99025

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III
CENTRAL REGIONAL LABORATORY
201 DEFENSE HIGHWAY
SUITE 200
ANNAPOLIS, MARYLAND 21401

QUALITY
ASSURANCE
BRANCH

DATE : November 28, 1994

SUBJECT: Region III Data QA Review

FROM : Susanne M. Stevens, Acting
Region III ESAT RPO (3ES30)

TO : Harry Harbold
Regional Project Manager (3HW20)

Attached is the inorganic data validation report for the Boarhead Farms Site (Case 22732) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

If you have any questions regarding this review, please call me at (410) 573-6832.

Attachment

cc: Julie Lovett, Ch_2M Hill

TID File: 03941109

AR305378

Printed on Recycled Paper

Lockheed
Environmental Systems & Technologies Co.

Environmental Services Assistance Teams
Region 3
1419 Forest Drive, Suite 104
Annapolis, Maryland 21403

Phone: (410) 268-7705
Fax: (410) 268-8472

DATE: NOVEMBER 21, 1994

SUBJECT: INORGANIC DATA VALIDATION (IM1 LEVEL)
Case 22732 SITE: BOARHEAD FARMS

FROM: BYRON LEO
INORGANIC DATA REVIEWER

MAHBOOBEH MECANIC
SENIOR OVERSIGHT CHEMIST

TO: SUSANNE STEVENS
ESAT ACTING REGIONAL PROJECT OFFICER

THROUGH: DALE S. BOSHART
ESAT TEAM MANAGER

OVERVIEW

Case 22732 consisted of twenty-five (25) soil samples and eight (8) associated equipment blanks analyzed for metals and cyanide (CN). The samples were analyzed by Associated Laboratories Inc. (ALI) according to the Contract Laboratory Program (CLP) Routine Analytical Services (RAS) Statement of Work (SOW) ILM02.1.

SUMMARY

All analytes were successfully analyzed in all samples. The data were validated according to the IM1 Level procedure, which includes the review of all QC forms except the ones for the Contract Required Detection Limit (CRDL) standard recovery, and excludes the review of the raw data. The equipment blanks were applied to the samples collected on the same day.

Areas of concern with respect to data usability are given below according to the seriousness of the problem.

MINOR ISSUES

The continuing calibration (CCB), preparation (PB) and equipment (EB) blanks had reported results greater than the Instrument Detection Limit (IDL) for the analytes given below. The reported results for these analytes in the affected samples which are less than five times the blank concentration may be biased high and have been qualified "B".

SDG	Blank	Analytes
MCLH00	CCB	Copper (Cu), Silver (Ag)
	EB	Lead (Pb), Potassium (K), Selenium (Se), Silver (Ag)
MCLH25	CCB	Manganese (Mn), Zinc (Zn), Thallium (Tl), K
	PB(aqueous)	Calcium (Ca), Cu, Iron (Fe), Sodium (Na)
	EB	K, Na

The ICP serial dilution results for the soil samples were outside the control limit (10% D) for the Ca, Cu, Na and Zn analytes in SDG MCLH00, and the Ca and Zn analytes in SDG MCLH25. The reported results for these analytes in the affected samples are estimated and have been qualified "J".

The laboratory duplicate results for the soil samples were outside the control limit (35% RPD) for the manganese (Mn) analyte in SDG MCLH00. The reported results for this analyte in the affected samples are estimated and have been qualified "J".

The soil matrix spike recovery was low (30%-75%) for the antimony (Sb) and Ag analytes in SDG MCLH00, and the Sb analyte in SDG MCLH25. The reported results and quantitation limits for these analytes may be biased low and have been qualified "L" and "UL", respectively, unless superseded by the "B" qualifier.

The laboratory blanks had negative results with absolute value greater than the IDL for the analytes given below. The quantitation limits for these analytes in the affected samples may be biased low and have been qualified "UL".

SDG	Blank	Analyte(s)
MCLH00	CCB	Arsenic (As), Tl
	PB(aqueous)	K, Zn, Tl
	PB(soil)	K
MCLH25	CCB	Pb, As
	EB	K, Na

NOTES

The laboratory flagged the cadmium (Cd) analyte on the Form Is for the soil samples in SDG MCLH25 with an "*" denoting the laboratory duplicate results outside the

contractual control limit (± CRDL). Since these results were within the technical control limit for the soil samples (± 2x CRDL), no action was taken.

The laboratory analyzed the As, Pb, Se and Tl analytes using the ICP method, and had IDL values less than CRDL.

The data were reviewed in accordance with the Innovative Approaches (IM1 Level) For Validation of Inorganic Data, September, 1992 and the National Functional Guidelines for Evaluating Inorganic Analyses, with modifications for use within Region III.

ATTACHMENTS

APPENDIX A ANNOTATED FORM Is

APPENDIX B GLOSSARY OF DATA QUALIFIER CODES

APPENDIX C SUPPORT DOCUMENTATION

DCN: 22732BHF.NAR

APPENDIX A

ANNOTATED FORM Is

U.S. EPA - C Review: ~~I~~ M1 Level

Location: EB100494/506 E NO.

1

INORGANIC ANALYSES DATE sampled 10/4/94

MCLH06

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): WATER Lab Sample ID: MCLH06

Level (low/med): LOW__ 000008 Date Received: 10/05/94

% Solids: __0.0

EQ BLK

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	37.8	U			P
7440-36-0	Antimony	25.5	U			P
7440-38-2	Arsenic	2.6	U		UL	P
7440-39-3	Barium	6.6	U			P
7440-41-7	Beryllium	1.5	U			P
7440-43-9	Cadmium	2.2	U			P
7440-70-2	Calcium	166	B			P
7440-47-3	Chromium	2.6	B			P
7440-48-4	Cobalt	10.4	U			P
7440-50-8	Copper	2.0	B		B	P
7439-89-6	Iron	38.6	B			P
7439-92-1	Lead	1.2	U			P
7439-95-4	Magnesium	33.5	U			P
7439-96-5	Manganese	1.4	B			P
7439-97-6	Mercury	0.20	U			CV
7440-02-0	Nickel	13.6	U			P
7440-09-7	Potassium	250	B			P
7782-49-2	Selenium	4.2	B			P
7440-22-4	Silver	2.4	B		B	P
7440-23-5	Sodium	256	B			P
7440-28-0	Thallium	2.9	U		UL	P
7440-62-2	Vanadium	4.2	U			P
7440-66-6	Zinc	3.2	B			P
	Cyanide	5.0	U			C

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305383

U.S. EPA - CI

Review: TM1 Level

Location: EB100594/510

1

INORGANIC ANALYSES DATE sampled 10/5/94

NO.

MCLH10

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): WATER Lab Sample ID: MCLH10 EQ. BLK

000011

Level (low/med): LOW__ Date Received: 10/06/94

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	37.8	U			P
7440-36-0	Antimony	25.5	U			P
7440-38-2	Arsenic	2.6	U		UL	P
7440-39-3	Barium	6.6	U			P
7440-41-7	Beryllium	1.5	U			P
7440-43-9	Cadmium	2.2	U			P
7440-70-2	Calcium	163	B			P
7440-47-3	Chromium	2.5	U			P
7440-48-4	Cobalt	10.4	U			P
7440-50-8	Copper	2.0	B		B	P
7439-89-6	Iron	26.3	B			P
7439-92-1	Lead	1.5	B			P
7439-95-4	Magnesium	33.5	U			P
7439-96-5	Manganese	1.3	U			P
7439-97-6	Mercury	0.20	U			CV
7440-02-0	Nickel	13.6	U			P
7440-09-7	Potassium	221	U		UL	P
7782-49-2	Selenium	3.0	U			P
7440-22-4	Silver	1.6	U			P
7440-23-5	Sodium	271	B			P
7440-28-0	Thallium	2.9	U		UL	P
7440-62-2	Vanadium	4.2	U			P
7440-66-6	Zinc	2.3	U		UL	P
	Cyanide	5.0	U			C

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305384

ILMO2.1

U.S. EPA - CLP

Review: ✓ M1 Level

Location: FB180694/512

1

INORGANIC ANALYSES DA DATE sampled 10/6/94

MCLH12

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): WATER Lab Sample ID: MCLH12

Level (low/med): LOW__ Date Received: 10/07/94 EQ. BLK

% Solids: __0.0

000012

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	37.8	U			P
7440-36-0	Antimony	25.5	U			P
7440-38-2	Arsenic	2.6	U		UL	P
7440-39-3	Barium	6.6	U			P
7440-41-7	Beryllium	1.5	U			P
7440-43-9	Cadmium	2.2	U			P
7440-70-2	Calcium	139	B			P
7440-47-3	Chromium	2.5	U			P
7440-48-4	Cobalt	10.4	U			P
7440-50-8	Copper	1.8	U			P
7439-89-6	Iron	1840				P
7439-92-1	Lead	2.9	B			P
7439-95-4	Magnesium	33.5	U			P
7439-96-5	Manganese	8.2	B			P
7439-97-6	Mercury	0.20	U			CV
7440-02-0	Nickel	13.6	U			P
7440-09-7	Potassium	221	U		UL	P
7782-49-2	Selenium	3.0	U			P
7440-22-4	Silver	2.3	B		B	P
7440-23-5	Sodium	265	B			P
7440-28-0	Thallium	2.9	U		UL	P
7440-62-2	Vanadium	4.2	U			P
7440-66-6	Zinc	17.4	B			P
	Cyanide	5.0	U			C

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305385

ILMO2.1

U.S. EPA - CLP

Review: I M1 Level

Location: EB100794/516

1

INORGANIC ANALYSES DA Date sampled 10/7/94

NO.

MCLH16

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): WATER Lab Sample ID: MCLH16

Level (low/med): LOW__ 0W-015 Date Received: 10/08/94 GQ.BL

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum_	37.8	U			P_
7440-36-0	Antimony_	25.5	U			P_
7440-38-2	Arsenic__	2.6	U			P_
7440-39-3	Barium___	6.6	U			P_
7440-41-7	Beryllium	1.5	U			P_
7440-43-9	Cadmium__	2.2	U			P_
7440-70-2	Calcium__	148	B			P_
7440-47-3	Chromium_	2.5	U			P_
7440-48-4	Cobalt___	10.4	U			P_
7440-50-8	Copper___	1.8	U			P_
7439-89-6	Iron____	12.9	U			P_
7439-92-1	Lead____	1.2	U			P_
7439-95-4	Magnesium	33.5	U			P_
7439-96-5	Manganese	1.3	U			P_
7439-97-6	Mercury__	0.20	U			CV
7440-02-0	Nickel___	13.6	U			P_
7440-09-7	Potassium	221	U		UL	P_
7782-49-2	Selenium_	4.1	B			P_
7440-22-4	Silver___	1.6	U			P_
7440-23-5	Sodium___	257	B			P_
7440-28-0	Thallium_	2.9	U		UL	P_
7440-62-2	Vanadium_	4.2	U			P_
7440-66-6	Zinc____	2.3	U		UL	P_
	Cyanide__	5.0	U			C_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305386

ILMO2.1

Review: IM1 Level

U.S. EPA - Location: EB100894/525

1 Date sampled 10/8/94

INORGANIC ANALYSES DATA SHEET

MPLE NO.

MCLH25

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): WATER Lab Sample ID: MCLH25

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: __0.0

0.002

Concentration Units (ug/L or mg/kg dry weight): UG/L_ Eq. BLK

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum_	37.8	U			P_
7440-36-0	Antimony_	25.5	U			P_
7440-38-2	Arsenic__	2.6	U			P_
7440-39-3	Barium___	6.6	U			P_
7440-41-7	Beryllium	1.5	U			P_
7440-43-9	Cadmium__	2.2	U			P_
7440-70-2	Calcium__	179	B		B	P_
7440-47-3	Chromium_	2.5	U			P_
7440-48-4	Cobalt___	10.4	U			P_
7440-50-8	Copper___	12.5	B			P_
7439-89-6	Iron_____	41.7	B		B	P_
7439-92-1	Lead_____	1.5	B			P_
7439-95-4	Magnesium	33.5	U			P_
7439-96-5	Manganese	2.3	B		B	P_
7439-97-6	Mercury__	0.20	U			CV
7440-02-0	Nickel___	13.6	U			P_
7440-09-7	Potassium	221	U			P_
7782-49-2	Selenium_	3.0	U			P_
7440-22-4	Silver___	1.6	U			P_
7440-23-5	Sodium___	237	B		B	P_
7440-28-0	Thallium_	2.9	U			P_
7440-62-2	Vanadium_	4.2	U			P_
7440-66-6	Zinc_____	5.3	B		B	P_
_____	Cyanide__	5.0	U			C_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

FORM I - IN ILM02.1

AR305387

Review: ☑ M1 Level

U.S. EPA Location: FB150994/530

1 Date sampled 10/9/94

INORGANIC ANALYSES DATA SHEET

MPLE NO.

MCLH30

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): WATER Lab Sample ID: MCLH30

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: __0.0

U 006

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

EQ. BLK

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum_	67.4	B			P_
7440-36-0	Antimony_	25.5	U			P_
7440-38-2	Arsenic__	2.6	U			P_
7440-39-3	Barium___	6.6	U			P_
7440-41-7	Beryllium	1.5	U			P_
7440-43-9	Cadmium__	2.2	U			P_
7440-70-2	Calcium__	206	B		B	P_
7440-47-3	Chromium_	2.5	U			P_
7440-48-4	Cobalt___	10.4	U			P_
7440-50-8	Copper___	1.8	U			P_
7439-89-6	Iron____	87.5	B			P_
7439-92-1	Lead____	1.2	U		UL	P_
7439-95-4	Magnesium	33.5	U			P_
7439-96-5	Manganese	2.3	B		B	P_
7439-97-6	Mercury__	0.20	U			CV
7440-02-0	Nickel___	13.6	U			P_
7440-09-7	Potassium	322	B		B	P_
7782-49-2	Selenium_	3.0	U			P_
7440-22-4	Silver___	1.6	U			P_
7440-23-5	Sodium___	210	B		B	P_
7440-28-0	Thallium_	2.9	U			P_
7440-62-2	Vanadium_	4.2	U			P_
7440-66-6	Zinc____	7.7	B		B	P_
_____	Cyanide__	5.0	U			C_

Color Before: COLORLESS Clarity Bef QV = QUALIFIER AFTER VALIDATION _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

Review: IM1 Level

U.S. EPA - Location: EB101094/535

Date sampled 10-10-94

1

INORGANIC ANALYSES DATA SHEET

MPLE NO.

MCLH35

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): WATER Lab Sample ID: MCLH35

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: __0.0

0 010

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

Eq. BLK

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum_	37.8	U			P_
7440-36-0	Antimony_	25.5	U			P_
7440-38-2	Arsenic__	2.6	U			P_
7440-39-3	Barium___	6.6	U			P_
7440-41-7	Beryllium	1.5	U			P_
7440-43-9	Cadmium__	2.2	U			P_
7440-70-2	Calcium__	203	B		B	P_
7440-47-3	Chromium_	2.5	U			P_
7440-48-4	Cobalt___	10.4	U			P_
7440-50-8	Copper___	1.9	B		B	P_
7439-89-6	Iron____	20.4	B		B	P_
7439-92-1	Lead____	1.2	U		UL	P_
7439-95-4	Magnesium	33.5	U			P_
7439-96-5	Manganese	1.5	B		B	P_
7439-97-6	Mercury__	0.20	U			CV
7440-02-0	Nickel___	13.6	U			P_
7440-09-7	Potassium	333	B		B	P_
7782-49-2	Selenium_	3.0	U			P_
7440-22-4	Silver___	1.6	U			P_
7440-23-5	Sodium___	260	B		B	P_
7440-28-0	Thallium_	2.9	U			P_
7440-62-2	Vanadium_	4.2	U			P_
7440-66-6	Zinc____	2.6	B		B	P_
_____	Cyanide__	5.0	U			C_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

FORM I - IN ILM02.1

AR305389

Review: IM1 Level

U.S. EPA Location: EB101194/540

1 Date Sampled 10/11/94 MPLE NO.

INORGANIC ANALYSES DATA SHEET

MCLH40

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): WATER Lab Sample ID: MCLH40

Level (low/med): LOW__ Date Received: 10/12/94

% Solids: __0.0

U 013

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

EQ. BLK

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	37.8	U			P
7440-36-0	Antimony	25.5	U			P
7440-38-2	Arsenic	2.6	U		UL	P
7440-39-3	Barium	6.6	U			P
7440-41-7	Beryllium	1.5	U			P
7440-43-9	Cadmium	2.2	U			P
7440-70-2	Calcium	265	B		B	P
7440-47-3	Chromium	2.5	U			P
7440-48-4	Cobalt	10.4	U			P
7440-50-8	Copper	3.8	B		B	P
7439-89-6	Iron	63.5	B		B	P
7439-92-1	Lead	1.2	U		UL	P
7439-95-4	Magnesium	33.5	U			P
7439-96-5	Manganese	2.3	B		B	P
7439-97-6	Mercury	0.20	U			CV
7440-02-0	Nickel	13.6	U			P
7440-09-7	Potassium	221	U			P
7782-49-2	Selenium	3.0	U			P
7440-22-4	Silver	1.6	U			P
7440-23-5	Sodium	279	B		B	P
7440-28-0	Thallium	2.9	U			P
7440-62-2	Vanadium	4.2	U			P
7440-66-6	Zinc	7.0	B		B	P
	Cyanide	5.0	U			C

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

AR305390

Review: IM1 Level

U.S. EPA - Location: SB 527/500

1

INORGANIC ANALYSE Sampled 10/4/94

LE NO.

MCLH00

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH00

Level (low/med): LOW__ 04-003 Date Received: 10/05/94

% Solids: _82.6

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	28200				P
7440-36-0	Antimony	6.0	U	N	UL	P
7440-38-2	Arsenic	0.61	U		UL	P
7440-39-3	Barium	66.2				P
7440-41-7	Beryllium	0.89	B			P
7440-43-9	Cadmium	0.52	U			P
7440-70-2	Calcium	2970		E	J	P
7440-47-3	Chromium	266				P
7440-48-4	Cobalt	26.8				P
7440-50-8	Copper	37.8		E	J	P
7439-89-6	Iron	26400				P
7439-92-1	Lead	16.2				P
7439-95-4	Magnesium	2580				P
7439-96-5	Manganese	658		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	58.4				P
7440-09-7	Potassium	82.7	B		B	P
7782-49-2	Selenium	3.3			B	P
7440-22-4	Silver	0.38	U	N	UL	P
7440-23-5	Sodium	506	B	E	J	P
7440-28-0	Thallium	1.3	B			P
7440-62-2	Vanadium	79.4				P
7440-66-6	Zinc	35.3		E	J	P
	Cyanide	1.4	U			C

Color Before: BROWN____ Clarity Before: ____ QV = QUALIFIER AFTER VALIDATION

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

FORM I - IN

ILM02.1

AR305391

Review: ✓ M1 Level

U.S. EPA - Location: SB 521/501

1 Sampled 10/4/94

INORGANIC ANALYSIS DATA PLE NO.

MCLH01

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH01

Level (low/med): LOW__ 004 Date Received: 10/05/94

% Solids: _86.6

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	16200				P
7440-36-0	Antimony	5.7	U	N	UL	P
7440-38-2	Arsenic	2.4				P
7440-39-3	Barium	49.3				P
7440-41-7	Beryllium	1.0	B			P
7440-43-9	Cadmium	0.49	U			P
7440-70-2	Calcium	3700		E	J	P
7440-47-3	Chromium	131				P
7440-48-4	Cobalt	13.9				P
7440-50-8	Copper	34.5		E	J	P
7439-89-6	Iron	19600				P
7439-92-1	Lead	13.3				P
7439-95-4	Magnesium	2650				P
7439-96-5	Manganese	555		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	32.5				P
7440-09-7	Potassium	449	B			P
7782-49-2	Selenium	0.67	U			P
7440-22-4	Silver	0.36	U	N	UL	P
7440-23-5	Sodium	394	B	E	J	P
7440-28-0	Thallium	0.64	U		UL	P
7440-62-2	Vanadium	37.8				P
7440-66-6	Zinc	40.2		E	J	P
	Cyanide	1.4	U			C

Color Before: BROWN____ Clarity Before: ____ QV = QUALIFIER AFTER VALIDATION

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
ROOTS

FORM I - IN

AR305392

ILMO2.1

Review: LM1 Level

U.S. EPA

Location: SB521/502

1

INORGANIC ANALY: Sampled 10/4/94

MPLE NO.

MCLH02

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH02

Level (low/med): LOW__ 0000005 Date Received: 10/05/94

% Solids: _87.0

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	21600				P
7440-36-0	Antimony	5.4	U	N	UL	P
7440-38-2	Arsenic	1.3	B			P
7440-39-3	Barium	64.9				P
7440-41-7	Beryllium	2.4				P
7440-43-9	Cadmium	0.47	U			P
7440-70-2	Calcium	3940		E	J	P
7440-47-3	Chromium	211				P
7440-48-4	Cobalt	36.4				P
7440-50-8	Copper	42.4		E	J	P
7439-89-6	Iron	26200				P
7439-92-1	Lead	13.6				P
7439-95-4	Magnesium	2560				P
7439-96-5	Manganese	833		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	53.6				P
7440-09-7	Potassium	360	B			P
7782-49-2	Selenium	0.64	U			P
7440-22-4	Silver	0.34	U	N	UL	P
7440-23-5	Sodium	511	B	E	J	P
7440-28-0	Thallium	0.62	U		UL	P
7440-62-2	Vanadium	65.7				P
7440-66-6	Zinc	39.2		E	J	P
	Cyanide	1.4	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:
ROOTS

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305393

Review: ✓ M1 Level

U.S. EPA - Location: SB523/503

1 Sampled 10/4/94

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MCLH03

Lab Name: ASSOCIATED LABORATORIES Contract: 68D20043

Lab Code: ALI Case No.: 22732 SAS No.: SDG No.: MCLH00

Matrix (soil/water): SOIL Lab Sample ID: MCLH03

Level (low/med): LOW Date Received: 10/05/94

% Solids: 87.8

0000006

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	34300				P
7440-36-0	Antimony	5.4	U	N	UL	P
7440-38-2	Arsenic	0.55	U		UL	P
7440-39-3	Barium	49.7				P
7440-41-7	Beryllium	0.70	B			P
7440-43-9	Cadmium	0.46	U			P
7440-70-2	Calcium	7760		E	J	P
7440-47-3	Chromium	211				P
7440-48-4	Cobalt	13.7				P
7440-50-8	Copper	50.6		E	J	P
7439-89-6	Iron	16800				P
7439-92-1	Lead	2.6				P
7439-95-4	Magnesium	2340				P
7439-96-5	Manganese	250		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	49.8				P
7440-09-7	Potassium	188	B		B	P
7782-49-2	Selenium	0.63	U			P
7440-22-4	Silver	0.34	U	N	UL	P
7440-23-5	Sodium	1820		E	J	P
7440-28-0	Thallium	1.8	B			P
7440-62-2	Vanadium	53.4				P
7440-66-6	Zinc	13.8		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: GREY Clarity After: Artifacts: YES

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILM02.1

AR305394

Review: LM1 Level

U.S. EPA - Location: SB520/504

1 Sampled 10-5-94

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MCLH04

Lab Name: ASSOCIATED LABORATORIES Contract: 68D20043

Lab Code: ALI Case No.: 22732 SAS No.: SDG No.: MCLH00

Matrix (soil/water): SOIL Lab Sample ID: MCLH04

Level (low/med): LOW 0000007 Date Received: 10/06/94

% Solids: 84.3

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	40000				P
7440-36-0	Antimony	5.7	U	N	UL	P
7440-38-2	Arsenic	0.58	U		UL	P
7440-39-3	Barium	57.7				P
7440-41-7	Beryllium	0.56	B			P
7440-43-9	Cadmium	0.49	U			P
7440-70-2	Calcium	6960		E	J	P
7440-47-3	Chromium	147				P
7440-48-4	Cobalt	9.9	B			P
7440-50-8	Copper	50.8		E	J	P
7439-89-6	Iron	12500				P
7439-92-1	Lead	1.4			B	P
7439-95-4	Magnesium	2200				P
7439-96-5	Manganese	217		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	42.6				P
7440-09-7	Potassium	49.0	U		UL	P
7782-49-2	Selenium	0.67	U			P
7440-22-4	Silver	0.35	U	N	UL	P
7440-23-5	Sodium	1700		E	J	P
7440-28-0	Thallium	1.1	B			P
7440-62-2	Vanadium	34.8				P
7440-66-6	Zinc	12.8		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: GREY Clarity After: Artifacts: YES

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305395

U.S. EPA - C Review: ~~I~~ M1 Level

1 Location: 53518/507

INORGANIC ANALYSES Samples 10-5/94

LE NO.

MCLH07

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH07

Level (low/med): LOW__ 0000009 Date Received: 10/06/94

% Solids: _81.5

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	31000				P
7440-36-0	Antimony	6.0	U	N	UL	P
7440-38-2	Arsenic	0.61	U		UL	P
7440-39-3	Barium	111				P
7440-41-7	Beryllium	1.5				P
7440-43-9	Cadmium	0.52	U			P
7440-70-2	Calcium	3660		E	J	P
7440-47-3	Chromium	560				P
7440-48-4	Cobalt	75.6				P
7440-50-8	Copper	64.6		E	J	P
7439-89-6	Iron	46500				P
7439-92-1	Lead	21.2				P
7439-95-4	Magnesium	2110				P
7439-96-5	Manganese	2310		*	J	P
7439-97-6	Mercury	0.09				CV
7440-02-0	Nickel	87.0				P
7440-09-7	Potassium	441	B			P
7782-49-2	Selenium	0.71	U			P
7440-22-4	Silver	0.38	U	N	UL	P
7440-23-5	Sodium	469	B	E	J	P
7440-28-0	Thallium	0.68	U		UL	P
7440-62-2	Vanadium	150				P
7440-66-6	Zinc	62.7		E	J	P
	Cyanide	1.4	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305396 ILMO2.1

U.S. EPA - 1

Review: I M1 Level

Location: SB506/50B

INORGANIC ANALYSE - sampled 10-5-94

LE NO.

MCLH08

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH08

Level (low/med): LOW__ 000010 Date Received: 10/06/94

% Solids: _88.1

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	21100				P
7440-36-0	Antimony	5.6	U	N	UL	P
7440-38-2	Arsenic	0.78	B			P
7440-39-3	Barium	49.9				P
7440-41-7	Beryllium	0.68	B			P
7440-43-9	Cadmium	0.48	U			P
7440-70-2	Calcium	8220		E	J	P
7440-47-3	Chromium	113				P
7440-48-4	Cobalt	8.4	B			P
7440-50-8	Copper	30.2		E	J	P
7439-89-6	Iron	12800				P
7439-92-1	Lead	5.5				P
7439-95-4	Magnesium	2730				P
7439-96-5	Manganese	116		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	23.5				P
7440-09-7	Potassium	178	B			P
7782-49-2	Selenium	0.66	U			P
7440-22-4	Silver	0.35	U	N	UL	P
7440-23-5	Sodium	1830		E	J	P
7440-28-0	Thallium	0.64	U		UL	P
7440-62-2	Vanadium	35.4				P
7440-66-6	Zinc	16.4		E	J	P
	Cyanide	1.2	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305397

U.S. EPA - CLP

Review: ☑ M1 Level

Location: SB507/513

1

INORGANIC ANALYSES DATA

Sampled 10-6-94

MCLH13

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH13

Level (low/med): LOW__ 040013 Date Received: 10/07/94

% Solids: _86.4

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	31700				P
7440-36-0	Antimony	5.4	U	N	UL	P
7440-38-2	Arsenic	3.3				P
7440-39-3	Barium	82.0				P
7440-41-7	Beryllium	0.95	B			P
7440-43-9	Cadmium	0.46	U			P
7440-70-2	Calcium	5950		E	J	P
7440-47-3	Chromium	183				P
7440-48-4	Cobalt	12.0				P
7440-50-8	Copper	34.7		E	J	P
7439-89-6	Iron	17900				P
7439-92-1	Lead	9.5				P
7439-95-4	Magnesium	3630				P
7439-96-5	Manganese	150		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	44.9				P
7440-09-7	Potassium	624	B			P
7782-49-2	Selenium	0.63	U			P
7440-22-4	Silver	0.34	U	N	UL	P
7440-23-5	Sodium	1500		E	J	P
7440-28-0	Thallium	2.6				P
7440-62-2	Vanadium	61.3				P
7440-66-6	Zinc	24.5		E	J	P
	Cyanide	4.3				C

Color Before: GREEN____ Clarity Before: _____ Texture: MEDIUM

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305398

ILM02.1

U.S. EPA - CLP

Review: ILM1 Level

Location: SB 503/514 Sampled 10/6/94

1

INORGANIC ANALYSES DAT

MCLH14

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH14

Level (low/med): LOW__ 000014 Date Received: 10/07/94

% Solids: _83.5

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	25400				P
7440-36-0	Antimony	6.0	U	N	UL	P
7440-38-2	Arsenic	1.9	B			P
7440-39-3	Barium	81.1				P
7440-41-7	Beryllium	1.1	B			P
7440-43-9	Cadmium	0.52	U			P
7440-70-2	Calcium	4990		E	J	P
7440-47-3	Chromium	229				P
7440-48-4	Cobalt	11.8				P
7440-50-8	Copper	37.0		E	J	P
7439-89-6	Iron	25400				P
7439-92-1	Lead	10.3				P
7439-95-4	Magnesium	3920				P
7439-96-5	Manganese	226		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	47.0				P
7440-09-7	Potassium	410	B			P
7782-49-2	Selenium	0.70	U			P
7440-22-4	Silver	0.38	U	N	UL	P
7440-23-5	Sodium	1080	B	E	J	P
7440-28-0	Thallium	2.6				P
7440-62-2	Vanadium	68.2				P
7440-66-6	Zinc	29.0		E	J	P
	Cyanide	1.4	U			C

Color Before: BROWN___ Clarity Before: _____ Texture: COARSE

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305399

U.S. EPA - CLP

Review: I M1 Level

Location: SB556/517

1

INORGANIC ANALYSES DATA

Samples 10/6/94

MCLH17

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH17

Level (low/med): LOW__ Date Received: 10/07/94

% Solids: _86.9

0000016

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	33700				P
7440-36-0	Antimony	5.4	U	N	UL	P
7440-38-2	Arsenic	0.91	B			P
7440-39-3	Barium	69.0				P
7440-41-7	Beryllium	0.81	B			P
7440-43-9	Cadmium	4.8				P
7440-70-2	Calcium	5770		E	J	P
7440-47-3	Chromium	318				P
7440-48-4	Cobalt	20.5				P
7440-50-8	Copper	97.5		E	J	P
7439-89-6	Iron	22200				P
7439-92-1	Lead	11.0				P
7439-95-4	Magnesium	3000				P
7439-96-5	Manganese	435		*	J	P
7439-97-6	Mercury	0.10	U			CV
7440-02-0	Nickel	76.2				P
7440-09-7	Potassium	374	B			P
7782-49-2	Selenium	0.64	U			P
7440-22-4	Silver	0.37	B	N	B	P
7440-23-5	Sodium	1090		E	J	P
7440-28-0	Thallium	1.9	B			P
7440-62-2	Vanadium	64.5				P
7440-66-6	Zinc	58.0		E	J	P
	Cyanide	5.3				C

Color Before: BROWN___ Clarity Before: _____ Texture: MEDIUM

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305400

ILMO2.1

U.S. EPA - CLP

Review: I M1 Level

Location: SB570/518 samples 10/7/94

1

INORGANIC ANALYSES DAT

MCLH18

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH18

Level (low/med): LOW__ 0000017 Date Received: 10/08/94

% Solids: _86.8

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	33600				P
7440-36-0	Antimony	5.6	U	N	UL	P
7440-38-2	Arsenic	1.1	B			P
7440-39-3	Barium	107				P
7440-41-7	Beryllium	1.2				P
7440-43-9	Cadmium	0.48	U			P
7440-70-2	Calcium	3160		E	J	P
7440-47-3	Chromium	363				P
7440-48-4	Cobalt	28.5				P
7440-50-8	Copper	45.7		E	J	P
7439-89-6	Iron	29500				P
7439-92-1	Lead	15.5				P
7439-95-4	Magnesium	2920				P
7439-96-5	Manganese	692		*	J	P
7439-97-6	Mercury	0.13				CV
7440-02-0	Nickel	78.5				P
7440-09-7	Potassium	486	B			P
7782-49-2	Selenium	0.66	U			P
7440-22-4	Silver	0.35	U	N	UL	P
7440-23-5	Sodium	528	B	E	J	P
7440-28-0	Thallium	3.0				P
7440-62-2	Vanadium	94.6				P
7440-66-6	Zinc	41.7		E	J	P
	Cyanide	1.1	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
ROOTS

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305401

U.S. EPA - CLP Review: I M1 Level

1 Location: SB568/519 NO.

INORGANIC ANALYSES D Sampled 10/7/94

MCLH19

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH19

Level (low/med): LOW__ 0100018 Date Received: 10/08/94

% Solids: _84.7

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	24400				P
7440-36-0	Antimony	5.6	U	N	UL	P
7440-38-2	Arsenic	2.9				P
7440-39-3	Barium	72.0				P
7440-41-7	Beryllium	1.4				P
7440-43-9	Cadmium	0.49	U			P
7440-70-2	Calcium	2280		E	J	P
7440-47-3	Chromium	377				P
7440-48-4	Cobalt	35.7				P
7440-50-8	Copper	25.1		E	J	P
7439-89-6	Iron	31900				P
7439-92-1	Lead	13.6				P
7439-95-4	Magnesium	2580				P
7439-96-5	Manganese	864		*	J	P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	67.0				P
7440-09-7	Potassium	316	B			P
7782-49-2	Selenium	0.66	U			P
7440-22-4	Silver	0.35	U	N	UL	P
7440-23-5	Sodium	320	B	E	J	P
7440-28-0	Thallium	2.0	B			P
7440-62-2	Vanadium	106				P
7440-66-6	Zinc	33.9		E	J	P
	Cyanide	1.2	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305402

ILMO2.1

U.S. EPA - CLP

Review: IM1 Level

1

INORGANIC ANALYSES DATA

Location: SB564/520

Sampled 10/7/94

MCLH20

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH20

Level (low/med): LOW__ 000019 Date Received: 10/08/94

% Solids: _77.9

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	72000				P
7440-36-0	Antimony	6.4	U	N	UL	P
7440-38-2	Arsenic	0.65	U			P
7440-39-3	Barium	148				P
7440-41-7	Beryllium	2.0				P
7440-43-9	Cadmium	0.55	U			P
7440-70-2	Calcium	2320		E	J	P
7440-47-3	Chromium	813				P
7440-48-4	Cobalt	30.9				P
7440-50-8	Copper	166		E	J	P
7439-89-6	Iron	63200				P
7439-92-1	Lead	12.3				P
7439-95-4	Magnesium	2920				P
7439-96-5	Manganese	416		*	J	P
7439-97-6	Mercury	0.10				CV
7440-02-0	Nickel	160				P
7440-09-7	Potassium	776	B			P
7782-49-2	Selenium	0.75	U			P
7440-22-4	Silver	0.40	U	N	UL	P
7440-23-5	Sodium	472	B	E	J	P
7440-28-0	Thallium	10.0				P
7440-62-2	Vanadium	240				P
7440-66-6	Zinc	55.0		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305403

U.S. EPA - CLP

Review: ✓M1 Level

1

INORGANIC ANALYSES DATA

Location: SB563/521

Sampled 10/8/94

MCLH21

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH21

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: _84.6

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	34400				P
7440-36-0	Antimony	7.5	B	N	L	P
7440-38-2	Arsenic	0.60	U			P
7440-39-3	Barium	69.8				P
7440-41-7	Beryllium	0.58	B			P
7440-43-9	Cadmium	0.51	U			P
7440-70-2	Calcium	6440		E	J	P
7440-47-3	Chromium	1910				P
7440-48-4	Cobalt	6.5	B			P
7440-50-8	Copper	206		E	J	P
7439-89-6	Iron	15400				P
7439-92-1	Lead	2.1				P
7439-95-4	Magnesium	2200				P
7439-96-5	Manganese	90.8		*	J	P
7439-97-6	Mercury	0.08	U			CV
7440-02-0	Nickel	57.6				P
7440-09-7	Potassium	173	B			P
7782-49-2	Selenium	0.70	U			P
7440-22-4	Silver	0.37	U	N	UL	P
7440-23-5	Sodium	1550		E	J	P
7440-28-0	Thallium	2.1	B			P
7440-62-2	Vanadium	47.0				P
7440-66-6	Zinc	13.7		E	J	P
	Cyanide	1.1	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

AR305404

ILMO2.1

U.S. EPA - CLP

Review: M1 Level

1

Location: SB559 / 522

INORGANIC ANALYSES DATA

Sampled 6/8/94

MCLH22

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH22

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: _85.4

0000021

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	40700				P
7440-36-0	Antimony	7.5	B	N	L	P
7440-38-2	Arsenic	0.60	U			P
7440-39-3	Barium	126				P
7440-41-7	Beryllium	1.5				P
7440-43-9	Cadmium	0.51	U			P
7440-70-2	Calcium	3450		E	J	P
7440-47-3	Chromium	509				P
7440-48-4	Cobalt	40.2				P
7440-50-8	Copper	52.2		E	J	P
7439-89-6	Iron	41500				P
7439-92-1	Lead	19.0				P
7439-95-4	Magnesium	2730				P
7439-96-5	Manganese	857		*	J	P
7439-97-6	Mercury	0.09				CV
7440-02-0	Nickel	107				P
7440-09-7	Potassium	529	B			P
7782-49-2	Selenium	0.69	U			P
7440-22-4	Silver	0.37	U	N	UL	P
7440-23-5	Sodium	582	B	E	J	P
7440-28-0	Thallium	5.3				P
7440-62-2	Vanadium	140				P
7440-66-6	Zinc	41.4		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN___ Clarity Before: _____ Texture: COARSE

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVEL

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILMO2.1

AR305405

U.S. EPA - CLP Review: ~~I~~M1 Level

1 Location: 58555/523 NO.

INORGANIC ANALYSES D Date sampled 10/9/94

MCLH23

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH23

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: _84.2

01-022

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	25300				P
7440-36-0	Antimony	5.6	U	N	UL	P
7440-38-2	Arsenic	2.9				P
7440-39-3	Barium	82.9				P
7440-41-7	Beryllium	1.4				P
7440-43-9	Cadmium	0.77	B			P
7440-70-2	Calcium	10500		E	J	P
7440-47-3	Chromium	364				P
7440-48-4	Cobalt	26.9				P
7440-50-8	Copper	67.7		E	J	P
7439-89-6	Iron	31200				P
7439-92-1	Lead	36.1				P
7439-95-4	Magnesium	2700				P
7439-96-5	Manganese	600		*	J	P
7439-97-6	Mercury	0.10				CV
7440-02-0	Nickel	111				P
7440-09-7	Potassium	617	B			P
7782-49-2	Selenium	0.66	U			P
7440-22-4	Silver	0.35	U	N	UL	P
7440-23-5	Sodium	493	B	E	J	P
7440-28-0	Thallium	3.6				P
7440-62-2	Vanadium	91.9				P
7440-66-6	Zinc	50.6		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:
STEMS

QV = QUALIFIER AFTER VALIDATION

FORM I - IN

ILM02.1

AR305406

Review: TM1 Level

U.S. EPA - Location: SB556/526

Date sampled 10/9/94

1 PLE N

INORGANIC ANALYSES DATA SHEET

MCL[redacted]6

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCI

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH26

Level (low/med): LOW__ Date Received: 10/11/9

% Solids: _82.6 0 00

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	40900				P
7440-36-0	Antimony	5.6	U	N	UL	P
7440-38-2	Arsenic	0.57	U			P
7440-39-3	Barium	58.7				P
7440-41-7	Beryllium	0.99	B			P
7440-43-9	Cadmium	0.48	U	*		P
7440-70-2	Calcium	2840		E	J	P
7440-47-3	Chromium	305				P
7440-48-4	Cobalt	19.2				P
7440-50-8	Copper	65.8				P
7439-89-6	Iron	24500				P
7439-92-1	Lead	5.7				P
7439-95-4	Magnesium	2070				P
7439-96-5	Manganese	185				P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	85.1				P
7440-09-7	Potassium	143	B		B	P
7782-49-2	Selenium	0.66	U			P
7440-22-4	Silver	0.35	U			P
7440-23-5	Sodium	347	B			P
7440-28-0	Thallium	2.7			B	P
7440-62-2	Vanadium	72.8				P
7440-66-6	Zinc	42.9		E	J	P
	Cyanide	1.2	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: M

Color After: GREY_____ Clarity After: Artifacts: Y

QV = QUALIFIER AFTER VALIDATION

Comments:
STONES

FORM I - IN

AR305407

Review: ~~I~~M1 Level

U.S. EPA - Location: SB553/527

1 Date Sampled 10/9/94 ... ...MPLE NO.

INORGANIC ANALYSES DATA SHEET

MCLH27

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH27

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: _82.9

U 004

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	38400				P
7440-36-0	Antimony	5.8	U	N	UL	P
7440-38-2	Arsenic	0.59	U			P
7440-39-3	Barium	58.2				P
7440-41-7	Beryllium	0.51	B			P
7440-43-9	Cadmium	0.72	B	*		P
7440-70-2	Calcium	2300		E	J	P
7440-47-3	Chromium	201				P
7440-48-4	Cobalt	26.2				P
7440-50-8	Copper	114				P
7439-89-6	Iron	14800				P
7439-92-1	Lead	1.8				P
7439-95-4	Magnesium	2080				P
7439-96-5	Manganese	216				P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	77.5				P
7440-09-7	Potassium	96.3	B		B	P
7782-49-2	Selenium	0.68	U			P
7440-22-4	Silver	0.36	U			P
7440-23-5	Sodium	424	B			P
7440-28-0	Thallium	0.66	U			P
7440-62-2	Vanadium	40.2				P
7440-66-6	Zinc	23.8		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: GREY_____ Clarity After: Artifacts: YES___

QV = QUALIFIER AFTER VALIDATION

Comments:
GRAVELS

FORM I - IN ILM02.1

AR305408

Review: IM1 Level

U.S. EPA - Location: SB550/528

1 Date sampled 10/10/94

INORGANIC ANALYSES DATA SHEET

MPLE NO.

MCLH28

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH28

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: _80.2

U 005

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	24600				P
7440-36-0	Antimony	5.9	U	N	UL	P
7440-38-2	Arsenic	1.9	B			P
7440-39-3	Barium	81.1				P
7440-41-7	Beryllium	1.1	B			P
7440-43-9	Cadmium	2.1		*		P
7440-70-2	Calcium	3520		E	J	P
7440-47-3	Chromium	405				P
7440-48-4	Cobalt	20.8				P
7440-50-8	Copper	56.3				P
7439-89-6	Iron	25400				P
7439-92-1	Lead	15.7				P
7439-95-4	Magnesium	3320				P
7439-96-5	Manganese	386				P
7439-97-6	Mercury	0.10	U			CV
7440-02-0	Nickel	124				P
7440-09-7	Potassium	555	B			P
7782-49-2	Selenium	0.70	U			P
7440-22-4	Silver	0.37	U			P
7440-23-5	Sodium	475	B			P
7440-28-0	Thallium	1.5	B		B	P
7440-62-2	Vanadium	74.4				P
7440-66-6	Zinc	46.2		E	J	P
	Cyanide	1.4	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MED.__

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

QV = QUALIFIER AFTER VALIDATION

Comments:
ROOTS

FORM I - IN ILM02.1

AR305409

Review: ~~I~~M1 Level

U.S. EPA - Location: SB547/531

1 Date sampled 10/10/94 PLE NO.

INORGANIC ANALYSES DATA SHEET

MCLH31

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH31

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: _85.6

0 007

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	20100				P
7440-36-0	Antimony	5.8	U	N	UL	P
7440-38-2	Arsenic	1.4	B			P
7440-39-3	Barium	39.0	B			P
7440-41-7	Beryllium	0.77	B			P
7440-43-9	Cadmium	2.6		*		P
7440-70-2	Calcium	3290		E	J	P
7440-47-3	Chromium	329				P
7440-48-4	Cobalt	12.9				P
7440-50-8	Copper	28.4				P
7439-89-6	Iron	23900				P
7439-92-1	Lead	9.4				P
7439-95-4	Magnesium	2060				P
7439-96-5	Manganese	304				P
7439-97-6	Mercury	0.09	U			CV
7440-02-0	Nickel	55.1				P
7440-09-7	Potassium	303	B		B	P
7782-49-2	Selenium	0.68	U			P
7440-22-4	Silver	0.36	U			P
7440-23-5	Sodium	660	B			P
7440-28-0	Thallium	2.5			B	P
7440-62-2	Vanadium	59.1				P
7440-66-6	Zinc	27.1		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MED.__

Color After: BROWN____ Clarity After: Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

AR305410

Review: ~~I~~M1 Level

U.S. EPA - Location: SB540/532

1 Date Sampled 10/10/94

MPLE NO

INORGANIC ANALYSES DATA SHEET

MCLH32

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH32

Level (low/med): LOW__ Date Received: 10/11/94

% Solids: _80.9

U 008

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	30000				P
7440-36-0	Antimony	6.0	U	N	UL	P
7440-38-2	Arsenic	2.2	B			P
7440-39-3	Barium	103				P
7440-41-7	Beryllium	1.8				P
7440-43-9	Cadmium	5.0		*		P
7440-70-2	Calcium	2590		E	J	P
7440-47-3	Chromium	640				P
7440-48-4	Cobalt	46.3				P
7440-50-8	Copper	193				P
7439-89-6	Iron	40500				P
7439-92-1	Lead	31.8				P
7439-95-4	Magnesium	2060				P
7439-96-5	Manganese	1120				P
7439-97-6	Mercury	0.20				CV
7440-02-0	Nickel	120				P
7440-09-7	Potassium	656	B			P
7782-49-2	Selenium	0.71	U			P
7440-22-4	Silver	2.1	B			P
7440-23-5	Sodium	144	B		B	P
7440-28-0	Thallium	1.2	B		B	P
7440-62-2	Vanadium	126				P
7440-66-6	Zinc	109		E	J	P
	Cyanide	4.7				C

Color Before: BROWN____ Clarity Before: _____ Texture: MED.__

Color After: BROWN____ Clarity After: ____ Artifacts: YES___

Comments:
ROOTS

QV = QUALIFIER AFTER VALIDATION

AR305411

Review: ~~IM~~1 Level

U.S. EPA · Location: SB542/533

1 Date Sampled 10/11/94

MPLE NO.

INORGANIC ANALYSES DATA SHEET

MCLH33

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH33

Level (low/med): LOW__ Date Received: 10/12/94

% Solids: _78.5

U 009

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	79700				P
7440-36-0	Antimony	6.4	U	N	UL	P
7440-38-2	Arsenic	0.66	U		UL	P
7440-39-3	Barium	227				P
7440-41-7	Beryllium	3.1				P
7440-43-9	Cadmium	0.76	B	*		P
7440-70-2	Calcium	1790		E	J	P
7440-47-3	Chromium	1020				P
7440-48-4	Cobalt	75.4				P
7440-50-8	Copper	71.2				P
7439-89-6	Iron	95700				P
7439-92-1	Lead	14.3				P
7439-95-4	Magnesium	2230				P
7439-96-5	Manganese	1080				P
7439-97-6	Mercury	0.11				CV
7440-02-0	Nickel	232				P
7440-09-7	Potassium	343	B			P
7782-49-2	Selenium	0.76	U			P
7440-22-4	Silver	0.40	U			P
7440-23-5	Sodium	165	B		B	P
7440-28-0	Thallium	7.1				P
7440-62-2	Vanadium	310				P
7440-66-6	Zinc	54.9		E	J	P
	Cyanide	1.5	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MED.__

Color After: BROWN____ Clarity After: _____ Artifacts: _____

Comments:

QV = QUALIFIER AFTER VALIDATION

FORM I - IN ILM02.1

AR305412

Review: IM1 Level

U.S. EPA Location: S&528/536

Date sampled 10/11/94

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INORGANIC ANALYSES DATA SHEET

MPLE NO.

MCLH36

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH36

Level (low/med): LOW__ Date Received: 10/12/94

% Solids: _81.3

U 011

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	45200				P
7440-36-0	Antimony	6.2	U	N	UL	P
7440-38-2	Arsenic	0.63	U			P
7440-39-3	Barium	165				P
7440-41-7	Beryllium	2.2				P
7440-43-9	Cadmium	0.62	B	*		P
7440-70-2	Calcium	2000		E	J	P
7440-47-3	Chromium	662				P
7440-48-4	Cobalt	69.1				P
7440-50-8	Copper	48.2				P
7439-89-6	Iron	61100				P
7439-92-1	Lead	18.3				P
7439-95-4	Magnesium	2040				P
7439-96-5	Manganese	1460				P
7439-97-6	Mercury	0.10				CV
7440-02-0	Nickel	133				P
7440-09-7	Potassium	482	B			P
7782-49-2	Selenium	0.73	U			P
7440-22-4	Silver	0.39	U			P
7440-23-5	Sodium	131	B		B	P
7440-28-0	Thallium	2.5			B	P
7440-62-2	Vanadium	204				P
7440-66-6	Zinc	64.3		E	J	P
	Cyanide	1.3	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MED.__

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:
STEMS_&_STONES

QV = QUALIFIER AFTER VALIDATION

FORM I - IN ILM02.1

AR305413

Review: IM1 Level

U.S. EPA · Location: SB538/537

1 - Date sample 10/11/94

MPLE NO.

INORGANIC ANALYSES DATA SHEET

MCLH37

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH37

Level (low/med): LOW__ Date Received: 10/12/94

% Solids: _71.4

0.012

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	60700				P
7440-36-0	Antimony	6.8	U	N	UL	P
7440-38-2	Arsenic	0.69	U			P
7440-39-3	Barium	116				P
7440-41-7	Beryllium	2.7				P
7440-43-9	Cadmium	0.94	B	*		P
7440-70-2	Calcium	1490		E	J	P
7440-47-3	Chromium	832				P
7440-48-4	Cobalt	57.2				P
7440-50-8	Copper	70.2				P
7439-89-6	Iron	69700				P
7439-92-1	Lead	11.1				P
7439-95-4	Magnesium	3110				P
7439-96-5	Manganese	923				P
7439-97-6	Mercury	0.11	U			CV
7440-02-0	Nickel	192				P
7440-09-7	Potassium	383	B			P
7782-49-2	Selenium	0.80	U			P
7440-22-4	Silver	0.43	U			P
7440-23-5	Sodium	182	B		B	P
7440-28-0	Thallium	4.7			B	P
7440-62-2	Vanadium	254				P
7440-66-6	Zinc	56.1		E	J	P
	Cyanide	1.4	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MED.__

Color After: GREY_____ Clarity After: _____ Artifacts: YES___

QV = QUALIFIER AFTER VALIDATION

Comments:
GRAVELS

FORM I - IN ILM02.1

AR305414

Review: M1 Level

U.S. EPA - Location: SB542/543

1 Date sampled 10/11/94

INORGANIC ANALYSES DATA SHEET

MPLE NO.

MCLH43

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Matrix (soil/water): SOIL_ Lab Sample ID: MCLH43

Level (low/med): LOW__ Date Received: 10/12/94

% Solids: _76.5

0.014

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

CAS No.	Analyte	Concentration	C	Q	QV	M
7429-90-5	Aluminum	66700				P
7440-36-0	Antimony	6.3	U	N	UL	P
7440-38-2	Arsenic	0.65	U		UL	P
7440-39-3	Barium	238				P
7440-41-7	Beryllium	3.4				P
7440-43-9	Cadmium	0.69	B	*		P
7440-70-2	Calcium	1830		E	J	P
7440-47-3	Chromium	913				P
7440-48-4	Cobalt	87.3				P
7440-50-8	Copper	60.8				P
7439-89-6	Iron	83800				P
7439-92-1	Lead	15.6				P
7439-95-4	Magnesium	2480				P
7439-96-5	Manganese	1960				P
7439-97-6	Mercury	0.11				CV
7440-02-0	Nickel	214				P
7440-09-7	Potassium	604	B			P
7782-49-2	Selenium	0.75	U			P
7440-22-4	Silver	0.40	U			P
7440-23-5	Sodium	118	B		B	P
7440-28-0	Thallium	2.8			B	P
7440-62-2	Vanadium	285				P
7440-66-6	Zinc	55.0		E	J	P
	Cyanide	1.5	U			C

Color Before: BROWN____ Clarity Before: _____ Texture: MED.__

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:
GRAVELS

QV = QUALIFIER AFTER VALIDATION

FORM I - IN ILM02.1

AR305415

APPENDIX B

GLOSSARY OF QUALIFIER CODES

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION
(confidence concerning presence or absence of analytes):

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

(NO CODE) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation limits):

J = Analyte Present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

[] = Analyte present. As values approach the IDL the quantitation may not be accurate.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

Q = No analytical result.

APPENDIX C

SUPPORT DOCUMENTATION

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732 SAS No.: _____ SDG No.:MCLH00

SOW No.: ILM02

EPA Sample No.	Lab Sample ID
MCLH00	MCLH00
MCLH00D	MCLH00D
MCLH00S	MCLH00S
MCLH01	MCLH01
MCLH02	MCLH02
MCLH03	MCLH03
MCLH04	MCLH04
MCLH06	MCLH06
MCLH07	MCLH07
MCLH08	MCLH08
MCLH10	MCLH10
MCLH12	MCLH12
MCLH13	MCLH13
MCLH14	MCLH14
MCLH16	MCLH16
MCLH17	MCLH17
MCLH18	MCLH18
MCLH19	MCLH19
MCLH20	MCLH20
MCLH21	MCLH21

OUA001

OCT 28 1994
RECEIVED

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: James McCall Name: __James McCall___

Date: 10/27/94 Title: __Inorganic Manager____

AR305419

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732 SAS No.: _____ SDG No.:MCLH00

SOW No.: ILM02

EPA Sample No.	Lab Sample ID
_MCLH22_____	__MCLH22_____
_MCLH23_____	__MCLH23_____

001002

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: James McCall Name: __James McCall___

Date: 10/22/94 Title: __Inorganic Manager____

AR305420

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732 SAS No.: _____ SDG No.:MCLH25

SOW No.: ILM02.1

0 001

EPA Sample No.	Lab Sample ID
MCLH25	MCLH25
MCLH26	MCLH26
MCLH27	MCLH27
MCLH28	MCLH28
MCLH30	MCLH30
MCLH31	MCLH31
MCLH32	MCLH32
MCLH32D	MCLH32D
MCLH32S	MCLH32S
MCLH33	MCLH33
MCLH35	MCLH35
MCLH36	MCLH36
MCLH37	MCLH37
MCLH40	MCLH40
MCLH43	MCLH43

NOV 2 1994
RECEIVED

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: James McCall Name: James McCall, Jr.

Date: 11/02/94 Title: Inorganics Manager

AR305421

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 22732

1. Sample Description (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (SAS) 7. Waste (SAS) 8. Other (SAS) (Specify)

2. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (SAS) (Specify) N. Not preserved

3. Region No.: III

Sampling Co.: CH2M Hill

5. Date Shipped: 10/4/94 Carrier: fedex

7. Date Received -- Received by: 10-5-94 Terry Forlan

Sampler (Name): Lynn E. Vogel

Airbill Number: 5945393742

Laboratory Contract Number: 68D20043 Unit Price: 100.00

Sampler Signature: Lynn E. Vogel

6. Ship To: ALI Associated Labs Inc. 806 North Batavia Orange CA 92668

8. Transfer to: Date Received:

Received by: 0000212

4. Type of Activity: Lead: SF, PRP, ST, FED; Pre-Remedial: PA, SSI, LSI; Remedial: RIFS, RD, RA, O&M, NPLD; Removal: CLEM, REMA, REM, OIL, UST

Contract Number: Price:

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - Mis Liq.	Non Water - Mis Liq.
MCLH00	5	L	G	6	X		X					3-1202561-62	SB527/500	10/04/94 0820	LN	CNC00	OK			
MCLH01	5	L	G	6	X		X					3-1202567-68	SB521/501	10/4/94 1030	LN	CNC01				
MCLH02	5	L	G	6	X		X					3-1202573-74	SB521/502	10/4/94 1030	LN	CNC02				
MCLH03	5	L	G	6	X		X					3-1202579-80	SB523/503	10/4/94 1355	LN	CNC03				
MCLH06	4	L	G	2,3	X		X					3-1202595-96	EB100494/506	10/4/94 1700	LN	CNC06				

Shipment for Case complete? (Y/N): Y

Page 1 of 1

Sample used for a spike and/or duplicate: MCLH00

Additional Sampler Signatures:

Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	10/4/94 1930				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none
		[signature]	10-5-94 9:40A		

Split Samples: ☐ Accepted (Signature) ☐ Declined

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I 019979

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 22732

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (SAS)
   7. Waste (SAS)
   8. Other (SAS) (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO_3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (SAS) (Specify)
   N. Not preserved

3. Region No.: III

Sampling Co.: CH2MHill

5. Date Shipped: 10/5/94 Carrier: fedex

7. Date Received -- Received by: 10/6/94 T. Boyd

Sampler (Name): Lynn C Vogel

Airbill Number: 5945393720

Laboratory Contract Number: 68D20043 Unit Price: 100.00

Sampler Signature: Lynn C Vogel

6. Ship To: ALI Associated Labs, In 806 North Batavia Orange CA 92668

8. Transfer to: Date Received:

Received by: 000211

Contract Number: Price:

4. Type of Activity: Lead: SF, PRP, ST, FED; Pre-Remedial: PA, SSI, LSI; Remedial: RIFS, RD, RA, O&M, NPLD; Removal: CLEM, REMA, REM, OIL, UST

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MS Liq.	Non Water - Ms Liq.
CNC04	5	L	G	6	X		X					3-1202585-86	SB520/504	10/5/94 0900	LN	CNC04				
MCLH																				
MCLH 07	5	L	G	6	X		X					3-1202805-06	SB518/507	10/5/94 1255	LN	CNC07				
MCLH 08	5	L	G	6	X		X					3-1202811-12	SB506/508	10/5/94 1505	LN	CNC08				
MCLH10	4	L	G	23	X		X					3-1202818-19	EB100594/510	10/5/94 1700	LN	CNC10				

Shipment for Case complete? (Y/N): Y

Page 1 of 1

Sample used for a spike and/or duplicate: —

Additional Sampler Signatures:

Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lynn C Vogel	10/5/94 1930				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none
			10/6/94 10:30		

Split Samples: ☐ Accepted (Signature) ☐ Declined

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AR305423

I 019980

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Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable)

Case No. 22137

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (SAS)
   7. Waste (SAS)
   8. Other (SAS) (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO_3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (SAS) (Specify)
   N. Not preserved

3. Region No. III

Sampling Co. CtrMtl

5. Date Shipped 10/7/94

Carrier fedex

7. Date Received -- Received by 10-8-94 T. Boylan

Sampler (Name) Lynn E. Vogel

Airbill Number 5945393683

Laboratory Contract Number 68D20043

Unit Price 100.00

Sampler Signature Lynn Vogel

6. Ship To ALI Associated Labs 806 North Batavia Orange CA 92668

8. Transfer to

Date Received

Received by 011209

Contract Number

Price

4. Type of Activity

Lead		Pre-Remedial		Remedial		Removal	
SF		PA		RIFS		CLEM	
PRP		SSI		RD		REMA	
ST		LSI		RA		REM	
FED				O&M		OIL	
				NPLD		UST	

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water – MIS Liq.	Non Water – MIS Liq.
MCLH 16	4	L	G	2,3	X		X					3-1202849,50	CB100794 / 516	10/7/94 1630	LV	CNC 16	OK			
MCLH 18	5	L	G	6	X		X					3-1202862,63	SB570 / 518	10/7/94 0950	LV	CNC 18				
MCLH 19	5	L	G	6	X		X					3-1202868,69	SB568 / 519	10/7/94 1130	LV	CNC 19				
MCLH 20	5	L	G	6	X		X					3-1202874,75	SB564 / 520	10/7/94 1545	LV	CNC 20				

Shipment for Case complete? (Y/N) Y

Page 1 of 1

Sample used for a spike and/or duplicate

Additional Sampler Signatures

Chain of Custody Seal Number

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	10/7/94 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
		[signature]	10/8/94 10:07		

Split Samples ☐ Accepted (Signature)
☐ Declined

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Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (If applicable):

Case No.: 22732

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Drill (SAS)
   7. Waste (SAS)
   8. Other (SAS) (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO_3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (SAS) (Specify)
   N. Not preserved

3. Region No.: III

Sampling Co.: CH2MHill

5. Date Shipped: 10/6/94 Carrier: Redox

7. Date Received -- Received by: 10-7-94 T. Boland

Sampler (Name): Lynn C. Vogel

Airbill Number: 5945393705

Laboratory Contract Number: 68D20043

Unit Price: 100.00

Sampler Signature: [signature]

6. Ship To: ALI Associated Lab Inc, 806 North Batavia Orange CA 92668

8. Transfer to:

Date Received:

Received by: 0000210

Contract Number:

Price:

4. Type of Activity

Lead		Pre-Remedial		Remedial		Removal	
SF		PRP		PA		RIFS		CLEM	
RRP		ST		SSI		RD		REMA	
FED		LSI		O&M		RA		REM	
				NPLD		OIL		UST	

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./ Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MIS Liq.	Non Water - Ms Liq.
MCLH 12	4	L	G	2,3	X		X					3-1202829,28	CB00694/S12	0694 1645	CN	CNC 12	OK			
MCLH 13	5	L	G	6	X		X					3-1202834,35	SB507/S13	10694 0920	CN	CNC 13				
MCLH 14	5	L	G	6	X		X					3-1202840,41	SB503/S14	0694 1115	CN	CNC 14				
MCLH 17	5	L	G	6	X		X					3-1202856,57	SB506/S17	10694 1535	CN	CNC 17				

Shipment for Case complete? (Y/N): Y

Page 1 of 1

Sample used for a spike and/or duplicate:

Additional Sampler Signatures:

Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	10/6/94 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
		[signature]	10-7-94 10:50		

Split Samples: ☐ Accepted (Signature) ☐ Declined

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AR305425

I 019981

original SDA - MCLHOX

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 22732

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (SAS)
   7. Waste (SAS)
   8. Other (SAS) (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO_3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (SAS) (Specify)
   N. Not preserved

3. Region No.: III

Sampling Co.: CH2M Hill

5. Date Shipped: 10/10/94

Carrier: Fedex

7. Date Received -- Received by: 10-11-94 Terry Boylan

Sampler (Name): Lynn L Vogel

Airbill Number: 5945393661

Laboratory Contract Number: 68D20043

Unit Price: 100.00

Sampler Signature: [signature]

6. Ship To: ALL Associated Lab, 806 North Batavia, Orange CA 92668

8. Transfer to:

Date Received:

Received by:

Contract Number:

Price:

4. Type of Activity

Lead		Pre-Remedial		Remedial		Removal	
SF				RIFS		CLEM	
PRP		PA		RD		REMA	
ST		SSI		RA		REM	
FED		LSI		O&M		OIL	
				NPLD		UST	

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MIS Liq.	Non Water - Mis Liq.
MCLH 21	5	L	G	6	X		X					3-1202880-81	SB563/521	10/8/94 1010	LN	CNC21	OK			
MCLH 22	5	L	G	6	X		X					3-1202886-87	SB559/522	10/8/94 1430	LN	CNC22				
MCLH 23	5	L	G	6	X		X					3-1202892-93	SB555/523	10/9/94 1000	LN	CNC23				
MCLH 25	4	L	G	2,3	X		X					3-1202962-63	EB100894/525	10/8/94 1600	LN	CNC25				
MCLH 26	5	L	G	6	X		X					3-1202898-99	SB556/526	10/9/94 1105	LN	CNC26				
MCLH 27	5	L	G	6	X		X					3-1202904-05	SB553/527	10/9/94 1400	LN	CNC27				
MCLH 28	5	L	G	6	X		X					3-1202910-11	SB550/528	10/10/94 0805	LN	CNC28				
MCLH 30	4	L	G	2,3	X		X					3-1202972-73	EB100994/530	10/9/94 1630	LN	CNC30				
MCLH 31	5	L	G	2,6	X		X					3-1202422-23	SB547/531	10/10/94 1000	LN	CNC31				
MCLH 32	5	L	G	6	X		X					3-1202928-29 3-1203094-95	SB540/532	10/10/94 1420	LN	CNC32				

Shipment for Case complete? (Y/N): Y

Page 1 of 2

Sample used for a spike and/or duplicate: MCLH32

Additional Sampler Signatures:

Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	10/10/94 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none
		[signature]	10/11/94	10:17 am	

Split Samples: ☐ Accepted (Signature) ☐ Declined

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EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (If applicable):

Case No.: 22732

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (SAS)
   7. Waste (SAS)
   8. Other (SAS) (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO_3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (SAS) (Specify)
   N. Not preserved

3. Region No.: III

Sampling Co.: CH2M Hill

5. Date Shipped: 10/10/94

Carrier: Fedex

7. Date Received -- Received by: 10-11-94 T. Boyd

Sampler (Name): Lynn E Vorel

Airbill Number: 5945396661

Laboratory Contract Number: 68D70043

Unit Price: 100.00

Sampler Signature:

6. Ship To: ALI Associated Lab 806 North Batavia Orange CA 92668

8. Transfer to:

Date Received:

Received by:

Contract Number:

Price:

4. Type of Activity

Lead		Pre-Remedial		Remedial		Removal	
SF				RIFS	✓	CLEM	
PRP		PA		RD		REMA	
ST		SSI		RA		REM	
FED		LSI		O&M		OIL	
				NPLD		UST	

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MS Liq.	Non Water - Ms Liq.
MCL1135	4	L	G	2,3	X		X					3-1202982-83	EB101094/535	10/10/94 1630	LN	CNC35	OK			

Shipment for Case complete? (Y/N): Y

Page 1 of 2 / 2

Sample used for a spike and/or duplicate:

Additional Sampler Signatures:

Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	10/10/94 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
			10-17-94 10:17AM		

Split Samples: ☐ Accepted (Signature) ☐ Declined

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0-1477

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 22132

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (SAS)
   7. Waste (SAS)
   8. Other (SAS) (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO_3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (SAS) (Specify)
   N. Not preserved

3. Region No.: III

Sampling Co.: CH2MHill

5. Date Shipped: 10/11/94 Carrier: Fedex

7. Date Received -- Received by: 10-12-94 T. Boylan

Sampler (Name): Lynn L. Vogel

Airbill Number: 5945934566

Laboratory Contract Number: 68D20043

Unit Price: 120.00

Sampler Signature: [signature]

6. Ship To: ALI Associated Labs 806 North Batavia Orange CA 92668

8. Transfer to:

Date Received:

Received by:

Contract Number:

Price:

4. Type of Activity

Lead		Pre-Remedial		Remedial		Removal	
SF				RIFS		CLEM	
PRP		PA		RD		REMA	
ST		SSI		RA		REM	
FED		LSI		O&M		OIL	
				NPLD		UST	

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc. Low Med High	C Sample Type: Comp./ Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/ Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/ Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MIS Liq.	Non Water - MIS Liq.
CNC																				
MCLH33	5	L	G	6	X		X					3-1202934-35	SB542/533	10/11/94 0800	LV	CNC33	OK			
MCLH36	5	L	G	6	X		X					3-1202940-41	SB528/536	10/11/94 1000	LV	CNC36				
MCLH37	5	L	G	6	X		X					3-1202946-47	SB538/537	10/11/94 1400	LV	CNC37				
MCLH40	5	L	G	2,3	X		X					3-1202992-93	EB101194/26	10/11/94 1650	LV	CNC40				
MCLH43	5	L	G	6	X		X					3-1202998-99	SB542/543	10/11/94 0800	LV	MC43	OK			

Shipment for Case complete? (Y/N): Y

Page 1 of 1

Sample used for a spike and/or duplicate:

Additional Sampler Signatures:

Chain of Custody Seal Number:

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	10/11/94 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
		[signature]	10-12-94 10:05		

Split Samples: ☐ Accepted (Signature) ☐ Declined

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EPA SAMPLE SHIPPING LOG

ARC/CH2

(REQUIRED FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM)

PROJECT SITE NAME: Boarhead Farms ; EPA PROJ. OFFICER: Harry Harbold
RAS NO. 22732 ; DAS NO. ; TASK OR SET NO.
PROJECT SITE LEADER: Donna Conway ; PHONE NO. (215) 563 4280
PROJECT SAMPLE COORDINATOR: Julie Lovett ; PHONE NO. (P3) 471 1441

DAS REQUEST (DETAILS REQUIRED) (10)

Preservation –

QC SAMPLE INFORMATION AND/OR COMMENTS	CONC. (LOW/ MED./ HIGH)	SAMPLE PHASE (AQ/ SOL.)	TYPE OF REQUEST (ORG. DIO, OR INOR) DAS	EPA SAMPLE No.	ORGANICS OR INORGANICS: LAB NAME	DATE SHIPPED	DATA RECEIVED (XX-OUT ITEMS NOT REQUESTED): VOA	BNA	PEST	TCDD	EP METALS	CN	LAB NAME	DAS REQUEST (ITEMIZE)	DATE SHIPPED	DATA REC'D
(2)	(3)	(4)	(5)	(6)	(7)	(8)	←			(9)		→	(11)	(12)	(13)	
MSMSD	L	SOL	INORG	MCLH 00	ALI	10/4/94					✓	✓				
—				MCLH 01							✓	✓				
Dof MCLH01				MCLH 02							✓	✓				
—				MCLH 03							✓	✓				
equipblank		AQ		MCLH 06							✓	✓	Rec'd 10-31-94			
—	L	SOL	INORG	MCLH 04	ALI	10/5/94					✓	✓				
—				MCLH 07							✓	✓				
—				MCLH 08							✓	✓				
equipblank		AQ		MCLH 10							✓	✓	Rec'd 10-31-94			
equipblank	L	AQ	INORG	MCLH 12	ALI	10/6/94					✓	✓				
—		SOL		MCLH 13							✓	✓				
—				MCLH 14							✓	✓				
—				MCLH 17							✓	✓	Rec'd 10-31-94			
equipblank	L	AQ	INORG	MCLH 16	ALI	10/7/94					✓	✓				
—		SOL		MCLH 18							✓	✓	Rec'd 10-31-94			

FINAL SAMPLING: YES ☐ NO ☒ : FINAL SHIPPING DATE: 10/11/94

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PAGE 2 OF 2

(1)

EPA SAMPLE SHIPPING LOG

ARCTCH2

(REQUIRED FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM)

PROJECT SITE NAME: Boorhead Farms ; EPA PROJ. OFFICER: Harry Harbold
RAS NO. 22732 ; SAS NO. ; TASK OR SET NO.
PROJECT SITE LEADER: Donna Connery ; PHONE NO. (215) 563-4220
PROJECT SAMPLE COORDINATOR: Julie Lovett ; PHONE NO. (703) 471-1491

SAS REQUEST (DETAILS REQUIRED) (10)

Preservation –

QC SAMPLE INFORMATION AND/OR COMMENTS	CONC. (LOW/ MED./ HIGH)	SAMPLE PHASE (AQ/ SOL.)	TYPE OF REQUEST (ORG. DIO. OR INOR.) SAS	EPA SAMPLE NO.	ORGANICS OR INORGANICS: LAB NAME	DATE SHIPPED	DATA RECEIVED (XX-OUT ITEMS NOT REQUESTED): VOA	BNA	PEST	TCDD	METALS	CN	SAS REQUEST (ITEMIZE) LAB NAME	SAS REQUEST (ITEMIZE) DATE SHIPPED	DATA REC'D.
(2)	(3)	(4)	(5)	(6)	(7)	(8)	←			(9)		→	(11)	(12)	(13)
–	L	SOL	INORG	MCLH 19	ALL	10/7/94					✓	✓			
–	↓	↓	↓	MCLH 20	↓	↓					✓	✓	Rec'd 10-31-94 JS		
–	L	SOL	INORG	MCLH 21	ALL	10/10/94					✓	✓			
–		↓		MCLH 23							✓	✓	Rec'd 10-31-94 JS		
equipblank		AQ		MCLH 25											
–		SOL		MCLH 22							✓	✓	Rec'd 10-31-94 JS		
–				MCLH 26											
–				MCLH 27											
–		↓		MCLH 28											
equipblank		AQ		MCLH 30											
–		SOL		MCLH 31											
MS/MSD		↓		MCLH 32	↓	↓									
equipblank	↓	AQ	↓	MCLH 35											
Dup of MCLH 33	L	SOL	INORG	MCLH 43	ALL	10/11/94									
–	L	SOL		MCLH 33											
–				MCLH 36											
–		↓		MCLH 37											
equipblank	↓	AQ	↓	MCLH 40	↓	↓									

FINAL SAMPLING: YES ☒ ; NO ☐ ; FINAL SHIPPING DATE: 10/11/94

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U.S. EPA - CLP

3
BLANKS

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG 000027

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	37.8	U	37.8	U	37.8	U	37.8	U	7.560	U	P
Antimony	25.5	U	25.5	U	25.5	U	25.5	U	5.100	U	P
Arsenic	3.5	B	2.6	U	-3.3	B	2.6	U	0.520	U	P
Barium	6.6	U	6.6	U	6.6	U	6.6	U	1.320	U	P
Beryllium	1.5	U	1.5	U	1.5	U	1.5	U	0.300	U	P
Cadmium	2.2	U	2.2	U	2.2	U	2.2	U	0.440	U	[illegible]
Calcium	67.9	U	67.9	U	67.9	U	67.9	U	-16.942	B	P
Chromium	2.5	U	2.5	U	2.5	U	2.5	U	0.506	B	P
Cobalt	10.4	U	10.4	U	10.4	U	10.4	U	2.080	U	P
Copper	2.1	B	1.8	U	1.8	U	2.6	B	0.360	U	P
Iron	12.9	U	12.9	U	12.9	U	12.9	U	2.580	U	P
Lead	1.2	U	1.2	U	1.2	U	1.2	U	-0.385	B	P
Magnesium	33.5	U	33.5	U	33.5	U	33.5	U	6.700	U	P
Manganese	1.3	U	1.3	U	1.3	U	1.3	U	0.260	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	13.6	U	13.6	U	13.6	U	13.6	U	-3.146	B	P
Potassium	221.0	U	-389.8	B	-395.2	B	221.0	U	-308.682	B	P
Selenium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Silver	1.6	U	2.5	B	1.6	U	1.9	B	0.378	B	P
Sodium	31.6	U	31.6	U	31.6	U	31.6	U	6.320	U	P
Thallium	2.9	U	2.9	U	-5.0	B	2.9	U	0.580	U	P
Vanadium	4.2	U	4.2	U	4.2	U	4.2	U	-2.576	B	P
Zinc	2.3	U	2.3	U	2.3	U	2.3	U	-1.006	B	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	1.244	U	C

U.S. EPA - CLP

3
BLANKS

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Preparation Blank Matrix (soil/water): WATER

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

000028

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			72.8	B	56.9	B			37.800	U	P
Antimony			25.5	U	25.5	U			25.500	U	P
Arsenic			2.6	U	2.6	U			2.600	U	P
Barium			6.6	U	6.6	U			6.600	U	P
Beryllium			1.5	U	1.5	U			1.500	U	P
Cadmium			2.2	U	2.2	U			2.200	U	P
Calcium			67.9	U	67.9	U			67.900	U	P
Chromium			2.5	U	2.5	U			2.500	U	P
Cobalt			10.4	U	10.4	U			10.400	U	P
Copper			1.8	U	1.8	U			1.800	U	P
Iron			12.9	U	12.9	U			12.900	U	P
Lead			1.2	U	1.2	U			1.200	U	P
Magnesium			33.5	U	33.5	U			33.500	U	P
Manganese			1.3	U	1.3	U			1.300	U	P
Mercury			0.2	U					0.200	U	CV
Nickel			13.6	U	13.6	U			13.600	U	P
Potassium			221.0	U	221.0	U			-292.430	B	P
Selenium			3.0	U	3.0	U			3.000	U	P
Silver			1.6	U	1.8	B			1.660	B	P
Sodium			31.6	U	31.6	U			31.600	U	P
Thallium			2.9	U	-5.4	B			-3.700	B	P
Vanadium			4.2	U	4.2	U			4.200	U	P
Zinc			2.3	U	2.3	U			-4.110	B	P
Cyanide			10.0	U					5.000	U	C

FORM III - IN

ILMO2.1

AR305432

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MCLH00S

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL__ 0001031 Level (low/med): LOW___

% Solids for Sample: _82.6

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	68.3425		5.9945	U	114.21	59.8	N	P
Arsenic	75-125	481.3034		0.6112	U	456.85	105.4		P
Barium	75-125	511.7730		66.1746		456.85	97.5		P
Beryllium	75-125	10.5053		0.8933	B	11.42	84.2		P
Cadmium	75-125	9.9662		0.5172	U	11.42	87.3		P
Calcium									NR
Chromium		314.9961		266.4073		45.69	106.3		P
Cobalt	75-125	125.2296		26.7731		114.21	86.2		P
Copper	75-125	93.8759		37.8194		57.11	98.2		P
Iron									NR
Lead	75-125	133.2937		16.1866		114.21	102.5		P
Magnesium									NR
Manganese		641.0092		657.8551		114.21	-14.7		P
Mercury	75-125	0.4036		0.0931	U	0.45	89.7		CV
Nickel	75-125	163.3240		58.4052		114.21	91.9		P
Potassium									NR
Selenium	75-125	489.1452		3.2800		456.85	106.4		P
Silver	75-125	7.9446		0.3761	U	11.42	69.6	N	P
Sodium									NR
Thallium	75-125	491.1188		1.3423	B	456.85	107.2		P
Vanadium	75-125	190.8036		79.4283		114.21	97.5		P
Zinc	75-125	128.5440		35.2759		114.21	81.7		P
Cyanide	75-125	24.2694		1.3633	U	28.15	86.2		C

Comments:
GRAVEL

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MCLH00D

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ 040033 Level (low/med): _LOW__

% Solids for Sample: _82.6 % Solids for Duplicate: __84.5

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		28158.8260		31789.5139		12.1		P
Antimony		5.9945	U	10.4791	B	200.0		P
Arsenic		0.6112	U	0.9411	B	200.0		P
Barium	47.0	66.1746		75.9639		13.8		P
Beryllium		0.8933	B	0.8847	B	1.0		P
Cadmium		0.5172	U	0.5122	U			P
Calcium	1175.4	2972.7192		3866.3019		26.1		P
Chromium		266.4073		266.3345		0.0		P
Cobalt	11.8	26.7731		34.7039		25.8		P
Copper		37.8194		39.3369		3.9		P
Iron		26431.2678		27011.0612		2.2		P
Lead		16.1866		15.9871		1.2		P
Magnesium	1175.4	2575.4296		2759.7923		6.9		P
Manganese		657.8551		951.4598		36.5	*	P
Mercury		0.0931	U	0.0931	U			CV
Nickel		58.4052		68.5742		16.0		P
Potassium		82.7288	B	317.2122	B	117.3		P
Selenium	1.2	3.2800		2.7130		18.9		P
Silver		0.3761	U	0.3725	U			P
Sodium		506.0862	B	700.1886	B	32.2		P
Thallium		1.3423	B	1.2831	B	4.5		P
Vanadium		79.4283		84.8040		6.5		P
Zinc		35.2759		40.2636		13.2		P
Cyanide		1.3633	U	1.4210	U			C

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ICP SERIAL DILUTION

EPA SAMPLE NO.

MCLH00L

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

Matrix (soil/water): SOIL_ 0000036 Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	119784.83		123766.50		3.3		P
Antimony	25.50	U	127.50	U			P
Arsenic	2.60	U	13.00	U			P
Barium	281.50		279.75	B	0.6		P
Beryllium	3.80	B	7.50	U	100.0		P
Cadmium	2.20	U	11.00	U			P
Calcium	12645.65		14444.00	B	14.2	E	P
Chromium	1133.27		1216.60		7.4		P
Cobalt	113.89		111.65	B	2.0		P
Copper	160.88		183.05		13.8	E	P
Iron	112435.97		119535.95		6.3		P
Lead	68.86		73.33		6.5		P
Magnesium	10955.62		11675.60	B	6.6		P
Manganese	2798.45		2947.15		5.3		P
Mercury							NR
Nickel	248.45		337.25		35.7		P
Potassium	351.92	B	1105.00	U	100.0		P
Selenium	13.95		28.96		107.6		P
Silver	1.60	U	8.00	U			P
Sodium	2152.84	B	4617.65	B	114.5	E	P
Thallium	5.71	B	14.50	U	100.0		P
Vanadium	337.88		349.35		3.4		P
Zinc	150.06		283.65		89.0	E	P

U.S. EPA - CLP

10
Instrument Detection Limits (Quarterly)

Lab Name: ASSOCIATED LABORATORIES Contract: 68D20043

Lab Code: ALI Case No.: 22732 SAS No.: SDG No.: MCLH00

ICP ID Number: ICAP61 Date: 10/15/94

Flame AA ID Number :

Furnace AA ID Number :

000037

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	237.30		200	37.8	P
Antimony	206.80		60	25.5	P
Arsenic			10		NR
Barium	493.40		200	6.6	P
Beryllium	234.80		5	1.5	P
Cadmium	228.80		5	2.2	P
Calcium	315.80		5000	67.9	P
Chromium	267.70		10	2.5	P
Cobalt	228.60		50	10.4	P
Copper	324.70		25	1.8	P
Iron	238.20		100	12.9	P
Lead			3		NR
Magnesium	279.00		5000	33.5	P
Manganese	257.60		15	1.3	P
Mercury			0.2		NR
Nickel	231.60		40	13.6	P
Potassium	766.40		5000	221.0	P
Selenium			5		NR
Silver	328.07		10	1.6	P
Sodium	589.50		5000	31.6	P
Thallium			10		NR
Vanadium	292.40		50	4.2	P
Zinc	213.80		20	2.3	P

Comments:

U.S. EPA - CLP

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Instrument Detection Limits (Quarterly)

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

ICP ID Number: _____ Date: 10/15/94

Flame AA ID Number : HG-4_____

Furnace AA ID Number : _____

000038

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.2	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

FORM X - IN

ILMO2

AR305437

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH00

ICP ID Number: 61E-TA_____ Date: 10/15/94

Flame AA ID Number : _____

Furnace AA ID Number : _____

000039

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	189.04		10	2.6	P
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead	220.35		3	1.2	P
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.02		5	3.0	P
Silver			10		NR
Sodium			5000		NR
Thallium	190.86		10	2.9	P
Vanadium			50		NR
Zinc			20		NR

Comments:

FORM X - IN ILMO2

AR305438

U.S. EPA - CLP

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PREPARATION LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.:_22732_ SAS No.: _____ SDG No.:MCLH00

Method: P_

000045

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	10/20/94	1.00	200
LCSW	10/20/94		100
MCLH00	10/20/94	1.03	200
MCLH00D	10/20/94	1.04	200
MCLH00S	10/20/94	1.06	200
MCLH01	10/20/94	1.04	200
MCLH02	10/20/94	1.08	200
MCLH03	10/20/94	1.08	200
MCLH04	10/20/94	1.07	200
MCLH06	10/20/94		100
MCLH07	10/20/94	1.04	200
MCLH08	10/20/94	1.03	200
MCLH10	10/20/94		100
MCLH12	10/20/94		100
MCLH13	10/20/94	1.10	200
MCLH14	10/20/94	1.02	200
MCLH16	10/20/94		100
MCLH17	10/20/94	1.08	200
MCLH18	10/20/94	1.05	200
MCLH19	10/20/94	1.07	200
MCLH20	10/20/94	1.03	200
MCLH21	10/20/94	1.02	200
MCLH22	10/20/94	1.02	200
MCLH23	10/20/94	1.08	200
PBS	10/20/94	1.00	200
PBW	10/20/94		100

FORM XIII - IN ILMO2.1

AR305439

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13.
PREPARATION LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.:_22732_ SAS No.: _____ SDG No.:MCLH00

Method: CV

000046

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	10/26/94	0.05	100
MCLH00	10/26/94	0.26	100
MCLH00D	10/26/94	0.26	100
MCLH00S	10/26/94	0.27	100
MCLH01	10/26/94	0.25	100
MCLH02	10/26/94	0.26	100
MCLH03	10/26/94	0.24	100
MCLH04	10/26/94	0.27	100
MCLH06	10/26/94		100
MCLH07	10/26/94	0.27	100
MCLH08	10/26/94	0.26	100
MCLH10	10/26/94		100
MCLH12	10/26/94		100
MCLH13	10/26/94	0.27	100
MCLH14	10/26/94	0.27	100
MCLH16	10/26/94		100
MCLH17	10/26/94	0.24	100
MCLH18	10/26/94	0.26	100
MCLH19	10/26/94	0.26	100
MCLH20	10/26/94	0.27	100
MCLH21	10/26/94	0.28	100
MCLH22	10/26/94	0.27	100
MCLH23	10/26/94	0.25	100
PBS	10/26/94	0.20	100
PBW	10/26/94		100

FORM XIII - IN ILMO2.1

AR305440

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PREPARATION LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.:_22732_ SAS No.: _____ SDG No.:MCLH00

Method: C_

000047

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	10/14/94	2.02	250
MCLH00	10/14/94	2.22	250
MCLH00D	10/14/94	2.13	250
MCLH00S	10/14/94	2.15	250
MCLH01	10/14/94	2.03	250
MCLH02	10/14/94	2.11	250
MCLH03	10/14/94	2.17	250
MCLH04	10/14/94	2.30	250
MCLH06	10/14/94		250
MCLH07	10/14/94	2.19	250
MCLH08	10/14/94	2.44	250
MCLH10	10/14/94		250
MCLH12	10/14/94		250
MCLH13	10/14/94	2.44	250
MCLH14	10/14/94	2.19	250
MCLH16	10/14/94		250
MCLH17	10/14/94	2.47	250
MCLH18	10/14/94	2.53	250
MCLH19	10/14/94	2.41	250
MCLH20	10/14/94	2.48	250
MCLH21	10/14/94	2.59	250
MCLH22	10/14/94	2.30	250
MCLH23	10/14/94	2.22	250
PBS	10/14/94	2.01	250
PBW	10/14/94		250

FORM XIII - IN ILMO2.1

AR305441

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH00

Instrument ID Number: ICAP61_____ Method: P_

Start Date: 10/25/94 End Date: 10/25/94

000048

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	0934		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0937																				X					
S	1.00	0939		X	X		X	X	X		X	X	X	X			X		X						X	X	
S	1.00	0942								X						X				X			X				
ICV	1.00	0944		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICB	1.00	0946		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CRI	1.00	0949			X			X	X		X	X	X				X		X			X			X	X	
ICSA	1.00	0952			X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSAB	1.00	0955			X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSA	10.00	0957		X																							
ICSAB	10.00	1000		X																							
CCV	1.00	1002		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1004		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
PBS	1.00	1007		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH00	1.00	1010		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH00D	1.00	1013		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH00S	1.00	1016			X		X	X	X		X	X	X				X		X			X			X	X	
MCLH01	1.00	1019		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH02	1.00	1021		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH03	1.00	1024		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH04	1.00	1027		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH07	1.00	1030		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH00L	5.00	1032		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV	1.00	1034		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1036		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH00A	1.00	1042			X																						
MCLH08	1.00	1048		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH13	1.00	1051		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH14	1.00	1053		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH17	1.00	1056		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH18	1.00	1100		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH19	1.00	1103		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	

FORM XIV - IN ILMO2.1

AR305442

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH00

Instrument ID Number: ICAP61_____ Method: P_ 000049

Start Date: 10/25/94 End Date: 10/25/94

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
LCSS	1.00	1108		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH20	1.00	1112		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
LCSW	1.00	1115		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
CCV	1.00	1116		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
CCB	1.00	1118		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
PBW	1.00	1121		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH21	1.00	1124		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH22	1.00	1127		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH23	1.00	1129		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH06	1.00	1132		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH10	1.00	1135		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH12	1.00	1138		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
MCLH16	1.00	1140		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
CRI	1.00	1143			X	_		X	X		X	X	X		_		X	_	X		_	X		_	X	X	_
CCV	1.00	1145		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
CCB	1.00	1146		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
ICSA	1.00	1149		_	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
ICSAB	1.00	1152		_	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
ICSA	10.00	1155		X	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ICSAB	10.00	1157		X	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
CCV	1.00	1159		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_
CCB	1.00	1201		X	X	_	X	X	X	X	X	X	X	X	_	X	X	_	X	X	_	X	X	_	X	X	_

FORM XIV - IN ILMO2.1

AR305443

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH00

Instrument ID Number: 61E-TA_____ Method: P_

000054

Start Date: 10/24/94 End Date: 10/24/94

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	1234				X									X						X			X			
S	1.00	1237				X									X						X			X			
S	1.00	1239																									
S	1.00	1240																									
S	1.00	1241																									
S	1.00	1243																									
S	1.00	1244																									
S	1.00	1245																									
ICV	1.00	1246				X									X						X			X			
ICB	1.00	1248				X									X						X			X			
CRI	1.00	1254				X									X						X			X			
ICSA	10.00	1256				X									X						X			X			
ICSAB	10.00	1301				X									X						X			X			
CCV	1.00	1304				X									X						X			X			
CCB	1.00	1306				X									X						X			X			
PBS	1.00	1309				X									X						X			X			
PBW	1.00	1311				X									X						X			X			
LCSW	1.00	1313				X									X						X			X			
LCSS	1.00	1316																			X			X			
LCSS	10.00	1318				X									X												
MCLH00	1.00	1320				X									X						X			X			
MCLH00D	1.00	1323				X									X						X			X			
MCLH00S	1.00	1325													X												
MCLH00S	5.00	1327				X															X			X			
MCLH00L	5.00	1330				X									X						X			X			
CCV	1.00	1332				X									X						X			X			
CCB	1.00	1334				X									X						X			X			
MCLH01	1.00	1337				X									X						X			X			
MCLH02	1.00	1339				X									X						X			X			
MCLH03	1.00	1341				X									X						X			X			
MCLH04	1.00	1344				X									X						X			X			
MCLH06	1.00	1346				X									X						X			X			

FORM XIV - IN ILMO2.1

AR305444

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH00

Instrument ID Number: 61E-TA_____ Method: P_ 011055

Start Date: 10/24/94 End Date: 10/24/94

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
MCLH07	1.00	1349				X									X						X			X			
MCLH08	1.00	1351				X									X						X			X			
MCLH10	1.00	1355				X									X						X			X			
MCLH13	1.00	1357				X									X						X			X			
MCLH12	1.00	1359				X									X						X			X			
CCV	1.00	1402				X									X						X			X			
CCB	1.00	1404				X									X						X			X			
MCLH14	1.00	1407				X									X						X			X			
MCLH16	1.00	1409				X									X						X			X			
MCLH17	1.00	1411				X									X						X			X			
MCLH18	1.00	1414				X									X						X			X			
MCLH19	1.00	1416				X									X						X			X			
MCLH20	1.00	1418				X									X						X			X			
MCLH21	1.00	1421				X									X						X			X			
MCLH22	1.00	1423				X									X						X			X			
MCLH23	1.00	1425				X									X						X			X			
CCV	1.00	1428				X									X						X			X			
CCB	1.00	1430				X									X						X			X			
CRI	1.00	1432				X									X						X			X			
ICSA	10.00	1436				X									X						X			X			
ICSAB	10.00	1438				X									X						X			X			
CCV	1.00	1441				X									X						X			X			
CCB	1.00	1443				X									X						X			X			

FORM XIV - IN ILM.1

AR305445

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3
BLANKS

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Preparation Blank Matrix (soil/water): SOIL_

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

0 018

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	37.8	U	37.8	U	37.8	U	37.8	U	22.214	B	P
Antimony	27.4	B	25.5	U	25.5	U	25.5	U	5.100	U	P
Arsenic	2.6	U	2.6	U	2.6	U	2.6	U	0.520	U	P
Barium	6.6	U	6.6	U	6.6	U	6.6	U	1.320	U	P
Beryllium	1.5	U	1.5	U	1.5	U	1.5	U	0.300	U	P
Cadmium	2.2	U	2.2	U	2.2	U	2.2	U	0.440	U	P
Calcium	67.9	U	67.9	U	67.9	U	67.9	U	13.580	U	P
Chromium	2.6	B	2.5	U	2.5	U	2.5	U	0.500	U	P
Cobalt	10.4	U	10.4	U	10.4	U	10.4	U	2.080	U	P
Copper	1.8	U	1.8	U	1.8	U	1.8	U	0.360	U	P
Iron	12.9	U	12.9	U	12.9	U	12.9	U	2.580	U	P
Lead	-1.4	B	1.2	U	1.2	U	-1.7	B	0.240	U	P
Magnesium	33.5	U	33.5	U	33.5	U	33.5	U	6.700	U	P
Manganese	1.3	U	1.3	U	1.5	B	1.3	U	0.260	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	13.6	U	13.6	U	13.6	U	13.6	U	2.720	U	P
Potassium	221.0	U	-263.4	B	446.9	B	221.0	U	-164.970	B	P
Selenium	3.0	U	-4.3	B	4.8	B	3.0	U	0.600	U	P
Silver	1.6	U	1.6	U	1.6	U	1.6	U	0.320	U	P
Sodium	31.6	U	31.6	U	31.6	U	31.6	U	6.320	U	P
Thallium	2.9	U	2.9	U	4.1	B	2.9	U	0.580	U	P
Vanadium	4.2	U	4.2	U	4.2	U	4.2	U	-1.658	B	P
Zinc	2.6	B	3.3	B	3.5	B	4.8	B	0.748	B	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	1.250	U	C

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3
BLANKS

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_ 0 019

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			37.8	U					37.800	U	P
Antimony			25.5	U					25.500	U	P
Arsenic			-2.7	B					2.600	U	P
Barium			6.6	U					6.600	U	P
Beryllium			1.5	U					1.500	U	[illegible]
Cadmium			2.6	B					2.200	U	[illegible]
Calcium			67.9	U					176.590	B	P
Chromium			2.5	U					2.500	U	P
Cobalt			10.4	U					10.400	U	P
Copper			1.8	U					2.430	B	P
Iron			19.6	B					16.160	B	P
Lead			1.2	U					1.200	U	P
Magnesium			50.7	B					33.500	U	P
Manganese			1.9	B					1.510	B	P
Mercury									0.200	U	CV
Nickel			13.6	U					13.600	U	P
Potassium			263.7	B					435.700	B	P
Selenium			3.0	U					3.324	B	P
Silver			1.6	U					1.600	U	P
Sodium			31.6	U					83.500	B	P
Thallium			3.2	B					2.900	U	P
Vanadium			4.2	U					4.200	U	P
Zinc			6.2	B					6.160	B	P
Cyanide									5.000	U	C

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MCLH32S

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

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

% Solids for Sample: _80.9

0 022

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	53.1026		6.0039	U	123.61	43.0	N	P
Arsenic	75-125	493.6897		2.1772	B	494.44	99.4		P
Barium	75-125	585.6638		103.3327		494.44	97.6		P
Beryllium	75-125	13.5476		1.7800		12.36	95.2		P
Cadmium	75-125	17.3201		5.0221		12.36	99.5		P
Calcium									NR
Chromium		642.2151		639.8823		49.44	4.7		P
Cobalt	75-125	165.8467		46.3217		123.61	96.7		P
Copper	75-125	241.3770		193.2121		61.80	77.9		P
Iron									NR
Lead	75-125	151.9617		31.7523		123.61	97.2		P
Magnesium									NR
Manganese		1209.2089		1119.5479		123.61	72.5		P
Mercury	75-125	0.6180		0.1978		0.52	80.8		CV
Nickel	75-125	220.7194		119.9341		123.61	81.5		P
Potassium									NR
Selenium	75-125	512.8603		0.7063	U	494.44	103.7		P
Silver	75-125	12.3016		2.1120	B	12.36	82.4		P
Sodium									NR
Thallium	75-125	485.5661		1.2187	B	494.44	98.0		P
Vanadium	75-125	247.1595		125.9898		123.61	98.0		P
Zinc	75-125	217.5525		109.2189		123.61	87.6		P
Cyanide	75-125	28.8004		4.7006		27.84	86.6		C

Comments:
ROOTS

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6
DUPLICATES

EPA SAMPLE NO.

MCLH32D

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

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

% Solids for Sample: _80.9 % Solids for Duplicate: __81.1

0 024

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		29962.6135		30871.9145		3.0		P
Antimony		6.0039	U	6.0616	U			P
Arsenic		2.1772	B	1.4907	B	37.4		P
Barium	47.1	103.3327		103.7059		0.4		P
Beryllium	1.2	1.7800		1.7686		0.6		P
Cadmium	1.2	5.0221		3.6726		31.0	*	P
Calcium	1177.2	2594.9567		2343.6531		10.2		P
Chromium		639.8823		620.2030		3.1		P
Cobalt	11.8	46.3217		46.5104		0.4		P
Copper		193.2121		196.2703		1.6		P
Iron		40468.9340		41523.6807		2.6		P
Lead		31.7523		31.5558		0.6		P
Magnesium	1177.2	2063.1491		2215.8624		7.1		P
Manganese		1119.5479		1148.0460		2.5		P
Mercury	0.1	0.1978		0.1373		36.1		CV
Nickel		119.9341		116.6207		2.8		P
Potassium		656.0080	B	722.6514	B	9.7		P
Selenium		0.7063	U	0.7131	U			P
Silver	2.4	2.1120	B	3.4397		47.8		P
Sodium		144.0885	B	184.1281	B	24.4		P
Thallium		1.2187	B	1.0229	B	17.5		P
Vanadium		125.9898		130.3556		3.4		P
Zinc		109.2189		111.0036		1.6		P
Cyanide	1.5	4.7006		5.0890		7.9		C

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9

ICP SERIAL DILUTION

EPA SAMPLE NO.

MCLH32L

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.: MCLH25

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

0 028

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	127258.71		131199.55		3.1		P
Antimony	25.50	U	127.50	U			P
Arsenic	9.25	B	13.00	U	100.0		P
Barium	438.88		447.40	B	1.9		P
Beryllium	7.56		9.15	B	21.0		P
Cadmium	21.33		30.70		43.9		P
Calcium	11021.43		13662.00	B	24.0	E	P
Chromium	2717.74		2852.50		5.0		P
Cobalt	196.74		169.30	B	13.9		P
Copper	820.62		821.15		0.1		P
Iron	171881.68		182061.65		5.9		P
Lead	134.86		140.82		4.4		P
Magnesium	8762.71		9370.35	B	6.9		P
Manganese	4755.00		4976.35		4.7		P
Mercury							NR
Nickel	509.39		497.20		2.4		P
Potassium	2786.23	B	4847.15	B	74.0		P
Selenium	3.00	U	15.00	U			P
Silver	8.97	B	8.00	U	100.0		P
Sodium	611.98	B	2370.45	B	287.3		P
Thallium	5.18	B	26.40	B	409.7		P
Vanadium	535.11		557.35		4.2		P
Zinc	463.88		522.80		12.7	E	P

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13
PREPARATION LOG

0 037

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.:_22732_ SAS No.: _____ SDG No.:MCLH25

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	10/18/94	1.00	200
MCLH26	10/18/94	1.10	200
MCLH27	10/18/94	1.06	200
MCLH28	10/18/94	1.07	200
MCLH31	10/18/94	1.03	200
MCLH32	10/18/94	1.05	200
MCLH32D	10/18/94	1.04	200
MCLH32S	10/18/94	1.00	200
MCLH33	10/18/94	1.01	200
MCLH36	10/18/94	1.01	200
MCLH37	10/18/94	1.05	200
MCLH43	10/18/94	1.05	200
PBS	10/18/94	1.00	200

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PREPARATION LOG

0039

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.:_22732_ SAS No.: _____ SDG No.:MCLH25

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	10/27/94	0.05	100
MCLH26	10/27/94	0.28	100
MCLH27	10/27/94	0.27	100
MCLH28	10/27/94	0.25	100
MCLH31	10/27/94	0.26	100
MCLH32	10/27/94	0.25	100
MCLH32D	10/27/94	0.27	100
MCLH32S	10/27/94	0.24	100
MCLH33	10/27/94	0.24	100
MCLH36	10/27/94	0.25	100
MCLH37	10/27/94	0.26	100
MCLH43	10/27/94	0.24	100
PBS	10/27/94	0.20	100

AR305452

U.S. EPA - CLP

13
PREPARATION LOG

0041

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.:_22732_ SAS No.: _____ SDG No.:MCLH25

Method: C_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	10/13/94	2.01	250
MCLH26	10/13/94	2.49	250
MCLH27	10/13/94	2.40	250
MCLH28	10/13/94	2.21	250
MCLH31	10/13/94	2.33	250
MCLH32	10/13/94	2.13	250
MCLH32D	10/13/94	2.18	250
MCLH32S	10/13/94	2.22	250
MCLH33	10/13/94	2.17	250
MCLH36	10/13/94	2.36	250
MCLH37	10/13/94	2.48	250
MCLH43	10/13/94	2.23	250
PBS	10/13/94	2.00	250

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ANALYSIS RUN LOG

0 043

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH25

Instrument ID Number: ICAP61_____ Method: P_

Start Date: 10/19/94 End Date: 10/19/94

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	0937		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0940																				X					
S	1.00	0943		X	X		X	X	X		X	X	X	X			X		X						X	X	
S	1.00	0947								X						X				X			X				
ICV	1.00	0949		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICB	1.00	0951		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CRI	1.00	0954			X			X	X		X	X	X				X		X			X			X	X	
ICSA	1.00	0957			X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSAB	1.00	1002			X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSA	10.00	1005		X																							
ICSAB	10.00	1008		X																							
CCV	1.00	1010		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1012		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
PBS	1.00	1015		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
LCSS	1.00	1028		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH32	1.00	1033		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH32D	1.00	1036		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH32S	1.00	1039			X		X	X	X		X	X	X				X		X			X			X	X	
MCLH26	1.00	1043		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH27	1.00	1045		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH28	1.00	1049		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH31	1.00	1051		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH32L	5.00	1054		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV	1.00	1057		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1059		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH32A	1.00	1102											X														
MCLH32A	1.00	1105			X																						
MCLH33	1.00	1108			X		X	X	X	X	X	X	X			X	X		X	X		X	X		X	X	
MCLH36	1.00	1111		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH37	1.00	1114		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH43	1.00	1117		X	X		X	X	X	X	X	X	X			X	X		X	X		X	X		X	X	
MCLH30	1.00	1120		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	

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ANALYSIS RUN LOG

0 04.

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH25

Instrument ID Number: ICAP61_____ Method: P_

Start Date: 10/19/94 End Date: 10/19/94

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
MCLH25	1.00	1123		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH35	1.00	1125		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
LCSW	1.00	1128		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV	1.00	1130		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1133		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
PBW	1.00	1136		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH40	1.00	1138		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MCLH33	5.00	1141		X										X													
MCLH43	5.00	1144												X													
CRI	1.00	1149			X			X	X		X	X	X				X		X			X			X	X	
ICSA	1.00	1151			X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSAB	1.00	1154			X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSA	10.00	1157		X																							
ICSAB	10.00	1200		X																							
CCV	1.00	1202		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB	1.00	1204		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	

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ANALYSIS RUN LOG

0 047

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH25

Instrument ID Number: 61E-TA_____ Method: P_

Start Date: 10/19/94 End Date: 10/19/94

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	0852		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
S	1.00	0855		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
S	1.00	0857		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	1.00	0859		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	1.00	0900		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	1.00	0901		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	1.00	0902		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	1.00	0903		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ICV	1.00	0909		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
ICB	1.00	0911		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
CRI	1.00	0914		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
ICSA	10.00	0920		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
ICSAB	10.00	0925		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
CCV	1.00	0927		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
CCB	1.00	0930		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
PBS	1.00	0932		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
PBW	1.00	0935		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
LCSW	1.00	0937		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
LCSS	1.00	0939		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-
LCSS	10.00	0942		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
MCLH32	1.00	0946		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
MCLH32D	1.00	0948		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
MCLH32S	1.00	0950		-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
MCLH32S	5.00	0953		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-
MCLH32L	5.00	0955		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
CCV	1.00	0958		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
CCB	1.00	1000		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
MCLH26	1.00	1004		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
MCLH27	1.00	1006		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
MCLH28	1.00	1009		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
MCLH31	1.00	1011		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-
MCLH33	1.00	1014		-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-

FORM XIV - IN

AR305456

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14
ANALYSIS RUN LOG

Lab Name: ASSOCIATED_LABORATORIES__ Contract: 68D20043__

Lab Code: ALI___ Case No.: 22732_ SAS No.: _____ SDG No.:MCLH25

Instrument ID Number: 61E-TA_____ Method: P_

Start Date: 10/19/94 End Date: 10/19/94

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
MCLH36	1.00	1016				X									X						X			X			
MCLH37	1.00	1019				X									X						X			X			
MCLH43	1.00	1021				X									X						X			X			
MCLH25	1.00	1023				X									X						X			X			
MCLH30	1.00	1027				X									X						X			X			
CCV	1.00	1029				X									X						X			X			
CCB	1.00	1031				X									X						X			X			
MCLH35	1.00	1034				X									X						X			X			
MCLH40	1.00	1036				X									X						X			X			
CRI	1.00	1038				X									X						X			X			
ICSA	10.00	1041				X									X						X			X			
ICSAB	10.00	1043				X									X						X			X			
CCV	1.00	1046				X									X						X			X			
CCB	1.00	1048				X									X						X			X			

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