AMERICAN ANALYTICAL & TECHNICAL SERVICES, INC.
1700 West Albany, Suite C / Broken Arrow, Oklahoma 74012 / 918-251-0545

August 19, 1993

Christy Macdowell
USEPA-Region VI
10625 Fallstone Road
Houston, TX 77099

SUBJECT: RAS #20266, SDG MFAP70

Ms. Macdowell:

The following is in response to the questions/issues as a result of the data review of the above mentioned case:

A. The percent recovery for the analytical spike of sample MFAP77 has been corrected to 91.0% on Form 14. The Form 14 is resubmitted.

B. The Thallium raw data has been corrected with the proper sample ID for MFAP76. The raw data page 219 has been resubmitted.

C. The Cyanide Initial Calibration Verification standard true value has been corrected on Form 2A to 90.0 ug/L. Form 2A is resubmitted.

D. Sample MFAP96 was listed incorrectly on the SDG TR Cover Sheet as MFAP76. The sample ID has been corrected and the form is resubmitted.

E. The contract was awarded in 1990 under SOW 3/90, which is correct on the Cover Page. Our CLP deliverable software prints the ILM02.1 on all forms because this is the version software that we have.

If you should have any other questions, please feel free to contact me at (918) 251-2858.

Sincerely,

Steve L. Markham
Inorganic Program Manager

CC: SMO
EMSL/LV
File

Facsimile Number (918) 251-2599

90074523

DIO
ok
7/19/93

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

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

Lab Code: AATS Case No.: 20266 SAS No.: SDG No.: MFAP70

Initial Calibration Source: EPA-IV

Continuing Calibration Source: IN.VEN.

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum	1878.0	1929.19	102.7	10000.0	9920.43	99.2	9815.96	98.2	P
Antimony	1024.0	1012.87	98.9	5000.0	4964.60	99.3	4940.40	98.8	P
Arsenic	50.9	51.40	101.0	50.4	53.30	105.8	54.90	108.9	F
Barium	1891.0	1960.34	104.1	10000.0	10171.19	101.7	10039.87	100.4	P
Beryllium	478.0	488.19	102.1	250.0	252.97	101.2	250.13	100.1	P
Cadmium	493.0	492.09	100.2	2500.0	2565.15	102.6	2565.48	102.6	P
Calcium	48810.0	48052.08	100.1	25000.0	25518.95	102.1	25461.94	101.8	P
Chromium	480.0	508.06	105.8	1000.0	1043.99	104.4	1035.99	103.6	P
Cobalt	487.0	496.05	101.9	2500.0	2523.67	100.9	2515.23	100.6	P
Copper	486.0	502.65	104.9	1250.0	1252.21	100.2	1232.39	99.0	P
Iron	1962.0	1954.12	99.6	5000.0	5050.97	101.0	5008.77	100.2	P
Lead	98.8	97.76	99.0	50.0	51.74	103.5	52.55	105.1	F
Magnesium	23859.0	24120.30	101.1	25000.0	25399.67	101.6	25423.20	101.7	P
Manganese	474.0	497.28	104.9	2500.0	2542.67	101.7	2523.22	100.9	P
Mercury	5.0	5.14	102.8	5.0	5.15	103.0	4.83	96.6	CV
Nickel	488.0	502.38	102.9	2500.0	2520.27	101.1	2523.12	100.9	P
Potassium	49182.0	49835.99	101.3	25000.0	25303.19	101.5	25386.17	101.5	P
Selenium	50.7	49.00	96.6	25.0	23.60	94.4	24.70	98.8	F
Silver	478.0	500.77	104.8	1250.0	1265.69	101.3	1249.68	100.0	P
Sodium	46804.0	49319.38	105.4	25000.0	25738.20	103.0	26420.87	105.7	P
Thallium	98.9	108.55	109.8	25.0	26.32	105.3	25.66	102.6	F
Vanadium	482.0	496.23	103.0	2500.0	2530.23	101.2	2501.70	100.1	P
Zinc	2921.0	2938.54	100.6	2500.0	2488.12	99.5	2481.30	99.3	P
Cyanide	98.0	97.07	102.9	100.0	102.43	102.4	100.13	100.1	CA

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

FORM II (PART 1) - IN

TLMOP.1

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8/19/93

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14

ANALYSIS RUN LOG

Lab Name: AMERICAN_ANALYTICAL_____ Contract: 68-D1-0024

Lab Code: AATS__ Case No.: 20266_ SAS No.: _____ SDG No.:MFAP70

Instrument ID Number: VAR400B_____ Method: F_

Start Date: 07/04/93 End Date: 07/04/93

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
MFAP73__	1.00	1727																			X						
MFAP73A_	1.00	1732	100.0																		X						
MFAP74__	1.00	1737																			X						
MFAP74A_	1.00	1742	98.0																		X						
CCV_____	1.00	1747																			X						
CCB_____	1.00	1751																			X						
MFAP77__	1.00	1756																			X						
MFAP77A_	1.00	1801	91.0																		X						
MFAP78__	1.00	1806																			X						
MFAP78A_	1.00	1811	118.0																		X						
MFAP96__	1.00	1815																			X						
MFAP96A_	1.00	1820	75.0																		X						
ZZZZZZ__	1.00	1825																									
ZZZZZZ__	1.00	1830																									
ZZZZZZ__	1.00	1835																									
ZZZZZZ__	1.00	1840																									
CCV_____	1.00	1844																			X						
CCB_____	1.00	1849																			X						

FORM XIV - IN ILMO2.1

Blank Corrected Pk Area (A-s): 0.058
Concentration (ug/L): 14.06

Replicate 2 Time: 11:50
Peak Area (A-s): 0.055 Peak Height (A): 0.087
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.064
Blank Corrected Pk Area (A-s): 0.057
Concentration (ug/L): 13.94

70. %

Mean Conc (ug/L): 14.00 SD: 0.084 RSD(%): 0.60

Recovery is 67.5%

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TI ID: 1433201 Seq. No.: 00030 A/S Pos.: 14 Date: 07/08/93 ~~MFAP 98~~ MFAP96

Replicate 1 Time: 11:53
Peak Area (A-s): 0.000 Peak Height (A): 0.010
Background Pk Area (A-s): -0.004 Background Pk Height (A): 0.006
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.74

1:9

Replicate 2 Time: 11:56
Peak Area (A-s): -0.000 Peak Height (A): 0.009
Background Pk Area (A-s): 0.001 Background Pk Height (A): 0.008
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.58

Mean Conc (ug/L): 0.66 SD: 0.119 RSD(%): 18.04

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TI ID: 1433201 Seq. No.: 00031 A/S Pos.: 14 Date: 07/08/93 ~~MFAP 98~~ MFAP96A

Replicate 1 Time: 11:59
Peak Area (A-s): 0.036 Peak Height (A): 0.056
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.039
Concentration (ug/L): 9.42

1:9

A

Replicate 2 Time: 12:02
Peak Area (A-s): 0.031 Peak Height (A): 0.056
Background Pk Area (A-s): 0.024 Background Pk Height (A): 0.037
Blank Corrected Pk Area (A-s): 0.034
Concentration (ug/L): 8.16

43.9 %

Mean Conc (ug/L): 8.79 SD: 0.888 RSD(%): 10.11

Recovery is 40.6%

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TI ID: PBS1426701 Seq. No.: 00032 A/S Pos.: 15 Date: 07/08/93

Replicate 1 Time: 12:05
Peak Area (A-s): -0.001 Peak Height (A): 0.008
Background Pk Area (A-s): -0.009 Background Pk Height (A): 0.005
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.43

Replicate 2 Time: 12:07

SAMPLE DELIVERY GROUP (SDG)
TRAFFIC REPORT (TR) COVER SHEET

LAB NAME: AMERICAN ANALYTICAL & TECHNICAL SERVICES, Inc.

LAB CODE: AATS CONTRACT No.: 68-D1-0024

RAS No.: 20266 SAS No.: _____

SDG 2 of 2

SDG No./First Sample in SDG: MFAP70
(Lowest EPA Sample Number
in first shipment of samples) Receipt Date: 06/23/93

Last Sample in SDG: MFAP96
(Highest EPA Sample Number
in last shipment of samples) Receipt Date: 06/25/93

EPA Sample Numbers in the SDG (listed in alphanumeric order)

1.	MFAP70	14266.12	11.	
2.	MFAP71	.13	12.	
3.	MFAP72	.14	13.	
4.	MFAP73	.15	14.	
5.	MFAP74	.16	15.	
6.	MFAP77	14291.01	16.	
7.	MFAP78	.02	17.	
8.	MFAP96	14332.01	18.	
9.			19.	
10.			20.	

Note: There are a maximum of 20 field samples in SDG.

Attach Traffic Reports to this form in alphanumberic order
(i.e., the order listed on this form).

Diana S. Baker 6-25-93 06-25-93
Diana S. Baker
Inorganic Document Control Officer Date