US EPA RECORDS CENTER REGION 5
422294

JUN 23 1993

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 6·17·93

SUBJECT: Review of Region V CLP Data
Received for Review on April 30, 1993

FROM: Charles T. Elly, Director (SL-10C)
Central Regional Laboratory

TO: Data User: PRC Jay Thakker

We have reviewed the data for the following case.

SITE NAME: Treasure Island-Man (OH)

CASE and/or SAS NUMBER: 19635 (2) SDG NUMBER: MERS84

Number and Type of Samples: 8 (water)

CLP Sample Numbers: MERS84-87 92-93, 98 MESF85

CLP Laboratory: AATS Hrs. for Review 10.5 +1.5 T.M

Following are our findings:

Data are Acceptable for use with qualification
JM

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualification.
( ) Data are preliminary, pending verification by laboratory.
( ) Data are unacceptable.

cc: Edward Kantor, EMSL-Las Vegas
Julie Frankel, VIAR & Co. (SMO)

NARRATIVE

SITE: TREASURE ISLAND
LABORATORY: AATS

CASE: 19635
SDG: MERS84

The laboratory's portion of case 19635 contains 8 low level water samples assayed for total metals and total cyanide. The following narrative lists the out of control audits and their possible effects on the results.

EVIDENTIAL AUDIT: All forms are originals. Most of the raw data sheets are originals, those photocopied state where the originals can be found. Some of the original ICP raw data is with case 19637 SDG: MBFR27. Some of the original As raw data are with cases 19615 SDG: MBHN32, 19632 SDG: MFS379 and 19587 SDG: MCJS51. Some of the original Pb raw data is with case 19632 SDG: MFS379. Some of the original Se raw data are with cases 19587 SDG: MCJS51 and 19584 SDG: MCHX23. Some of the original Tl raw data are with cases 19587 SDG: MCJS51 and 19615 SDG: MBHN32. The original CN raw data is with case 19615 SDG: MBHN52. The original sample tags, original Federal Express airbills and the original chain of custody forms are present. All forms are present and in the order indicated on the Form DC-2 [inventory sheet].

ICP ANALYSES: The duplicate audit for Al (difference >CRDL) is out of control. All Al data are estimated (J) due to poor precision.

The duplicate RPD for Fe (59.7%) is out of control. All Fe data are estimated (J) due to poor precision.

The preparation blank contains Co (5.696 µg/L), Fe (15.399 µg/L), Mn (2.061 µg/L) and Na (504.863 µg/L). The Fe result on MESF85 is affected by poor precision, but all Fe results remain qualified as stated above. The Co result on MERS98 and the Mn and Na result on MESF85 are estimated (J) due to contamination.

GFAA ANALYSES: After checking and recalculating the Se raw data, the reviewer flagged (W) results on MERS84 and 87, and removed the (W) flag on result MERS86 on the Forms 1.

Reviewed by: James Redlin, Lockheed/ESAT
Date: 6/16/93

The As results for MERS84-86 were flagged (W) and are estimated (UJ) due to interference.

The Se results for MERS84, 85, 87 and MESF85 were flagged (W) and are estimated (UJ) due to interference.

The Pb result for MERS84 was flagged (W) and is estimated (J) due to interference.

The CCB contains Tl (1.5 µg/L, 1.5 µg/L). The Tl results for MERS87, 92 and 98 were flagged (W). Tl data on MERS87 and 92 are estimated (UJ) due to interference. The Tl result on MERS98 is estimated (J) due to contamination and interference.

OTHER ANALYSES: All Hg and CN data are acceptable.

Sample MESF85 is a field blank containing Al (122 µg/L). All Al data are affected by field contamination, but remain qualified as stated above.

Samples MERS85/86 are field duplicates with a field RPD for Pb (40.3%). The Pb result on MERS84 is affected by poor field precision, but remains qualified as stated above. All Pb data except on MERS84 are estimated (J) due to poor field precision.

Reviewed by: James Redlin James Redlin, Lockheed/ESAT
Date: 6/16/93

GLOSSARY A

Data Qualifier Definitions

For the purposes of this document the following code letters and associated definitions are provided.

U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

J - The associated value is an estimated quantity.

R - The data are unusable. (Note: Analyte may or may not be present.)

UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

QC EXCEPTION SUMMARY REPORT

CASE # 19635 (2)
DATA SET #
LAB Q.C. #
DATE: 6/14/93

SITE Treasure Is. - Man (OH)
LAB AATS
REVIEWED BY J. Rollin

MATRIX: water
CONC. : Low

WATER SAMPLE SPK. MER592
WATER SAMPLE DUP. MER592
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	Holding Time	Cal Blanks	Init Calver	Contin Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk %R	AQ Dup RPD	AQ Spk %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	MES85 Dup RPD	MES85 Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum	ok		ok	ok			ok	ok				CRDL	ok	ok				122						
Antimony																								
Arsenic																								
Barium												20.0 < CRDL												
Beryllium																								
Cadmium																								
Calcium																		~~585~~						
Chromium																								
Cobalt					5.696																			
Copper																								
Iron					15.399							59.7						~~22.4~~						
Lead																			40.3					
Magnesium																								
Manganese		~~2.1~~			2.061													~~2.1~~						
Mercury																								
Nickel																								
Potassium																								
Selenium																								
Silver																								
Sodium					504.863													~~1650~~						
Thallium		~~2.5~~			~~2.150~~																			
Tin																								
Vanadium																								
Zinc																								
Cyanide																								

Prep Blk
Co (5.696 µg/L) MER598
Fe (15.399 µg/L) MESF85
Mn (2.061 µg/L) MESF85
[illegible] MESF85

Blk
~~Mn (2.1 µg/L) MESF85~~
Tl (1.6 µg/L) MER598
(1.5 µg/L)

F. Blk
Al (122 µg/L) All
Field Dup
Pb (40.3%) All

ICP - 3/29, 4/2
F - 3/29
Hg - 4/2
CN - 3/31

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001

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

ab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635 SAS No.: _____ SDG No.:MERS84

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
_MERS84_____	__1302301_____
_MERS85_____	__1302302_____
_MERS86_____	__1302303_____
_MERS87_____	__1302304_____
_MERS92_____	__1304401_____
_MERS92D_____	__1304401D_____
_MERS92S_____	__1304401S_____
_MERS93_____	__1304402_____
_MERS98_____	__1304403_____
_MESF85_____	__1304404_____

RECEIVED
APR 30 1993
US EPA REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

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: _____ Name: Steve L. Markham_____

Date: _April 29, 1993_____ Title: Inorganic ___Program Manager_____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

002

MERS84

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1302301___

Level (low/med): LOW__ Date Received: 03/24/93

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	231		*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	2.0	U	W	F
7440-39-3	Barium	39.7	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	66900			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	3.1	B		P
7439-89-6	Iron	215		*	P
7439-92-1	Lead	2.8	B	W	F
7439-95-4	Magnesium	19400			P
7439-96-5	Manganese	33.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	2410	B		P
7782-49-2	Selenium	3.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	51900			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	12.3	B		P
	Cyanide	10.0	U		CA

JR 6/16/93

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

003

MERS85

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1302302

Level (low/med): LOW Date Received: 03/24/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	509		*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	2.0	U	W	F
7440-39-3	Barium	43.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	43000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	6.2	B		P
7439-89-6	Iron	537		*	P
7439-92-1	Lead	10.3			F
7439-95-4	Magnesium	14700			P
7439-96-5	Manganese	41.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	4860	B		P
7782-49-2	Selenium	3.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	32200			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	5.2	B		P
7440-66-6	Zinc	27.5			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MERS86

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1302303___

Level (low/med): LOW__ Date Received: 03/24/93

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	509		*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	2.0	U	W	F
7440-39-3	Barium	40.3	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	41600			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	6.8	B		P
7439-89-6	Iron	558		*	P
7439-92-1	Lead	15.5			F
7439-95-4	Magnesium	13900			P
7439-96-5	Manganese	41.7			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	4350	B		P
7782-49-2	Selenium	3.0	U	~~W~~	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	31100			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	32.9			P
	Cyanide	10.0	U		CA

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

005

MERS87

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1302304

Level (low/med): LOW Date Received: 03/24/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	203		*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	182	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	58300			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	4.7	B		P
7439-89-6	Iron	364		*	P
7439-92-1	Lead	16.5		S	F
7439-95-4	Magnesium	46600			P
7439-96-5	Manganese	76.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	28100			P
7782-49-2	Selenium	3.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	64600			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	90.1			P
	Cyanide	10.0	U		CA

JR 6/16/93

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Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

006

MERS92

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1304401___

Level (low/med): LOW__ Date Received: 03/26/93

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	526		*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	19.0	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	32600			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	14.9	B		P
7439-89-6	Iron	731		*	P
7439-92-1	Lead	11.8			F
7439-95-4	Magnesium	9360			P
7439-96-5	Manganese	53.1			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	2920	B		P
7782-49-2	Selenium	3.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	9480			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	24.6			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

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Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

007

MERS93

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1304402___

Level (low/med): LOW__ Date Received: 03/26/93

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	404		*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	21.3		S	F
7440-39-3	Barium	39.7	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.6	B		P
7440-70-2	Calcium	53700			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	11.4	B		P
7439-89-6	Iron	577		*	P
7439-92-1	Lead	4.2			F
7439-95-4	Magnesium	13800			P
7439-96-5	Manganese	116			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	4740	B		P
7782-49-2	Selenium	3.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	18600			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	15.7	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

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Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

008

MERS98

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: ____ SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1304403___

Level (low/med): LOW__ Date Received: 03/26/93

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	154	B	*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	14.5			F
7440-39-3	Barium	596			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	232000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.1	B		P
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron	8040		*	P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	134000			P
7439-96-5	Manganese	1840			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	33500			P
7782-49-2	Selenium	30.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	98300			P
7440-28-0	Thallium	14.9	B	W	F
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	3.0	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

009

MEGF85

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Matrix (soil/water): WATER Lab Sample ID: 1304404___

Level (low/med): LOW__ Date Received: 03/26/93

% Solids: _0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	122	B	*	P
7440-36-0	Antimony	24.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	8.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	585	B		P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron	22.4	B	*	P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	149	U		P
7439-96-5	Manganese	2.1	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	27.0	U		P
7440-09-7	Potassium	888	U		P
7782-49-2	Selenium	3.0	U	W	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	1650	B		P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	3.0	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

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3
BLANKS

Lab Name: AMERICAN ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	79.0	U	79.0	U	79.0	U	79.0	U	79.000	U	P
Antimony	24.0	U	24.0	U	24.0	U	24.0	U	24.000	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	F
Barium	8.0	U	8.0	U	8.0	U	8.0	U	8.000	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Cadmium	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Calcium	246.0	U	246.0	U	246.0	U	246.0	U	246.000	U	P
Chromium	4.0	U	4.0	U	-4.0	B	4.0	U	4.000	U	P
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	5.696	B	P
Copper	-3.6	B	3.0	U	3.0	U	3.0	U	-3.078	B	P
Iron	8.0	U	8.0	U	8.0	U	8.0	U	15.399	B	P
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	F
Magnesium	149.0	U	149.0	U	149.0	U	149.0	U	149.000	U	P
Manganese	2.0	U	2.1	B	2.0	U	2.0	U	2.061	B	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.200	U	CV
Nickel	27.0	U	27.0	U	27.0	U	27.0	U	27.000	U	P
Potassium	888.0	U	888.0	U	888.0	U	888.0	U	888.000	U	P
Selenium	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	F
Silver	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Sodium	442.0	U	442.0	U	442.0	U	442.0	U	504.863	B	P
Thallium	1.8	B	2.6	B	1.9	B	2.3	B	2.150	B	F
Vanadium	4.0	U	4.0	U	4.0	U	4.0	U	4.000	U	P
Zinc	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	CA

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3
BLANKS

024

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	79.0	U	79.0	U	79.0	U	79.0	U	79.000	U	P
Antimony	24.0	U	24.0	U	24.0	U	24.0	U	24.000	U	P
Arsenic			2.0	U							F
Barium	8.0	U	8.0	U	8.0	U	8.0	U	8.000	U	P
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium	4.0	U	4.0	U	4.0	U	4.0	U	4.000	U	P
Cobalt											NR
Copper											NR
Iron											NR
Lead			2.0	U							F
Magnesium											NR
Manganese											NR
Mercury			0.2	U	0.2	U					CV
Nickel											NR
Potassium											NR
Selenium			3.0	U	3.0	U	3.0	U			F
Silver											NR
Sodium											NR
Thallium	1.0	U	1.0	U	1.0	U	1.0	U			F
Vanadium	4.0	U	4.0	U	4.0	U	4.0	U	4.000	U	P
Zinc											NR
Cyanide											NR

3
BLANKS

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS __ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U			F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead	2.0	U	2.0	U	2.0	U					F
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium	3.0	U	3.0	U	3.0	U	3.0	U			F
Silver											NR
Sodium											NR
Thallium			1.0	U	1.0	U	1.3	B			F
Vanadium											NR
Zinc											NR
Cyanide											NR

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3
BLANKS

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic			2.0	U							F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium			3.0	U							F
Silver											NR
Sodium											NR
Thallium			1.5	B	1.5	B					F
Vanadium											NR
Zinc											NR
Cyanide											NR

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3
BLANKS

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635__ SAS No.: _____ SDG No.: MERS8-

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U			F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium	3.0	U	3.0	U	3.0	U					F
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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3
BLANKS

028

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U					F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
[illegible]nium											NR
								NR			
Sodium											NR
Thallium											NR
Vanadium											
Vanadium											NR
Zinc											NR
Cyanide											NR

FORM III - IN

ILM02.

U.S. EPA - CLP

3
BLANKS

029

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U					F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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032

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MERS92S

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: _____ SDG No.: MERS84

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2787.3830		525.6700		2000.000	113.1		P
Antimony	75-125	460.8310		24.0000	U	500.000	92.2		P
Arsenic	75-125	38.4000		2.0000	U	40.000	96.0		F
Barium	75-125	1942.3000		19.0060	B	2000.000	96.2		P
Beryllium	75-125	45.0920		1.0000	U	50.000	90.2		P
Cadmium	75-125	47.9850		2.0000	U	50.000	96.0		P
Calcium									NR
Chromium	75-125	198.9920		4.0000	U	200.000	99.5		P
Cobalt	75-125	475.2910		5.0000	U	500.000	95.1		P
Copper	75-125	263.3190		14.8940	B	250.000	99.4		P
Iron	75-125	1974.4190		730.6450		1000.000	124.4		P
Lead	75-125	32.3800		11.8100		20.000	102.8		F
Magnesium									NR
Manganese	75-125	526.2570		53.0650		500.000	94.6		P
Mercury	75-125	1.1200		0.2000	U	1.000	112.0		CV
Nickel	75-125	494.5350		27.0000	U	500.000	98.9		P
Potassium									NR
Selenium	75-125	8.8000		3.0000	U	10.000	88.0		F
Silver	75-125	41.7660		3.0000	U	50.000	83.5		P
Sodium									NR
Thallium	75-125	43.5600		1.0000	U	50.000	87.1		F
Vanadium	75-125	493.1260		4.0000	U	500.000	98.6		P
Zinc	75-125	518.0410		24.5970		500.000	98.7		P
Cyanide	75-125	98.7960		10.0000	U	100.000	98.8		CA

Comments:

U.S. EPA - CLP

033

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DUPLICATES

EPA SAMPLE NO.

MERS92D

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

Matrix (soil/water): WATER Level (low/med): LOW_

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	200.0	525.6700		808.8870		42.4	*	P
Antimony		24.0000	U	24.0000	U			P
Arsenic		2.0000	U	2.0000	U			F
Barium		19.0060	B	15.5500	B	20.0		P
Beryllium		1.0000	U	1.0000	U			P
Cadmium		2.0000	U	2.0000	U			P
Calcium		32644.7850		32405.8550		0.7		P
Chromium		4.0000	U	4.0000	U			P
Cobalt		5.0000	U	5.0000	U			P
Copper		14.8940	B	15.6490	B	4.9		P
Iron		730.6450		1352.9080		59.7	*	P
Lead	3.0	11.8100		13.4100		12.7		F
Magnesium	5000.0	9357.5390		9484.2770		1.3		P
Manganese	15.0	53.0650		57.1110		7.3		P
Mercury		0.2000	U	0.2000	U			CV
Nickel		27.0000	U	27.0000	U			P
Potassium		2920.9990	B	2794.5680	B	4.4		P
Selenium		3.0000	U	3.0000	U			F
Silver		3.0000	U	3.0000	U			P
Sodium	5000.0	9476.4660		8917.7960		6.1		P
Thallium		1.0000	U	1.0000	U			F
Vanadium		4.0000	U	4.0000	U			P
Zinc	20.0	24.5970		23.3540		5.2		P
Cyanide		10.0000	U	10.0000	U			CA

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

ICP ID Number: TJA61_____ Date: 02/23/93

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	79.0	P
Antimony	217.58		60	24.0	P
Arsenic			10		NR
Barium	493.41		200	8.0	P
Beryllium	313.04		5	1.0	P
Cadmium	228.80		5	2.0	P
Calcium	317.93		5000	246.0	P
Chromium	267.72		10	4.0	P
Cobalt	228.62		50	5.0	P
Copper	324.75		25	3.0	P
Iron	259.94		100	8.0	P
Lead			3		NR
Magnesium	279.08		5000	149.0	P
Manganese	257.61		15	2.0	P
Mercury			0.2		NR
Nickel	221.60		40	27.0	P
Potassium	776.49		5000	888.0	P
Selenium			5		NR
Silver	328.07		10	3.0	P
Sodium	588.99		5000	442.0	P
Thallium			10		NR
Vanadium	292.40		50	4.0	P
Zinc	213.86		20	3.0	P

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: SDG No.: MERS84

ICP ID Number: Date: 02/08/93

Flame AA ID Number :

Furnace AA ID Number : VAR400A

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	193.70	BZ	10	1.0	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: SDG No.: MERS84

ICP ID Number: Date: 01/31/93

Flame AA ID Number :

Furnace AA ID Number : VAR400B

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	193.70	BZ	10	2.0	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: SDG No.: MERS84

ICP ID Number: Date: 02/04/93

Flame AA ID Number :

Furnace AA ID Number : PE5100A

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	193.70	BZ	10	1.0	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

U.S. EPA - CLP

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: SDG No.: MERS84

ICP ID Number: Date: 02/04/93

Flame AA ID Number :

Furnace AA ID Number : PE5100A

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	283.30	BZ	3	2.0	F
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

U.S. EPA - CLP

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

ICP ID Number: _____ Date: 01/31/93

Flame AA ID Number : _____

Furnace AA ID Number : VAR400B_____

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	283.30	BZ	3	1.0	F
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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044

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN ANALYTICAL Contract: 68-D1-0024

Lab Code: AATS Case No.: 19635 SAS No.: SDG No.: MER984

ICP ID Number: Date: 02/04/93

Flame AA ID Number :

Furnace AA ID Number : PE5100A

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			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.00	BZ	5	1.0	F
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

U.S. EPA - CLP

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

ICP ID Number: _____ Date: 02/08/93

Flame AA ID Number : _____

Furnace AA ID Number : VAR400A_____

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			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.00	BZ	5	3.0	F
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

10

Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

ICP ID Number: _____ Date: 01/31/93

Flame AA ID Number : _____

Furnace AA ID Number : VAR400B_____

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			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium	276.80	BZ	10	1.0	F
Vanadium			50		NR
Zinc			20		NR

Comments:

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 19635_ SAS No.: _____ SDG No.: MERS84

ICP ID Number: _____ Date: 02/23/93

Flame AA ID Number : LEEMAN_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		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:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No. _____ (2) CERCLIS No. OH

Case No. 19635 Site Name Location: Treasure Island-Mn

Contractor or EPA Lab: AATS Data User: PRC

No. of Samples: 8 Date Samples or Data Received: 4-30-93

Have Chain-of-Custody records been received? YES ✓ NO ___
Have traffic reports or packing lists been received? YES ✓ NO ___
If no, are traffic report or packing list numbers written on the chain-of-custody record? YES ✓ NO ___
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? YES ✓ NO ___
No. of samples claimed: 8 No. of samples received: 8

Received by: Lynette Burnett Date: 4-30-93

Received by LSSS: Dorothy M. May Date: 4/30/93

Review started: 6/14/~~93~~ 93 Reviewer Signature: J. Rodlin

Total time spent on review: 10.5 +1.5 Date review completed: 6/16/93

Copied by: Robert Feyser Date: 6-17-93

Mailed to user by: Lynette Burnett Date: 6-21-93

DATA USERS:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ESCRL

Data received by: Mildred Jackson Date: JUN 23 1993

Data review received by: _____ Date: _____
Inorganic Data Complete( ) Suitable for Intended Purpose( ) ✓ if OK
Organic Data Complete ( ) Suitable for Intended Purpose( ) list
Dioxin Data Complete ( ) Suitable for Intended Purpose( ) prblms
SAS Data Complete ( ) Suitable for Intended Purpose( ) below.
PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files Date: _____