US EPA RECORDS CENTER REGION 5
513041

(2)

MEMORANDUM

TO: Dave Hendren

FROM: Gary Hahn

DATE: December 19, 1995

SUBJECT: TAT-Chicago
Project No. ZT4052.EIL0903KAA

RE: 9502.862; 9502.864

CC: Lab File

Attached is the laboratory report of the analyses conducted on samples received at the Analytical Services Center on December 12 and 13, 1995. Analyses were performed according to the procedures set forth in the Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, U.S. EPA, 1986.

The chain of custody form provided herein is integral to this report and must be included with the analytical results forms upon transferral to another data user.

All samples on which this report is based will be retained by E & E for a period of thirty days from the date of this report, unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of $1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/bjk
Enclosure

Case Narrative
TAT-Chicago
ZT4052.EIL0903KAA
9502.862; 9502.864

Lead was detected in the preparation blank at 0.49 mg/Kg. Levels detected in the samples exceeded this blank value by more than ten times. No corrective action was required.

Copper results have been flagged "E" based on the serial dilution analysis. A chemical/physical interference is indicated.

Recovery of copper was high in the matrix spike analysis. A post digestion analytical spike was performed with a recovery of 129%.

The %RPD was high for arsenic, lead, and zinc in the matrix duplicate analysis. Sample non-homogeneity is suspected.

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 has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Gary Hahn - Manager
Analytical Services Center
December 19, 1995

Total number of pages in this data package is: 85 .

Ecology and Environment, Inc.
Analytical Services Center
Cooler Receipt Form

PACKAGE RECEIPT #: 1627 NUMBER OF COOLERS: 1 DATE RECEIVED: 12.12.95

E&E Project #: _____ Project or Site Name: TAT-Chicago

A: Preliminary Examination Phase

(CIRCLE ONE)

1 Did coolers come with airbill or packing slip? YES NO

if YES, enter carrier here and print airbill # below: FedEX

2 Did cooler(s) have custody seals? YES NO

if YES, how many and where: 2 @ sum

3 Were custody seals unbroken and intact on receipt? YES NO*

4 Where custody seals dated and signed? YES NO

if YES, enter Date: 12.11.95 Name: _____

5 Initial here to acknowledge receipt of cooler(s): JK

B Unpacking Phase:

Date Cooler(s) Opened: 12.12.95 C-O-C Numbers: _____

Coolers Opened By(print): J. Hendricks (sign): _____

6 Where C-O-C forms received and sealed in plastic bag? YES NO*

7 Was the project identifiable from the C-O-C form? YES NO

if YES, enter the project number and name in the heading above.

8 Was enough packing material used in cooler(s)? YES NO

Circle type of material: Vermiculite Bubble Wrap Other _____

9 If required, was enough ice used?: YES NO

if YES, circle type of ice: WET DRY BLUE Other _____

10 Was a temperature blank included inside cooler(s)? YES NO

if Yes, indicate temperature in table below.

If No, indicate Cooler temperature in table below.

11 Were all containers sealed in separate plastic bags?: YES NO*

12 Did all containers arrive unbroken and in good condition? YES NO

C Login Phase:

Date Samples Logged in: 12.12.95

Samples logged in By(print): J. Hendricks (sign): _____

13 Were all container labels complete(eg.date,time,preserv.)? YES NO*

14 Were all C-O-C forms filled out properly in ink and signed? YES NO*

15 Did the C-O-C form agree with containers received? YES NO*

16 Were the correct containers used for the tests requested? YES NO*

17 Were the correct preservatives listed on the sample labels? YES NO*

18 Was a sufficient sample volume sent for the tests requested? YES NO*

19 Were all volatile samples received without head space? ND YES NO

Please record Temp. Blank or Cooler Temp. for each cooler, range (2 - 5 C°)*

AIRBILL #	TEMP.C°	AIRBILL #	TEMP.C°	AIRBILL #	TEMP.C°
5177085196	2.0				

* If NO or Temp. outside of acceptable range a Discrepancy form must be filed.

..ONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: ZT4052
PROJECT NAME: Gateway EIL0903KAA
Activity Code:
SAMPLERS: (Print Name and Sign) Cathy Sullivan, Dean Tiebout

Page 2 of 2

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte: Hg, As, Cd, Cu, Ni, Pb, Zn Method 6010						TAG NUMBERS
2QSS03	12/11/95	1518		X	2QSS03	1	1						*One Week turnaround for
2QSS03D	12/11/95	1518		X	2QSS03D	1	1						hard copy data.
2QSS04	12/11/95	1533		X	2QSS04	1	1						Send Results to
2QSS05	12/11/95	1547		X	2QSS05	1	1						Dave Hendren, Chicago
2QSS06	12/11/95	1600		X	2QSS06	1	1						
2QSS07	12/11/95	1610		X	2QSS07	1	1						NOTE: Job # is ZT4052
2QSS08	12/11/95	1627		X	2QSS08	1	1						
2QSS09	12/11/95	1637		X	2QSS09	1	1						
													Shipment is not Complete

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Cathy Sullivan	12/11/95 1720	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) / Date / Time
w/ Fed Ex	12.12.95 1025	12.12.95 1025

Ship To: Ecology & Environment, ASC
4493 Walden Avenue
Lancaster, NY 14086

ATTN: William Howard

Airbill Number: 5177085196

Chain of Custody Seal Numbers: 44509-10

Distribution: White - Accompanies Shipment; Pink - Coordinator Field Files; Yellow - Laboratory File

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ NO: ZT4052

PROJECT NAME: GATEWAY EIL0903 ~~RAA~~ KAA CS 12/12/95

Activity Code:

SAMPLERS: (Print Name and Sign) Cathy Sullivan, Dean Tiebout

Page 1 of 3

STA NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte: 4oz-As Cd Cu Ni Pb Zn Method 6010						TAG NUMBERS
2QSS10	12/12/95	846		X	2QSS10	1	1						*One week turnaround
2QSS11	12/12/95	857		X	2QSS11	1	1						hard copy data.
2QSS12	12/12/95	910		X	2QSS12	1	1						Send results to
2QSS13	12/12/95	920		X	2QSS13	1	1						Dave Hendren, Chicago
2QSS14	12/12/95	933		X	2QSS14	1	1						
2QSS15	12/12/95	950		X	2QSS15	1	1						
2QSS15D	12/12/95	950		X	2QSS15D	1	1						
2QSS16	12/12/95	1008		X	2QSS16	1	1						
2QSS17	12/12/95	1023		X	2QSS17	1	1						
2QSS18	12/12/95	1040		X	2QSS18	1	1						
2QSS19	12/12/95	1059		X	2QSS19	1	1						
2QSS20	12/12/95	1105		X	2QSS20	1	1						
~~4QSS03~~ ~~2QSS21~~	12/12/95	1144		X	CS 12/12/95 ~~2QSS21~~ 4QSS03	1	1						
CS 12/12/95 4QSS01	12/12/95	1124		X	CS 12/12/95 ~~2QSS22~~ 4QSS01	1	1						Shipment is not Complete
4QSS02	12/12/95	1131		X	CS 12/12/95 ~~2QSS23~~ 4QSS02	1	1						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Cathy Sullivan	12/12/95 1645	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) / Date / Time
Fed Ex	12-13-95 10 AM	12-13-95 10 AM

Ship To: Ecology & Environment, ASC
4493 Walden Avenue
Lancaster, NY 14086

ATTN: William Howard

Airbill Number: 5177085200

Chain of Custody Seal Numbers: 44511-12

Distribution: White - Accompanies Shipment, Pink - Coordinator Field Files; Yellow - Laboratory File

5-59645

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: ZT4052
PROJECT NAME: GATEWAY EIL0903KAA
Activity Code:

SAMPLERS: (Print Name and Sign) Cathy Sullivan, Dean Tiebout

Page 2 of 3

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte: Hg-7470 As, Cd, Cu, Ni, Pb, Zn Method 6010						TAG NUMBERS
4QS504	12/12/95	1200		X	4QS504	1	1						*One Week turnaround
4QS505	12/12/95	1214		X	4QS505	1	1						hard copy data.
4QS505D	12/12/95	1214		X	4QS505D	1	1						Send Results to
4QS506	12/12/95	1325		X	4QS506	1	1						Dave Hendren, Chicago
4QS507	12/12/95	1332		X	4QS507	1	1						
4QS508	12/12/95	1351		X	4QS508	1	1						
4QS509	12/12/95	1406		X	4QS509	1	1						
4QS510	12/12/95	1414		X	4QS510	1	1						
4QS511	12/12/95	1428		X	4QS511	1	1						
4QS512	12/12/95	1439		X	4QS512	1	1						
4QS513	12/12/95	1444		X	4QS513	1	1						
4QS514	12/12/95	1448		X	4QS514	1	1						
4QS515	12/12/95	1509		X	4QS515	1	1						
4QS515D	12/12/95	1509		X	4QS515D	1	1						Shipment is not Complete
4QS516	12/12/95	1524		X	4QS516	1	1						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Cathy Sullivan	12/12/95 1645	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) / Date / Time
Fed Ex	12-13-95 10 AM	12-13-95 10 AM

Ship To: Ecology & Environment, ASC.
4493 Walden Avenue
Lancaster, NY 14086
ATTN: William Howard

Airbill Number: 5177085200

Chain of Custody Seal Numbers: 44511-12

Distribution: White - Accompanies Shipment; Pink - Coordinator Field Files; Yellow - Laboratory File

Ecology and Environment, Inc.
Analytical Services Center
Cooler Receipt Form

PACKAGE RECEIPT #: 1633 NUMBER OF COOLERS: 1 DATE RECEIVED: 12·13·95

E&E Project #: _____ Project or Site Name: TPI - Chicago

A: Preliminary Examination Phase

(CIRCLE ONE)

1 Did coolers come with airbill or packing slip? YES NO

if YES, enter carrier here and print airbill # below: FedEx

2 Did cooler(s) have custody seals? YES NO

if YES, how many and where: 2 @ side

3 Were custody seals unbroken and intact on receipt? YES NO*

4 Where custody seals dated and signed? YES NO

if YES, enter Date: 12.12.95 Name: [illegible]

5 Initial here to acknowledge receipt of cooler(s): [illegible]

B Unpacking Phase:

Date Cooler(s) Opened: 12·13·95 C-O-C Numbers: —

Coolers Opened By(print): J. Hendricks (sign): [illegible]

6 Where C-O-C forms received and sealed in plastic bag? YES NO

7 Was the project identifiable from the C-O-C form? YES NO

if YES, enter the project number and name in the heading above.

8 Was enough packing material used in cooler(s)? YES NO

Circle type of material: Vermiculite ____ Bubble Wrap ____ Other ____

9 If required, was enough ice used?: YES NO

if YES, circle type of ice: WET ___ DRY ___ BLUE ___ Other ____

10 Was a temperature blank included inside cooler(s)? YES NO

if Yes, indicate temperature in table below.

If No, indicate Cooler temperature in table below.

11 Were all containers sealed in separate plastic bags?: YES NO*

12 Did all containers arrive unbroken and in good condition? YES NO

C Login Phase:

Date Samples Logged in: 12·13·95

Samples logged in By(print): J. Hendricks (sign): [illegible]

13 Were all container labels complete(eg.date,time,preserv.)? YES NO*

14 Were all C-O-C forms filled out properly in ink and signed? YES NO*

15 Did the C-O-C form agree with containers received? YES NO*

16 Were the correct containers used for the tests requested? YES NO*

17 Were the correct preservatives listed on the sample labels? YES NO*

18 Was a sufficient sample volume sent for the tests requested? YES NO*

19 Were all volatile samples received without head space? N/A YES NO

Please record Temp. Blank or Cooler Temp. for each cooler, range (2 - 5 C°)*

AIRBILL #	TEMP.C°	AIRBILL #	TEMP.C°	AIRBILL #	TEMP.C°
5177085200	2.0				

* If NO or Temp. outside of acceptable range a Discrepancy form must be filed.

7

recycled paper

ecology and environment

TAT - CHICAGO

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.:37351_

SOW No.: ILM03.0

EPA Sample No.	Lab Sample ID
2QSS07	37351
2QSS08	37352
2QSS09	37353
2QSS09D	37353D
2QSS09S	37353S
2QSS10	37355
2QSS11	37356
2QSS12	37357
2QSS13	37358
2QSS14	37359
2QSS15	37360
2QSS15D	37361
2QSS16	37362
2QSS17	37363
2QSS18	37364
2QSS19	37365
2QSS20	37366
4QSS01	37368
4QSS02	37369
4QSS03	37367

Were ICP interelement corrections applied ? Yes/No YES

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

Comments:

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: Gary Hahn Name: Gary Hahn

Date: 12-19-96 Title: Laboratory Manager

TAT - CHICAGO

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.:37351_

SOW No.: ILM03.0

EPA Sample No.	Lab Sample ID
_4QSS04_____	_37370_____
_4QSS05_____	_37371_____

Were ICP interelement corrections applied ? Yes/No YES

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

Comments:

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: Gary Hahn Name: Gary Hahn

Date: 12-1995 Title: Laboratory Manager

TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS07

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37351

Level (low/med): LOW__ Date Received: 12/12/95

% Solids: _87.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	9.9		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.03	U		P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	42.7		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	235		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	25.5			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	385		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: Y_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM I - IN ILM03.0

TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS08

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37352

Level (low/med): LOW__ Date Received: 12/12/95

% Solids: _86.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	8.0		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.7			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	51.3		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	507		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	22.3			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	926		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: Y_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM I - IN ILM03.0

TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS09

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37353

Level (low/med): LOW__ Date Received: 12/12/95

% Solids: _79.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	9.1		*	P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	0.79			P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	64.6		EN	P
7439-89-6	Iron				NR
7439-92-1	Lead	1080		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel	23.4			P
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	1480		*	P
	Cyanide				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: Y_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM I - IN ILM03.0

TAT - CHICAGO

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS10

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37355

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _93.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	6.3		*	P
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.03	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	31.4		EN	P
7439-89-6	Iron____				NR
7439-92-1	Lead____	225		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	17.8			P
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	238		*	P
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:
_____ARTIFACTS_=_ROCKS,_STICKS,_LEAVES_____

FORM I - IN ILM03.0

TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS11

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37356

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _84.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	7.1		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.25	B		P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	61.4		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	370		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	17.7			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	576		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM I - IN ILM03.0

TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS12

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37357

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _89.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	1.6		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.03	U		P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	99.9		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	570		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	23.1			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	736		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS13

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37358

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _88.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	6.1		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.03	U		P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	97.2		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	521		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	20.0			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	580		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS14

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37359

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _80.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	7.9		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	3.7			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	34.4		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	154		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	21.2			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	251		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS15

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37360

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _79.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	9.0		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.99			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	62.8		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	390		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	24.2			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	619		*	P_
_____	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

_____ARTIFACTS_=_ROCKS,_STICKS,_LEAVES_____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS15D

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37361

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _79.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	9.9		*	P_
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.48	B		P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	65.5		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	460		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	24.3			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	805		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:
ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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EPA SAMPLE NO.

2QSS16

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37362

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _82.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	6.9		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.2			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	86.3		EN	P_
7439-89-6	Iron_____				NR
7439-92-1	Lead_____	310		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	18.8			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc_____	767		*	P_
_____	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:
_____ARTIFACTS_=_ROCKS,_STICKS,_LEAVES_____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS17

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37363

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _80.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	11.6		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	4.3			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	85.5		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	581		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	24.7			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	808		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS18

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37364

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _80.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	9.0		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.6			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	71.3		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	875		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	22.4			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	662		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS19

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37365

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _83.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	6.8		*	P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	0.04	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	27.0		EN	P
7439-89-6	Iron				NR
7439-92-1	Lead	58.3		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel	16.3			P
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	178		*	P
	Cyanide				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2QSS20

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37366

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _83.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	10.3		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	2.3			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	79.0		EN	P_
7439-89-6	Iron_____				NR
7439-92-1	Lead_____	478		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	28.0			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc_____	626		*	P_
_____	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:
_____ARTIFACTS_=_ROCKS,_STICKS,_LEAVES_____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

4QSS01

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37368

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _82.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	18.4		*	P_
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.8			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	134		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	1580		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	224			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	1010		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:
_____ARTIFACTS_=_ROCKS,_STICKS,_LEAVES_____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

4QSS02

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37369

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _81.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	11.7		*	P
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	2.5			P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	69.3		EN	P
7439-89-6	Iron____				NR
7439-92-1	Lead____	3680		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	22.3			P
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	883		*	P
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

4QSS03

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37367

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _88.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	13.0		*	P_
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	0.03	U		P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	45.4		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	151		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	25.7			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	277		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM I - IN ILM03.0

TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

4QSS04

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37370

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _87.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	9.8		*	P_
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	3.9			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	121		EN	P_
7439-89-6	Iron____				NR
7439-92-1	Lead____	938		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	19.8			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	1220		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM I - IN ILM03.0

TAT - CHICAGO

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

4QSS05

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Matrix (soil/water): SOIL_ Lab Sample ID: 37371

Level (low/med): LOW__ Date Received: 12/13/95

% Solids: _49.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	8.0		*	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	4.4			P_
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	197		EN	P_
7439-89-6	Iron_____				NR
7439-92-1	Lead_____	675		*	P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	28.7			P_
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc_____	993		*	P_
	Cyanide__				NR

Color Before: _____ Clarity Before: _____ Texture: M_____

Color After: CL_____ Clarity After: C_____ Artifacts: YES___

Comments:

ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM I - IN ILM03.0

TAT - CHICAGO

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

Initial Calibration Source: EPA-LV/P-E__

Continuing Calibration Source: VHG/NBS_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic	1000.0	1023.20	102.3	500.0	525.07	105.0	517.33	103.5	P
Barium									NR
Beryllium									NR
Cadmium	500.0	505.36	101.1	500.0	516.36	103.3	506.96	101.4	P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper	1000.0	1004.11	100.4	500.0	516.96	103.4	506.71	101.3	P
Iron									NR
Lead	1000.0	1025.53	102.6	1000.0	1028.21	102.8	1010.88	101.1	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel	1000.0	1036.72	103.7	500.0	511.95	102.4	502.17	100.4	P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc	1000.0	1014.02	101.4	500.0	519.40	103.9	512.62	102.5	P
Cyanide									NR

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

TAT - CHICAGO

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

Initial Calibration Source: EPA-LV/P-E__

Continuing Calibration Source: VHG/NBS_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic				500.0	521.48	104.3	520.03	104.0	P
Barium									NR
Beryllium									NR
Cadmium				500.0	509.68	101.9	514.23	102.8	P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper				500.0	513.58	102.7	520.67	104.1	P
Iron									NR
Lead				1000.0	1019.65	102.0	1024.42	102.4	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel				500.0	506.09	101.2	509.50	101.9	P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc				500.0	513.02	102.6	516.81	103.4	P
Cyanide									NR

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

FORM II (PART 1) - IN ILM03.0

TAT - CHICAGO

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

Initial Calibration Source: EPA-LV/P-E__

Continuing Calibration Source: VHG/NBS_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic				500.0	520.58	104.1	521.16	104.2	P
Barium									NR
Beryllium									NR
Cadmium				500.0	510.58	102.1	514.90	103.0	P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper				500.0	521.32	104.3	528.26	105.7	P
Iron									NR
Lead				1000.0	1018.49	101.8	1019.57	102.0	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel				500.0	507.91	101.6	509.60	101.9	P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc				500.0	512.00	102.4	514.24	102.8	P
Cyanide									NR

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

TAT - CHICAGO

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

Initial Calibration Source: EPA-LV/P-E__

Continuing Calibration Source: VHG/NBS_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic				500.0	520.89	104.2			P
Barium									NR
Beryllium									NR
Cadmium				500.0	514.19	102.8			P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper				500.0	527.82	105.6			P
Iron									NR
Lead				1000.0	1016.85	101.7			P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel				500.0	508.36	101.7			P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc				500.0	513.91	102.8			P
Cyanide									NR

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

TAT - CHICAGO

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

AA CRDL Standard Source: PERKIN-ELMER

ICP CRDL Standard Source: VHG_____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic				20.0	20.90	104.5	19.29	96.4
Barium								
Beryllium								
Cadmium				10.0	9.94	99.4	10.18	101.8
Calcium								
Chromium								
Cobalt								
Copper				50.0	52.66	105.3	55.77	111.5
Iron								
Lead				6.0	7.80	130.0	7.48	124.7
Magnesium								
Manganese								
Mercury								
Nickel				80.0	85.29	106.6	86.76	108.4
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc				40.0	41.75	104.4	42.72	106.8

TAT - CHICAGO

3
BLANKS

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

Preparation Blank Matrix (soil/water): SOIL_

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	3.1	U	3.1	U	3.1	U	3.1	U	0.310	U	P
Barium											NR
Beryllium											NR
Cadmium	0.3	U	0.3	U	0.3	U	0.3	U	0.030	U	P
Calcium											NR
Chromium											NR
Cobalt											NR
Copper	1.8	U	1.8	U	1.8	U	1.8	U	0.180	U	P
Iron											NR
Lead	2.9	U	2.9	U	2.9	U	2.9	U	0.488		P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel	5.9	U	5.9	U	5.9	U	5.9	U	0.590	U	P
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc	3.9	U	3.9	U	3.9	U	3.9	U	0.390	U	P
Cyanide											NR

TAT - CHICAGO

3
BLANKS

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic			3.1	U	3.1	U	3.1	U			P
Barium											NR
Beryllium											NR
Cadmium			0.3	U	0.3	U	0.3	U			P
Calcium											NR
Chromium											NR
Cobalt											NR
Copper			1.8	U	1.8	U	1.8	U			P
Iron											NR
Lead			2.9	U	2.9	U	2.9	U			P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel			5.9	U	5.9	U	5.9	U			P
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc			3.9	U	3.9	U	3.9	U			P
Cyanide											NR

FORM III - IN ILM03.0

TAT - CHICAGO

3
BLANKS

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic			3.1	U							P
Barium											NR
Beryllium											NR
Cadmium			0.3	U							P
Calcium											NR
Chromium											NR
Cobalt											NR
Copper			1.8	U							P
Iron											NR
Lead			2.9	U							P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel			5.9	U							P
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc			3.9	U							P
Cyanide											NR

FORM III - IN ILM03.0

TAT - CHICAGO

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No: _____ SDG No.: 37351_

ICP ID Number: OPTIMA_____ ICS Source: VHG_____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum								
Antimony								
Arsenic	0	0	6	6.3		5	3.7	
Barium								
Beryllium								
Cadmium	23	873	-15	844.0	96.7	-14	861.2	98.6
Calcium								
Chromium								
Cobalt								
Copper	30	521	2	488.0	93.7	3	510.4	98.0
Iron								
Lead	67	888	7	883.4	99.5	6	889.0	100.1
Magnesium								
Manganese								
Mercury								
Nickel	31	894	10	856.4	95.8	11	869.3	97.2
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc	0	932	23	917.8	98.5	25	930.1	99.8

TAT - CHICAGO

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

2QSS09S

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

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

% Solids for Sample: _79.8

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic	75-125	292.1130		9.0910		250.63	112.9		P
Barium									NR
Beryllium									NR
Cadmium	75-125	7.2440		0.7905		6.26	103.1		P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper	75-125	104.8409		64.5678		31.33	128.5	N	P
Iron									NR
Lead		778.1148		1077.3610		62.66	-477.6		P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel	75-125	95.9583		23.3584		62.66	115.9		P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc		843.0799		1480.5395		62.66	-1017.3		P
Cyanide									NR

Comments:
ARTIFACTS_=_ROCKS,_STICKS,_LEAVES

FORM V (Part 1) - IN ILM03.0

TAT - CHICAGO

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

2QSS09A

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.: 37351_

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

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper		1846.01		515.25		1030.0	129.2		P
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:
ARTIFACTS = ROCKS, STICKS, LEAVES

TAT - CHICAGO

6
DUPLICATES

EPA SAMPLE NO.

2QSS09D

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

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

% Solids for Sample: _79.8 % Solids for Duplicate: __79.8

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic		9.0910		12.0712		28.2	*	P
Barium								NR
Beryllium								NR
Cadmium	0.6	0.7905		0.9492		18.2		P
Calcium								NR
Chromium								NR
Cobalt								NR
Copper		64.5678		73.3877		12.8		P
Iron								NR
Lead		1077.3610		638.5338		51.1	*	P
Magnesium								NR
Manganese								NR
Mercury								NR
Nickel	5.0	23.3584		27.2263		15.3		P
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc		1480.5395		652.1842		77.7	*	P
Cyanide								NR

TAT - CHICAGO

7
LABORATORY CONTROL SAMPLE

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

Solid LCS Source: ERA_____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic				100.0	103.9		80.0	120.0	103.9
Barium									
Beryllium									
Cadmium				100.0	105.8		80.0	120.0	105.8
Calcium									
Chromium									
Cobalt									
Copper				100.0	103.1		80.0	120.0	103.1
Iron									
Lead				100.0	106.3		80.0	120.0	106.3
Magnesium									
Manganese									
Mercury									
Nickel				100.0	107.7		80.0	120.0	107.7
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc				100.0	103.4		80.0	120.0	103.4
Cyanide									

TAT - CHICAGO

8
STANDARD ADDITION RESULTS

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract:_____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.:_____ SDG No.:37351_

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

FORM VIII - IN ILM03.0

TAT - CHICAGO

9

ICP SERIAL DILUTION

EPA SAMPLE NO.

2QSS09L

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum							NR
Antimony							NR
Arsenic	72.55		47.29	B	34.8		P
Barium							NR
Beryllium							NR
Cadmium	6.31		5.20	B	17.6		P
Calcium							NR
Chromium							NR
Cobalt							NR
Copper	515.25		457.42		11.2	E	P
Iron							NR
Lead	8597.34		8098.14		5.8		P
Magnesium							NR
Manganese							NR
Mercury							NR
Nickel	186.40		177.20	B	4.9		P
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc	2362.94		2313.07		2.1		P

TAT - CHICAGO

10

Instrument Detection Limits (Quarterly)

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

ICP ID Number: OPTIMA_____ Date: 10/20/95

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	188.98		10	3.1	P
Barium			200		NR
Beryllium			5		NR
Cadmium	226.50		5	0.3	P
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper	324.75		25	1.8	P
Iron			100		NR
Lead	220.35		3	2.9	P
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel	231.60		40	5.9	P
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc	213.84		20	3.9	P

Comments:

FORM X - IN ILM03.0

TAT - CHICAGO

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

ICP ID Number: OPTIMA_____ Date: 08/25/95

Analyte	Wave-length (nm)	Interelement Correction Factors for : Al	Ca	Fe	Mg	___
Aluminum	308.21	0.0000000	0.0000070	0.0001230	0.0000730	
Antimony	206.83	0.0000280	0.0000000	0.0000140	0.0000020	
Arsenic	188.98	0.0000010	0.0000000	0.0000030	0.0000000	
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	
Beryllium	313.11	0.0000000	0.0000000	0.0000000	0.0000000	
Cadmium	226.50	0.0000510	0.0000010	0.0016460	0.0000050	
Calcium	315.88	0.0001570	0.0000000	0.0057220	0.0009620	
Chromium	205.55	0.0000030	0.0000060	0.0001160	0.0001730	
Cobalt	228.62	-0.0000010	0.0000020	0.0093020	0.0000020	
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	
Iron	259.94	-0.0000050	0.0000080	0.0000000	0.0000850	
Lead	220.35	0.0000540	0.0000000	-0.0000340	0.0000020	
Magnesium	279.08	0.0000100	-0.0000080	0.0008600	0.0000000	
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium	766.48	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium	196.03	0.0000010	0.0000000	-0.0000720	0.0000000	
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	
Zinc	213.84	0.0000320	0.0000030	0.0012370	0.0027810	

Comments:

FORM XI (Part 1) - IN ILM03.0

TAT - CHICAGO

12
ICP LINEAR RANGES (QUARTERLY)

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.: 37351_

ICP ID Number: OPTIMA_____ Date: 09/22/95

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	10.00	50000.0	P
Antimony	10.00	2000.0	P
Arsenic	10.00	10000.0	P
Barium	10.00	5000.0	P
Beryllium	10.00	1000.0	P
Cadmium	10.00	5000.0	P
Calcium	10.00	150000.0	P
Chromium	10.00	10000.0	P
Cobalt	10.00	10000.0	P
Copper	10.00	10000.0	P
Iron	10.00	250000.0	P
Lead	10.00	10000.0	P
Magnesium	10.00	150000.0	P
Manganese	10.00	10000.0	P
Mercury			NR
Nickel	10.00	10000.0	P
Potassium	10.00	50000.0	P
Selenium	10.00	10000.0	P
Silver	10.00	10000.0	P
Sodium	10.00	50000.0	P
Thallium	10.00	10000.0	P
Vanadium	10.00	10000.0	P
Zinc	10.00	5000.0	P

Comments:

FORM XII - IN ILM03.0

TAT - CHICAGO

13
PREPARATION LOG

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.:9502.862 SAS No.: _____ SDG No.:37351_

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
2QSS07	12/13/95	1.00	100
2QSS08	12/13/95	1.00	100
2QSS09	12/13/95	1.00	100
2QSS09D	12/13/95	1.00	100
2QSS09S	12/13/95	1.00	100
2QSS10	12/13/95	1.00	100
2QSS11	12/13/95	1.00	100
2QSS12	12/13/95	1.00	100
2QSS13	12/13/95	1.00	100
2QSS14	12/13/95	1.00	100
2QSS15	12/13/95	1.00	100
2QSS15D	12/13/95	1.00	100
2QSS16	12/13/95	1.00	100
2QSS17	12/13/95	1.00	100
2QSS18	12/13/95	1.00	100
2QSS19	12/13/95	1.00	100
2QSS20	12/13/95	1.00	100
4QSS01	12/13/95	1.00	100
4QSS02	12/13/95	1.00	100
4QSS03	12/13/95	1.00	100
4QSS04	12/13/95	1.00	100
4QSS05	12/13/95	1.00	100
LCSS	12/13/95	1.00	100
PBS	12/13/95	1.00	100

FORM XIII - IN ILM03.0

TAT - CHICAGO

14
ANALYSIS RUN LOG

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.:37351_

Instrument ID Number: OPTIMA_____ Method: P_

Start Date: 12/15/95 End Date: 12/15/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	0206				X			X				X		X				X							X	
S	1.00	0211				X			X				X		X				X							X	
ICV	1.00	0216				X			X				X		X				X							X	
ICB	1.00	0221				X			X				X		X				X							X	
CCV	1.00	0226				X			X				X		X				X							X	
CCB	1.00	0232				X			X				X		X				X							X	
ICSA	1.00	0235				X			X				X		X				X							X	
ICSAB	1.00	0240				X			X				X		X				X							X	
CRI	1.00	0245				X			X				X		X				X							X	
PBS	1.00	0250				X			X				X		X				X							X	
LCSS	1.00	0253				X			X				X		X				X							X	
2QSS07	1.00	0258				X			X				X		X				X							X	
2QSS08	1.00	0301				X			X				X		X				X								
2QSS09	1.00	0305				X			X				X		X				X								
2QSS09D	1.00	0308				X			X				X		X				X								
2QSS09S	1.00	0312				X			X				X		X				X							X	
CCV	1.00	0318				X			X				X		X				X							X	
CCB	1.00	0323				X			X				X		X				X							X	
2QSS08	5.00	0405																								X	
ZZZZZZ	1.00	0405																									
2QSS09L	5.00	0411				X			X				X		X				X								
2QSS09	5.00	0411																								X	
2QSS09D	5.00	0413																								X	
2QSS09L	25.00	0414																								X	
2QSS09A	1.00	0416											X														
2QSS10	1.00	0422				X			X				X		X				X							X	
2QSS11	1.00	0425				X			X				X		X				X								
2QSS12	1.00	0429				X			X				X		X				X								
CCV	1.00	0435				X			X				X		X				X							X	
CCB	1.00	0440				X			X				X		X				X							X	
2QSS13	1.00	0444				X			X				X		X				X								
2QSS14	1.00	0449				X			X				X		X				X							X	

FORM XIV - IN ILM03.0

TAT - CHICAGO

14
ANALYSIS RUN LOG

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.:37351_

Instrument ID Number: OPTIMA_____ Method: P_

Start Date: 12/15/95 End Date: 12/15/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
2QSS15	1.00	0452				X			X				X		X				X								
2QSS15D	1.00	0456				X			X				X		X				X								
2QSS16	1.00	0501				X			X				X		X				X								
2QSS17	1.00	0505				X			X				X		X				X								
2QSS18	1.00	0508				X			X				X		X				X								
2QSS19	1.00	0514				X			X				X		X				X							X	
2QSS20	1.00	0517				X			X				X		X				X								
4QSS03	1.00	0523				X			X				X		X				X							X	
CCV	1.00	0528				X			X				X		X				X							X	
CCB	1.00	0533				X			X				X		X				X							X	
4QSS01	1.00	0549				X			X				X						X								
4QSS02	1.00	0552				X			X				X						X								
4QSS04	1.00	0556				X			X				X		X				X								
4QSS05	1.00	0600				X			X				X		X				X								
ZZZZZZ	1.00	0603																									
ZZZZZZ	1.00	0606																									
ZZZZZZ	1.00	0612																									
2QSS11	5.00	0614																								X	
2QSS12	5.00	0615																								X	
2QSS13	5.00	0617																								X	
CCV	1.00	0622				X			X				X		X				X							X	
CCB	1.00	0628				X			X				X		X				X							X	
2QSS15	5.00	0630																								X	
2QSS15D	5.00	0631																								X	
2QSS16	5.00	0633																								X	
2QSS17	5.00	0635																								X	
2QSS18	5.00	0636																								X	
2QSS20	5.00	0638																								X	
4QSS01	10.00	0641													X											X	
4QSS02	10.00	0644													X											X	
4QSS04	10.00	0647																								X	
CCV	1.00	0652				X			X				X		X				X							X	

FORM XIV - IN ILM03.0

TAT - CHICAGO

14
ANALYSIS RUN LOG

Lab Name: ECOLOGY_AND_ENVIRONMENT__ Contract: _____

Lab Code: EANDE_ Case No.: 9502.862 SAS No.: _____ SDG No.:37351_

Instrument ID Number: OPTIMA_____ Method: P_

Start Date: 12/15/95 End Date: 12/15/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	0658				X			X				X		X				X							X	
4QSS05	5.00	0700																								X	
ZZZZZZ	1.00	0701																									
ZZZZZZ	1.00	0704																									
ICSA	1.00	0708				X			X				X		X				X							X	
ICSAB	1.00	0713				X			X				X		X				X							X	
CRI	1.00	0718				X			X				X		X				X							X	
CCV	1.00	0723				X			X				X		X				X							X	
CCB	1.00	0728				X			X				X		X				X							X	

FORM XIV - IN ILM03.0

Instrument ID: Optima
ICS Source: VHG
Date: 8/21/95
Units: ug/L

ICP Interference Check Sample Values

ELEMENT	MEAN	STANDARD DEVIATION	LOWER VALUE	UPPER VALUE
Al	485049	7762	388039	582058
Ba	453	4.4	362	544
Be	485	8.1	388	582
Cd	873	7.2	699	1048
Cr	465	4.1	371	558
Co	447	4.1	357	536
Cu	521	5.9	417	625
Fe	167869	3829	134295	201442
Pb	888	5.9	710	1065
Mg	490819	7649	392655	588982
Mn	487	7.0	390	585
Ni	894	8.7	715	1073
Ag	951	15.6	761	1141
V	453	4.4	363	544
Zn	932	8.6	746	1118
Ca	452792	10737	362233	544350

Run#1

ANALYZE > MANUAL MODE

12/15/95
02:02:04

Method Name: 9512150201 Read Delay: 65 Rinse Time: 0 Dil:
Format Name: clpf Replicates: 2 Data Dsp: SPEC4 Wt/Vol:
Comments: Standard Condition Default Values

RAW DATA
12/15/95
CLB

Command?

F5	F6	F7	F8	F9	F10	F11	F12
Analysis Elements	Repli-cates	Read Delay	Dilution	Wt/Vol		Format Name	Calib Summary

Δ 9502.862 As, Cd, Cu, Ni, Pb, Zn
Δ 9502.864 ⊥

ΔPBS, LCS 123

12/15/95 02:04
blank

rep	1	ASILM	sf	-17.3
rep	1	CD	sf	-44.3
rep	1	CU	sf	-381.6
rep	1	NI	sf	-43.0
rep	1	PBILM	sf	2.2
rep	1	ZN	sf	94.3
rep	2	ASILM	sf	-15.0
rep	2	CD	sf	-43.0
rep	2	CU	sf	-366.8
rep	2	NI	sf	-45.9
rep	2	PBILM	sf	2.6
rep	2	ZN	sf	88.4

12/15/95 02:06
blank

ASILM	av	-16.15	sf	sd	1.622	%cv	10.04	
CD	av	-43.62	sf	sd	0.939	%cv	2.15	
CU	av	-374.18	sf	sd	10.499	%cv	2.81	
NI	av	-44.47	sf	sd	2.086	%cv	4.69	
PBILM	av	2.41	sf	sd	0.297	%cv	12.30	
ZN	av	91.37	sf	sd	4.179	%cv	4.57	

12/15/95 02:09
#1 standard

rep	1	ASILM	sf	780.4
rep	1	CD	sf	22347.9
rep	1	CU	sf	67971.9
rep	1	NI	sf	7741.9
rep	1	PBILM	sf	3791.2
rep	1	ZN	sf	21310.1
rep	2	ASILM	sf	781.2
rep	2	CD	sf	22419.5
rep	2	CU	sf	68201.9
rep	2	NI	sf	7768.6
rep	2	PBILM	sf	3795.0
rep	2	ZN	sf	21350.1

12/15/95 02:11
#1 standard

ASILM	av	780.76	sf	sd	0.579	%cv	0.07	conc	1000.0
CD	av	22383.69	sf	sd	50.611	%cv	0.23	conc	1000.0
CU	av	68086.91	sf	sd	162.627	%cv	0.24	conc	1000.0
NI	av	7755.26	sf	sd	18.899	%cv	0.24	conc	1000.0
PBILM	av	3793.12	sf	sd	2.659	%cv	0.07	conc	2000.0
ZN	av	21330.09	sf	sd	28.249	%cv	0.13	conc	1000.0

12/15/95 02:14
ICV

rep	1	ASILM	conc	1022.57	ppb
rep	1	CD	conc	504.98	ppb
rep	1	CU	conc	1004.27	ppb
rep	1	NI	conc	1035.37	ppb
rep	1	PBILM	conc	1024.44	ppb
rep	1	ZN	conc	1014.67	ppb
rep	2	ASILM	conc	1023.83	ppb

recycled paper

rep	2	CD	conc	505.74	ppb
rep	2	CU	conc	1003.95	ppb
rep	2	NI	conc	1038.07	ppb
rep	2	PBILM	conc	1026.62	ppb
rep	2	ZN	conc	1013.37	ppb

12/15/95 02:16
ICV

ASILM	av	1023.20	ppb	sd	0.889	%cv	0.09
CD	av	505.36	ppb	sd	0.535	%cv	0.11
CU	av	1004.11	ppb	sd	0.220	%cv	0.02
NI	av	1036.72	ppb	sd	1.911	%cv	0.18
PBILM	av	1025.53	ppb	sd	1.542	%cv	0.15
ZN	av	1014.02	ppb	sd	0.921	%cv	0.09

12/15/95 02:19
ICB

rep	1	ASILM	conc	-0.63	ppb
rep	1	CD	conc	-0.01	ppb
rep	1	CU	conc	0.05	ppb
rep	1	NI	conc	-0.23	ppb
rep	1	PBILM	conc	1.01	ppb
rep	1	ZN	conc	-1.40	ppb
rep	2	ASILM	conc	-2.31	ppb
rep	2	CD	conc	0.12	ppb
rep	2	CU	conc	0.02	ppb
rep	2	NI	conc	-0.04	ppb
rep	2	PBILM	conc	-0.61	ppb
rep	2	ZN	conc	-1.60	ppb

12/15/95 02:21
ICB

ASILM	av	-1.47	ppb	sd	1.193	%cv	81.13
CD	av	0.05	ppb	sd	0.096	%cv	178.6
CU	av	0.03	ppb	sd	0.023	%cv	67.49
NI	av	-0.13	ppb	sd	0.138	%cv	102.7
PBILM	av	0.20	ppb	sd	1.144	%cv	578.5
ZN	av	-1.50	ppb	sd	0.138	%cv	9.19

12/15/95 02:24
CCV1

rep	1	ASILM	conc	529.73	ppb
rep	1	CD	conc	516.56	ppb
rep	1	CU	conc	517.13	ppb
rep	1	NI	conc	512.49	ppb
rep	1	PBILM	conc	1029.17	ppb
rep	1	ZN	conc	519.72	ppb
rep	2	ASILM	conc	520.42	ppb
rep	2	CD	conc	516.16	ppb
rep	2	CU	conc	516.79	ppb
rep	2	NI	conc	511.42	ppb
rep	2	PBILM	conc	1027.25	ppb
rep	2	ZN	conc	519.09	ppb

12/15/95 02:26
CCV1

ASILM	av	525.07	ppb	sd	6.582	%cv	1.25
CD	av	516.36	ppb	sd	0.284	%cv	0.06

ecology and environment

recycled paper

CU	av	516.96	ppb	sd	0.238	%cv	0.05
NI	av	511.95	ppb	sd	0.758	%cv	0.15
PBILM	av	1028.21	ppb	sd	1.359	%cv	0.13
ZN	av	519.40	ppb	sd	0.446	%cv	0.09

12/15/95 02:30
CCB1

rep	1	ASILM	conc	-0.45	ppb
rep	1	CD	conc	0.08	ppb
rep	1	CU	conc	0.03	ppb
rep	1	NI	conc	-0.32	ppb
rep	1	PBILM	conc	1.10	ppb
rep	1	ZN	conc	-1.73	ppb
rep	2	ASILM	conc	-3.38	ppb
rep	2	CD	conc	-0.05	ppb
rep	2	CU	conc	0.12	ppb
rep	2	NI	conc	-0.47	ppb
rep	2	PBILM	conc	0.18	ppb
rep	2	ZN	conc	-1.77	ppb

12/15/95 02:32
CCB1

ASILM	av	-1.92	ppb	sd	2.069	%cv	108.0
CD	av	0.02	ppb	sd	0.087	%cv	544.9
CU	av	0.08	ppb	sd	0.064	%cv	83.61
NI	av	-0.39	ppb	sd	0.109	%cv	27.55
PBILM	av	0.64	ppb	sd	0.651	%cv	101.6
ZN	av	-1.75	ppb	sd	0.028	%cv	1.58

12/15/95 02:34
ICSAI

rep	1	ASILM	conc	5.27	ppb
rep	1	CD	conc	-14.97	ppb
rep	1	CU	conc	2.18	ppb
rep	1	NI	conc	9.32	ppb
rep	1	PBILM	conc	7.19	ppb
rep	1	ZN	conc	23.35	ppb
rep	2	ASILM	conc	6.39	ppb
rep	2	CD	conc	-15.04	ppb
rep	2	CU	conc	2.31	ppb
rep	2	NI	conc	9.96	ppb
rep	2	PBILM	conc	7.48	ppb
rep	2	ZN	conc	23.22	ppb

12/15/95 02:35
ICSAI

ASILM	av	5.83	ppb	sd	0.794	%cv	13.62
CD	av	-15.00	ppb	sd	0.053	%cv	0.35
CU	av	2.24	ppb	sd	0.096	%cv	4.29
NI	av	9.64	ppb	sd	0.457	%cv	4.74
PBILM	av	7.34	ppb	sd	0.210	%cv	2.87
ZN	av	23.29	ppb	sd	0.087	%cv	0.37

12/15/95 02:38
ICSABI

rep	1	ASILM	conc	6.15	ppb
rep	1	CD	conc	843.44	ppb
rep	1	CU	conc	487.11	ppb

rep	1	NI	conc	856.01	ppb
rep	1	PBILM	conc	883.17	ppb
rep	1	ZN	conc	917.05	ppb
rep	2	ASILM	conc	6.43	ppb
rep	2	CD	conc	844.55	ppb
rep	2	CU	conc	488.79	ppb
rep	2	NI	conc	856.75	ppb
rep	2	PBILM	conc	883.69	ppb
rep	2	ZN	conc	918.58	ppb

12/15/95 02:40
ICSABI

ASILM	av	6.29 ppb	sd	0.195	%cv	3.10
CD	av	843.99 ppb	sd	0.783	%cv	0.09
CU	av	487.95 ppb	sd	1.183	%cv	0.24
NI	av	856.38 ppb	sd	0.527	%cv	0.06
PBILM	av	883.43 ppb	sd	0.364	%cv	0.04
ZN	av	917.82 ppb	sd	1.078	%cv	0.12

12/15/95 02:43
CRII

rep	1	ASILM	conc	21.30	ppb
rep	1	CD	conc	9.89	ppb
rep	1	CU	conc	52.66	ppb
rep	1	NI	conc	85.40	ppb
rep	1	PBILM	conc	8.05	ppb
rep	1	ZN	conc	41.87	ppb
rep	2	ASILM	conc	20.51	ppb
rep	2	CD	conc	9.99	ppb
rep	2	CU	conc	52.66	ppb
rep	2	NI	conc	85.19	ppb
rep	2	PBILM	conc	7.56	ppb
rep	2	ZN	conc	41.63	ppb

12/15/95 02:45
CRII

ASILM	av	20.90 ppb	sd	0.561	%cv	2.68
CD	av	9.94 ppb	sd	0.075	%cv	0.76
CU	av	52.66 ppb	sd	0.004	%cv	0.01
NI	av	85.30 ppb	sd	0.145	%cv	0.17
PBILM	av	7.80 ppb	sd	0.346	%cv	4.44
ZN	av	41.75 ppb	sd	0.173	%cv	0.41

12/15/95 02:48
PBS 123

rep	1	ASILM	conc	-1.77	ppb
rep	1	CD	conc	0.04	ppb
rep	1	CU	conc	0.36	ppb
rep	1	NI	conc	0.72	ppb
rep	1	PBILM	conc	5.11	ppb
rep	1	ZN	conc	-1.44	ppb
rep	2	ASILM	conc	-2.18	ppb
rep	2	CD	conc	-0.18	ppb
rep	2	CU	conc	0.38	ppb
rep	2	NI	conc	0.52	ppb
rep	2	PBILM	conc	4.65	ppb
rep	2	ZN	conc	-1.34	ppb

recycled paper

12/15/95 02:50 PBS1
PBS 123

ASILM	av	-1.98 ppb	sd	0.294	%cv	14.86
CD	av	-0.07 ppb	sd	0.157	%cv	234.7
CU	av	0.37 ppb	sd	0.015	%cv	4.11
NI	av	0.62 ppb	sd	0.136	%cv	21.97
PBILM	av	4.88 ppb	sd	0.326	%cv	6.68
ZN	av	-1.39 ppb	sd	0.070	%cv	5.02

12/15/95 02:52
LCS 123

rep	1	ASILM	conc	1047.93	ppb
rep	1	CD	conc	1013.71	ppb
rep	1	CU	conc	978.24	ppb
rep	1	NI	conc	1083.62	ppb
rep	1	PBILM	conc	1067.94	ppb
rep	1	ZN	conc	991.56	ppb
rep	2	ASILM	conc	1029.43	ppb
rep	2	CD	conc	1101.55	ppb
rep	2	CU	conc	1082.78	ppb
rep	2	NI	conc	1071.21	ppb
rep	2	PBILM	conc	1057.19	ppb
rep	2	ZN	conc	1076.08	ppb

12/15/95 02:53 LCSS1
LCS 123

ASILM	av	1038.68 ppb	sd	13.085	%cv	1.26
CD	av	1057.63 ppb	sd	62.114	%cv	5.87
CU	av	1030.51 ppb	sd	73.926	%cv	7.17
NI	av	1077.41 ppb	sd	8.774	%cv	0.81
PBILM	av	1062.57 ppb	sd	7.595	%cv	0.71
ZN	av	1033.82 ppb	sd	59.762	%cv	5.78

9502.862
12/15/95 02:57
37351

rep	1	ASILM	conc	86.29	ppb
rep	1	CD	conc	-8.53	ppb
rep	1	CU	conc	375.24	ppb
rep	1	NI	conc	223.17	ppb
rep	1	PBILM	conc	2057.76	ppb
rep	1	ZN	conc	3373.48	ppb
rep	2	ASILM	conc	86.66	ppb
rep	2	CD	conc	-8.17	ppb
rep	2	CU	conc	369.66	ppb
rep	2	NI	conc	221.87	ppb
rep	2	PBILM	conc	2048.82	ppb
rep	2	ZN	conc	3342.66	ppb

12/15/95 02:58 2QSS07
37351

ASILM	av	86.47 ppb	sd	0.264	%cv	0.31
CD	av	-8.35 ppb	sd	0.259	%cv	3.10
CU	av	372.45 ppb	sd	3.948	%cv	1.06
NI	av	222.52 ppb	sd	0.920	%cv	0.41
PBILM	av	2053.29 ppb	sd	6.322	%cv	0.31
ZN	av	3358.07 ppb	sd	21.791	%cv	0.65

12/15/95 03:01
37352

rep	1	ASILM	conc	68.45	ppb
rep	1	CD	conc	14.44	ppb
rep	1	CU	conc	429.42	ppb
rep	1	NI	conc	191.63	ppb
rep	1	PBILM	conc	4309.98	ppb
rep	1	ZN	conc	7203.75	ppb
rep	2	ASILM	conc	69.82	ppb
rep	2	CD	conc	15.01	ppb
rep	2	CU	conc	462.52	ppb
rep	2	NI	conc	195.28	ppb
rep	2	PBILM	conc	4497.16	ppb
rep	2	ZN	conc	7522.07	ppb

Calculation:
Ni in 2QSS08

193.45 ug/L X 0.1 L final volume

1g X 0.869
= 22.3 mg/kg
BJA 12/19/95

12/15/95 03:01 2QSS08
37352

ASILM	av	69.14 ppb	sd	0.969	%cv	1.40
CD	av	14.72 ppb	sd	0.401	%cv	2.72
CU	av	445.97 ppb	sd	23.406	%cv	5.25
NI	av	193.45 ppb	sd	2.578	%cv	1.33
PBILM	av	4403.57 ppb	sd	132.351	%cv	3.01
ZN	av	~~7362.91 ppb~~ DIL BM 12/15/95	sd	225.086	%cv	3.06

12/15/95 03:04
37353

rep	1	ASILM	conc	73.82	ppb
rep	1	CD	conc	6.20	ppb
rep	1	CU	conc	515.02	ppb
rep	1	NI	conc	185.36	ppb
rep	1	PBILM	conc	8634.94	ppb
rep	1	ZN	conc	12155.22	ppb
rep	2	ASILM	conc	71.28	ppb
rep	2	CD	conc	6.41	ppb
rep	2	CU	conc	515.48	ppb
rep	2	NI	conc	187.44	ppb
rep	2	PBILM	conc	8559.74	ppb
rep	2	ZN	conc	12144.71	ppb

12/15/95 03:05 2QSS09
37353

ASILM	av	72.55 ppb	sd	1.796	%cv	2.48
CD	av	6.31 ppb	sd	0.150	%cv	2.38
CU	av	515.25 ppb	sd	0.327	%cv	0.06
NI	av	186.40 ppb	sd	1.470	%cv	0.79
PBILM	av	8597.34 ppb	sd	53.179	%cv	0.62
ZN	av	~~12149.96 ppb~~ DIL BM 12/15/95	sd	7.429	%cv	0.06

12/15/95 03:08
37353.D

rep	1	ASILM	conc	97.10	ppb
rep	1	CD	conc	7.52	ppb
rep	1	CU	conc	572.80	ppb
rep	1	NI	conc	219.10	ppb
rep	1	PBILM	conc	4980.96	ppb
rep	1	ZN	conc	5408.93	ppb
rep	2	ASILM	conc	95.56	ppb

rep	2	CD	conc	7.63	ppb
rep	2	CU	conc	598.47	ppb
rep	2	NI	conc	215.43	ppb
rep	2	PBILM	conc	5210.04	ppb
rep	2	ZN	conc	5573.16	ppb

12/15/95 03:08 2Q SS09(DUP) RPD
37353.D

ASILM	av	96.33	ppb	28.2	sd	1.085	%cv	1.13
CD	av	7.57	ppb	18.2	sd	0.083	%cv	1.09
CU	av	585.63	ppb	12.9	sd	18.153	%cv	3.10
NI	av	217.27	ppb	15.3	sd	2.593	%cv	1.19
PBILM	av	5095.50	ppb	51.1	sd	161.979	%cv	3.18
ZN	av	~~5491.04 ppb~~	DILUTE		sd	116.132	%cv	2.11

12/15/95

12/15/95 03:11
37353.S

rep	1	ASILM	conc	2328.66	ppb
rep	1	CD	conc	57.66	ppb
rep	1	CU	conc	816.92	ppb
rep	1	NI	conc	764.94	ppb
rep	1	PBILM	conc	6209.84	ppb
rep	1	ZN	conc	6629.64	ppb
rep	2	ASILM	conc	2333.47	ppb
rep	2	CD	conc	57.95	ppb
rep	2	CU	conc	856.34	ppb
rep	2	NI	conc	766.56	ppb
rep	2	PBILM	conc	6208.87	ppb
rep	2	ZN	conc	6825.92	ppb

12/15/95 03:12 2Q SS09(SPIKE) REC
37353.S

ASILM	av	2331.06	ppb	113	sd	3.403	%cv	0.15
CD	av	57.81	ppb	103	sd	0.204	%cv	0.35
CU	av	836.63	ppb	129	sd	27.878	%cv	3.33
NI	av	765.75	ppb	116	sd	1.148	%cv	0.15
PBILM	av	6209.36	ppb	4X	sd	0.687	%cv	0.01
ZN	av	6727.78	ppb	4X	sd	138.793	%cv	2.06

See Cu postspike

12/15/95 03:16
CCV2

rep	1	ASILM	conc	517.33	ppb
rep	1	CD	conc	507.54	ppb
rep	1	CU	conc	507.40	ppb
rep	1	NI	conc	503.39	ppb
rep	1	PBILM	conc	1014.34	ppb
rep	1	ZN	conc	514.38	ppb
rep	2	ASILM	conc	517.33	ppb
rep	2	CD	conc	506.37	ppb
rep	2	CU	conc	506.01	ppb
rep	2	NI	conc	500.94	ppb
rep	2	PBILM	conc	1007.42	ppb
rep	2	ZN	conc	510.86	ppb

12/15/95 03:18
CCV2

ASILM	av	517.33	ppb	sd	0.000	%cv	0.00
CD	av	506.96	ppb	sd	0.825	%cv	0.16

CU	av	506.71 ppb	sd	0.983	%cv	0.19
NI	av	502.17 ppb	sd	1.733	%cv	0.35
PBILM	av	1010.88 ppb	sd	4.892	%cv	0.48
ZN	av	512.62 ppb	sd	2.490	%cv	0.49

12/15/95 03:21
CCB2

rep	1	ASILM	conc	0.06 ppb
rep	1	CD	conc	0.15 ppb
rep	1	CU	conc	0.19 ppb
rep	1	NI	conc	0.35 ppb
rep	1	PBILM	conc	0.29 ppb
rep	1	ZN	conc	0.89 ppb
rep	2	ASILM	conc	1.47 ppb
rep	2	CD	conc	0.07 ppb
rep	2	CU	conc	0.29 ppb
rep	2	NI	conc	0.15 ppb
rep	2	PBILM	conc	1.13 ppb
rep	2	ZN	conc	0.34 ppb

12/15/95 03:23
CCB2

ASILM	av	0.76 ppb	sd	0.998	%cv	130.5
CD	av	0.11 ppb	sd	0.061	%cv	55.96
CU	av	0.24 ppb	sd	0.068	%cv	28.73
NI	av	0.25 ppb	sd	0.141	%cv	57.54
PBILM	av	0.71 ppb	sd	0.598	%cv	84.11
ZN	av	0.61 ppb	sd	0.389	%cv	63.48

12/15/95 04:03
~~37353.L~~ CB 12/15/95
37352 5X

rep	1	ASILM	conc	13.17 ppb
rep	1	CD	conc	3.09 ppb
rep	1	CU	conc	101.45 ppb
rep	1	NI	conc	42.25 ppb
rep	1	PBILM	conc	943.03 ppb
rep	1	ZN	conc	1654.83 ppb
rep	2	ASILM	conc	13.33 ppb
rep	2	CD	conc	3.12 ppb
rep	2	CU	conc	96.39 ppb
rep	2	NI	conc	41.26 ppb
rep	2	PBILM	conc	908.66 ppb
rep	2	ZN	conc	1562.41 ppb

12/15/95 04:05 2Q SS08
CB 12/15/95 ~~37353.L~~ 37352 5X

ASILM	av	13.25 ppb	sd	0.107	%cv	0.81
CD	av	3.10 ppb	sd	0.018	%cv	0.58
CU	av	98.92 ppb	sd	3.582	%cv	3.62
NI	av	41.75 ppb	sd	0.699	%cv	1.67
PBILM	av	925.84 ppb	sd	24.305	%cv	2.63
ZN	av	1608.62 ppb	sd	65.354	%cv	4.06

12/15/95 04:05
37353 5X

rep	1	ZN	conc	1552.19 ppb
rep	2	ZN	conc	1560.65 ppb

Wrong Sample
CB 12/15/95

CWS 12/15/95

12/15/95 04:05
37353 5X

ZN	av	1556.42 ppb	sd	5.982	%cv	0.38

12/15/95 04:09
37353.L

rep	1	ASILM	conc	6.62	ppb
rep	1	CD	conc	1.10	ppb
rep	1	CU	conc	90.83	ppb
rep	1	NI	conc	35.49	ppb
rep	1	PBILM	conc	1617.57	ppb
rep	1	ZN	conc	2351.96	ppb
rep	2	ASILM	conc	12.29	ppb
rep	2	CD	conc	0.99	ppb
rep	2	CU	conc	92.13	ppb
rep	2	NI	conc	35.39	ppb
rep	2	PBILM	conc	1621.69	ppb
rep	2	ZN	conc	2357.99	ppb

12/15/95 04:11 2QSS09 (Serial Dilution)
37353.L

ASILM	av	9.46 ppb	sd	4.013	%cv	42.43
CD	av	1.04 ppb	sd	0.078	%cv	7.54
CU	av	91.48 ppb	sd	0.919	%cv	1.00
NI	av	35.44 ppb	sd	0.077	%cv	0.22
PBILM	av	1619.63 ppb	sd	2.910	%cv	0.18
ZN	av	2354.97 ppb	sd	4.264	%cv	0.18

12/15/95 04:11
37353 5X

rep	1	ZN	conc	2373.48 ppb
rep	2	ZN	conc	2352.40 ppb

12/15/95 04:11 2QSS09
37353 5X

ZN	av	2362.94 ppb	sd	14.907	%cv	0.63

12/15/95 04:13
37353.D 5X

rep	1	ZN	conc	1040.31 ppb
rep	2	ZN	conc	1041.47 ppb

12/15/95 04:13 2QSS09 (Dup) rpd = 77.7
37353.D 5X

ZN	av	1040.89 ppb	sd	0.821	%cv	0.08

12/15/95 04:14
37353.L 25X

rep	1	ZN	conc	463.65 ppb
rep	2	ZN	conc	461.58 ppb

12/15/95 04:14 2QSS09 (Serial Dilution)
37353.L 25X

ZN	av	462.62 ppb	sd	1.465	%cv	0.32

recycled paper

12/15/95 04:16
37353.A

rep	1	CU	conc	1835.52	ppb
rep	2	CU	conc	1856.51	ppb

12/15/95 04:16 Cu Spike Amt. = 1030 ppb REC = 129%
37353.A 2QSS09 (POST SPIKE)

CU	av	1846.01 ppb	sd	14.842	%cv	0.80

9502.864
12/15/95 04:20
37355

rep	1	ASILM	conc	58.95	ppb
rep	1	CD	conc	-0.19	ppb
rep	1	CU	conc	294.43	ppb
rep	1	NI	conc	167.02	ppb
rep	1	PBILM	conc	2110.71	ppb
rep	1	ZN	conc	2231.68	ppb
rep	2	ASILM	conc	58.57	ppb
rep	2	CD	conc	-0.31	ppb
rep	2	CU	conc	294.65	ppb
rep	2	NI	conc	166.79	ppb
rep	2	PBILM	conc	2108.47	ppb
rep	2	ZN	conc	2234.14	ppb

12/15/95 04:22 2Q SS10
37355

ASILM	av	58.76 ppb	sd	0.270	%cv	0.46
CD	av	-0.25 ppb	sd	0.081	%cv	32.30
CU	av	294.54 ppb	sd	0.154	%cv	0.05
NI	av	166.90 ppb	sd	0.161	%cv	0.10
PBILM	av	2109.59 ppb	sd	1.580	%cv	0.07
ZN	av	2232.91 ppb	sd	1.738	%cv	0.08

12/15/95 04:24
37356

rep	1	ASILM	conc	59.61	ppb
rep	1	CD	conc	2.14	ppb
rep	1	CU	conc	511.93	ppb
rep	1	NI	conc	150.21	ppb
rep	1	PBILM	conc	3134.74	ppb
rep	1	ZN	conc	5094.10	ppb
rep	2	ASILM	conc	60.35	ppb
rep	2	CD	conc	2.18	ppb
rep	2	CU	conc	529.76	ppb
rep	2	NI	conc	150.40	ppb
rep	2	PBILM	conc	3145.97	ppb
rep	2	ZN	conc	5173.86	ppb

12/15/95 04:25 2QSS11
37356

ASILM	av	59.98 ppb	sd	0.523	%cv	0.87
CD	av	2.16 ppb	sd	0.030	%cv	1.40
CU	av	520.85 ppb	sd	12.605	%cv	2.42
NI	av	150.30 ppb	sd	0.139	%cv	0.09
PBILM	av	3140.36 ppb	sd	7.937	%cv	0.25
ZN	av	~~5133.98 ppb~~ DIL BCM 12/15/95	sd	56.399	%cv	1.10

12/15/95 04:28
37357

rep	1	ASILM	conc	13.03	ppb
rep	1	CD	conc	-35.93	ppb
rep	1	CU	conc	894.07	ppb
rep	1	NI	conc	205.00	ppb
rep	1	PBILM	conc	5066.36	ppb
rep	1	ZN	conc	6610.85	ppb
rep	2	ASILM	conc	15.09	ppb
rep	2	CD	conc	-37.92	ppb
rep	2	CU	conc	884.27	ppb
rep	2	NI	conc	205.83	ppb
rep	2	PBILM	conc	5073.04	ppb
rep	2	ZN	conc	6554.86	ppb

12/15/95 04:29 2QSS12
37357

ASILM	av	14.06	ppb	sd	1.458	%cv	10.37
CD	av	-36.93	ppb	sd	1.408	%cv	3.81
CU	av	889.17	ppb	sd	6.929	%cv	0.78
NI	av	205.41	ppb	sd	0.582	%cv	0.28
PBILM	av	5069.70	ppb	sd	4.726	%cv	0.09
ZN	av	~~6582.86 ppb~~ DIL 8-12/15/95		sd	39.589	%cv	0.60

12/15/95 04:33
CCV3

rep	1	ASILM	conc	522.21	ppb
rep	1	CD	conc	511.06	ppb
rep	1	CU	conc	514.86	ppb
rep	1	NI	conc	507.68	ppb
rep	1	PBILM	conc	1020.11	ppb
rep	1	ZN	conc	515.25	ppb
rep	2	ASILM	conc	520.75	ppb
rep	2	CD	conc	508.30	ppb
rep	2	CU	conc	512.30	ppb
rep	2	NI	conc	504.51	ppb
rep	2	PBILM	conc	1019.20	ppb
rep	2	ZN	conc	510.80	ppb

12/15/95 04:35
CCV3

ASILM	av	521.48	ppb	sd	1.036	%cv	0.20
CD	av	509.68	ppb	sd	1.951	%cv	0.38
CU	av	513.58	ppb	sd	1.809	%cv	0.35
NI	av	506.10	ppb	sd	2.235	%cv	0.44
PBILM	av	1019.65	ppb	sd	0.638	%cv	0.06
ZN	av	513.02	ppb	sd	3.152	%cv	0.61

12/15/95 04:38
CCB3

rep	1	ASILM	conc	-0.16	ppb
rep	1	CD	conc	0.03	ppb
rep	1	CU	conc	0.51	ppb
rep	1	NI	conc	-0.42	ppb
rep	1	PBILM	conc	2.13	ppb
rep	1	ZN	conc	-0.03	ppb
rep	2	ASILM	conc	-1.54	ppb

rep	2	CD	conc	0.13	ppb
rep	2	CU	conc	0.49	ppb
rep	2	NI	conc	0.23	ppb
rep	2	PBILM	conc	-0.20	ppb
rep	2	ZN	conc	-0.40	ppb

12/15/95 04:40
CCB3

ASILM	av	-0.85	ppb	sd	0.979	%cv 115.4
CD	av	0.08	ppb	sd	0.068	%cv 83.12
CU	av	0.50	ppb	sd	0.012	%cv 2.36
NI	av	-0.10	ppb	sd	0.460	%cv 467.8
PBILM	av	0.96	ppb	sd	1.651	%cv 171.1
ZN	av	-0.22	ppb	sd	0.262	%cv 120.7

12/15/95 04:43
37358

rep	1	ASILM	conc	54.02	ppb
rep	1	CD	conc	-13.94	ppb
rep	1	CU	conc	850.46	ppb
rep	1	NI	conc	175.79	ppb
rep	1	PBILM	conc	4552.94	ppb
rep	1	ZN	conc	5093.55	ppb
rep	2	ASILM	conc	53.79	ppb
rep	2	CD	conc	-15.63	ppb
rep	2	CU	conc	866.14	ppb
rep	2	NI	conc	178.22	ppb
rep	2	PBILM	conc	4645.22	ppb
rep	2	ZN	conc	5220.76	ppb

12/15/95 04:44 2Q SS13
37358

ASILM	av	53.90	ppb	sd	0.160	%cv 0.30
CD	av	-14.79	ppb	sd	1.198	%cv 8.10
CU	av	858.30	ppb	sd	11.087	%cv 1.29
NI	av	177.00	ppb	sd	1.723	%cv 0.97
PBILM	av	4599.08	ppb	sd	65.250	%cv 1.42
ZN	av	~~5157.15 ppb~~ DIC BQm 12/15/95		sd	89.949	%cv 1.74

12/15/95 04:47
37359

rep	1	ASILM	conc	62.77	ppb
rep	1	CD	conc	29.59	ppb
rep	1	CU	conc	278.66	ppb
rep	1	NI	conc	171.76	ppb
rep	1	PBILM	conc	1241.13	ppb
rep	1	ZN	conc	2035.44	ppb
rep	2	ASILM	conc	64.90	ppb
rep	2	CD	conc	29.50	ppb
rep	2	CU	conc	278.06	ppb
rep	2	NI	conc	171.70	ppb
rep	2	PBILM	conc	1244.50	ppb
rep	2	ZN	conc	2029.92	ppb

12/15/95 04:49 2Q SS14
37359

ASILM	av	63.83	ppb	sd	1.510	%cv 2.37
CD	av	29.54	ppb	sd	0.067	%cv 0.23

CU	av	278.36 ppb	sd	0.424	%cv	0.15
NI	av	171.73 ppb	sd	0.036	%cv	0.02
PBILM	av	1242.82 ppb	sd	2.380	%cv	0.19
ZN	av	2032.68 ppb	sd	3.903	%cv	0.19

12/15/95 04:52
37360

rep	1	ASILM	conc	70.63	ppb
rep	1	CD	conc	7.78	ppb
rep	1	CU	conc	491.04	ppb
rep	1	NI	conc	191.07	ppb
rep	1	PBILM	conc	3086.24	ppb
rep	1	ZN	conc	5110.81	ppb
rep	2	ASILM	conc	72.77	ppb
rep	2	CD	conc	7.92	ppb
rep	2	CU	conc	505.70	ppb
rep	2	NI	conc	192.91	ppb
rep	2	PBILM	conc	3110.07	ppb
rep	2	ZN	conc	5156.30	ppb

12/15/95 04:52 2QSS15
37360

ASILM	av	71.70 ppb	sd	1.510	%cv	2.11
CD	av	7.85 ppb	sd	0.094	%cv	1.20
CU	av	498.37 ppb	sd	10.366	%cv	2.08
NI	av	191.99 ppb	sd	1.297	%cv	0.68
PBILM	av	3098.15 ppb	sd	16.851	%cv	0.54
ZN	av	~~5133.56 ppb~~ DIL AL 12/15/95	sd	32.161	%cv	0.63

12/15/95 04:55
37361

rep	1	ASILM	conc	80.88	ppb
rep	1	CD	conc	3.77	ppb
rep	1	CU	conc	531.90	ppb
rep	1	NI	conc	192.52	ppb
rep	1	PBILM	conc	3721.52	ppb
rep	1	ZN	conc	6737.30	ppb
rep	2	ASILM	conc	75.47	ppb
rep	2	CD	conc	3.89	ppb
rep	2	CU	conc	505.10	ppb
rep	2	NI	conc	192.58	ppb
rep	2	PBILM	conc	3558.80	ppb
rep	2	ZN	conc	6544.49	ppb

12/15/95 04:56 2QSS15D
37361

ASILM	av	78.17 ppb	sd	3.822	%cv	4.89
CD	av	3.83 ppb	sd	0.090	%cv	2.36
CU	av	518.50 ppb	sd	18.950	%cv	3.65
NI	av	192.55 ppb	sd	0.045	%cv	0.02
PBILM	av	3640.16 ppb	sd	115.059	%cv	3.16
ZN	av	~~6640.89 ppb~~ DIL AL 12/15/95	sd	136.337	%cv	2.05

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37362

rep	1	ASILM	conc	56.65	ppb
rep	1	CD	conc	9.87	ppb
rep	1	CU	conc	702.49	ppb

recycled paper

rep	1	NI	conc	155.35	ppb
rep	1	PBILM	conc	2562.15	ppb
rep	1	ZN	conc	6583.40	ppb
rep	2	ASILM	conc	56.93	ppb
rep	2	CD	conc	9.69	ppb
rep	2	CU	conc	725.48	ppb
rep	2	NI	conc	156.25	ppb
rep	2	PBILM	conc	2564.17	ppb
rep	2	ZN	conc	6725.02	ppb

12/15/95 05:01 2QSS16
37362

ASILM	av	56.79 ppb	sd	0.202	%cv	0.36
CD	av	9.78 ppb	sd	0.122	%cv	1.25
CU	av	713.98 ppb	sd	16.258	%cv	2.28
NI	av	155.80 ppb	sd	0.638	%cv	0.41
PBILM	av	2563.16 ppb	sd	1.430	%cv	0.06
ZN	av	~~6654.21 ppb~~ DIC 12/15/95	sd	100.139	%cv	1.50

12/15/95 05:04
37363

rep	1	ASILM	conc	95.60	ppb
rep	1	CD	conc	34.36	ppb
rep	1	CU	conc	711.62	ppb
rep	1	NI	conc	198.77	ppb
rep	1	PBILM	conc	4835.10	ppb
rep	1	ZN	conc	6933.87	ppb
rep	2	ASILM	conc	90.71	ppb
rep	2	CD	conc	34.21	ppb
rep	2	CU	conc	662.00	ppb
rep	2	NI	conc	198.00	ppb
rep	2	PBILM	conc	4503.09	ppb
rep	2	ZN	conc	6618.70	ppb

12/15/95 05:05 2QSS17
37363

ASILM	av	93.16 ppb	sd	3.456	%cv	3.71
CD	av	34.28 ppb	sd	0.105	%cv	0.31
CU	av	686.81 ppb	sd	35.087	%cv	5.11
NI	av	198.39 ppb	sd	0.547	%cv	0.28
PBILM	av	4669.10 ppb	sd	234.771	%cv	5.03
ZN	av	~~6776.28 ppb~~ DIC 12/15/95	sd	222.858	%cv	3.29

12/15/95 05:08
37364

rep	1	ASILM	conc	73.87	ppb
rep	1	CD	conc	12.99	ppb
rep	1	CU	conc	546.38	ppb
rep	1	NI	conc	179.56	ppb
rep	1	PBILM	conc	6779.75	ppb
rep	1	ZN	conc	5441.30	ppb
rep	2	ASILM	conc	70.02	ppb
rep	2	CD	conc	13.21	ppb
rep	2	CU	conc	599.14	ppb
rep	2	NI	conc	180.58	ppb
rep	2	PBILM	conc	7278.46	ppb
rep	2	ZN	conc	5841.26	ppb

12/15/95 05:08 2QSS18
37364

ASILM	av	71.95 ppb	sd	2.726	%cv	3.79
CD	av	13.10 ppb	sd	0.155	%cv	1.18
CU	av	572.76 ppb	sd	37.311	%cv	6.51
NI	av	180.07 ppb	sd	0.724	%cv	0.40
PBILM	av	7029.10 ppb	sd	352.643	%cv	5.02
ZN	av	~~5641.28 ppb~~ DIL B-12/15/95	sd	282.815	%cv	5.01

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37365

rep	1	ASILM	conc	60.60	ppb
rep	1	CD	conc	-1.86	ppb
rep	1	CU	conc	223.31	ppb
rep	1	NI	conc	135.71	ppb
rep	1	PBILM	conc	482.77	ppb
rep	1	ZN	conc	1473.68	ppb
rep	2	ASILM	conc	53.51	ppb
rep	2	CD	conc	-2.03	ppb
rep	2	CU	conc	226.05	ppb
rep	2	NI	conc	135.69	ppb
rep	2	PBILM	conc	488.30	ppb
rep	2	ZN	conc	1483.63	ppb

12/15/95 05:14 2QSS19
37365

ASILM	av	57.05 ppb	sd	5.015	%cv	8.79
CD	av	-1.95 ppb	sd	0.115	%cv	5.93
CU	av	224.68 ppb	sd	1.940	%cv	0.86
NI	av	135.70 ppb	sd	0.011	%cv	0.01
PBILM	av	485.53 ppb	sd	3.909	%cv	0.81
ZN	av	1478.66 ppb	sd	7.034	%cv	0.48

12/15/95 05:16
37366

rep	1	ASILM	conc	84.27	ppb
rep	1	CD	conc	18.03	ppb
rep	1	CU	conc	669.29	ppb
rep	1	NI	conc	233.51	ppb
rep	1	PBILM	conc	4035.44	ppb
rep	1	ZN	conc	6070.89	ppb
rep	2	ASILM	conc	88.17	ppb
rep	2	CD	conc	20.39	ppb
rep	2	CU	conc	653.31	ppb
rep	2	NI	conc	235.79	ppb
rep	2	PBILM	conc	3972.93	ppb
rep	2	ZN	conc	5991.51	ppb

12/15/95 05:17 2QSS20
37366

ASILM	av	86.22 ppb	sd	2.758	%cv	3.20
CD	av	19.21 ppb	sd	1.671	%cv	8.70
CU	av	661.30 ppb	sd	11.298	%cv	1.71
NI	av	234.65 ppb	sd	1.613	%cv	0.69
PBILM	av	4004.18 ppb	sd	44.200	%cv	1.10
ZN	av	~~6031.20 ppb~~ DIL B-12/15/95	sd	56.128	%cv	0.93

12/15/95 05:21
37367

rep	1	ASILM	conc	116.87	ppb
rep	1	CD	conc	-7.41	ppb
rep	1	CU	conc	401.61	ppb
rep	1	NI	conc	227.34	ppb
rep	1	PBILM	conc	1339.15	ppb
rep	1	ZN	conc	2448.00	ppb
rep	2	ASILM	conc	112.15	ppb
rep	2	CD	conc	-7.55	ppb
rep	2	CU	conc	400.94	ppb
rep	2	NI	conc	227.79	ppb
rep	2	PBILM	conc	1336.02	ppb
rep	2	ZN	conc	2441.53	ppb

12/15/95 05:23 4QSS03
37367

ASILM	av	114.51 ppb	sd	3.341	%cv	2.92
CD	av	-7.48 ppb	sd	0.102	%cv	1.36
CU	av	401.28 ppb	sd	0.472	%cv	0.12
NI	av	227.57 ppb	sd	0.315	%cv	0.14
PBILM	av	1337.58 ppb	sd	2.214	%cv	0.17
ZN	av	2444.77 ppb	sd	4.573	%cv	0.19

12/15/95 05:26
CCV4

rep	1	ASILM	conc	522.11	ppb
rep	1	CD	conc	517.01	ppb
rep	1	CU	conc	522.67	ppb
rep	1	NI	conc	512.10	ppb
rep	1	PBILM	conc	1030.85	ppb
rep	1	ZN	conc	519.39	ppb
rep	2	ASILM	conc	517.95	ppb
rep	2	CD	conc	511.46	ppb
rep	2	CU	conc	518.66	ppb
rep	2	NI	conc	506.90	ppb
rep	2	PBILM	conc	1017.99	ppb
rep	2	ZN	conc	514.23	ppb

12/15/95 05:28
CCV4

ASILM	av	520.03 ppb	sd	2.939	%cv	0.57
CD	av	514.23 ppb	sd	3.918	%cv	0.76
CU	av	520.67 ppb	sd	2.835	%cv	0.54
NI	av	509.50 ppb	sd	3.677	%cv	0.72
PBILM	av	1024.42 ppb	sd	9.092	%cv	0.89
ZN	av	516.81 ppb	sd	3.654	%cv	0.71

12/15/95 05:31
CCB4

rep	1	ASILM	conc	-1.41	ppb
rep	1	CD	conc	0.04	ppb
rep	1	CU	conc	0.60	ppb
rep	1	NI	conc	0.40	ppb
rep	1	PBILM	conc	1.64	ppb
rep	1	ZN	conc	1.37	ppb
rep	2	ASILM	conc	-1.63	ppb

rep	2	CD	conc	0.15	ppb
rep	2	CU	conc	0.49	ppb
rep	2	NI	conc	0.52	ppb
rep	2	PBILM	conc	-0.63	ppb
rep	2	ZN	conc	0.94	ppb

12/15/95 05:33
CCB4

ASILM	av	-1.52 ppb	sd	0.150	%cv	9.86
CD	av	0.09 ppb	sd	0.081	%cv	85.99
CU	av	0.54 ppb	sd	0.077	%cv	14.17
NI	av	0.46 ppb	sd	0.080	%cv	17.44
PBILM	av	0.50 ppb	sd	1.607	%cv	319.5
ZN	av	1.16 ppb	sd	0.305	%cv	26.35

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37368

rep	1	ASILM	conc	150.42	ppb
rep	1	CD	conc	15.50	ppb
rep	1	CU	conc	1096.13	ppb
rep	1	NI	conc	1831.38	ppb
rep	1	PBILM	conc	13277.19	ppb
rep	1	ZN	conc	8483.43	ppb
rep	2	ASILM	conc	151.82	ppb
rep	2	CD	conc	13.53	ppb
rep	2	CU	conc	1102.24	ppb
rep	2	NI	conc	1845.01	ppb
rep	2	PBILM	conc	13359.27	ppb
rep	2	ZN	conc	8607.88	ppb

12/15/95 05:49 4Q SS01
37368

ASILM	av	151.12 ppb	sd	0.991	%cv	0.66
CD	av	14.51 ppb	sd	1.395	%cv	9.61
CU	av	1099.19 ppb	sd	4.315	%cv	0.39
NI	av	1838.19 ppb	sd	9.637	%cv	0.52
PBILM	av	~~13518.23 ppb~~ DIL	sd	58.037	%cv	0.44
ZN	av	~~8545.66 ppb~~ BLW 12/15/95	sd	87.998	%cv	1.03

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37369

rep	1	ASILM	conc	94.06	ppb
rep	1	CD	conc	20.04	ppb
rep	1	CU	conc	561.23	ppb
rep	1	NI	conc	181.58	ppb
rep	1	PBILM	conc	30012.42	ppb
rep	1	ZN	conc	7262.16	ppb
rep	2	ASILM	conc	97.33	ppb
rep	2	CD	conc	20.32	ppb
rep	2	CU	conc	570.37	ppb
rep	2	NI	conc	182.75	ppb
rep	2	PBILM	conc	30135.85	ppb
rep	2	ZN	conc	7290.82	ppb

12/15/95 05:52 4Q SS02
37369

ASILM	av	95.69 ppb	sd	2.313	%cv	2.42
CD	av	20.18 ppb	sd	0.202	%cv	1.00

CU	av	565.80 ppb		sd	6.464	%cv	1.14
NI	av	182.17 ppb		sd	0.822	%cv	0.45
PBILM	av	~~30074.13 ppb~~	DIL	sd	87.277	%cv	0.29
ZN	av	~~7276.49 ppb~~	12/15/95	sd	20.265	%cv	0.28

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37370

rep	1	ASILM	conc	86.25	ppb
rep	1	CD	conc	34.38	ppb
rep	1	CU	conc	1035.13	ppb
rep	1	NI	conc	172.71	ppb
rep	1	PBILM	conc	8063.09	ppb
rep	1	ZN	conc	9920.57	ppb
rep	2	ASILM	conc	85.81	ppb
rep	2	CD	conc	34.39	ppb
rep	2	CU	conc	1081.01	ppb
rep	2	NI	conc	173.72	ppb
rep	2	PBILM	conc	8325.87	ppb
rep	2	ZN	conc	10235.25	ppb

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37370

4QSS04

ASILM	av	86.03 ppb		sd	0.311	%cv	0.36
CD	av	34.38 ppb		sd	0.009	%cv	0.03
CU	av	1058.07 ppb		sd	32.443	%cv	3.07
NI	av	173.22 ppb		sd	0.715	%cv	0.41
PBILM	av	8194.48 ppb		sd	185.813	%cv	2.27
ZN	av	~~10077.91 ppb~~	DIL 12/15/95	sd	222.512	%cv	2.21

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37371

rep	1	ASILM	conc	39.44	ppb
rep	1	CD	conc	21.50	ppb
rep	1	CU	conc	967.63	ppb
rep	1	NI	conc	141.38	ppb
rep	1	PBILM	conc	3323.68	ppb
rep	1	ZN	conc	5455.77	ppb
rep	2	ASILM	conc	39.67	ppb
rep	2	CD	conc	21.37	ppb
rep	2	CU	conc	973.09	ppb
rep	2	NI	conc	141.36	ppb
rep	2	PBILM	conc	3315.39	ppb
rep	2	ZN	conc	5496.82	ppb

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37371

4QSS05

ASILM	av	39.56 ppb		sd	0.162	%cv	0.41
CD	av	21.43 ppb		sd	0.090	%cv	0.42
CU	av	970.36 ppb		sd	3.864	%cv	0.40
NI	av	141.37 ppb		sd	0.012	%cv	0.01
PBILM	av	3319.53 ppb		sd	5.862	%cv	0.18
ZN	av	~~5476.29 ppb~~	DIL 12/15/95	sd	29.026	%cv	0.53

12/15/95 06:02
37371.D

rep	1	ASILM	conc	40.49	ppb
rep	1	CD	conc	20.94	ppb
rep	1	CU	conc	863.12	ppb

rep	1	NI	conc	161.97	ppb
rep	1	PBILM	conc	3968.66	ppb
rep	1	ZN	conc	6718.43	ppb
rep	2	ASILM	conc	41.71	ppb
rep	2	CD	conc	21.14	ppb
rep	2	CU	conc	838.56	ppb
rep	2	NI	conc	162.72	ppb
rep	2	PBILM	conc	3898.20	ppb
rep	2	ZN	conc	6579.24	ppb

12/15/95 06:03
37371.D

				RPD				
ASILM	av	41.10	ppb	3.88	sd	0.866	%cv	2.11
CD	av	21.04	ppb	1.84	sd	0.140	%cv	0.67
CU	av	850.84	ppb	132	sd	17.366	%cv	2.04
NI	av	162.35	ppb	13.8	sd	0.533	%cv	0.33
PBILM	av	3933.43	ppb	16.9	sd	49.822	%cv	1.27
ZN	av	~~6648.84~~	ppb DL	12/15/95	sd	98.419	%cv	1.48

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37371.S

rep	1	ASILM	conc	2428.69	ppb
rep	1	CD	conc	75.16	ppb
rep	1	CU	conc	1194.89	ppb
rep	1	NI	conc	726.64	ppb
rep	1	PBILM	conc	4343.98	ppb
rep	1	ZN	conc	6317.73	ppb
rep	2	ASILM	conc	2430.90	ppb
rep	2	CD	conc	74.88	ppb
rep	2	CU	conc	1239.76	ppb
rep	2	NI	conc	727.86	ppb
rep	2	PBILM	conc	4353.41	ppb
rep	2	ZN	conc	6495.00	ppb

12/15/95 06:06
37371.S

				REC				
ASILM	av	2429.80	ppb	120	sd	1.563	%cv	0.06
CD	av	75.02	ppb	107	sd	0.198	%cv	0.26
CU	av	1217.32	ppb	98.8	sd	31.724	%cv	2.61
NI	av	727.25	ppb	117	sd	0.865	%cv	0.12
PBILM	av	4348.69	ppb	4x	sd	6.670	%cv	0.15
ZN	av	6406.37	ppb	4x	sd	125.344	%cv	1.96

12/15/95 06:10
37371.L

rep	1	ASILM	conc	2.91	ppb
rep	1	CD	conc	3.82	ppb
rep	1	CU	conc	161.65	ppb
rep	1	NI	conc	26.62	ppb
rep	1	PBILM	conc	627.67	ppb
rep	1	ZN	conc	1013.49	ppb
rep	2	ASILM	conc	7.77	ppb
rep	2	CD	conc	4.00	ppb
rep	2	CU	conc	162.86	ppb
rep	2	NI	conc	26.73	ppb
rep	2	PBILM	conc	634.10	ppb
rep	2	ZN	conc	1015.46	ppb

12/15/95 06:12
37371.L

ASILM	av	5.34 ppb	sd	3.437 %cv	64.41
CD	av	3.91 ppb	sd	0.122 %cv	3.12
CU	av	162.26 ppb	sd	0.855 %cv	0.53
NI	av	26.67 ppb	sd	0.077 %cv	0.29
PBILM	av	630.89 ppb	sd	4.545 %cv	0.72
ZN	av	1014.48 ppb	sd	1.393 %cv	0.14

12/15/95 06:14
37356 5X

rep	1	ZN	conc	986.94 ppb
rep	2	ZN	conc	967.91 ppb

12/15/95 06:14 2QSS11
37356 5X

ZN	av	977.43 ppb	sd	13.454 %cv	1.38

12/15/95 06:15
37357 5X

rep	1	ZN	conc	1314.13 ppb
rep	2	ZN	conc	1306.24 ppb

12/15/95 06:15 2QSS12
37357 5X

ZN	av	1310.19 ppb	sd	5.578 %cv	0.43

12/15/95 06:17
37358 5X

rep	1	ZN	conc	1039.69 ppb
rep	2	ZN	conc	1010.11 ppb

12/15/95 06:17 2QSS13
37358 5X

ZN	av	1024.90 ppb	sd	20.917 %cv	2.04

12/15/95 06:21
CCV5

rep	1	ASILM	conc	520.94 ppb
rep	1	CD	conc	511.50 ppb
rep	1	CU	conc	522.12 ppb
rep	1	NI	conc	509.15 ppb
rep	1	PBILM	conc	1018.55 ppb
rep	1	ZN	conc	513.37 ppb
rep	2	ASILM	conc	520.21 ppb
rep	2	CD	conc	509.67 ppb
rep	2	CU	conc	520.52 ppb
rep	2	NI	conc	506.66 ppb
rep	2	PBILM	conc	1018.43 ppb
rep	2	ZN	conc	510.64 ppb

12/15/95 06:22
CCV5

ASILM	av	520.58 ppb	sd	0.518 %cv	0.10
CD	av	510.58 ppb	sd	1.293 %cv	0.25

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CU	av	521.32 ppb	sd	1.129	%cv	0.22
NI	av	507.91 ppb	sd	1.767	%cv	0.35
PBILM	av	1018.49 ppb	sd	0.081	%cv	0.01
ZN	av	512.00 ppb	sd	1.933	%cv	0.38

12/15/95 06:26
CCB5

rep	1	ASILM	conc	-0.47	ppb
rep	1	CD	conc	0.10	ppb
rep	1	CU	conc	0.54	ppb
rep	1	NI	conc	0.42	ppb
rep	1	PBILM	conc	2.22	ppb
rep	1	ZN	conc	-0.03	ppb
rep	2	ASILM	conc	-1.27	ppb
rep	2	CD	conc	0.14	ppb
rep	2	CU	conc	0.66	ppb
rep	2	NI	conc	0.64	ppb
rep	2	PBILM	conc	1.72	ppb
rep	2	ZN	conc	-0.08	ppb

12/15/95 06:28
CCB5

ASILM	av	-0.87 ppb	sd	0.570	%cv	65.40
CD	av	0.12 ppb	sd	0.032	%cv	26.98
CU	av	0.60 ppb	sd	0.083	%cv	13.76
NI	av	0.53 ppb	sd	0.159	%cv	30.03
PBILM	av	1.97 ppb	sd	0.356	%cv	18.07
ZN	av	-0.05 ppb	sd	0.035	%cv	68.89

12/15/95 06:30
37360 5X

rep	1	ZN	conc	981.18	ppb
rep	2	ZN	conc	985.86	ppb

12/15/95 06:30 2QSS15
37360 5X

ZN	av	983.52 ppb	sd	3.309	%cv	0.34

12/15/95 06:31
37361 5X

rep	1	ZN	conc	1274.76	ppb
rep	2	ZN	conc	1271.91	ppb

12/15/95 06:31 2QSS15D
37361 5X

ZN	av	1273.33 ppb	sd	2.009	%cv	0.16

12/15/95 06:33
37362 5X

rep	1	ZN	conc	1262.04	ppb
rep	2	ZN	conc	1276.82	ppb

12/15/95 06:33 2QSS16
37362 5X

ZN	av	1269.43 ppb	sd	10.451	%cv	0.82

recycled paper

12/15/95 06:35
37363 5X

	rep	1	ZN	conc	1283.95 ppb
	rep	2	ZN	conc	1311.27 ppb

12/15/95 06:35 2QSS17
37363 5X

ZN	av	1297.61 ppb	sd	19.317	%cv	1.49

12/15/95 06:36
37364 5X

	rep	1	ZN	conc	1056.70 ppb
	rep	2	ZN	conc	1070.25 ppb

12/15/95 06:36 2QSS18
37364 5X

ZN	av	1063.47 ppb	sd	9.577	%cv	0.90

12/15/95 06:38
37366 5X

	rep	1	ZN	conc	1051.67 ppb
	rep	2	ZN	conc	1043.43 ppb

12/15/95 06:38 2QSS20
37366 5X

ZN	av	1047.55 ppb	sd	5.825	%cv	0.56

12/15/95 06:40
37368 10X

	rep	1	PBILM	conc	1292.61 ppb
	rep	1	ZN	conc	827.27 ppb
	rep	2	PBILM	conc	1294.56 ppb
	rep	2	ZN	conc	826.55 ppb

12/15/95 06:41 4QSS01
37368 10X

PBILM	av	1293.58 ppb	sd	1.379	%cv	0.11
ZN	av	826.91 ppb	sd	0.510	%cv	0.06

12/15/95 06:43
37369 10X

	rep	1	PBILM	conc	2993.69 ppb
	rep	1	ZN	conc	719.20 ppb
	rep	2	PBILM	conc	3004.00 ppb
	rep	2	ZN	conc	721.91 ppb

12/15/95 06:44 4QSS02
37369 10X

PBILM	av	2998.84 ppb	sd	7.290	%cv	0.24
ZN	av	720.55 ppb	sd	1.919	%cv	0.27

12/15/95 06:47
37370 10X

	rep	1	ZN	conc	1061.76 ppb

	rep	2	ZN	conc	1071.24	ppb	

12/15/95 06:47 4QS504
37370 10X

ZN	av	1066.50	ppb	sd	6.701	%cv	0.63

12/15/95 06:51
CCV6

rep	1	ASILM	conc	522.15	ppb
rep	1	CD	conc	515.58	ppb
rep	1	CU	conc	528.84	ppb
rep	1	NI	conc	511.00	ppb
rep	1	PBILM	conc	1022.79	ppb
rep	1	ZN	conc	515.57	ppb
rep	2	ASILM	conc	520.18	ppb
rep	2	CD	conc	514.22	ppb
rep	2	CU	conc	527.67	ppb
rep	2	NI	conc	508.21	ppb
rep	2	PBILM	conc	1016.35	ppb
rep	2	ZN	conc	512.90	ppb

12/15/95 06:52
CCV6

ASILM	av	521.16	ppb	sd	1.391	%cv	0.27
CD	av	514.90	ppb	sd	0.962	%cv	0.19
CU	av	528.26	ppb	sd	0.828	%cv	0.16
NI	av	509.60	ppb	sd	1.971	%cv	0.39
PBILM	av	1019.57	ppb	sd	4.551	%cv	0.45
ZN	av	514.24	ppb	sd	1.888	%cv	0.37

12/15/95 06:56
CCB6

rep	1	ASILM	conc	-0.82	ppb
rep	1	CD	conc	0.04	ppb
rep	1	CU	conc	1.14	ppb
rep	1	NI	conc	0.88	ppb
rep	1	PBILM	conc	1.95	ppb
rep	1	ZN	conc	0.21	ppb
rep	2	ASILM	conc	-1.82	ppb
rep	2	CD	conc	0.10	ppb
rep	2	CU	conc	1.28	ppb
rep	2	NI	conc	0.99	ppb
rep	2	PBILM	conc	1.78	ppb
rep	2	ZN	conc	-0.03	ppb

12/15/95 06:58
CCB6

ASILM	av	-1.32	ppb	sd	0.704	%cv	53.39
CD	av	0.07	ppb	sd	0.045	%cv	63.59
CU	av	1.21	ppb	sd	0.099	%cv	8.20
NI	av	0.93	ppb	sd	0.080	%cv	8.59
PBILM	av	1.86	ppb	sd	0.119	%cv	6.36
ZN	av	0.09	ppb	sd	0.168	%cv	190.0

12/15/95 06:59
37371 5X

rep	1	ZN	conc	980.94	ppb

```
                rep   2  ZN          conc     972.87 ppb

12/15/95 07:00
37371 5X
    ZN          av    976.91 ppb          sd      5.703 %cv    0.58

12/15/95 07:01
37371.D 5X
                rep   1  ZN          conc    1207.86 ppb

                rep   2  ZN          conc    1185.60 ppb

12/15/95 07:01
37371.D 5X
    ZN          av   1196.73 ppb          sd     15.742 %cv    1.32

12/15/95 07:03
37371.L 25X
                rep   1  ZN          conc     200.28 ppb

                rep   2  ZN          conc     200.19 ppb

12/15/95 07:04
37371.L 25X
    ZN          av    200.24 ppb          sd      0.060 %cv    0.03

12/15/95 07:07
ICSAF
                rep   1  ASILM       conc       7.12 ppb
                rep   1  CD          conc     -14.40 ppb
                rep   1  CU          conc       2.79 ppb
                rep   1  NI          conc      11.07 ppb
                rep   1  PBILM       conc       5.85 ppb
                rep   1  ZN          conc      24.86 ppb

                rep   2  ASILM       conc       3.57 ppb
                rep   2  CD          conc     -14.52 ppb
                rep   2  CU          conc       2.97 ppb
                rep   2  NI          conc      10.69 ppb
                rep   2  PBILM       conc       5.63 ppb
                rep   2  ZN          conc      24.77 ppb

12/15/95 07:08
ICSAF
    ASILM       av      5.34 ppb          sd      2.513 %cv   47.08
    CD          av    -14.46 ppb          sd      0.080 %cv    0.56
    CU          av      2.88 ppb          sd      0.125 %cv    4.33
    NI          av     10.88 ppb          sd      0.274 %cv    2.52
    PBILM       av      5.74 ppb          sd      0.159 %cv    2.77
    ZN          av     24.82 ppb          sd      0.063 %cv    0.25

12/15/95 07:11
ICSABF
                rep   1  ASILM       conc       3.92 ppb
                rep   1  CD          conc     859.28 ppb
                rep   1  CU          conc     508.34 ppb
                rep   1  NI          conc     868.88 ppb
                rep   1  PBILM       conc     889.15 ppb
                rep   1  ZN          conc     927.98 ppb
```

4Q SS06

RPD= 20.2%

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ecology and environment

rep	2	ASILM	conc	3.50	ppb
rep	2	CD	conc	863.18	ppb
rep	2	CU	conc	512.41	ppb
rep	2	NI	conc	869.75	ppb
rep	2	PBILM	conc	888.89	ppb
rep	2	ZN	conc	932.29	ppb

12/15/95 07:13
ICSABF

ASILM	av	3.71	ppb	sd	0.304	%cv	8.19
CD	av	861.23	ppb	sd	2.757	%cv	0.32
CU	av	510.37	ppb	sd	2.881	%cv	0.56
NI	av	869.32	ppb	sd	0.619	%cv	0.07
PBILM	av	889.02	ppb	sd	0.183	%cv	0.02
ZN	av	930.14	ppb	sd	3.049	%cv	0.33

12/15/95 07:16
CRIF

rep	1	ASILM	conc	19.77	ppb
rep	1	CD	conc	10.22	ppb
rep	1	CU	conc	55.71	ppb
rep	1	NI	conc	86.79	ppb
rep	1	PBILM	conc	6.66	ppb
rep	1	ZN	conc	42.90	ppb
rep	2	ASILM	conc	18.82	ppb
rep	2	CD	conc	10.15	ppb
rep	2	CU	conc	55.83	ppb
rep	2	NI	conc	86.74	ppb
rep	2	PBILM	conc	8.30	ppb
rep	2	ZN	conc	42.55	ppb

12/15/95 07:18
CRIF

ASILM	av	19.29	ppb	sd	0.675	%cv	3.50
CD	av	10.18	ppb	sd	0.051	%cv	0.50
CU	av	55.77	ppb	sd	0.090	%cv	0.16
NI	av	86.76	ppb	sd	0.035	%cv	0.04
PBILM	av	7.48	ppb	sd	1.164	%cv	15.57
ZN	av	42.72	ppb	sd	0.245	%cv	0.57

12/15/95 07:21
CCV7

rep	1	ASILM	conc	524.58	ppb
rep	1	CD	conc	515.36	ppb
rep	1	CU	conc	528.75	ppb
rep	1	NI	conc	508.94	ppb
rep	1	PBILM	conc	1018.61	ppb
rep	1	ZN	conc	514.94	ppb
rep	2	ASILM	conc	517.20	ppb
rep	2	CD	conc	513.02	ppb
rep	2	CU	conc	526.89	ppb
rep	2	NI	conc	507.78	ppb
rep	2	PBILM	conc	1015.09	ppb
rep	2	ZN	conc	512.88	ppb

12/15/95 07:23
CCV7

ASILM	av	520.89	ppb	sd	5.218	%cv	1.00

CD	av	514.19 ppb	sd	1.654	%cv	0.32
CU	av	527.82 ppb	sd	1.315	%cv	0.25
NI	av	508.36 ppb	sd	0.824	%cv	0.16
PBILM	av	1016.85 ppb	sd	2.487	%cv	0.24
ZN	av	513.91 ppb	sd	1.453	%cv	0.28

12/15/95 07:27
CCB7

rep	1	ASILM	conc	-0.99	ppb
rep	1	CD	conc	0.18	ppb
rep	1	CU	conc	1.44	ppb
rep	1	NI	conc	1.45	ppb
rep	1	PBILM	conc	2.71	ppb
rep	1	ZN	conc	-0.15	ppb
rep	2	ASILM	conc	1.49	ppb
rep	2	CD	conc	0.15	ppb
rep	2	CU	conc	1.43	ppb
rep	2	NI	conc	0.80	ppb
rep	2	PBILM	conc	2.89	ppb
rep	2	ZN	conc	-0.28	ppb

12/15/95 07:28
CCB7

ASILM	av	0.25 ppb	sd	1.752	%cv	700.4
CD	av	0.16 ppb	sd	0.019	%cv	11.69
CU	av	1.44 ppb	sd	0.003	%cv	0.24
NI	av	1.12 ppb	sd	0.460	%cv	41.08
PBILM	av	2.80 ppb	sd	0.126	%cv	4.52
ZN	av	-0.22 ppb	sd	0.095	%cv	43.61

Test Performed: METALS DIGESTION

Date: 12.13.95

Work Performed by: G Pleuthner

Job Number	ID Number	pH (1 - 14)	Color	Clarity	Texture	Artifacts	Digestion Code (ICP)	Digestion Code (HGA)	Initial Weight or Volume	Final Weight or Volume	Color (Final)	Clarity (Final)
9502.852	37296.01				M	1,2	21		1.00g	100ml	Y	C
	37297.01											
	37298.01											
	37299.01											
	37300.01											
	37301.01											
	37302.01											
	37303.01											
	37304.01											
	37305.01											
	37306.01											
	37307.01											
	37308.01											
	37309.01											
	37310.01											
	37311.01											
	37312.01											
	37313.01											
	37314.01											
	37315.01											
	37315.01 D											
	37315.01 A SP											
9502.862	37351.01											
	37352.01											
	37353.01											
	37353.01 D											
	37353.01 A SP.											
9502.876	37460.01				CY							
9502.852	PBS 121				—	—					a	c

SDG #1

SDG #2

2QSS07
2QSS08
2QSS09
2QSS09 (DUP)
2QSS09 (SPIKE)

Comments: 877

BALANCE MODEL S400

CALIBRATION SERIAL # 19645

0.50g = 0.50g 5.00g = 5.00g

1.00g = 1.00g 10.00g = 10.00g

2.00g = 2.00

Circle one reference

REFERENCE	METHOD		
CLP	---------- SOP # 10		
SW846	3050 (SOLIDS)	3010 (ICP-WATER)	3020 (FURNACE-WATER)
OTHER	A 1M ICP SPIKE 1021.22.1, 1021.23.1		

Approved by: _____ Date: 12/14/92

80

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ecology and environment 0131191

Test Performed: METALS DIGESTION

Date: 12.13.95.

Work Performed by: G. Pewtney

Job Number	ID Number	pH (1 - 14)	Color	Clarity	Texture	Artifacts	Digestion Code (ICP)	Digestion Code (HGA)	Initial Weight or Volume	Final Weight or Volume	Color (Final)	Clarity (Final)
9502.852	SLCS 121						21		100 ml	100 ml	C1	C
9502.862	PBS 122						↓		100 ml	100 ml	↓	↓
↓	SLCS 122						↓		100 ml	100 ml	↓	↓
852+862	12/14/95											

— Gordon and LCS indicate blank after the 20th sample.

SDG #1 ie. Job # 9502.852 has blk #122

SDG #2 Job # 9502.862 has blk 1,864 #123

SDG #3 Job # 9502.876 has blk #121

Comments:

BALANCE MODEL Fisher 400

CALIBRATION SERIAL # 19645

0.50g = 0.50g 5.00=5.00

1.00g = 1.00g 10.00=10.00

2.00g = 2.00g

Circle one reference

REFERENCE	METHOD		
CLP	---------- SOP # 10		
SW846	3050 (SOLIDS)	3010 (ICP-WATER)	3020 (FURNACE-WATER)
OTHER			

Approved by: Date: 12/14/95

recycled paper

ecology and environment 0131191

Test Performed: METALS DIGESTION

Date: 12.13.95

Work Performed by: C Pleasant

Job Number	ID Number	pH (1 - 14)	Color	Clarity	Texture	Artifacts	Digestion Code (ICP)	Digestion Code (HGA)	Initial Weight or Volume	Final Weight or Volume	Color (Final)	Clarity (Final)	
9502.064	37355.01				M	1,2	21		1.00g	100ml	C1	C	2QSS10
	37356.01												2QSS11
	37357.01												2QSS12
	37358.01												2QSS13
	37359.01												2QSS14
	37360.01												2QSS15
	37361.01												2QSS15D
	37362.01												2QSS16
	37363.01												2QSS17
	37364.01												2QSS18
	37365.01												2QSS19
	37366.01												2QSS20
	37367.01												4QSS03
	37368.01												4QSS01
	37369.01												4QSS02
	37370.01												4QSS04
	37371.01												4QSS05 KB 12/18/95
	37371.01 1)												~~4QSS05 (DUP)~~
	37371.01 ~~A~~ SP												~~4QSS05 (SPIKE)~~
	PBS 123												PBS1
	SLCS 123								100ml				LCSS1

SOG #2

Comments:

BALANCE MODEL Fisher 5400

CALIBRATION SERIAL # 19645

0.50g = 0.50g

1.00g = 1.00g

2.00g = 2.00g

5.00g = 5.00g

10.00g = 10.00g

Circle one reference

REFERENCE	METHOD		
CLP	SOP # 10		
SW846	3050 (SOLIDS)	3010 (ICP-WATER)	3020 (FURNACE-WATER)
OTHER	~~A~~ 1ml ICPSPIKE 1021.22.1, 1021.23.1		

Approved by: PM Date: 12/14/95

recycled paper ecology and environment 0131191

METALS DIGESTION/EXTRACTION CODES

01 E.P. TOX Extraction Metals
02 E.P. TOX Extraction Organics
03 E.P. TOX Extraction Miscellaneous
04 E.P. TOX Digestion ICP
05 TCLP Extraction Metals
06 TCLP Extraction Organics
07 TCLP ZHE Extraction Purgeables
08 TCLP Digestion ICP
09 California Wet Test Extraction Metals
10 California Wet Test Extraction Organics
11 California Wet Test Digestion/ICP
12 Metals Available ICP
13 E.P. TOX Cr +6
14 MMWEP Extraction Metals
15 MMWEP Extraction Wet Chem.
16 MMWEP Digestion ICP
17 MMWEP Digestion Furnace
18 Cal. Wet Test Cr +6
19 TCLP Cr +6
20
21 ICP/Flame
22 Furnace
23 CR +6
24 Total Recoverable ICP
25 Total Recoverable Furnace
26 Soluble Metals ICP
27 Soluble Metals Furnace
28 Metals on Air Filters
29 Miscellaneous

COLOR CODES

R Red
O Orange
G Green
Y Yellow
B Blue
BR Brown
BK Black
CL Clear

CLARITY CODES (LIQUID)

CL Cloudy
C Clear

TEXTURE CODES (SOLID)

H Homogeneous
M Mixture
F Fine Soil
G Granular Soil
SL Sludge
CY Clay
SD Sand

COMMENTS

1 Reactive
2 Effervescent
3 Phase Change
4 Precipitation
5 Other (Explain)

ARTIFACTS

1 Rocks
2 Sticks, Leaves
3 Shavings
4 Other (Explain)

From Page No. ___

Test Performed: % SOLID
Method Number:
Date: 12/13/95
Work Performed By: D.E. JNIS

TIME IN : 1700 TEMP °C = 100
TIME OUT : 2100 TEMP °C = 108

Job No.	ID No.	DISH #	DISH WEIGHT	INITIAL WEIGHT (TARED)	FINAL WEIGHT	% SOLID	
9502.852	37296.01		0.99g	5.45	5.88	89.7	
	37297.01			6.13	6.44	88.9	
	37298.01			5.69	5.69	82.6	
	37299.01			5.64	6.05	89.7	
	37300.01			5.67	5.75	84.0	
	37300.01 DUP			5.53	5.66	84.4	RPD = 0.5%
	37301.01			5.69	6.13	90.3	
	37302.01			5.64	5.69	83.3	
	37303.01			5.75	5.73	82.4	
	37304.01			5.51	5.43	80.6	
	37305.01			5.95	6.16	86.9	
	37306.01			5.45	5.45	81.8	
	37307.01			6.23	6.33	85.7	
	37308.01			5.65	5.39	77.9	
	37309.01			5.81	5.75	81.9	
	37310.01			5.90	5.70	79.8	
	37311.01			5.50	5.44	80.9	
	37311.01 DUP			5.50	5.48	81.6	RPD = 0.9%
	37312.01			5.55	5.52	81.6	
	37313.01			5.70	6.00	87.9	
	37314.01			5.82	5.05	69.8	
	37315.01			5.92	5.90	82.9	
9502.862	37351.01			5.87	6.11	87.2	
	37352.01			5.50	5.77	86.9	
	37353.01		0.99g	5.73	5.56	79.8	

FISHER BALANCE MODEL S-400 S/N 19645

CAL WEIGHT	MEASURED
0.50	0.50
1.00	1.00
2.00	2.00
5.00	5.00
10.00	10.00

To Page No. ___

Witnessed & Understood by me, KAN

Date 12/15/95

Invented by

Recorded by

Date

Project No.
Book No. 1061 TITLE

Entered 12/15/95 KR

From Page No.

Test Performed: STSMET
Method Number:
Date: 12-14-95
Work Performed By: R. HUSTED

\$ TIME IN: 20:00
TEMP: 102°C RLH 12/14/95
TIME OUT: 22:45
TEMP: 102°C

Scale: Mettler PM300 #I17466
1.0g = 1.00
2.0g = 2.00
5.0g = 5.00

Job No.	ID No.	DISH #	DISH WT (g)	INITIAL WT TARED (g)	FINAL WT (g)	% SOLIDS	
502.862	37351.01						
RLH 12/14/95	37352.01	See	pg 52	RLH 12/14/95	RLH 12-14-95		
	37353.01						
	37353.01 DUP						
502.864	37355.01	1	0.98	6.83	7.39	93.9	
	37356.01	2	0.98	7.71	7.52	84.8	
	37357.01	3	0.99	6.37	6.66	89.0	
	37358.01	4	0.99	7.61	7.71	88.3	
	37359.01	5	0.99	5.80	5.68	80.9	
	37360.01	6	0.98	6.71	6.31	79.4	
	37361.01	7	0.98	6.27	5.94	79.1	
	37362.01	8	0.99	6.83	6.64	82.7	
	37363.01	9	0.99	5.89	5.72	80.3	
	37364.01	10	0.99	6.66	6.34	80.3	
	37364.01 DUP	11	0.98	6.39	6.06	79.5	1.0 %RPD
	37365.01	12	0.98	6.59	6.47	83.3	
	37366.01	13	0.99	6.21	6.19	83.7	
	37367.01	14	0.98	6.39	6.63	88.4	
	37368.01	15	0.99	7.58	7.21	82.1	
	37369.01	16	0.99	6.10	5.97	81.6	
	37370.01	17	0.98	8.23	8.17	87.4	
	37371.01	18	0.99	6.66	4.27	49.2	
502.833	37201.01	19	1.00	7.89	8.61	96.5	
	37202.01	20	0.98	7.34	8.01	95.8	
	37202.01 DUP	21	0.98	6.43	7.16	96.1	0.3 %RPD

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by RLH	12/14/95