U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGL1
Instrument ID Number: LACHAT-1 Method: AS
Start Date: 12/08/95 End Date: 12/08/95

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	
CCV13	1.00	1519																								
CCB13	1.00	1520																								
MEAGM6	1.00	1520																								
CCV14	1.00	1521																								
CCB14	1.00	1522																								

24250

00079

FORM XIV - IN ILM04.

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 24259
DATA SET: MCA6L1
LAB QC #
DATE: 1/10/96

SITE: Jefferson/Chem
LAB: Columbia
REVIEWED BY: M. Dietrich

MATRIX: Soil
CONC: low

WATER SAMPLE SPK:
WATER SAMPLE DUP:
SOIL SAMPLE SPK:
SOIL SAMPLE DUP:

FORM #		FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 4	FORM 5	FIELD	FIELD	FIELD	FIELD		
ELEMENT	HOLD TIME	INITIAL CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICB %R	SOIL SPIKE %R	SOIL DUP RPD	LCS AQ	LCS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP RPD	AQ SPIKE %R	BLANK	DUP RPD	BLANK	DUP RPD	GFAA DUP	GFAA ANALYT SPIKE
ALUMINUM																					
ANTIMONY								32.8													
ARSENIC				0.6																	
BARIUM																					
BERYLLIUM				0.6																	
CADMIUM																					
CALCIUM																					
CHROMIUM																					
COBALT																					
COPPER																					
IRON																					
LEAD																					
MAGNESIUM																					
MANGANESE									118.6												
MERCURY				0.1																	
NICKEL																					
POTASSIUM																					
SELENIUM																					
SILVER																					
SODIUM																					
THALLIUM																					
TIN																					
VANADIUM									82.8												
ZINC																					
CYANIDE																					

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.: 24259

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (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 (Specify)
   N. Not preserved

3. Region No.: V

Sampling Co.: MDEQ

Sampler (Name): Nabil Seif

Sampler Signature: Nabil Seif

4. Type of Activity

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

5. Date Shipped: 11-28-95

Carrier: Airborne Express

Airbill Number: 6883010783

6. Ship To: Columbia Analytical Servi Inc. 1317 S. Thirteen Ave. Kelso, WA 98626 ATTN: Fran Adiar.

7. Date Received -- Received by: 11-29-95 Ruth Hagley

Laboratory Contract Number: 68-D5-0135

Unit Price: 70.00

8. Transfer to

Date Received

Received by

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. only: Nitrate/Nitrite	Fluoride	High only: pH	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.
MEAGL1	5	L	G	6	X		X					5-193154	SS1	11-28-95 1145	NS	EASS1	OK			
MEAGL2												5-193158	SS2	11-28-95 1130	NS	EASS2				
MEAGL3												5-193162	SS3	11-28-95 1220	NS	EASS3				
MEAGL4												5-193166	SS4	11-28-95 1245	NS	EASS4				
MEAGL5												5-193170	SS5	11-28-95 1430	NS	EASS5				
MEAGL6												5-193174	SS6	11-28-95 1345	NS	EASS6				
MEAGL7												5-193178	SS7	11-28-95 1505	NS	EASS7				
MEAGL8												5-193182	SS8	11-28-95 1530	NS	EASS8				
MEAGL9												5-193186	SS9	11-28-95 1555	NS	EASS9				
MEAGM0												5-193190	SS10	11-28-95 1620	NS	EASS10				

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

Page 1 of 4

Sample used for a spike and/or duplicate

Additional Sampler Signatures

Chain of Custody Seal Number: 152981, 152982

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? (Y/N/none)
		Ruth Hagley	11/29/95 0900		

Soil Samples ☐ Accepted (Signature) 12-6-95
☐ Declined

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:
Green - Region C Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to

SE..EVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Inorg-2

00194

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

Inorga Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable):

Case No.: 2A2593

1. Sample Description (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (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 (Specify) N. Not preserved

3. Region No.: V

Sampling Co.: MDEQ

Sampler (Name): Nabil Seif

Sampler Signature: Nabil Seif

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

5. Date Shipped: 11-28-95

Carrier: Airborne Expres

Airbill Number: 6883010783

6. Ship To: Columbia Analytical Servic Inc. 1317 S. Thirteen Ave. Kelso, WA 98626 ATTN: Fran Adler

7. Date Received -- Received by: 11-29-95 Ruth Higley

Laboratory Contract Number: 68-D5-0135

Unit Price: 70.00

8. Transfer to:

Date Received:

Received by:

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. only: Nitrate/Nitrite	Fluoride	High only: pH	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.
MEAGM1	5	L	G	6	X		X					5-193194	SS11	11-28 -95 1615	NS	EAST1	OK			
MEAGM2	↓	↓	↓	↓	X		X					5-193198	SS12	11-28-95 1545	NS	EAST2	↓			
MEAGM3					X		X					5-193202	SS13	11-28-95 1500	NS	EAST3				
MEAGM4					X		X					5-193206	SS14	11-28-95 1530	NS	EAST4				
MEAGM5					X		X					5-193210	SS15	11-28-95 1645	NS	EAST5				
MEAGM6	↓	↓	↓	↓	X		X					5-193214	SS16	11-28-95 1210	NS	EAST6	↓			

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

Page 2 of 2

Sample used for a spike and/or duplicate:

Additional Sampler Signatures:

Chain of Custody Seal Number: 152981 - 152982

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? (Y)N/none	
		Ruth Higley	11-30-95 0900		

Split Samples: ☐ Accepted (Signature) ☐ Declined

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used

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SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

RECEIVED
FEB - 8 1996
ERD-SUPERFUND

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 01-24-96

SUBJECT: Review of Region V CLP Data
Received for Review on Jan 12, 1996

FROM: Stephen L. Ostrodka, Chief (HSRL-5J) L. Finkelberg for S. Ostrodka
Superfund Technical Support Section

TO: Data User: MDEQ

We have reviewed the data for the following case:

SITE NAME: Jefferson/Chene (MI)

CASE NUMBER: 24259 (2) SDG NUMBER: MEAGM7

Number and Type of Samples: 15 (soil/water)

Sample Numbers: MEAGM7-9 MEAGN0-9 MEAGP0-1

Laboratory: Columbia Hrs. for Review: 13.0 +1.8 T.A.

Following are our findings:

water sample:

The ICB and CCB contain contamination.

soil samples

The matrix spike recoveries for Sb, Mn, As and Se are out of control.
The CCBs contain contamination.

All soil and water data are usable with the qualifications described in the attached narrative.

L. Finkelberg
01-24-96

cc: Regional TPO
Brian Freeman
HSMC-5J

NARRATIVE

SITE: JEFFERSON/CHENE CASE: 24259
LABORATORY: COLUMBIA SDG: MEAGM7

The laboratory's portion of case 24245 contains 1 low level water and 14 low level soil 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 are from bound lab note books. The originals that are present are sample tags, chain of custody forms, Form DC-1 and Form DC-2. The original Airborne Express sticker is with case 24259, SDG: MEAGL1. All forms are present and in the order indicated on the Form DC-2 [inventory sheet].

Sample tag #5-193254 states that it is for sample MEAGN7, but has information matching sample MEAGN6 on the chain of custody form. On the Form DC-1, the lab states that the sampling jar was labeled sample MEAGN6. CLASS was phoned by the lab (see lab phone log) and was instructed by CLASS to treat sample tag #5-193254 as for sample MEAGN6.

WATER SAMPLE - [MEAGP1]

Sample MEAGP1 is a rinsate field blank, and is the only water matrix sample in this SDG. According to the ILM04.0 SOW, there are to be no matrix spike, duplicate and serial dilution audits performed on field blanks. The water data are not qualified on these bases.

ICP ANALYSES: The ICB contains Ba (1.6 µg/L) and Zn (8.1 µg/L). The CCB contains Al (43.7 µg/L) and Fe (34.2 µg/L). The Al, Ba, Fe and Zn results for sample MEAGP1 are estimated (J) due to contamination.

GFAA ANALYSES: The CCB contains Pb (1.7 µg/L). The Pb result for sample MEAGP1 is estimated (J) due to contamination.

Reviewed by: James Redlin James Redlin
Lockheed ESAT
Date: 1/19/96

OTHER ANALYSES: After checking and recalculating the Hg and CN raw data, the reviewer corrected the CN data for sample MEAGP1 on Form 1 and the Hg and CN water preparation blank on Form 3.

SOIL SAMPLES - [MEAGM7-M9, N0-N9 and P0]

ICP ANALYSES: The soil duplicate RPD for Sb (44.7%) was not flagged by the laboratory because the duplicate difference does not exceed the technical criterion (±2xCRDL) for soil samples. The soil Sb data are not qualified on this basis. The matrix spike recovery for Sb (30.5%) is out of control. The CCB contains Sb (29.0 µg/L). The Sb data for samples MEAGM7-M9, N0-N2, N4-N9 and P0 are estimated (J) due to low bias and contamination. The Sb result for sample MEAGN3 is estimated (UJ) due to possible elevation of the detection limit.

The soil matrix spike recovery for Mn (234.4%) is out of control. All the soil Mn data are estimated (J) due to high bias.

GFAA ANALYSES: After checking the GFAA raw data, the reviewer corrected the dilution factors for As and Tl on Form 14.

After checking and recalculating the GFAA raw data, the reviewer corrected the Pb data and added (S) flags for samples MEAGN8 and P0 on the Form 1s and corrected As and Pb CCB data on Form 3.

After checking and recalculating the GFAA raw data, the reviewer discovered that the first analysis of sample MEAGM8 for As had an analytical spike failure that required MSA analysis to be performed on the sample, according to the ILM04.0 SOW. The laboratory diluted sample MEAGM8, re-analyzed and reported the result. The As result for MEAGM8 is not qualified on this basis, but is qualified in the next paragraph.

The soil matrix spike recovery for As (54.5%) is out of control. The As result for sample MEAGM8 was flagged (W) by the laboratory. The As data for samples MEAGM7, M9, N0-N9 and P0 are estimated (J) due to low bias. The As result for sample MEAGM8 is estimated (J) due to low bias and interference.

Reviewed by: James Redlin
James Redlin
Lockheed ESAT

Date: 1/19/96

The matrix spike recovery for Pb (262.5%) was not flagged by the laboratory because the sample concentration was more than 4x the spike level. All the soil Pb data are acceptable.

The matrix spike recovery for Se (41.9%) is out of control. The CCB contains Se (1.6 µg/L). The Se results for samples MEAGM8-M9, N0-N9 and P0 were flagged (W) by the laboratory. The Se data for samples MEAGN3 and N6 are estimated (J) due to low bias, interference and contamination. The Se data for samples MEAGM8-M9, N0-N2, N4-N5, N7-N9 and P0 are estimated (UJ) due to possible elevation of the detection limit and interference. The Se result for sample MEAGM7 is estimated (UJ) due to possible elevation of the detection limit.

The soil duplicate RPD for Tl (200.0%) was not flagged by the laboratory because the duplicate difference does not exceed the technical criterion (±2xCRDL) for soil samples. The Tl data are not qualified on this basis. The CCB contains Tl (1.0 & 1.1 µg/L). All the soil Tl data are estimated (J) due to contamination.

OTHER ANALYSES: After checking and recalculating the Hg raw data, the reviewer corrected the Hg CCB data on Form 3.

The CCB contains Hg (0.1 µg/L). The Hg data for samples MEAGM7-M9, N0, N2-N5, N7 and P0 are estimated (J) due to contamination.

All soil CN data are acceptable.

Sample MEAGP1 is a rinsate field blank, and is the only sample with a water matrix. Sample MEAGP1 contains Na (2680 µg/L) that could affect all the soil Na data. The rinsate field blank does not qualify any soil data.

Reviewed by: James Redlin

Date: 1/19/96

James Redlin
Lockheed ESAT

DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utinized in this document, the following code letters and associated definitions are provide:

U Indicates the material was analyzed, 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 Indicates the associated value is an estimated quantity.

R Indicates the data are unusable. (Note: The analyte may or may not be present.)

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

E Indicates the reported value is estimated because of the presence of interferences. An explanatory note shall be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).

M Indicates duplicate injection precision is not met.

N Indictaes the spike sample recovery is not within control limits.

S Indicates the reported value was determined by the Method of Standard Addition (MSA).

W Indicates the post-digestion spike for furnace AA analysis is out of control limits (85%-115%), while sample absorbance is less than 50% of the spike absorbance.

+ Indicates the correlation coefficient for the MSA is less than 0.995.

* Indicates the duplicate analysis is not within control limits.

Note: Entering "S", "W" or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 24259 SITE: Jefferson / Chene MATRIX: Soil/water WATER SAMPLE SPK: MEAGP1

DATA SET: MEAGM7 LAB: Columbia CONC: Low WATER SAMPLE DUP: MEAGP1

LAB QC # REVIEWED BY: J. Rollin Soil-[14] MEAGM7-9 MEAGN0-9 MEAGP0 SOIL SAMPLE SPK: MEAGN5

DATE: 1-16-96 WATER [1] MEAGP1 SOIL SAMPLE DUP: MEAGN5

FORM #	11-28	FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD		
ELEMENT	HOLD TIME	INITIAL CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICB %R	SOIL SPIKE %R	SOIL DUP RPD	LCS AQ	LCS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP RPD	AQ SPIKE %R	BLANK P1	DUP RPD	BLANK	DUP RPD	GFAA DUP	GFAA ANALYT SPIKE
ALUMINUM	ok	ok	ok	~~43.7~~	~~16.360~~	~~3.146~~	ok		~~(209)~~	ok	ok		ok			~~12.9~~					
ANTIMONY				29.0				30.5	(44.7)												
ARSENIC				~~0.8~~				54.5													
BARIUM				ICB 1.6					~~(200.0)~~							~~2.5~~					
BERYLLIUM																					
CADMIUM																					
CALCIUM				~~65.6~~	~~69.930~~	~~2.408~~										~~418~~					
CHROMIUM				~~6.6~~																	
COBALT																					
COPPER									~~(200.0)~~							~~3.5~~					
IRON				~~34.7~~	24.500	~~2.118~~										~~49.7~~					
LEAD				~~0.818~~		~~0.140~~		(262.5)	~~(235)~~							~~1.0~~					
MAGNESIUM																					
MANGANESE								234.4	~~(283)~~							~~1.3~~					
MERCURY				0.1																	
NICKEL																					
POTASSIUM				ICB 315.5																	
SELENIUM				1.6	~~1.200~~	~~0.240~~		41.9													
SILVER																					
SODIUM																2680					
THALLIUM				1.1	~~0.600~~				(200.9)												
TIN																					
VANADIUM																					
ZINC				ICB 8.1	~~3.160~~	~~0.380~~										~~12.0~~					
CYANIDE																					

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

SOW No.: ILM04.0

EPA Sample No.	Lab Sample ID.
MEAGM7	K07446-001
MEAGM8	K07446-002
MEAGM9	K07446-003
MEAGN0	K07446-004
MEAGN1	K07446-005
MEAGN2	K07446-006
MEAGN3	K07446-007
MEAGN4	K07446-008
MEAGN5	K07446-009
MEAGN5D	K07446-009
MEAGN5S	K07446-009
MEAGN6	K07446-010
MEAGN7	K07446-011
MEAGN8	K07446-012
MEAGN9	K07446-013
MEAGP0	K07446-014
MEAGP1	K07446-015
MEAGP1D	K07446-015
MEAGP1S	K07446-015

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JAN 12 1996
US EPA CENTRAL 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 diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Eileen M Arnold Name: Eileen M. Arnold 24259

Date: 1/11/96 Title: Project Chemist 00001

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB1

MEAGP1

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): WATER Lab Sample ID: K07446-015

Level (low/med): LOW Date Received: 11/29/95

% 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	12.9	B		P
7440-36-0	Antimony	16.9	U		P
7440-38-2	Arsenic	0.70	U		F
7440-39-3	Barium	2.5	B		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	2.7	U		P
7440-70-2	Calcium	418	B	E	P
7440-47-3	Chromium	2.9	U		P
7440-48-4	Cobalt	3.0	U		P
7440-50-8	Copper	3.5	B		P
7439-89-6	Iron	49.7	B		P
7439-92-1	Lead	1.0	B		F
7439-95-4	Magnesium	128	U		P
7439-96-5	Manganese	1.3	B		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	10.9	U		P
7440-09-7	Potassium	282	U		P
7782-49-2	Selenium	0.90	U		F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	2680	B		P
7440-28-0	Thallium	0.20	U		F
7440-62-2	Vanadium	1.8	U		P
7440-66-6	Zinc	12.0	B		P
	Cyanide	1.0 ~~0.50~~	U		AS

JR 1/17/96

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

24259

00016

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS27

MEAGM7

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-001

Level (low/med): LOW Date Received: 11/29/95

% Solids: 83.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7170			P
7440-36-0	Antimony	5.0	B	N	P
7440-38-2	Arsenic	3.1		N	F
7440-39-3	Barium	68.0			P
7440-41-7	Beryllium	0.95	B		P
7440-43-9	Cadmium	0.65	U		P
7440-70-2	Calcium	19900			P
7440-47-3	Chromium	13.7			P
7440-48-4	Cobalt	2.0	B		P
7440-50-8	Copper	28.7			P
7439-89-6	Iron	8340			P
7439-92-1	Lead	155		S	F
7439-95-4	Magnesium	5900			P
7439-96-5	Manganese	403		N	P
7439-97-6	Mercury	0.10			CV
7440-02-0	Nickel	8.8	B		P
7440-09-7	Potassium	708	B		P
7782-49-2	Selenium	1.1	U	N	F
7440-22-4	Silver	0.43	U		P
7440-23-5	Sodium	122	B		P
7440-28-0	Thallium	0.05	B		F
7440-62-2	Vanadium	15.3			P
7440-66-6	Zinc	95.9			P
	Cyanide	0.21	B		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS28

MEAGM8

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-002

Level (low/med): LOW Date Received: 11/29/95

% Solids: 89.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23200			P
7440-36-0	Antimony	5.7	B	N	P
7440-38-2	Arsenic	3.4	B	NW	F
7440-39-3	Barium	256			P
7440-41-7	Beryllium	5.6			P
7440-43-9	Cadmium	1.3			P
7440-70-2	Calcium	119000			P
7440-47-3	Chromium	15.2			P
7440-48-4	Cobalt	0.75	B		P
7440-50-8	Copper	25.5			P
7439-89-6	Iron	7430			P
7439-92-1	Lead	674			F
7439-95-4	Magnesium	30000			P
7439-96-5	Manganese	2140		N	P
7439-97-6	Mercury	0.09	B		CV
7440-02-0	Nickel	7.5	B		P
7440-09-7	Potassium	1660			P
7782-49-2	Selenium	1.0	U	NW	F
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	722	B		P
7440-28-0	Thallium	0.27	B		F
7440-62-2	Vanadium	13.4			P
7440-66-6	Zinc	263			P
	Cyanide	1.1			AS

olor Before: BROWN Clarity Before: Texture: COARSE

olor After: BROWN Clarity After: Artifacts:

omments:

24259
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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS29

MEAGM9

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-003

Level (low/med): LOW Date Received: 11/29/95

% Solids: 85.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7100			P
7440-36-0	Antimony	5.9	B	N	P
7440-38-2	Arsenic	6.1		N	F
7440-39-3	Barium	182			P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	0.77	B		P
7440-70-2	Calcium	49000			P
7440-47-3	Chromium	14.6			P
7440-48-4	Cobalt	4.4	B		P
7440-50-8	Copper	105			P
7439-89-6	Iron	13100			P
7439-92-1	Lead	175			F
7439-95-4	Magnesium	8990			P
7439-96-5	Manganese	329		N	P
7439-97-6	Mercury	0.11			CV
7440-02-0	Nickel	16.5			P
7440-09-7	Potassium	780	B		P
7782-49-2	Selenium	0.21	U	NW	F
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	372	B		P
7440-28-0	Thallium	0.35	B		F
7440-62-2	Vanadium	22.1			P
7440-66-6	Zinc	639			P
	Cyanide	0.26	B		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS 30

MEAGN0

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-004

Level (low/med): LOW Date Received: 11/29/95

% Solids: 87.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8460			P
7440-36-0	Antimony	4.3	B	N	P
7440-38-2	Arsenic	7.7		N	F
7440-39-3	Barium	57.2			P
7440-41-7	Beryllium	0.49	B		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	4900			P
7440-47-3	Chromium	14.6			P
7440-48-4	Cobalt	4.9	B		P
7440-50-8	Copper	16.0			P
7439-89-6	Iron	14500			P
7439-92-1	Lead	46.8		S	F
7439-95-4	Magnesium	2650			P
7439-96-5	Manganese	320		N	P
7439-97-6	Mercury	0.11			CV
7440-02-0	Nickel	9.6			P
7440-09-7	Potassium	858	B		P
7782-49-2	Selenium	0.21	U	NW	F
7440-22-4	Silver	0.41	U		P
7440-23-5	Sodium	72.3	B		P
7440-28-0	Thallium	0.37	B		F
7440-62-2	Vanadium	25.1			P
7440-66-6	Zinc	51.4			P
	Cyanide	0.06	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS21

MEAGN1

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-005

Level (low/med): LOW Date Received: 11/29/95

% Solids: 83.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9920			P
7440-36-0	Antimony	7.2	B	N	P
7440-38-2	Arsenic	13.5		NS	F
7440-39-3	Barium	134			P
7440-41-7	Beryllium	0.59	B		P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	29800			P
7440-47-3	Chromium	27.5			P
7440-48-4	Cobalt	5.7	B		P
7440-50-8	Copper	219			P
7439-89-6	Iron	28500			P
7439-92-1	Lead	328		S	F
7439-95-4	Magnesium	8660			P
7439-96-5	Manganese	491		N	P
7439-97-6	Mercury	0.46			CV
7440-02-0	Nickel	25.5			P
7440-09-7	Potassium	1650			P
7782-49-2	Selenium	0.21	U	NW	F
7440-22-4	Silver	5.8			P
7440-23-5	Sodium	139	B		P
7440-28-0	Thallium	0.48	B		F
7440-62-2	Vanadium	36.3			P
7440-66-6	Zinc	209			P
	Cyanide	0.20	B		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
5522

MEAGN2

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-006

Level (low/med): LOW Date Received: 11/29/95

% Solids: 85.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200			P
7440-36-0	Antimony	3.9	B	N	P
7440-38-2	Arsenic	9.4		NS	F
7440-39-3	Barium	73.8			P
7440-41-7	Beryllium	0.60	B		P
7440-43-9	Cadmium	0.63	U		P
7440-70-2	Calcium	23000			P
7440-47-3	Chromium	19.7			P
7440-48-4	Cobalt	7.1	B		P
7440-50-8	Copper	23.6			P
7439-89-6	Iron	20000			P
7439-92-1	Lead	72.1		S	F
7439-95-4	Magnesium	11500			P
7439-96-5	Manganese	345		N	P
7439-97-6	Mercury	0.12			CV
7440-02-0	Nickel	23.9			P
7440-09-7	Potassium	1590			P
7782-49-2	Selenium	0.21	U	NW	F
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	82.6	B		P
7440-28-0	Thallium	0.47	B		F
7440-62-2	Vanadium	30.4			P
7440-66-6	Zinc	69.1			P
	Cyanide	0.06	U		AS

olor Before: BROWN Clarity Before: Texture: MEDIUM

olor After: BROWN Clarity After: Artifacts:

omments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS23

MEAGN3

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-007

Level (low/med): LOW Date Received: 11/29/95

% Solids: 77.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10100			P
7440-36-0	Antimony	4.3	U	N	P
7440-38-2	Arsenic	6.6		N	F
7440-39-3	Barium	87.9			P
7440-41-7	Beryllium	0.62	B		P
7440-43-9	Cadmium	0.69	U		P
7440-70-2	Calcium	6480			P
7440-47-3	Chromium	18.5			P
7440-48-4	Cobalt	4.7	B		P
7440-50-8	Copper	50.9			P
7439-89-6	Iron	15600			P
7439-92-1	Lead	110			F
7439-95-4	Magnesium	3680			P
7439-96-5	Manganese	271		N	P
7439-97-6	Mercury	0.14			CV
7440-02-0	Nickel	17.9			P
7440-09-7	Potassium	1820			P
7782-49-2	Selenium	0.39	B	NW	F
7440-22-4	Silver	0.46	U		P
7440-23-5	Sodium	56.3	B		P
7440-28-0	Thallium	0.49	B		F
7440-62-2	Vanadium	28.2			P
7440-66-6	Zinc	117			P
	Cyanide	0.12	B		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS24

MEAGN4

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-008

Level (low/med): LOW Date Received: 11/29/95

% Solids: 83.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9700			P
7440-36-0	Antimony	5.9	B	N	P
7440-38-2	Arsenic	6.9		N	F
7440-39-3	Barium	516			P
7440-41-7	Beryllium	0.63	B		P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	16900			P
7440-47-3	Chromium	17.3			P
7440-48-4	Cobalt	6.1	B		P
7440-50-8	Copper	51.2			P
7439-89-6	Iron	16700			P
7439-92-1	Lead	176		S	F
7439-95-4	Magnesium	6860			P
7439-96-5	Manganese	266		N	P
7439-97-6	Mercury	0.15			CV
7440-02-0	Nickel	18.9			P
7440-09-7	Potassium	1660			P
7782-49-2	Selenium	0.21	U	NW	F
7440-22-4	Silver	0.60	B		P
7440-23-5	Sodium	65.6	B		P
7440-28-0	Thallium	0.48	B		F
7440-62-2	Vanadium	27.4			P
7440-66-6	Zinc	169			P
	Cyanide	0.06	U		AS

olor Before: BROWN Clarity Before: Texture: COARSE

olor After: BROWN Clarity After: Artifacts:

omments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS25

MEAGN5

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-009

Level (low/med): LOW Date Received: 11/29/95

% Solids: 75.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200			P
7440-36-0	Antimony	5.0	B	N	P
7440-38-2	Arsenic	7.7		N	F
7440-39-3	Barium	113			P
7440-41-7	Beryllium	0.70	B		P
7440-43-9	Cadmium	0.71	U		P
7440-70-2	Calcium	7980			P
7440-47-3	Chromium	21.4			P
7440-48-4	Cobalt	6.5	B		P
7440-50-8	Copper	67.3			P
7439-89-6	Iron	17700			P
7439-92-1	Lead	161			F
7439-95-4	Magnesium	4230			P
7439-96-5	Manganese	351		N	P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	20.0			P
7440-09-7	Potassium	2170			P
7782-49-2	Selenium	0.24	U	NW	F
7440-22-4	Silver	0.58	B		P
7440-23-5	Sodium	66.6	B		P
7440-28-0	Thallium	0.13	B		F
7440-62-2	Vanadium	31.0			P
7440-66-6	Zinc	144			P
	Cyanide	0.23	B		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS26

MEAGN6

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-010

Level (low/med): LOW Date Received: 11/29/95

% Solids: 73.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600			P
7440-36-0	Antimony	4.9	B	N	P
7440-38-2	Arsenic	12.6		NS	F
7440-39-3	Barium	145			P
7440-41-7	Beryllium	0.87	B		P
7440-43-9	Cadmium	0.74	U		P
7440-70-2	Calcium	18300			P
7440-47-3	Chromium	24.4			P
7440-48-4	Cobalt	6.0	B		P
7440-50-8	Copper	118			P
7439-89-6	Iron	18100			P
7439-92-1	Lead	320		S	F
7439-95-4	Magnesium	7210			P
7439-96-5	Manganese	294		N	P
7439-97-6	Mercury	0.35			CV
7440-02-0	Nickel	24.0			P
7440-09-7	Potassium	2350			P
7782-49-2	Selenium	0.27	B	NW	F
7440-22-4	Silver	0.57	B		P
7440-23-5	Sodium	95.8	B		P
7440-28-0	Thallium	0.63	B		F
7440-62-2	Vanadium	30.5			P
7440-66-6	Zinc	255			P
	Cyanide	0.36	B		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS27

MEAGN7

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-011

Level (low/med): LOW Date Received: 11/29/95

% Solids: 84.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8110			P
7440-36-0	Antimony	6.5	B	N	P
7440-38-2	Arsenic	7.5		N	F
7440-39-3	Barium	121			P
7440-41-7	Beryllium	0.51	B		P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	24100			P
7440-47-3	Chromium	25.9			P
7440-48-4	Cobalt	5.0	B		P
7440-50-8	Copper	54.9			P
7439-89-6	Iron	14900			P
7439-92-1	Lead	531			F
7439-95-4	Magnesium	8180			P
7439-96-5	Manganese	269		N	P
7439-97-6	Mercury	0.24			CV
7440-02-0	Nickel	26.0			P
7440-09-7	Potassium	1340			P
7782-49-2	Selenium	0.21	U	NW	F
7440-22-4	Silver	0.43	U		P
7440-23-5	Sodium	83.7	B		P
7440-28-0	Thallium	0.40	B		F
7440-62-2	Vanadium	24.6			P
7440-66-6	Zinc	158			P
	Cyanide	0.07	B		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

SS28

MEAGN8

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-012

Level (low/med): LOW Date Received: 11/29/95

% Solids: 80.5

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7570			P	
7440-36-0	Antimony	5.6	B	N	P	
7440-38-2	Arsenic	4.8		N	F	
7440-39-3	Barium	150			P	
7440-41-7	Beryllium	0.54	B		P	
7440-43-9	Cadmium	0.77	B		P	
7440-70-2	Calcium	33100			P	
7440-47-3	Chromium	21.1			P	
7440-48-4	Cobalt	4.3	B		P	
7440-50-8	Copper	102			P	
7439-89-6	Iron	13100			P	
7439-92-1	Lead	316 ~~280~~		S	F	JR 1/17/96
7439-95-4	Magnesium	10400			P	
7439-96-5	Manganese	384		N	P	
7439-97-6	Mercury	0.24			CV	
7440-02-0	Nickel	16.4			P	
7440-09-7	Potassium	1350			P	
7782-49-2	Selenium	0.22	U	NW	F	
7440-22-4	Silver	0.45	U		P	
7440-23-5	Sodium	97.3	B		P	
7440-28-0	Thallium	0.37	B		F	
7440-62-2	Vanadium	23.1			P	
7440-66-6	Zinc	187			P	
	Cyanide	0.19	B		AS	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS29

MEAGN9

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-013

Level (low/med): LOW Date Received: 11/29/95

% Solids: 86.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8990			P
7440-36-0	Antimony	7.4	B	N	P
7440-38-2	Arsenic	5.2		N	F
7440-39-3	Barium	98.9			P
7440-41-7	Beryllium	0.48	B		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	63700			P
7440-47-3	Chromium	17.3			P
7440-48-4	Cobalt	7.4	B		P
7440-50-8	Copper	38.7			P
7439-89-6	Iron	17100			P
7439-92-1	Lead	157			F
7439-95-4	Magnesium	18900			P
7439-96-5	Manganese	392		N	P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	20.1			P
7440-09-7	Potassium	1740			P
7782-49-2	Selenium	0.21	U	NW	F
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	125	B		P
7440-28-0	Thallium	0.37	B		F
7440-62-2	Vanadium	26.7			P
7440-66-6	Zinc	115			P
	Cyanide	0.06	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

00014

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
SS30

MEAGP0

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Lab Sample ID: K07446-014

Level (low/med): LOW Date Received: 11/29/95

% Solids: 88.2

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	10300			P	
7440-36-0	Antimony	6.0	B	N	P	
7440-38-2	Arsenic	5.6		N	F	
7440-39-3	Barium	65.1			P	
7440-41-7	Beryllium	0.58	B		P	
7440-43-9	Cadmium	0.61	U		P	
7440-70-2	Calcium	59600			P	
7440-47-3	Chromium	18.6			P	
7440-48-4	Cobalt	7.5	B		P	
7440-50-8	Copper	26.3			P	
7439-89-6	Iron	18400			P	
7439-92-1	Lead	38.5 ~~37.2~~		S	F	1/17/96 JR
7439-95-4	Magnesium	20900			P	
7439-96-5	Manganese	350		N	P	
7439-97-6	Mercury	0.04	B		CV	
7440-02-0	Nickel	20.6			P	
7440-09-7	Potassium	2280			P	
7782-49-2	Selenium	0.20	U	NW	F	
7440-22-4	Silver	0.41	U		P	
7440-23-5	Sodium	149	B		P	
7440-28-0	Thallium	0.23	B	W	F	
7440-62-2	Vanadium	29.0			P	
7440-66-6	Zinc	64.3			P	
	Cyanide	0.06	B		AS	

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: BROWN Clarity After: Artifacts:

Comments:

24259

00015

U.S. EPA - CLP

3
BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	7.0	U	7.0	U	7.0	U	28.2	B	3.146	B	P
Antimony	16.9	U	22.0	B	29.0	B	16.9	U	3.380	U	P
Arsenic	0.7	U	0.7	U	0.7	U	0.7	U	0.140	U	F
Barium	1.6	B	0.7	U	0.7	U	0.7	U	-0.208	B	P
Beryllium	0.6	U	0.6	U	0.6	U	0.6	U	0.120	U	P
Cadmium	2.7	U	2.7	U	2.7	U	2.7	U	0.540	U	P
Calcium	12.0	B	7.2	U	10.1	B	41.5	B	2.408	B	P
Chromium	2.9	U	2.9	U	6.6	B	2.9	U	0.580	U	P
Cobalt	3.0	U	-4.8	B	-3.0	B	3.0	U	0.600	U	P
Copper	-1.3	B	-2.6	B	-2.1	B	-2.4	B	-0.578	B	P
Iron	3.4	U	3.4	U	3.4	U	18.3	B	2.118	B	P
Lead	0.6	U	0.6	U	0.8	B	0.6	U	0.140	B	F
Magnesium	127.8	U	127.8	U	127.8	U	127.8	U	25.560	U	P
Manganese	0.9	U	0.9	U	0.9	U	0.9	U	0.180	U	P
Mercury	0.1	B	0.1	B	0.1	B	0.1	U	0.040	U	CV
Nickel	10.9	U	10.9	U	10.9	U	10.9	U	2.180	U	P
Potassium	315.5	B	281.8	U	281.8	U	281.8	U	-145.816	B	P
Selenium	0.9	U	1.2	B	1.6	B	1.3	B	0.240	B	F
Silver	1.8	U	1.8	U	1.8	U	1.8	U	0.360	U	P
Sodium	25.8	U	25.8	U	25.8	U	25.8	U	5.160	U	P
Thallium	0.8	B	1.0	B	0.3	B	-0.6	B	0.040	U	F
Vanadium	1.8	U	1.8	U	1.8	U	1.8	U	0.360	U	P
Zinc	8.1	B	3.8	B	2.6	B	2.6	B	0.380	B	P
Cyanide	1.0	U	1.0	U	1.0	U	1.0	U	0.050	U	AS

U.S. EPA - CLP

3
BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

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			7.6	B	43.7	B	7.0	U	16.360	B	P	
Antimony			16.9	U	18.0	B	27.0	B	16.900	U	P	
Arsenic			0.7	U	0.8	B	0.7	U	0.700	U	F	
Barium			0.7	U	0.7	U	0.7	U	0.700	U	P	
Beryllium			0.6	U	0.6	U	0.6	U	0.600	U	P	
Cadmium			2.7	U	2.7	U	2.7	U	2.700	U	P	
Calcium			25.8	B	65.6	B	17.0	B	69.930	B	P	
Chromium			2.9	U	2.9	U	2.9	U	2.900	U	P	
Cobalt			3.0	U	3.0	U	3.0	U	3.000	U	P	
Copper			-1.3	B	-1.8	B	-2.1	B	-3.400	B	P	
Iron			16.3	B	34.2	B	12.5	B	24.500	B	P	
Lead			0.6	U	-0.6	B	1.7 ~~1.8~~	B	0.600	U	F	JR 1/17/96
Magnesium			127.8	U	127.8	U	127.8	U	127.800	U	P	
Manganese			0.9	U	0.9	U	0.9	U	0.900	U	P	
Mercury									0.180 ~~0.100~~ ~~U~~ B		CV	JR 1/17/96
Nickel			10.9	U	10.9	U	10.9	U	10.900	U	P	
Potassium			281.8	U	281.8	U	281.8	U	281.800	U	P	
Selenium			0.9	U	0.9	U	0.9	U	1.200	B	F	
Silver			1.8	U	1.8	U	1.8	U	1.800	U	P	
Sodium			25.8	U	25.8	U	25.8	U	25.800	U	P	
Thallium			-0.6	B	-0.2	B			0.600	B	F	
Vanadium			1.8	U	1.8	U	1.8	U	1.800	U	P	
Zinc			2.6	B	3.2	B	3.2	B	3.160	B	P	
Cyanide			-1.0	B					1.000	U	AS	JR 1/17/96

U.S. EPA - CLP

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BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			7.0	U	43.3	B					P
Antimony			18.6	B	17.3	B					P
Arsenic			0.7	U							F
Barium			0.7	U	0.7	U					P
Beryllium			0.6	U	0.6	U					P
Cadmium			2.7	U	2.7	U					P
Calcium			18.5	B	65.0	B					P
Chromium			3.1	B	2.9	U					P
Cobalt			3.0	U	3.0	U					P
Copper			-2.9	B	-1.8	B					P
Iron			5.0	B	30.5	B					P
Lead											
Magnesium			127.8	U	127.8	U					P
Manganese			0.9	U	0.9	U					P
Mercury											
Nickel			10.9	U	10.9	U					P
Potassium			281.8	U	281.8	U					P
Selenium			0.9	B	0.9	U	1.5	B			F
Silver			1.8	U	1.8	U					P
Sodium			25.8	U	25.8	U					P
Thallium											
Vanadium			1.8	U	1.8	U					P
Zinc			1.4	U	3.1	B					P
Cyanide											

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FORM III - IN ILM04.0

U.S. EPA - CLP

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BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic	0.7	U	0.7	U	0.7	U	0.7	U			F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead	0.6	U	0.6	U	0.6	U	0.6	U			F
Magnesium											
Manganese											
Mercury	0.1	~~B~~ U	0.1	B	0.1	U					CV
Nickel	JK 1/17/96										
Potassium											
Selenium	0.9	U	0.9	U	0.9	U					F
Silver											
Sodium											
Thallium	0.8	B	1.1	B	1.0	B	0.7	B			F
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

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BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic			0.7	U	0.7 ~~0.8~~	~~B~~	U 0.7	U			F
Barium					JR 1/17/96						
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			0.6	U	0.6	U	0.6	U			F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium			0.8	B	0.2	B					F
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

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BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			0.6	U	0.6	U	0.6	U			F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

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BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			0.6	U	0.6	B	0.6	U			F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

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FORM III - IN ILM04.0

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U.S. EPA - CLP

3
BLANKS

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			0.6	U							F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEAGN5S

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

Matrix (soil/water): SOIL Level (low/med): LOW
% Solids for Sample: 75.9

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	45.2095		4.9987	B	131.75	30.5	N	P
Arsenic	75-125	13.4651		7.7207		10.54	54.5	N	F
Barium	75-125	615.0988		113.2885		527.01	95.2		P
Beryllium	75-125	13.1910		0.6957	B	13.18	94.8		P
Cadmium	75-125	11.3781		0.7115	U	13.18	86.3		P
Calcium									NR
Chromium	75-125	71.7549		21.4414		52.70	95.5		P
Cobalt	75-125	120.9407		6.5217	B	131.75	86.8		P
Copper	75-125	129.3834		67.2569		65.88	94.3		P
Iron									NR
Lead		174.5718		160.7378		5.27	262.5		F
Magnesium									NR
Manganese	75-125	659.3781		350.5138		131.75	234.4	N	P
Mercury	75-125	1.1557		0.1022	B	1.16	90.8		CV
Nickel	75-125	151.1700		20.0448		131.75	99.5		P
Potassium									NR
Selenium	75-125	1.1067	B	0.2372	U	2.64	41.9	N	F
Silver	75-125	12.2240		0.5823	B	13.18	88.3		P
Sodium									NR
Thallium	75-125	12.5165		0.1318	B	13.18	94.0		F
Vanadium	75-125	152.3426		30.9908		131.75	92.1		P
Zinc	75-125	269.6838		144.4638		131.75	95.0		P
Cyanide	75-125	6.2829		0.2323	B	6.59	91.8		AS

Comments:

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEAGN5A

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

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

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony		128.80		18.97	B	120.0	91.5		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese		3608.03		1330.20		2500.0	91.1		P
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MEAGN5D

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

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

% Solids for Sample: 75.9 % Solids for Duplicate: 83.1

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		11192.9140		10630.2890		5.2		P
Antimony		4.9987	B	7.8735	B	44.7		P
Arsenic	2.6	7.7207		7.2991		5.6		F
Barium	52.7	113.2885		111.0171		2.0		P
Beryllium		0.6957	B	0.7009	B	0.7		P
Cadmium		0.7115	U	0.7115	U			P
Calcium		7980.0158		8976.4242		11.8		P
Chromium		21.4414		21.2912		0.7		P
Cobalt		6.5217	B	6.4638	B	0.9		P
Copper		67.2569		67.7576		0.7		P
Iron		17682.8010		17696.5740		0.1		P
Lead		160.7378		148.2213		8.1		F
Magnesium	1317.5	4226.8458		4516.9513		6.6		P
Manganese		350.5138		312.3452		11.5		P
Mercury		0.1022	B	0.0949	B	7.4		CV
Nickel	10.5	20.0448		22.3426		10.8		P
Potassium	1317.5	2169.5599		2050.0922		5.7		P
Selenium		0.2372	U	0.2372	U			F
Silver		0.5823	B	0.4769	B	19.9		P
Sodium		66.6456	B	62.1291	B	7.0		P
Thallium		0.1318	B	0.0527	U	200.0		F
Vanadium	13.2	30.9908		29.9947		3.3		P
Zinc		144.4638		144.2978		0.1		P
Cyanide		0.2323	B	0.1944	B	17.8		AS

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00045

U.S. EPA - CLP

10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

ICP ID Number: TJA-1 Date: 10/15/95

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200.0	7.0	P
Antimony	206.80		60.0	16.9	P
Arsenic			10.0		
Barium	493.60		200.0	0.7	P
Beryllium	313.00		5.0	0.6	P
Cadmium	228.80		5.0	2.7	P
Calcium	317.90		5000.0	7.2	P
Chromium	267.70		10.0	2.9	P
Cobalt	228.60		50.0	3.0	P
Copper	324.70		25.0	0.6	P
Iron	259.90		100.0	3.4	P
Lead			3.0		
Magnesium	383.20		5000.0	127.8	P
Manganese	257.60		15.0	0.9	P
Mercury			0.2		
Nickel	231.60		40.0	10.9	P
Potassium	766.50		5000.0	281.8	P
Selenium			5.0		
Silver	328.00		10.0	1.8	P
Sodium	588.90		5000.0	25.8	P
Thallium			10.0		
Vanadium	292.40		50.0	1.8	P
Zinc	213.80		20.0	1.4	P
Cyanide			10.0		

Comments:

24259

00050

U.S. EPA - CLP

10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

ICP ID Number: Date: 10/15/95

Flame AA ID Number:

Furnace AA ID Number: VARIAN-2

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead	283.30	BZ	3.0	0.6	F
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium	276.80	BZ	10.0	0.2	F
Vanadium			50.0		
Zinc			20.0		
Cyanide			10.0		

Comments:

24259

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U.S. EPA - CLP

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

ICP ID Number: Date: 10/15/95

Flame AA ID Number: VARIAN-3

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury	253.70	BD	0.2	0.1	CV
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		
Cyanide			10.0		

Comments:

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

ICP ID Number: Date: 10/15/95

Flame AA ID Number:

Furnace AA ID Number: VARIAN-4

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic	193.70	BZ	10.0	0.7	F
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium	196.00		5.0	0.9	F
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		
Cyanide			10.0		

Comments:

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135

Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7

ICP ID Number: Date: 10/15/95

Flame AA ID Number: LATCHAT-1

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200.0		
Antimony			60.0		
Arsenic			10.0		
Barium			200.0		
Beryllium			5.0		
Cadmium			5.0		
Calcium			5000.0		
Chromium			10.0		
Cobalt			50.0		
Copper			25.0		
Iron			100.0		
Lead			3.0		
Magnesium			5000.0		
Manganese			15.0		
Mercury			0.2		
Nickel			40.0		
Potassium			5000.0		
Selenium			5.0		
Silver			10.0		
Sodium			5000.0		
Thallium			10.0		
Vanadium			50.0		
Zinc			20.0		
Cyanide			10.0	1.0	AS

Comments:

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: TJA-1 Method: P
Start Date: 12/26/95 End Date: 12/26/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	0924		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
S	1.00	0926		X				X		X		X	X	X		X	X								X	X	
S	1.00	0928			X		X		X		X								X	X		X	X				
ICV	1.00	0930		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICB	1.00	0932		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV11	1.00	0934		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB11	1.00	0936		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV12	1.00	0943		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB12	1.00	0945		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CRII	1.00	0947			X			X	X		X	X	X				X		X			X			X	X	
ICSAI	1.00	0950		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSABI	1.00	0954		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
/13	1.00	0957		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB13	1.00	0959		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
PBS	1.00	1002		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
LCSS	1.00	1005		X	X		X	X	X		X	X	X	X		X	X		X	X		X	X		X	X	
LCSS	1.00	1012								X																	
MEAGM7	1.00	1015		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGM8	1.00	1018		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGM9	1.00	1021		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN0	1.00	1025		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN1	1.00	1029		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN2	1.00	1032		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN3	1.00	1035		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV14	1.00	1038		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB14	1.00	1040		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN4	1.00	1047		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN5	1.00	1050		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN5L	5.00	1053		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN5D	1.00	1057		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN5S	1.00	1100			X		X	X	X		X	X	X				X		X			X			X	X	
MEAGN5A	1.00	1111			X												X										

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: TJA-1 Method: P
Start Date: 12/26/95 End Date: 12/26/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MEAGN6	1.00	1114		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CRIF1	1.00	1118			X			X	X		X	X	X				X		X			X			X	X	
ICSAF1	1.00	1121		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSABF1	1.00	1127		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV15	1.00	1130		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB15	1.00	1132		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV16	1.00	1137		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB16	1.00	1140		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN7	1.00	1142		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN8	1.00	1145		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGN9	1.00	1148		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGP0	1.00	1151		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
PBW	1.00	1155		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
LCSW	1.00	1158		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGP1	1.00	1202		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGP1D	1.00	1205		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
MEAGP1S	1.00	1208		X	X		X	X	X		X	X	X	X			X		X			X			X	X	
MEAGP1L	5.00	1211		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV17	1.00	1214		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB17	1.00	1215		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CRIF2	1.00	1217			X			X	X		X	X	X				X		X			X			X	X	
ICSAF2	1.00	1220		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
ICSABF2	1.00	1222		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCV18	1.00	1225		X	X		X	X	X	X	X	X	X	X		X	X		X	X		X	X		X	X	
CCB18	1.00	1227		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

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/18/95 End Date: 12/18/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1804				X																					
S10	1.00	1808				X																					
S20	1.00	1812				X																					
S40	1.00	1816				X																					
S60	1.00	1820				X																					
ICV	1.00	1824				X																					
ICB	1.00	1828				X																					
CCV11	1.00	1832				X																					
CCB11	1.00	1836				X																					
ZZZZZZ	1.00	1840																									
CRA	1.00	1844				X																					
LCSS	1.00	1848																									
LCSSA	1.00	1852	99.0																								
CCV12	1.00	1856				X																					
CCB12	1.00	1900				X																					
PBW	1.00	1904				X																					
PBWA	1.00	1908	98.0			X																					
LCSW	1.00	1912				X																					
LCSWA	1.00	1916	88.5			X																					
CCV13	1.00	1920				X																					
CCB13	1.00	1924				X																					
MEAGP1	1.00	1928				X																					
MEAGP1A	1.00	1932	98.5			X																					
MEAGP1D	1.00	1936				X																					
MEAGP1DA	1.00	1940	99.0			X																					
MEAGP1S	1.00	1944				X																					
CCV14	1.00	1948				X																					
CCB14	1.00	1952				X																					
ZZZZZZ	1.00	1956																									
PBS	1.00	2000				X																					
PBSA	1.00	2004	101.5			X																					
LCSS	250.00	2008				X																					

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/18/95 End Date: 12/18/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
LCSSA	250.00	2012	95.5			X																					
MEAGM7	1.00	2016				X																					
MEAGM7A	1.00	2020	91.5			X																					
MEAGM8	1.00	2024																									
MEAGM8A	1.00	2028	57.0																								
CCV15	1.00	2032				X																					
CCB15	1.00	2036				X																					
ZZZZZZ	1.00	2040																									
ZZZZZZ	1.00	2044																									
CCV16	1.00	2048				X																					
CCB16	1.00	2052				X																					
MEAGM9	1.00	2056				X																					
MEAGM9A	1.00	2100	93.5			X																					
MEAGN0	1.00	2104				X																					
MEAGN0A	1.00	2108	88.0			X																					
MEAGN1	1.00	2112																									
MEAGN1A	1.00	2116	87.5																								
MEAGN2	1.00	2120																									
MEAGN2A	1.00	2124	80.5																								
MEAGN3	1.00	2128				X																					
MEAGN3A	1.00	2132	86.0			X																					
CCV17	1.00	2136				X																					
CCB17	1.00	2140				X																					

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/18/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	2148				X																					
S10	1.00	2152				X																					
S20	1.00	2156				X																					
S40	1.00	2200				X																					
S60	1.00	2204				X																					
ICV2	1.00	2208				X																					
ICB2	1.00	2212				X																					
CCV21	1.00	2216				X																					
CCB21	1.00	2220				X																					
CRA2	1.00	2224				X																					
MEAGN4	1.00	2228				X																					
MEAGN4A	1.00	2232	93.5			X																					
MEAGN5	1.00	2236				X																					
MEAGN5A	1.00	2240	92.5			X																					
MEAGN5D	1.00	2244				X																					
MEAGN5DA	1.00	2248	85.5			X																					
MEAGN5S	1.00	2252				X																					
MEAGN6	1.00	2256																									
MEAGN6A	1.00	2300	84.0																								
CCV22	1.00	2304				X																					
CCB22	1.00	2308				X																					
MEAGN7	1.00	2312				X																					
MEAGN7A	1.00	2316	91.0			X																					
MEAGN8	1.00	2320				X																					
MEAGN8A	1.00	2324	91.5			X																					
MEAGN9	1.00	2328				X																					
MEAGN9A	1.00	2332	88.5			X																					
MEAGP0	1.00	2336				X																					
MEAGP0A	1.00 ~~2.00~~	2340	88.5			X																					
MEAGM8	2.00	2344				X																					
MEAGM8A	2.00 ~~1.00~~	2348	81.5			X																					
CCV23	1.00	2352				X																					

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/18/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB23	1.00	2356				X																					
ZZZZZZ	1.00	0000																									
MEAGN1	2.00	0004																									
MEAGN1A	2.00	0008	81.5																								
CCV24	1.00	0012				X																					
CCB24	1.00	0016				X																					
ZZZZZZ	1.00	0018																									
ZZZZZZ	1.00	0020																									
CCV25	1.00	0022				X																					
CCB25	1.00 ~~2.00~~	0024				X																					
MEAGN10	2.00	0026				X																					
MEAGN11	2.00	0028				X																					
MEAGN12	2.00	0030				X																					
MEAGN13	2.00	0032				X																					
MEAGN20	2.00	0034				X																					
MEAGN21	2.00	0036				X																					
MEAGN22	2.00	0038				X																					
MEAGN23	2.00	0040				X																					
MEAGN60	2.00	0042				X																					
MEAGN61	2.00	0044				X																					
MEAGN62	2.00	0046				X																					
MEAGN63	2.00 ~~1.00~~	0048				X																					
CCV26	1.00	0050				X																					
CCB26	1.00	0052				X																					

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	0804													X												
S3	1.00	0808													X												
S30	1.00	0812													X												
S40	1.00	0816													X												
S50	1.00	0820													X												
ICV	1.00	0824													X												
ICB	1.00	0828													X												
CCV11	1.00	0832													X												
CCB11	1.00	0836													X												
ZZZZZZ	1.00	0840																									
CRA	1.00	0844													X												
PRS	1.00	0848													X												
[illegible]A	1.00	0852	103.5												X												
LCSS	50.00	0856													X												
LCSSA	50.00	0900	94.5												X												
PBW	1.00	0904													X												
PBWA	1.00	0908	99.5												X												
LCSW	1.00	0912													X												
LCSWA	1.00	0916	95.5												X												
CCV12	1.00	0920													X												
CCB12	1.00	0924													X												
ZZZZZZ	1.00	0928																									
ZZZZZZ	1.00	0932																									
CCV13	1.00	0936													X												
CCB13	1.00	0940													X												
MEAGP1	1.00	0944													X												
MEAGP1A	1.00	0948	106.0												X												
MEAGP1D	1.00	0952													X												
MEAGP1DA	1.00	0956	104.5												X												
MEAGP1S	1.00	1000													X												
CCV14	1.00	1004													X												
CCB14	1.00	1008													X												

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14
ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MEAGM7	1.00	1012																									
MEAGM8	1.00	1016																									
MEAGM9	1.00	1020																									
MEAGN0	1.00	1024																									
MEAGN1	1.00	1028																									
MEAGN2	1.00	1032																									
MEAGN3	1.00	1036																									
MEAGN4	1.00	1040																									
MEAGN5	1.00	1044																									
MEAGN6	1.00	1048																									
CCV15	1.00	1052													X												
CCB15	1.00	1056													X												
ZZZZZZ	1.00	1100																									
MEAGN7	1.00	1104																									
MEAGN8	1.00	1108																									
MEAGN9	1.00	1112													X												
CCV16	1.00	1116													X												
CCB16	1.00	1120													X												

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1504													X												
S3	1.00	1508													X												
S30	1.00	1512													X												
S40	1.00	1516													X												
S50	1.00	1520													X												
ICV2	1.00	1524													X												
ICB2	1.00	1528													X												
CCV21	1.00	1532													X												
CCB21	1.00	1536													X												
CRA2	1.00	1540													X												
MEAGN5	25.00	1544													X												
MEAGN5A	25.00	1548	102.5												X												
AGN5D	25.00	1552																									
MEAGN5DA	25.00	1556	1.0																								
MEAGN5S	25.00	1600													X												
MEAGM7	25.00	1604																									
MEAGM7A	25.00	1608	84.0																								
CCV22	1.00	1612													X												
CCB22	1.00	1616													X												
MEAGM8	25.00	1620																									
MEAGM8A	25.00	1624	0.0																								
MEAGM9	25.00	1628													X												
MEAGM9A	25.00	1632	88.0												X												
MEAGN0	10.00	1636																									
MEAGN0A	10.00	1640	82.5																								
MEAGN1	25.00	1644																									
MEAGN1A	25.00	1648	-225.0																								
MEAGN2	10.00	1652																									
MEAGN2A	10.00	1656	78.5																								
CCV23	1.00	1700													X												
CCB23	1.00	1704													X												
MEAGN3	1.00	1708																									

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1712																									
ZZZZZZ	1.00	1716																									
CCV24	1.00	1720													X												
CCB24	1.00	1724													X												
MEAGN3	10.00	1728																									
MEAGN3A	10.00	1732	-223.0																								
MEAGN4	25.00	1736																									
MEAGN4A	25.00	1740	83.5																								
MEAGN6	25.00	1744																									
MEAGN6A	25.00	1748	-248.5																								
MEAGN7	25.00	1752																									
MEAGN7A	25.00	1756	0.0																								
MEAGN8	25.00	1800																									
MEAGN8A	25.00	1804	-244.5																								
CCV25	1.00	1808													X												
CCB25	1.00	1812													X												
MEAGN9	25.00	1816													X												
MEAGN9A	25.00	1820	89.5												X												
CCV26	1.00	1824													X												
CCB26	1.00	1828													X												
ZZZZZZ	1.00	1832																									
ZZZZZZ	1.00	1836																									
CCV27	1.00	1840													X												
CCB27	1.00	1844													X												
MEAGN5D	25.00	1848																									
MEAGN5DA	25.00	1852	82.0																								
MEAGM8	100.00	1856													X												
MEAGM8A	100.00	1900	89.0												X												
MEAGN1	50.00	1904																									
MEAGN1A	50.00	1908	84.0																								
MEAGN3	25.00	1912													X												
MEAGN3A	25.00	1916	86.0												X												

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MEAGN6	50.00	1920																									
MEAGN6A	50.00	1924	79.5																								
CCV28	1.00	1928													X												
CCB28	1.00	1932													X												
ZZZZZZ	1.00	1936																									
MEAGN5D	25.00	1940													X												
MEAGN5DA	25.00	1944	88.5												X												
MEAGP0	10.00	1948																									
MEAGP0A	10.00	1952	81.5																								
MEAGN7	100.00	1956													X												
MEAGN7A	100.00	2000	85.5												X												
MEAGN8	50.00	2004																									
GN8A	50.00	2008	84.5																								
CCV29	1.00	2012													X												
CCB29	1.00	2016													X												
ZZZZZZ	1.00	2018																									
ZZZZZZ	1.00	2020																									
CCV210	1.00	2022													X												
CCB210	1.00	2024													X												
MEAGM70	25.00	2026													X												
MEAGM71	25.00	2028													X												
MEAGM72	25.00	2030													X												
MEAGM73	25.00	2032													X												
MEAGN20	25.00	2034													X												
MEAGN21	25.00	2036													X												
MEAGN22	25.00	2038													X												
MEAGN23	25.00	2040													X												
MEAGN00	10.00	2042													X												
MEAGN01	10.00	2044													X												
MEAGN02	10.00	2046													X												
MEAGN03	10.00	2048													X												
MEAGN40	50.00	2050													X												

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MEAGN41	50.00	2052													X												
MEAGN42	50.00	2054													X												
MEAGN43	50.00	2056													X												
CCV211	1.00	2058													X												
CCB211	1.00	2100													X												
ZZZZZZ	1.00	2102																									
ZZZZZZ	1.00	2104																									
ZZZZZZ	1.00	2106																									
CCV212	1.00	2108													X												
CCB212	1.00	2110													X												
MEAGP00	10.00	2112													X												
MEAGP01	10.00	2114													X												
MEAGP02	10.00	2116													X												
MEAGP03	10.00	2118													X												
MEAGN10	50.00	2120													X												
MEAGN11	50.00	2122													X												
MEAGN12	50.00	2124													X												
MEAGN13	50.00	2126													X												
MEAGN60	50.00	2128													X												
MEAGN61	50.00	2130													X												
MEAGN62	50.00	2132													X												
MEAGN63	50.00	2134													X												
MEAGN80	50.00	2136													X												
MEAGN81	50.00	2138													X												
MEAGN82	50.00	2140													X												
MEAGN83	50.00	2142													X												
CCV213	1.00	2144													X												
CCB213	1.00	2146													X												

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1104		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
S5	1.00	1108		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
S30	1.00	1112		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
S40	1.00	1116		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
S50	1.00	1120		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
ICV	1.00	1124		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
ICB	1.00	1128		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CCV11	1.00	1132		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CCB11	1.00	1136		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CRA	1.00	1140		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
PBS	1.00	1144		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
PBSA	1.00	1148	92.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
SS	10.00	1152		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
LCSSA	10.00	1156	89.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
PBW	1.00	1200		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
PBWA	1.00	1204	91.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
LCSW	1.00	1208		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
LCSWA	1.00	1212	89.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CCV12	1.00	1216		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CCB12	1.00	1220		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
ZZZZZZ	1.00	1224		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	1.00	1228		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV13	1.00	1232		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CCB13	1.00	1236		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
ZZZZZZ	1.00	1240		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MEAGP1	1.00	1244		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
MEAGP1A	1.00	1248	107.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
MEAGP1D	1.00	1252		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
MEAGP1DA	1.00	1256	101.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
MEAGP1S	1.00	1300		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CCV14	1.00	1304		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
CCB14	1.00	1308		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MEAGM7	1.00	1312																									
MEAGM7A	1.00	1316	30.0																								
MEAGM8	1.00	1320																									
MEAGM8A	1.00	1324	32.0																								
MEAGM9	1.00	1328																			X						
MEAGM9A	1.00	1332	55.0																		X						
MEAGN0	1.00	1336																			X						
MEAGN0A	1.00	1340	67.0																		X						
MEAGN1	1.00	1344																			X						
MEAGN1A	1.00	1348	60.0																		X						
CCV15	1.00	1352																			X						
CCB15	1.00	1356																			X						
MEAGN2	1.00	1400																			X						
MEAGN2A	1.00	1404	47.0																		X						
MEAGN5	1.00	1408																			X						
MEAGN5A	1.00	1412	59.0																		X						
MEAGN5D	1.00	1416																			X						
MEAGN5DA	1.00	1420	51.0																		X						
MEAGN5S	1.00	1424																			X						
CCV16	1.00	1428																			X						
CCB16	1.00	1432																			X						
ZZZZZZ	1.00	1436																									
ZZZZZZ	1.00	1440																									
CCV17	1.00	1444																			X						
CCB17	1.00	1448																			X						
MEAGN3	1.00	1452																			X						
MEAGN3A	1.00	1456	59.0																		X						
MEAGN4	1.00	1500																			X						
MEAGN4A	1.00	1504	53.0																		X						
MEAGN6	1.00	1508																			X						
MEAGN6A	1.00	1512	53.0																		X						
MEAGN7	1.00	1516																			X						

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MEAGN7A	1.00	1520	60.0																		X						
MEAGN8	1.00	1524																			X						
MEAGN8A	1.00	1528	64.0																		X						
CCV18	1.00	1532																			X						
CCB18	1.00	1536																			X						
MEAGN9	1.00	1540																			X						
MEAGN9A	1.00	1544	49.0																		X						
MEAGM7	5.00	1548																			X						
MEAGM7A	5.00	1552	87.0																		X						
MEAGM8	5.00	1556																			X						
MEAGM8A	5.00	1600	74.0																		X						
CCV19	1.00	1604																			X						
B19	1.00	1608																			X						

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-4 Method: F
Start Date: 12/19/95 End Date: 12/19/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1612																			X						
S5	1.00	1616																			X						
S30	1.00	1620																			X						
S40	1.00	1624																			X						
S50	1.00	1628																			X						
ICV2	1.00	1632																			X						
ICB2	1.00	1636																			X						
CCV21	1.00	1640																			X						
CCB21	1.00	1644																			X						
CRA2	1.00	1648																			X						
MEAGP0	1.00	1652																			X						
MEAGP0A	1.00	1656	53.0																		X						
CCV22	1.00	1700																			X						
CCB22	1.00	1704																			X						

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/18/95 End Date: 12/18/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	0904		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S10	1.00	0908		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
S20	1.00	0912		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
S40	1.00	0916		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
S60	1.00	0920		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
ICV	1.00	0924		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
ICB	1.00	0928		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCV11	1.00	0932		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCB11	1.00	0936		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CRA	1.00	0940		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
PBW	1.00	0944		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
PBWA	1.00	0948	108.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
[illegible] W	1.00	0952		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
LCSWA	1.00	0956	113.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCV12	1.00	1000		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCB12	1.00	1004		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGP1	1.00	1008		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGP1A	1.00	1012	108.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGP1D	1.00	1016		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGP1DA	1.00	1020	59.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGP1S	1.00	1024		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCV13	1.00	1028		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCB13	1.00	1032		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
PBS	1.00	1036		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
PBSA	1.00	1040	99.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
LCSS	10.00	1044		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
LCSSA	10.00	1048	110.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN5	1.00	1052		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN5A	1.00	1056	97.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN5D	1.00	1100		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN5DA	1.00	1104	97.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN5S	1.00	1108		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—

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U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/18/95 End Date: 12/18/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV14	1.00	1112																						X			
CCB14	1.00	1116																						X			
MEAGM7	1.00	1120																						X			
MEAGM7A	1.00	1124	110.0																					X			
MEAGM8	1.00	1128																						X			
MEAGM8A	1.00	1132	105.0																					X			
MEAGM9	1.00	1136																						X			
MEAGM9A	1.00	1140	109.0																					X			
MEAGN0	1.00	1144																						X			
MEAGN0A	1.00	1148	107.0																					X			
MEAGN1	1.00	1152																						X			
MEAGN1A	1.00	1156	99.0																					X			
CCV15	1.00	1200																						X			
CCB15	1.00	1204																						X			

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U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/18/95 End Date: 12/18/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1208		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
S10	1.00	1212		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
S20	1.00	1216		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
S40	1.00	1220		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
S60	1.00	1224		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
ICV2	1.00	1228		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
ICB2	1.00	1232		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCV21	1.00	1236		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCB21	1.00	1240		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CRA2	1.00	1244		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN2	1.00	1248		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN2A	1.00	1252	93.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
[illegible]GN3	1.00	1256		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN3A	1.00	1300	92.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN4	1.00	1304		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN4A	1.00	1308	96.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN6	1.00	1312		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN6A	1.00	1316	96.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCV22	1.00	1320		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCB22	1.00	1324		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN7	1.00	1328		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN7A	1.00	1332	95.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN8	1.00	1336		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN8A	1.00	1340	94.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN9	1.00	1344		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
MEAGN9A	1.00	1348	93.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCV23	1.00	1352		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
CCB23	1.00	1356		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—
ZZZZZZ	14.10	1400		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ZZZZZZ	1.60	1404		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ZZZZZZ	0.70	1408		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ZZZZZZ	0.30	1412		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-2 Method: F
Start Date: 12/18/95 End Date: 12/18/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	0.70	1416																									
ZZZZZZ	1.30	1420																									
ZZZZZZ	0.70	1424																									
ZZZZZZ	0.50	1428																									
ZZZZZZ	0.30	1432																									
CCV24	1.00 ~~1.10~~	1436																						X			
CCB24	1.00 ~~14.50~~	1440																						X			
ZZZZZZ	1.00	1444																									
MEAGP0	1.00	1448																						X			
MEAGP0A	1.00	1452	84.5																					X			
CCV25	1.00	1456																						X			
CCB25	1.00	1500																						X			

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U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-3 Method: CV
Start Date: 12/20/95 End Date: 12/20/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1504		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
S0.2	1.00	1505		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
S0.5	1.00	1506		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
S1	1.00	1507		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
S5	1.00	1508		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
S10	1.00	1509		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
ICV	1.00	1510		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
ICB	1.00	1511		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
CCV11	1.00	1512		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
CCB11	1.00	1513		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
ZZZZZZ	1.00	1514		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CRA	1.00	1515		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
[illegible]	1.00	1516		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
LCSS	10.00	1517		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN7	1.00	1518		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN8	1.00	1519		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGM9	1.00	1520		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN0	1.00	1521		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN1	1.00	1522		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN2	1.00	1523		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN3	1.00	1524		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
CCV12	1.00	1525		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
CCB12	1.00	1526		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
ZZZZZZ	1.00	1527		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MEAGN4	1.00	1528		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN5	1.00	1529		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN5D	1.00	1530		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN5S	1.00	1531		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN6	1.00	1532		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN7	1.00	1533		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN8	1.00	1534		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—
MEAGN9	1.00	1535		—	—	—	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—	—

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U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-3 Method: CV
Start Date: 12/20/95 End Date: 12/20/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MEAGP0	1.00	1536																X									
ZZZZZZ	1.00	1537																									
CCV13	1.00	1538																X									
CCB13	1.00	1539																X									

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U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: VARIAN-3 Method: CV
Start Date: 12/20/95 End Date: 12/20/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1302																X									
S0.2	1.00	1303																X									
S0.5	1.00	1304																X									
S1	1.00	1305																X									
S5	1.00	1306																X									
S10	1.00	1307																X									
ICV2	1.00	1308																X									
ICB2	1.00	1309																X									
CCV21	1.00	1310																X									
CCB21	1.00	1311																X									
ZZZZZZ	1.00	1312																									
CRA2	1.00	1313																X									
[illegible]	1.00	1315																X									
MEAGP1	1.00	1316																X									
MEAGP1D	1.00	1317																X									
MEAGP1S	1.00	1318																X									
ZZZZZZ	1.00	1319																									
ZZZZZZ	1.00	1320																									
ZZZZZZ	1.00	1321																									
ZZZZZZ	1.00	1322																									
ZZZZZZ	1.00	1323																									
CCV22	1.00	1324																X									
CCB22	1.00	1325																X									

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U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: LATCHAT-1 Method: AS
Start Date: 12/06/95 End Date: 12/06/95

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S200	1.00	1651																									X
S100	1.00	1651																									X
S50	1.00	1652																									X
S20	1.00	1653																									X
S10	1.00	1654																									X
S0	1.00	1654																									X
ICV	1.00	1655																									X
ICB	1.00	1656																									X
CCV11	1.00	1657																									X
CCB11	1.00	1657																									X
PBS	1.00	1658																									X
LCSS	1.00	1659																									X
ZZZZZZ	1.00	1700																									
MEAGM7	1.00	1700																									X
MEAGM8	1.00	1701																									X
MEAGM9	1.00	1702																									X
MEAGN0	1.00	1703																									X
MEAGN1	1.00	1703																									X
MEAGN2	1.00	1704																									X
MEAGN3	1.00	1705																									X
CCV12	1.00	1706																									X
CCB12	1.00	1706																									X
MEAGN4	1.00	1707																									X
MEAGN5	1.00	1708																									X
MEAGN5D	1.00	1709																									X
MEAGN5S	1.00	1709																									X
MEAGN6	1.00	1710																									X
MEAGN7	1.00	1711																									X
MEAGN8	1.00	1712																									X
MEAGN9	1.00	1712																									X
MEAGP0	1.00	1713																									X
MEAGP1	1.00	1714																									X

24259

00088

U.S. EPA - CLP

14
ANALYSIS RUN LOG

Lab Name: COLUMBIA ANALYTICAL SVCS. Contract: 68-D5-0135
Lab Code: COLUMB Case No.: 24259 SAS No.: SDG No.: MEAGM7
Instrument ID Number: LATCHAT-1 Method: AS
Start Date: 12/06/95 End Date: 12/06/95

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV13	1.00	1715																									X
CCB13	1.00	1715																									X
MEAGP1D	1.00	1716																									X
MEAGP1S	1.00	1717																									X
ZZZZZZ	1.00	1718																									
ZZZZZZ	1.00	1718																									
ZZZZZZ	1.00	1719																									
ZZZZZZ	1.00	1720																									
ZZZZZZ	1.00	1721																									
ZZZZZZ	1.00	1721																									
ZZZZZZ	1.00	1722																									
CCV14	1.00	1723																									X
CCB14	1.00	1724																									X

24259

00089

CASE NARRATIVE

SDG:MEAGM7 CASE:24259 SERVICE REQUEST:K9507446

Sample MEAGN6 was received with the tag number labelled MEAGN7. Sample MEAGN7 had a tag also labelled MEAGN7. We were instructed by Roger Nowakowsi, DynCorp, to use the number on the container for each of these samples.

Analytical spike recoveries and MSA slope, intercept, and r value calculations are included with the raw data prior to the printouts for the furnace analytical runs.

Please note that in accordance with page D-7 of SOW 7/88, all soil samples are diluted to 100 mLs after digestion. After settling to remove insoluble matter they are diluted 1:1 with acidified water prior to analysis for an equivalent final volume of 200 mLs. The first 1:1 dilution for soils is indicated in the raw data with the entry of a dilution factor of 1/2 on the appropriate ICP or GFAA instrument printout.

A wind storm on Dec. 12, 1995 caused a power outage in the community. As a result, samples were stored in a refigerator at 7 C for 3 hours. The samples had been prepared for ICP, GFAA and CN analysis. Mercury prpearation and analysis occurred following the temperature anomaly.

An insufficient volume of Sample MEAGP1 was received to perform Cyanide QC analysis. A smaller portion of sample was used so that the QC could be performed. We were later informed that this was a field blank and QC was not required. There was insufficient volume remaining to repeat the Cyanide analysis.

Respectfully Submitted:

Eileen M. Arnold

Eileen M. Arnold
EPA-CLP Project Chemist
COLUMBIA ANALYTICAL SERVICES

24259
00001A

Columbia Analytical Services, Inc.

TELEPHONE RECORD

FROM: Roger Nowakowski COMPANY: CAAS DATE: 11/30/95

TO: TIME: 8:00a

CAS CONTACT: TELEPHONE #:

PROJECT: 24259 SERVICE REQUEST #: K9507446

MESSAGE:

We received sample jar for sample # MEAGN6, however the Tag # was MEAGN7.

There was a sample tag labelled MEAGN7.

Checked with Roger and he said to go with the container number, ignore the "extra" sample tag mis-labelled MEAGN7.

ACTION ITEMS:

cc:

☐ REPLY ☐ NO REPLY

Emm
SIGNATURE

24259

00257

In Reference to Case No(s):
24259

SDG: MEAGM7

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Telephone Record Log

Date of Call: 1-17-96

Laboratory Name: Columbia Labs

Lab Contact: Eileen Arnold

360 ~~206~~ -577-7222

Region: 5

Regional Contact: Jim Redlin

Call Initiated By: ____ Laboratory X Region

In reference to data for the following sample number(s):

all

Summary of Questions/Issues Discussed:

(1) The SDG cover sheet (p. 254) is for the wrong case (SDG: MEAGL1). Will need correct SDG cover sheet.
(2) Where is the original airbill - only have photocopy with no notation on where original is (p. 236)
(3) For GFAA - why is there a baseline correction - example - p. 201 Tl Blank between sample # 34 + 35.

Summary of Resolution:

(1) + (2) will check + call back
(3) will call back after check SOW ILM04.0.

1) Found SDG Cover Sheet at lab - will fed Ex
(2) Original airbill with case 24259 SDG: MEAGL1
(3) p. E-16 SOW ILM04.0 states practice acceptable - no problem,

James Redlin
Signature

1-17-96
Date

Distribution: (1) Lab Copy, [redacted] (3) SMO Copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: (2) CERCLIS No: MIB000000082

Case No: 24259 Site Name Location: Jefferson Chene

Contractor or EPA Lab: Columbia Data User: MDEQ

No. of Samples: 15 Date Sampled or Data Received: 1-12-96

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: 15 No. of samples received: 15

Received by: Lynette Burnett Date: 1-12-96

Received by LSSS: Allison C Harvey Date: 1-16-96

Review started: 1-16-96 Reviewer Signature: J. Rollin

Total time spent on review: 13 + 1.8 p.m. Date review completed: 1-18-96

Copied by: Lynette Burnett Date: 2-5-96

Mailed to user by: Lynette Burnett Date: 2-5-96

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Data: _____

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.: 24259

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (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 (Specify)
   N. Not preserved

3. Region No.: V

Sampling Co.: MDEQ

Sampler (Name): Nabil Seif

Sampler Signature: Nabil Seif

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

5. Date Shipped: 11-28-95

Carrier: Airborne Express

Airbill Number: 6883010783

6. Ship To: Columbia Analytical Service Inc. 1317 S. Thirteen Ave. Kelso, WA 98626 ATTN: Fran Adair

7. Date Received -- Received by: 11-29-95 Ruth Nagley

Laboratory Contract Number: 68-D5-0135

Unit Price: 70.00

8. Transfer to

Date Received

Received by

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. only: Nitrate/Nitrite	Fluoride	High only: pH	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.
MEAGN7	5	L	G	6	X		X					5-193258	SS27	11-28-95 1500	NS	EASW7	OK			
MEAGN8	↓	↓	↓	↓	X		X					5-193262	SS28	11-28-95 1525	NS	EASW8	↓			
MEAGN9	↓	↓	↓	↓	X		X					5-193266	SS29	11-28-95 1605	NS	EASW9	↓			
MEAGP0	↓	↓	↓	↓	X		X					5-193270	SS30	11-28-95 1555	NS	EASX0	↓			
MEAGP1	4	L	G	2	X							5-193275	FB1	11-28-95 1530	NS	EASX1	↓			
MEAGP1	4	L	G	3			X					5-193276	FB1	11-28-95 1530	NS	EASX1	↓			

Shipment for Case complete? (Y/N):

Page 1 of 4

Sample used for a spike and/or duplicate:

Additional Sampler Signatures:

Chain of Custody Seal Number: 152981, 152982

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1735				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? (Y/N/none)	
		Ruth Nagley	11/29/95 0900		

Split Samples: ☐ Accepted (Signature) ☐ Declined

Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used.

Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab

00235

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.: 24259

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (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 (Specify)
   N. Not preserved

3. Region No.: V

Sampling Co.: MDEQ

Sampler (Name): Nabil Seif

Sampler Signature: Nabil Seif

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 ☐

5. Date Shipped: 11-28-95

Carrier: Airborne Express

Airbill Number: 6883010183

6. Ship To: Columbia Analytical Services Inc.
1317 S. Thirteen Ave.
Kelso, WA 98626
ATTN: Fran Adair

7. Date Received -- Received by: 11-29-95 Ruth Higley

Laboratory Contract Number: 68-D5-0135

Unit Price: 70.00

8. Transfer to:

Date Received:

Received by:

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. only: Nitrate/Nitrite	Fluoride	High only: pH	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.
MEAGM7	5	L	G	6	X		X					5-193218	SS17	11-28-95-1100	NS	EAST7	OL			
MEAGM8	↓	↓	↓	↓	X		X					5-193222	SS18	11-28-95-1110	NS	EAST8	↓			
MEAGM9					X		X					5-193226	SS19	11-28-95-1145	NS	EAST9				
MEAGM0					X		X					5-193230	SS20	11-28-95-1155	NS	EASW0				
MEAGN1					X		X					5-193234	SS21	11-28-95-1205	NS	EASW1				
MEAGN2					X		X					5-193238	SS22	11-28-95-1220	NS	EASW2				
MEAGN3					X		X					5-193242	SS23	11-28-95-1325	NS	EASW3				
MEAGN4					X		X					5-193246	SS24	11-28-95-1340	NS	EASW4				
MEAGN5					X		X					5-193250	SS25	11-28-95-140[illegible]	NS	EASW5				
MEAGN6	↓	↓	↓	↓	X		X					5-193254	SS26	11-28-95-1445	NS	EASW6	↓			

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

Page 1 of 3

Sample used for a spike and/or duplicate: MEAGN5

Additional Sampler Signatures:

Chain of Custody Seal Number: 152981 - 152982

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Nabil Seif	11-28-95 1750				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
		Ruth Higley	11/29/95 0900		

Split Samples: ☐ Accepted (Signature) ☐ Declined

12-6-95

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:
Green - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Return to SMO

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Inorg-2

00234