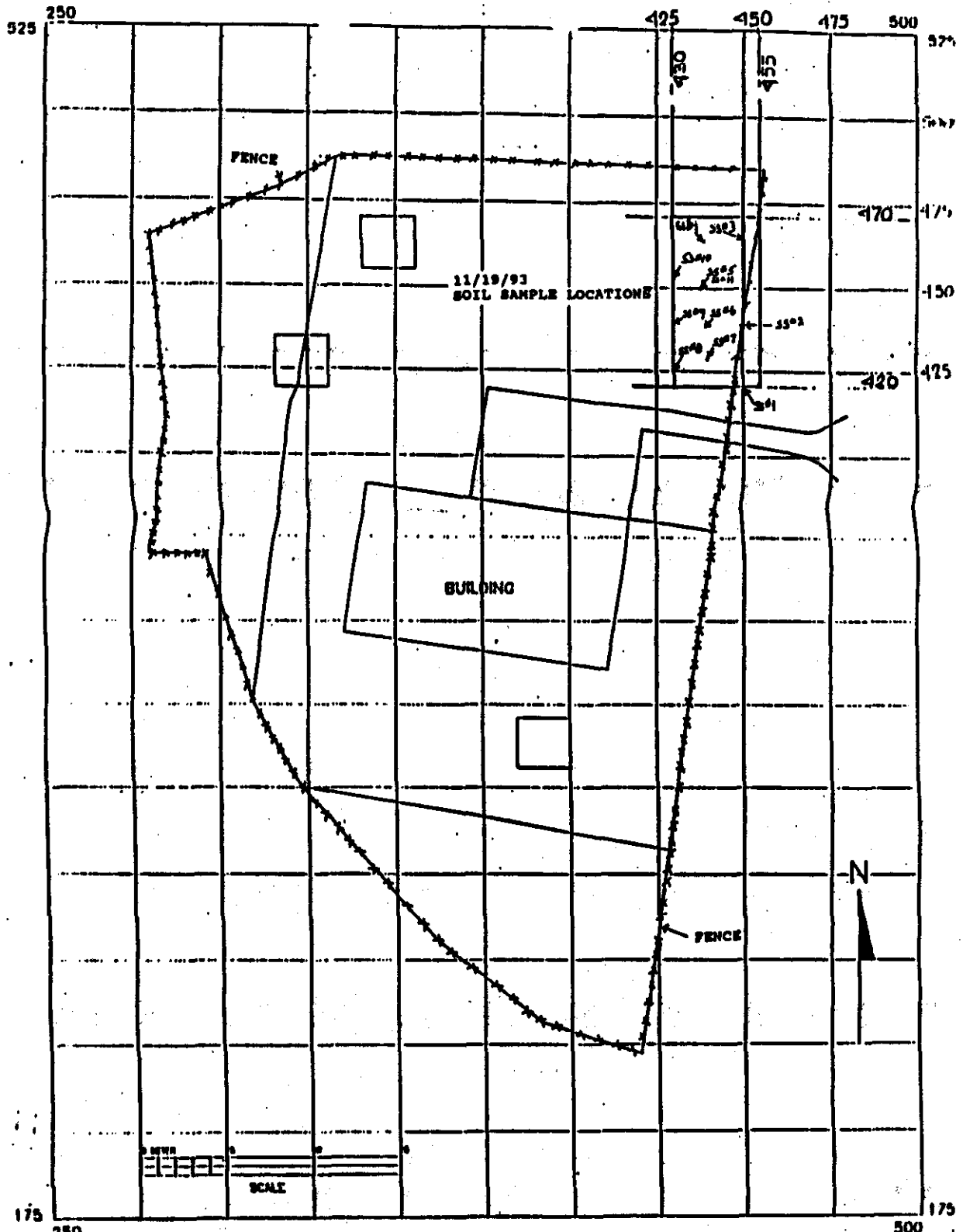
Pgs. _____ of _____

Sample ID#	Date	Time	Sample Matrix	Sampler's Initials	Turnaround Time # of Container	Container Type Preservative Used	Type of Analysis	CLIENT COMMENTS	Received By:	Date/Time	Relinquished By:	Date/Time	Slipper:	Date/Time	Lab Comments:
# 1	11/18/87	0810	SOIL	DJO	402		Metals	Background Rad Meter Reading 0.03 mR/h	Porter	11/18/87					
# 2		0818	SOIL	DJO	402										
# 3		0822	SOIL	DJO	402										
# 4		0825	SOIL	DJO	402										
# 5		0830	SOIL	DJO	402										
# 6		0835	SOIL	DJO	402										
# 7		0838	SOIL	DJO	402										
# 8		0841	SOIL	DJO	402										
# 9		0846	SOIL	DJO	402										
# 10		0849	SOIL	DJO	402										
# 11		0832	SOIL	DJO	402										
# 12		0850	WATER	DJO	1 LT										

AR101434

11/19/93 SOIL SAMPLE LOCATIONS

ATTACHMENT-B



PRC EMI, INC.

SITE MAP
METCOA RESTART SITE
PULASKI, PA

AR101435

INORGANIC CHEMISTRY

CASE NARRATIVE

CLIENT: Dynamac
DATE: December 1, 1993

Work Order: 93-11-158

The following data package comprises 11 soil samples and 1 water sample received at GP Environmental Services on November 22, 1993. The samples were analyzed for lead, cadmium, chromium, copper, and nickel according to CLP 3/90 protocol.

The matrix spike recovery was high for lead. The chromium duplicate precision was poor. Both of these violations are most likely due to the difficulty in obtaining a representative sample at digestion. The sample selected for duplicate and matrix spike had a coarse texture and it contained rocks and vegetation which would make homogenization difficult.

All QA/QC criteria were met with the exception of that mentioned above.

AR101436

001

ENVIROFORMS/INORGANIC CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDS No.: A#1---

SCW No.: 3/90

Sample No.	Lab Sample ID.
A#10--	931113310A
A#11--	931113311A
A#12--	931113312A
A#1---	931113801A
A#1---D	931113801A
A#1---S	931113801A
A#2---	931113802A
A#3---	931113803A
A#4---	931113804A
A#5---	931113805A
A#6---	931113806A
A#7---	931113807A
A#8---	931113808A
A#9---	931113809A
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Were ICP interelement corrections applied? Yes/No NO

Were ICP background corrections applied? Yes/No YES

If yes, were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy 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: Patricia Amen Name: Patricia Amen

Date: 2/1/03 Title: Inorganic Manager

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#10--

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 931113610A

Level (low/med): LOW

Date Received: 11/22/93

% Solids: 90.0

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

CAS No.	Analyte	Concentration	C	Q	X
7440-43-9	Cadmium	76.2			
7440-47-3	Chromium	15.6		*	
7440-50-8	Copper	42.6			
7439-92-1	Lead	30.6		N	
7440-02-0	Nickel	200			

Color Before: BLACK

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#11--

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GFENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 921115811A

Level (low/med): LOW

Date Received: 11/22/93

% Solids: 88.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	8.7			P
7440-47-3	Chromium	10.0		*	P
7440-50-8	Copper	18.1			P
7439-92-1	Lead	9.4		NS	F
7440-02-0	Nickel	106			P

Color Before: BLACK

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIRONMENTAL/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#12--

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): WATER

Lab Sample ID: 931115812A

Level (low/med): LOW

Data Received: 11/22/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	X
7440-43-9	Cadmium	2.4			
7440-47-3	Chromium	7.2			
7440-50-8	Copper	16.2			
7439-92-1	Lead	4.5			
7440-02-0	Nickel	13.6			

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#1---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 931113301A

Level (low/med): LOW

Data Received: 11/22/93

% Solids: 80.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	8.3			P
7440-47-3	Chromium	8.1		*	P
7440-50-8	Copper	10.5			P
7439-92-1	Lead	13.6		N	P
7440-02-0	Nickel	24.8			P

52 = 1

Color Before: BROWN

Clarity Before:

Texture: COARSE

Color After: - YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIRONMENTAL/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#2---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 931115802A

Level (low/med): LOW

Date Received: 11/22/93

% Solids: 80.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	24.3			d
7440-47-3	Chromium	10.8		*	d
7440-50-8	Copper	20.5			d
7439-92-1	Lead	26.6		N	d
7440-02-0	Nickel	79.6			d

52 = 2

Color Before: BROWN

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

¹
INORGANIC ANALYSIS DATA SHEET

A#3---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 931115303A

Level (low/med): LOW

Data Received: 11/22/93

% Solids:

81.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	1960			P
7440-47-3	Chromium	9.0		*	P
7440-50-8	Copper	13.8			P
7439-92-1	Lead	17.5		N	P
7440-02-0	Nickel	53.4			P

CS # 3

Color Before: BLACK

Clarity Before:

Texture: FINE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#4---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 931115804A

Level (low/med): LOW

Date Received: 11/22/93

% Solids: 90.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadnium	9.9			U
7440-47-3	Chromium	13.5		*	U
7440-50-8	Copper	14.8			U
7439-92-1	Lead	28.5		N	U
7440-02-0	Nickel	112			U

33=4

Color Before: BLACK

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#5---

Lab Name: GP ENVIRONMENTAL.

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 931115305A

Level (low/med): LOW

Date Received: 11/22/93

% Solids: 92.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	8.3			P
7440-47-3	Chromium	13.9		*	P
7440-50-8	Copper	18.9			P
7439-92-1	Lead	11.7		N	P
7440-02-0	Nickel	127			P

0103

Color Before: BLACK

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#6---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 932225606A

Level (low/med): LOW

Date Received: 11/22/93

% Solids: 88.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	7.6			P
7440-47-3	Chromium	7.8		*	P
7440-50-8	Copper	5.1	B		P
7439-92-1	Lead	7.1		N	P
7440-02-0	Nickel	38.2			P

==6

Color Before: BLACK

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A=7---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A=1---

Matrix (soil/water): SOIL

Lab Sample ID: 931115807A

Level (low/med): LOW

Date Received: 11/22/93

% Solids: 83.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	28.0			P
7440-47-3	Chromium	11.8		*	P
7440-50-8	Copper	9.4			P
7439-92-1	Lead	7.7		N	P
7440-02-0	Nickel	152			P

52 = 7

Color Before: BROWN

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#8---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GFENV

Case No.:

SAS No.:

SDG No.: A-1---

Matrix (soil/water): SOIL

Lab Sample ID: 931115303A

Level (low/med): LOW

Date Received: 11/22/93

% Solids:

88.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	70.7			P
7440-47-3	Chromium	86.6	*		P
7440-50-8	Copper	91.5			P
7439-92-1	Lead	30.0	N		F
7440-02-0	Nickel	447			P

Color Before: BLACK

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1
INORGANIC ANALYSIS DATA SHEET

A#9---

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Lab Sample ID: 931115309A

Level (low/med): LOW

Data Received: 11/27/93

* Solids:

88.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	1020			u
7440-47-3	Chromium	212		*	u
7440-50-8	Copper	51.8			u
7439-92-1	Lead	43.5		N	u
7440-02-0	Nickel	1050			u

2: = 9

Color Before: BLACK

Clarity Before:

Texture: COARSE

Color After: YELLOW

Clarity After: CLEAR

Artifacts: YES

Comments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SEG No.: A-1

Initial Calibration Source: ICVC, ICVAC00

Continuing Calibration Source: ICVC, p.150

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium	500.0	491.21	98.2	500.0	484.06	96.8	497.94	99.6	u
Chromium	500.0	493.82	98.8	500.0	491.14	98.2	499.18	99.8	u
Copper	1000.0	952.93	95.3	1000.0	929.92	93.0	931.77	93.2	u
Lead	50.0	54.31	108.6	50.0	51.05	102.1	53.36	106.7	u
Nickel	1000.0	955.32	95.5	1000.0	964.60	96.5	976.83	97.7	u

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

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GFENV

Case No.:

SAS No.:

SDG No.: A-1---

Initial Calibration Source:

Continuing Calibration Source: ICVC, p.150

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				%	
	True	Found	%R(1)	True	Found	%R(1)	Found		%R(1)
Cadmium				500.0	497.94	99.6			100 100 100 106.5 100
Chromium				500.0	494.54	98.9			
Copper				1000.0	939.71	94.0			
Lead				50.0	51.05	102.1	53.26	106.5	
Nickel				1000.0	973.81	97.4			

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

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A=1---

Initial Calibration Source:

Continuing Calibration Source: ICVC

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium									
Chromium									
Copper									
Lead				50.0	52.30	104.6	53.64	107.3	F
Nickel									

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

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A-1---

Initial Calibration Source: ICVC

Continuing Calibration Source: ICVC

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium									
Chromium									
Copper									
Lead	50.0	49.17	98.3	50.0	48.10	96.2	51.19	102.4	F
Nickel									

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

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SEC No.: A-1---

Initial Calibration Source:

Continuing Calibration Source: ICVC

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				M	
	True	Found	%R(1)	True	Found	%R(1)	Found		%R(1)
Cadmium									
Chromium									
Copper									
Lead				50.0	47.15	94.3	50.48	101.0	F
Nickel									

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

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SEG No.: A-1

Initial Calibration Source: ICVC

Continuing Calibration Source: ICVC

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				M	
	True	Found	%R(1)	True	Found	%R(1)	Found		%R(1)
Cadmium									
Chromium									
Copper									
Lead	50.0	51.92	103.8	50.0	50.92	101.8	50.32	100.6	F
Nickel									

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

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SES No.: A#1---

Initial Calibration Source:

Continuing Calibration Source: ICVC

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				M	
	True	Found	%R(1)	True	Found	%R(1)	Found		%R(1)
Cadmium									
Chromium									
Copper									
Lead				50.0	49.72	99.4	51.02	102.0	F
Nickel									

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

ENVIROFORMS/INORGANIC CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

Initial Calibration Source:

Continuing Calibration Source: ICVC

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium									
Chromium									
Copper									
Lead				50.0	51.62	103.2	51.12	102.2	F
Nickel									

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

ENVIROFORMS/INORGANIC CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

Initial Calibration Source: ICVC

Continuing Calibration Source: ICVC

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cadmium									
Chromium									
Copper									
Lead	50.0	53.85	107.7	50.0	48.40	96.8	51.07	102.1	F
Nickel									

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

ENVIRONMENTAL/INORGANIC CLP

23

CRDL STANDARD FOR AA AND ICP

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

AA CRDL Standard Source: HP STD

ICP CRDL Standard Source: HP STD

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Found	%R
Cadmium				10.0	8.71	87.1	8.67	86.7
Chromium				20.0	25.00	125.0	21.57	107.8
Copper				50.0	46.20	92.4	45.27	90.5
Lead	3.0	3.18	106.0					
Nickel				80.0	81.32	101.6	87.02	108.8

ENVIROFORMS/INORGANIC CLP

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV Case No.:

SAS No.:

SEG No.: A#1

AA CRDL Standard Source: HP STD

ICP CRDL Standard Source: HP STD

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Found	%R
Cadmium								
Chromium								
Copper								
Lead	3.0	2.74	91.3					
Nickel								

ENVIROFORMS/INORGANIC CLP

23

CRDL STANDARD FOR AA AND ICP

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

AA CRDL Standard Source: HP STD

ICP CRDL Standard Source: HP STD

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Found	%R
Cadmium								
Chromium								
Copper								
Lead	3.0	2.87	95.7					
Nickel								

ENVIROFORMS/INORGANIC CLP

23

CRDL STANDARD FOR AA AND ICP

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GFENV

Case No.:

SAS No.:

SEG No.: A-1---

AA CRDL Standard Source: HP STD

ICP CRDL Standard Source: HP STD

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Found	%R
Cadmium								
Chromium								
Copper								
Lead	3.0	2.76	92.0					
Nickel								

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL

CONCENTR:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A51---

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
	C		1	C	2	C	3	C	C	X	
Cadmium	2.4	U	2.4	U	2.4	U	2.4	U	0.480	U	U
Chromium	7.2	U	7.2	U	7.2	U	7.2	U	1.440	U	U
Copper	16.2	U	16.2	U	16.2	U	16.2	U	3.240	U	U
Lead	1.0	U	1.0	U	1.0	U	1.0	U	0.453	U	U
Nickel	13.6	U	13.6	U	13.6	U	13.6	U	2.720	U	U

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L) C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank C	Y
		1 C	2 C	3 C	4 C	5 C	6 C		
Cadmium							2.4	U	U
Chromium							7.2	U	U
Copper							16.2	U	U
Lead		1.0	U	1.0	U	1.0	1.4	U	U
Nickel							13.6	U	U

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L) C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank C M	
		1 C	2 C	3 C	4 C	5 C	6 C		
Cadmium									
Chromium									
Copper									
Lead	-1.7 B	-1.5 B	-1.3 B	-1.7 B					
Nickel									

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

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						Prepa- ration Blank C	M
		Blank (ug/L)	1 C	2 C	3 C				
Cadmium									
Chromium									
Copper									
Lead		1.0	U					F	
Nickel									

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L) C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank C	M
		1 C	2 C	3 C	4 C	5 C	6 C		
Cadmium									
Chromium									
Copper									
Lead	-1.0 B	1.0 U	1.0 U	-1.0 B					
Nickel									

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

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)						Preparation Blank C	M
		1 C	2 C	3 C	4 C	5 C	6 C		
Cadmium									
Chromium									
Copper									
Lead		1.0 U		1.0 U		1.0 U		F	
Nickel									

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L) C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank C	M
		1 C	2 C	3 C	4 C	5 C	6 C		
Cadmium									
Chromium									
Copper									
Lead	-1.4 B	-1.5 B	-1.1 B					F	
Nickel									

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

ICP ID Number: 6500

ICS Source: IC20005/IC10

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	TR	Sol. A	Sol. AB	TR
Cadmium		300	15	266.7	88.9	11	268.4	89.5
Chromium		300	0	272.1	90.7	0	269.4	89.8
Copper		300	-1	255.3	85.1	3	256.8	85.6
Lead								
Nickel		300	14	253.4	84.5	8	259.4	86.5

ENVIROFORMS/INORGANIC CLP

SA
SPIKE SAMPLE RECOVERY

SAMPLE NO.

A#1---S

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Level (low/med): LOW

% Solids for Sample: 80.7

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
Cadmium	75-125	23.3642	8.2748	12.39	121.8		P
Chromium	75-125	57.9207	8.1315	49.57	100.4		P
Copper	75-125	70.7027	10.5197	61.96	97.1		P
Lead	75-125	21.3108	13.6005	4.96	155.4	N	F
Nickel	75-125	146.9866	24.8260	123.92	98.6		P

Comments:

ENVIROFORMS/INORGANIC CLP

6
DUPLICATES

SAMPLE NO.

A#1---D

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Matrix (soil/water): SOIL

Level (low/med): LOW

* Solids for Sample: 80.7

* Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Cadmium		8.2748	-	9.8233	-	17.1	-	P
Chromium	2.5	8.1315	-	12.1746	-	39.8	*	P
Copper	6.2	10.5197	-	14.8695	-	34.3	-	P
Lead		13.6005	-	11.9525	-	12.9	-	F
Nickel	9.9	24.8260	-	32.9074	-	28.0	-	P

ENVIROFORMS/INORGANIC CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1

Solid LCS Source: ERA 217

Aqueous LCS Source: ICVA0009,ICV

Analyte	Aqueous (ug/L)			Solid (mg/kg)					
	True	Found	±R	True	Found	C	Limits	±R	
Cadmium	500.0	464.86	93.0	79.1	82.8	-	40.0	126.0	104.7
Chromium	500.0	478.69	95.7	66.2	62.1	-	30.0	93.0	93.8
Copper	1000.0	884.76	88.5	34.8	36.3	-	17.0	52.0	104.3
Lead	50.0	50.50	101.0	101.0	78.9	-	45.0	146.0	78.1
Nickel	1000.0	926.06	92.6	168.0	165.2	-	84.0	261.0	98.3

ENVIROFORMS/INORGANIC CLP

8
STANDARD ADDITION RESULTS

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SEG No.: A#1---

Concentration Units: ug/L

EPA Sample No.	An	0 ADD		1 ADD		2 ADD		3 ADD		Final Conc.	R	Q
		CON	ABS	CON	ABS	CON	ABS	CON	ABS			
A#11--	PB	10.00	0.097	20.00	0.153	30.00	0.187	20.7	0.245	0.9954		

ENVIROFORMS/INORGANIC CLP

9
ICP SERIAL DILUTIONS

SAMPLE NO.

A#1---L

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SCG No.: A#1---

Matrix (soil/water): SOIL

Level (low/med): LGW

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	M
Cadmium	33.39	31.56	5.5	-	P
Chromium	32.81	44.40	35.3	-	P
Copper	42.45	81.00	100.0	-	P
Lead				-	
Nickel	100.17	134.86	34.6	-	P

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

ICP ID Number:

Date: 03/01/93

Flame AA ID Number:

Furnace AA ID Number: 3051

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			100.0		
Antimony	217.60	BZ	60.0		
Arsenic	193.70	BZ	10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead	283.30	BZ	3.0	1.0	
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium	196.00	BZ	5.0		
Silver	328.10	BZ	10.0		
Sodium			5000.0		
Thallium	276.80	BZ	10.0		
Vanadium			50.0		
Zinc			20.0		

Comments:

041

ENVIROFORMS/INORGANIC CLP

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

ICP ID Number:

Date: 03/01/93

Flame AA ID Number:

Furnace AA ID Number: 3050

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			100.0		
Antimony	217.60	BZ	60.0		
Arsenic	193.70	BZ	10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper	231.60	BZ	25.0		
Iron			100.0		
Lead	283.30	BZ	3.0	1.0	F
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel		BZ	40.0		
Potassium			5000.0		
Selenium	196.00	BZ	5.0		
Silver	328.10	BZ	10.0		
Sodium			5000.0		
Thallium	276.80	BZ	10.0		
Vanadium			50.0		
Zinc			20.0		

Comments:

042

ENVIRONMENTAL/INORGANIC CLP

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

ICP ID Number:

6500

Date:

03/01/91

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200.0		
Antimony			60.0		
Arsenic			10.0		
Barium	233.53		200.0		
Beryllium	313.04		5.0		
Cadmium	214.00		5.0	2.4	P
Calcium	317.93		5000.0		
Chromium	267.72		10.0	7.2	P
Cobalt	228.62		50.0		
Copper	324.75		25.0	16.2	P
Iron	259.94		100.0		
Lead			3.0		
Magnesium	279.08		5000.0		
Manganese	257.61		15.0		
Mercury			0.2		
Nickel	231.60		40.0	13.6	P
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium	292.40		50.0		
Zinc	213.86		20.0		

Comments:

ENVIROFORMS/INORGANIC CLP

11A
ICP INTERELEMENT CORRECTION FACTORS (Annually)

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

ICP ID Number: 6500

Date: 11/25/90

Analyte	Wave-length (nm)	Interelement Correction Factors for:			
		Al	Ca	Fe	Mg
Aluminum	308.22	0.000000	0.000000	0.000000	0.000000
Antimony					
Arsenic					
Barium	233.53	0.000000	0.000000	0.000000	0.000000
Beryllium	313.04	0.000000	0.000000	0.000000	0.000000
Cadmium	214.00	0.000000	0.000000	0.000000	0.000000
Calcium	317.93	0.000000	0.000000	0.000000	0.000000
Chromium	267.72	0.000000	0.000000	0.000000	0.000000
Cobalt	228.62	0.000000	0.000000	0.000000	0.000000
Copper	324.75	0.000000	0.000000	0.000000	0.000000
Iron	259.94	0.000000	0.000000	0.000000	0.000000
Lead					
Magnesium	279.08	0.000000	0.000000	0.000000	0.000000
Manganese	267.61	0.000000	0.000000	0.000000	0.000000
Mercury					
Nickel	231.60	0.000000	0.000000	0.000000	0.000000
Potassium					
Selenium					
Silver					
Sodium					
Thallium					
Vanadium	292.40	0.000000	0.000000	0.000000	0.000000
Zinc	213.86	0.000000	0.000000	0.000000	0.000000

Comments:

ENVIROFORMS/INORGANIC CLP

12
ICP LINEAR RANGES (QUARTERLY)

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

ICP ID Number: 6500

Date: 11/25/90

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum			NR
Antimony			NR
Arsenic			NR
Barium			NR
Beryllium			NR
Cadmium	4.00	1000.0	P
Calcium			NR
Chromium	4.00	1000.0	P
Cobalt			NR
Copper	2.00	5000.0	P
Iron			NR
Lead			NR
Magnesium			NR
Manganese			NR
Mercury			NR
Nickel	2.00	2000.0	P
Potassium			NR
Selenium			NR
Silver			NR
Sodium			NR
Thallium			NR
Vanadium			NR
Zinc			NR

Comments:

ENVIROFORMS/INORGANIC CLP

13
Preparation Log

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Method: F

Sample No.	Preparation Date	Weight (gram)	Volume (ml)
A#10--	11/22/93	1.00	200
A#11--	11/22/93	1.00	200
A#12--	11/22/93		100
A#1---	11/22/93	1.00	200
A#1---D	11/22/93	1.00	200
A#1---S	11/22/93	1.00	200
A#2---	11/22/93	1.00	200
A#3---	11/22/93	1.00	200
A#4---	11/22/93	1.00	200
A#5---	11/22/93	1.00	200
A#6---	11/22/93	1.00	200
A#7---	11/22/93	1.00	200
A#8---	11/22/93	1.00	200
A#9---	11/22/93	1.00	200
LCSS	11/22/93	1.00	200
LCSW	11/22/93		100
PBS	11/22/93	1.00	200
PSW	11/22/93		100

ENVIROFORMS/INORGANIC CLP

13

Preparation Log

Lab Name: GP ENVIRONMENTAL

Contract:

Lab Code: GPENV

Case No.:

SAS No.:

SDG No.: A#1---

Method: P

Sample No.	Preparation Date	Weight (gram)	Volume (ml)
A#10--	11/22/93	1.00	200
A#11--	11/22/93	1.00	200
A#12--	11/22/93		100
A#1---	11/22/93	1.00	200
A#1---D	11/22/93	1.00	200
A#1---S	11/22/93	1.00	200
A#2---	11/22/93	1.00	200
A#3---	11/22/93	1.00	200
A#4---	11/22/93	1.00	200
A#5---	11/22/93	1.00	200
A#6---	11/22/93	1.00	200
A#7---	11/22/93	1.00	200
A#8---	11/22/93	1.00	200
A#9---	11/22/93	1.00	200
LCSS	11/22/93	1.00	200
LCSW	11/22/93		100
PBS	11/22/93	1.00	200
PEW	11/22/93		100

INSTRUMENT ID 6506 DEVICE SERIAL FOR ICP

DATE OF ANALYSIS 11/24/93

DATE OF REVIEW 11-24-93

ANALYST NAME Margalith Benhariz

REVIEWER'S NAME David H.

ANALYST SIGNATURE M. Benhariz

REVIEWER'S SIGNATURE David H.

TIME ANALYSIS INITIATED _____

WORK ORDER NUMBER 93-11-58

CASE _____ SDC _____

INDUCTIVELY COUPLED PLASMA

ID	D.F.	COMMENTS	ID	D.F.	COMMENTS	ID	D.F.	COMMENTS
1. ICP			25. COF			49. COF		
2. ICB			26. COB			50. COB		
3. ICS			27. 11A		93-11-58	51.		
4. ICD			28. 10A			52.		
5. CRI			29. 09A	5		53. (P)		
6. OBW			30. 09A	5		54.		
7. OBS			31. 10A	10		55.		
8. ICD			32. ICD			56.		
9. ICS			33. ICS			57.		
10. OIA		93-11-58	34. CRIT			58.		
11. OIARA		↓ ↓	35. COV3			59.		
12. OIARA		↓ ↓	36. COB			60.		
13. COF			37. COF			61. COF		
14. COB			38. COB			62. COB		
15. OIAL	5	93-11-58	39.			63.		
16. OIA			40.			64.		
17. OIA			41.		Cal. over.	65.		
18. OIA			42.			66.		
19. OIA			43.			67.		
20. OIA			44.			68.		
21. OIA			45.			69.		
22. OIA			46.			70.		
23. OIA			47.			71.		
24. 10A		↓ ↓	48.		Cal. over.	72.		

COMMENTS: _____

Method Name: Replicates: 2 Read Delay: 20
Print Format: All Data ID Name: Data Name: mb1124
Remarks:

CO NI CR CU

Element Name CO Gain 632.0
Element Name NI Gain 642.0
Element Name CR Gain 646
Element Name CU Gain 321
ANALYST MRS INST ID 6500
ELEMEN cd ni cr cu

Standard 1 Replicate 1
CO 102799
NI 110630
CR 102723
CU 119733
CASE 93-11-158 SDG
ppm

Standard 1 Replicate 2
CO 133534
NI 111423
CR 100521
CU 121540
ICV LV - ICVAC008 % p.150
LCSSLV - #217
ic10003

CO AU 132970 SD 100512 - CVIC20005 CONC 1.0000 ppm
NI AU 111027 SD 100511 - CV 0.3 CONC 2.0000 ppm
CR AU 101703 SD 1525.0 CV 1.4 CONC 1.0000 ppm
CU AU 120744 SD 1123.4 CV 0.9 CONC 5.0000 ppm

Blank Replicate 1
CO 227
NI 416
CR -234
CU 336

Blank Replicate 2
CO 181
NI 160
CR 163
CU 146

CO AU 204 SD 32.5 CV 15.9 CONC 0.0000 ppm
NI AU 208 SD 161.0 CV 62.2 CONC 0.0000 ppm
CR AU 143 SD 294.0 CV 448.0 CONC 0.0000 ppm
CU AU 242 SD 132.9 CV 54.9 CONC 0.0000 ppm

ICV Replicate 1
CO 0.4647 ppm
NI 0.9589 ppm
CR 0.4975 ppm
CU 0.9525 ppm

ICV Replicate 2
CO 0.4976 ppm
NI 0.9517 ppm
CR 0.4901 ppm
CU 0.9533 ppm

CO AU 0.4912 ppm SD .00916 CV 1.8
NI AU 0.9538 ppm SD .00503 CV 0.5
CR AU 0.4930 ppm SD .00520 CV 1.0
CU AU 0.9533 ppm SD .00027 CV 0.0

ICC

Replicate 1

CO	-0.0000	pps
CH	-0.0127	pps
CR	-0.0013	pps
CU	0.0024	pps

Peak Offset
Peak Offset

ICC

Replicate 2

CO	-0.0012	pps
CH	0.0061	pps
CR	-0.0000	pps
CU	-0.0010	pps

Peak Offset

CO
CH
CR
CU

AU	-0.0004	pps	SD	.00022	CU	122.6
AU	-0.0033	pps	SD	.01331	CU	402.0
AU	-0.0008	pps	SD	.00110	CU	137.2
AU	0.0007	pps	SD	.00247	CU	342.9

ICSA1

Replicate 1

CO	0.0141	pps
CH	0.0147	pps
CR	-0.0012	pps
CU	0.0024	pps

Peak Offset

Peak Offset

ICSA1

Replicate 2

CO	0.0150	pps
CH	0.0130	pps
CR	0.0022	pps
CU	-0.0047	pps

Peak Offset

Peak Offset

CO
CH
CR
CU

AU	0.0143	pps	SD	.00059	CU	4.0
AU	0.0137	pps	SD	.00121	CU	8.7
AU	0.0004	pps	SD	.00246	CU	501.0
AU	-0.0010	pps	SD	.00322	CU	503.9

ICSAB1

Replicate 1

CO	0.2664	pps
CH	0.2598	pps
CR	0.2670	pps
CU	0.2533	pps

ICSAB1

Replicate 2

CO	0.2663	pps
CH	0.2463	pps
CR	0.2772	pps
CU	0.2568	pps

CO
CH
CR
CU

AU	0.2666	pps	SD	.00031	CU	0.1
AU	0.2533	pps	SD	.00923	CU	23.6
AU	0.2721	pps	SD	.00724	CU	21.6
AU	0.2533	pps	SD	.00210	CU	0.8

CRI1

Replicate 1

CO	0.0093	pps
CH	0.0323	pps
CR	0.0232	pps
CU	0.0453	pps

CRI1

Replicate 2

CO	0.0081	pps
CH	0.0302	pps
CR	0.0267	pps
CU	0.0470	pps

AVCA

AU	0.0087	pps	SD	.0000
----	--------	-----	----	-------

AR101483 C 150

CCRH
CU

AU 0.0010 ppm SD .00213 CU 1.8
AU 0.0030 ppm SD .00249 CU 9.9
AU 0.0462 ppm SD .00180 CU 2.6

PSW

Replicate 1

CCRD
CCRH
CU
-0.0001 ppm
0.0003 ppm
0.0007 ppm
0.0031 ppm

PSW

Replicate 2

CCRD
CCRH
CU
-0.0004 ppm
0.0091 ppm
-0.0020 ppm
-0.0111 ppm

Peak Offset ✓

CCRD
CCRH
CU

AU -0.0004 ppm SD .00033 CU 85.5
AU 0.0047 ppm SD .00623 CU 131.1
AU 0.0033 ppm SD .00472 CU 87.8
AU -0.0039 ppm SD .01012 CU 255.5

PS5

Replicate 1

CCRD
CCRH
CU
-0.0002 ppm
-0.0024 ppm
-0.0017 ppm
-0.0036 ppm

Peak Offset
Peak Offset

PS5

Replicate 2

CCRD
CCRH
CU
0.0001 ppm
-0.0104 ppm
0.0033 ppm
0.0064 ppm

Peak Offset ✓

CCRD
CCRH
CU

AU -0.0000 ppm SD .00027 CU 825.7
AU -0.0066 ppm SD .00364 CU 84.4
AU 0.0009 ppm SD .00378 CU 397.9
AU 0.0014 ppm SD .00710 CU 502.9

LCSW

Replicate 1

CCRD
CCRH
CU
0.4613 ppm
0.9109 ppm
0.4608 ppm
0.8932 ppm

LCSW

Replicate 2

CCRD
CCRH
CU
0.4653 ppm
0.9411 ppm
0.4763 ppm
0.8742 ppm

CCRD
CCRH
CU

AU 0.4648 ppm SD .00474 CU 1.0
AU 0.9260 ppm SD .02139 CU 2.9
AU 0.4786 ppm SD .00302 CU 0.6
AU 0.8347 ppm SD .01490 CU 1.6

LC55

Replicate 1

CCRD
CCRH
CU
0.4074 ppm
0.8213 ppm
0.3154 ppm
0.1831 ppm

LC55

Replicate 2

CCRD
CCRH
CU
0.4234 ppm
0.8310 ppm

ARI01486 J0051

	CCR				0.3071	ppm				
	CU				0.1802	ppm				
CCZC	AC	0.4157	ppm				SD	.00913	CCU	0.2
CCZC	AC	0.0262	ppm				SD	.00625	CCU	1.0
CCZC	AC	0.0102	ppm				SD	.00444	CCU	1.4
CCZC	AC	0.1817	ppm				SD	.00202	CCU	1.1

9311158-01A

Replicate 1

CCZC					0.0803	ppm			
CCZC					0.0994	ppm			
CCZC					0.0015	ppm			
CCZC					0.0274	ppm			

9311158-01A

Replicate 2

CCZC					0.0329	ppm			
CCZC					0.1004	ppm			
CCZC					0.0333	ppm			
CCZC					0.0472	ppm			

CCZC	AC	0.0333	ppm				SD	.00064	CCU	1.9
CCZC	AC	0.1001	ppm				SD	.00067	CCU	0.6
CCZC	AC	0.0328	ppm				SD	.00141	CCU	14.8
CCZC	AC	0.0424	ppm				SD	.00674	CCU	15.8

9311158-01AD

Replicate 1

CCZC					0.0337	ppm			
CCZC					0.1339	ppm			
CCZC					0.0471	ppm			
CCZC					0.0595	ppm			

9311158-01AD

Replicate 2

CCZC					0.0405	ppm			
CCZC					0.1314	ppm			
CCZC					0.0511	ppm			
CCZC					0.0604	ppm			

CCZC	AC	0.0396	ppm				SD	.00128	CCU	1.8
CCZC	AC	0.1327	ppm				SD	.00133	CCU	1.1
CCZC	AC	0.0491	ppm				SD	.00206	CCU	1.8
CCZC	AC	0.0597	ppm				SD	.00064	CCU	1.0

9311158-01AS

Replicate 1

CCZC					0.0926	ppm			
CCZC					0.3841	ppm			
CCZC					0.2347	ppm			
CCZC					0.2334	ppm			

9311158-01AS

Replicate 2

CCZC					0.0959	ppm			
CCZC					0.6020	ppm			
CCZC					0.2326	ppm			
CCZC					0.2371	ppm			

CCZC	AC	0.0942	ppm				SD	.00234	CCU	1.4
CCZC	AC	0.3930	ppm				SD	.01244	CCU	0.8
CCZC	AC	0.2337	ppm				SD	.00153	CCU	0.9
CCZC	AC	0.2332	ppm				SD	.00241	CCU	0.9

CCV1

Replicate 1

CCZC					0.4764	ppm			
CCZC					0.3588	ppm			
CCZC					0.4733	ppm			
CCZC					0.3333	ppm			

CCU1

Replicate 1

CU	0.4916	ppm
CU	0.9703	ppm
CU	0.4891	ppm
CU	0.9233	ppm

CU
CU
CU

AU	0.4340	ppm
AU	0.9643	ppm
AU	0.4911	ppm
AU	0.9299	ppm

SD	.01077	CU	100.0
SD	.00877	CU	100.0
SD	.00277	CU	100.0
SD	.01023	CU	100.0

CC31

Replicate 1

CU	-0.0000	ppm
CU	0.0004	ppm
CU	0.0002	ppm
CU	0.0021	ppm

CC31

Replicate 2

CU	-0.0006	ppm
CU	0.0022	ppm
CU	-0.0012	ppm
CU	0.0024	ppm

CU
CU
CU

AU	-0.0003	ppm
AU	0.0013	ppm
AU	-0.0004	ppm
AU	0.0023	ppm

SD	.00042	CU	106.6
SD	.00123	CU	99.2
SD	.00103	CU	26.7
SD	.00017	CU	7.3

931115B-01AL:5

Replicate 1

CU	0.0072	ppm
CU	0.0354	ppm
CU	0.0073	ppm
CU	0.0046	ppm

931115B-01AL:5

Replicate 2

CU	0.0053	ppm
CU	0.0163	ppm
CU	0.0103	ppm
CU	0.0091	ppm

CU
CU
CU

AU	0.0033	ppm
AU	0.0249	ppm
AU	0.0063	ppm
AU	0.0033	ppm

SD	.00109	CU	23.7
SD	.01194	CU	41.1
SD	.00211	CU	23.7
SD	.00103	CU	27.3

931115B-02A

Replicate 1

CU	0.0983	ppm
CU	0.3209	ppm
CU	0.0403	ppm
CU	0.0639	ppm

931115B-02A

Replicate 2

CU	0.0969	ppm
CU	0.3209	ppm
CU	0.0438	ppm
CU	0.0814	ppm

CU
CU
CU

AU	0.0977	ppm
AU	0.3209	ppm
AU	0.0433	ppm
AU	0.0827	ppm

SD	.00109	CU	1.1
SD	.00011	CU	0.0
SD	.00333	CU	1.1
SD	.00173	CU	2.0

931115B-03A

Replicate 1

CU	1.6920	ppm
CU	0.2239	ppm

Over Calls.
AR101488

CR 0.0069 ppm
CU 0.0554 ppm

9311138-03A

Replicate 2

CO 1.2940 ppm
NI 0.0219 ppm
CR 0.0070 ppm
CU 0.0513 ppm

Over Calib.

CO
NI
CR
CU

AU	1.0000	ppm	SD	.00076	CV	0.0
AU	0.2106	ppm	SD	.00744	CV	3.4
AU	0.0369	ppm	SD	.00002	CV	0.0
AU	0.0342	ppm	SD	.00129	CV	3.2

9311138-04A

Replicate 1

CO 0.0466 ppm
NI 0.5006 ppm
CR 0.0592 ppm
CU 0.0673 ppm

9311138-04A

Replicate 2

CO 0.0433 ppm
NI 0.5144 ppm
CR 0.0627 ppm
CU 0.0671 ppm

CO
NI
CR
CU

AU	0.0450	ppm	SD	.00213	CV	4.7
AU	0.5073	ppm	SD	.00973	CV	1.9
AU	0.0610	ppm	SD	.00246	CV	4.0
AU	0.0672	ppm	SD	.00008	CV	0.1

9311138-05A

Replicate 1

CO 0.0373 ppm
NI 0.5847 ppm
CR 0.0643 ppm
CU 0.0877 ppm

9311138-05A

Replicate 2

CO 0.0387 ppm
NI 0.5772 ppm
CR 0.0633 ppm
CU 0.0844 ppm

CO
NI
CR
CU

AU	0.0382	ppm	SD	.00094	CV	2.4
AU	0.5820	ppm	SD	.00400	CV	0.6
AU	0.0639	ppm	SD	.00079	CV	1.2
AU	0.0871	ppm	SD	.00090	CV	1.0

9311138-06A

Replicate 1

CO 0.0333 ppm
NI 0.1643 ppm
CR 0.0347 ppm
CU 0.0199 ppm

9311138-06A

Replicate 2

CO 0.0333 ppm
NI 0.1723 ppm
CR 0.0342 ppm
CU 0.0251 ppm

CO
NI
CR
CU

AU	0.0333	ppm	SD	.00032	CV	0.9
AU	0.1496	ppm	SD	.00487	CV	4.0
AU	0.0343	ppm	SD	.00033	CV	1.0
AU	0.0223	ppm	SD	.00363	CV	16.1

AR101489

9311132-07A

Replicate 1

CO	0.1169	ppm
NI	0.6206	ppm
CR	0.0471	ppm
CU	0.0409	ppm

9311132-07A

Replicate 2

CO	0.1173	ppm
NI	0.6441	ppm
CR	0.0513	ppm
CU	0.0373	ppm

CO	AU	0.1171	ppm	SD	.00023	CU	0.2
NI	AU	0.6364	ppm	SD	.01090	CU	1.7
CR	AU	0.0493	ppm	SD	.00312	CU	6.3
CU	AU	0.0391	ppm	SD	.00232	CU	6.5

9311132-08A

Replicate 1

CO	0.3123	ppm
NI	1.9314	ppm
CR	0.3843	ppm
CU	0.4037	ppm

9311132-08A

Replicate 2

CO	0.3135	ppm
NI	1.9768	ppm
CR	0.3623	ppm
CU	0.4014	ppm

CO	AU	0.3130	ppm	SD	.00049	CU	0.2
NI	AU	1.9791	ppm	SD	.00919	CU	0.1
CR	AU	0.3834	ppm	SD	.00127	CU	0.3
CU	AU	0.4031	ppm	SD	.00514	CU	1.2

9311132-09A

Replicate 1

CO	1.7161	ppm
NI	3.7603	ppm
CR	0.9406	ppm
CU	0.2314	ppm

Over Calib.
Over Calib.

9311132-09A

Replicate 2

CO	1.7163	ppm
NI	3.7673	ppm
CR	0.9287	ppm
CU	0.2256	ppm

Over Calib.
Over Calib.

CO	AU	1.7163	ppm	SD	.00006	CU	0.0
NI	AU	3.7673	ppm	SD	.00443	CU	0.1
CR	AU	0.9346	ppm	SD	.00644	CU	0.9
CU	AU	0.2235	ppm	SD	.00410	CU	1.7

9311132-10A

Replicate 1

CO	0.3402	ppm
NI	0.9080	ppm
CR	0.0696	ppm
CU	0.1907	ppm

9311132-10A

Replicate 2

CO	0.3457	ppm
NI	0.6064	ppm
CR	0.0703	ppm
CU	0.1925	ppm

AR101490

CO	AU	0.3429	ppm	SD	.00330	CU	1.1
NI	AU	0.6782	ppm	SD	.01366	CU	1.3

GR	AU	0.0079	ppm	SD	.00343	CU	0.6
CU	AU	0.1714	ppm	SD	.00131	CU	0.6

CCV2 Replicate 1

CCV2	0.4940	ppm
CCV2	0.4900	ppm
CCV2	0.4900	ppm
CCV2	0.4900	ppm

CCV2 Replicate 2

CCV2	0.4935	ppm
CCV2	0.4900	ppm
CCV2	0.4900	ppm
CCV2	0.4900	ppm

CCV2	AU	0.4979	ppm	SD	.00221	CU	0.4
CCV2	AU	0.9760	ppm	SD	.01217	CU	1.2
CCV2	AU	0.4991	ppm	SD	.00108	CU	0.2
CCV2	AU	0.9317	ppm	SD	.00962	CU	1.0

CCB2 Replicate 1

CCB2	-0.0002	ppm	Peak Offset
CCB2	0.0032	ppm	
CCB2	0.0041	ppm	
CCB2	-0.0014	ppm	

CCB2 Replicate 2

CCB2	-0.0003	ppm	Peak Offset
CCB2	-0.0034	ppm	
CCB2	0.0034	ppm	
CCB2	0.0004	ppm	

CCB2	AU	-0.0005	ppm	SD	.00043	CU	82.3
CCB2	AU	-0.0011	ppm	SD	.00612	CU	336.9
CCB2	AU	0.0037	ppm	SD	.00047	CU	12.4
CCB2	AU	-0.0005	ppm	SD	.00149	CU	267.6

9311158-11A Replicate 1

9311158-11A	0.0376	ppm
9311158-11A	0.4633	ppm
9311158-11A	0.0465	ppm
9311158-11A	0.0782	ppm

9311158-11A Replicate 2

9311158-11A	0.0390	ppm
9311158-11A	0.4749	ppm
9311158-11A	0.0419	ppm
9311158-11A	0.0815	ppm

9311158-11A	AU	0.0383	ppm	SD	.00102	CU	2.6
9311158-11A	AU	0.4691	ppm	SD	.00813	CU	1.7
9311158-11A	AU	0.0442	ppm	SD	.00327	CU	7.3
9311158-11A	AU	0.0799	ppm	SD	.00231	CU	2.8

9311158-12A Replicate 1

9311158-12A	-0.0003	ppm	Peak Offset
9311158-12A	0.0011	ppm	
9311158-12A	0.0030	ppm	
9311158-12A	0.0038	ppm	

9311158-12A Replicate 2

9311158-12A	-0.0000	ppm
9311158-12A	0.0023	ppm
9311158-12A	0.0019	ppm

CU -0.0077 ppm

CO
NI
CR
CU

AU	-0.0004	ppm	SD	.00032	CU	117.9
AU	0.0047	ppm	SD	.00305	CU	103.4
AU	0.0024	ppm	SD	.00074	CU	27.6
AU	-0.0019	ppm	SD	.00221	CU	421.4

9311150-09A:3 Replicate 1

CO
NI
CR
CU

1.3912	ppm	Over Calib.
0.0493	ppm	
0.0103	ppm	
0.0112	ppm	

9311150-09A:3 Replicate 2

CO
NI
CR
CU

1.3730	ppm	Over Calib.
0.0476	ppm	
0.0122	ppm	
0.0117	ppm	

CO
NI
CR
CU

AU	0.0003	ppm	SD	.01233	CU	0.7
AU	0.0466	ppm	SD	.00132	CU	12.7
AU	0.0113	ppm	SD	.00138	CU	12.2
AU	0.0117	ppm	SD	.00005	CU	0.4

9311150-09A:3 Replicate 1

CO
NI
CR
CU

0.9024	ppm
0.9217	ppm
0.1952	ppm
0.0370	ppm

9311150-09A:3 Replicate 2

CO
NI
CR
CU

0.8956	ppm
0.9243	ppm
0.1930	ppm
0.0490	ppm

CO
NI
CR
CU

AU	0.9006	ppm	SD	.00254	CU	0.2
AU	0.9230	ppm	SD	.00159	CU	0.2
AU	0.1941	ppm	SD	.00156	CU	0.8
AU	0.0440	ppm	SD	.00707	CU	16.0

9311150-09A:10 Replicate 1

CO
NI
CR
CU

0.8060	ppm	Peak Offset
0.0261	ppm	
0.0079	ppm	
-0.0054	ppm	

9311150-09A:10 Replicate 2

CO
NI
CR
CU

0.8001	ppm
0.0201	ppm
0.0068	ppm
-0.0032	ppm

CO
NI
CR
CU

AU	0.8030	ppm	SD	.00423	CU	0.3
AU	0.0261	ppm	SD	.00005	CU	0.1
AU	0.0093	ppm	SD	.00060	CU	33.3
AU	-0.0043	ppm	SD	.00155	CU	33.3

ICSA?

Replicate 1

CO
NI
CR
CU

0.0109	ppm	Peak Offset
0.0019	ppm	
0.0017	ppm	
0.0021	ppm	Peak Offset

ICSA?

Replicate 2

ARI01492

57

	0.0112 pps	Peak Offset
	0.0134 pps	
	0.0020 pps	Peak Offset
	0.0034 pps	Peak Offset
0020	AV 0.0110 pps	50 .0021 CU 1.9
0020	AV 0.0076 pps	50 .0021 CU 104.1
0020	AV -0.0000 pps	50 .0021 CU > 999
0020	AV 0.0022 pps	50 .0021 CU 32.4

IC1AGF Replicate 1

0020	0.2450 pps
0020	0.2592 pps
0020	0.2672 pps
0020	0.2487 pps

IC1AGF Replicate 2

0020	0.2699 pps
0020	0.2594 pps
0020	0.2716 pps
0020	0.2640 pps

0020	AV 0.2683 pps	50 .0021 CU 0.3
0020	AV 0.2593 pps	50 .0021 CU 0.0
0020	AV 0.2694 pps	50 .0021 CU 1.1
0020	AV 0.2567 pps	50 .0114 CU 4.4

CRI# Replicate 1

0020	0.0083 pps
0020	0.0908 pps
0020	0.0198 pps
0020	0.0430 pps

CRI# Replicate 2

0020	0.0089 pps
0020	0.0332 pps
0020	0.0233 pps
0020	0.0474 pps

0020	AV 0.0086 pps	50 .0021 CU 5.1
0020	AV 0.0670 pps	50 .0021 CU 11.3
0020	AV 0.0213 pps	50 .0021 CU 6.9
0020	AV 0.0432 pps	50 .0021 CU

CCV# Replicate 1

0020	0.4952 pps
0020	0.9873 pps
0020	0.4936 pps
0020	0.9506 pps

CCV# Replicate 2

0020	0.4973 pps
0020	0.9397 pps
0020	0.4954 pps
0020	0.9287 pps

0020	AV 0.4979 pps	50 .0021 CU 0.0
0020	AV 0.9738 pps	50 .0198 CU 2.0
0020	AV 0.4943 pps	50 .0021 CU 0.2
0020	AV 0.9397 pps	50 .0158 CU 1.6

CC# Replicate 1

0020	-0.0007 pps
0020	0.0011 pps
0020	0.0046 pps

AB101493

CU

0.0014 ppm

0000

Replicate 2

0000

0.0002 ppm
0.0001 ppm
0.0047 ppm
0.0021 ppm

0000

0.0002 ppm
0.0003 ppm
0.0047 ppm
0.0002 ppm

0000

0.00070
0.00043
0.00111
0.00111

0000

0.0006
0.0006
0.0006
0.0006

BENCH SHEET
239_2 OF 7421

Run #1

DATA FILE: PSY24938
INSTRUMENT FILE: PSY24938

CASE:
INSTRUMENT: 3051

SGC:
ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	%SOLIDS
1	0.0000 ug/L	STD 0.00	WATER	1.00	100.000	100.000	100.00
2	3.0000 ug/L	STD 3.00	WATER	1.00	100.000	100.000	100.00
3	20.000 ug/L	STD 20.0	WATER	1.00	100.000	100.000	100.00
4	75.000 ug/L	STD 75.0	WATER	1.00	100.000	100.000	100.00
5	ICV	ICV	WATER	1.00	100.000	100.000	100.00
6	ICB	ICB	WATER	1.00	100.000	100.000	100.00
7	CRA	CRA	WATER	1.00	100.000	100.000	100.00
8	PBW	PBW	WATER	1.00	100.000	100.000	100.00
9	PBUAA	PBUAA	WATER	1.00	100.000	100.000	100.00
10	PBS_11/24/93	PBS	SOIL	1.00	1.000	200.000	100.00
11	PBSA	PBSA	SOIL	1.00	1.000	200.000	100.00
12	LCSV	LCSV	WATER	1.00	100.000	100.000	100.00
13	LCSWA	LCSWA	WATER	1.00	100.000	100.000	100.00
14	LCSB	LCSB	SOIL	20.00	1.000	200.000	100.00
15	LCSBA	LCSBA	SOIL	20.00	1.000	200.000	100.00
16	CCV1	CCV1	WATER	1.00	100.000	100.000	100.00
17	CCB1	CCB1	WATER	1.00	100.000	100.000	100.00
18	9311158-01A	#1	SOIL	1.00	1.000	200.000	80.70
19	9311158-01AA	#1A	SOIL	1.00	1.000	200.000	80.70
20	9311158-01AD	#1D	SOIL	1.00	1.000	200.000	80.70
21	9311158-01ADA	#1DA	SOIL	1.00	1.000	200.000	80.70
22	9311158-01AS	#1S	SOIL	1.00	1.000	200.000	80.70
23	9311158-02A	#2	SOIL	1.00	1.000	200.000	80.60
24	9311158-02AA	#2A	SOIL	1.00	1.000	200.000	80.60
25	9311158-03A	#3	SOIL	1.00	1.000	200.000	81.90
26	9311158-03AA	#3A	SOIL	1.00	1.000	200.000	81.90
27	CCV2	CCV2	WATER	1.00	100.000	100.000	100.00
28	CCB2	CCB2	WATER	1.00	100.000	100.000	100.00
29	9311158-04A	#4	SOIL	1.00	1.000	200.000	90.70
30	9311158-04AA	#4A	SOIL	1.00	1.000	200.000	90.70
31	9311158-05A	#5	SOIL	1.00	1.000	200.000	92.00
32	9311158-05AA	#5A	SOIL	1.00	1.000	200.000	92.00
33	9311158-06A	#6	SOIL	1.00	1.000	200.000	88.90
34	9311158-06AA	#6A	SOIL	1.00	1.000	200.000	88.90
35	9311158-07A	#7	SOIL	1.00	1.000	200.000	83.70
36	9311158-07AA	#7A	SOIL	1.00	1.000	200.000	83.70
37	9311158-08A	#8	SOIL	1.00	1.000	200.000	88.50
38	9311158-08AA	#8A	SOIL	1.00	1.000	200.000	88.50
39	CCV3	CCV3	WATER	1.00	100.000	100.000	100.00
40	CCB3	CCB3	WATER	1.00	100.000	100.000	100.00

Rita Amich - 11/24/93
Analyst / Date

11/24/93
Lab Supervisor / Date
ARI01495

BENCH SHEET
239_2 of 7421

FILE: PSY2493B
INSTRUMENT FILE: PSY2493B

CASE:
INSTRUMENT: 3051

SDG:
ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	RESULTS
41	9311158-09A	#9	SOIL	1.00	1.000	200.000	88.20
42	9311158-09AA	#9A	SOIL	1.00	1.000	200.000	88.20
43	9311158-10A	#10	SOIL	1.00	1.000	200.000	90.00
44	9311158-10AA	#10A	SOIL	1.00	1.000	200.000	90.00
45	9311158-11A	#11	SOIL	1.00	1.000	200.000	88.20
46	9311158-11AA	#11A	SOIL	1.00	1.000	200.000	88.20
47	9311158-12A	#12	WATER	1.00	100.000	100.000	100.00
48	9311158-12AA	#12A	WATER	1.00	100.000	100.000	100.00
49	CC74	CC74	WATER	1.00	100.000	100.000	100.00
50	CC34	CC34	WATER	1.00	100.000	100.000	100.00
51	9311158-02A	#2	SOIL	5.00	1.000	200.000	83.60
52	9311158-02AA	#2A	SOIL	5.00	1.000	200.000	83.60
53	9311158-09A	#9	SOIL	10.00	1.000	200.000	83.20
54	9311158-09AA	#9A	SOIL	10.00	1.000	200.000	83.20
55	9311158-10A	#10	SOIL	5.00	1.000	200.000	90.00
56	9311158-10AA	#10A	SOIL	5.00	1.000	200.000	90.00
	CC75	CC75	WATER	1.00	100.000	100.000	100.00
	CC35	CC35	WATER	1.00	100.000	100.000	100.00
59	9311158-09A	#9	SOIL	5.00	1.000	200.000	83.20
60	9311158-09AA	#9A	SOIL	5.00	1.000	200.000	83.20
61	CC76	CC76	WATER	1.00	100.000	100.000	100.00
62	CC36	CC36	WATER	1.00	100.000	100.000	100.00

Rita Aron 11/24/93
Analyst / Date

SM 11/24/93
Lab Supervisor / Date

AR101496

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Page 1
METHOD REPORT
239_2 OF 7421

DATA FILE: PSY24938
INSTRUMENT FILE: PSY24938

ANALYST: RA
INSTRUMENT: 3051

METHOD FILE: PS
ANALYZED: 11/24/93

ANALYTE	CORR.	SLOPE	INTERCPT.	STD. D.	IC/1 D	IC/2 D	IC/3 D	IC/4 D	IC/5 D	IC/6 D
Lead	0.9995	191.8394	-0.9493	980025	IC/C	IC/C	IC/C	ERL#217		

Rita Ann 11/24/93

Analyst / Date

ADL 11/24/93

Lab Supervisor / Date

AR101497

032

RUN SUMMARY SHEET

Lead

FILE: PBT24938
INSTRUMENT FILE: PBT24938

CASE:

SOC:

INSTRUMENT: 3031

ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY	TRND	PREC
1	0.0000 ug/L	STD 0.00	-0.001	0.001	-0.949	-0.949	1.00	ug/L			
2	3.0000 ug/L	STD 3.00	0.019	0.021	2.39	2.39	1.00	ug/L			7.07
3	20.000 ug/L	STD 20.0	0.118	0.116	21.5	21.5	1.00	ug/L			1.21
4	75.000 ug/L	STD 75.0	0.395	0.392	74.6	74.6	1.00	ug/L			0.51
5	ICV	ICV	0.258	0.225	54.3	54.3	1.00	ug/L	109.0		0.00
6	ICB	ICB	-0.001	0.001	-0.949	-0.949	1.00	ug/L			
7	CRA	CRA	0.022	0.021	3.18	3.18	1.00	ug/L	106.0		3.29
8	PBW	PBW	0.014	0.011	1.45	1.45	1.00	ug/L			17.0
9	PBWA	PBWA	0.112	0.114	20.7	20.7	1.00	ug/L	96.4		1.25
10	PBS_11/24/93	PBS <i>27272</i>	0.023	0.024	3.56	0.772	0.200	mg/Kg			3.01
11	PBSA	PBSA	0.121	0.123	22.5	4.49	0.200	mg/Kg	94.5		1.16
12	LCSW	LCSW	0.286	0.250	50.5	50.5	1.00	ug/L	101.0		9.50
13	LCSWA	LCSWA	0.365	0.371	69.7	69.7	1.00	ug/L	95.9		1.15
14	LCSB	LCSB <i>27272</i>	0.008	0.007	0.450	1.76	4.00	mg/Kg			9.45
15	LCSBA	LCSBA	0.108	0.118	20.7	82.9	4.00	mg/Kg	104.0		6.25
16	CCV1	CCV1	0.290	0.252	51.0	51.0	1.00	ug/L	102.0		9.92
17	CCB1	CCB1	0.001	0.000	-0.853	-0.853	1.00	ug/L			141.0
18	9311158-01A	#1	0.302	0.226	55.5	45.0 <i>0.243</i>	0.243	mg/Kg			3.35
19	9311158-01AA	#1A	0.443	0.438	85.5	21.2	0.243	mg/Kg	150.0		2.35
20	9311158-01AD	#1D	0.256	0.269	50.4	15.0 <i>0.243</i>	0.243	mg/Kg		9.41	0.77
21	9311158-01ADA	#1DA	0.399	0.412	76.9	19.0	0.243	mg/Kg	132.0		2.27
22	9311158-01AS	#1S	0.434	0.436	82.5	25.0 <i>0.243</i>	0.243	mg/Kg	135.0		0.32
23	9311158-02A	#2	0.468	0.468	88.8	30.0 <i>0.243</i>	0.243	mg/Kg			0.00
24	9311158-02AA	#2A	0.604	0.588	113.0	28.1	0.243	mg/Kg	123.0		1.00
25	9311158-03A	#3	0.364	0.344	67.0	14.0 <i>0.244</i>	0.244	mg/Kg			3.79
26	9311158-03AA	#3A	0.479	0.475	90.6	22.1	0.244	mg/Kg	118.0		0.59
27	CCV2	CCV2	0.282	0.284	53.4	53.4	1.00	ug/L	107.0		0.50
28	CCB2	CCB2	0.000	0.001	-0.853	-0.853	1.00	ug/L			167.0
29	9311158-04A	#4	0.516	0.498	96.3	25.0 <i>0.220</i>	0.220	mg/Kg			2.51
30	9311158-04AA	#4A	0.527	0.529	100.0	22.1	0.220	mg/Kg	20.1		0.27
31	9311158-05A	#5	0.300	0.275	54.0	<u>11.7</u>	0.217	mg/Kg			6.56
32	9311158-05AA	#5A	0.391	0.395	74.3	16.1	0.217	mg/Kg	101.0		0.34
33	9311158-06A	#6	0.171	0.169	31.7	<u>7.12</u>	0.225	mg/Kg			0.33
34	9311158-06AA	#6A	0.266	0.265	50.0	11.2	0.225	mg/Kg	91.6		0.27
35	9311158-07A	#7	0.175	0.174	32.3	<u>7.73</u>	0.239	mg/Kg			0.41
36	9311158-07AA	#7A	0.277	0.273	51.8	12.0	0.239	mg/Kg	97.0		1.03
37	9311158-08A	#8	0.537	0.515	100.0	25.0 <i>0.226</i>	0.226	mg/Kg			2.74
38	9311158-08AA	#8A	0.579	0.541	106.0	26.3	0.226	mg/Kg	32.0		4.00
39	CCV3	CCV3	0.267	0.275	51.0	51.0	1.00	ug/L	102.0		2.00

POOR SOIL RECOVERY

OVERALL RECOVERY 250%

Rita Amick 11/24/93

ML U/12/93

Analyst: Y. Data

Lab Supervisor / Date

ARI01498

038

RUN SUMMARY SHEET Lead

DATE: LE: P8Y24938
INSTRUMENT FILE: P8Y24938

CASE:

SDG:
INSTRUMENT: JCS1

ANALYZED: 11/24/1993

SEQ LAB ID	CLIENT ID	REF1	REF2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY	CR20	CR50
40 CCB3	CCB3	0.002	0.001	-0.662	-0.662	1.00	ug/L			47.1
41 9311158-09A	#9	0.739	0.730	143.3	33.1 34.1	0.227	mg/Kg	51.3		0.97
42 9311158-09AA	#9A	0.774	0.802	150.3	34.1	0.227	mg/Kg	51.3		2.51
43 9311158-10A	#10	0.534	0.522	100.3	23.7 23.7	0.222	mg/Kg	32.1		1.61
44 9311158-10AA	#10A	0.583	0.540	107.3	23.7	0.222	mg/Kg	32.1		5.42
45 9311158-11A	#11	0.221	0.216	41.3	12.7 12.7	0.227	mg/Kg	73.3		1.62
46 9311158-11AA	#11A	0.297	0.297	56.0	12.7	0.227	mg/Kg	73.3		0.00
47 9311158-12A	#12	0.029	0.028	4.52	4.52 ✓	1.00	ug/L			2.48
48 9311158-12AA	#12A	0.141	0.144	26.4	26.4	1.00	ug/L	109.3		1.47
49 CCV4	CCV4	0.283	0.282	53.2	53.2	1.00	ug/L	106.3		0.25
50 CCB4	CCB4	0.000	0.003	-0.662	-0.662	1.00	ug/L			141.3
51 9311158-08A	#8	0.134	0.151	26.6	30.0 ✓	1.13	mg/Kg			7.39
52 9311158-08AA	#8A	0.254	0.254	47.3	53.9	1.13	mg/Kg	106.3		0.00
53 9311158-09A	#9	0.131	0.132	24.3	54.2 54.2	2.27	mg/Kg			0.54
54 9311158-09AA	#9A	0.129	0.130	23.9	54.2	2.27	mg/Kg	-1.920		0.55
55 9311158-10A	#10	0.150	0.147	27.5	30.6 ✓	1.11	mg/Kg			1.43
56 9311158-10AA	#10A	0.258	0.257	48.5	53.8	1.11	mg/Kg	104.3		
57 CCV5	CCV5	0.272	0.283	52.3	52.3	1.00	ug/L	104.3		2.90
58 CCB5	CCB5	0.002	0.004	-0.374	-0.374	1.00	ug/L			47.1
59 9311158-09A	#9	0.198	0.212	38.4	43.3 ✓	1.13	mg/Kg			4.23
60 9311158-09AA	#9A	0.299	0.292	55.8	63.2	1.13	mg/Kg	86.3		1.68
61 CCV6	CCV6	0.278	0.291	53.6	53.6	1.00	ug/L	107.3		3.23
62 CCB6	CCB6	0.000	0.001	-0.353	-0.353	1.00	ug/L			141.3

Rita Amin 11/24/93
Analyst / Date

AM 11/24/93
Lab Supervisor / Date

AR101499

BENCH SHEET
239_2 OF 7421

Sub 5

FILE: PBY24930
INSTRUMENT FILE: PBY24930

CASE:
INSTRUMENT: 3050

SDS:
ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	MATRIX	QUANTITY	PRICE	AMOUNT	TOTALS
1	0.0000 ug/L	STD 0.00	WATER	1.00	100.000	100.000	100.00
2	3.0000 ug/L	STD 3.00	WATER	1.00	100.000	100.000	100.00
3	20.0000 ug/L	STD 20.0	WATER	1.00	100.000	100.000	100.00
4	75.0000 ug/L	STD 75.0	WATER	1.00	100.000	100.000	100.00
5	ICV	ICV	WATER	1.00	100.000	100.000	100.00
6	ICB	ICB	WATER	1.00	100.000	100.000	100.00
7	CRA	CRA	WATER	1.00	100.000	100.000	100.00
8	PBS	PBS_11/24/93	SOIL	1.00	1.000	200.000	100.00
9	PBSA	PBSA	SOIL	1.00	1.000	200.000	100.00
10	LCSS	LCSS	SOIL	20.00	1.000	200.000	100.00
11	LCSSA	LCSSA	SOIL	20.00	1.000	200.000	100.00
12	CCV1	CCV1	WATER	1.00	100.000	100.000	100.00
13	CCB1	CCB1	WATER	1.00	100.000	100.000	100.00
14	9311158-01A	#1	SOIL	2.00	1.000	200.000	80.70
15	9311158-01AA	#1A	SOIL	2.00	1.000	200.000	80.70
16	9311158-01AD	#1D	SOIL	2.00	1.000	200.000	80.70
	9311158-01ADA	#1DA	SOIL	2.00	1.000	200.000	80.70
	9311158-01AS	#1S	SOIL	2.00	1.000	200.000	80.70
19	9311158-02A	#2	SOIL	2.00	1.000	200.000	80.60
20	9311158-02AA	#2A	SOIL	2.00	1.000	200.000	80.60
21	9311158-03A	#3	SOIL	2.00	1.000	200.000	81.90
22	9311158-03AA	#3A	SOIL	2.00	1.000	200.000	81.90
23	CCV2	CCV2	WATER	1.00	100.000	100.000	100.00
24	CCB2	CCB2	WATER	1.00	100.000	100.000	100.00
25	9311158-04A	#4	SOIL	2.00	1.000	200.000	90.70
26	9311158-04AA	#4A	SOIL	2.00	1.000	200.000	90.70
27	CCV3	CCV3	WATER	1.00	100.000	100.000	100.00
28	CCB3	CCB3	WATER	1.00	100.000	100.000	100.00
29	PBS_11/24/93	PBS	SOIL	1.00	1.000	200.000	100.00
30	LCSS(CERAM)217A	PBSAA	SOIL	1.00	1.000	200.000	100.00
31	9311158-01A	#1	SOIL	2.00	1.000	200.000	80.70
32	9311158-01AA	#1A	SOIL	2.00	1.000	200.000	80.70
33	9311158-02A	#2	SOIL	2.00	1.000	200.000	80.60
34	9311158-02AA	#2A	SOIL	2.00	1.000	200.000	80.60
35	9311158-03A	#3	SOIL	2.00	1.000	200.000	81.90
36	9311158-03AA	#3A	SOIL	2.00	1.000	200.000	81.90
	9311158-04A	#4	SOIL	2.00	1.000	200.000	90.70
	9311158-04AA	#4A	SOIL	2.00	1.000	200.000	90.70

Rita Park 11/24/93

WJH 11/29/93

Analyst / Date

Lab Supervisor / Date

AR101500

035

BENCH SHEET
239_2 OF 7421

DATA FILE: PBY2493D
INSTRUMENT FILE: PBY2493D

CASE:
INSTRUMENT: 3050

SGG:
ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	TESTS
39	CC74	CC74	WATER	1.00	100.000	100.000	100.00
40	CC34	CC34	Water	1.00	100.000	100.000	100.00
41	9311158-02A0	#20	SOIL	2.00	1.000	200.000	20.50
42	9311158-02A1	#21	SOIL	2.00	1.000	200.000	20.50
43	9311158-02A2	#22	SOIL	2.00	1.000	200.000	20.50
44	9311158-02A3	#23	SOIL	2.00	1.000	200.000	20.50
45	CC75	CC75	WATER	1.00	100.000	100.000	100.00
46	CC35	CC35	WATER	1.00	100.000	100.000	100.00
47			Water	1.00	100.000	100.000	100.00
48			Water	1.00	100.000	100.000	100.00
49			Water	1.00	100.000	100.000	100.00
50			Water	1.00	100.000	100.000	100.00

Rita Arnesen 11/24/93

NJI 11/27/93

Analyse / Date

AR101501

Lab Supervisor / Date

086

RUN SUMMARY SHEET

Lead

FILE: PBY24930
INSTRUMENT FILE: PBY24930

CASE:

ICG:
INSTRUMENT: 3350

ANALYZED: 11/24/1993

SEQ LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	REMARKS	Q300	Q50
1 0.0000 ug/L	STD 0.00	0.017	0.013	-1.060	-1.060	1.00	ug/L			18.3
2 3.0000 ug/L	STD 3.00	0.028	0.028	2.03	2.03	1.00	ug/L			0.00
3 20.000 ug/L	STD 20.0	0.116	0.116	22.9	22.9	1.00	ug/L			3.00
4 75.000 ug/L	STD 75.0	0.333	0.330	74.1	74.1	1.00	ug/L			0.64
5 ICV	ICV	0.227	0.226	49.2	49.2	1.00	ug/L		98.3	3.31
6 ICS	ICS	0.011	0.014	-1.650	-1.650	1.00	ug/L			17.0
7 CRA	CRA	0.033	0.029	2.74	2.74	1.00	ug/L		91.3	9.12
8 PBS	PBS_11/24/93	0.034	0.031	3.10	0.619	0.200	ug/Kg			6.53
9 PBSA	PBSA	0.108	0.109	20.9	4.18	0.200	ug/Kg		89.0 ✓	1.97
10 LCSS	LCSS	0.098	0.107	19.7	78.9	4.00	ug/Kg			6.21
11 LCSSA	LCSSA	0.173	0.192	38.7	155.0	4.00	ug/Kg		95.0 ✓	7.36
12 CCV1	CCV1	0.222	0.222	48.1	48.1	1.00	ug/L		96.2	0.00
13 CCT	CCT	0.013	0.013	-1.530	-1.530	1.00	ug/L			0.00
14 9311158-01A	#1	0.135	0.135	27.4	45.6 ✓	0.496	ug/Kg			0.00
15 9311158-01AA	#1A	0.202	0.199	43.0	21.3	0.496	ug/Kg		77.3	1.06
16 9311158-01AD	#1D	0.124	0.118	24.1	12.0	0.496	ug/Kg			12.9
17 9311158-01ADA	#1DA	0.197	0.199	42.4	21.3	0.496	ug/Kg		91.4	0.71
18 9311158-01AS	#1S	0.197	0.204	43.0	21.3	0.496	ug/Kg		156.0	2.47
19 9311158-02A	#2	0.229	0.225	49.3	21.3	0.496	ug/Kg			1.25
20 9311158-02AA	#2A	0.293	0.297	65.4	32.3	0.496	ug/Kg		80.7	0.96
21 9311158-03A	#3	0.164	0.165	34.4	14.3	0.488	ug/Kg			0.43
22 9311158-03AA	#3A	0.227	0.231	49.8	24.3	0.488	ug/Kg		76.6	1.24
23 CCV2	CCV2	0.234	0.236	51.2	51.2	1.00	ug/L		102.3	0.50
24 CCS2	CCS2	0.013	0.015	-1.300	-1.300	1.00	ug/L			10.1
25 9311158-04A	#4	0.247	0.243	53.4	25.4	0.441	ug/Kg			1.15
26 9311158-04AA	#4A	0.314	0.302	68.5	30.2	0.441	ug/Kg		74.3	2.75
27 CCV3	CCV3	0.216	0.220	47.2	47.2	1.00	ug/L		94.3	1.30
28 CCS3	CCS3	0.013	0.012	-1.650	-1.650	1.00	ug/L			5.66
29 PBS_11/24/93	PBS	0.027	0.031	2.25	0.453 ✓	0.200	ug/Kg			9.75
30 9311158-01A	PBSAA	0.105	0.105	20.3	4.06	0.200	ug/Kg		90.2	0.00
31 9311158-01A	#1	0.129	0.141	27.4	13.6 ✓	0.496	ug/Kg			6.28
32 9311158-01AA	#1A	0.206	0.210	44.8	22.2	0.496	ug/Kg		86.7	1.36
33 9311158-02A	#2	0.235	0.227	50.2	21.7	0.496	ug/Kg			2.45
34 9311158-02AA	#2A	0.299	0.296	66.0	32.3	0.496	ug/Kg		79.3	3.71
35 9311158-03A	#3	0.168	0.173	35.9	17.3 ✓	0.488	ug/Kg			2.07
36 9311158-03AA	#3A	0.240	0.247	53.2	26.3	0.488	ug/Kg		86.7	2.07
37 9311158-04A	#4	0.267	0.265	58.4	25.4	0.441	ug/Kg			0.
38 9311158-04AA	#4A	0.330	0.325	73.2	32.3	0.441	ug/Kg		75.0	1.08

Rita Amos 11/24/93

11/24/93

AR101502

Lab Supervisor / Date

087

RUN SUMMARY SHEET Lead

DATA FILE: PBY24930
INSTRUMENT FILE: PBY24930

CASE:

SEC:
INSTRUMENT: 3050

ANALYZED: 11/26/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	PRECEDENCE	TEST
39	CC74	CC74	0.234	0.230	50.5	50.5	1.00	ug/L	101.0	1.22
40	CC34	CC34	0.016	0.016	-0.222	-0.222	1.00	ug/L		0.00
41	9311158-02A0	#20	0.226		318.0	158.0	0.476	ug/Kg		
42	9311158-02A1	MSA Spike # M2	0.231		MSA 10 C=	0.983		ug/Kg		
43	9311158-02A2	MSA Spike # M3	0.242		MSA 20 M=	0.00071		ug/Kg		
44	9311158-02A3	MSA Spike # M4	0.246		MSA 30 S=	0.22560		ug/Kg		
45	CC75	CC75	0.239		52.1	52.1	1.00	ug/L	100.0	
46	CC35	CC35	0.016		-0.222	-0.222	1.00	ug/L		
47			0.233		50.7	50.7	1.00	ug/L		
48			0.225		48.8	48.8	1.00	ug/L		
49			0.228		0.000 NG MODE			ug/L		
50			0.235		0.000 NG MODE			ug/L		

Handwritten note: 11/26/93, 101.0, 100.0, 100.0

Handwritten note: 11/26/93

Rita Amin akul/s
Analyst / Date

11/26/93
Lab Supervisor / Date
AR101503 028

Page 1
METHOD REPORT
239_2 OF 7422

FILE: PSY2493D
INSTRUMENT FILE: PSY2493D

ANALYST: DM
INSTRUMENT: 3050

METHOD FILE: P8
ANALYZED: 11/24/1993

ANALYST	CORR.	SLOPE	INTERC.	STD. D.	IC: 13	IC: 13	IC: 13	IC: 13	IC: 13	IC: 13
Lead	0.9984	237.4914	-4.5226	P8C025	IC: C	IC: C	IC: C	IC: C	IC: C	IC: C

Rita Amh 11/24/93
Analyst / Date

CT 11/24/93

Lab Supervisor / Date

AR101504

139

Run #3

RUN SUMMARY SHEET Lead

DATA FILE: PBY2593A
INSTRUMENT FILE: PBY2593A

CASE:

SEC:
INSTRUMENT: 3051

ANALYZED: 11/25/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	PAV CONC.	RESULT	LIMIT	UNITS	RECOVERY	REF	CRSD
1	3.0000 ug/L	STD 0.00	-0.001	0.000	-1.120	-1.120	1.00	ug/L			0.00
2	3.0000 ug/L	STD 3.00	0.017	0.018	2.48	2.48	1.00	ug/L			4.06
3	20.0000 ug/L	STD 20.0	0.118	0.116	22.4	22.4	1.00	ug/L			1.21
4	75.0000 ug/L	STD 75.0	0.379	0.375	76.3	76.3	1.00	ug/L			0.75
5	ICV	ICV	0.267	0.263	51.9	51.9	1.00	ug/L	104.0		1.07
6	ICB	ICB	0.000	0.000	-1.020	-1.020	1.00	ug/L			
7	CRA	CRA	0.020	0.019	2.37	2.37	1.00	ug/L	95.8		3.63
8	PSW 11-23-93	PSW 11-23-93	0.009	0.003	-0.222	-0.222	1.00	ug/L			35.4
9	PSW 11-23-93A	PSW 11-23-93A	0.114	0.116	22.0	22.0	1.00	ug/L	110.0		1.23
10	LCSM	LCSM	0.228	0.235	45.2	45.2	1.00	ug/L	90.4		2.14
11	LCSMA	LCSMA	0.332	0.326	64.5	64.5	1.00	ug/L	96.4		1.72
12	9311155-01C	SP-12	0.128	0.125	24.2	24.2	1.00	ug/L			1.64
13	9311155-01CA	SP-12A	0.246	0.233	47.0	47.0	1.00	ug/L	114.0		3.23
14	9311155-02C	SP-13	0.022	0.020	3.17	3.17	1.00	ug/L			6.73
15	9311155-02CA	SP-13A	0.127	0.125	24.2	24.2	1.00	ug/L	105.0		1.12
16	CCV1	CCV1	0.263	0.257	50.9	50.9	1.00	ug/L	102.0		63
17	CCB1	CCB1	0.001	0.000	-0.921	-0.921	1.00	ug/L			3
18	9311155-03B	SP-14	0.009	0.006	0.473	0.473	1.00	ug/L			25.3
19	9311155-03BA	SP-14A	0.124	0.118	23.2	23.2	1.00	ug/L	116.0		3.51
20	9311155-04C	SP-15	0.005	0.007	0.178	0.178	1.00	ug/L			23.6
21	9311155-04CA	SP-15A	0.113	0.109	21.2	21.2	1.00	ug/L	106.0		2.51
22	9311155-05C	SP-16	0.011	0.008	0.977	0.977	1.00	ug/L			16.1
23	9311155-05CA	SP-16A	0.116	0.121	22.5	22.5	1.00	ug/L	113.0		2.91
24	9311155-06B	DUPLICATE	0.015	0.011	1.58	1.58	1.00	ug/L			21.8
25	9311155-06BA	DUPLICATEA	0.124	0.118	23.2	23.2	1.00	ug/L	108.0		3.5
26	9311155-01E	MU-1	0.009	0.005	0.378	0.378	1.00	ug/L			40.6
27	9311155-01EA	MU-1A	0.116	0.113	21.3	21.3	1.00	ug/L	109.0		1.81
28	CCV2	CCV2	0.259	0.255	50.3	50.3	1.00	ug/L	101.0		1.11
29	CCB2	CCB2	0.004	0.001	-0.521	-0.521	1.00	ug/L			84.3
30	9311155-02C	MU-2	0.003	0.006	-0.122	-0.122	1.00	ug/L			47.1
31	9311155-02CA	MU-2A	0.114	0.108	21.2	21.2	1.00	ug/L	106.0		3.2
32	9311155-03C	MU-3	0.002	0.005	-0.321	-0.321	1.00	ug/L			60.6
33	9311155-03CA	MU-3A	0.107	0.103	20.0	20.0	1.00	ug/L	99.8		2.6
34	9311155-04C	MU-4	0.001	0.002	-0.721	-0.721	1.00	ug/L			47.1
35	9311155-04CA	MU-4A	0.115	0.106	21.0	21.0	1.00	ug/L	103.0		5.7
36	9311155-05C	MU-5	0.003	0.007	-0.022	-0.022	1.00	ug/L			56.6
37	9311155-05CA	MU-5A	0.114	0.110	21.6	21.6	1.00	ug/L	102.0		2.5
38	9311155-06C	MU-6	0.002	0.005	-0.321	-0.321	1.00	ug/L			4
39	9311155-06CA	MU-6A	0.103	0.107	20.0	20.0	1.00	ug/L	99.8		2.6

Analyst: [Signature] Date: 11/29/93

074 11/29/93

AR 01505

Lab Supervisor / Date

070

RUN SUMMARY SHEET
Lead

DATA FILE: P8Y2593A
INSTRUMENT FILE: P8Y2593A

CASE:

CG:
INSTRUMENT: JCS:

ANALYZED: 11/25/1993

SEQ LAB ID	CLIENT ID	RES1	RES2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY	CRSD
40 CC73	CC73	0.257	0.251	49.7	49.7	1.00	ug/L	99.4	1.37
41 CC23	CC23	0.001	-0.001	-1.020	-1.020	1.00	ug/L		
42 9311159-07B	MW-7	0.002	0.005	-0.321	-0.321	1.00	ug/L		60.6
43 9311159-07BA	MW-7A	0.108	0.114	21.2	21.2	1.00	ug/L	106.0	3.32
44 9311159-07BD	MW-7D	0.004	0.007	0.073	0.073	1.00	ug/L	-323.24	38.6
45 9311159-07BDA	MW-7DA	0.112	0.111	21.2	21.2	1.00	ug/L	106.0	0.63
46 9311159-07BS	MW-7S	0.105	0.100	19.4	19.4	1.00	ug/L	97.3	3.45
47 9311159-08B	MW-8	0.007	0.009	0.577	0.577	1.00	ug/L		17.7
48 9311159-08BA	MW-8A	0.105	0.113	20.8	20.8	1.00	ug/L	104.0	9.19
49 9311159-09C	MW-9	0.002	0.005	-0.321	-0.321	1.00	ug/L		60.6
50 9311159-09CA	MW-9A	0.107	0.101	19.8	19.8	1.00	ug/L	98.8	4.08
51 CC74	CC74	0.258	0.263	51.0	51.0	1.00	ug/L	102.0	1.36
52 CC24	CC24	0.001	0.001	-0.821	-0.821	1.00	ug/L		0.00
53 9311159-10D	MW-10	0.003	0.007	-0.022	-0.022	1.00	ug/L		56.6
54 9311159-10DA	MW-10A	0.117	0.113	22.0	22.0	1.00	ug/L	110.0	2.46
55 9311159-11D	MW-11	0.010	0.012	1.18	1.18	1.00	ug/L		17.8
56 9311159-11DA	MW-11A	0.111	0.104	20.4	20.4	1.00	ug/L	96.4	.0
57 CC75	CC75	0.265	0.262	51.6	51.6	1.00	ug/L	103.0	0.20
58 CC25	CC25	0.004	0.001	-0.521	-0.521	1.00	ug/L		84.3
59 9311158-02A		0.428	0.425	84.2	34.2	1.00	ug/L		0.50
60 9311158-02AA	A	0.512	0.496	99.7	99.7	1.00	ug/L	77.6	2.24
61 9311158-02A		0.111	0.114	21.6	107.5 26.6	5.00	ug/kg		1.38
62 9311158-02AA	A	0.216	0.225	43.0	215.0	5.00	ug/L	103.0 ✓	2.59
63 CC76	CC76	0.263	0.259	51.1	51.1	1.00	ug/L	102.0	1.08
64 CC26	CC26	0.003	0.005	-0.222	-0.222	1.00	ug/L		35.4

F- UIC-21 11-25-93

OH 11/29/93

93-11-155

11-159
11-153

BENCH SHEET
239_2 OF 7422

DATA FILE: PBY2593A
INSTRUMENT FILE: PBY2593A

CASE:
INSTRUMENT: 3051

LOG:
ANALYZED: 11/25/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	TESTS
1	0.0000 ug/L	STD 0.00	WATER	1.00	100.000	100.000	100.00
2	3.0000 ug/L	STD 3.00	WATER	1.00	100.000	100.000	100.00
3	20.0000 ug/L	STD 20.0	WATER	1.00	100.000	100.000	100.00
4	75.0000 ug/L	STD 75.0	WATER	1.00	100.000	100.000	100.00
5	ICV	ICV	WATER	1.00	100.000	100.000	100.00
6	ICB	ICB	WATER	1.00	100.000	100.000	100.00
7	CRA	CRA	WATER	1.00	100.000	100.000	100.00
8	PSW 11-23-93	PSW 11-23-93	WATER	1.00	100.000	100.000	100.00
9	PSW 11-23-93A	PSW 11-23-93A	WATER	1.00	100.000	100.000	100.00
10	LCSW	LCSW	WATER	1.00	100.000	100.000	100.00
11	LCSWA	LCSWA	WATER	1.00	100.000	100.000	100.00
12	9311155-01C	SP-12	WATER	1.00	100.000	100.000	100.00
13	9311155-01CA	SP-12A	WATER	1.00	100.000	100.000	100.00
14	9311155-02C	SP-13	WATER	1.00	100.000	100.000	100.00
15	9311155-02CA	SP-13A	WATER	1.00	100.000	100.000	100.00
16	CC1	CC1	WATER	1.00	100.000	100.000	100.00
17	CC1	CC1	WATER	1.00	100.000	100.000	100.00
18	9311155-03B	SP-14	WATER	1.00	100.000	100.000	100.00
19	9311155-03BA	SP-14A	WATER	1.00	100.000	100.000	100.00
20	9311155-04C	SP-15	WATER	1.00	100.000	100.000	100.00
21	9311155-04CA	SP-15A	WATER	1.00	100.000	100.000	100.00
22	9311155-05C	SP-16	WATER	1.00	100.000	100.000	100.00
23	9311155-05CA	SP-16A	WATER	1.00	100.000	100.000	100.00
24	9311155-06B	DUPLICATE	WATER	1.00	100.000	100.000	100.00
25	9311155-06BA	DUPLICATEA	WATER	1.00	100.000	100.000	100.00
26	9311159-01E	MW-1	WATER	1.00	100.000	100.000	100.00
27	9311159-01EA	MW-1A	WATER	1.00	100.000	100.000	100.00
28	CC2	CC2	WATER	1.00	100.000	100.000	100.00
29	CC2	CC2	WATER	1.00	100.000	100.000	100.00
30	9311159-02C	MW-2	WATER	1.00	100.000	100.000	100.00
31	9311159-02CA	MW-2A	WATER	1.00	100.000	100.000	100.00
32	9311159-03C	MW-3	WATER	1.00	100.000	100.000	100.00
33	9311159-03CA	MW-3A	WATER	1.00	100.000	100.000	100.00
34	9311159-04C	MW-4	WATER	1.00	100.000	100.000	100.00
35	9311159-04CA	MW-4A	WATER	1.00	100.000	100.000	100.00
36	9311159-05C	MW-5	WATER	1.00	100.000	100.000	100.00
37	9311159-05CA	MW-5A	WATER	1.00	100.000	100.000	100.00
38	9311159-06C	MW-6	WATER	1.00	100.000	100.000	100.00
39	9311159-06CA	MW-6A	WATER	1.00	100.000	100.000	100.00
40	CC3	CC3	WATER	1.00	100.000	100.000	100.00

F. Wick

11-25-93

11-29-93

RENCE SHEET
239_2 OF 7421

DATA FILE: PBY2593A
INSTRUMENT FILE: PBY2593A

CASE:
INSTRUMENT: 3051

SG:
ANALYZED: 11/25/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	SECURITY
41	CC33	CC33	WATER	1.00	100.000	100.000	100.00
42	9311159-078	MW-7	WATER	1.00	100.000	100.000	100.00
43	9311159-078A	MW-7A	WATER	1.00	100.000	100.000	100.00
44	9311159-078D	MW-7D	WATER	1.00	100.000	100.000	100.00
45	9311159-078DA	MW-7DA	WATER	1.00	100.000	100.000	100.00
46	9311159-078S	MW-7S	WATER	1.00	100.000	100.000	100.00
47	9311159-088	MW-8	WATER	1.00	100.000	100.000	100.00
48	9311159-088A	MW-8A	WATER	1.00	100.000	100.000	100.00
49	9311159-09C	MW-9	WATER	1.00	100.000	100.000	100.00
50	9311159-09CA	MW-9A	WATER	1.00	100.000	100.000	100.00
51	CCV4	CCV4	WATER	1.00	100.000	100.000	100.00
52	CC34	CC34	WATER	1.00	100.000	100.000	100.00
53	9311159-100	MW-10	WATER	1.00	100.000	100.000	100.00
54	9311159-100A	MW-10A	WATER	1.00	100.000	100.000	100.00
55	9311159-110	MW-11	WATER	1.00	100.000	100.000	100.00
56	9311159-110A	MW-11A	WATER	1.00	100.000	100.000	100.00
57	CCV5	CCV5	WATER	1.00	100.000	100.000	100.00
58	CC35	CC35	WATER	1.00	100.000	100.000	100.00
59	9311158-02A		WATER	1.00	100.000	100.000	100.00
60	9311158-02AA	A	WATER	1.00	100.000	100.000	100.00
61	9311158-02A		WATER	5.00	100.000	100.000	100.00
62	9311158-02AA	A	WATER	5.00	100.000	100.000	100.00
63	CCV6	CCV6	WATER	1.00	100.000	100.000	100.00
64	CC36	CC36	WATER	1.00	100.000	100.000	100.00

Handwritten notes:
1.000 200.0
5.00 100.000
5.00 100.000
DM w/50175

Analyst: F. J. [unclear] *Date:* 11-25-93

Lab Supervisor: [unclear] *Date:* 11-29-93

AR101508

073

Page 1
METHOD REPORT
239_2 OF 7421

FILE: PBY2593A
INSTRUMENT FILE: PBY2593A

ANALYST: RU
INSTRUMENT: 3051

METHOD FILE: 98
ANALYZED: 11/25/1993

ANALYTE	CORR.	SLOPE	INTERCPT.	STD. DEV.	IC7	IC7	IC7	IC7	IC7	IC7
Lead	0.9950	199.7765	-1.3227	280025	IC/C	IC/C	IC/C	ERA=217		

F. Nich

11-25-93

AH 11-29-93

Analyse / Date

Lab Supervisor / Date

AR101509

07

Run = 1

RUN SUMMARY SHEET Lead

LAB FILE: PBY2993B
INSTRUMENT FILE: PBY2993B

CASE:

SCG:
INSTRUMENT: 3051

ANALYZED: 11/29/1993

SEQ LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	SECURITY	SPD	TRSD
1 0.0000 ug/L	STD 0.00	0.002	0.004	-0.962	-0.962	1.00	ug/L			47.1
2 3.0000 ug/L	STD 3.00	0.021	0.021	2.76	2.76	1.00	ug/L			3.02
3 20.000 ug/L	STD 20.0	0.115	0.111	21.7	21.7	1.00	ug/L			2.53
4 75.000 ug/L	STD 75.0	0.379	0.361	76.5	76.5	1.00	ug/L			3.44
5 ICV	ICV	0.268	0.271	53.8	53.8	1.00	ug/L	108.3		0.79
6 ICZ	ICZ	0.002	0.000	-1.350	-1.350	1.00	ug/L			141.0
7 CRA	CRA	0.020	0.022	2.76	2.75	1.00	ug/L	92.3		6.73
8 PBS	PBS	0.023	0.022	3.07	0.613	0.200	mg/Kg			3.14
9 PSSA	PSSA	0.128	0.132	25.2	9.03	0.200	mg/Kg	110.3		2.18
10 9311158-04A	#4	0.137	0.130	25.9	28.5 ✓	1.10	mg/Kg			3.71
11 9311158-04AA	#4A	0.218	0.216	43.0	47.5	1.10	mg/Kg	85.3		0.65
12 CCV1	CCV1	0.242	0.244	48.6	48.6	1.00	ug/L	96.3		0.53
13 CCZ	CCZ	0.001	0.000	-1.460	-1.460	1.00	ug/L			141.0
14 9311158-11A0	#110	0.168		31.3	1.00 0.227		mg/Kg			
15 9311158-11A1	M5A Spike # M2	0.279		M5A 10 C=	0.962		mg/Kg			
16 9311158-11A2	M5A Spike # M3	0.313		M5A 20 H=	0.00605		mg/Kg			
17 9311158-11A3	M5A Spike # M4	0.358		M5A 30 B=	0.12890		mg/Kg			
18 9311158-11A0	#110	0.097		20.7	9.37		0.454 mg/Kg			
19 9311158-11A1	M5A Spike # M2	0.153		M5A 10 C=	0.995		mg/Kg			
20 9311158-11A2	M5A Spike # M3	0.187		M5A 20 H=	0.00478		mg/Kg			
21 9311158-11A3	M5A Spike # M4	0.245		M5A 30 B=	0.09820		mg/Kg			
22 CCV2	CCV2	0.256		51.1	51.1	1.00	ug/L	102.3		
23 CCZ	CCZ	0.002		-1.150	-1.150	1.00	ug/L			

1/2 D.L.

0.227 mg/Kg

[Signature]

Analyst / Date

075 11/30/93

Lab Supervisor / Date

AR101510

075

BENCH SHEET 239_2 OF 7421

FILE: 89Y29938
INSTRUMENT FILE: 89Y29938

CASE:
INSTRUMENT: 3051

LOG:
ANALYZED: 11/29/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	TESTS
1	0.0000 LB/L	STD 0.00	WATER	1.00	100.000	100.000	100.00
2	3.0000 LB/L	STD 3.00	WATER	1.00	100.000	100.000	100.00
3	20.0000 LB/L	STD 20.0	WATER	1.00	100.000	100.000	100.00
4	75.0000 LB/L	STD 75.0	WATER	1.00	100.000	100.000	100.00
5	ICV	ICV	WATER	1.00	100.000	100.000	100.00
6	ICB	ICB	WATER	1.00	100.000	100.000	100.00
7	CRA	CRA	WATER	1.00	100.000	100.000	100.00
8	PBS	PBS	SOIL	1.00	1.000	200.000	100.00
9	PBSA	PBSA	SOIL	1.00	1.000	200.000	100.00
10	9311158-04A	#A	SOIL	5.00	1.000	200.000	90.70
11	9311158-04AA	#AA	SOIL	5.00	1.000	200.000	90.70
12	CCV1	CCV1	WATER	1.00	100.000	100.000	100.00
13	CCB1	CCB1	WATER	1.00	100.000	100.000	100.00
14	9311158-11A0	#110	SOIL	1.00	1.000	200.000	88.20
15	9311158-11A1	#111	SOIL	1.00	1.000	200.000	88.20
16	9311158-11A2	#112	SOIL	1.00	1.000	200.000	88.20
17	9311158-11A3	#113	SOIL	1.00	1.000	200.000	88.20
18	9311158-11A0	#110	SOIL	2.00	1.000	200.000	88.20
19	9311158-11A1	#111	SOIL	2.00	1.000	200.000	88.20
20	9311158-11A2	#112	SOIL	2.00	1.000	200.000	88.20
21	9311158-11A3	#113	SOIL	2.00	1.000	200.000	88.20
22	CCV2	CCV2	WATER	1.00	100.000	100.000	100.00
23	CCB2	CCB2	WATER	1.00	100.000	100.000	100.00

WH 11/30/93

Analyst / Date

Lab Supervisor / Date

ARI01511

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Page :
METHOD REPORT
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QA FILE: PBT2993B
CALIBRATION FILE: PBT2993B

ANALYST: RA
INSTRUMENT: 3031

METHOD FILE: PE
ANALYZED: 11/29/1993

ANALYTE	CONC.	SLOPE	INTERCEPT	STD. DEV.	IC/IC	IC/IC	IC/IC	IC/IC	IC/IC	IC/IC
Lead	0.9995	205.8925	-1.3525	980025	IC/C	IC/C	IC/C	IC/C	IC/C	IC/C

1257 11/30/93

Analyst / Date

Lab Supervisor / Date

ARI01512

METAL DIGESTION LOG FORM

Date of Digestion : 11-27-03
 Yr Order No. : 02-11-159
 Site Name : DINAKAR
 Prepared By : 1 Smr

Case No. : _____
 SOG No. : _____
 SAS No. : _____
 Dig. Supervisor Approval : 11/27/03

Method/Procedure Used : SM/ 3/4A
 Amount Digested

Client ID	GP Number	Matrix	Flame/ICP	Furnace	Spike	Amount
#1	01A	SOIL	1.00g 200 ml	1.00g 200 ml		
#2	02A	SOIL	1.00g 200 ml	1.00g 200 ml		
#3	03A	SOIL	1.00g 200 ml	1.00g 200 ml		
#4	04A	SOIL	1.00g 200 ml	1.00g 200 ml		
#5	05A	SOIL	1.00g 200 ml	1.00g 200 ml		
#6	06A	SOIL	1.00g 200 ml	1.00g 200 ml		
#7	07A	SOIL	1.00g 200 ml	1.00g 200 ml		
#8	08A	SOIL	1.00g 200 ml	1.00g 200 ml		
#9	09A	SOIL	1.00g 200 ml	1.00g 200 ml		
#10	10A	SOIL	1.00g 200 ml	1.00g 200 ml		
#11	11A	SOIL	1.00g 200 ml	1.00g 200 ml		
#12	12A	WATER	100ml 100 ml	100ml 100 ml		
#13	13A	SOIL	1.00g 200 ml	1.00g 200 ml		
#14	14A	SOIL	1.00g 200 ml	1.00g 200 ml		
#15	15A	SOIL	1.00g 200 ml	1.00g 200 ml		
CC	LCS5	SOIL	1.00g 200 ml	1.00g 200 ml	L0040 EKA LST ± 3m	1.00g
	LCSW	WATER	100ml 100 ml	100ml 100 ml	EVH-09 FL EVE-007 ml	1.00g
	PSS		0.00g 200 ml	0.00g 200 ml		
	PSW	WATER	100ml 100 ml	100ml 100 ml		

AR101513

Comments:

**G2 ENVIRONMENTAL SERVICES
SAMPLE DESCRIPTION FORM**

Date of Digestion : 11-22-93
 Work Order Number : 92-11-158
 Case Number : DYNAMAC
 DG Number : ---
 Prepared By : SMR
 : 11/24/93

SAS # : _____
 Date : _____
 Date : _____

CLIENT ID	GRID	MATRIX	SOIL		WATER		SOIL & WATER		
			ARTIFACT DESCRIPTION	TEXTURE	pH	CLARITY BEFORE	CLARITY AFTER	COLOR BEFORE	COLOR AFTER
#1	01	SOIL	ROCKS, VEG.	COARSE	/		CLEAR	BROWN	YELLOW
#2	02			↓				↓	
#3	03			FINE				BLACK	
#4	04			COARSE					
#5	05								
#6	06								
#7	07							BROWN	
#8	08							BLACK	
#9	09								
#10	10								
#11	11	↓	↓	↓				↓	↓
#12	12	WATER				←	CLEAR	↓	COLORLESS

XSOLIDS SUMMARY

DATE ANALYSIS BEGUN 11-22-93

WORK ORDER 93-11-158

ANALYST: Jill Sobieski

METHOD: 100.3

Client ID	Sample	A Dry Container Weight	B Net Sample + Dry Container Weight	C = B - A Net Sample Weight	D Dry Sample + Dry Container Weight	E = D - A Dry Sample Weight	(E/C) 100 Percent Solids	Exp Date
	9311153-01A	1.613	7.402	5.78	6.284	4.67	80.650	11/23/19
	9311153-02A	1.615	7.509	5.89	6.445	4.83	80.520	11/23/19
	9311153-03A	1.613	7.375	5.76	6.320	4.71	81.860	11/23/19
	9311153-04A	1.586	10.198	8.61	9.357	7.81	90.720	11/23/19
	9311153-05A	1.594	11.866	10.27	11.044	9.45	92.000	11/23/19
	9311153-06A	1.612	9.577	7.96	8.655	7.04	88.920	11/23/19
	9311153-07A	1.581	8.351	6.77	7.231	5.64	83.650	11/23/19
	9311153-08A	1.602	10.273	8.67	9.284	7.68	88.590	11/23/19
	9311153-09A	1.628	9.222	7.59	8.327	6.69	88.190	11/23/19
	9311153-10A	1.531	9.535	8.00	8.778	7.24	89.960	11/23/19
	9311153-11A	1.584	7.691	6.10	6.951	5.36	88.180	11/23/19

Analyst / Date

Jill Sobieski 11-23-93

Lab Manager / Date

[Signature] 11-23-93

ARI01515

530

TOTAL % SOLIDS

GP ENVIRONMENTAL SERVICES

DATE: 11-24-93 **METHOD: 1760.3**

WORK ORDER: 93-11-158

DATE OF ANALYSIS: 11-22-93

ANALYST: J. Sobieszka

Client ID	Dry Container Weight	A		B		C = B - A		D		E = D - A		Percent Solids
		Wet Sample + Container Weight	Wet Sample Weight	Wet Sample + Container Weight	Wet Sample Weight	Dry Sample + Container Weight	Dry Sample Weight	Dry Sample + Container Weight	Dry Sample Weight			
1	1.6134	7.4020	01A	5.7886	6.2839	4.6705	80.68					
2	1.6150	7.6094	02A	5.9944	6.4450	4.8300	80.57					
3	1.6189	7.3755	03A	5.7626	6.3298	4.7169	81.85					
4	1.5862	10.1977	04A	8.6115	9.3987	7.8125	90.72					
5	1.5936	11.8652	05A	10.2720	11.0442	9.4506	92.00					
6	1.6122	9.5775	06A	7.9653	8.6955	7.0833	88.93					
7	1.5984	8.3381	07A	6.7297	7.2390	5.6406	83.69					
8	1.6019	10.2731	08A	8.6712	9.2842	7.6823	88.51					
9	1.6277	9.2218	09A	7.5941	8.2232	6.6975	88.19					
10	1.5497	9.5855	10A	8.0358	8.7781	7.2284	89.95					
11	1.5840	7.6914	11A	6.1074	6.9689	5.3819	88.17					
11 dup	1.5808	8.1546	11A dup	6.5738	7.4613	5.8805	89.45					

ARI01516