DYNAMAC
CORPORATION
Environmental Services

80 W. Lancaster Avenue
Devon, PA 19333

Telephone: 215-989-9400
Fax: 215-989-9414

159700

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. C03112

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

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 (°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.

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.

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

Attachment A

Soil Sampling at METCOA Restart Site

Sampling Date: November 19, 1993

Sampling Performed by David J. Owen 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.

GP ENVIRONMENTAL SERVICES, INC.

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

Contract #/Billing Reference

_____ of _____ Pgs.

Project: METCOA SITE
Client: EPA - 3
Send Results To: Dynamac.
Address:
Phone: 215-989-9400

Turnaround Time
# of Container
Container Type
Preservative Used
Type of Analysis: Metals

Sample ID#	Date	Time	Sample Matrix	Sampler's Initials	Metals	CLIENT COMMENTS
# 1	11/4/93	0810	SOIL	DJO	4 oz	Background Rad Meter Reading 0.03 mR/h
# 2		0818	SOIL	DJO	4 oz	
# 3		0822	SOIL	DJO	4 oz	
# 4		0825	SOIL	DJO	4 oz	
# 5		0830	SOIL	DJO	4 oz	
# 6		0835	SOIL	DJO	4 oz	Highest Sample Rad Meter Reading 0.06 mR/h.
# 7		0838	SOIL	DJO	4 oz	
# 8		0841	SOIL	DJO	4 oz	
# 9		0846	SOIL	DJO	4 oz	
# 10		0849	SOIL	DJO	4 oz	
# 11		0832	SOIL	DJO	4 oz	
# 12		0850	WATER	DJO	1 Lit	

Relinquished By:	Date/Time	Received By:	Relinquished By:	Received for Laboratory By:	Date/Time
[illegible]	11/19/97			[illegible]	11/20/93

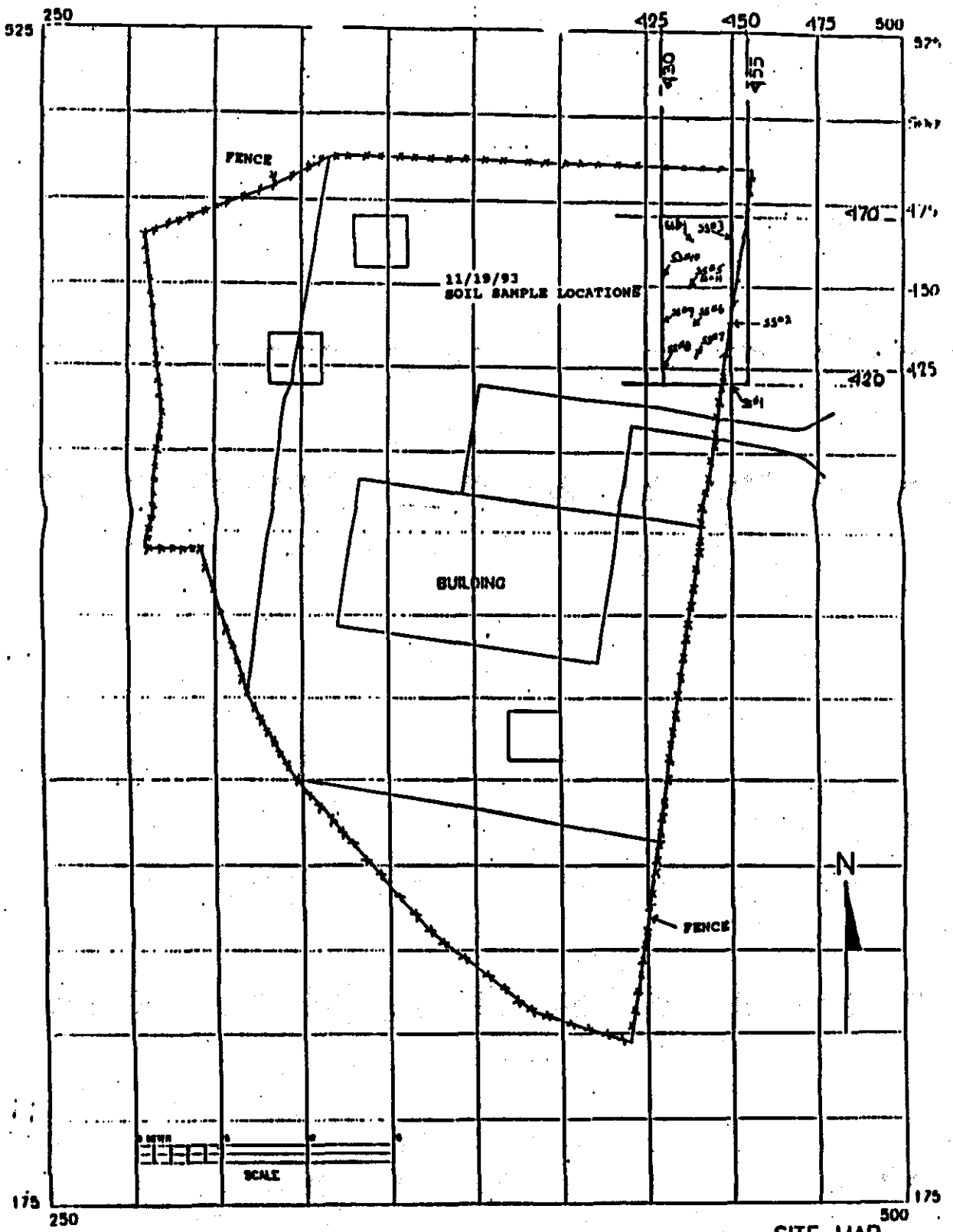
Relinquished By:	Date/Time	Received By:	Date/Time	Shipper:	Airbill No.:

Relinquished By:	Date/Time	Received By:	Lab Comments:

AR101434

11/19/93 SOIL SAMPLE LOCATIONS

ATTACHMENT-B



PRC EMI, INC.

SITE MAP
METCOA RESTART SITE
PULASKI, PA

AR101435

ATTACHMENT-C

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.

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A#1---

SOW No.: 3/90

Sample No.	Lab Sample ID.
A#10--	931115810A
A#11--	931115811A
A#12--	931115812A
A#1---	931115801A
A#1---D	931115801A
A#1---S	931115801A
A#2---	931115802A
A#3---	931115803A
A#4---	931115804A
A#5---	931115805A
A#6---	931115806A
A#7---	931115807A
A#8---	931115808A
A#9---	931115809A

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 Aiken Name: Patricia Aiken

Date: 12/1/93 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: 9311158101A

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	M
7440-43-9	Cadmium	76.2			P
7440-47-3	Chromium	15.6		*	P
7440-50-8	Copper	42.6			P
7439-92-1	Lead	30.6		N	P
7440-02-0	Nickel	200			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

mments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

A#11--

Lab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A#1---

Matrix (soil/water): SOIL Lab Sample ID: 9311158111A

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

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

A#12--

ab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A#1---

Matrix (soil/water): WATER Lab Sample ID: 9311158122

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	M
7440-43-9	Cadmium	2.4	U		P
7440-47-3	Chromium	7.2	U		P
7440-50-8	Copper	16.2	U		P
7439-92-1	Lead	4.5			F
7440-02-0	Nickel	13.6	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

FORM I - IN

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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: 931115801A

Level (low/med): LOW Date 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	F
7440-02-0	Nickel	24.8			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

ROCKS, VEGETATION

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ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

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: 9311158C2A

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	_		P
7440-47-3	Chromium	10.8	_	*	P
7440-50-8	Copper	20.5	_		P
7439-92-1	Lead	26.6	_	N	F
7440-02-0	Nickel	79.6	_		P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

mments:

ROCKS, VEGETATION

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

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: 9311153013A

Level (low/med): LOW Date 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	F
7440-02-0	Nickel	53.4			P

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: 9311115804A

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	Cadmium	9.9	_		P
7440-47-3	Chromium	13.5	_	*	P
7440-50-8	Copper	14.8	_		P
7439-92-1	Lead	28.5	_	N	F
7440-02-0	Nickel	112	_		P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

ROCKS, VEGETATION

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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: 9311158058

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	F
7440-02-0	Nickel	127			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

ROCKS, VEGETATION

FORM I - IN

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

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: 9311115806A

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	F
7440-02-0	Nickel	38.2			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

ROCKS, VEGETATION

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ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

A=7---

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A=1---

Matrix (soil/water): SOIL Lab Sample ID: 9311158017A

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

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: GPENV Case No.: SAS No.: SDG No.: A#I---

Matrix (soil/water): SOIL Lab Sample ID: 9311153C3A

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

FORM I - IN

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ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

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: 9311153095A

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	1020	-		P
7440-47-3	Chromium	212	-	*	P
7440-50-8	Copper	51.8	-		P
7439-92-1	Lead	43.5	-	N	F
7440-02-0	Nickel	1050	-		P

#9

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

ROCKS, VEGETATION

FORM I - IN

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,ICVA000

Continuing Calibration Source: ICVC,p.150

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
Cadmium	500.0	491.21	98.2	500.0	484.06	96.8	497.94	99.6	P
Chromium	500.0	493.82	98.8	500.0	491.14	98.2	499.18	99.8	P
Copper	1000.0	952.93	95.3	1000.0	929.92	93.0	931.77	93.2	P
Lead	50.0	54.31	108.6	50.0	51.05	102.1	53.36	106.7	P
Nickel	1000.0	955.32	95.5	1000.0	964.60	96.5	976.83	97.7	P

(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,p.150

Concentration Units: ug/L

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

AR101452

ENVIROFORMS/INORGANIC CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A21---

Initial Calibration Source: ICVC

Continuing Calibration Source: ICVC

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
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.: SDG No.: A4L---

Initial Calibration Source:

Continuing Calibration Source: ICVC

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
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.: SDG No.: A=1

Initial Calibration Source: ICVC

Continuing Calibration Source: ICVC

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
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.: SDG No.: A#1---

Initial Calibration Source:

Continuing Calibration Source: ICVC

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
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

FORM II (PART 1) - IN

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 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
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

AR101457

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 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
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

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 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	1[illegible]

AR101459

2B
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 Found	%R
Cadmium								
Chromium								
Copper								
Lead	3.0	2.74	91.3					
Nickel								

AR101460

ENVIRCFORMS/INCRGANIC CLP

2B
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								

2B
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	2.76	92.0					
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) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Cadmium	2.4	U	2.4	U	2.4	U	2.4	U	0.480	U	P
Chromium	7.2	U	7.2	U	7.2	U	7.2	U	1.440	U	P
Copper	16.2	U	16.2	U	16.2	U	16.2	U	3.240	U	P
Lead	1.0	U	1.0	U	1.0	U	1.0	U	0.453	B	F
Nickel	13.6	U	13.6	U	13.6	U	13.6	U	2.720	U	

AR101463

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) 1	C	2	C	3	C	Preparation Blank	C	M
Cadmium									2.4	U	P
Chromium									7.2	U	P
Copper									16.2	U	P
Lead			1.0	U	1.0	U	1.0	U	1.4	B	P
Nickel									13.6	U	P

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) 1	C	2	C	3	C	Preparation Blank	C	M
Cadmium											
Chromium											
Copper											
Lead	-1.7	B	-1.5	B	-1.3	B	-1.7	B			F
Nickel											

FORM III - IN

AR101465 000

ENVIROFORMS/INORGANIC CLP

3
BLANKS

Lab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A#I—

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
Cadmium											
Chromium											
Copper											
Lead			1.0	U							F
Nickel											

FORM III - IN

AR101466 001

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) 1	C	2	C	3	C	Preparation Blank	C	M
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) 1	C	2	C	3	C	Prepa-ration Blank	C	M
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) 1	C	2	C	3	C	Preparation Blank	C	M
Cadmium											
Chromium											
Copper											
Lead	-1.4	B	-1.5	B	-1.1	B					F
Nickel											

FORM III - IN

AR101469

4

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 Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	%R	Final Found Sol. A	Final Found Sol. AB	%R
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

5A
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	P
Nickel	75-125	146.9866		24.8260		123.92	98.6		P

Comments:

FORM V (PART 1) - IN

AR101471

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

FORM VI - IN

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) True	Found	%R	Solid (mg/kg) 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

FORM VII - IN

ENVIROFORMS/INORGANIC CLP

8

STANDARD ADDITION RESULTS

Lab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A#1---

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
A#11--	PB	0.097	10.00	0.153	20.00	0.187	30.00	0.245	20.7	0.9954	

FORM VIII - IN

ENVIROFORMS/INORGANIC CLP

9

ICP SERIAL DILUTIONS

SAMPLE NO.

A#1---L

Lab Name: GP ENVIRONMENTAL Contract:

Lab Code: GPENV Case No.: SAS No.: SDG No.: A#1---

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

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	B	35.3		P
Copper	42.45		81.00	U	100.0		P
Lead							
Nickel	100.17		134.86	B	34.6		P

FORM IX - IN

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	F
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:

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:

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	0.0000000	0.0000000	0.0000000	0.0000000	
Antimony						
Arsenic						
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	
Cadmium	214.00	0.0000000	0.0000000	0.0000000	0.0000000	
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	
Lead						
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	
Manganese	267.61	0.0000000	0.0000000	0.0000000	0.0000000	
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium						
Selenium						
Silver						
Sodium						
Thallium						
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	
Zinc	213.86	0.0000000	0.0000000	0.0000000	0.0000000	

Comments:

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

mments:

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
PBW	11/22/93		100

FORM XIII - IN

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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
PBW	11/22/93		100

FORM XIII - IN

OF ENVIRONMENTAL SERVICES

INSTRUMENT ID 6500 BENCH SHEET FOR ICP

DATE OF ANALYSIS 11/24/93 DATE OF REVIEW 11-24-93

ANALYST NAME Meredith Bonkerd REVIEWER'S NAME David H

ANALYST SIGNATURE [signature] REVIEWER'S SIGNATURE [signature]

TIME ANALYSIS INITIATED WORK ORDER NUMBER 93-11-158

CASE SDG

INDUCTIVELY COUPLED PLASMA

ID	D.F.	COMMENTS	ID	D.F.	COMMENTS	ID	D.F.	COMMENTS
1. ICV			25. CCV			49. CCV		
2. ICB			26. CCB			50. CCB		
3. icsa			27. 11A		93-11-158	51.		
4. icsab			28. 12A			52.		
5. crii			29. 03A	5	[illegible] crover.	53.		
6. obw			30. 09A	5		54.		
7. obs			31. [illegible]	10		55.		
8. lcsw			32. [illegible]			56.		
9. lcss			33. [illegible]			57.		
10. 01A		93-11-158	34. crit			58.		
11. 01ARe		↓ ↓	35. ccv3			59.		
12. 01ASch		↓ ↓	36. ccb3			60.		
13. CCV			37. CCV			61. CCV		
14. CCB			38. CCB			62. CCB		
15. 01AL	5	93-11-158	39.			63.		
16. 02A		↓ ↓	40.			64.		
17. 03A		Cd over.	41.			65.		
18. 04A			42.			66.		
19. 05A			43.			67.		
20. 06A			44.			68.		
21. 07A			45.			69.		
22. 08A			46.			70.		
23. 09A		Cd, Ni over	47.			71.		
24. 10A		↓ ↓	48.			72.		

COMMENTS:

AR101483

Run Manual Mode 93/11/24 13:01

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

CD	NI	CR	CU

Element Name CD Gain 630
Element Name NI Gain 642
Element Name CR Gain 646
Element Name CU Gain 324

DATE 11/24/93
ANALYST MB
CASE 93-11-158
UNIT ppm
ICV LV - ICVA0008
ICSSLV - ICVA0009
ICSAB LV - ic20005

ELEMENT Cd Ni Cr Cu
INST.ID 6500
SDG
r
p.150
LCSS LV - #217 ic10003
ICSAB LV - ic20005

Standard 1 Replicate 1

CD	EM	[illegible]
NI	EM	110630
CR	EM	[illegible]
CU	EM	[illegible]

Standard 1 Replicate 2

CD	EM	133534
NI	EM	111422
CR	EM	[illegible]
CU	EM	121540

CD	AV	132970	SD	[illegible]	CV		CONC	1.0000 ppm
NI	AV	111027	SD	[illegible]	CV	0.5	CONC	2.0000 ppm
CR	AV	101705	SD	1525.0	CV	1.4	CONC	1.0000 ppm
CU	AV	120744	SD	1125.4	CV	0.9	CONC	5.0000 ppm

Blank Replicate 1

CD	EM	227
NI	EM	416
CR	EM	-254
CU	EM	336

Blank Replicate 2

CD	EM	181
NI	EM	160
CR	EM	163
CU	EM	146

CD	AV	204	SD	32.5	CV	15.9	CONC	0.0000 ppm
NI	AV	288	SD	181.0	CV	62.8	CONC	0.0000 ppm
CR	AV	-45	SD	294.8	CV	648.0	CONC	0.0000 ppm
CU	AV	242	SD	132.9	CV	54.9	CONC	0.0000 ppm

ICV Replicate 1

CD	0.4847 ppm
NI	0.9589 ppm
CR	0.4975 ppm
CU	0.9525 ppm

ICV Replicate 2

CD	0.4976 ppm
NI	0.9517 ppm
CR	0.4901 ppm
CU	0.9533 ppm

CD	AV	0.4912 ppm	SD	.00915	CV	1.8
NI	AV	0.9553 ppm	SD	.00505	CV	0.5
CR	AV	0.4938 ppm	SD	.00520	CV	1.0
CU	AV	0.9529 ppm	SD	.00057	CV	0.0

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0 049

ICD Replicate 1

CD	-0.0000 ppm	
NI	-0.0127 ppm	Peak Offset
CR	-0.0013 ppm	Peak Offset
CU	0.0024 ppm	

ICD Replicate 2

CD	-0.0012 ppm	
NI	0.0061 ppm	
CR	-0.0000 ppm	
CU	-0.0010 ppm	Peak Offset

CD	AV -0.0006 ppm	SD	.00082	CV	122.6
NI	AV -0.0033 ppm	SD	.01331	CV	402.0
CR	AV -0.0008 ppm	SD	.00110	CV	137.2
CU	AV 0.0007 ppm	SD	.00249	CV	342.9

ICSAi Replicate 1

CD	0.0141 ppm	Peak Offset
NI	0.0147 ppm	
CR	-0.0012 ppm	
CU	0.0026 ppm	Peak Offset

ICSAi Replicate 2

CD	0.0150 ppm	Peak Offset
NI	0.0130 ppm	
CR	0.0022 ppm	
CU	-0.0047 ppm	Peak Offset

CD	AV 0.0143 ppm	SD	.00059	CV	4.0
NI	AV 0.0139 ppm	SD	.00121	CV	8.7
CR	AV 0.0004 ppm	SD	.00246	CV	501.0
CU	AV -0.0010 ppm	SD	.00522	CV	503.9

ICSABi Replicate 1

CD	0.2664 ppm
NI	0.2598 ppm
CR	0.2670 ppm
CU	0.2538 ppm

ICSABi Replicate 2

CD	0.2668 ppm
NI	0.2468 ppm
CR	0.2772 ppm
CU	0.2568 ppm

CD	AV 0.2666 ppm	SD	.00031	CV	0.1
NI	AV 0.2533 ppm	SD	.00922	CV	3.6
CR	AV 0.2721 ppm	SD	.00724	CV	2.6
CU	AV 0.2553 ppm	SD	.00210	CV	0.8

CRIi Replicate 1

CD	0.0093 ppm
NI	0.0823 ppm
CR	0.0232 ppm
CU	0.0453 ppm

CRIi Replicate 2

CD	0.0081 ppm
NI	0.0802 ppm
CR	0.0247 ppm
CU	0.0470 ppm

CD	AV 0.0087 ppm	SD	.0000

NI	AV	0.0013 ppm	SD	.00148	CV	1.8
CR	AV	0.0230 ppm	SD	.00229	CV	9.9
CU	AV	0.0462 ppm	SD	.00120	CV	2.6

PBW Replicate 1

CD	-0.0001 ppm
NI	0.0003 ppm
CR	0.0037 ppm
CU	0.0031 ppm

PBW Replicate 2

CD	-0.0006 ppm	
NI	0.0091 ppm	
CR	0.0020 ppm	
CU	-0.0111 ppm	Peak Offset ✓

CD	AV	-0.0004 ppm	SD	.00033	CV	85.5
NI	AV	0.0047 ppm	SD	.00621	CV	131.1
CR	AV	0.0053 ppm	SD	.00472	CV	87.8
CU	AV	-0.0039 ppm	SD	.01012	CV	255.5

PBS Replicate 1

CD	-0.0002 ppm	
NI	-0.0026 ppm	Peak Offset
CR	-0.0017 ppm	Peak Offset
CU	-0.0036 ppm	

PBS Replicate 2

CD	0.0001 ppm	
NI	-0.0106 ppm	Peak Offset
CR	0.0035 ppm	
CU	0.0064 ppm	✓

CD	AV	-0.0000 ppm	SD	.00027	CV	825.7
NI	AV	-0.0066 ppm	SD	.00564	CV	84.4
CR	AV	0.0009 ppm	SD	.00373	CV	397.9
CU	AV	0.0014 ppm	SD	.00710	CV	502.9

LCSW Replicate 1

CD	0.4613 ppm
NI	0.9109 ppm
CR	0.4808 ppm
CU	0.6952 ppm

LCSW Replicate 2

CD	0.4683 ppm	
NI	0.9411 ppm	
CR	0.4765 ppm	
CU	0.6742 ppm	✓

CD	AV	0.4648 ppm	SD	.00494	CV	1.0
NI	AV	0.9260 ppm	SD	.02139	CV	2.3
CR	AV	0.4784 ppm	SD	.00302	CV	0.6
CU	AV	0.6847 ppm	SD	.01490	CV	1.6

LCSS Replicate 1

CD	0.4074 ppm
NI	0.8213 ppm
CR	0.3134 ppm
CU	0.1831 ppm

LCSS Replicate 2

CD	0.4234 ppm
NI	0.8310 ppm

	CR		0.3071 ppm				
	CU		0.1802 ppm				
CD	AV	0.4137 ppm		SD	.00918	CV	2.2
NI	AV	0.0262 ppm		SD	.00685	CV	0.8
CR	AV	0.3102 ppm		SD	.00446	CV	1.4
CU	AV	0.1817 ppm		SD	.00202	CV	1.1

9311158-01A Replicate 1

CD	0.0333 ppm
NI	0.0996 ppm
CR	0.0318 ppm
CU	0.0376 ppm

9311158-01A Replicate 2

CD	0.0329 ppm
NI	0.1006 ppm
CR	0.0328 ppm
CU	0.0472 ppm

CD	AV	0.0333 ppm		SD	.00066	CV	1.9
NI	AV	0.1001 ppm		SD	.00067	CV	0.6
CR	AV	0.0328 ppm		SD	.00141	CV	4.3
CU	AV	0.0424 ppm		SD	.00674	CV	15.8

9311158-01AD Replicate 1

CD	0.0387 ppm
NI	0.1339 ppm
CR	0.0471 ppm
CU	0.0595 ppm

9311158-01AD Replicate 2

CD	0.0405 ppm
NI	0.1316 ppm
CR	0.0511 ppm
CU	0.0604 ppm

CD	AV	0.0396 ppm		SD	.00129	CV	3.2
NI	AV	0.1327 ppm		SD	.00158	CV	1.1
CR	AV	0.0491 ppm		SD	.00284	CV	5.8
CU	AV	0.0599 ppm		SD	.00064	CV	1.0

9311158-01AS Replicate 1

CD	0.0926 ppm
NI	0.5841 ppm
CR	0.2347 ppm
CU	0.2334 ppm

9311158-01AS Replicate 2

CD	0.0959 ppm
NI	0.6020 ppm
CR	0.2326 ppm
CU	0.2871 ppm

CD	AV	0.0942 ppm		SD	.00234	CV	2.4
NI	AV	0.5930 ppm		SD	.01264	CV	2.1
CR	AV	0.2337 ppm		SD	.00153	CV	0.6
CU	AV	0.2852 ppm		SD	.00262	CV	0.9

CCV1 Replicate 1

CD	0.4764 ppm
NI	0.9568 ppm
CR	0.4930 ppm
CU	0.9392 ppm

CCV1 Replicate 2

CD	0.4916 ppm
NI	0.9703 ppm
CR	0.4891 ppm
CU	0.9203 ppm

CD	AV	0.4840 ppm	SD	.01077	CV	2.2
NI	AV	0.9643 ppm	SD	.00814	CV	0.8
CR	AV	0.4911 ppm	SD	.00275	CV	0.5
CU	AV	0.9279 ppm	SD	.01322	CV	1.4

CCB1 Replicate 1

CD	-0.0000 ppm
NI	0.0004 ppm
CR	0.0002 ppm
CU	0.0021 ppm

CCB1 Replicate 2

CD	-0.0006 ppm
NI	0.0022 ppm
CR	-0.0012 ppm
CU	0.0024 ppm

CD	AV	-0.0003 ppm	SD	.00042	CV	106.6
NI	AV	0.0013 ppm	SD	.00123	CV	93.2
CR	AV	-0.0004 ppm	SD	.00105	CV	226.7
CU	AV	0.0023 ppm	SD	.00017	CV	7.3

9311158-01AL:5 Replicate 1

CD	0.0072 ppm
NI	0.0354 ppm
CR	0.0073 ppm
CU	0.0046 ppm

9311158-01AL:5 Replicate 2

CD	0.0053 ppm
NI	0.0185 ppm
CR	0.0103 ppm
CU	0.0031 ppm

CD	AV	0.0063 ppm	SD	.00139	CV	22.1
NI	AV	0.0269 ppm	SD	.01194	CV	44.2
CR	AV	0.0088 ppm	SD	.00211	CV	23.7
CU	AV	0.0038 ppm	SD	.00105	CV	27.3

9311158-02A Replicate 1

CD	0.0985 ppm
NI	0.3209 ppm
CR	0.0408 ppm
CU	0.0639 ppm

9311158-02A Replicate 2

CD	0.0969 ppm
NI	0.3209 ppm
CR	0.0458 ppm
CU	0.0814 ppm

CD	AV	0.0977 ppm	SD	.00109	CV	1.1
NI	AV	0.3209 ppm	SD	.00011	CV	0.0
CR	AV	0.0433 ppm	SD	.00353	CV	8.1
CU	AV	0.0827 ppm	SD	.00173	CV	2.0

9311158-03A Replicate 1

CD	1.6929 ppm	Over Calib.
NI	0.2239 ppm	

CR	0.0369 ppm	
CU	0.0554 ppm	

9311158-03A Replicate 2

CD	1.6940 ppm	Over Calib.
NI	0.2134 ppm	
CR	0.0370 ppm	
CU	0.0573 ppm	

CD	AV	[illegible] ppm	SD	.00076	CV	0.0
NI	AV	0.2186 ppm	SD	.00744	CV	3.4
CR	AV	0.0369 ppm	SD	.00002	CV	0.0
CU	AV	0.0563 ppm	SD	.00129	CV	2.2

9311158-04A Replicate 1

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

9311158-04A Replicate 2

CD	0.0435 ppm
NI	0.5144 ppm
CR	0.0627 ppm
CU	0.0671 ppm

CD	AV	0.0450 ppm	SD	.00215	CV	4.7
NI	AV	0.5075 ppm	SD	.00975	CV	1.9
CR	AV	0.0610 ppm	SD	.00246	CV	4.0
CU	AV	0.0672 ppm	SD	.00008	CV	0.1

9311158-05A Replicate 1

CD	0.0375 ppm
NI	0.5847 ppm
CR	0.0643 ppm
CU	0.0877 ppm

9311158-05A Replicate 2

CD	0.0387 ppm
NI	0.5792 ppm
CR	0.0633 ppm
CU	0.0864 ppm

CD	AV	0.0382 ppm	SD	.00094	CV	2.4
NI	AV	0.5820 ppm	SD	.00400	CV	0.6
CR	AV	0.0639 ppm	SD	.00079	CV	1.2
CU	AV	0.0871 ppm	SD	.00090	CV	1.0

9311158-06A Replicate 1

CD	0.0333 ppm
NI	0.1648 ppm
CR	0.0347 ppm
CU	0.0199 ppm

9311158-06A Replicate 2

CD	0.0338 ppm
NI	0.1743 ppm
CR	0.0342 ppm
CU	0.0251 ppm

CD	AV	0.0333 ppm	SD	.00032	CV	0.9
NI	AV	0.1696 ppm	SD	.00687	CV	4.0
CR	AV	0.0345 ppm	SD	.00035	CV	1.0
CU	AV	0.0225 ppm	SD	.00360	CV	16.1

9311138-07A Replicate 1

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

9311138-07A Replicate 2

CD	0.1173 ppm
NI	0.6441 ppm
CR	0.0515 ppm
CU	0.0373 ppm

CD	AV	0.1171 ppm	SD	.00025	CV	0.2
NI	AV	0.6364 ppm	SD	.01090	CV	1.7
CR	AV	0.0493 ppm	SD	.00312	CV	6.3
CU	AV	0.0391 ppm	SD	.00258	CV	6.5

9311138-08A Replicate 1

CD	0.3125 ppm
NI	1.9814 ppm
CR	0.3843 ppm
CU	0.4087 ppm

9311138-08A Replicate 2

CD	0.3135 ppm
NI	1.9768 ppm
CR	0.3825 ppm
CU	0.4014 ppm

CD	AV	0.3130 ppm	SD	.00069	CV	0.2
NI	AV	1.9791 ppm	SD	.00319	CV	0.1
CR	AV	0.3834 ppm	SD	.00127	CV	0.3
CU	AV	0.4051 ppm	SD	.00516	CV	1.2

9311138-09A Replicate 1

CD	1.7161 ppm	Over Calib.
NI	3.7608 ppm	Over Calib.
CR	0.9406 ppm	
CU	0.2314 ppm	

9311138-09A Replicate 2

CD	1.7185 ppm	Over Calib.
NI	3.7673 ppm	Over Calib.
CR	0.9287 ppm	
CU	0.2256 ppm	

CD	AV	~~1.7183~~ ppm	SD	.00006	CV	0.0
NI	AV	~~3.7640~~ ppm	SD	.00445	CV	0.1
CR	AV	0.9346 ppm	SD	.00644	CV	0.9
CU	AV	0.2285 ppm	SD	.00410	CV	1.7

9311138-10A Replicate 1

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

9311138-10A Replicate 2

CD	0.3457 ppm
NI	0.6084 ppm
CR	0.0703 ppm
CU	0.1925 ppm

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CD	AV	0.3429 ppm	SD	.00390	CV	1.1
NI	AV	0.6982 ppm	SD	.01386	CV	1.5

CR	AV	0.0679 ppm	SD	.00048	CV	0.6
CU	AV	0.1916 ppm	SD	.00131	CV	0.6

CCV2 Replicate 1

CD	0.4963 ppm
NI	0.9602 ppm
CR	0.4924 ppm
CU	0.9249 ppm

CCV2 Replicate 2

CD	0.4995 ppm
NI	0.9854 ppm
CR	0.4999 ppm
CU	0.9383 ppm

CD	AV	0.4979 ppm	SD	.00221	CV	0.4
NI	AV	0.9768 ppm	SD	.01217	CV	1.2
CR	AV	0.4991 ppm	SD	.00108	CV	0.2
CU	AV	0.9317 ppm	SD	.00962	CV	1.0

CCB2 Replicate 1

CD	-0.0002 ppm	
NI	0.0032 ppm	Peak Offset
CR	0.0041 ppm	
CU	-0.0016 ppm	

CCB2 Replicate 2

CD	-0.0008 ppm	
NI	-0.0054 ppm	Peak Offset
CR	0.0034 ppm	
CU	0.0004 ppm	

CD	AV	-0.0005 ppm	SD	.00045	CV	82.3
NI	AV	-0.0011 ppm	SD	.00612	CV	556.9
CR	AV	0.0037 ppm	SD	.00047	CV	12.4
CU	AV	-0.0005 ppm	SD	.00149	CV	267.6

9311158-11A Replicate 1

CD	0.0376 ppm
NI	0.4633 ppm
CR	0.0465 ppm
CU	0.0782 ppm

9311158-11A Replicate 2

CD	0.0390 ppm
NI	0.4749 ppm
CR	0.0419 ppm
CU	0.0815 ppm

CD	AV	0.0383 ppm	SD	.00102	CV	2.6
NI	AV	0.4691 ppm	SD	.00818	CV	1.7
CR	AV	0.0442 ppm	SD	.00327	CV	7.3
CU	AV	0.0799 ppm	SD	.00231	CV	2.8

9311158-12A Replicate 1

CD	-0.0008 ppm	
NI	0.0011 ppm	Peak Offset
CR	0.0030 ppm	
CU	0.0038 ppm	

9311158-12A Replicate 2

CD	-0.0000 ppm
NI	0.0083 ppm
CR	0.0017 ppm

CU		-0.0077 ppm					
CD	AV	-0.0004 ppm		SD	.00032	CV	117.7
NI	AV	0.0047 ppm		SD	.00505	CV	106.4
CR	AV	0.0024 ppm		SD	.00074	CV	27.8
CU	AV	-0.0019 ppm		SD	.00821	CV	421.4

9311150-03A:3 Replicate 1

CD	1.5912 ppm	Over Calib.
NI	0.0495 ppm	
CR	0.0103 ppm	
CU	0.0112 ppm	

9311150-03A:3 Replicate 2

CD	1.5738 ppm	Over Calib.
NI	0.0476 ppm	
CR	0.0122 ppm	
CU	0.0117 ppm	

CD	AV	[illegible] ppm		SD	.01233	CV	0.7
NI	AV	0.0486 ppm		SD	.00132	CV	2.7
CR	AV	0.0113 ppm		SD	.00138	CV	12.2
CU	AV	0.0117 ppm		SD	.00005	CV	0.4

9311158-09A:5 Replicate 1

CD	0.9024 ppm
NI	0.9217 ppm
CR	0.1952 ppm
CU	0.0370 ppm

9311158-09A:5 Replicate 2

CD	0.8966 ppm
NI	0.9243 ppm
CR	0.1930 ppm
CU	0.0490 ppm

CD	AV	0.9006 ppm	✓	SD	.00254	CV	0.2
NI	AV	0.9230 ppm	✓	SD	.00169	CV	0.2
CR	AV	0.1941 ppm		SD	.00156	CV	0.8
CU	AV	0.0440 ppm		SD	.00707	CV	16.0

9311158-03A:10 Replicate 1

CD	0.8060 ppm	
NI	0.0261 ppm	
CR	0.0099 ppm	
CU	-0.0054 ppm	Peak Offset

9311158-03A:10 Replicate 2

CD	0.8001 ppm
NI	0.0261 ppm
CR	0.0088 ppm
CU	-0.0032 ppm

CD	AV	0.8030 ppm	✓	SD	.00423	CV	0.5
NI	AV	0.0261 ppm		SD	.00005	CV	0.1
CR	AV	0.0093 ppm		SD	.00060	CV	8.5
CU	AV	-0.0043 ppm		SD	.00155	CV	35.5

ICSAf Replicate 1

CD	0.0109 ppm	Peak Offset
NI	0.0019 ppm	
CR	0.0017 ppm	
CU	0.0021 ppm	Peak Offset

ICSAf Replicate 2

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CO	0.0112 ppm		Peak Offset
NI	0.0104 ppm		
CR	-0.0020 ppm		Peak Offset
CU	0.0004 ppm		Peak Offset

CO	AV	0.0110 ppm	SD	.00021	CV	1.9
NI	AV	0.0076 ppm	SD	.00013	CV	104.1
CR	AV	-0.0000 ppm	SD	.00283	CV>	999
CU	AV	0.0020 ppm	SD	.00090	CV	32.4

ICSAGF Replicate 1

CO	0.2660 ppm
NI	0.2592 ppm
CR	0.2672 ppm
CU	0.2487 ppm

ICSAGF Replicate 2

CO	0.2699 ppm
NI	0.2594 ppm
CR	0.2716 ppm
CU	0.2646 ppm

CO	AV	0.2680 ppm	SD	.00021	CV	0.8
NI	AV	0.2593 ppm	SD	.00006	CV	0.0
CR	AV	0.2694 ppm	SD	.00308	CV	1.1
CU	AV	0.2567 ppm	SD	.01141	CV	4.4

CRIF Replicate 1

CO	0.0083 ppm
NI	0.0908 ppm
CR	0.0198 ppm
CU	0.0430 ppm

CRIF Replicate 2

CO	0.0089 ppm
NI	0.0832 ppm
CR	0.0233 ppm
CU	0.0474 ppm

CO	AV	0.0086 ppm	SD	.00044	CV	5.1
NI	AV	0.0870 ppm	SD	.00540	CV	6.2
CR	AV	0.0215 ppm	SD	.00243	CV	11.3
CU	AV	0.0452 ppm	SD	.00311	CV	6.9

CCV3 Replicate 1

CO	0.4982 ppm
NI	0.9878 ppm
CR	0.4936 ppm
CU	0.9506 ppm

CCV3 Replicate 2

CO	0.4975 ppm
NI	0.9597 ppm
CR	0.4954 ppm
CU	0.9287 ppm

CO	AV	0.4979 ppm	SD	.00046	CV	0.9
NI	AV	0.9738 ppm	SD	.01987	CV	2.0
CR	AV	0.4945 ppm	SD	.00127	CV	0.2
CU	AV	0.9397 ppm	SD	.01332	CV	1.4

CCB3 Replicate 1

CO	-0.0007 ppm
NI	0.0011 ppm
CR	0.0046 ppm

CU -0.0014 ppm

0000 Replicate 2

CD	0.0002 ppm
NI	0.0001 ppm
CR	0.0047 ppm
CU	0.0021 ppm

CD	AV	-0.0002 ppm	SD	.00070	CV	273.5
NI	AV	0.0003 ppm	SD	.00033	CV	97.2
CR	AV	0.0047 ppm	SD	.00011	CV	2.3
CU	AV	0.0002 ppm	SD	.00233	CV	643.9

Run #1

BENCH SHEET
239_2 or 7421

DATA FILE: PBY24933 CASE: SDG:
INSTRUMENT FILE: PBY24933 INSTRUMENT: 3051 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	PBWA	PBWAA	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	LCSW	LCSW	WATER	1.00	100.000	100.000	100.00
13	LCSWA	LCSWA	WATER	1.00	100.000	100.000	100.00
14	LCSS	LCSS	SOIL	20.00	1.000	200.000	100.00
15	LCSSA	LCSSA	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	88.60
38	9311158-08AA	#8A	SOIL	1.00	1.000	200.000	88.60
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 Arnold 11/24/93
Analyst / Date

11/24/93
Lab Supervisor / Date

BENCH SHEET
239_2 of 7421

A FILE: PBY24938 CASE: SDG:
TRUMENT FILE: PBY24938. INSTRUMENT: 3C51 ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	%SOLIDS
41	9311158-09A	#9	SOIL	1.00	1.000	200.000	83.20
42	9311158-09AA	#9A	SOIL	1.00	1.000	200.000	83.20
43	9311158-10A	#10	SOIL	1.00	1.000	200.000	90.20
44	9311158-10AA	#10A	SOIL	1.00	1.000	200.000	90.20
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	CCV4	CCV4	WATER	1.00	100.000	100.000	100.00
50	CCB4	CCB4	WATER	1.00	100.000	100.000	100.00
51	9311158-08A	#8	SOIL	5.00	1.000	200.000	88.60
52	9311158-08AA	#8A	SOIL	5.00	1.000	200.000	88.60
53	9311158-09A	#9	SOIL	10.00	1.000	200.000	88.20
54	9311158-09AA	#9A	SOIL	10.00	1.000	200.000	88.20
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
	CCV5	CCV5	WATER	1.00	100.000	100.000	100.00
	CCB5	CCB5	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	CCV6	CCV6	WATER	1.00	100.000	100.000	100.00
62	CCB6	CCB6	WATER	1.00	100.000	100.000	100.00

Rita Amin 11/24/93
Analyst / Date

MH 11/24/93
Lab Supervisor / Date

METHOD REPORT
239_2 of 7421

DATA FILE: PBY24938 ANALYST: RA METHOD FILE: PB
INSTRUMENT FILE: PBY24938 INSTRUMENT: 3051 ANALYZED: 11/24/1993

ANALYTE	CORR.	SLOPE	INTRCPT.	STD ID	ICV ID	CCV ID	ICSA ID	ICSB ID	ICSA ID	ICSB ID
Lead	0.9995	191.5394	-0.9493	PBCOZS	ICVC	ICVC	ICVC	ERA#217		

Rita Arnold 11/24/93
Analyst / Date

11/24/93
Lab Supervisor / Date

RUN SUMMARY SHEET
Lead

FILE: PBY24938 CASE: SDG:
INSTRUMENT FILE: PBY24938 INSTRUMENT: 3051 ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY	REP3	MASS
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			0.54
5	ICV	ICV	0.288	0.285	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	PBWAA [illegible]	0.112	0.114	20.7	20.7	1.00	ug/L	96.4		1.25
10	PBS_11/24/93	~~[illegible]~~ [illegible]	0.023	0.024	3.56	0.712	0.200	mg/Kg			3.01
11	PBSA	~~[illegible]~~	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 [illegible]	0.365	0.371	69.7	69.7	1.00	ug/L	95.9		1.15
14	~~[illegible]~~	~~[illegible]~~ [illegible]	0.008	0.007	0.490	1.96	4.00	mg/Kg	~~[illegible]~~		9.43
15	~~[illegible]~~	~~[illegible]~~	0.108	0.118	20.7	82.9	4.00	mg/Kg	104.0		6.26
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.[illegible]
18	9311158-01A	#1	0.302	0.286	53.5	~~[illegible]~~ [illegible]	0.248	mg/Kg			3.35
19	9311158-01AA	#1A	0.443	0.458	85.5	21.2	0.248	mg/Kg	150.0		2.35
20	9311158-01AD	#1D	0.266	0.269	50.4	~~[illegible]~~ [illegible]	0.248	mg/Kg		9.41	0.79
21	9311158-01ADA	#1DA	0.399	0.412	76.9	19.0	0.248	mg/Kg	132.0		2.27
22	9311158-01AS	#1S	0.434	0.436	82.5	~~[illegible]~~ [illegible]	0.248	mg/Kg	135.0		0.32
23	9311158-02A	#2	0.468	0.468	88.8	~~[illegible]~~ [illegible]	0.248	mg/Kg			0.30
24	9311158-02AA	#2A	0.604	0.588	113.0	28.1	0.248	mg/Kg	122.0		1.97
25	9311158-03A	#3	0.364	0.344	67.0	~~[illegible]~~	0.244	mg/Kg			3.39
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	53.6	53.6	1.00	ug/L	107.0		0.50
28	CCB2	CCB2	0.000	0.001	-0.853	-0.853	1.00	ug/L			141.0
29	9311158-04A	#4	0.516	0.498	96.3	~~[illegible]~~ [illegible]	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	0.273	54.0	11.7 ✓	0.217	mg/Kg			6.66
32	9311158-05AA	#5A	0.391	0.393	74.3	16.1	0.217	mg/Kg	101.0		0.36
33	9311158-06A	#6	0.171	0.169	31.7	7.12 ✓	0.225	mg/Kg			0.83
34	9311158-06AA	#6A	0.266	0.265	50.0	11.2	0.225	mg/Kg	91.6		0.27
35	9311158-07A	#7	0.173	0.174	32.3	7.73 ✓	0.239	mg/Kg			0.41
36	9311158-07AA	#7A	0.277	0.273	51.8	12.4	0.239	mg/Kg	97.4		1.23
37	9311158-08A	#8	0.537	0.515	100.0	~~[illegible]~~ [illegible]	0.226	mg/Kg	over cal		2.76
38	9311158-08AA	#8A	0.579	0.561	106.0	26.3	0.226	mg/Kg	32.6		4.20
	CCV3	CCV3	0.267	0.275	51.0	51.0	1.00	ug/L	102.0		2.5[illegible]

Rita Arnold 11/24/93
Analyst / Date

11/24/93
Lab Supervisor / Date

RUN SUMMARY SHEET
Lead

DAT. LE: PBY24938 CASE: SDG:
INSTRUMENT FILE: PBY24938 INSTRUMENT: 3051 ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	%RECOVERY	%RPD	%RSD
40	CC33	CC33	0.002	0.001	-0.662	-0.662	1.00	ug/L			47.1
41	9311158-09A	#9	0.739	0.730	140.3	~~[illegible]~~	0.227	mg/Kg	[illegible]		0.37
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	~~[illegible]~~	0.222	mg/Kg	[illegible]		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	~~[illegible]~~	0.227	mg/Kg	[illegible]		1.62
46	9311158-11AA	#11A	0.297	0.297	56.0	12.7	0.227	mg/Kg	75.3		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		1.49
49	CCV4	CCV4	0.283	0.282	53.2	53.2	1.00	ug/L	106.3		0.25
50	CC34	CC34	0.000	0.003	-0.662	-0.662	1.00	ug/L			141.3
51	9311158-08A	#8	0.136	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	~~[illegible]~~	2.27	mg/Kg	[illegible]		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		2.30
58	CC35	CC35	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			4.33
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	CC36	CC36	0.000	0.001	-0.353	-0.353	1.00	ug/L			141.3

Rita Arnim 11/24/93
Analyst / Date

[illegible] 11/29/93
Lab Supervisor / Date

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BENCH SHEET
239_2 or 7421

FILE: PBY24930 CASE: SDG:
INSTRUMENT FILE: PBY24930 INSTRUMENT: 3050 ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	RESULTS
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	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	LCSSCERA#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 Arnold 11/24/93
Analyst / Date

KJH 11/29/93
Lab Supervisor / Date

BENCH SHEET
239_2 or 7421

DATA FILE: PBY2493D
INSTRUMENT FILE: PBY2493D

CASE:
INSTRUMENT: 3050

SDG:
ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	%SOLIDS
39	CCV4	CCV4	WATER	1.00	100.000	100.000	100.00
40	CCB4	CCB4	Water	1.00	100.000	100.000	100.00
41	9311158-02A0	#20	SOIL	2.00	1.000	200.000	80.60
42	9311158-02A1	#21	SOIL	2.00	1.000	200.000	80.60
43	9311158-02A2	#22	SOIL	2.00	1.000	200.000	80.60
44	9311158-02A3	#23	SOIL	2.00	1.000	200.000	80.60
45	CCV5	CCV5	WATER	1.00	100.000	100.000	100.00
46	CCB5	CCB5	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 Arnold 11/24/93
Analyst / Date

NTI 11/29/93
Lab Supervisor / Date

RUN SUMMARY SHEET
Lead

A FILE: PBY24930 CASE: SDG:
STRUMENT FILE: PBY24930 INSTRUMENT: 3050 ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY	RPD	RSD
1	0.0000 ug/L	STD 0.00	0.017	0.013	-1.060	-1.060	1.00	ug/L			18.8
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			0.00
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		0.31
6	ICB	ICB	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	mg/Kg			6.53
9	PBSA	PBSA	0.106	0.109	20.9	4.18	0.200	mg/Kg	89.0 ✓		1.97
10	LCSS	LCSS	0.098	0.107	19.7	78.9	4.00	mg/Kg			6.21
11	LCSSA	LCSSA	0.173	0.192	38.7	155.0	4.00	mg/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	CCB1	CCB1	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	mg/Kg			0.00
15	9311158-01AA	#1A	0.202	0.199	43.0	21.3	0.496	mg/Kg	77.3		1.06
	9311158-01AD	#1D	0.124	0.118	24.1	12.0	0.496	mg/Kg		12.9	3.
17	9311158-01ADA	#1DA	0.197	0.199	42.4	21.3	0.496	mg/Kg	91.4		0.71
18	9311158-01AS	#1S	0.197	0.204	43.0	21.3	0.496	mg/Kg	56.0		2.47
19	9311158-02A	#2	0.229	0.225	49.3	~~24.5~~	0.496	mg/Kg			1.25
20	9311158-02AA	#2A	0.293	0.297	65.4	32.5	0.496	mg/Kg	80.7		0.96
21	9311158-03A	#3	0.164	0.165	34.4	~~16.3~~	0.488	mg/Kg			0.43
22	9311158-03AA	#3A	0.227	0.231	49.8	24.3	0.488	mg/Kg	76.6		1.24
23	CCV2	CCV2	0.234	0.236	51.2	51.2	1.00	ug/L	102.3		0.60
24	CCB2	CCB2	0.013	0.015	-1.300	-1.300	1.00	ug/L			10.1
25	9311158-04A	#4	0.247	0.243	53.6	~~[illegible]~~	0.441	mg/Kg			1.15
26	9311158-04AA	#4A	0.314	0.302	68.5	30.2	0.441	mg/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	CCB3	CCB3	0.013	0.012	-1.650	-1.650	1.00	ug/L			5.66
29	PBS_11/24/93	PBS	0.027	0.031	2.26	0.453 ✓	0.200	mg/Kg			9.73
30	[illegible]	PBSAA	0.105	0.105	20.3	4.06	0.200	mg/Kg	90.2		0.00
31	9311158-01A	#1	0.129	0.141	27.4	13.6 ✓	0.496	mg/Kg			6.28
32	9311158-01AA	#1A	0.206	0.210	44.8	22.2	0.496	mg/Kg	86.7		1.36
33	9311158-02A	#2	0.235	0.227	50.2	~~[illegible]~~	0.496	mg/Kg			2.45
34	9311158-02AA	#2A	0.299	0.296	66.0	32.8	0.496	mg/Kg	79.3		0.71
35	9311158-03A	#3	0.168	0.173	35.9	17.3 ✓	0.488	mg/Kg			2.37
36	9311158-03AA	#3A	0.240	0.247	53.2	26.3	0.488	mg/Kg	86.7		2.[illegible]
37	9311158-04A	#4	0.267	0.265	58.6	~~[illegible]~~	0.441	mg/Kg			0.
38	9311158-04AA	#4A	0.330	0.325	73.2	32.3	0.441	mg/Kg	[illegible] %		1.08

Rita Amb 11/30/93 — Analyst / Date

[illegible] 11/30/93 — Lab Supervisor / Date

AR101502

RUN SUMMARY SHEET
Lead

DATA FILE: PBY24930 CASE: SDG:
INSTRUMENT FILE: PBY24930 INSTRUMENT: 3030 ANALYZED: 11/24/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY	RPD	RSD
39	CCV4	CCV4	0.234	0.230	50.5	50.5	1.00	ug/L	101.0		1.22
40	CCB4	CCB4	0.016	0.016	-0.322	-0.322	1.00	ug/L			0.00
41	9311158-02A0	#20	0.226		318.0	158.0	0.496	mg/Kg			
42	9311158-02A1	MSA Spike # M2	0.231		MSA 10 C=	0.983		mg/Kg			
43	9311158-02A2	MSA Spike # M3	0.242		MSA 20 M=	0.00071		mg/Kg			
44	9311158-02A3	MSA Spike # M4	0.246		MSA 30 B=	0.22540		mg/Kg			
45	CCV5	CCV5	0.239		52.1	52.1	1.00	ug/L	104.0		
46	CCB5	CCB5	0.016		-0.322	-0.322	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			0.224		0.000 NO MODE			ug/L			
50			0.235		0.000 NO MODE			ug/L			

VOID, CORR POST [illegible]

VOID DM 11/29/93

Rita Amin 11/24/93
Analyst / Date

[illegible] 11/29/93
Lab Supervisor / Date

METHOD REPORT
239_2 of 7422

. FILE: PBY2493D
STRUMENT FILE: PBY2493D

ANALYST: DH
INSTRUMENT: 3050

METHOD FILE: PB
ANALYZED: 11/24/1993

ANALYTE	CORR.	SLOPE	INTERCPT.	STD ID	ICV ID	CCV ID	LCSW ID	LCSS ID	ICSA ID	ICSB ID
Lead	0.9984	237.4914	-4.6224	PBC025	ICVC	ICVC	ICVC	ERA#217		

Rita Arnold 11/24/93
Analyst / Date

11/29/93
Lab Supervisor / Date

Run #3

RUN SUMMARY SHEET
Lead

DATA FILE: PBY2593A CASE: SDG:
INSTRUMENT FILE: PBY2593A INSTRUMENT: 3051 ANALYZED: 11/25/1993

SEQ LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY	RPD	RSD
1 0.0000 ug/L	STD 0.00	-0.001	0.000	-1.120	-1.120	1.00	ug/L			***.**
2 3.0000 ug/L	STD 3.00	0.017	0.018	2.48	2.48	1.00	ug/L			4.06
3 20.000 ug/L	STD 20.0	0.118	0.116	22.4	22.4	1.00	ug/L			1.21
4 75.000 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	95.5		3.63
8 PBW 11-23-93	PBW 11-23-93	0.009	0.003	-0.222	-0.222	1.00	ug/L			35.4
9 PBW 11-23-93A	PBW 11-23-93A	0.114	0.116	22.0	22.0	1.00	ug/L	110.0		1.23
10 LCSW	LCSW	0.228	0.235	45.2	45.2	1.00	ug/L	90.4		2.14
11 LCSWA	LCSWA	0.332	0.324	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			1.68
13 9311155-01CA	SP-12A	0.246	0.235	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			6.75
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			.0
18 9311155-03B	SP-14	0.009	0.006	0.473	0.473	1.00	ug/L			23.3
19 9311155-03BA	SP-14A	0.124	0.118	23.2	23.2	1.00	ug/L	116.0		3.5
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		2.5
22 9311155-05C	SP-16	0.011	0.009	0.977	0.977	1.00	ug/L			14.1
23 9311155-05CA	SP-16A	0.116	0.121	22.6	22.6	1.00	ug/L	113.0		2.9
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 9311159-01E	MW-1	0.009	0.005	0.378	0.378	1.00	ug/L			40.6
27 9311159-01EA	MW-1A	0.110	0.113	21.3	21.3	1.00	ug/L	109.0		1.8
28 CCV2	CCV2	0.259	0.255	50.3	50.3	1.00	ug/L	101.0		1.1
29 CCB2	CCB2	0.004	0.001	-0.521	-0.521	1.00	ug/L			84.3
30 9311159-02C	MW-2	0.003	0.006	-0.122	-0.122	1.00	ug/L			47.1
31 9311159-02CA	MW-2A	0.114	0.108	21.2	21.2	1.00	ug/L	106.0		3.5
32 9311159-03B	MW-3	0.002	0.005	-0.321	-0.321	1.00	ug/L			60.6
33 9311159-03BA	MW-3A	0.107	0.103	20.0	20.0	1.00	ug/L	99.8		2.6
34 9311159-04C	MW-4	0.001	0.002	-0.721	-0.721	1.00	ug/L			47.1
35 9311159-04CA	MW-4A	0.115	0.106	21.0	21.0	1.00	ug/L	105.0		5.7
36 9311159-05B	MW-5	0.003	0.007	-0.022	-0.022	1.00	ug/L			56.6
37 9311159-05BA	MW-5A	0.114	0.110	21.4	21.4	1.00	ug/L	107.0		2.5
38 9311159-06B	MW-6	0.002	0.005	-0.321	-0.321	1.00	ug/L			5
39 9311159-06BA	MW-6A	0.103	0.107	20.0	20.0	1.00	ug/L	99.8		2.6

Analyst / Date 11/29/93 Lab Supervisor / Date

RUN SUMMARY SHEET
Lead

DATA FILE: PBY2593A CASE: SDG:
INSTRUMENT FILE: PBY2593A INSTRUMENT: 3051 ANALYZED: 11/25/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	%RECOVERY	%RPD	%RSD
40	CCV3	CCV3	0.257	0.251	49.7	49.7	1.00	ug/L	99.4		1.67
41	CCB3	CCB3	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	0.078	0.078	1.00	ug/L		-328.26	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		5.19
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	CCV4	CCV4	0.258	0.263	51.0	51.0	1.00	ug/L	102.0		1.36
52	CCB4	CCB4	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		[illegible]
57	CCV5	CCV5	0.265	0.262	51.6	51.6	1.00	ug/L	103.0		0.80
58	CCB5	CCB5	0.004	0.001	-0.521	-0.521	1.00	ug/L			84.3
59	9311158-02A		0.428	0.425	84.2	~~84.2~~	1.00	~~ug/L~~ mg/kg			0.50
60	9311158-02AA	A	0.512	0.496	99.7	99.7	1.00	~~ug/L~~	77.4		2.24
61	9311158-02A	1:5 DIL	0.111	0.114	21.4	~~107.0~~ 26.6	5.00	~~ug/L~~ mg/kg			1.38
62	9311158-02AA	A	0.216	0.225	43.0	215.0	5.00	ug/L	108.0 ✓		2.89
63	CCV6	CCV6	0.263	0.259	51.1	51.1	1.00	ug/L	102.0		1.08
64	CCB6	CCB6	0.003	0.005	-0.222	-0.222	1.00	ug/L			35.4

E-Wk... 11-25-93 DH 11/29/93

Analyst / Date Lab Supervisor / Date

AR101506

071

93-11-155

11-159

M-153

BENCH SHEET
239_2 or 7421

DATA FILE: PBY2593A CASE: SDG:
INSTRUMENT FILE: PBY2593A INSTRUMENT: ICS1 ANALYZED: 11/25/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	RESULTS
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 11-23-93	PBW 11-23-93	WATER	1.00	100.000	100.000	100.00
9	PBW 11-23-93A	PBW 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	CCV1	CCV1	WATER	1.00	100.000	100.000	100.00
[illegible]	CCB1	CCB1	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	CCV2	CCV2	WATER	1.00	100.000	100.000	100.00
29	CCB2	CCB2	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	9311159-03D	MW-3	WATER	1.00	100.000	100.000	100.00
33	9311159-03DA	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	9311159-05D	MW-5	WATER	1.00	100.000	100.000	100.00
37	9311159-05DA	MW-5A	WATER	1.00	100.000	100.000	100.00
38	9311159-06D	MW-6	WATER	1.00	100.000	100.000	100.00
	9311159-06DA	MW-6A	WATER	1.00	100.000	100.000	100.00
40	CCV3	CCV3	WATER	1.00	100.000	100.000	100.00

[illegible] 11-25-93 [illegible] 11-29-93

[illegible] Analyst: / Date [illegible] Supervisor: / Date

AR101507

072

BENCH SHEET
239_2 or 7421

DATA FILE: PBY2593A CASE: SDG:
INSTRUMENT FILE: PBY2593A INSTRUMENT: 3051 ANALYZED: 11/25/1993

SEQ	LAB ID	CLIENT ID	MATRIX	DILUTION	SIZE	VOLUME	%SOLIDS
41	CCB3	CCB3	WATER	1.00	100.000	100.000	100.00
42	9311159-07B	MW-7	WATER	1.00	100.000	100.000	100.00
43	9311159-07BA	MW-7A	WATER	1.00	100.000	100.000	100.00
44	9311159-07BD	MW-7D	WATER	1.00	100.000	100.000	100.00
45	9311159-07BDA	MW-7DA	WATER	1.00	100.000	100.000	100.00
46	9311159-07BS	MW-7S	WATER	1.00	100.000	100.000	100.00
47	9311159-08B	MW-8	WATER	1.00	100.000	100.000	100.00
48	9311159-08BA	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	CCB4	CCB4	WATER	1.00	100.000	100.000	100.00
53	9311159-10D	MW-10	WATER	1.00	100.000	100.000	100.00
54	9311159-10DA	MW-10A	WATER	1.00	100.000	100.000	100.00
55	9311159-11D	MW-11	WATER	1.00	100.000	100.000	100.00
56	9311159-11DA	MW-11A	WATER	1.00	100.000	100.000	100.00
57	CCV5	CCV5	WATER	1.00	100.000	100.000	100.00
58	CCB5	CCB5	WATER	1.00	100.000	100.000	100.00
					1.000	200.0	
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	CCB6	CCB6	WATER	1.00	100.000	100.000	100.00

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SH 11/30/93

[signature] 11-25-93
Analyst / Date

[signature] 11-29-93
Lab Supervisor / Date

AR101508

073

METHOD REPORT
239_2 or 7421

FILE: PBY2593A
INSTRUMENT FILE: PBY2593A

ANALYST: RU
INSTRUMENT: ICS1

METHOD FILE: PB
ANALYZED: 11/25/1993

ANALYTE	CORR.	SLOPE	INTERCPT.	STD ID	ICV ID	CCV ID	ICSA ID	ICSAB ID	ICSA ID	ICSB ID
Lead	0.9990	199.7705	-1.0207	PBC025	ICVC	ICVC	ICVC	ERA#217		

F. Lich 11-25-93
Analyst / Date

RH 11-29-93
Lab Supervisor / Date

07

Run = 1

RUN SUMMARY SHEET
Lead

DATA FILE: PBY29938 CASE: SDG:
INSTRUMENT FILE: PBY29938 INSTRUMENT: 3051 ANALYZED: 11/29/1993

SEQ	LAB ID	CLIENT ID	REP1	REP2	RAW CONC.	RESULT	LIMIT	UNITS	RECOVERY %	RSD
1	0.0000 ug/L	STD 0.00	0.002	0.004	-0.942	-0.942	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		0.00
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	74.5	74.5	1.00	ug/L		3.44
5	ICV	ICV	0.268	0.271	53.8	53.8	1.00	ug/L	108.0	0.79
6	ICB	ICB	0.002	0.000	-1.350	-1.350	1.00	ug/L		141.0
7	CRA	CRA	0.020	0.022	2.76	2.76	1.00	ug/L	92.0	6.73
8	PBS	PBS	0.023	0.022	3.07	0.613	0.200	mg/Kg		3.14
9	PBSA	PBSA	0.128	0.132	25.2	5.03	0.200	mg/Kg	110.0	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	85.8	0.63
12	CCV1	CCV1	0.242	0.244	48.6	48.6	1.00	ug/L	96.8	0.58
13	CCBT	CCBT	0.001	0.000	-1.460	-1.460	1.00	ug/L		141.0
14	9311158-11A0	#110	0.168		31.3	[illegible]	0.227	mg/Kg		
15	9311158-11A1	MSA Spike # M2	0.279		MSA 10 C=	0.962		mg/Kg		
	9311158-11A2	MSA Spike # M3	0.313		MSA 20 N=	0.00605		mg/Kg		
17	9311158-11A3	MSA Spike # M4	0.358		MSA 30 B=	0.12890		mg/Kg		
18	9311158-11A0	#110	0.097	1/2 DIL.	20.7	9.37	0.454	mg/Kg		
19	9311158-11A1	MSA Spike # M2	0.153		MSA 10 C=	0.995		mg/Kg		
20	9311158-11A2	MSA Spike # M3	0.187		MSA 20 N=	0.00478		mg/Kg		
21	9311158-11A3	MSA Spike # M4	0.245		MSA 30 B=	0.09820		mg/Kg		
22	CCV2	CCV2	0.256		51.1	51.1	1.00	ug/L	102.3	
23	CCB2	CCB2	0.002		-1.150	-1.150	1.00	ug/L		

11/29/93

Analyst / Date

11/30/93

Lab Supervisor / Date

AR101510

BENCH SHEET
239_2 or 7421

L A FILE: PBY29938 CASE: SDG:
INSTRUMENT FILE: PBY29938 INSTRUMENT: 3051 ANALYZED: 11/29/1993

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	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	#4	SOIL	5.00	1.000	200.000	90.70
11	9311158-04AA	#4A	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

DH 11/30/93

Analyst / Date Lab Supervisor / Date

METHOD REPORT
239_2 of 7421

DA FILE: PBY29938 ANALYST: RA METHOD FILE: PB
UMENT FILE: PBY29938 INSTRUMENT: 3051 ANALYZED: 11/29/1993

ANALYTE	CORR.	SLOPE	INTRCPT.	STD ID	ICV ID	CCV ID	LCSW ID	LCSS ID	ICSA ID	ICSB ID
Lead	0.9995	205.3925	-1.3328	PB0025	ICVC	ICVC	ICVC	ERA#217		

Analyst / Date

WSH 11/30/93
Lab Supervisor / Date

ENVIRONMENTAL SERVICES

METAL DIGESTION LOG FORM

Date of Digestion : 11-22-03
Yc Order No. : 93-11-157
Client Name : DYNAMAC
Prepared By : SML

EPA Case No. :
SDG No. :
SAS No. :
Dig. Supervisor Approval : [illegible] 11/30/03

Method/Procedure Used : SOIL 3/GA

Client ID	GP Number	Matrix	Amount Digested Flame/ICP	Amount Digested Furnace	Spike Soln ID	Amount
#1	01A	SOIL	1.00 g 200 ml	1.00 g 200 ml		
D			ml	ml		
S			ml	ml	PASS FL	2.0mL FL, 1.0mL [illegible]
#2	02A		ml	ml		
#3	03A		ml	ml		
#4	04A		ml	ml		
#5	05A		ml	ml		
#6	06A		ml	ml		
#7	07A		ml	ml		
#8	08A		ml	ml		
#9	09A		ml	ml		
#10	10A		ml	ml		
#11	11A		ml	ml		
#12	12A	WATER	100mL 100 ml	100mL 100 ml		
			ml	ml		
			ml	ml		
			ml	ml		
QC LCSS	—	SOIL	1.00 g 200 ml	1.00 g 200 ml	L0040 EKA LOT #[illegible]	1.00 g
LCSW	—	WATER	100mL 100 ml	100mL 100 ml	ICVA-009 FL ICVC-007 FL	1.0mL 1.0mL
PBS	—	—	0.00 g 200 ml	0.00 g 200 ml		
PBW	—	WATER	100mL 100 ml	100mL 100 ml		

Comments:

AR101513

111-[illegible]

GP ENVIRONMENTAL SERVICES
SAMPLE DESCRIPTION FORM

ate of Digestion : 11-22-93
/ork Order Number : 93-11-158
ase Number : DYNAMAC
DG Number : —
repared By : SMT
: [illegible]

SAS # :
Date :
Date :

			SOIL		WATER		SOIL & WATER		
CLIENT ID	GPID	MATRIX	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			<2	CLEAR		COLORLESS	COLORLESS

Comments:

AR101514 023

%SOLIDS SUMMARY

DATE ANALYSIS BEGUN 11-22-93 WORK ORDER 93-11-158

ANALYST: Jill Sobieski METHOD: 160.3

Client ID	Sample	A Dry Container Weight	B Wet Sample + Dry Container Weight	C = B - A Wet Sample Weight	D Dry Sample + Dry Container Weight	E = D - A Dry Sample Weight	(E/C) 100 Percent Solids	Due Date
	9311153-01A	1.613	7.402	5.78	6.284	4.67	80.630 %	11/23/13
	9311153-02A	1.615	7.503	5.93	6.445	4.83	80.520 %	11/23/13
	9311153-03A	1.613	7.373	5.76	6.330	4.71	81.860 %	11/23/13
	9311153-04A	1.526	10.198	8.61	9.333	7.81	90.720 %	11/23/13
	9311153-05A	1.594	11.866	10.27	11.044	9.45	92.000 %	11/23/13
	9311153-06A	1.612	9.577	7.95	8.693	7.08	88.930 %	11/23/13
	9311153-07A	1.598	8.338	6.74	7.233	5.64	83.690 %	11/23/13
	9311153-08A	1.602	10.273	8.67	9.284	7.68	88.590 %	11/23/13
	9311153-09A	1.628	9.222	7.59	8.325	6.69	88.130 %	11/23/13
	9311153-10A	1.553	9.535	8.00	8.778	7.22	89.560 %	11/23/
	9311153-11A	1.584	7.691	6.10	6.953	5.38	88.100 %	11/23/13

Analyst / Date

Joel Schneider 11-23-93

Lab Manager / Data

11-23-93

AR101515

GP ENVIRONMENTAL SERVICES

TOTAL % SOLIDS

DUE DATE: 11-24-93 METHOD: 160.3

ANALYST: J. Sobieski DATE OF ANALYSIS: 11-22-93 WORK ORDER: 93-11-158

Client ID	Dry Container Weight ~~Fraction~~	A Wet Sample + Dry Container Weight	B Fraction ~~Wet Sample + Dry Container Weight~~	C = B - A Wet Sample Weight	D Dry Sample + Dry Container Weight	E = D - A Dry Sample Weight	(E/C) 100 Percent Solids
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	1.6129	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	11.8656	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	6.7397	7.2390	5.6406	83.69
8	1.6019	10.2731	08A	8.6712	9.2842	7.6823	88.59
9	1.6277	9.2218	09A	7.5941	8.3252	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	5.3849	88.17
11 dup	1.5808	8.1546	11A dup	6.5738	7.4613	5.8805	89.45

Laboratory Manager:

AR101516